C&S Engineers, Inc.
499 Colonel Eileen Collins Blvd.
Syracuse, New York 13212

Alternatives Analysis Report and Remedial Action Work Plan

Urban Villages (Former Will & Baumer Candle Co., Inc.)

100 Buckley Road, Salina, New York
NYSDEC BCP Site No. C734154

October 2025
REVISED: July 27, 2026

Alternatives Analysis Report (AAR)
and Remedial Action Work Plan (RAWP)

for

New York State Brownfield Cleanup Program
Urban Villages (Former Will & Baumer Candle Co., Inc.)
100 Buckley Road, Town of Salina, Onondaga County, New York
Site No. C734154

Prepared by:

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212

Prepared on Behalf of:

UR-ban Villages PFA, LLC
925 7th North Street
Liverpool, New York 13088

DRAFT: October 2025
REVISED: July 27, 2026

TABLE OF CONTENTS

EXECUTIVE SUMMARY I

1. INTRODUCTION 1
1.1 Site Location and Description 1
1.2 Contemplated Redevelopment Plan 2
1.3 Description of Surrounding Property 3

2. DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS 6
2.1 Summary of Remedial Investigations Performed 6
2.1.1 Surface Soil Characterization 6
2.1.2 Test Pits 7
2.1.3 Soil Borings 8
2.1.4 Groundwater Monitoring Wells 9
2.1.5 Soil Vapor/Air Sampling 10
2.1.6 Samples Collected 11
2.1.7 Chemical Analytical Work Performed 12
2.1.8 Best Management Practices 12
2.1.9 Documentation 13
2.2 Significant Threat 13
2.3 Site History 13
2.3.1 Past Uses and Ownership 13
2.3.2 Phase I and Phase II Reports 15
2.3.3 Sanborn Maps and Historic Facility Drawings 17
2.4 Geologic and Hydrogeologic Conditions 20
2.4.1 Topography 20
2.4.2 Geology 20
2.4.3 Hydrogeology 21
2.5 Contamination Conditions 22
2.5.1 Conceptual Model of Site Contamination 22
2.5.2 Description of Areas of Concern 26
2.5.3 Identification of Standards, Criteria, and Guidance 27
2.5.4 Soil / Fill Contamination 28
2.5.5 On-Site and Off-Site Groundwater Contamination 30
2.5.6 On-Site and Off-Site Soil Vapor Contamination 32
2.5.7 Contaminants of Concerns 33
2.6 Environmental and Public Health Assessments 33
2.6.1 Qualitative Human Health Exposure Assessment 33
2.6.2 Fish & Wildlife Remedial Impact Analysis 35
2.7 Interim Remedial Action 35
2.8 Remedial Action Objectives 36

2.8.1 Groundwater 36
2.8.2 Soil 36
2.8.3 Soil Vapor 36

3. ALTERNATIVES ANALYSIS REPORT 37
3.1 Objectives 37
3.2 Applicable Standards, Criteria, and Guidance 39
3.3 Remedial Action Objectives 39
3.4 Future Use Evaluation 39
3.5 Development and Evaluation of Alternatives 39
3.5.1 No Action 40
3.5.2 Track 4 (Restricted Residential Use) – Cover System and Vapor Mitigation 40
3.5.3 Track 1 (Unrestricted Use) – Complete Contaminated Soil/Fill Removal, Groundwater Treatment, and Vapor Mitigation 44
3.6 Comparative Evaluation of Alternatives and Recommended Actions 47
3.6.1 No Action Alternative 47
3.6.2 Track 4 (Residential Restricted) – Cover System and Vapor Mitigation 47
3.6.3 Track 1 (Unrestricted Use) – Complete Contaminated Soil/Fill Removal, Groundwater Treatment, and Vapor Mitigation 48
3.7 Selection of the Preferred Remedy 48
3.7.1 Zoning 48
3.7.2 Applicable Comprehensive Community Master Plans or Land Use Plans . 49
3.7.3 Surrounding Property Uses 50
3.7.4 Citizen Participation 50
3.7.5 Environmental Justice 50
3.7.6 Proximity to Natural Resources 50
3.7.7 Off-Site Groundwater Impacts 51
3.7.8 Proximity to Floodplains 51
3.7.9 Current Institutional Controls 51
3.8 Summary of Selected Remedial Actions 51

4. REMEDIAL ACTION PROGRAM 53
4.1 Governing Documents 53
4.1.1 Standards, Criteria and Guidance (SCG) 53
4.1.2 Green Remediation Components 55
4.1.3 Site-Specific Health and Safety Plan (HASP) 61
4.1.4 Quality Assurance Program Plan (QAPP) 62
4.1.5 Construction Quality Assurance Plan (CQAP) 62
4.1.6 Soil/Materials Management Plan (SMMP) 65
4.1.7 Storm Water Pollution Prevention Plan (SWPPP) 65
4.1.8 Community Air Monitoring Plan (CAMP) 65

4.1.9 Contractors Site Operations Plan (SOP) 66
4.1.10 Citizen Participation Plan (CPP) 67
4.2 General Remedial Construction Information 68
4.2.1 Project Organization 68
4.2.2 Remedial Engineer 69
4.2.3 Remedial Action Construction Schedule 70
4.2.4 Work Hours 70
4.2.5 Site Security 70
4.2.6 Traffic Control 71
4.2.7 Contingency Plan 71
4.2.8 Worker Training and Monitoring 71
4.2.9 Agency Approvals 71
4.2.10 Pre-Construction Meeting with NYSDEC 72
4.2.11 Emergency Contact Information 72
4.2.12 Remedial Action Costs 72
4.3 Site Preparation 73
4.3.1 Mobilization 73
4.3.2 Monitoring Well / Vapor Probe Decommissioning 73
4.3.3 Erosion and Sedimentation Controls 73
4.3.4 Stabilized Construction Entrance 74
4.3.5 Utility Marker and Easements Layout 74
4.3.6 Sheeting and Shoring 74
4.3.7 Equipment and Material Staging 75
4.3.8 Decontamination Area 75
4.3.9 Site Fencing 75
4.3.10 Demobilization 75
4.4 Reporting 76
4.4.1 Daily Reports 76
4.4.2 Monthly Reports 77
4.4.3 Other Reporting 77
4.4.4 Complaint Management Plan 78
4.4.5 Deviations from the Remedial Action Work Plan 78

5. REMEDIAL ACTION: MATERIAL REMOVAL FROM SITE 79
5.1 Soil Cleanup Objectives 79
5.2 Remedial Performance Evaluation (Post Excavation End-Point Sampling) 79
5.3 Estimated Material Removal Quantities 79
5.4 Soil / Materials Management Plan 80
5.4.1 Remedial Excavation Areas 80
5.4.2 Soil Screening Methods 81
5.4.3 Stockpile Methods 82
5.4.4 Materials Excavation and Load Out 82

5.4.5 Materials Transport Off-Site 84
5.4.6 Materials Disposal Off-Site 85
5.4.7 Materials Reuse On-Site 87
5.4.8 Fluids Management 89
5.4.9 Demarcation 89
5.4.10 Backfill from Off-Site Sources 89
5.4.11 Stormwater Pollution Prevention 90
5.4.12 Contingency Plan 91
5.4.13 Community Air Monitoring Plan 93
5.4.14 Odor, Dust and Nuisance Control Plan 94

6. RESIDUAL CONTAMINATION TO REMAIN ON-SITE 96

7. ENGINEERING CONTROLS: SITE COVER SYSTEM 97
7.1 Soil Cover System 98
7.2 Hardscape Cover System 99

8. ENGINEERING CONTROLS: TREATMENT SYSTEMS 100

9. CRITERIA FOR COMPLETION OF REMEDIATION / TERMINATION OF REMEDIAL SYSTEMS 102
9.1 Composite Cover System 102
9.2 Sub-Slab Depressurization System (SSDS) 102

10. ENGINEERING AND INSTITUTIONAL CONTROLS 103
10.1 Environmental Easement 103
10.2 Site Management Plan 105

11. FINAL ENGINEERING REPORT 107
11.1 Certifications 108

12. SCHEDULE 109

13. REFERENCES 110

FIGURES

Figure 1 ..... Site Location
Figure 2 ..... Site Layout
Figure 3A ..... Surface Soil Sample Locations
Figure 3B ..... Surface Soil Data Exceedances
Figure 4A ..... Subsurface Soil Sample Locations
Figure 4B ..... Subsurface Soil Data Exceedances

Figure 5 ..... Fill Distribution
Figure 6A ..... Groundwater Sample Locations
Figure 6B ..... Sampling Event 1 Groundwater Exceedances (Organics)
Figure 6C ..... Sampling Event 2 Groundwater Exceedances (Organics)
Figure 6D ..... Sampling Event 1 Groundwater Exceedances (Inorganics)
Figure 6E ..... Sampling Event 2 Groundwater Exceedances (Inorganics)
Figure 7A ..... Soil Vapor Sampling Locations
Figure 7B ..... Soil Vapor Sampling Results
Figure 8A ..... Sampling Event 1 Groundwater Contours
Figure 8B ..... Sampling Event 2 Groundwater Contours
Figure 9 ..... Future Development Plan
Figure 10 ..... Anticipated Phasing Plan
Figure 11 ..... Engineering Controls – Cover System
Figure 12 ..... Engineering Controls – Vapor Mitigation

TABLES PROVIDED IN REPORT

Table 2-1: Historical Site Owners 13
Table 2-2: Sanborn Map Review 17
Table 2-3: Historic Facility Drawing Review 18
Table 2-4: Groundwater Elevations 21
Table 2-5: Summary of Contaminants in Soil / Fill 28
Table 2-6: Summary of Contaminants in Groundwater 31
Table 2-7: Summary of Contaminants in Soil and Sub-Slab Vapor 32
Table 3-1: Track 4 Summary of Remedial Costs 43
Table 3-2: Track 1 Summary of Remedial Costs 46
Table 4-1: Material Removal Metrics 60
Table 4-2: Cover System Construction Metrics 61
Table 4-3: Environmental Footprint Summary 61
Table 4-4: Remedial Action Construction Schedule 70
Table 4-5: Approvals and Authorizations for Remedial Work / Development 71
Table 12-1: Certificate of Completion Schedule 109

ATTACHED TABLES

Table 1 ..... Master Sample Log
Table 2-1A ..... VOC Surface Soil Data Summary
Table 2-1B ..... SVOC Surface Soil Data Summary
Table 2-1C ..... Metals Surface Soil Data Summary
Table 2-1D ..... PCB Surface Soil Data Summary
Table 2-1E ..... PFAS Surface Soil Data Summary
Table 2-1F ..... Pesticide and Herbicide Surface Soil Data Summary
Table 2-2A ..... VOC 12-inch and 24-inch Near Surface Data Summary
Table 2-2B ..... SVOC 12-inch and 24-inch Near Surface Data Summary

ATTACHED TABLES (continued)

Table 2-2C ..... Metals 12-inch and 24-inch Near Surface Data Summary
Table 2-2D ..... PCB 12-inch and 24-inch Near Surface Data Summary
Table 2-2E ..... PFAS 12-inch and 24-inch Near Surface Data Summary
Table 2-2F .. Pesticide and Herbicide 12-inch and 24-inch Near Surface Data Summary
Table 3A ..... VOC Subsurface Data Summary
Table 3B ..... SVOC Subsurface Data Summary
Table 3C ..... Metals Subsurface Data Summary
Table 3D ..... PCB Subsurface Data Summary
Table 3E ..... PFAS Subsurface Data Summary
Table 3F ..... Pesticide and Herbicide Subsurface Data Summary
Table 4A ..... Round 1 VOC Groundwater Data Summary
Table 4B ..... Round 1 SVOC Groundwater Data Summary
Table 4C ..... Round 1 Metals Groundwater Data Summary
Table 4D ..... Round 1 PCB Groundwater Data Summary
Table 4E ..... Round 1 PFAS Groundwater Data Summary
Table 4F ..... Round 1 Pesticide and Herbicide Groundwater Data Summary
Table 4G ..... Round 1 General Chemistry Groundwater Data Summary
Table 5A ..... Round 2 VOC Groundwater Data Summary
Table 5B ..... Round 2 SVOC Groundwater Data Summary
Table 5C ..... Round 2 Metals Groundwater Data Summary
Table 5D ..... Round 2 PCB Groundwater Data Summary
Table 5E ..... Round 2 PFAS Groundwater Data Summary
Table 5F ..... Round 2 Pesticide and Herbicide Groundwater Data Summary
Table 5G ..... Round 2 General Chemistry Groundwater Data Summary
Table 6 ..... Soil Vapor Data Summary
Table 7 ..... SVOC Data – C&S Supplemental Investigation
Table 8 ..... Metals Data – C&S Supplemental Investigation
Table 9 ..... Pesticide / Herbicide Data – C&S Supplemental Investigation
Table 10 ..... PCB Data – C&S Supplemental Investigation

APPENDICES

Appendix A ..... Metes and Bounds Description
Appendix B ..... Site Development Plan
Appendix C ..... Wetland and SEQR Documents
Appendix D ..... Sanborn Maps and Historic Facility Drawings
Appendix E ..... Geologic Cross Sections
Appendix F ..... Climate Screening Checklist
Appendix G ..... Green Remediation Evaluation
Appendix H ..... Health and Safety Plan
Appendix I ..... Quality Assurance Project Plan

APPENDICES (continued)

Appendix J ..... Stormwater Pollution Prevention Plan
Appendix K ..... Community Air Monitoring Plan
Appendix L ..... Citizen Participation Plan
Appendix M ..... Remedial Action Costs
Appendix N ..... Request to Import / Reuse Fill Material

ACRONYM LIST

AAR	Alternatives Analysis Report
AGV	Air Guidance Value
AMSL	Above Mean Sea Level
AST	Aboveground Storage Tank
AWQS	Ambient Water Quality Standard
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
BGS	Below Ground Surface
BMP	Best Management Practice
CAMP	Community Air Monitoring Plan
C/D	Construction/Demolition
CPP	Community Participation Plan
COC	Contaminant of Concern
COC	Certificate of Completion
CQAP	Construction Quality Assurance Plan
C&S	C & S Engineers, Inc.
CVA	Climate Change Vulnerability Assessment
DD	Decision Document
DER	Department of Environmental Remediation
DER-10	Technical Guidance for Site Investigation and Remediation (NYSDEC)
DMM	Division of Materials Management (NYSDEC)
DOH	Department of Health
EC	Engineering Control
ECL	Environmental Conservation Law
ERIS	Environmental Risk Information Services
ESA	Environmental Site Assessment
EWP	Excavation Work Plan
FEMA	Federal Emergency Management Agency
FER	Final Engineering Report
FWI	Fire Weather Index

GHG	Greenhouse Gas
GRT	Green Remediation Technique
GPS	Global Positioning System
HAP	Hazardous Air Pollutant
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations
HFM	Historic Fill Material
IC	Institutional Control
IRM	Interim Remedial Measure
ISCO	In-Situ Chemical Oxidation
NAPL	Non-Aqueous Phase Liquid
NAVD	North American Vertical Datum
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration (US)
PAH	Polycyclic Aromatic Hydrocarbons
PPM	Parts per Million
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene
PID	Photo-ionization Detector
PFAS	Per- and Polyfluoroalkyl Substances
PFE	Pressure Field Extension
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PPE	Personal Protective Equipment
QA/QC	Quality Assurance / Quality Control
QAPP	Quality Assurance Program Plan
QHHEA	Qualitative Human Health Exposure Assessment
RAO	Remedial Action Objective
RAWP	Remedial Action Work Plan
RI	Remedial Investigation

RIWP	Remedial Investigation Work Plan
RROD	Repurposing and Reuse Floating District
SCG	Standards, Criteria, Guidance
SCO	Soil Cleanup Objective
SEFA	Spreadsheets for Environmental Footprint Analysis (USEPA)
SEQRA	State Environmental Quality Review Act
SITE	100 Buckley Road, Salina, New York
SMP	Site Management Plan
SMMP	Soil and Material Management Plan
SMTC	Syracuse Metropolitan Transportation Council
SOP	Standard Operating Procedure
SS	Sub-Slab
SSD	Sub-Slab Depressurization
SSDS	Sub-Slab Depressurization System
SSV	Sub-Slab Vapor
SURF	Sustainable Remediation Forum
SV	Soil Vapor
SVI	Soil Vapor Intrusion
SVOC	Semi-volatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TAL	Target Analyte List
TCE	Trichloroethene
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
$\mu G/M^3$	Microgram per Cubic Meter
USEPA	United States Environmental Protection Agency
USGS	United States Geologic Service
UST	Underground Storage Tank
VI	Vapor Intrusion
VOC	Volatile Organic Compound
VOV	Volatile Organic Vapor

CERTIFICATION

I, H. Nevin Bradford, III, PE., certify that I am currently a NYS Registered Professional Engineer and that this Alternatives Analysis Report and Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31).

H. Nevin Bradford, III, P.E.
State of New York Professional Engineer No. 086008

July 27, 2026

EXECUTIVE SUMMARY

C&S Engineers, Inc. (C&S) has prepared this Alternative Analysis Report (AAR) and Remedial Action Work Plan (RAWP) for Brownfield Cleanup Program (BCP) Site No. C734154 located at 100 Buckley Road, Salina, Onondaga County, New York (the "Site"). This document reports on the data and findings from the New York State Department of Environmental Conservation (NYSDEC)-approved Remedial Investigation (RI), evaluates remedial alternatives to address the contamination at the Site, and provides details for all elements of the proposed Remedial Action.

Site Description/Physical Setting/Site History

UR-ban Villages PFA, LLC entered into a Brownfield Cleanup Agreement (BCA) with the NYSDEC in February 2022, to investigate and remediate an 11.68-acre property located at 100 Buckley Road in the Town of Salina, Onondaga County, New York. UR-ban Villages PFA, LLC is a Volunteer in the BCP.

The Site is located in the County of Onondaga and Town of Salina, New York and is identified as Block 01, Lot 15.2 on Section 086 of the Town of Salina Tax Map. A United States Geological Survey (USGS) topographical quadrangle map (**Figure 1**) shows the Site location. The Site is situated on an approximately 11.68-acre area bounded by medical offices (Retina-Vitreous Surgeons of CNY and Housel Dermatology, P.C.) to the north, the convergence of several roadways (Buckley Road, Park Street, Old Liverpool Road, and Onondaga Lake Parkway) to the south, the Interstate Route 81 corridor to the east, and Buckley Road to the west (see **Figure 2**).

The initial development of the Site occurred between 1904 and 1911 when many of the existing structures were constructed by The Will & Baumer Co. Since its first development and continuing until 2010, the Site was used as a beeswax and candle manufacturing facility by Will & Baumer (and its predecessors and successors). Will & Baumer ceased operations there in 2010.

The facility included various buildings housing offices, wax melting, pressing, and molding areas, a laboratory, press and pan rooms, multiple sheds, a digester house, a still house, a storage room, a machine shop, bleach houses, an oil house, and packaging areas. A rail line extended from the northeast to the southeast corners of the parcel, traversing the eastern portion of the site. Several railroad spurs operated in this area from at least 1911 until 1990, situated between the former boiler house and a storage building located at the southeast corner.

Historic maps indicate that up to eleven aboveground storage tanks (ASTs) existed to the north and east of the former storage building, containing substances such as grease, oil,

tar, and acid. Additionally, a fuel oil storage tank was located near the southeast corner of the boiler house.

Will & Baumer ceased operations in 2010. Historic city directories show that CNY Logistics and Light Four Life Candles, LLC was present at the site address (100 Buckley Road) in 2014, with Light Four Life Candles, LLC also listed in 2018. These entities are believed to have been lessees under Syracuse Gateway Holdings, LLC. Aside from one building used as an office furniture warehouse, the site was vacant when acquired by Urban Villages PFA, LLC. The furniture warehouse later became vacant when site redevelopment activities began.

The Site now contains ten former industrial buildings associated with Will & Baumer Candle Co., Inc. One building was demolished by the current owner in 2023. No further demolitions are planned at this time. The structures are primarily located in the western two-thirds of the parcel, while the eastern portion, which once housed rail lines and storage tanks, is now mostly open space. Currently, the southernmost building (referred to as Building 1 and depicted on **Figure 2**) has been completely renovated into 20 residential apartments and is occupied by tenants. Building 2, which adjoins the north side of Building 1, is nearing completion of renovation activities and will be ready for occupancy pending change-of-use approval. Upon completion, the building will contain 33 apartments and an underground parking structure. The northernmost building (referred to as Building 5 and depicted on **Figure 2**) has been completely renovated into an indoor sports complex and is intermittently occupied for recreational activities. The former boiler house (Building 7) is currently undergoing renovation for conversion into a restaurant and brewery. The remaining buildings are planned to be renovated sequentially during future phases, likely following completion of Site remediation and issuance of the Certificate of Completion. A Site Control Plan is in place to restrict access to areas under construction and which require remediation by property occupants and the general public.

Summary of the Remedial Investigation

A RI was implemented to characterize Site conditions and identify the appropriate remedy for the Site. The RI included the collection and analysis of 28 surface and shallow subsurface soil samples, 25 samples of soil containing historic fill material (HFM), 20 samples of native soil beneath the HFM, six samples of native soil at deeper depths (20 to 30 feet), 9 samples of subsurface soil expected to be impacted by PCBs, two rounds of groundwater samples from 14 wells, and ten soil vapor and sub-slab soil vapor samples.

HFM is present across the majority of the Site. Based on the RI, the known contaminants of concern in the HFM include semi-volatile organic compounds (SVOCs) and metals. The distribution and variation in analyte concentrations in the soils that contain HFM

indicates that the source of contamination in soil samples containing HFM is likely the HFM itself and no apparent discrete source is located on-Site or off-Site.

Groundwater across the Site contains low levels of the same SVOCs present in the HFM, at concentrations that slightly exceed current NYS Ambient Water Quality Standards (AWQS). The groundwater beneath the Site also contains concentrations of several naturally occurring minerals / metals, including iron, magnesium, manganese, and sodium, and per- and polyfluoroalkyl substances (PFAS) compounds that exceed current NYS AWQS or Guidance Values. The minerals are likely indicative of a natural regional condition, and the PFAS are believed to be representative of an area-wide rather than a site-specific condition.

Several of the soil vapor and sub-slab vapor samples contained varying concentrations of trichloroethylene (TCE), and lesser amounts of tetrachloroethene (also known as perchloroethylene, or PCE). The presence of these compounds could pose a potential for these compounds to enter and affect indoor air quality within buildings on the Site and should be accounted for in Site redevelopment plans. Sub-slab depressurization (SSD) systems (SSDS) for the buildings and ventilation systems for the enclosed indoor parking garages should be considered.

The following green / sustainable elements may be considered during design and implementation of the remedy:

- Utilizing a cover system to isolate the HFM. This approach significantly reduces the use of fossil fuels that would be used to excavate and haul the HFM off-site for disposal, as well as bring replacement material to the Site. Excess soil generated during site grading operations would be beneficially re-used under the final cover system to the extent practicable to achieve final grades. This option also limits the volume of soil to be managed in a landfill.

- Clean soil and aggregate needed to construct the cover system can be sourced from local pits / quarries, thus reducing emissions for transport vehicles.

- High efficiency and appropriately sized fans for the SSD and building ventilation systems.

Qualitative Human Health Exposure Assessment

Potential exposure pathways exist for workers involved with site remediation and site construction activities, site visitors, and trespassers, under the current use scenario. Potential exposure pathways also exist, as described above, for Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers under future

use scenarios, if the points of exposure, contaminant migration routes, and exposure pathways are not mitigated.

In most instances, these exposures can be readily mitigated in the short-term (current use and construction-phase work) through the use of personal protective equipment (PPE); proper soil / fill management during ground-intrusive activities; and implementation and adherence to a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP). In the long-term (future use scenario, post-remediation), these exposures can be mitigated through the implementation of institutional controls, including restrictions on use of groundwater and environmental easements, and engineering controls, including suitable cover systems (asphalt / concrete /hardscape, buildings, and engineered soil cover system with visible demarcation barrier); and the installation and operation of vapor intrusion (VI) mitigation systems (sub-slab depressurization systems, indoor garage space mechanical ventilation systems), as necessary, within renovated existing and future buildings.

Groundwater is not considered a relevant mechanism for exposure due to the municipal water servicing the Site and surrounding area and requirement for an Environmental Easement that will restrict the use of groundwater. There is not a ban on groundwater use as a public drinking water supply in the Town of Salina. However, groundwater in the vicinity of the Site is not known to be utilized as a source of potable water.

Fish and Wildlife Assessment

The Site is currently in the process of being redeveloped for mixed use for commercial and residential. The former industrial buildings are located in an urbanized area with limited wildlife exposure. The potential environmental receptors include biota, including plant species, birds, reptiles, amphibians, soil invertebrates, and mammals inhabiting and migrating through the Site.

A wetland delineation was conducted at the Site in 2020 by Delta Engineers, Architects, Land Surveyors & Landscape Architecture, D.P.C. (Delta). The delineation identified three small wetlands on the eastern portion of the Site. These were 0.35, 0.45, and 0.26 acres in area, respectively. A portion of the 0.45-acre wetland, located east of Building "D" on Figure 2, is visible on past aerial photographs as an area of open water. No apparent surface connections to intermittent or perennial streams or other wetlands were identified. These wetlands were not identified to be associated with or connected to mapped NYSDEC wetlands.

A request for an Approved Jurisdictional Determination was submitted to the U.S. Army Corps of Engineers, Buffalo District. An Approved Jurisdictional Determination was issued on January 29, 2021, concluding that the delineated aquatic features were excluded from federal jurisdiction under the Clean Water Act. Accordingly, a federal permit under

Section 404 of the Clean Water Act was not required for activities involving the identified features.

The proposed project was subjected to review under the State Environmental Quality Review (SEQR) Act and a Negative Declaration (ND) was issued by the lead agency, the Town of Salina, on January 27, 2023. Pursuant to 6NYCRR Part 664, Section 664.1, Subsection (d), NYSDEC wetland regulations enacted in January 2025 are not applicable since the SEQR ND pre-dated January 1, 2025.

The NYSDEC Environmental Resource Mapper was utilized to determine if there are any known significant natural communities, endangered species, or threatened species on or in the vicinity of the Site. According to the Resource Mapper:

- The Site is located in the vicinity of a significant natural community. This significant natural community is identified as the Onondaga Salt Marsh, which is located northwest of the Site, at the northern edge of Onondaga Lake.
- The Site is located in the vicinity of rare animals (Lake Sturgeon) and rare plants.

Based on the data compiled in the course of the RI, the contaminants identified at the Site consist of:

- SVOCs (polynuclear aromatic hydrocarbons, or PAHs) and metals in some surface soil and in the HFM that has been distributed across the Site;
- SVOCs and common naturally occurring metals in shallow groundwater; and
- Low concentrations of certain volatile organic compounds (VOCs) in soil vapor.

Based upon the nature and location of the identified Site contaminants, and the future mitigation of those conditions through the planned Site redevelopment and institutional and engineering controls, the Site conditions are not expected to pose a significant threat to the identified fish and wildlife resource in the vicinity of the Site.

Summary of the Remedy

1. A remedial program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:
    - Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
    - Reducing direct and indirect greenhouse gases and other emissions;

- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar Department accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial program, as appropriate. The project will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial program.

Additionally, the remedial program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Screening for indications of contamination (by visual means, odor, and monitoring with photoionization detector or PID) of all excavated soil during any intrusive Site work;
3. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;
4. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications established in 6 NYCRR 375-6.7(d), NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for Commercial Use, and NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances and (2) all Federal, State and local rules and regulations for handling and transport of material;
5. Construction and maintenance of a site cover consisting of either clean soil or hardscape to prevent human exposure to residual contaminated soil/fill remaining under the Site;
6. Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site;
7. Installation and operation of an active SSD system in the Annex to mitigate carbon tetrachloride impacts in soil vapor and a pre-occupancy soil vapor intrusion (SVI) investigation of on-site buildings;
8. Publication of a Site Management Plan (SMP) for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;
9. All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

1. INTRODUCTION

UR-ban Villages PFA, LLC entered into a BCA with the NYSDEC in February 2022, to investigate and remediate an 11.68-acre property located at 100 Buckley Road in the Town of Salina, Onondaga County, New York. UR-ban Villages PFA, LLC is a Volunteer in the BCP. Restricted Residential use is proposed for the property. When completed, the Site will serve as a mix of commercial and residential purposes. Refer to the BCP application for additional details.

C&S Engineers, Inc. (C&S) has prepared this AAR and RAWP on behalf of the Volunteers (UR-ban Villages PFA, LLC, hereafter known as "Volunteers"), for BCP Site No. C734154, for the Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP site (the Site). The Site is 11.68 acres in land area and is located at 100 Buckley Road in the Town of Salina, Onondaga County, New York (the "Site"). **Figure 1** shows the location of the Site and **Figure 2** shows the Site boundaries and identified pertinent site features.

The Volunteers submitted a final BCP Application to investigate and remediate the Site in October 2021. The BCA was executed on February 25, 2022. A Remedial Investigation Work Plan (RIWP) was subsequently approved on August 16, 2022, and the RI commenced on August 23, 2022.

This AAR/RAWP summarizes the nature and extent of contamination as determined from data gathered during the RI, performed between August 23, 2022 and April 13, 2023. It provides an evaluation of a Track 1 cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in DER-10, DER-31, and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have not yet determined whether this Site does or does not pose a significant threat to human health and the environment. The RI for this Site did not identify fish and wildlife resources.

A formal remedial design document will not be prepared for the soil management and site cover system. Remedial design documents will be prepared for building SSD or mechanical ventilation systems intended to mitigate vapor intrusion.

1.1 Site Location and Description

The Site is located in the County of Onondaga and Town of Salina, New York and is identified as Block 01, Lot 15.2 on Section 086 of the Town of Salina Tax Map. A USGS topographical quadrangle map (**Figure 1**) shows the Site location. The Site is situated on an approximately 11.68-acre area bounded by medical offices (Retina-Vitreous Surgeons

of CNY and Housel Dermatology, P.C.) to the north, the convergence of several roadways (Buckley Road, Park Street, Old Liverpool Road, and Onondaga Lake Parkway) to the south, the Interstate Route 81 corridor to the east, and Buckley Road to the west (see **Figure 2**). A boundary map is attached to the BCA as required by Environmental Conservation Law (ECL) Title 14 Section 27-1419. The 11.68-acre property is fully described in **Appendix A**. A global positioning system coordinate for the starting point is included.

1.2 Contemplated Redevelopment Plan

The Remedial Action to be performed under this RAWP is intended to make the Site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described here to provide the basis for this assessment. However, the Remedial Action contemplated under this RAWP may be implemented independent of the proposed redevelopment plan.

The Site is currently occupied by ten former industrial buildings that were once utilized in connection with the Will & Baumer Candle Co., Inc. manufacturing operations. The Volunteer is in the process of restoring the existing buildings and redeveloping the Site into a mixed-use multi-family / commercial site. The redeveloped Site will house approximately 250 apartment units, indoor and covered parking, Site offices, recreational facilities, a banquet house, a brew house, and common areas.

Construction and redevelopment activities are occurring in phases. For reference, **Figure 2** identifies the numbering sequence of the existing buildings.

Building 1 has been completely renovated into 20 residential apartments and has been occupied by residential tenants since Fall 2025. Prior to occupancy, a soil vapor intrusion assessment and sampling of surface and shallow soil surrounding Building 1 were completed, and NYSDEC approved a Change of Use for the building.

Building 2 is nearing completion of renovation activities and will contain 33 residential apartments and an underground parking structure. A soil vapor intrusion assessment has been completed, and occupancy is pending Change of Use approval.

Building 5 has been completely renovated into an indoor sports complex and is currently operational. A soil vapor intrusion assessment has also been completed for Building 5 and NYSDEC approved a Change of Use for the building.

The former boiler house, identified as Building 7, is currently undergoing renovation for conversion into a brewery and restaurant.

Future phases of redevelopment are expected to include the rehabilitation of Buildings

3A and 3B into residential apartments with basement-level parking, completion of Site remedial activities, installation of remaining Site infrastructure, and the sequential renovation of other Site buildings.

Subsequent phases will include the conversion of Building 6 into a leasing office and shared community / recreational space, conversion of Building 4A into indoor parking, and conversion of Buildings 4B and 4C into indoor parking (grade level) with apartments in upper floors to be added. Future phases may include the construction of additional buildings east of Building 4A and south of 4C, and at the southern edge of the Site. If constructed, it is anticipated that the additional buildings will contain apartment units. The overall planned development is depicted on **Figure 9** and a drawing depicting the overall phasing of the project is attached as **Figure 10**.

The Site is currently zoned as a Repurposing and Reuse Floating Overlay District (RROD). The planned future use is consistent with this zoning classification. The proposed Site Plan was approved by the Town of Salina Planning Department on July 28, 2025.

The proposed remedial alternatives are based on the planned use of the site for a mix of commercial and residential purposes, with remediation efforts aimed at achieving Residential-Restricted Use Soil Cleanup Objectives (SCOs).

The redevelopment plan is provided in **Appendix B**.

1.3 Description of Surrounding Property

The area immediately north of the Site is currently occupied by a small office park that contains four separate office buildings and related parking areas. The office buildings are presently occupied by Retina-Vitreous Surgeons of Central New York, P.C.; Housel Dermatology, P.C.; TRC Companies, Inc.; and Supreme Lending (mortgage lending). The area north of this office park is developed with a residential neighborhood.

The area to the northeast, east, and southeast of the Site, across Interstate Route 81, is developed with a mix of industrial and commercial properties (northeast), undeveloped land followed by the NBT Bank stadium, a cold storage facility operated by Byrne Dairy, the Syracuse Walsh Regional Transportation Center, and the Central New York Regional Market (east), and the Destiny USA mall (southeast). Ley Creek flows through the area between the east side of Interstate Route 81 and the NBT Bank Stadium, Byrne Dairy cold storage facility, and Regional Transportation Center. Ley Creek empties into Onondaga Lake at a point approximately 1,850 feet southeast of the Site.

Onondaga Lake is located approximately 750 feet to the south and southwest, across Park Street, Old Liverpool Road, and Onondaga Lake Parkway.

The area to the northwest of the Site, across Buckley Road, is developed with a large residential neighborhood.

Potential sensitive receptors in the vicinity of the Site include:

Schools:
The closest school buildings include the Chestnut Hill Elementary School of the Liverpool Central School District, located approximately 5,000 feet northeast of the Site, and the Lemoyne Elementary School of the Syracuse City School District, located approximately 6,300 feet northeast of the Site.

Day Care Facilities:
The closest child day care facilities include Ms. Jennifer's NeighborSchool, located approximately 2,640 feet northwest; the County North Children's Center, located approximately 2,900 feet northwest; the Rainbow Daycare, located approximately 3,850 feet east-southeast; the Bumblebee Daycare, located approximately 5,200 feet east; and the Building Bonds Daycare, located approximately 5,950 feet east-northeast of the Site.

Hospitals:
The closest hospital building is the St. Joseph's Health Hospital, located approximately 10,200 feet southeast of the Site.

Residential Areas:
The closest residential neighborhoods are located to the north (1,000 feet) and northwest (100 feet).

Rivers / Streams / Lakes:
Onondaga Lake is located about 750 feet to the south. Ley Creek flows through the area approximately 1,250 feet east of the site and east of the Interstate 81 corridor, discharging into the northeastern corner of the lake.

Wetlands:
No mapped wetlands are identified on the Site. The closest NYSDEC-mapped wetlands (per NYSDEC Environmental Resource Mapper) are located to the east of the southbound exit ramp of Interstate Route 81, east of the site. This wetland extends to the east and northeast, beyond Interstate Route 81. Another large wetland area is mapped to the east, in the area occupied by the existing NBT Bank Stadium, Byrne Dairy cold storage facility, and Regional Transportation Center. In addition, much of the area south of Park Street and Onondaga Lake Parkway, adjacent to Onondaga Lake, are mapped as wetlands by NYSDEC.

Several off-site wetlands are also mapped on the National Wetlands Inventory. These include the areas along and including Ley Creek (classified as R2UBHx), Onondaga Lake (classified as L1UBH), and two small freshwater ponds located along the north shore of Onondaga Lake, along Onondaga Lake Parkway, west of the site. These two freshwater ponds are classified as PUBHh.

In preparation for the ongoing redevelopment, a wetland delineation was conducted at the Site in 2020 by Delta Engineers, Architects, Land Surveyors & Landscape Architecture, D.P.C. (Delta). The delineation report is included in **Appendix C**. The delineation identified three small wetlands within the eastern portion of the Site, measuring approximately 0.35, 0.45, and 0.26 acres, respectively. A portion of the 0.45-acre wetland, located east of Building "D" as depicted on Figure 2, is visible in historical aerial photographs as an area of open water. No apparent surface-water connections to intermittent or perennial streams or other wetlands were identified. The delineated wetlands were not identified as being associated with mapped NYSDEC freshwater wetlands. On January 29, 2021, the U.S. Army Corps of Engineers, Buffalo District, issued an Approved Jurisdictional Determination concluding that the identified aquatic features were excluded from federal jurisdiction under the Clean Water Act. Accordingly, a federal permit under Section 404 of the Clean Water Act was not required for filling or modification of the identified features at the time of the determination. A copy of the Approved Jurisdictional Determination is also included in **Appendix C**.

The proposed project was subjected to review under the State Environmental Quality Review (SEQR) Act and a Negative Declaration was issued by the lead agency, the Town of Salina, on January 27, 2023. Pursuant to 6NYCRR Part 664, Section 664.1, Subsection (d), NYSDEC wetland regulations enacted in January 2025 are not applicable since the SEQR Negative Declaration pre-dated January 1, 2025. Copies of the SEQR Declaration are contained in **Appendix C**.

2. DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

The Site was investigated in accordance with the scope of work presented in the NYSDEC-approved RIWP dated July 2022 and approved by NYSDEC on August 16, 2022. The investigation was conducted between August 23, 2022 and April 13, 2023. The RI report was submitted to NYSDEC on July 12, 2024.

2.1 Summary of Remedial Investigations Performed

The scope of the RI aimed to assess the nature and extent of site contamination and included:

- Collection and laboratory analysis of 22 surface soil samples and six shallow subsurface samples (within upper 24 inches of soil) from three locations;
- Advancement of 28 soil borings and collection of 60 subsurface soil samples, including 25 samples of HFM, 20 samples of shallow native soil below the HFM, six samples of native soil from deeper depths, and nine samples of soil in the vicinity of the transformer building;
- Installation and development of 14 groundwater monitoring wells and performance of two rounds of groundwater sampling;
- Collection of seven sub-slab soil vapor samples from existing buildings 3B, 4A, 4C, 5 (two samples), 6, and 7, and three soil vapor samples at points near the perimeter of the site;
- Collection of quality assurance/control samples per the Quality Assurance Program Plan (QAPP); and
- Laboratory analysis of the samples for various contaminants, including VOCs, SVOCs, pesticides, PCBs, PFAS, 1,4-dioxane, and metals.

2.1.1 Surface Soil Characterization

Surface soil samples were collected across the Site to facilitate the characterization of the shallow soils in areas that are not proposed to be "capped" by pavement or buildings in final development. Twenty-two surface soil samples were collected and analyzed as shown on **Figure 3A**.

A steel shovel was used to remove the overlying turf, as necessary. The exposed soil located zero to two inches below the root zone was collected using a stainless-steel hand shovel. All non-disposable sampling equipment was decontaminated with an

Alconox®/water mixture (or similar) and a water rinse between sample locations to avoid potential cross contamination of samples.

Soil from each location was screened in the field for obvious visible impairment, olfactory indications of impairment, evidence of non-aqueous phase liquids (NAPLs), and/or indication of detectable volatile organic vapors (VOVs) with a photoionization detector (PID), collectively referred to as "evidence of impairment".

Three surface soil locations along the western edge of the Site did not contain contaminant concentrations above the applicable Restricted Residential SCOs in the upper two inches of soil. As a result, an additional sampling event was completed at these locations, as provided in the RIWP. This additional sampling included the collection of discrete-depth soil samples at 12 and 24 inches below grade, to more fully characterize the upper two feet of soil in this area and to evaluate the need for soil removal or installation of a cover system. The additional six samples were analyzed for the full list of analytes presented above. None of the compounds included in the analyses were detected in the 12-inch or 24-inch depth samples at concentrations above the corresponding Restricted Residential SCOs.

The surface soil sampling identified:

- SVOCs (specifically PAHs) and metals (including arsenic, manganese, and mercury) associated with the HFM deposited across the eastern portion of the Site. These locations are also consistent with where HFM contains similar contaminants. In these areas, the HFM is generally present at the surface.

The locations and magnitude of surface soil exceedances are depicted on **Figure 3B**.

2.1.2 Test Pits

Sixteen test pits were advanced during the RI, with the primary purpose being to qualitatively define the nature and the lateral and vertical distribution of existing HFM on the Site. Tests pits were advanced to the vertical extent of the HFM as allowed by the field conditions, such as the stability of the test pit walls, the influence and elevations of groundwater within the test pits, and/or the extent of the excavator reach. Excavation equipment used for the test pits had a minimum reach of eight feet to extend below the depth at which HFM was observed during prior test pit excavations. **Figure 4A** depicts the locations of the test pits advanced during this RI.

As the test pits were excavated, the exposed soil/HFM were classified with respect to predominant soil types, texture, and relative moisture content; examined for non-soil components/artifacts indicative of fill material; examined for visible staining or obvious odors suggestive of impact by petroleum products or other contaminants; and field screened with a portable PID, to document whether VOCs were released from the soil.

The PID screening was performed by headspace analysis methods, by placing a representative portion of the soil sample into a re-sealable plastic bag and monitoring the airspace surrounding the soil within the bag as the soil was agitated to promote the release of VOCs.

The conditions observed during the test pit excavations was used in conjunction with the observations from the soil borings to determine the areal distribution of HFM.

2.1.3 Soil Borings

Soil borings were advanced at 28 locations across the Site to facilitate the sampling of HFM and native material. The soil borings were positioned to ensure complete coverage of the Site. Soil boring locations are shown on **Figure 4A**.

- 19 of the 28 soil borings were advanced to assess shallow HFM and native soil conditions across the Site. These borings were advanced into native material, up to a depth of 16 feet below ground surface (bgs).
- Six soil borings were advanced to a maximum depth of 40 feet bgs to assess conditions deeper in the native material.
- Three boring locations were advanced to 5 feet bgs within the area of the former transformer shed near the west side of Building 6 to assess the depths of PCB impacts to the subsurface soils in this area.

Bedrock was not encountered during the soil boring advancement.

Exploration locations were located with a hand-held global positioning system (GPS).

From the borings, HFM and native soil samples were collected to document Site conditions. Soil sample collection was biased towards material horizons that exhibited gross characteristics, discoloration, and/or odors/vapors.

A direct-push drilling rig was used to advance the borings. Each boring location was continuously sampled in five-foot intervals using a two-inch by five-foot stainless steel sampling tube fitted with a disposable acetate liner. All non-disposable sampling equipment was decontaminated between runs and between drill locations to avoid potential cross contamination of samples.

Soils from the acetate liners were screened in the field for visible impairment (e.g. staining), olfactory indications of impairment, evidence of NAPLs, and/or indication of detectable VOCs over 10 parts per million (ppm) with a 10.6 eV PID. Such evidence is collectively referred to as “evidence of impairment”.

Soil boring logs were prepared and include soil description, PID readings, and other relevant observations.

The HFM and soil sampling identified:

- SVOCs (specifically PAHs) and metals (including arsenic, cadmium, chromium trivalent, copper, manganese, mercury, nickel, lead, selenium, silver, thallium, and zinc) associated with the HFM deposited across much of the Site. The PAHs are also present in the upper region of the native soil that underlies the fill deposits at limited, localized areas (near west side of Building 3B and on southeast portion of Site). The vertical migration into the native soil appears to be very limited, with no significant impacts noted in samples collected from the deeper portions of the native formation.

The locations and magnitude of HFM and soil exceedances are depicted on **Figure 4B**.

2.1.4 Groundwater Monitoring Wells

To characterize groundwater conditions at the Site, 14 groundwater monitoring wells were installed, as shown in **Figure 6A**. A rotary drill was used to advance 4-1/4-inch hollow stem augers. The augers and drilling rods were decontaminated prior to use via high pressure sprayer. Between each well location, decontamination procedures were repeated.

The overburden wells were constructed to intersect the top of the water table. Each well was completed with 10 to 15 feet of 2-inch Schedule 40 polyvinyl chloride (PVC) well screen with 0.010-slot slot size connected to an appropriate length of Schedule 40 PVC well riser to complete the well. The annulus was filled with quartz sand to approximately two feet above the screened section, and one to two feet of hydrated bentonite chips or pellets above the sand. The remaining annulus was grouted to ground surface. Each well was completed with a flush-mount or above-grade protective casing.

At least 24 hours following installation, the monitoring wells were developed through the removal of up to ten well volumes using a peristaltic pump to document stabilization of water quality. The effluent was monitored for pH, temperature, dissolved oxygen, conductivity, oxidation / reduction potential, and turbidity.

Seven days following development, groundwater sampling was conducted using low-low purging and sampling techniques. Before purging the well, water levels were measured using an electric water level sounder capable of measuring to the 0.01-foot accuracy. Peristaltic pumps using manufacturer-specified tubing were used for purging and sampling groundwater. Sampling protocol and equipment complied with the most

current version of NYSDEC's "*Groundwater Sampling for Emerging Contaminants*" guidance. In addition, calibration, purging and sampling procedures were performed as specified by the United States Environmental Protection Agency (USEPA)[1] guidance for low-flow sampling. Decontamination was conducted after each well was sampled to reduce the likelihood of cross contamination. Calibration times, purging volumes, water levels and field measurements were recorded on field logs.

The groundwater sampling identified:

- PAHs at concentrations exceeding the respective NYSDEC Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1) standards. The PAH exceedances were identified in 13 of the 14 samples collected.

- Naturally occurring metals, primarily iron, magnesium, and manganese and secondarily, aluminum were identified in filtered and unfiltered samples collected from all 14 monitoring wells exceeding the NYSDEC TOGS 1.1.1 standards. These compounds are common in groundwater throughout the northeastern United States. During the first round of groundwater sampling, aluminum was detected in the northern upgradient monitoring well.

- Dieldrin (an organochlorine pesticide) was identified during one event in one sample collected from the eastern portion of the Site at a concentration exceeding the NYSDEC TOGS1.1.1 standard.

- PFAS were identified in samples collected from 11 of the 14 samples collected from the monitoring wells. Seven of the samples collected contained concentrations exceeding the NYSDEC PFAS guidance values. The concentrations of PFAS identified in the samples were generally consistent across the Site and between sampling events and is therefore believed to be representative of an area-wide rather than a site-specific condition.

The locations and magnitude of groundwater exceedances are depicted on **Figures 6B, 6C, 6D,** and **6E**.

2.1.5 Soil Vapor/Air Sampling

A total of 12 soil vapor samples were collected throughout the Site, including seven sub-slab soil vapor samples, three soil vapor samples, and two outdoor air samples. The sample locations are depicted on **Figure 7A**.

[1] USEPA Low Stress (low-flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, September 19, 2017.

Indoor air samples were not collected since the existing buildings were exposed to the elements. The sub-slab soil vapor samples were collected from Buildings 3B, 4A, 4C, 5 (two samples), 6 and 7. Sub-slab samples from Buildings 1, 2, 3A, and 4B could not be collected due to the water table being present immediately beneath the concrete slab. Soil vapor samples were collected from two locations on the western portion of the Site, and at one location on the east central portion of the Site. Soil vapor samples could not be collected from the northern, eastern or southern portions of the Site due to high water table.

The sub-slab vapor and soil vapor sampling identified:

- The soil vapor samples collected within the sub-slab soils of Building 6 (sample SSV-106) and Building 7 (SSV-07) contained TCE at concentrations of 36 µg/m^3 and 6.2 µg/m^3, respectively. PCE was also detected at a concentrations of 1.1 µg/m^3 in the Building 6 and 1.4 µg/m^3 in the Building 7 sub-slab vapor sample.

- Relatively low concentrations of TCE were also detected within sub-slab vapor samples collected from Buildings 3B (1.7 µg/m^3), 4A (1.7 µg/m^3), and 5 (0.75 to 0.86 µg/m^3). PCE was also detected at a concentration of 6 µg/m^3 in the sub-slab vapor samples from Building 3B.

- A relatively low concentration of TCE was detected within a soil vapor sample collected from the northwestern edge of the property (1.3 µg/m^3), and a relatively low concentration of PCE was detected within a soil vapor sample collected from the eastern of the property (0.75 µg/m^3).

The locations and magnitude of soil vapor compounds are depicted on **Figure 7B**.

2.1.6 Samples Collected

The following samples were collected for laboratory analysis during the RI:

- 22 surface soil samples (collected at 0-2 inches below any vegetative layer, if present);

- Six shallow subsurface soil samples (collected between 2 and 24 inches below grade);

- 60 subsurface soil samples, including 25 collected from zones containing HFM, 20 from shallow native soil directly beneath the HFM, and six from deep native soil, and nine from the vicinity of the transformer building;

- 28 groundwater samples, representing two separate sampling events

encompassing 14 monitoring wells;

- Seven sub-slab soil vapor samples from beneath the foundations of certain existing buildings;
- Three soil vapor samples; and
- Appropriate QA / QC samples.

Attached **Figures 3** through **7** and **Tables 1** through **6** summarize the RI results for each medium investigated.

2.1.7 Chemical Analytical Work Performed

Samples of surface soil, shallow subsurface soil, HFM, native soil, groundwater, soil vapor, and sub-slab soil vapor were collected and subjected to laboratory analyses during the RI. Attached **Table 1** provides a summary of all chemical analytical work performed during the RI.

2.1.8 Best Management Practices

The following Best Management Practices (BMPs) were implemented during the RI to reduce the environmental footprint of the work:

- **Minimize Mobilizations** – C&S staff and the drilling subcontractor scheduled work to minimize mobilizations.
- **No Idling of Equipment** – Equipment was shut down when idle (not actively in use).
- **On-site Waste Recycling** – If soil cuttings do not exhibit evidence of contamination were put back in place. Soil cuttings generated during monitoring well installation were stockpiled appropriately on-site and will be re-used under the anticipated cover system, if waste characterization results allow.
- **Waste Storage Containers** – Cleaned, reclaimed 5-gallon buckets and 55-gallon drums were used for the collection, transport, and storage of sampling wastes. The re-use of containers decreases the generation of waste.
- **Sustainable Laboratory Practices** –C&S utilized a lab courier service, rather than making trips directly to the lab. C&S also utilized a laboratory that implements the following sustainable practices:
    - Recycles paper products and shipping materials.

- Uses energy-efficient lighting and other equipment.
- Maintains a paperless reporting and invoicing program.
- Minimizes waste through use of EPA-approved microscale methods.

- **Monitoring Equipment** – Rechargeable battery-powered field equipment, including PIDs, DusTrak real-time particulate monitors, Tharmis Antenna, peristaltic pumps, were charged at C&S' facility. C&S' facility is equipped with roof-mounted solar panels to produce green energy. On average, approximately 26% of the electricity used at the facility is generated on-site through use of solar panels. This practice reduces the load on the electrical grid and allow for the use of renewable sources of energy.

2.1.9 Documentation

Attached **Tables 1** through **6** include summaries of the analytical data. Sample locations are presented on **Figures 3** through **7**.

2.2 Significant Threat

A significant threat determination to human health and the environment has not yet been made. Upon determination, notice will be provided for public review.

2.3 Site History

2.3.1 Past Uses and Ownership

The Site was purchased by the current owner of record, UR-ban Villages, PFA, LLC, on June 21, 2021. This acquisition was from a related entity, PDM Estates, LLC. PDM Estates, LLC had acquired the Site in April 2021 from Syracuse Gateway Holdings, LLC.

The historic ownership of the Site is summarized in **Table 2-1**.

Table 2-1: Historical Site Owners

Owner of Record	Period of Ownership
UR-ban Villages PFA, LLC	June 21, 2021 to Present
PDM Estates, LLC	April 7, 2021 to June 21, 2021
Syracuse Gateway Holdings, LLC, c/o Syracuse Gateway Holdings Canada, Inc.	September 24, 2010 to April 7, 2021
Will & Baumer, Inc.	April 4, 1984 to September 24, 2010
W & F Mfg. Co., Inc.	March 30, 1984 to April 4, 1984
Onondaga County Industrial Development Agency	March 28, 1980 to March 30, 1984
W & F Mfg. Co., Inc.	March 2, 1979 to March 28, 1980

Owner of Record	Period of Ownership
Syracuse China Company (in interest to Will & Baumer Candle Co., Inc. by merger)	March 26, 1976 (merger) to March 2, 1979
The Will & Baumer Co. (name changed to Will & Baumer Candle Co., Inc. on January 25, 1963)	March 29, 1904 to March 26, 1976
Louis & Augusta Will and Anthony & Matilda Will	Prior to March 29, 1904

Available historic records indicate that the first development of the Site occurred between 1904 and 1911 when many of the existing structures were constructed by The Will & Baumer Co. Since its first development and continuing until 2010, the Site was used as a beeswax and candle manufacturing facility by Will & Baumer (and its predecessors and successors). Will & Baumer ceased operations there in 2010.

The facility included various buildings housing offices, wax melting, pressing, and molding areas, a laboratory, press and pan rooms, multiple sheds, a digester house, a still house, a storage room, a machine shop, bleach houses, an oil house, and packaging areas. A rail line extended from the northeast to the southeast corners of the parcel, traversing the eastern portion of the site. Several railroad spurs operated in this area from at least 1911 until 1990, situated between the former boiler house and a storage building located at the southeast corner.

Historic maps indicate that up to eleven ASTs existed to the north and east of the former storage building, containing substances such as grease, oil, tar, and acid. Additionally, a fuel oil storage tank was located near the southeast corner of the boiler house.

Will & Baumer ceased operations in 2010. Historic city directories show that CNY Logistics and Light Four Life Candles, LLC was present at the site address (100 Buckley Road) in 2014, with Light Four Life Candles, LLC also listed in 2018. These entities are believed to have been lessees under Syracuse Gateway Holdings, LLC. Aside from one building used as an office furniture warehouse, the site was vacant when acquired by UR-ban Villages PFA, LLC. The furniture warehouse became vacant prior to the start of site redevelopment activities.

The Site now contains ten former industrial buildings associated with Will & Baumer Candle Co., Inc. One building was demolished by the current owner in 2023. These structures are primarily located in the western two-thirds of the parcel, while the eastern portion, which once housed rail lines and storage tanks, is now mostly open space. Currently, only one building has been converted into an indoor sports complex, and no further demolitions are planned at this time.

2.3.2 Phase I and Phase II Reports

LaBella Phase I ESA Report – April 2020

The April 2020 Phase I ESA by LaBella identified the following recognized environmental conditions (RECs):

- **Historic Operations and Regulatory Listings:** Historical records indicate that Will & Baumer operated as a candle manufacturing facility from at least 1911 until approximately 2010. The site included offices, manufacturing areas, and various storage tanks, with several tanks identified in the southeastern portions of the site. Railroad spurs existed from at least 1911 to 1990.

- **Historic Hazardous Waste Generation:** Records reviewed by LaBella for the 2020 Phase I ESA revealed hazardous waste generation at the site from at least 1982 to 2010. Generated wastes included spent non-halogenated solvents, ignitable and corrosive wastes, chromium, methyl ethyl ketone, lead, benzene, chloroform, spent halogenated solvents, mercury, and cresol.

- **Historic Petroleum Storage and Use:** Regulatory listings identified four former ASTs containing fuel oil, one containing gasoline, and a chemical AST of unknown contents, all of which had been removed as of the date of the ESA.

- **Past Documented Petroleum Spill:** An inactive NYSDEC spill (Spill #9200872) indicates contamination from No. 6 fuel oil found during the decommissioning of former ASTs, though no further information is available regarding this incident.

- **Unknown Drums:** Six 55-gallon drums, suspected to contain soil, were found north of Building #7, with three tipped over and spilling their contents. The origin and nature of this material remain unknown.

LaBella Phase II ESA – May 2020

The Phase II ESA aimed to assess environmental conditions and address issues identified in the Phase I ESA. The investigation, conducted in accordance with ASTM E1903-19, included:

- A geophysical survey.

- A subsurface investigation with 21 direct-push soil borings and seven temporary groundwater monitoring wells.

- Collection and laboratory analysis of subsurface soil and groundwater samples.

The geophysical survey was limited to confirming the absence of subsurface utilities at the boring locations.

The investigation yielded the following findings:

- **Soil and Groundwater Sampling:** Petroleum odors were noted in two soil borings, with elevated PID readings observed. HFM was present in the upper five feet of soil at most locations.
- **Contaminants Detected:** The principal contaminants included VOCs, SVOCs (especially PAHs), and metals, with specific findings as follows:
    - Acetone and other aromatic VOCs were detected above Unrestricted Use SCOs in several samples.
    - SVOCs were found at concentrations below Unrestricted Use SCOs at various sampling locations.
    - Lead concentrations exceeded Unrestricted Use SCOs in two samples.
    - Groundwater samples revealed acetone and various SVOCs exceeding groundwater standards, though findings indicated that detections may not represent actual groundwater conditions.

C&S Supplemental Historic Fill Investigation – June 2021

The conditions observed in the LaBella Phase II ESA prompted a supplemental investigation by C&S to assess HFM quality and potential contaminants. This investigation involved:

- Advancing 16 test pits across the eastern portion of the site.
- Collecting surface soil samples near a former transformer house and where former rail spurs traversed the site.
- Laboratory analysis of fill and surface soil samples.
- The investigation revealed HFM in all test pits, containing materials like concrete, ash, and metal debris, with elevated PID readings noted.
- Principal contaminants detected included:
    - SVOCs exceeding Industrial SCOs in surface and test pit samples.
    - PCBs above Unrestricted Use SCOs in surface soil.

- Pesticides detected at concentrations exceeding Unrestricted Use SCOs.
- Metals exceeding Unrestricted Use SCOs in various samples.

The analytical results from the Supplemental Historic Fill Investigation are summarized in **Tables 7** through **10**.

2.3.3 Sanborn Maps and Historic Facility Drawings

All Sanborn Maps available for this Site were reviewed prior to preparation of the RAWP. Historic Fire Insurance Maps (Sanborn Maps) documenting site development in 1911, 1928, 1942, 1950, 1953, 1968, 1969, 1970, 1971, and 1990 are available for the Site. **Table 2-2** provides a summary of the Sanborn Map review.

Table 2-2: Sanborn Map Review

Year	Site Observations
1911	The Site was developed with the majority of the Site Buildings and appears to have been occupied by The Will and Baumer Co. Greenpoint Works Bees Wax and Candle Manufacturers. The site included offices, a candle factory, a laboratory, a press and pan rooms, multiple sheds, a digester house, still house, a store room, a machine shop, a bleach house, an oil house, and packaging and decorating areas. Multiple grease and oil tanks as well as an acid tank are visible on the southeastern portion of the Site. A bleaching yard is located on the northwestern portion of the Site. Railroad spurs run between the site buildings on the eastern portion of the Site running north and south.
1928	The Site conditions appear to have been similar to those depicted on the 1911 map with the addition of a beeswax bleach house on the northwestern portion where the bleaching yard was previously located. A fuel oil tank is located south of the railroad spurs in the 1953 map. It appears that additional grease and oil tanks are located on the southeastern portion of the Site.
1942, 1950, and1953	The Site conditions appear to have been similar to those depicted on the previous maps with the addition of a beeswax bleach house on the northwestern portion where the bleaching yard was previously located. A fuel oil tank is located south of the railroad spurs in the 1953 map. It appears that additional grease and oil tanks are located on the southeastern portion of the Site.
1968	The Site conditions appear to have been similar to those depicted on the previous maps with the exception of the bleach house appears to have been replaced with a smaller bleach house building.
1969, 1970, 1971 and 1990	The Site conditions appear to have been similar to those depicted on the previous maps with less tanks on the southwestern portion of the Site. A storage area is now present on the northern portion of the Site. The Site includes offices, machine dipping, packaging, a bleach house, a pipe shop, reclaiming areas, staging areas, melting areas, and a factory area.

In addition to the historic Fire Insurance Maps, historic facility drawings documenting site conditions in 1951, 1987, and 1989 are available for the Site. **Table** 2-3 provides a summary of the historic facility drawing review.

Table 2-3: Historic Facility Drawing Review

Year	Site Observations
1951	The drawing is entitled *Will & Baumer Candle So., Inc. et al, Syracuse & Salina, Factory Insurance Association, June 13, 1951*. The drawing shows nearby roadways, including Park Street, Buckley Road, Liverpool Road, and Onondaga Lake Parkway in the same general locations as current conditions. The drawing also depicts Spring Street traversing the southern section of the Site in a northwest to southeast orientation. The drawing depicts the presence of current buildings 1, 2 3A, 3B, 4A, 6, and 7. In addition, a building had previously adjoined the north side of Building 7, and another building had adjoined the south side of Building 7. These buildings were not labeled on the drawing and, as such, their purpose is unclear. A 10,000-gallon aboveground fuel oil tank is identified to the southeast of current Building 7. Another structure is positioned east of current Building 7 and three storage tanks are depicted just east of that building; the storage tanks are labeled as "old tanks". The building that coincides with the present location of Building 4A is identified as a "bleach house". Current building 6 was identified as a "machine shop". Another L-shaped building had existed to the northeast of current Building 6; a portion of this building may represent the structure that was demolished in 2023. A large structure was also present south of current Building 6 and east of current Buildings 1 and 2, and another was present at the southern edge of the site, along Park Street. A rail line entered the southeast corner of the site and extends along the eastern side of current Buildings 1 and 2. Another rail line entered the southeast side of the site and extends along the eastern side of current Building 7. There are several other rail spurs in this area as well.

Year	Site Observations
1987	The drawing is entitled *Will & Baumer Candle Co., Inc., Syracuse and Town of Salina, Industrial Risk Insurer, September 9, 1987*. The drawing shows nearby roadways, including Buckley Road, Liverpool Road, and Onondaga Lake Parkway, and the Interstate 81 off ramp east of the site, in the same general locations as current conditions. The Site is developed with 11 buildings including the ten that remain at the present time and the one that was demolished by UR-ban Villages PFA, LLC in 2023. The nature and use of the buildings are not identified on the drawing. The drawing depicts what is inferred to be the configuration of the facility's fire water distribution network. In addition to these buildings, a small shed labelled as "waste drums shed" was positioned to the east of current Building 6, a small unlabeled shed was positioned south of current Building 1, at the main point of access from Buckley Road; a small building as labeled "meter" was positioned at the southeastern edge of the site; and three storage tanks labeled as "empty" were positioned at the eastern edge of the site, east of current Building 7. A small structure labeled as "lacquer stge shed" was positioned west of the storage tanks and southeast of current Building 7. Two rectangular shapes labelled as "20,000" are present between current Building 4C and the building that was demolished in 2023. These coincide with the location of two aboveground wax storage tanks that were dismantled when the building was demolished in 2023.
1989	The drawing is entitled *Will & Baumer Candle Co., Inc., Plant Layout, April 24, 1989*. The drawing shows nearby roadways, including Buckley Road, Liverpool Road, and Onondaga Lake Parkway in the same general locations as current conditions. The Site is developed with 11 buildings including the ten that remain at the present time and the one that was demolished by UR-ban Villages PFA, LLC in 2023. The buildings are identified as Building 1, Main Office (current Building 1); Building 13, Candle Plant (current Building 2); Building 14, Package (current Building 3A); Building 15, Vassar (current Building 3B); Building 19, Extruder (east end of current Building 3B); Building 16, Quonset (current Building 4A); Buildings 20 and 18, Glass Lights (current Building 4B); Building 17, B.W. Storage (current Building 4C); Building 21, Warehouse (current Building 5); Building 3, Maintenance (current Building 6); Building 7, Boiler (current Building 7); and Building 12, Bleach (building demolished in 2023). In addition to these buildings, a small shed was positioned to the east of current Building 6; a small guard shack was positioned south of current Building 1, at the main point of access from Buckley Road; a small building labeled as "water" was positioned at the southeastern edge of the site; and three storage tanks were positioned at the eastern edge of the site, east of current Building 7. A rectangular shape is noted near the southeast corner of the boiler building, where other historical information indicates that a 10,000-gallon aboveground fuel oil storage tank previously existed. Parking areas are present south of current Building 6, on the southern edge of the site, and west of current Building 2.

Copies of the Sanborn maps and historic facility drawings are contained in **Appendix D.**

2.4 Geologic and Hydrogeologic Conditions

2.4.1 Topography

The overall topography of the site and immediately surrounding area slopes generally toward the east and southeast, in the direction of Interstate Route 81 and Onondaga Lake, respectively. The highest point on the subject property is located near the central west border, where the surface elevation is approximately 402 feet above mean sea level (amsl). The surface elevation near the northwestern corner in 376 feet amsl. The surface elevation along the eastern side and at the southeast corner of the site is at 369 feet amsl. The topographic relief is much more pronounced on the western edges of the site than elsewhere. Along the western side, slopes range from approximately 8 to 30 percent. Slopes on the remainder of the property average 1 to 2 percent.

Onondaga Lake is located about 750 feet south of the Site. Ley Creek flows through the area approximately 1,250 feet east of the site and east of the Interstate 81 corridor, discharging into the northeastern corner of the lake. The lake receives roughly 70% of its inflow from Ninemile and Onondaga Creeks, which enter from the southwest and southeast, respectively. Around 20% of the lake's inflow comes from treated wastewater discharged by the Onondaga County municipal wastewater treatment system. The lake drains at its northern end into the Seneca River, which meanders northwesterly to join the Oneida River about 6.5 miles northwest of the lake. The Oswego River, formed by the confluence of the Seneca and Oneida Rivers, continues northwesterly for approximately 23 miles before emptying into Lake Ontario at the City of Oswego.

2.4.2 Geology

According to the Surficial Geology Map of New York, Finger Lakes Sheet (Muller and Cadwell, 1986), the overburden materials in the vicinity consist of lacustrine silt and clay. This material is described as "generally laminated clay and silt deposited in pro-glacial lakes," typically calcareous, with variable thickness (up to 50 meters).

The Remedial Investigation and prior field investigations revealed that the majority of the site contains HFM, with observed thicknesses of up to approximately nine feet. 6 NYCRR Part 375 defines historic fill material as: *non-indigenous or non-native material, historically deposited or disposed in the general area of, or on, a site to create useable land by filling water bodies, wetlands or topographic depressions, which is in no way connected with the subsequent operations at the location of the emplacement, and which was contaminated prior to emplacement*. The HFM at the site contains gravel, sand, silt, brick, ash, metal, glass, and coal. Beneath this fill material, native soil consists of gray and brown silt and clay, consistent with the deposits described in the regional geological mapping.

The Geologic Map of New York, Finger Lakes Sheet (Rickard and Fisher, 1970), identifies the local bedrock beneath and around the site as shale and dolostone of the Vernon Formation.

Bedrock was not encountered during the Remedial Investigation; however, it was located at an approximate depth of 70 feet below existing grade during the installation of several geothermal wells at the site in 2024.

The locations and depths of HFM at the Site are shown on **Figure 5**. Geologic cross sections are shown in **Appendix E**.

2.4.3 Hydrogeology

During the RI, groundwater was encountered from depths of less than a foot to approximately 10 feet below grade. **Table 2-4** presents water level measurement and groundwater flow maps are shown in **Figure 8a** and **Figure 8b**. Groundwater contours were generally the same across the two sampling events and indicate a generally eastern to southeastern flow direction. Generally, the groundwater table was approximately 0.5 feet higher in December as compared to October, due to October being a drier month than December.

Table 2-4: Groundwater Elevations

Well No.	Ground Elevation (ft AMSL)	*Riser Elevation (ft AMSL)*	Depth (ft BGS)	Elevation (ft AMSL)	Depth (ft BGS)	Elevation (ft AMSL)
Date	--	--	***October 2022***		***December 2022***	
MW-101	380.57	383.63	13.37	370.26	13.20	372.06
MW-102	372.28	375.26	4.68	370.58	4.53	370.73
MW-103	369.72	372.80	4.15	368.65	3.76	369.04
MW-104	370.32	373.85	5.02	368.83	4.56	369.29
MW-105	369.86	371.91	2.26	369.65	1.68	370.23
MW-106	371.99	371.37	1.21	370.16	0.95	370.42
MW-107	372.97	372.49	3.73	368.76	4.42	368.07
MW-108	370.16	373.03	4.46	368.39	4.54	368.49
MW-109	369.65	371.93	3.91	368.21	3.84	368.09
MW-110	370.64	373.36	5.41	367.95	5.40	367.96
MW-111	369.78	372.48	2.55	369.93	2.33	370.15
MW-112	372.28	374.95	5.48	369.47	5.07	369.88
MW-113	375.10	374.79	4.68	370.08	6.34	368.45
MW-114	376.91	376.63	6.48	370.15	4.57	372.06

- Elevations tied to North American Vertical Datum (NAVD) 88.
- All units in feet.
- BGS – Below ground surface
- AMSL – Above mean sea level

2.5 Contamination Conditions

2.5.1 Conceptual Model of Site Contamination

The Site, located on the southern edge of the Town of Salina, is a former industrial property historically used as a beeswax and candle manufacturing facility. The Site is now vacant and contains ten former industrial buildings associated with Will & Baumer Candle Co., Inc. One building was demolished by the current owner in 2023. The Volunteer is in the process of restoring the existing buildings and redeveloping the Site into a mixed-use multi-family / commercial site. The redeveloped Site will house approximately 250 apartment units, indoor and covered parking, Site offices, recreational facilities, a banquet house, a brew house, and common areas. Building 1 has been completely renovated and is currently occupied by residential tenants (circa Fall 2025), prior to any remedial actions being implemented.

2.5.1.1 Contaminant Sources and Affected Media

The source of contamination is defined as either the source of contaminant release to the environment (such as a waste disposal area or point of discharge) or the impacted environmental medium (soil, air, biota, water) at the point of exposure. The contaminant sources and affected media associated with Site-related contaminants include:

- PAHs and metals inherent to and distributed throughout the HFM that has been deposited across much of the property during past development and operations. Some of the PAHs appear to have impacted the upper regions of the native soil that exists beneath the fill layer in certain localized areas, limited to near the western side of the Site and on the southeastern portion of the Site.

- Low levels of PAHs present in the groundwater beneath portions of the Site. While PAHs typically have low solubility and are often adhered to soil particles rather than being present in a dissolved phase, the filtered groundwater samples indicate there may be some mobility of these PAHs from the HFM into the upper portion of the native soil and into groundwater.

- VOCs (particularly TCE) present in vadose-zone soil vapor beneath certain building slabs. No concentrated contaminant mass was identified in soil, and no significant groundwater contamination by VOCs was identified during the RI.

2.5.1.2 Contaminant Release and Transport Mechanisms

Contaminant release and transport mechanisms carry contaminants from the source to points where people may be exposed and are specific to the type of contaminant and Site use. No on-going or potential releases of identified Site contaminants have been identified at the Site.

Potential transport mechanisms for PAHs and metals associated with HFM and surface soil include:

- Erosion and transport of soil / fill with adsorbed PAHs and metals via surface / storm water runoff; and
- Migration of airborne particulate / dust due to on-site traffic and during ground-intrusive construction activities.

These transport mechanisms can typically be managed during site construction through the implementation of sound erosion and sediment control practices, dust mitigation and control techniques, and community air monitoring activities. These transport mechanisms would be managed in the long-term (post remediation and construction) through the installation and maintenance of a suitable Site cover system.

Potential transport mechanisms for vapor-phase VOCs in the vadose zone would include:

- Vapor intrusion into renovated buildings or future buildings constructed on the Site; and
- Potential vapor migration through the unsaturated vadose zone to nearby properties.

The potential for migration of the vapor-phase VOCs into on-Site buildings can be mitigated through the installation of vapor mitigation (sub-slab depressurization systems) and indoor air texting in existing and future buildings prior to occupancy. Buildings that will contain indoor / enclosed garages in the lowest (ground-contact) levels can be equipped with mechanical ventilation systems that remove vapors prior to their entry into occupied spaces of those buildings.

The data collected during the Remedial Investigation does not indicate that significant off-Site migration of vapor-phase VOCs is occurring.

2.5.1.3 Potential Exposure Points

The point of exposure is a location where actual or potential human contact with a contaminated medium may occur. Under the current use scenario, potential exposure points include:

- Areas where surface soil, HFM, shallow native soil, or groundwater with the identified Site contaminants are present. Under the current use scenario, this may include workers involved with Site remediation and Site-Construction activities, Site visitors, and trespassers. Under future use scenarios, this may include Site

tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers (if not mitigated).

- Areas where contaminants present in the surface soil and HFM have been transported through erosion and overland flow of storm water. Under the current use scenario, this may include workers involved with Site remediation and Site-Construction activities, Site visitors, and trespassers. Under future use scenarios, this may include Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers (if not mitigated).

- Inside buildings where sub-slab soil vapors with elevated concentrations of VOCs may enter the building and affect indoor air quality. Under the current use scenario, this may include workers involved with Site remediation and Site-Construction activities, Site visitors, and trespassers. Under future use scenarios, this may include Site tenants; visitors; property management staff; maintenance and construction staff; outside building maintenance contractors; and other building occupants (if not mitigated).

2.5.1.4 Routes of Exposure

The route of exposure is the manner in which a contaminant actually enters or contacts the body (i.e., ingestion, inhalation, dermal absorption). Based on the types of receptors and points of exposure identified above, potential routes of exposure are listed below:

- Dermal or Direct Contact – This route of exposure involves direct dermal contact or introduction of affected media (soil particles, groundwater) into the eyes or other mucous membranes. Under the current use scenario, workers involved with Site remediation and Site-Construction activities, Site visitors, trespassers, and may be affected through this route of exposure. Under future use scenarios, Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers may be affected by this route of exposure if not mitigated.

- Inhalation – This route of exposure involves direct inhalation of airborne contaminants. This can include vapor-phase VOCs and contaminated airborne particulates and respirable dust. Under the current use scenario, workers involved with Site remediation and Site-Construction activities, Site visitors, trespassers, and persons present in near off-site (downwind) areas may be affected through this route of exposure. Under future use scenarios, Site tenants; visitors; maintenance, groundskeeping, and construction staff; utility workers and nearby persons may be affected by this route of exposure if not mitigated.

- Ingestion – This route of exposure involves direct ingestion of affected media (soil particles, groundwater) or accidental ingestion through eating food, chewing

gum, smoking, drinking, or other oral contact with items in the contaminated areas or with items that are cross-contaminated by poor hygiene practices. Under the current use scenario, workers involved with Site remediation and Site-Construction activities, Site visitors, trespassers, and may be affected through this route of exposure. Under future use scenarios, Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers may be affected by this route of exposure if not mitigated.

Groundwater is not considered a relevant mechanism for exposure due to the municipal water servicing the Site and requirement for an Environmental Easement that will restrict the use of groundwater. There is not a ban on groundwater use as a public drinking water supply in the Town of Salina. However, groundwater in the vicinity of the Site is not known to be utilized as a source of potable water.

2.5.1.5 Receptor Populations

Under current conditions, potential human receptors include persons performing construction work, current residents and visitors to the occupied residential Building 1 or recently renovated indoor sports complex Building 5, or persons trespassing on the Site; persons living and working in the area surrounding the Site; and persons involved in utility work on or adjacent to the Site. In addition, potential environmental receptors include wildlife living on and migrating through the Site (e.g., rodents, birds, etc.).

The planned future use of the Site is the development of mixed use commercial and residential buildings. The redevelopment of the Site will need to be controlled through the implementation of engineering and institutional controls under a Track 4 Restricted Residential cleanup.

2.5.1.6 Exposure Assessment

Potential exposure pathways exist, as described above, for workers involved with Site remediation and Site-Construction activities, Site visitors, and trespassers, under the current use scenario. Potential exposure pathways also exist, as described above, for Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers under future use scenarios, if the points of exposure, contaminant migration routes, and exposure pathways are not mitigated.

In most instances, these exposures can be readily mitigated in the short-term (current use and construction-phase work) through the use of personal protective equipment (PPE); proper soil / fill management during ground-intrusive activities; and implementation and adherence to a HASP and CAMP. In the long-term (future use scenario, post-remediation), these exposures can be mitigation through the implementation of institutional controls, including restrictions on use of groundwater,

environmental easements, and engineering controls, including suitable cover systems (asphalt / concrete /hardscape, buildings, and engineered soil cover system with visible demarcation barrier); and the installation and operation of vapor mitigation systems (sub-slab depressurization systems, indoor garage space mechanical ventilation systems), as necessary, within renovated existing and future buildings.

Groundwater is not considered a relevant mechanism for exposure due to the municipal water servicing the Site and requirement for an Environmental Easement that will restrict the use of groundwater. There is not a ban on groundwater use as a public drinking water supply in the Town of Salina. However, groundwater in the vicinity of the Site is not known to be utilized as a source of potable water.

2.5.2 Description of Areas of Concern

Three areas of concern have been identified at the Site and are summarized below:

1. Site-wide Historic Fill Material
    - Contaminant concentrations in surface and sub-surface soil exceeding the Restricted Residential Use SCOs were generally associated with HFM at the Site. Constituents in the HFM at concentrations that exceed the Restricted Residential Use SCOs include SVOCs and metals.

2. Black Wax Substance
    - During site construction activities in June 2024, a viscous black material was encountered in soil to the east of Building 6 and northwest of Building 7. This material exhibited no obvious odor or PID response. A grab sample of the material was collected and analyzed for VOCs, PCBs, and petroleum fingerprint/Identification. The VOC analysis identified low levels of ethylbenzene, 2-butanone, n-butylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, and trichloroethene in the material. Except for 2-butanone (also known as methyl ethyl ketone or MEK), the concentrations were below Unrestricted Use SCOs established in 6 NYCRR Part 375. 2-Butanone was present at a concentration of 1.8 mg/kg, above it's Unrestricted Use SCO of 0.1 mg/kg, but below its Restricted Residential SCO of 100 mg/kg. No PCBs were detected in the material. The petroleum fingerprint analysis determined that the chromatogram presented by the material did not match any petroleum reference standard. The material contained hydrocarbons eluting in the range between n-Tetradecane (C14) and n-Octacosane (C28). Paraffin wax is represented by compounds in the C20 to C28 range. Based on the lack of a petroleum hydrocarbon match, the range of elution, and its visual appearance, it is presumed that the material represents a wax-based byproduct of the historic candle-making processes at the Site.

3. Soil Vapor
    - Sub-slab vapor beneath Buildings 6 and 7 contain elevated levels of TCE and lesser concentrations of TCE. The TCE concentrations beneath these buildings are such that mitigation may be required based on NYSDOH Soil Vapor/Indoor Air Matrices (Matrix A). Soil vapor intrusion sampling has been conducted for occupied Building 1 (apartments), unoccupied Building 2 (apartments) and operational Building 5 (sporting complex). These sampling events involved the collection of both sub-slab and co-located indoor air samples. Additional soil vapor intrusion sampling will be completed for each building once renovations are completed, prior to their occupancy.

2.5.3 Identification of Standards, Criteria, and Guidance

The following Standards, Criteria, and Guidance (SCG) are applicable to the Site.:

- New York Codes, Rules, and regulations, Title 6 (6 NYCRR), Chapter IV, Subpart 375-6: *Remedial Program Soil Cleanup Objectives*, and *DEC CP-51 Soil Cleanup Guidance*, issued October 21, 2010.

- Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs.

- NYSDEC Technical and Operational Guidance Series (TOGS), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.

- 6 NYCRR Part 703, Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations.

- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

- NYSDOH *Trichloroethene (TCE) in Indoor Air and Outdoor Air*, August 2015 Fact Sheet.

- NYSDEC 6 NYCRR Part 371, Identification and Listing of Hazardous Wastes.

- NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation, May 2010.

- NYSDEC DER-31, Green Remediation, January 20, 2011

2.5.4 Soil / Fill Contamination

During the RI, 22 surface soil samples, six shallow subsurface samples (within upper 24 inches of soil), and 60 subsurface soil samples were collected across the Site. The sub-surface soil samples represented both the HFM and underlying native soil regimes. The following sections summarize the analytical data generated and provide a comparison to relevant SCGs.

2.5.4.1 Summary of Soil / Fill Data

Table 2-5 summarizes the contaminants identified in surface soil, sub-surface HFM, and sub-surface native soil along with the range of concentrations observed.

Table 2-5: Summary of Contaminants in Soil / Fill

Analyte	Unrestricted Use SCO (ppm)	Restricted Residential Use SCO (ppm)	Range of Exceedances (ppm)		
			Surface Soil	***Sub-Surface HFM***	***Sub-Surface Native Soil***
2-Butanone	0.12		--	0.18 – 0.26	--
Acetone	0.05	100	0.19 – 0.20	0.11 – 1.8	0.054 – 0.41
Benzene			--	0.97	--
Ethylbenzne			--	1.4	--
Toluene			--	4.3	--
TCE			--	3.1 – 4.9	--
p/m-Xylene			--	0.34- 3.5	--
o-Xylene			--	0.31 – 3.0	--
¾-Methylphenol	0.33	100	0.35	11	--
Acenaphthene		100	--	170	--
Anthracene		100	--	330	--
Benzo(a)anthracene	1	1	1.0 – 26.0	3.1 – 540	1.2
Benzo(a)pyrene	1	1	1.0 – 25.0	2.7 – 430	1.0
Benzo(b)fluoranthene	1	1	1.2 – 30.0	1.3 – 500	1.1 – 1.2
Benzo(k)fluoranthene	0.8	3.9	1.5 – 12.0	1.1 – 200	--
Benzo(ghi)perylene		100	--	200	--
Chrysene	1	3.9	1.2 – 24.0	1 – 460	1.0
Dibenzo(a,h)anthracene	0.33	0.33	0.56 – 3.6	0.4 – 64	0.72
Dibenzofuran	7	59	--	140	--
Fluoranthene	100	100	--	1800	--
Fluorene		100	--	200	--
Indeno(1,2,3-cd)pyrene	0.5	0.55	0.51 – 13	0.62 – 260	0.57 – 1.5
Naphthalene	12	100	--	200	--

Analyte	Unrestricted Use SCO (ppm)	Restricted Residential Use SCO (ppm)	Range of Exceedances (ppm)		
			Surface Soil	***Sub-Surface HFM***	***Sub-Surface Native Soil***
Phenanthrene	100	100	--	--	--
Phenol	0.33	100	--	4.2	--
Pyrene	100	100	--	760	--
Total PCBs	0.1	1	0.147	0.134	--
Endrin		11	0.0381	--	--
Dieldrin		0.2	0.00617 – 0.0352	0.00919 – 0.0304	--
4,4'-DDE		8.9	0.00358 – 0.276	0.0105 – 0.0267	--
4,4'-DDD		13	0.0065	0.0838	--
4,4'-DDT	0.0033	7.9	0.00786 – 0.0558	0.00386 – 0.111	--
Arsenic	13	16	14.5 – 93.3	13.6 – 189	20
Cadmium	2.5	4.3	--	5.14	--
Chromium (Hexavalent)		110	30.6 – 34.5	--	--
Chromium (Trivalent)		180	1.19	--	39.7
Copper	50	270	51.4 – 254	70.9 – 269	60.4 – 136
Lead	63	400	90.5 – 240	64.7 – 288	--
Manganese		2000	1750 – 37200	4420	--
Mercury	0.18	0.81	0.20 – 2.38	0.211 – 1.06	0.424
Nickel	30	310	--	38.9 – 51.2	44.6
Selenium	3.9	180	6.22 – 20.1	--	--
Silver		180	7.27	--	--
Zinc	109	10000	113 – 916	122 – 12400	110 – 148

1. "--" indicates that there were no exceedances of the respective analyte in the medium.

2.5.4.2 Comparison of Soil / Fill with SCGs

Surface soil across much of the property contains PAHs at concentrations above Restricted Residential SCOs. The specific PAHs include benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenzo(a,h)anthracene; and indeno(1,2,3-cd)pyrene. The surface soil also contains various metals at concentrations above Restricted Residential SCOs. These include arsenic; manganese; mercury; and zinc.

HFM is present across much of the Site. The HFM is located at or just beneath the surface and extending to depths up to ten feet below grade. The HFM is comprised of a heterogeneous mixture of predominantly granular soils (sand and gravel) with anthropogenic materials, including concrete debris, brick debris, coal debris, ash, and slag. Other items, including railroad ties, metal shavings, and glass bottles are present in localized areas. The deepest deposits of HFM are generally found in the southeastern portion of the Site. The general distribution of fill material across the site is depicted on attached **Figure 5.**

The HFM contains PAHs at concentrations above Restricted Residential SCOs. The specific PAHs include acenaphthene; anthracene; naphthalene; benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; benzo(g,h,i)perylene; dibenzo(a,h)anthracene; dibenzofuran; fluoranthene; fluorene; indeno(1,2,3-cd)pyrene; phenanthrene; and pyrene. The HFM also contains various metals, including arsenic; cadmium; chromium; manganese; mercury; and zinc, at concentrations above Restricted Residential SCOs.

The native soil beneath the HFM is comprised of gray and brown sand, silt and clay, with intermittent occurrences of peat on the eastern portion of the site. Except at one location on the southeastern portion of the Site, the native soil did not contain contaminant concentrations above Restricted Residential SCOs. At B-108, located on the southeastern portion of the site, native soil below the HFM layer at depths between nine and 13 feet below grade contained arsenic at a concentration above the Industrial (and therefore Restricted Residential) SCO. The HFM in this area extended to a depth of seven feet below grade. Some of the PAHs appear to have impacted the upper regions of the native soil that exists beneath the fill layer in certain localized areas. The PAHs detected in the HFM are also found in the upper layers of native soil, limited to near the western side of the Site and on the southeastern portion of the Site.

Table 2 and **Table 3** show exceedances of Track 1 Unrestricted Use SCOs and Track 4 Restricted Residential Use SCOs for surface soil and sub-surface soil at the Site, respectively. **Figure 3B** and **Figure 4B** are spider maps that show the location and summarize exceedances of Track 4 Restricted Residential Use SCOs for surface soil and sub-surface soil, respectively.

2.5.5 On-Site and Off-Site Groundwater Contamination

During the RI, 28 groundwater samples were collected across the Site over two sampling events. The following sections summarize the analytical data generated and provide a comparison to relevant SCGs.

2.5.5.1 Summary of Groundwater Data

Table 2-6 below summarizes the contaminants identified in groundwater along with the range of concentrations observed.

Table 2-6: Summary of Contaminants in Groundwater

Analyte	TOGS 1.1.1 AWQS (ppb)	Range of Exceedances (ppb)	
		October 2022	***December 2022***
Benzo(a)anthracene	0.002	0.02 – 0.13	0.02 – 0.12
Benzo(a)pyrene	0	0.02 – 0.16	0.03 – 0.06
Benzo(b)fluoranthene	0.002	0.01 – 0.25	0.02 – 0.09
Benzo(k)fluoranthene	0.002	0.01 – 0.08	0.01 – 0.08
Chrysene	0.002	0.02 – 0.10	0.02 – 0.08
Indeno(1,2,3-cd)pyrene	0.002	0.01 – 0.17	0.04 – 0.1
Dieldrin	0.004	0.029	--
Aluminum, Total	2000	3450	--
Iron, Total	300	1830 – 51100	696 – 61400
Iron, Dissolved	300	1330 – 45200	1560 – 81900
Magnesium, Total	35000	35200 – 106000	36700 – 189000
Magnesium, Dissolved	35000	36600 – 147000	35000 – 239000
Manganese, Total	300	357.8 – 2085	494.8 – 2158
Manganese, Dissolved	300	620.6 – 2034	703.7 – 2110
PFOS	2.7	2.77 – 8.79	3.02 – 6.8
PFOA	6.7	--	7.08

1. PFAS guidance values and concentrations are displayed in parts per trillion (ppt).
2. "--" indicates that there were no exceedances of the respective analyte during the sampling event.

2.5.5.2 Comparison of Groundwater with SCGs

Groundwater beneath most of the Site contains low levels of the same SVOCs found in the HFM. The groundwater also contains naturally occurring minerals including iron, manganese, and magnesium at concentrations exceeding recognized AWQS. These minerals are common in groundwater across New York State and likely reflect regional conditions.

PFAS, including perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), were also detected in groundwater across the Site at levels exceeding current groundwater guidance values. The PFAS compounds appear at relatively low and consistent concentrations throughout the Site, with no identified on-Site source or concentrated contaminant mass. This suggests that the detected PFAS compounds represent a broader groundwater condition rather than being sourced from the Site itself. Groundwater flow generally trends toward the southeast.

Tables that indicate exceedances of Class GA AWQS in monitoring wells prior to the remedy are shown in attached **Tables 4** and **5**. Spider maps that indicate the locations of and summarize exceedances of AWQS prior to the remedy are shown in **Figure 6B, 6C, 6D,** and **6E**.

2.5.6 On-Site and Off-Site Soil Vapor Contamination

During the RI, seven sub-slab soil vapor samples, three soil vapor samples, and two outdoor air samples were collected. The following sections summarize the analytical data generated and provide a comparison to relevant SCGs.

2.5.6.1 Summary of Soil Vapor Data

Table 2-7 summarizes the contaminants identified in soil and sub-slab vapor along with the range of concentrations observed.

Table 2-7: Summary of Contaminants in Soil and Sub-Slab Vapor

Analyte	Range of Concentrations (µg/m^3)	
	Sub-Slab / Crawl Space	Exterior Soil Vapor
Carbon Tetrachloride	ND	ND
1,1-Dichloroethene	ND	ND
Cis-1,2-Dichloroethene	2.7	ND
Trichloroethene	0.54 – 36	1.3
Methylene Chloride	0.76 – 11	0.59 – 12
Tetrachloroethene	1.1 – 6	0.75
1,1,1-Trichloroethane	ND	ND
Vinyl Chloride	ND	ND
Benzene	0.93 – 9.9	0.42 – 0.51
Ethylbenzene	0.65 – 1.5	0.48 – 1.0
Cyclohexane	0.89 – 9.6	ND
2,2,4-Trimethylpentane	0.61 – 2.5	ND
1,2,4-Trimethylbenzene	0.69 – 1.5	1.1
1,3,5-Trimethylbenzene	0.49 – 0.54	0.49
o-Xylene	0.74 – 1.1	0.65
p/m-Xylene	0.61 – 3.8	0.96 – 1.1
Heptane	1.1 – 13	21 – 1600
Hexane	1.7 – 20	1.2
Toluene	0.94 – 15	0.57 – 1.2

1. ND indicates the analyte was not detected above laboratory detection limits in the respective air medium.

2.5.6.2 Comparison of Soil Vapor with SCGs

TCE was identified at elevated concentrations in sub-slab soil vapor samples collected from Building 6 (former maintenance shop) and Building 7 (former boiler house). Relatively low concentrations of TCE were also detected within five other samples collected. PCE was also detected at relatively low concentrations within five samples.

A table of the soil vapor data collected prior to the remedy is shown in attached **Table 6**. A spider map that indicates the locations of and summarizes soil vapor data prior to the remedy is shown in **Figure 7B**.

2.5.7 Contaminants of Concerns

The primary contaminants of concern associated with the site are:

- SVOCs (particularly PAHs) and metals in both surface and subsurface soil containing HFM.
- PAHs and naturally-occurring metals in groundwater.
- Trichloroethene in soil vapor beneath the areas occupied by Buildings 6 and 7.

Figures 3 through **7** and **Tables 1** through **6** summarize the RI results for each medium investigated.

2.6 Environmental and Public Health Assessments

2.6.1 Qualitative Human Health Exposure Assessment

The following section provides a qualitative assessment of potential human health exposure to the contaminants of concerns (COCs) that have been identified at the Site as a result of the remedial investigation. The intent of this Qualitative Human Health Exposure Assessment (QHHEA) is to evaluate and document potential exposure routes and pathways and to identify and characterize the potentially exposed populations, currently and under the reasonably expected future use of the Site. The reasonably anticipated future use of the Site is Restricted Residential.

The QHHEA must evaluate the following five elements associated with exposure pathways, relative to the Site-specific conditions:

1. Identification of the contaminant source(s) and the nature and extent of contamination to all media within the area of exposure;
2. Identification and analysis of contaminant release and transport mechanisms;
3. Identification of all potential exposure points where actual or potential human contact with contaminated media may occur;
4. Description of routes of exposure to the contamination; and
5. A characterization of the receptor populations who may be exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway are documented; a potential exposure pathway exists when any one or more of the five elements comprising an exposure pathway is not known. An exposure pathway may be eliminated from further evaluation when any one of the five elements comprising an exposure pathway has not existed in the past, does not exist in the present, and can reasonably be anticipated to never exist in the future.

Potential on-site exposure pathways exist for workers involved with Site remediation and Site-Construction activities, Site visitors, and trespassers, under the current use scenario. Potential exposure pathways also exist for Site tenants; visitors; maintenance, groundskeeping, and construction staff; and utility workers under future use scenarios, if the points of exposure, contaminant migration routes, and exposure pathways are not mitigated.

In most instances, these exposures can be readily mitigated in the short-term (current use and construction-phase work) through the use of personal protective equipment (PPE); proper soil / fill management during ground-intrusive activities; and implementation and adherence to a HASP and CAMP. In the long-term (future use scenario, post-remediation), these exposures can be mitigated through the implementation of institutional controls, including restrictions on use of groundwater, environmental easements, and engineering controls, including suitable cover systems (asphalt / concrete /hardscape, buildings, and engineered soil cover system with visible demarcation barrier); and the installation and operation of vapor mitigation systems (sub-slab depressurization systems, indoor garage space mechanical ventilation systems), as necessary, within renovated existing and future buildings.

Groundwater is not considered a relevant mechanism for exposure due to the municipal water servicing the Site and requirement for an Environmental Easement that will restrict the use of groundwater. There is not a ban on groundwater use as a public drinking water supply in the Town of Salina. However, groundwater in the vicinity of the Site is not known to be utilized as a source of potable water.

Potential off-site exposure pathways include the generation and airborne migration of fugitive dust and particulates during construction and remedial activities involving the disturbance of impacted soil and/or HFM. These exposures would be short-term in nature and limited to the duration of intrusive site activities.

To minimize the potential for off-site migration of particulates, air monitoring will be implemented during intrusive activities to document particulate levels and evaluate dust generation. If visible emissions or elevated particulate concentrations are observed, appropriate mitigation strategies will be implemented. Any potential exposure conditions or exceedances will be documented, and the NYSDEC and NYSDOH will be notified, as appropriate.

Soil vapor and groundwater data collected from downgradient areas of the Site did not identify contaminants which are indicative of significant on-site contaminant sources or of off-site migration. Based on the available data, complete off-site exposure pathways via soil vapor intrusion or groundwater migration are not present under current or anticipated Site conditions.

2.6.2 Fish & Wildlife Remedial Impact Analysis

The Site is currently in the process of being redeveloped for mixed use for commercial and residential. The former industrial buildings are located in an urbanized area with limited wildlife exposure. The potential environmental receptors include biota, including plant species, birds, reptiles, amphibians, soil invertebrates, and mammals inhabiting and migrating through the Site.

The NYSDEC Environmental Resource Mapper was utilized to determine if there are any known significant natural communities, endangered species, or threatened species on or in the vicinity of the Site. According to the Resource Mapper:

- The Site is located in the vicinity of a significant natural community. This significant natural community is identified as the Onondaga Salt Marsh, which is located northwest of the Site, at the northern edge of Onondaga Lake.
- The Site is located in the vicinity of rare animals (Lake Sturgeon) and rare plants.

Based on the data compiled in the course of the RI, the contaminants identified at the Site consist of:

- SVOCs (PAHs) and metals in some surface soil and in the HFM that has been distributed across the Site;
- SVOCs and common naturally occurring metals in shallow groundwater; and
- Low concentrations of certain VOCs in soil vapor.

Based upon the nature and location of the identified Site contaminants, and the future mitigation of those conditions through the planned Site redevelopment and institutional and engineering controls, the Site conditions are not expected to pose a significant threat to the identified fish and wildlife resource in the vicinity of the Site.

2.7 Interim Remedial Action

No Interim Remedial Measures (IRMs) have been performed at the Site.

2.8 Remedial Action Objectives

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) have been identified for this Site.

2.8.1 Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.

RAOs for Environmental Protection

- Restore ground water aquifer, to the extent practicable, to pre-disposal/pre-release conditions.

2.8.2 Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

2.8.3 Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the Site.

3. ALTERNATIVES ANALYSIS REPORT

This section presents the AAR. The purpose of the AAR is to evaluate remedial alternatives to address the contamination identified during the RI at the Site. This AAR has been prepared in accordance with Chapter 4 of the DER-10, *Technical Guidance for Site Investigation and Remediation*, issued on May 3, 2010, as well as within the guidance of DER-31, *Green Remediation,* issued on August 11, 2010.

3.1 Objectives

The purpose of the AAR is to identify and evaluate remedial goals, objectives, and factors, to develop remedial alternatives to address the contamination presented in the Remedial Investigation Report (RIR), and to select appropriate remedial actions to be implemented in the RAWP. Ultimately, the remedial action must:

a. Eliminate or mitigate threats to public health and the environment presented by the contaminants;

b. Address all identifiable sources of contamination, with preference to actions that remove or treat the source, followed by actions that contain the source, followed by actions that eliminate exposure, followed by actions that threat the contaminant at the point of exposure;

c. Ensure that any petroleum and chemical bulk storage tanks at the site are in compliance with applicable regulations or properly cleaned and closed in accordance with applicable petroleum bulk storage regulations;

d. Consider the protection of groundwater and include remediation of groundwater, if deemed necessary;

e. Consider and mitigate any soil vapor intrusion;

f. Consider and mitigate impacts to any adjacent residential properties;

g. Consider and remediate or mitigate any surface water and sediment impacts; and

h. Consider and mitigate any impacts to aquatic ecological resources where the Fish and Wildlife Resource Exposure Assessment has identified actual or potential impacts to these resources.

Consistent with NYSDEC DER-10 (Section 4.0) and DER-31, remedial alternatives will be evaluated based on the following criteria:

a. Protection of Public Health and the Environment: This criterion evaluates exposure and residual risks to human health and the environment during or subsequent to implementation of the alternative.

b. Compliance with SCGs: This criterion evaluates whether the remedial alternative will ultimately result in compliance with SCGs, to the extent practicable.

c. Long-Term Effectiveness and Permanence: This criterion evaluates if the remedy is effective in the long-term after implementation (e.g., potential rebound). In the event that residual impacts will remain as part of the alternative, then the risks and adequacy/reliability of the controls are also evaluated.

d. Reduction of Toxicity, Mobility, or Volume with Treatment: This criterion evaluates the reduction of contaminant toxicity, mobility or volume as a result of the remedial alternative. In addition, the reversibility of the contaminant destruction or treatment is evaluated.

e. Short-Term Effectiveness and Impacts: This criterion evaluates if the remedial alternative protects the community, workers and the environment during implementation.

f. Implementability: This criterion evaluates the remedial alternative based on its suitability, implementability at the specific site, and availability of services and materials that will be required.

g. Cost Effectiveness: This criterion evaluates the capital, operation, maintenance, and monitoring costs for the remedial alternative. The estimated costs are presented on a present worth basis.

h. Land Use: This criterion evaluates the proposed remedial approach against the current, intended, and reasonably anticipated future use of the land and its surroundings.

i. Community Acceptance: This criterion takes into account concerns of the community regarding the proposed remedy. Any public comments and overall public perception are addressed as part of the criterion.

j. Green and Sustainable Remediation (including Climate Resiliency): This criterion considers all environmental effects of remedy implementation and incorporates alternatives that minimize the environmental footprint of cleanup actions.

3.2 Applicable Standards, Criteria, and Guidance

The remedial alternatives were developed in consideration of the SCGs listed in **Section 2.5.3.**

3.3 Remedial Action Objectives

The remedial alternatives were developed in consideration of the RAOs listed in **Section 2.8.**

3.4 Future Use Evaluation

When evaluating remedial alternatives, reasonableness of the anticipated future land use should be considered.

UR-BAN Villages PFA, LLC plans to complete the rehabilitation and reuse of 10 abandoned factory buildings on the Site. The new Site will see the transformation of the above-mentioned parcel from a factory and warehouse site to a mixed-use multi-family / commercial site. The redeveloped Site will house approximately 250 apartment units, indoor and covered parking, Site offices, recreational facilities, a banquet house, a brew house, and common areas. No areas of concern were identified within the structures.

The construction is expected to occur in phases. For reference, **Figure 2** identifies the numbering sequence of the existing buildings. The initial work will generally focus on the conversion of Building 5 on the northern portion of the Site into indoor recreational space, the rehabilitation of the Buildings 1, 2, 3A, and 3B on the southwestern portion of the Site into apartment units (Buildings 2, 3A, and 3B will also contain basement level parking), Site remedial activities, and installation of Site infrastructure. Subsequent phases will include the rehabilitation of the former boiler house (Building 7) on the eastern portion of the Site into commercial space, conversion of Building 6 into a leasing office and shared community / recreational space, conversion of Building 4A into indoor parking, and conversion of Buildings 4B and 4C into indoor parking (grade level) with apartments in upper floors to be added. Future phases may include the construction of additional buildings east of Building 4A and south of 4C, and at the southern edge of the Site. If constructed, it is anticipated that the additional buildings will contain apartment units.

3.5 Development and Evaluation of Alternatives

This section identifies potential remedial alternatives to be considered to address the Site. Per DER-10 4.2(a)(i), each alternative considered must be protective of human health and the environment and conform to officially promulgated SCGs. These two criteria are considered threshold criteria.

The following alternatives have been identified and are discussed in the subsections below:

1. Alternative 1 – No Action – This alternative is accomplished by leaving the contaminants on-site as is and not implementing any remedial action. The purpose of evaluating the no action alternative is to develop a standard baseline alternative. This alternative does not meet the DER-10 threshold criteria, nor will it achieve the RAOs.

2. Alternative 2 – Cover System and Vapor Mitigation – This alternative would consist of a Track 4 cleanup designed to meet Restricted Residential SCOs and prepare the Site for a mixed residential and commercial use development, subject to institutional controls (ICs) and engineering controls (ECs). The major elements of this alternative include the construction and long-term maintenance of a clean cover system and installation of vapor mitigation systems in existing and future buildings to mitigate the potential for soil vapor intrusion.

3. Alternative 3 – Complete Contaminated Fill / Soil Removal, Groundwater Remediation, and Vapor Mitigation – This alternative would be completed to achieve a Track 1 cleanup to meet Unrestricted Use SCOs and prepare the Site for any type of development, without being subject to ICs and ECs. The major elements of this alternative include the complete removal of the contaminated soil / HFM, the completion of groundwater treatment, and the installation of vapor mitigation systems in existing occupied buildings and future buildings.

These remedial alternatives evaluated are summarized below:

3.5.1 No Action

The No Action alternative was developed as a procedural requirement under the NYSDEC DER-10 to provide a standard baseline alternative. This alternative is the process of implementing no further remedial or monitoring activities. This process does not implement the construction of controls which would be employed to prevent exposure to contaminated HFM, groundwater, and soil vapor intrusion. Accordingly, this alternative will not be evaluated further in this report.

3.5.2 Track 4 (Restricted Residential Use) – Cover System and Vapor Mitigation

In general, the types and concentrations of contaminants identified during the RI in the soil/HFM across the Site are typical for sites with similar historical industrial uses. These contaminants are typically relatively immobile and primary or common routes of exposure relate to direct contact with the soil, ingestion of soil particles, or inhalation of airborne particulates (soil particles) to which the contaminants are adhered. As such,

exposure risks can be effectively mitigated by installing a cover system to prevent direct contact and to meet the Track 4 cleanup. It is common for sites with HFM to be impacted by contaminants such as PAHs and metals, and the installation of cover systems has been implemented throughout similar sites to contain and prevent unintended exposure to the contaminated subsurface soil/HFM.

This alternative is the process of excavating and/or re-grading the upper two-feet of impacted soil/HFM to allow the installation of a two-foot clean soil or hard-scaped cover system meeting the final grading plan throughout the Site. Once the soil/HFM is graded to meet the planned final grade, a demarcation barrier is placed over the impacted soil/HFM and covered with a minimum of 24 inches of clean soil cover (for the planned Restricted Residential Use scenario).

The soil RAOs can be achieved through the installation of a cover system. Therefore, complete removal of contaminated soil/HFM is not warranted and the Site can be remediated by installing a cover system. This will consist of a combination of the installation of impervious hardscapes (asphalt or concrete surface) and a two-foot soil cover in areas without an impervious cover.

Remediation of the Site's groundwater is not a part of this alternative, as the groundwater concentrations of PAHs were low, the local groundwater is not used, and the PAH impacts will continue to attenuate through natural degradation processes.

Vapor mitigation is a part of this alternative and will include the installation of active sub-slab depressurization (SSD) systems and the use of ventilation units within the current Site buildings that are impacted by VOC in soil vapors. Passive SSD systems will be installed in any future buildings and can be activated in the event that vapor intrusion may impact the indoor air.

3.5.2.1 Track 4 Alternative Assessment

Protection of Human Health and the Environment

The excavated and/or re-graded soil/HFM with contaminant concentrations above proposed Residential Restricted SCOs will be re-used onsite and will be isolated by the two-foot clean soil or hardscape cover system.

Groundwater at the Site is not used as a source of drinking water. Drinking water in the Town of Salina is provided by the Onondaga County Water Authority and is sourced from Otisco Lake and Lake Ontario. The drinking water is treated prior to use to ensure the water meets NYSDEC and USEPA standards. An Institutional Control (IC) in the form of an environmental easement will restrict groundwater use from the Site as potable or process water without necessary water quality treatment as determined by the NYSDOH

or County DOH.

The concentrations of TCE within two of the Site's buildings sub-slab soils indicated there is the potential for soil vapor intrusion affecting the indoor air quality. The buildings sub-slab and basement parking garages will be mitigated with a passive SSDS or ventilation units in the current and future Site buildings. The systems will be designed to result in compliance with NYSDOH indoor air guidance values established for human health protection and any current local and state codes.

Long term human health and environmental protection and control can be managed with an SMP, environmental easement, deed restrictions, monitoring and other such IC / EC. This alternative would be protective of human health and the environment.

Compliance with SCGs

The alternative complies with the SCGs, as on-site HFM / soil with contaminant concentrations above the SCOs would either be removed and disposed of off-site or left under impervious asphalt or concrete or beneath at least two feet of a clean soil cover.

Groundwater at the Site is impacted by PAH concentrations exceeding TOGS 1.1.1 standards. However, there is no identifiable human exposure pathway given the Site is supplied by OCWA and an IC in the form of an environmental easement that restricts groundwater use from the Site as potable or process water without necessary water quality treatment as determined by the NYSDOH or County DOH will be imposed.

Indoor soil vapor will be mitigated by installing a passive SSDS or a mechanical ventilation system in the basement parking garage for the current and future Site buildings. The system will be designed in compliance with NYSDOH indoor air guidance values (AGVs) and any local and state codes. To ensure the effectiveness of the vapor mitigation systems, SVI sampling will be completed after the planned building renovations or the construction of any new buildings. If the investigation indicates contaminant concentrations that exceed NYSDOH AGVs, an active SSDS will be employed, or the mechanical ventilation system will be re-designed.

Short-term Effectiveness and Impacts

This alternative increases the short-term risks for the community and the workers implementing the alternative (i.e., through the disturbance of impacted HFM / soil) because the Site will undergo removal and / or grading of contaminated HFM / soil. However, these risks would be minimized through the implementation of appropriate HFM / soil handling procedures, air monitoring, and dust suppression techniques.

Long-term Effectiveness and Permanence

This alternative would be a permanent remedy to address the contaminated soil/HFM throughout the Site with annual inspections to ensure the cover system is not compromised. The presence of a cover system will eliminate the potential for users of the Site to come into contact with the contaminated HFM/soil. Any new Site work or soil/HFM removal will be completed under the SMP. The vapor mitigation system will be active in buildings potentially affected by VI until consistent indoor air sampling indicates there is no longer a potential for vapor intrusion risk.

Reduction of Toxicity, Mobility and Volume

This alternative would result in the reduction of the mobility and volume of contaminants in the soil / HFM. The mobility would be controlled by the cover system and the volume likely will not decrease to limit the amount of waste generated. The soil will be re-used on-site, unless an excess of soil is encountered.

Implementability

This alternative is implementable using existing construction/remediation methods and equipment. The expected duration is less than one construction season, with some additional work to be completed under a third Phase of the project. This alternative would result in a Site suitable for redevelopment for residential use (except for single-family homes).

Cost Effectiveness

The estimated cost of this alternative is $3,040,399. See section Remedial Action Cost Section **4.2.12** for additional information regarding cost.

Table 3-1: Track 4 Summary of Remedial Costs

Remediation Activity	Total Estimated Initial Remedial Cost	Total Estimated O&M Cost (30 Years)	Total Estimated Remedial Cost
Track 4 Soil Cover System, SSDS	$2,890,399	$150,000.00	$3,040,399

Land Use

The use of Track 4 cleanup alternative would allow for the use of the property for mixed-use residential and commercial spaces. The planned land use conforms to the Town of Salina development plans for the area. Therefore, this alternative would allow for the

highest and best use of the land.

Community Acceptance

Based on the findings of the studies performed to date, it is anticipated that the results of this alternative would be acceptable to the community.

Green and Sustainable Remediation (including Climate Resiliency)

The completion of the Track 4 cleanup alternative represents the remedial option with the least environmental footprint for the Site. This alternative utilizes the following green remediation techniques to reduce wastes and greenhouse emissions:

- Re-grading and re-use of soils / HFM on-site to be placed under a cover system, the alternative remedial approach significantly reduces the use of fossil fuels that would be used to excavate and haul the contaminated soil / HFM off-site for disposal, as well as transporting replacement material to the Site. This option also limits the volume of soil to be managed in a landfill.
- Clean soil and aggregate needed to construct the cover system can be sourced from local pits / quarries, thus reducing emissions for transport vehicles.
- Natural degradation to reduce the PAH concentrations within the Sites groundwater. This remedial method reduces the amount of waste and products which would be used if an injection or source removal remedial method was implemented.
- The vapor mitigation systems will be designed to ensure the most efficient motors will be utilized to reduce the reliance on the electrical grid.

A detailed narrative of the green remediation approach for the selected remedy is provided in **Section 4.1.2.**

3.5.2.2 Summary

The Track 4 (Restricted Residential) – Cover System and Vapor Mitigation Alternative was designed to remediate the Site to a moderately restrictive level – Residential Restricted Use SCOs, and prepare the Site for redevelopment for the rehabilitation and construction of several buildings for the planned mixed residential and commercial uses. This Alternative would require that ICs and engineering controls (ECs) be implemented.

3.5.3 Track 1 (Unrestricted Use) – Complete Contaminated Soil/Fill Removal, Groundwater Treatment, and Vapor Mitigation

3.5.3.1 Description

Under this Unrestricted Use Alternative, the soil/HFM impacted by concentrations of

contaminants greater than the Unrestricted Use SCOs would be excavated and disposed of at an off-site disposal facility in accordance with applicable regulations. Based on the results of the RI, the depth of impacted soil/HFM ranges from approximate depth of 2 to 10 feet bgs across the Site with an average of 5 feet bgs. The estimated volume of soil/HFM requiring removal is approximately 64,000 cubic yards. Assuming a conversion rate of 1.35 tons per cubic yard, the weight of this HFM is estimated at 86,400 tons. This would require removal of soil adjacent to existing building foundations, likely requiring shoring, and dewatering, groundwater treatment, and disposal of groundwater from excavations.

If contaminant concentrations in groundwater still exceed TOGS 1.1.1 standards and guidance values following HFM removal, the PAHs in groundwater could be addressed with in-situ chemical oxidation (ISCO). The effectiveness of the ISCO would be verified by four rounds of groundwater sampling and analysis.

Vapor mitigation is a part of this alternative and will include the installation of active sub-slab depressurization (SSD) systems and the use of ventilation units within the current Site buildings that are impacted or may potentially be impacted by VOC in soil vapors. Passive SSD systems will be installed in any future buildings and can be activated in the event that vapor intrusion may impact the indoor air.

3.5.3.2 Assessment

Protection of Human Health and the Environment

This alternative would be the most protective of human health and the environment, as all soil with contaminant concentrations above the Unrestricted Use SCOs on-site would be removed and disposed of off-site. The groundwater would be treated in-situ to meet TOGS 1.1.1 standards and the vapor mitigation will be active until vapor intrusion risk is no longer present at the Site.

Compliance with SCGs

The alternative complies with the SCGs, as the on-site HFM/soil with contaminant concentrations above the SCOs would be removed and disposed of off-site. The Site's contaminated groundwater would be treated in-situ to meet TOGS 1.1.1 standards and the soil vapor mitigation system would mitigate the vapor intrusion risk to meet the NYSDOH guidance.

Short-term Effectiveness and Impacts

This alternative increases the short-term risks for the community and the workers implementing the alternative (i.e., through the disturbance of the contaminated

HFM/soil), because the Site will undergo complete removal of contaminated HFM/soil. However, these risks would be minimized through the implementation of appropriate HFM / soil handling procedures, air monitoring, and dust suppression techniques.

Long-term Effectiveness and Permanence

The Unrestricted Use Alternative would be a permanent remedy to address the contaminant concentrations in the HFM/soil, groundwater, and soil vapor on the Site.

Reduction of Toxicity, Mobility and Volume

This alternative would result in the reduction of the toxicity, mobility, and volume of contaminants on the Site since the remedy would include the removal of contaminated HFM / soil and treatment of groundwater. This would not eliminate the source of soil vapor intrusion into the building and vapor mitigation will still be required.

Implementability

This alternative is implementable using existing construction methods and equipment. Access and removal of HFM/soil beneath structures, if necessary, would not be possible. The expected duration is 18 to 24 months. This alternative would result in a Site suitable for redevelopment for any use.

Cost Effectiveness

The estimated cost of this alternative is $18,779,407 as detailed in the table below.

Table 3-2: Track 1 Summary of Remedial Costs

Remediation Activity	Total Estimated Initial Remedial Cost	Total Estimated O&M Cost (30 Years)	Total Estimated Remedial Cost
Track 1 Unrestricted Use Soil Removal, Dewatering, SSDS	$18,689,407	$90,000	$18,779,407

Land Use

This alternative would allow for the use of the parcel for any use, contingent on the requirements for zoning / land use in the Town of Salina.

Community Acceptance

It is anticipated that this alternative would be acceptable to the community.

Green and Sustainable Remediation (including Climate Resiliency)

Due to the magnitude of soil removal, backfilling, and landfill disposal required for this option, local resources may be affected. The remediation will require a significant expenditure of fossil fuels to fuel the trucks and equipment necessary to remove the contaminated HFM/soil from the Site, as well as the trucks that will provide backfill materials for the Site. This alternative also greatly increased the amount of waste soil generated, which will be sent to a landfill for disposal.

Furthermore, due to the low concentrations of contaminants in the groundwater and the potential for the conditions to be attributed to background concentrations or from off-site sources, the treatment of groundwater will be inefficient and lengthy. Groundwater remediation will require a large number of trips to the Site, expenditure or significant energy to operate a treatment system, and generation of site-specific chemicals that need to be delivered to the Site and injected.

Green remediation alternatives will be limited to local sourcing of material. However, the impacts related to soil management will far outweigh these benefits.

3.5.3.3 Summary

The Unrestricted Use Alternative was designed to remediate the Site to its least restrictive level – Unrestricted Use Soil SCOs and prepare the Site for redevelopment for any type of use. This alternative would not require ECs / ICs, and there would be no need for site management.

3.6 Comparative Evaluation of Alternatives and Recommended Actions

This section of the report compares the remedial alternatives proposed for each of the impacted media and presents the recommended action for each media group.

3.6.1 No Action Alternative

The No Action Alternative does not meet DER-10 threshold criteria and is therefore not protective of human health and the environment and would likely not be acceptable to the community in the long term. Therefore, this alternative is not the recommended remedy for the Site.

3.6.2 Track 4 (Residential Restricted) – Cover System and Vapor Mitigation

The Track 4 – Cover System and Vapor Mitigation Alternative would be a long-term remedy and is anticipated to be acceptable to the community. This alternative reduces the toxicity, mobility, and volume of impacted media the excavation and grading of impacted soil / HFM and the placement of the impacted materials under a clean soil or

hardscaped cover system across the Site. The installation of an SSDS and/or mechanical ventilation system for the buildings affected by VI would mitigate these concerns. This alternative was designed to:

- Remediate the Site to a reasonable level that protects human health and the environment;
- Provide a cost-effective effort that meets SCGs and the future land use of the Site, and;
- Prepare the Site for redevelopment for residential and commercial mixed uses.

3.6.3 Track 1 (Unrestricted Use) – Complete Contaminated Soil/Fill Removal, Groundwater Treatment, and Vapor Mitigation

The Unrestricted Use Alternative would be a long-term remedy and is anticipated to be acceptable to the community. This alternative effectively reduces the toxicity, mobility, and volume of impacted media through the removal of all impacted HFM/soil from the Site and replace the material with clean backfill material, as well as the treatment of groundwater. The installation of a SSDS and ventilation system to mitigate the vapor intrusion risk to the Site buildings until indoor air sampling indicates there is no longer a risk. However, this alternative will negatively impact the redevelopment because of the increased complexity of the remediation due to multiple actions to reestablish the Site, increased timeframe to conduct the remediation, and a significantly higher remedial cost.

3.7 Selection of the Preferred Remedy

Based on the alternative analysis evaluation, the Track 4 (Residential Restricted) – Cover System and Vapor Mitigation remedy is the recommended final remedial approach for the Site. This alternative was found to be protective of public health and the environment; significantly less disruptive to the community; consistent with current and future land use; represents a more cost-effective approach and is the greenest remediation alternative. The alternative will fully satisfy the RAOs. The recommended remedial alternative is described in further detail below.

3.7.1 Zoning

The Site is currently zoned as the Industrial District (I-1) under the Town of Salina's Zoning Map (January 2021). The intent of the I-1 district is to provide areas near or adjacent to highways to handle large traffic volumes for industrial, heavy commercial, and other uses which are not generally compatible with the uses permitted in other districts. The use of the site as a mixed-use residential / commercial property is permitted

by the Town of Salina. Furthermore, the Site is also part of the Repurposing and Reuse Overlay District (RROD). The objectives of this district are to:

- Encourage the reuse and repurposing of older commercial buildings that have either been abandoned or have become underutilized;
- Achieve a pattern of development that encourages restoration of existing buildings and a development that encourages people to walk, ride a bicycle or use public transit;
- Allow for a mix of uses, inclusive of residential, designed to attract pedestrians;
- Discourage singular use buildings developed as isolated islands within an expansive parking lot;
- Encourage the adaptive reuse of aging commercial buildings;
- Provide a high level of amenities that create a comfortable environment for pedestrians, bicyclists, and other users;
- Provide sufficient density of employees, residents and recreational users to support public transit, while generating a percentage of trips serviceable by public transit;
- Maintain an adequate level of parking appropriate to the use and integrate this use safely with pedestrians, bicyclists, and other users;
- Take advantage of existing infrastructure and resources available on site and encourage development compatible with existing land use and contours on the site.

The redevelopment project will see the rehabilitation and reuse of ten abandoned factory buildings on the Site to a mixed-use multi-family / commercial site. The redeveloped Site will house approximately 250 apartment units, indoor and covered parking, Site offices, recreational facilities, a banquet house, a brew house, and common areas. This redevelopment plan is not only acceptable under the current I-1 zoning but meets the objectives of the RROD district.

3.7.2 Applicable Comprehensive Community Master Plans or Land Use Plans

As of the date of this document, the Town of Salina is in the process of creating a Comprehensive Plan. According to a public open house hosted in June 2024, the main themes of the plan will be Greenways & Blueways, Housing & Neighborhoods, Strong Centers, and Community Mobility. During the open house presentation, strong centers

were described as walkable, people-oriented places with a mix of jobs, housing, shopping, dining, culture, public spaces, entertainment, transportation, and services. The foundation of strong centers is the mixture of land uses. The presentation used the Urban Villages development at the former Will & Baumer Candle Co., Inc. site as an example of strong center development. The redevelopment will provide a combination of residential and commercial uses across the Site, providing a place for people to live, shop, dine, and more. The planned future use of the Site directly aligns with the Town of Salina's proposed Comprehensive Plan.

3.7.3 Surrounding Property Uses

The anticipated future land use of the Site and its surrounding properties are compatible with the selected remedy. The Town of Salina's proposed Comprehensive Plan identifies the Town's commercial areas as potential strong centers. The Site is surrounded by commercial properties and is located in the near vicinity of the Old Liverpool Road commercial corridor and the 7th North Street commercial corridor. The transformation of the Site to a mixed-use commercial / residential property has the potential to encourage similar redevelopment in the area and the creation of more strong centers. The redevelopment of the Site would align with historical development patterns in the area and attract a large number of visitors each day, especially with the intention of providing places to shop and dine. The revitalization of the Site would make the local area more attractive, appealing to pedestrians.

3.7.4 Citizen Participation

Citizens will be kept informed on the status of the Site through fact sheets and document repositories. Citizens are encouraged to provide public comment throughout the implementation of the remedy. The Citizen Participation Plan is discussed further in **Section 4.1.10**.

3.7.5 Environmental Justice

The Syracuse Metropolitan Transportation Council has developed an Environmental Justice Mapper to indicate the presence of focus populations based on minority populations, low-income populations, and other variables which may be of interest. According to the Syracuse Metropolitan Transportation Council (SMTC) Environmental Justice Mapper, the Site is located in a non-priority area. The proposed future use is not expected to increase or cause a disproportionate burden on the community.

3.7.6 Proximity to Natural Resources

A review of information concerning endangered and threatened species in Onondaga County, available via the NYSDEC Environmental Resource Mapper, indicated that the

Site is in the vicinity of the Onondaga Salt Marsh (a significant natural community) and is in the vicinity of rare plants and rare animals (Lake Sturgeon).

Based upon the nature and location of the identified Site contaminants, and the future mitigation of those conditions through the planned Site redevelopment and institutional and engineering controls, the Site conditions are not expected to pose a significant threat to the identified fish and wildlife resource in the vicinity of the Site.

3.7.7 Off-Site Groundwater Impacts

Groundwater is not considered a relevant mechanism for exposure due to the municipal water servicing the Site and requirement for an Environmental Easement that will restrict the use of groundwater. There is not a ban on groundwater use as a public drinking water supply in the Town of Salina. However, groundwater in the vicinity of the Site is not known to be utilized as a source of potable water.

3.7.8 Proximity to Floodplains

According to the Federal Emergency Management Agency (FEMA) National Flood Hazard map, the eastern portion of the Site is located in an area with a 1% annual chance flood hazard, the central portion of the Site is located in an area with a 0.2% annual chance flood hazard, and the western portion of the Site is located in an area determined to be outside the 0.2% annual chance floodplain.

3.7.9 Current Institutional Controls

There are currently no institutional controls being implemented at the Site.

3.8 Summary of Selected Remedial Actions

The Track 4 (Commercial) – Cover System and Vapor Mitigation remedy would include the following:

1. Screening for indications of contamination (by visual means, odor, and monitoring with PID) of all excavated soil during any intrusive Site work;

2. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal;

3. Import of materials to be used for backfill and cover in compliance with: (1) chemical limits and other specifications established in 6 NYCRR 375-6.7(d), NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or

Soil for Commercial Use, and NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances and (2) all Federal, State and local rules and regulations for handling and transport of material;

4. Construction and maintenance of a site cover consisting of either clean soil or hardscape to prevent human exposure to residual contaminated soil / fill remaining under the Site;

5. Installation and operation of multiple SSDSs and ventilation systems to mitigate chlorinated solvent impacts in soil vapor;

6. Recording of an Environmental Easement, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site;

7. Publication of a Site Management Plan for long term management of residual contamination as required by the Environmental Easement, including plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

8. All responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.

Remedial activities will be performed at the Site in accordance with this NYSDEC-approved RAWP and the NYSDEC-issued DD. All deviations from the RAWP and / or DD will be promptly reported to NYSDEC for approval and fully explained in the FER.

4. REMEDIAL ACTION PROGRAM

This section presents the RAWP for the Site. This RAWP is based on the data collected during the RI of the Site and the recommended final remedial approach for the Site proposed in the AAR. This RAWP identifies the controls to be applied with respect to the remediation of the Site and how the actions will successfully achieve Restricted Residential Use SCOs.

4.1 Governing Documents

The primary documents governing the remedial action program are summarized below.

4.1.1 Standards, Criteria and Guidance (SCG)

The following standards, criteria, and guidance are typically applicable to Remedial Action projects in New York State, and will be consulted and adhered to as applicable:

- 6 NYCRR Part 364 - NYS Waste Transporter Permits
- 6 NYCRR Part 360 - NYS Solid Waste Management Requirements
- 6 NYCRR Part 371 - Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
- 6 NYCRR Subpart 374-2 - Standards for the Management of Used Oil
- 6 NYCRR Part 375 - Environmental Remediation Programs
- 6 NYCRR Part 376 - Land Disposal Restrictions
- 6 NYCRR Part 613 - Petroleum Bulk Storage
- 6 NYCRR Parts 700-706 – Classes and Standards of Quality and Purity
- 6 NYCRR Part 750 - State Pollutant Discharge Elimination System (SPDES) Permits
- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response
- CP-43 - Commissioner Policy on Groundwater Monitoring Well Decommissioning (December 2009)
- CP-49 – Climate Change and DEC Action (2022)

- CP-51- Soil Cleanup Guidance (2010)
- DER-2 - Making Changes to Selected Remedies (April 2008)
- DER-10 – Technical Guidance for Site Investigation and Remediation (2010)
- DER-13 – Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York (2006)
- DER-23 – Citizen Participation Handbook for Remedial Programs (2010)
- DER-31 – Green Remediation (2010)
- DER-32 – Brownfield Cleanup Program Applications and Agreements (2017)
- DER-33 – Guide to Drafting and Recording Institutional Controls (2010)
- TAGM 3028 - "Contained In" Criteria for Environmental Media: Soil Action Levels (August 1997)
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations (1998, Addenda 2000, 2004 and 2023)
- New York State Standards and Specifications for Erosion and Sediment Control (2016)
- New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)
- New York State Climate Act (2019)
- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (2023)

4.1.1.1 Green and Sustainable Remediation and Climate Resiliency

NYSDEC's Program Policy DER-31 / Green Remediation and DER-31 Green and Sustainable Remediation Initiative Memorandum require that green remediation concepts and techniques be considered during all stages of the remedial program, including remediation, with the goal of improving the sustainability of the cleanup and documenting the net environmental benefit of any implemented green technology. Green Remediation is defined as "the practice of considering all environmental effects of

remedy implementation and incorporating options to minimize the environmental footprint of cleanup actions." The use of these practices and technologies during remediation should be less disruptive to the environment, generate less waste, increase reuse and recycling, and emit fewer pollutants, including greenhouse gases (GHGs), to the atmosphere.

4.1.2 Green Remediation Components

This RAWP identifies the green remediation components of the remedial design program, which will be implemented for the construction, operation, optimization, maintenance, and monitoring of the remedial program, and which also meet the requirements for the intended use of the Site for Restricted Residential Use. The purpose of this section is to identify concepts and develop a plan to best achieve a "Green Remediation" goal for each of the Sites selected remedies. The Green Remediation concepts considered during the development of the remedial alternatives include:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term when choosing a site remedy;
- Reducing direct and indirect GHG and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and,
- Designing buildings to meet the 2020 Energy Conservation Construction Code of New York.

Based on the type of remediation required for the Site, the principal green remediation goals for the Site are focused around the reduction of waste and the reuse of material to extent feasible throughout the remediation process. The reduction in wastes indirectly reduces the consumption of fossil fuels and the generation of greenhouse gases.

4.1.2.1 Environmental Footprint Analysis

As a part of the Green Remediation, the use of an environmental footprint analysis was completed to further evaluate the impact of the planned remedies for the Site. For the purpose of analyzing the overall impact and sustainability of the planned remediation activities, C&S developed a Green Remediation Calculator that contains pertinent content of the DER-31 referenced calculators [(e.g. SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA) and SiteWiseTM (developed by the US military)]. In addition to that content, C&S' Green Remediation calculator is based upon content previously created by engineers and scientists in C&S' air resources and aviation practices for use at industrial facilities to calculate emissions of GHGs, hazardous air pollutants (HAPs) and criteria pollutants for permitting, tracking, and reporting purposes; as well as for large airport construction projects to calculate potential and actual emissions from construction of terminals, taxiways, runways, etc.

Based on the anticipated elements of the implementation of the remedy, the Green Remediation Calculator was used to develop estimated values for:

- Water consumption
  - Wetting of the Site during construction to comply with the CAMP
- GHGs
  - Emissions related to the transportation of personnel to and from the Site
  - Emissions related to the mining and import of clean soil / aggregate
  - Emissions related to the manufacture and import of asphalt and concrete
  - Emissions related to the operation of site-work equipment (excavators, loaders, etc.)
  - Emissions related to export of contaminated soil
- Renewable and non-renewable energy usage
  - Electricity for the operation of the SSDS and ventilation systems
  - Charging of environmental monitoring equipment
- Waste reduction and material usage
  - Reuse of materials on and off site

The analysis presented in this report includes an estimate of emissions from the mining and import of clean soil and aggregate, as well as for the production and import of asphalt and concrete. These upstream sources are not required by DER-31 but have been included for consistency with USEPA's SEFA.

Building envelope related construction is not part of the remedy. However, the building renovations will meet or exceed the 2020 Energy Conservation Construction Code of New York.

Narratives regarding the various elements of the remedy, their potential impact on the environment, and strategies employed to reduce their footprint (BMPs) are provided in the following subsections.

4.1.2.2 Green Remediation Techniques

To further reduce the environmental footprint of the remediation, Green Remediation Techniques (GRTs) will be identified in the RAWP and will be implemented throughout the remedial activities.

NYSDEC DER-31 identifies a list of specific techniques which will be considered during the development of the RAWP. The RAWP will further describe the techniques which will be implemented if they are identified as being feasible during the site redevelopment and remediation to best achieve a green remediation goal for the Site.

4.1.2.3 Best Management Practices

The section describes the general BMPs which were identified as being feasible to be implemented throughout the planned remedy to further support green remediation goals. The following BMPs were identified for implementation:

- Minimize Mobilizations – C&S will coordinate with the site contractor(s) to best schedule site activities in conjunction to minimize the number of trips to the Site for field staff, workers, and mobilizing equipment.

- Excavation Equipment – Site contractor(s) will use equipment that is suitably sized to complete the anticipated sitework. The use of equipment which is undersized or oversized can decrease the efficiency of the equipment considerably. When possible, equipment will be used which can perform multiple types of tasks without mobilizing a single piece of equipment for each task. Contractors will be encouraged to utilize Clean Fuel Fleet vehicles and Tier 2 or higher Equipment and will burn ultra-low sulfur diesel fuel.

- Idling of Motorized Equipment – Equipment and trucks will be shut down if left idling longer than 5-minutes.

- Stormwater and Erosion Controls – Where possible, the use of compost socks will be used for controlling sediment run-off, in leu of synthetic non-decomposable sediment fencing. Soil piles will be covered with tarps or plastic sheeting in a

manner to allow for the reuse of the covers each day to minimize the generation of waste.

- Soil Stockpiles – Soil will be stockpiled within the planned areas needing additional soil to meet the final grading. This will reduce additional handling of waste soil and minimize mobilization to new sections of the Site.

- C&S Battery-Powered Sampling Equipment – CAMP equipment (PIDs, Dustraks, Thiamis Antenna), Geopump Peristaltic groundwater Pump, Horiba Water Quality Meter, Data Loggers, and any other battery-operated equipment will be charged at the C&S facility. C&S estimated in 2024 that 28% of the electricity used at their facility is generated on-site through use of solar panels. This practice will reduce the load on the electrical grid and allow for the use of renewable energy source, and indirectly minimizing the use of fossil fuels and reducing the generation of greenhouse gas emissions.

- Waste Storage Containers – C&S uses cleaned reclaimed 5-gallon buckets and 55-gallon drums for the collection, transport, and storage of sampling wastes. The re-use of containers decreases the generation of waste.

- Generated Wastes Re-Use – Drill cuttings / spoils which were generated during the RI were staged on-site for re-use for backfill to meet grade under the cover system. Depending on the analytical results of the soil, the soil will be either used as cover or placed under the cover system to meet final grading.

- Cover-System – The selected geotextile fabric used for the demarcation barrier will be composed of recycled materials. The geotextile fabric will allow for the percolation of water through the cover system to control erosion and/or pooling of water.

- Sustainable Laboratory Practices – C&S will submit samples to a laboratory, which implements the following sustainable practices:
    - Recycles paper products and shipping materials.
    - Uses energy-efficient lighting and other equipment.
    - Maintains a paperless reporting and invoicing program.
    - Minimizes waste through use of EPA-approved microscale methods.

4.1.2.4 Climate Change Vulnerability Assessment

The proposed remedies were assessed to identify their potential vulnerability to the changing climate and if needed develop measures to ensure an increase in the remedies resiliency. C&S conducted a climate screening to evaluate individual climate risks which

might impact the Site's planned remedies. The completed NYSDEC Climate Screening Checklist is provided as **Appendix F**.

The climate screening was completed by reviewing data provided in an Environmental Risk Information Services (ERIS) Climate Risk Assessment report, provided as an attachment in the Climate Screening Checklist in **Appendix F**. Based on the potential climate hazards provided in the Climate Screening Table, the following provides a summary of the hazards identified for the Site:

- **Precipitation** – The report indicated that the Site received an average of 40 inches of precipitation in 1990 and the region received between 40 and 50 inches of precipitation. The precipitation for the Site is projected to increase by 1 to 2 inches in 2030, 2 to 3 inches in 2045, and 3 inches in 2060. Similarly, the precipitation for the region is projected to increase to 50 inches by 2060. The proposed Site redevelopment includes the upgrade of stormwater systems, designed to handle 100-year storm event.

- **Temperature** – The report indicated that the Site had an average of seven days per year with the maximum temperature exceeding 89.7°F. This number is projected to increase to 21 days by 2030, 29 days by 2045, and 42 days by 2060. The report also projected that approximately seven days per year will exceed 95.56°F by 2050. It is not expected that extreme heat will impact the proposed remedy.

- **Sea Level Rise** – The Site is located inland and is not likely to be influenced by sea level rise.

- **Flooding** – The eastern portion of the Site is located in an area with a 1% annual chance flood hazard, the central portion of the Site is located in an area with a 0.2% annual chance flood hazard, and the western portion of the Site is located in an area determined to be outside the 0.2% annual chance floodplain. The report indicates that 68% of the Site has fluvial (riverine) or pluvial (surface) flooding risk. The report projected that the Site has a 51% chance of a significant pluvial or fluvial flood over four feet deep over the next 30 years. Similarly, the FEMA analysis indicated that there is a 26% chance of a major flood in the next 30 years.

- **Storm Surge** – The Site is located inland and is not likely to be influenced by storm surges.

- **Wildfires** – The report indicated that the Site has a 0.1% chance of having a wildfire over a 30-year range, with a 0.00% chance in a given year.

- **Drought** – The report indicated that the historical average water stress for the Site was 4.91% in 2015 and is projected to increase to 5.4% in 2030, 5.6% in 2045, and 5.8% in 2060.

- **Storm Severity** – According to the report, the Site had 14 extreme rainfall events in 1990 with the amount of rainfall exceeding 0.8 inches. This number is projected to increase to 16 events in 2030, 17 to 18 events in 2045, and 18 events in 2060. The proposed Site redevelopment includes the upgrade of stormwater systems, designed to handle 100-year storm event.

- **Landslides** – Based on the USGS U.S. Landslide Inventory Map, the Site is not located near or in an area marked as the potential for a landslide.

Based on the above assessment of potential climate hazards, precipitation, temperature, flooding, and storm severity are relevant to the Site and precipitation, flooding, and storm severity can have a potential impact to the Site remedy. However, the proposed Site redevelopment includes the upgrade of stormwater systems, designed to handle 100-year storm events and backup generators in the event of a power outage, making the Site and remedy resilient to the climate hazards.

4.1.2.5 Summary

The elements of the remedy with a significant environmental footprint will be tracked to document metrics and identify reductions of the environmental footprint throughout the remediation planning and implementation. The expectation of the environmental footprint from these significant elements are shown in **Table 4-1, Table 4-2,** and **Table 4-3**. The inputs and outputs from C&S' Green Remediation Calculator are provided in **Appendix G.** The actual environmental footprint results will be summarized in the FER.

Table 4-1: Material Removal Metrics

Item / Activity	Volume / Unit	Note
Diesel Use	31,257.69 gallons	Operation of on-site equipment and transportation of materials, equipment, waste, workers
Gasoline Use	4,129 gallons	Operation of on-site equipment and transportation of workers
Grid Electricity Usage	0.17 MWh	Charging of CAMP stations each day
Public Water Use	10,000 gallons	Wetting of the Site for CAMP implementation
Import of Construction Materials	500 pounds	Polyethylene sheeting and other miscellaneous material for soil stockpiles
Solid waste recycled / reused on-site	4,571 tons	Reuse of soil beneath the cover system during sitework and regrading
Off-site laboratory analyses	45 samples	Imported material sampling

Table 4-2: Cover System Construction Metrics

Item / Activity	Volume / Unit	Note
Diesel Use	4,766.45 gallons	Operation of on-site equipment and transportation of materials, equipment, waste, workers
Gasoline Use	281.9 gallons	Operation of on-site equipment and transportation of workers
Grid Electricity Usage	0.26 MWh	Charging of CAMP stations each day
Public Water Use	10,000 gallons	Wetting of the Site for CAMP implementation
Import of Construction Materials	3,302.51 tons	Asphalt for the cover system
	1,087.53 tons	Concrete for the cover system
	8,928 tons	Stone base for the cover system
	11,629.5	General fill for cover system (beneath topsoil)
	3,488.4 tons	Topsoil for the cover system
	2,800 pounds	Geotextile demarcation barrier for the cover system
Off-site laboratory analyses	45 samples	Characterization sampling for import of material (stone and topsoil)

Table 4-3: Environmental Footprint Summary

Activity	Total Energy (MMBtu)	lbs CO_2	lbs NOx	lbs SOx	lbs PM	lbs HAPs
On-Site Components	5,015	793,763	3,902	28	296	1
Grid Electricity Generation	123,175	6,390	27	27	1	1
Transportation	101	16,222	65	2	2	3
Off-Site Components	3,714,251	77,843,595	247,313	733,752	77,050	96,509
Total	**3,719,490**	**78,659,971**	**251,307**	**733,808**	**77,350**	**96,515**

MMBtu – Metric Million British Thermal Unit
CO_2 – Carbon Dioxide
lbs – Pounds
NOx – Nitrogen Oxides
SOx – Sulfur Oxides
PM – Particulate Matter
HAP – Hazardous Air Pollutants

4.1.3 Site-Specific Health and Safety Plan (HASP)

All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA).

The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for

the preparation of an appropriate HASP and for the appropriate performance of work according to that plan and applicable laws.

The HASP and requirements defined in this RAWP pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion (COC). A HASP was prepared that details procedures for maintaining safe working conditions and minimizing the potential for exposure to hazardous material. Additional measures, reflected in the HASP and including measures for additional air sampling for work conducted in close proximity of these buildings, will be implemented to ensure the apartment tenants and sporting complex visitors are not exposed to site-related contamination. The measures will limit the potential for non-construction related personnel to access construction / remedial areas of the Site; this includes a Site Control Plan provided in the HASP. The HASP is provided in **Appendix H**.

The Site Safety Coordinator will be Tim Wawro of Pascarella Development and Property Management, LLC.

Though not anticipated, any required confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gases.

4.1.4 Quality Assurance Program Plan (QAPP)

To ensure that suitable and verifiable data results are obtained from the information collected at the Site, a project QAPP has been prepared and outlines the following:

- Quality control objectives including sampling procedures, laboratory certifications, analytical methodologies, and data usability;
- Field sampling techniques including procedures, preparation, measurement, and decontamination; and
- Sample management and handling.

The QAPP is provided in **Appendix I**.

4.1.5 Construction Quality Assurance Plan (CQAP)

The Construction Quality Assurance Plan (CQAP) provides a detailed description of the observation and testing activities that will be used to monitor construction quality and confirm that remedy construction is in conformance with the remediation objectives and specifications. Since the remedial elements will be constructed in concurrence with general site construction, the Property Developer (Pascarella Development and Management, LLC) and their personnel will have the primary responsibility for overall project execution, regulatory compliance, and construction quality. The Environmental

Consultant (C&S) and their personnel will provide oversight of remedial construction, support regulatory reporting, and confirm adherence to this RAWP. A CQAP has been developed that pertains directly to the remediation objectives and specifications. The CQAP is included below:

- The quality assurance program will be managed by C&S personnel under the direction of the Volunteer and in coordination with the Property Developer. C&S personnel have full authority to halt construction, request corrective measures, or require additional verification testing if work is found to be noncompliant with remedial project requirements.

- All personnel involved in quality assurance activities will be trained in applicable ASTM field procedures and regulatory requirements and will maintain current certifications such as OSHA 40-Hour HAZWOPER.

- C&S personnel will be on-Site during implementation of the RAWP to monitor particulates and organic vapor in accordance with the CAMP, discussed further in **Section 4.1.8**. C&S personnel will meet with the Construction Superintendent daily to discuss the plans for that day and schedule upcoming activities. Field personnel will document remedial activities. Field activities will be forwarded to the C&S Project Manager daily and to the Remedial Engineer on a weekly basis.

- Prior to placement of the final cover system, the prepared sub-grade will be surveyed by a licensed surveyor. The pre-cover survey and the post-cover survey will be compared to document that the Site cover is of adequate thickness.

- C&S personnel will conduct observation and testing throughout the duration of the remedial construction. Continuous visual inspections will be used to confirm that demarcation fabric is placed without gaps, tears, or misalignment, and that the clean soil layer is free from debris or unsuitable material. The thickness of the clean soil cover will be pre-planned using grade stakes.

- Field personnel will screen excavations with a PID during ground-intrusive work. PID readings, including specifically elevated readings, will be recorded in the project field book (or on separate logs) and reported to the NYSDEC and NYSDOH. Field personnel under the direct supervision of the Remedial Engineer will collect documentation samples in accordance with this RAWP.

- Field observations will be recorded on appropriate project logs. Recorded field observations may take the form of notes, charts, sketches, and / or photographs. A photo log will be kept to document construction activities during remediation.

- Upon completion of the cover system installation, a licensed surveyor will conduct a detailed topographic and as-built survey to document the final extent of the cover system. The survey will confirm that cover elements have been placed as specified, final site grades are consistent with the design, and that the delineation between pervious and impervious cover areas is properly established. Survey results will be reviewed by the remedial engineer and incorporated into the FER.

- C&S personnel will oversee installation of the sub-slab depressurization system, including placement of perforated piping, gravel bedding, vapor barrier, fan units, and other components, to confirm conformance with project specifications and design drawings. If applicable, the vapor barrier will be visually inspected for integrity prior to slab placement, with all seams, penetrations, and edges verified to be sealed using manufacturer-approved methods and materials.

- C&S personnel will conduct pressure field extension (PFE) testing after system start-up to verify adequate negative pressure is achieved beneath the slab across the targeted area. Results will be documented and compared to design criteria. Following installation, the SSDS will be activated and airflow, pressure readings, and fan operation will be verified to confirm system performance meets design specifications.

- Throughout construction, regular project coordination meetings will be held to facilitate communication among key project participants, including the Volunteer's representatives, Property Developer, Environmental Consultant, excavation and environmental contractors, and other relevant stakeholders. These meetings will cover progress updates, quality concerns, schedule adjustments, and any required corrective actions.

- Daily reports documenting field activities, weather conditions, personnel and equipment, community air monitoring results (15-minute average data downloads), CAMP station information (i.e., a figure showing work areas, wind direction, and CAMP station locations), and any observed deviations from the plans will be submitted to the NYSDEC and NYSDOH Project Managers on the following business day. Any CAMP exceedances and corrective measures taken will require reporting to the NYSDEC and the NYSDOH Project Managers within one business day.

- C&S personnel will maintain original field paperwork during performance of the remedy. Remedial activities will be documented in the monthly BCP progress reports. The Project Manager will maintain the field paperwork after completion and will maintain submittal document files.

- Supporting data such as visual inspection logs, soil thickness verification, and survey data will be compiled and reviewed by the Remedial Engineer. Nonconformance reports and corrective action documentation will be generated as needed and retained in the project record. Upon completion of remedial construction, a summary of observations and testing, as-built documentation, and certifications by the Remedial Engineer confirming compliance with project specifications will be included in the FER.

4.1.6 Soil/Materials Management Plan (SMMP)

A Soil / Materials Management Plan (SMMP) has been prepared and includes detailed plans for managing all soils / materials that are disturbed at the Site, including excavation, handling, storage, transport and disposal. The SMMP also includes all controls that will be applied to these efforts to assure effective, nuisance-free performance in compliance with all applicable Federal, State and local laws and regulations. The SMMP is provided in **Section 5.4**.

4.1.7 Storm Water Pollution Prevention Plan (SWPPP)

Since the Site is greater than one acre in size, a Storm Water Pollution Prevention Plan (SWPPP) has been prepared to address the requirements of New York State Storm-Water Management Regulations including physical methods to control and / or divert surface water flows and to limit the potential for erosion and migration of Site soils, via wind or water. The SWPPP was prepared by the site design engineer, Calocerinos Engineering.

The erosion and sediment controls will be in conformance with requirements presented in the New York State Standards and Specifications for Erosion and Sediment Control.

The SWPPP is provided in **Appendix J.**

4.1.8 Community Air Monitoring Plan (CAMP)

Air monitoring during ground-intrusive activities will be conducted using two monitoring stations (one at the upwind perimeter and one at the downwind perimeter of the immediate work area). Each station will be equipped with a portable PID to monitor and record real-time VOC concentrations and a particulate monitor to measure and record real-time concentrations of respirable particulate matter less than 10 microns in diameter (PM-10). The CAMP stations will provide a comparison of VOC and PM-10 concentrations is air upwind to those in the downwind position. Special requirements for CAMP monitoring for instances where work will occur within twenty feet of occupied buildings have also been incorporated into the CAMP. Air monitoring will also be conducted in the work zone for on-site health and safety. Details on air monitoring are provided in **Section 5.4.13**. The CAMP is provided in **Appendix K**.

4.1.9 Contractors Site Operations Plan (SOP)

The Remedial Engineer will review all plans and submittals for this remedial project (including those listed above and contractor / sub-contractor document submittals) and will confirm that they comply with this RAWP. The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor / sub-contractor document submittals, comply with this RAWP. All remedial documents will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.9.1 Pre-Remediation Submittals

Prior to implementation of the remedy the following submittals will be reviewed:

- The Contractor's schedule to complete each element of the remediation.
- The Contractor's Site-specific HASP:
    - All remedial work performed under this plan will be in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.
    - The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan and applicable laws.
    - HASP and requirements defined in this Remedial Action Work Plan pertain to all remedial and invasive work performed at the Site until the issuance of a Certificate of Completion.
- Proof of worker training in accordance with OSHA regulation 29 CFR 1910.120 for all workers with the potential to come in contact with contaminated soils and hazardous materials.
- U Dig ticket number along with associated documentation.
- The Contractor's Excavated Soils Management Plan. The plan will include:
    - Disposal options of all media;
    - Site plan showing stock pile locations and protection methods;
    - Equipment decontamination locations;

- Excavation methods;
- Dewatering equipment, methods and permits; and
- Traffic direction at the Site for trucks.

- Any waste characterization sampling results collected by the Contractor will be provided to C&S.
- Disposal Facility Permit for material disposed at an off-site facility and letter of acknowledgement from the Disposal Facility stating they intend to accept the material.

4.1.9.2 Remediation Close-out Submittals

The following submittals will be reviewed for remediation close-out:

- Final topographic survey drawings of the excavation(s) completed for the remedy;
- As-built site civil drawings;
- Copies of remediation related permits;
- Waste hauler permit certificates (DEC Part 364 Permits for all trucking companies used to haul waste);
- Tabulated load summaries for all remediation related out-going and in-coming materials will be tracked and prepared by the Engineer. The total number of imported and exported loads will be tracked daily and reflected within the daily reports, and the total tonnage of materials will be provided at the completion of remediation;
- Waste manifests or bills of lading for all remediation related materials; and
- Shipment records of all backfill material imported to the Site, including all imported or reused material approvals, receipts, and any associated data.
- All analytical data related to confirmation sampling for any excavation areas.

4.1.10 Citizen Participation Plan (CPP)

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet,

(4) a list of recipients (contact list); and (5) a statement that the repository was inspected and that it contained all of applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

The approved Citizen Participation Plan for this project is attached in **Appendix L**.

Document repositories have been established at the following locations and contain all applicable project documents:

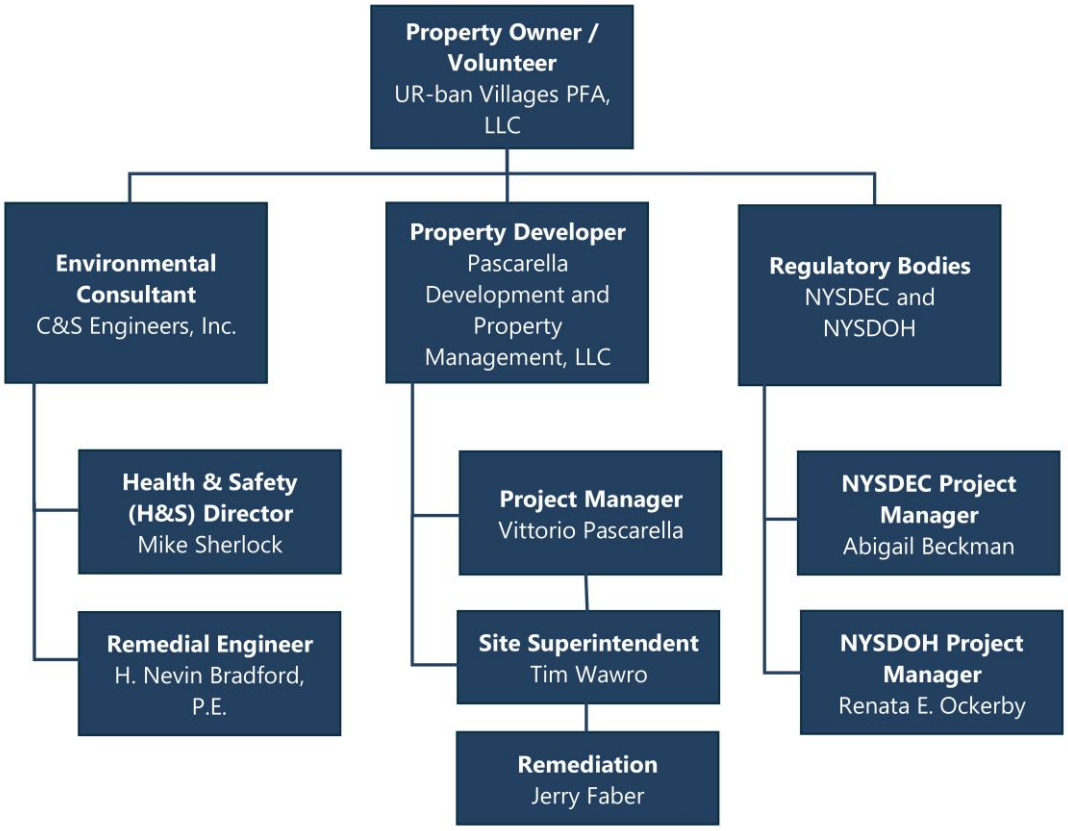
Liverpool Public Library
310 Tulip Street, Liverpool, NY 13088
(315) 457-0310
Mon / Tue / Wed / Thu: 9AM – 9PM
Fri: 9AM – 5PM
Sat: 9Am – 4 PM
Sun: 11AM-4PM

In addition, an electronic repository can be accessed via DECInfo Locator at the following link: https://extapps.dec.ny.gov/data/DecDocs/C734154/.

4.2 General Remedial Construction Information

4.2.1 Project Organization

An organization chart is included below:



4.2.2 Remedial Engineer

The Remedial Engineer for this project will be H. Nevin Bradford, III, P.E. The Remedial Engineer is a registered professional engineer licensed by the State of New York. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for the Urban Villages Site (NYSDEC BCA Index No. C734154-01-22 Site No. C734154). The Remedial Engineer will certify in the Final Engineering Report that the remedial activities were observed by qualified environmental professionals under his supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer will coordinate the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response services, import of back fill material, and management of waste transport and disposal. The Remedial Engineer will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this RAWP and will certify compliance in the FER.

The Remedial Engineer will provide the certifications listed in **Section 11.1** in the FER.

4.2.3 Remedial Action Construction Schedule

A remedial action construction schedule is provided below:

Table 4-4: Remedial Action Construction Schedule

Date	Task
Monthly by 10th day	Progress reports
October 2025	Draft AAR and RAWP submitted to NYSDEC
July 2026	Final AAR and RAWP submitted to NYSDEC
September 2026	AAR / RAWP approved by NYSDEC and Decision Document (DD) issued
Summer/Fall 2026	Remedial Action commences (performed under approved Interim Site Management Plan (ISMP) if DD has not yet been issued)
May 1, 2026	Draft Environmental Easement package submitted to NYSDEC
August 1, 2026	Draft Site Management Plan (SMP) submitted to NYSDEC
October 1, 2026	Remedial system construction complete, including installation / construction of cover system and IRM Completion
October 1, 2026	EE Executed and Final SMP submitted to NYSDEC
October 1, 2026	Draft FER submitted to NYSDEC
November 1, 2026	EE recorded and Notices provided
November 15, 2026	Final FER submitted in final form to NYSDEC

4.2.4 Work Hours

The hours for operation of remedial construction will conform to the Town of Salina construction code requirements or according to specific variances issued by that agency. NYSDEC will be notified by the Volunteer of any variances issued by the Town of Salina. NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

Site control is an important aspect of this remedial program. In order to safeguard the health and safety of site workers and the general public, access to all remedial work areas will be restricted. Perimeter fencing is in place to facilitate site control. Additionally, temporary construction fencing will be erected around accessible excavations and staging areas to prevent unauthorized personnel from entering these areas.

4.2.6 Traffic Control

Traffic control will include one clearly marked entry and exit point along Buckley Road, designated haul routes, and restricted zones to ensure the safe movement of vehicles and equipment. Traffic flow will be managed through signage, barricades, and flaggers as needed, particularly in high-risk areas. Vehicle access will be scheduled to minimize congestion and designated parking / staging areas will be established for equipment and personnel to prevent obstruction of active work zones. Emergency access routes will remain clear at all times, and dust suppression measures will be implemented to reduce airborne contaminants. Regular monitoring and adjustments will be made as site conditions change to maintain safety and efficiency.

4.2.7 Contingency Plan

It is not uncommon to encounter unforeseen conditions during remediation or construction at former industrial sites. This could include buried tanks, unknown utilities, fill materials that differ from those observed during the RI, and other similar issues. The discovery of such conditions will be communicated with NYSDEC to determine the appropriate course to address or document the concern.

4.2.8 Worker Training and Monitoring

Worker training and monitoring will be conducted in accordance with the HASP.

4.2.9 Agency Approvals

The Volunteer has addressed all SEQRA requirements for this Site. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction.

The planned end use for the Site is in conformance with the current zoning for the property as demonstrated on the redevelopment plan (**Appendix B**). A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

A complete list of all federal, state and local governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work is provided in **Table 4-5**. This list includes a citation of the law, statute or code to be complied with, the originating agency, and a contact name and phone number in that agency. This list will be updated in the Final Engineering Report.

Table 4-5: Approvals and Authorizations for Remedial Work / Development

Authorization	Originating Agency	Contact Name	Phone Number
Site Plan Approval	Town of Salina Planning Board	Mark Lafaver	315-457-6661
SEQRA Negative Declaration	Town of Salina Planning Board	Mark Lafaver	315-457-6661
Building Permit	Town of Salina Planning Board	Mark Lafaver	315-457-6661
Community Participation Plan (CPP) Approval	NYSDEC DER Region 7	Joshua Cook, P.E.	315-426-7558
RIWP Approval	NYSDEC DER Region 7	Joshua Cook, P.E.	315-426-7558
Geothermal Work Plan Approval	NYSDEC DER Region 7	Andy LoFaro, P.E.	315-426-7558
RI Report Approval (pending)	NYSDEC DER Region 7	Abigail Beckman	315-426-7558
AAR / RAWP Approval (pending)	NYSDEC DER Region 7	Abigail Beckman	315- 426-7735

All planned remedial or construction work in regulated wetlands and adjacent areas will be specifically approved by the NYSDEC Division of Natural Resources to ensure that it meets the requirements for substantive compliance with those regulations prior to the start of construction. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

4.2.10 Pre-Construction Meeting with NYSDEC

A pre-construction meeting will be held between NYSDEC, the Volunteer, the Remedial Engineer, the Construction Manager, and the remediation contractor to discuss roles, responsibilities, and expectations associated with this RAWP.

4.2.11 Emergency Contact Information

An emergency contact sheet with names and phone numbers is included in the HASP. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

4.2.12 Remedial Action Costs

The total estimated cost of the Remedial Action is $3,040,399. An itemized and detailed summary of estimated costs for all remedial activity is attached as **Appendix M**. This will be revised based on actual costs and submitted as an Appendix to the Final Engineering Report.

4.3 Site Preparation

4.3.1 Mobilization

Before beginning remedial activities, the remediation contractor will make necessary preparations. Mobilization tasks may include the following:

- Setting up temporary facilities such as offices, storage areas, and decontamination pads;
- Constructing a stabilized construction entrance to control sediment tracking;
- Installing perimeter controls such as silt fences or barriers for erosion control;
- Delivering and staging equipment and materials in designated areas;
- Establishing utility connections, if needed; and
- Implementing safety protocols, including signage and traffic control measures, to regulate site access.

4.3.2 Monitoring Well / Vapor Probe Decommissioning

Existing groundwater monitoring wells will either be protected during remediation and development for use in post-remedial monitoring or will be properly decommissioned in accordance with NYSDEC Commissioners Policy CP-43. The only exception to this is if the full length of the well is to be excavated during remediation.

Similarly, existing soil vapor implants installed during the RI will be properly decommissioned unless they are to be fully removed during remediation or used for post-remedial monitoring.

4.3.3 Erosion and Sedimentation Controls

As part of the remedial actions to be performed at the Site, measures will be needed to limit erosion and dust generation. Erosion control and dust suppression techniques will be employed as necessary to limit erosion and fugitive dust generated in disturbed areas during remediation and redevelopment activities. Such techniques may be employed even if the community air monitoring results indicate that particulate levels are below action levels. Techniques may include but are not limited to:

- Using silt fencing, hay bales, and / or mulching
- Applying water on haul roads and ingress / egress points

- Wetting equipment and excavation surfaces
- Hauling materials in properly tarped or watertight containers
- Limiting vehicle speed on the Site
- Limiting the size of excavations
- Covering excavated areas and materials following excavation

Effectiveness of the dust suppression measures will be evaluated based on the results of the air monitoring that will be conducted under the CAMP.

4.3.4 Stabilized Construction Entrance

A stabilized construction entrance for controlling tracking of sediment will be installed at the Buckley Road and Park Street access points and will be properly operated. The entrance will be graded to ensure proper drainage. A geotextile fabric will be placed on the entrance to prevent soil migration and improve stability and a layer of coarse aggregate will be placed on top of the fabric (typically 2- to 3-inch crushed stone to a minimum thickness of 6 inches). The entrance will be wide enough for vehicles and extend at least 50 feet into the Site to reduce mud tracking. Regular maintenance, including adding fresh stone and removing accumulated sediment, will be performed to keep the entrance effective throughout the project.

4.3.5 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. Volunteer and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the Site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

4.3.6 Sheeting and Shoring

Appropriate management of structural stability of on-Site or off-Site structures during on-Site activities include excavation is the sole responsibility of the Volunteer and its

contractors. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this RAWP. Further, the Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved RAWP.

4.3.7 Equipment and Material Staging

Equipment and materials will be staged in designated areas to ensure organized storage and easy access for construction activities. These staging areas will be strategically located to minimize congestion, improve workflow, and enhance site safety. The remediation contractor will notify the Volunteer and Remedial Engineer in advance of site mobilization.

4.3.8 Decontamination Area

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this RAWP are complete. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

4.3.9 Site Fencing

Site fencing will be installed around the perimeter to restrict unauthorized pedestrian access and enhance safety. The fencing will be secure, clearly marked with signs, and regularly inspected to maintain its effectiveness throughout the project.

4.3.10 Demobilization

Following the completion of remedial activities, the remediation contractor will demobilize equipment and materials not designated for off-site disposal. The Remedial Engineer will document the demobilization activities and confirm that the following has been completed:

- Restoration of areas that may have been disturbed to accommodate support areas (e.g., staging areas, decontamination areas, storage areas, temporary water management areas, and access area);

- Removal of temporary access areas (whether on-Site or off-Site) and restoration of disturbed access areas to pre-remediation conditions;

- Removal of sediment and erosion control measures and disposal of materials in accordance with acceptable rules and regulations;
- Equipment decontamination; and
- General refuse disposal.

4.4 Reporting

All daily and monthly Reports will be included in the Final Engineering Report.

4.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by noon of each day following the reporting period and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the Site;
- References to alpha-numeric map for Site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP findings, including excursions (15-minute data downloads) and station information;
- Photographs of site activities;
- An explanation of notable Site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to an alpha-numeric map for the Site that identifies work areas. These reports will include a summary of CAMP results, odor and dust excursions and corrective actions, and all complaints received from the public.

A Site map that shows a predefined alpha-numeric grid for use in identifying locations described in reports submitted to NYSDEC is attached in **Figure 2**.

The NYSDEC assigned project number will appear on all reports.

4.4.2 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers by the 10th day of each month following the reporting period and will include:

- Activities relative to the Site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (e.g., tons / cubic yards of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and / or schedule;
- Sampling results received following internal data review and validation, as applicable;
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays; and
- Tracking of GSR metrics determined during the design process.

4.4.3 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital (JPEG) format. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos of the Site prior to any Remedial Actions will be provided. Representative photos will be provided of each contaminant source, source area and Site structures before, during and after remediation. Photos will be included in the daily reports as needed, and a comprehensive collection of photos will be included in the FER.

Progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the FER, including a comparison to the goals established during the remedial program. Regular updates to the metrics used (SEFA, SiteWise™ or otherwise approved method) should be included.

The Climate Screening process and results will be documented in the form of a completed checklist and brief letter report. If the Climate Screening results indicate that a CVA is necessary, a complete CVA Report will be developed. The CVA Report will be included as an Appendix or Attachment in relevant documents and / or submitted as a standalone report.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-Site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

4.4.4 Complaint Management Plan

To address public complaints regarding nuisances such as noise, dust, or traffic disruptions, a structured complaint management process will be implemented. Each complaint will be logged with details such as the nature of the issue, time, and location. Upon receipt, the complaint will be investigated promptly, and appropriate corrective actions, such as dust suppression, noise reduction, or adjusted work hours, will be taken as necessary. The complainant will be informed of the resolution steps, and follow-ups will be conducted if required. All complaints and responses will be recorded to ensure accountability and reported to NYSDEC.

4.4.5 Deviations from the Remedial Action Work Plan

Any deviations from the RAWP will be communicated to NYSDEC via telephone or email. All deviations will be documented and will include:

- Reasons for deviating from the approved RAWP;
- Approval process to be followed for changes / editions to the RAWP;
- Effect of the deviations on overall remedy.

5. REMEDIAL ACTION: MATERIAL REMOVAL FROM SITE

The remediation will include the displacement (cut) of approximately 3,386 cubic yards of contaminated fill/soil as a result of Site regrading. This material will be re-used on-site below the cover system. It is not anticipated that any contaminated soil will require off-site disposal.

5.1 Soil Cleanup Objectives

The Soil Cleanup Objectives for this Site are established in 6 NYCRR 375-6 for Restricted Residential Use and NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances.

Soil and materials management on-Site and off-Site will be conducted in accordance with the Soil / Materials Management Plan as described below.

Table 2 and **Table 3** summarize all soil samples that exceed the SCOs proposed for this Remedial Action. Spider maps that show all soil samples that exceed the SCOs proposed for this Remedial Action are shown in **Figure 3B** and **Figure 4B**.

Although no USTs have been identified thus far, any unanticipated UST closures will, at a minimum, conform to criteria defined in DER-10.

5.2 Remedial Performance Evaluation (Post Excavation End-Point Sampling)

Post-excavation end-point sampling is not anticipated as part of this Remedial Action.

5.3 Estimated Material Removal Quantities

The area of waxy substance that was encountered east of Building 6 and northwest of Building 7 will be excavated for off-site disposal at a permitted facility. The lateral and vertical limits of this material have not been fully defined. As such, the exact quantity is currently unknown and will be defined during the removal process.

No other soil/fill is expected to be removed from the Site. Approximately 3,386 cubic yards of contaminated soil/fill will be displaced through site grading and placed as fill elsewhere under the final cover system. Additionally, an additional estimated 8,928 cubic yards of stone base is expected to be imported for placement under asphalt and concrete surfaces, an additional 15,753 cubic yards of general fill is expected to be imported to bring the site to rough grade and to construct the lower 18 inches of the soil cover system, and an additional 2,584 cubic yards of topsoil is expected to provide the upper

six inches of the soil cover system. The proposed grading plan is provided in **Appendix B**.

5.4 Soil / Materials Management Plan

This SMMP outlines the procedures for handling, segregating, storing, transporting, reusing, and disposing of contaminated soil and materials at the Site. The plan establishes methods to be employed for successful soil and material management while minimizing potential risks such as cross-contamination, airborne dust, and runoff. The Remedial Engineer and field personnel working under his supervision, will be responsible for monitoring and documenting the handling and transport of material. The Remedial Engineer and appropriate field personnel will also be responsible for identifying materials to be transported off-site versus temporary on-site stockpiling, selection of samples for characterization, and determining appropriate off-site disposal facilities, if necessary.

5.4.1 Remedial Excavation Areas

Based on the findings of the remedial investigation, one area of remedial excavation is planned. This area corresponds to the location of the waxy substance encountered in soil east of Building 6 and northwest of Building 7. The lateral and vertical limits of the waxy substance are not yet defined. As such, the excavation will begin where the material was encountered just below the ground surface and will be expanded laterally and vertically until the material is effectively removed.

The excavated materials will either be stockpiled for later off-site disposal or pre-characterized through the excavation of test pits and direct-loaded for immediate transport to the disposal facility. The specifics for each are described in Sections 5.4.3 and 5.4.4 below, respectively.

As described in Section 2.5.2 above, this material exhibited no obvious odor or PID response. A grab sample of the material was collected and analyzed for VOCs, PCBs, and petroleum fingerprint/Identification. No VOCs were detected above restricted residential SCOs. The material is readily visible in soil based on its black coloration and viscous nature.

The soil exposed by the excavation will be examined for staining, obvious odors, and other visible evidence of its presence. The soil will also be screening with a PID, as described in Section 5.4.2 below; however, based on previous observations, it is unlikely that PID response will serve as a reliable indicator of material distribution. As such, in the absence of PID response from the material, visual indicators will serve as the primary criteria for establishing excavation boundaries. The excavation will continue until visual indicators suggest that the lateral and vertical extent of the material has been removed and no PID readings above 5 ppm are recorded.

Once field indicators (visual, olfactory, PID) indicate that the lateral and vertical limits of the material and related impacts have been reached, confirmation samples will be collected from the terminal walls and bottom of the resultant excavation. Confirmation sampling will conform to the requirements set forth in DER-10 Section 5.4 (b)(5), as follows:

- If the excavation is less than 20 feet in perimeter dimension, one bottom sample and one sidewall sample biased in the direction of surface runoff;
- If the perimeter of the excavation is between 20 and 300 linear feet, one grab subsurface soil sample will be collected from every 30 linear feet of sidewall and one grab sample will be collected for every 900 square feet of bottom. Sidewall sample locations will be biased to the depth at which the highest prominence of impact (most visibly impacted material and/or highest PID response) is encountered for each interval.

Based on the nature of the material, the confirmation samples will be analyzed for 6 NYCRR Part 375 VOC and SVOCs. In the event that VOC concentrations do not exceed Protection of Groundwater SCOs, the excavation will be considered complete. Given that the on-site fill materials across much of the eastern half of the property, where the waxy substance is present, contain elevated concentrations of SVOCs/PAHs, and that this area will be covered with a suitable soil and hardscape cover system, the final excavation limits will not be predicated on meeting Restricted Residential SCOs for SVOCs/PAHs.

If VOC concentrations in the conformation samples exceed Protection of Groundwater SCOs, further excavation will occur in the relevant direction and additional confirmation samples will be collected until the concentrations remaining no longer exceed the Protection of Groundwater SCOs.

5.4.2 Soil Screening Methods

Visual, olfactory and PID soil screening and assessment will be performed by a qualified environmental professional or experienced field geologist under the direction of the Remedial Engineer during all remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the COC.

Screening will be completed using a portable PID, to document whether VOCs are released from the soil. The PID screening will be performed using headspace analysis methods, by placing a representative portion of the soil sample into a re-sealable plastic

bag and monitoring the airspace surrounding the soil within the bag as the soil is agitated to promote the release of VOCs. The PID will be calibrated daily with a 100-ppm isobutylene / air calibration gas mixture.

As needed, soils will be segregated based on previous environmental data, visual, olfactory, and screening results (PID readings in access of 5 ppm via headspace), into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil.

Any primary contaminant sources (including but not limited to tanks and hotspots) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the FER.

Screening will be performed by qualified environmental professionals.

5.4.3 Stockpile Methods

Stockpiles, if used, will be placed on a continuous sheet of 6 mil polyethylene sheeting and inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. At a minimum, a storm event should be considered a rainfall of three inches or greater in 12 hours. Judgement should be used to evaluate water infiltration, nearby waterbodies where runoff is likely, and engineering controls that may be affected.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Soil stockpiles will be continuously encircled with silt fences. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

5.4.4 Materials Excavation and Load Out

The Remedial Engineer or a qualified environmental professional under his supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the Site.

A Site utility stakeout will be completed for all utilities prior to any ground intrusive activities at the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements). Trucks transporting contaminated soil must have either tight-fitting opaque covers that are secured on the sides and / or back, or opaque covers that are locked on all sides.

Vehicles leaving the Site will not be overloaded. The Remedial Engineer's representative will make reasonable efforts to ensure that vehicles are not loaded beyond their NYSDOT weight rating and that all material is secured beneath the truck bed cover.

Locations where vehicles enter or exit the Site shall be inspected daily for evidence of off-Site sediment tracking.

The Remedial Engineer will be responsible for ensuring that all egress points for truck and equipment transport from the Site will be clean of dirt and other materials derived from the Site during Site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to Site-derived materials.

The Volunteer and parties performing this work are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The Remedial Engineer will ensure that Site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.

Although it is not anticipated, any hotspots or structures to be remediated will be removed and end-point remedial performance sampling completed before excavations related to Site development commence proximal to the hotspot or structure.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-Site is prohibited.

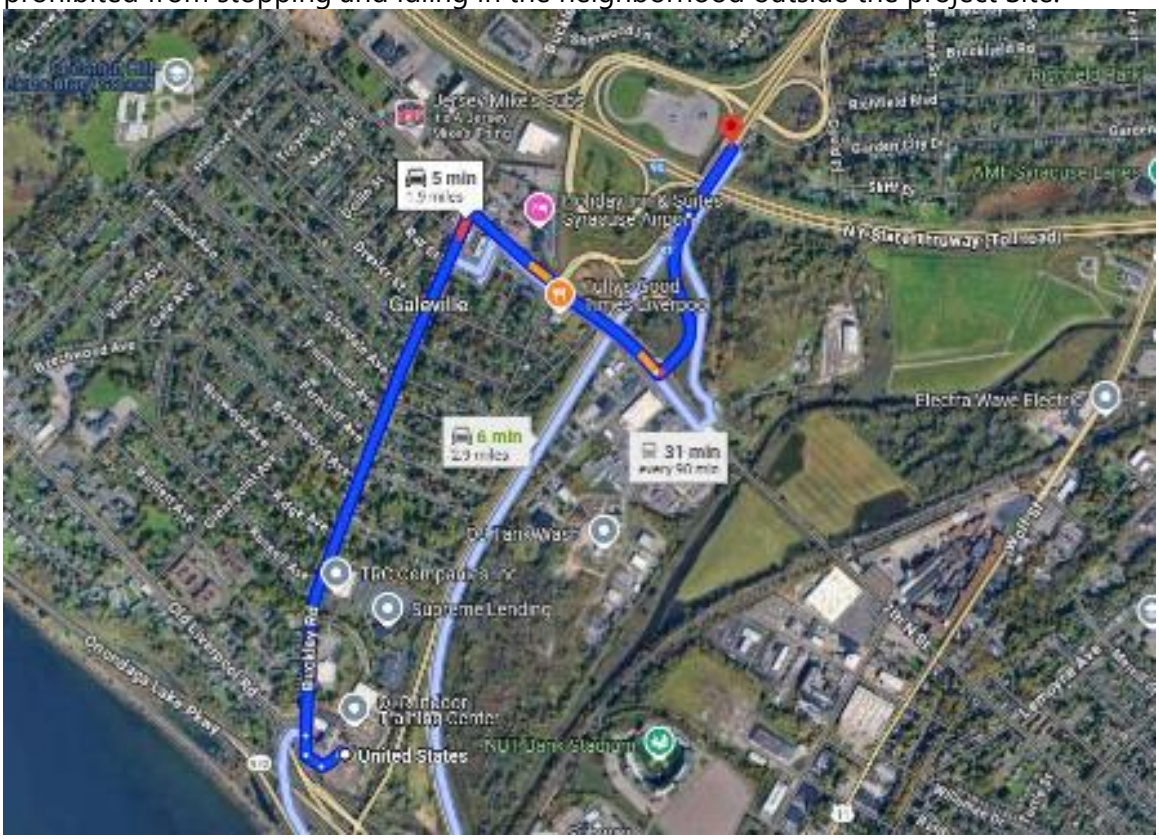
Although it is not anticipated, any primary contaminant sources identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. The survey information will be shown on maps to be reported in the FER.

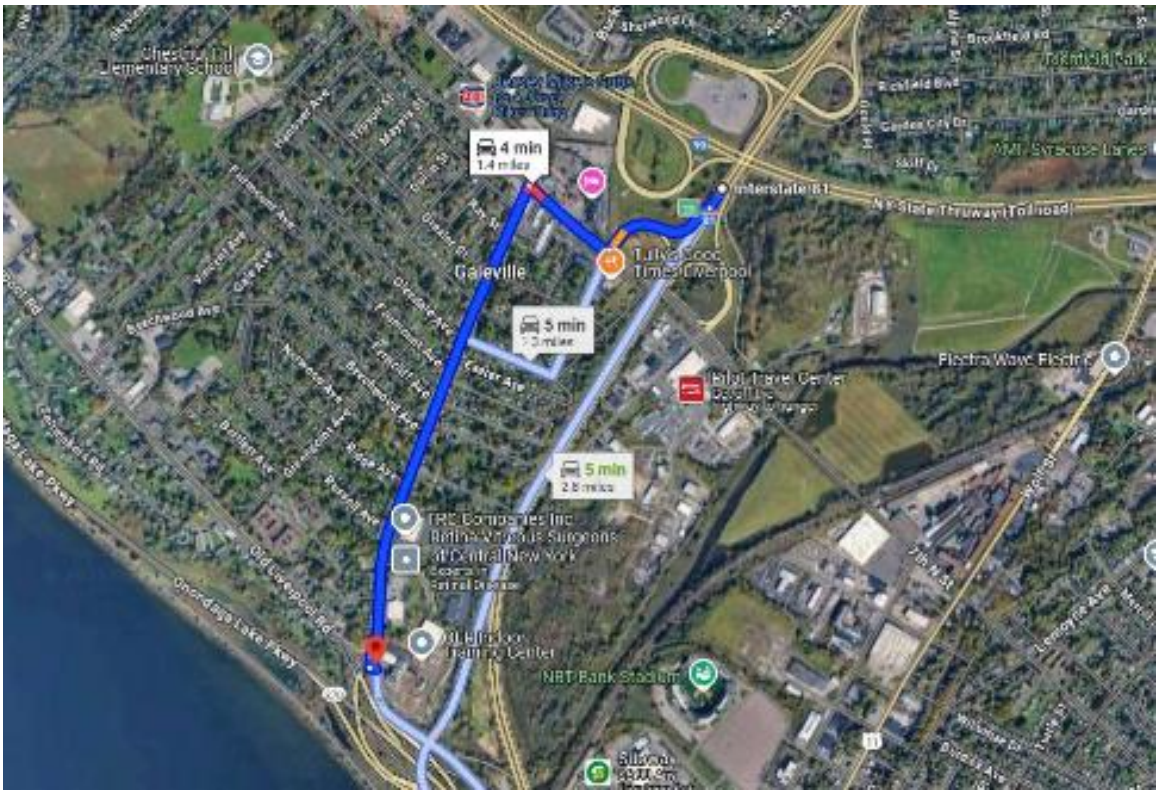
5.4.5 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will maintain a current Part 364 permit and trucks will be properly placarded with high-contrast lettering. Copies of the Part 364 permit shall be located within the hauler's truck and made available upon request. The Part 364 permit will also be included in the Final Engineering Report.

Truck transport routes connect the Site to I-81 northbound and southbound via Buckley Road and 7th North Street, major transportation corridors. All trucks loaded with Site materials will exit the vicinity of the Site using only these approved truck routes.

Proposed in-bound and out-bound truck routes to the Site are shown below. This is the most appropriate route and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off- Site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. Trucks will be prohibited from stopping and idling in the neighborhood outside the project Site.





Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during Site remediation and development.

Queuing of trucks will be performed on-Site in order to minimize off-Site disturbance. Off-Site queuing will be prohibited.

Material transported by trucks exiting the Site will be secured with tight-fitting covers. Loose-fitting canvas or mesh truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

5.4.6 Materials Disposal Off-Site

Disposal locations have not yet been established. Disposal location established at a later date will be reported to the NYSDEC Project Manager.

Based on the site grading plan, the site construction will require the import of approximately 27,235 cubic yards of soil above expected cut volumes. Additionally, the RI identified no distinct contaminant source areas that warrant excavation and off-site disposal. As such, the expected approximately 3,386 cubic yards of cut material can be effectively reused on-site under the site cover system. Based on this, no material expected to be disposed off-Site at a solid waste landfill at this time, other than the waxy material encountered east of Building 6 and northwest of Building 7.

Any soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-Site management of materials from this Site is prohibited without formal NYSDEC approval.

Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360.15 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the Site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Volunteer to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation Site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Non-hazardous historic fill and contaminated soils taken off-Site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360.2. The Remedial Engineer is responsible for assuring material is properly characterized and determining the appropriate disposal methods based on the characterization results.

Historical fill and contaminated soils from the Site are prohibited from being disposed at Part 360.15 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the Site are considered by the NYSDEC Division of Materials Management (DMM) to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC DMM. This material is prohibited from being sent or redirected to a Part 360-15 Registration Facility. In this case, as dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation Site, that the soil material is contaminated and that it must not be redirected to on-Site or off-Site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial

Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the Site during this Remedial Action, including excavated soil, contaminated soil, historic fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-Site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER.

Hazardous wastes derived from on-Site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this Site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization sampling will be performed exclusively for the purposes of off-Site soil disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state and local laws rules and regulations and facility-specific permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC associated with waste characterization activities will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt. Waste characterization data will be used solely for complying with requirements for off-site disposal. Waste Characterization sampling cannot be utilized for:

- Delineating the extent of contamination required for remediation at a Site.
- Replacing or substituting data collected as part of Site Characterization and/or Remedial Investigation.
- Replacing or substituting confirmation or documentation sampling as described in NYSDEC DER-10, Section 5.4.
- To modify remedial decisions as formalized in a NYSDEC approved Decision Document or Record of Decision.

5.4.7 Materials Reuse On-Site

Proposed materials for reuse on-site must be sampled for full suite analytical parameters including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. The sampling

frequency will be in accordance with DER-10 Table 5.4(e)10 unless prior approval is obtained from the NYSDEC project manager for modification of the sampling frequency.

Chemical criteria for on-Site reuse of material have been approved by NYSDEC. These criteria are listed in NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for Commercial Use, and NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances. The Remedial Engineer will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-Site. Approvals for modifications to the analytical parameters must be obtained from the NYSDEC project manager prior to the sampling event.

Soil/fill material for reuse on-site will be segregated and staged as described in **Section 5.4.1** and **Section 5.4.3**. The anticipated size and location of stockpiles will be provided in the 15-day notification to the NYSDEC project manager. Stockpile locations will be based on the location of Site excavation activities and proximity to nearby Site features. Material reuse on-site will comply with requirements of NYSDEC DER-10 Section 5.4(e)4. Any modifications to the requirements of DER-10 Section 5.4(e)4 must be approved by the NYSDEC project manager.

Sampling conducted to determine acceptable reuse must include collection of all necessary quality assurance / quality control (QA / QC) samples, including, matrix spike / matrix spike duplicate (MS / MSD) samples, duplicate samples, equipment blanks for applicable parameters, etc. Laboratory deliverables will be Category B deliverables. Laboratory reporting limits will be sufficient to determine compliance with the soil cleanup objectives (SCOs). VOC samples will be collected in accordance with EPA Method 5035.

A "Request to Import/Reuse Fill Material" form will be filed with the NYSDEC project manager for review and approval prior to material reuse on the site. A copy of the form is presented in **Appendix N**. Acceptable demolition material proposed for reuse on-Site, if any, will be sampled for asbestos.

Concrete crushing or processing on-Site is prohibited, unless NYSDEC has specifically approved on-site processing and reuse of acceptable demolition material.

Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site is prohibited for reuse on-Site.

Contaminated on-Site material, including historic fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. This will be expressed in the Site Management Plan (SMP).

5.4.8 Fluids Management

All liquids to be removed from the Site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Liquids discharged into the New York City sewer system will be addressed through approval by NYCDEP.

Dewatered fluids will not be recharged back to the land surface or subsurface of the Site. Dewatering fluids will be managed off-Site.

Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream, river and/or storm sewer) is prohibited without a SPDES permit.

5.4.9 Demarcation

After the completion of soil removal and any other invasive remedial activities and prior to backfilling, a land survey will be performed by a New York State licensed surveyor. The survey will define the top elevation of residual contaminated soils. A physical demarcation layer, consisting of a high visibility geotextile, orange snow fencing material, or equivalent material will be placed on this surface to provide a visual reference. This demarcation layer will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP. The survey will measure the grade covered by the demarcation layer before the placement of cover soils, pavement and sub-soils, structures, or other materials. This survey and the demarcation layer placed on this grade surface will constitute the physical and written record of the upper surface of the 'Residuals Management Zone' in the SMP. A map showing the survey results will be included in the FER and the SMP.

5.4.10 Backfill from Off-Site Sources

All materials proposed for import onto the Site will be approved by the Remedial Engineer and will be in compliance with provisions in this RAWP prior to receipt at the Site.

Material from industrial sites, spill sites, other environmental remediation sites or other potentially contaminated sites will not be imported to the Site. Solid waste will not be imported onto the Site.

The FER will include the following certification by the Remedial Engineer: "I certify that all import of soils from off-Site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".

All imported soils will meet NYSDEC approved backfill or cover soil quality objectives for this Site as established in 6 NYCRR 375-6.7(d), NYSDEC DER-10 Appendix 5 – Allowable Constituent Levels for Imported Fill or Soil for Commercial Use, and NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances. Non-compliant soils will not be imported onto the Site without prior approval by NYSDEC. Nothing in the approved RAWP or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'general fill' requirements under 6 NYCRR Part 360.13, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Nothing in this RAWP should be construed as an approval for this purpose.

A "Request to Import/Reuse Fill Material" form will be filed with the NYSDEC project manager for review and approval prior to import to the site. A copy of the form is presented in **Appendix N**.

5.4.11 Stormwater Pollution Prevention

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area.

A complete SWPPP is included in **Appendix J**.

5.4.12 Contingency Plan

If underground tanks or other previously unidentified contaminant sources are found during on-Site remedial excavation or development related construction, sampling will be performed on product, sediment and surrounding soils, etc. in accordance with DER-10. Chemical analytical work will be for full scan parameters (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides, PCBs and PFAS). Analyses will not be otherwise limited without NYSDEC approval.

Identification of unknown or unexpected contaminated media identified by screening during invasive Site work will be promptly communicated by phone to NYSDEC's Project Manager. These findings will be also included in daily and periodic electronic media reports.

5.4.12.1 Extreme Storm Preparedness and Response Contingency Plan

Damage from flooding or storm surge can include dislocation of soil and stockpiled materials, dislocation of site structures and construction materials and equipment, and dislocation of support of excavation structures. Damage from wind during an extreme storm event can create unsafe or unstable structures, damage safety structures and cause downed power lines creating dangerous site conditions and loss of power. In the event of emergency conditions caused by an extreme storm event, the Volunteer will undertake the following steps for site preparedness prior to the event and response after the event.

Storm Preparedness

Preparations in advance of an extreme storm event will include the following: containerized hazardous materials and fuels will be removed from the property; loose materials will be secured to prevent dislocation and blowing by wind or water; heavy equipment such as excavators and generators will be removed from excavated areas, trenches and depressions on the property to high ground or removed from the property; an inventory of the property with photographs will be performed to establish conditions for the site and equipment prior to the event; stockpile covers for soil and fill will be secured by adding weights such as sandbags for added security and worn or ripped stockpile covers will be replaced with competent covers; stockpiled hazardous wastes will be removed from the property; stormwater management systems will be inspected and fortified, including, as necessary: clean and reposition silt fences, hay bales; clean storm sewer filters and traps; and secure and protect pumps and hosing.

Storm Response

At the conclusion of an extreme storm event, as soon as it is safe to access the property, a complete inspection of the property will be performed. NYSDEC will be notified within

24 hours if off-site discharges of soil or fill material are observed. A site inspection report will be submitted to NYSDEC at the completion of site inspection and after the site security is assessed. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. Damage from storm conditions that result in acute public safety threats, such as downed power lines or imminent collapse of buildings, structures or equipment will be reported to public safety authorities via appropriate means such as calling 911.

Petroleum spills will be reported to NYSDEC within 2 hours of identification and consistent with State regulations. Public safety structures, such as construction security fences will be repaired promptly to eliminate public safety threats. Debris will be collected and removed.

Dewatering will be performed in compliance with existing laws and regulations and consistent with emergency notifications, if any, from proper authorities. Eroded areas of soil including unsafe slopes will be stabilized and fortified. Dislocated materials will be collected and appropriately managed. Support of excavation structure will be inspected and fortified as necessary. Impacted stockpiles will be contained and damaged stockpile covers will be replaced. Stormwater control systems and structures will be inspected and maintained as necessary.

If soil or fill materials are discharged off site to adjacent properties, property owners and NYSDEC will be notified, and corrective measure plan designed to remove and clean dislocated material will be submitted to NYSDEC and implemented following approval by NYSDEC and granting of site access by the property owner. Impacted offsite areas may require characterization based on site conditions, at the discretion of NYSDEC.

If onsite petroleum spills are identified, a qualified environmental professional will determine the nature and extent of the spill and report to NYSDEC's spill hotline at (800) 457-7362 within statutory defined timelines. If the source of the spill is ongoing and can be identified, it should be stopped if this can be done safely. Potential hazards will be addressed immediately, consistent with guidance issued by NYSDEC.

Storm Response Reporting

A site inspection report will be submitted to NYSDEC at the completion of site inspection. An inspection report will be used for this purpose. Site conditions will be compared to the inventory of site conditions and material performed prior to the storm event and significant differences will be noted. The site inspection report will be sent to the NYSDEC project manager and will include the site name, address, tax block and lot, site primary and alternate contact name and phone number.

Damage and soil release assessment will include: whether the project had stockpiles; whether stockpiles were damaged; photographs of damage and notice of plan for repair; report of whether soil from the site was dislocated and whether any of the soil left the site; estimates of the volume of soil that left the site, nature of impact, and photographs; description of erosion damage; description of equipment damage; description of damage to the remedial program or the construction program, such as damage to the support of excavation; presence of onsite or offsite exposure pathways caused by the storm; presence of petroleum or other spills and status of spill reporting to NYSDEC; description of corrective actions; schedule for corrective actions.

This report should be completed and submitted to NYSDEC project manager with photographs within 24 hours of the time of safe entry to the property after the storm event.

5.4.13 Community Air Monitoring Plan

Air sampling locations are to be determined and adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and downwind monitoring station. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

Community air monitoring will be conducted according to the CAMP provided in **Appendix K**. If particulate levels at the Site exceed the thresholds listed in the CAMP or if airborne dust is observed on the Site or leaving the Site, the dust suppression techniques listed below will be employed. The remedial party will also take measures listed below to prevent dust production on the Site.

Exceedances observed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers and included in the Daily Report.

Water will be available on-site at suitable supply and pressure for use in dust control.

5.4.13.1 Special Requirements for Community Air Monitoring Program - Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates will reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices will be considered and implemented to prevent exposures related to the work activities and to control dust and odors. To the extent practicable, the planned activities will be performed when potentially

exposed populations are at a minimum, such as during weekdays when tenants are away for work.

- If total VOC concentrations outside the walls of occupied structures or next to intake vents exceed 1 part-per-million, additional monitoring will be conducted within the occupied structure(s). Background readings in the occupied spaces will be taken prior to commencement of the planned work. Any unusual background readings will be discussed with NYSDEC and NYSDOH prior to commencement of the work.

- If total particulate concentrations outside the walls of occupied structures or next to intake vents exceed 150 micrograms per cubic meter, work activities will be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 micrograms per cubic meter or less at the monitoring point.

5.4.14 Odor, Dust and Nuisance Control Plan

The FER will include the following certification by the Remedial Engineer: "I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan."

5.4.14.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-Site. Specific odor control methods to be used on a routine basis is not anticipated to be necessary due to lack of petroleum or chemical impacts. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Volunteer's Remedial Engineer, who is responsible for certifying the FER.

All necessary means will be employed to prevent on- and off-Site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-Site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-Site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting / filtering systems.

5.4.14.2 Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-Site work will include, at a minimum, the items listed below:

- Water will be available on-site at suitable supply and pressure for use in dust control.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-Site roads will be limited in total area to minimize the area required for water spraying.

5.4.14.3 Other Nuisances

If necessary, a plan for rodent control will be developed and utilized by the contractor prior to and during Site clearing and Site grubbing, and during all remedial work.

If necessary, a plan will be developed and utilized by the contractor for all remedial work and will conform, at a minimum, to NYCDEP noise control standards.

6. RESIDUAL CONTAMINATION TO REMAIN ON-SITE

Since residual contaminated soil will exist beneath the Site after the remedy is complete, ECs and ICs are required to protect human health and the environment. These ECs and ICs are described hereafter. Long-term management of EC/ICs and of residual contamination will be executed under a Site-specific SMP that will be developed and included in the FER.

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the Site) will have two primary EC systems:

- A composite cover system consisting of asphalt covered roads and parking areas, concrete covered sidewalks, concrete building slabs, and clean soil cover
- An SSDS and / or mechanical ventilation system for each of the on-site buildings which is or may potentially be impacted by VI.

The FER will report residual contamination on the Site in tabular and map form. This will include presentation of exceedances of both Track 1 and Track 4 sites.

7. ENGINEERING CONTROLS: SITE COVER SYSTEM

Exposure to residual contaminated soils will be prevented by an engineered site cover system that will be built on the Site. This site cover system will be comprised of asphalt covered roads, concrete covered sidewalks, concrete building slabs, and clean soil cover.

Green remediation BMPs for designing and installing a conventional cover system include:

- Design in ways that mimic rather than alter the site's natural setting, to improve the cover's long-term performance and protect ecosystem services such as potable water, wildlife habitat, and carbon storage;
- Design a cover accounting for potential effects of climate change, which could involve changes in onsite soil development or increased vulnerability to flooding;
- Use uncontaminated soil or sediment from onsite excavation instead of imported soil / sediment for the cover's frost prevention and erosion control layers; similarly, uncontaminated sand, gravel, and rocks from onsite instead of offsite areas may be used for drainage;
- Apply low impact development strategies such as installing earthen berms to manage stormwater;
- Choose geotextile fabric or drainage tubing composed of 100% recycled materials rather than virgin materials for lining, erosion control, and drainage;
- Select materials with biobased content for daily activities during cover construction;
- Use clean fuel and emission control technologies for routine field vehicles and machinery such as backhoes and bulldozers to reduce fuel consumption and emission of air pollutants such as GHGs and particulate matter; and
- Investigate onsite solar and wind resources to power equipment such as leachate pumps and flare units.

For alternative cover designs:

- Consider using asphalt rubber (containing recycled tires) where the cover system includes a layer of asphalt;
- Substitute concrete with high albedo pavement, which reflects sunlight and heat away from the cover surface and may aid growth of nearby vegetation; and

- Consider using concrete containing a high percentage of industrial waste by-products as a substitute for cement, if tests show no contaminant leaching.

In addition to BMPs that apply to conventional covers, BMPs for designing and installing an evapotranspiration cover include:

- Choose recycled (crushed) concrete for biobarriers or capillary breaks instead of natural rock;
- Select native drought-resistant plants for the upper vegetative layer to reduce maintenance needs;
- Preserve biodiversity and related ecosystem services by installing a suitable mix of native shrubs, grasses, and forbs; and
- Use non-synthetic amendments such as compost instead of chemical fertilizers if the soil or vegetation is found to need supplementation over time.

7.1 Soil Cover System

The following criteria apply to the construction of the soil cover system:

- The soil cover will be a minimum of two feet of clean soil placed over a fabric demarcation layer and will be installed in areas that will be landscaped.
- Soil cover material, including any fill material brought to the site, will meet the requirements in 6 NYCRR Part 375-6.7(d) and approved by NYSDEC prior to import.
- Existing surfaces and grades will be adjusted (excavated or filled) to accommodate a minimum of one foot of soil cover system to meet proposed final grades. The locations required to receive the soil cover system are shown as "Greenspace" on **Figure 11**.
- The upper six inches of soil will be of sufficient quality to maintain a vegetative cover. The soil cover will be planted with native species of grasses, shrubs, trees, and other vegetation suited for growing in the Northeast to maximize habitat function.
- Each excavation will be surveyed prior and subsequent to soil placement to confirm that a minimum of two feet of soil cover has been placed over the demarcation layer.

- The soil cover will extend to the hardscape cover system (buildings, asphalt pavement or concrete pavement as detailed below) and / or property boundaries.

- Onsite HFM which needs to be excavated to accommodate the soil cover system may be beneficially reused onsite by being placed below the demarcation layer and soil cover system. HFM that cannot be beneficially used below the soil cover system or hardscape cover system will be transported off-site for proper disposal.

7.2 Hardscape Cover System

The hardscape cover system will be installed in areas of the Site not protected by the soil cover system. The hardscape cover system will consist of a combinations of building foundations, concrete slabs, asphalt parking lots and driveways, and concrete sidewalks. Asphalt pavement will consist of compacted clean stone sub-base and a minimum of four inches of compacted asphaltic concrete. Concrete sidewalks, pads, and ramps will consist of compacted clean stone sub-base and Portland cement-based concrete.

A diagram showing the design detail for the soil cover is shown in **Figure 11** and the design details for each type of hardscape cover type is shown in **Appendix B**. A map showing the aerial distribution of each of the cover types to be built at the Site is included in **Figure 11**.

An Excavation Plan will be included in the Site Management Plan and will outline the procedures to be followed if the site cover system and underlying residual contamination are disturbed after the Remedial Action is complete.

The components of the site cover system will be documented in the FER. Maintenance of this site cover system will be described in the SMP.

8. ENGINEERING CONTROLS: TREATMENT SYSTEMS

Based on the sampling of soil and air during the RI, systems designed to mitigate vapor intrusion will be installed in all the existing buildings that are or potentially may be affected by VI, and any proposed future development. The vapor mitigation systems will comprise of the following:

- A mechanical ventilation system will be installed in the planned above-ground and basement parking garages.
- A sub-slab depressurization system (SSDS) will be installed in the buildings planned to be used for residential or commercial use.

The SSDS will be designed as follows:

- Designed to maintain an adequate negative pressure beneath the building slab. A pressure field extension test will be completed for each building requiring an SSDS.
- Vacuum gauges and alarms will be installed on vertical risers to monitor pressure and system status.
- Suction points will penetrate the soil under the slab. Each point will be urethane sealed and tested for tightness. Trenching will be completed as necessary, if poor connection and/or coverage is observed.
- Suction points will be connected to adequately sized risers that will discharge air vertically through the roof by way of a continuously operating forced air blower mounted on at the top of each riser above the roof.
- The SSDS will be designed to the applicable ANSI/AARST standard SGM-MFLB-2023 for Soil Gas Mitigation Standards for Existing Multifamily, School, Commercial and Mixed-Use Buildings.

A description of the Mechanical Ventilation System designed to be installed in the above-ground and basement parking garages is as follows:

- The system will consist of two motorized exhaust fans that will be installed in the basement area at the western end of the South facing wall and will each discharge air through two large louvers.
- One fan will run continuously and remove a constant volume of 1,000 cubic feet per minute (CFM) of air from the garage area.
- The second fan will be controlled by a carbon monoxide (CO) detection system and will cycle on / off based on detected levels of CO in the garage.

- Three outside air louvers will be located at the eastern end of the building and will introduce fresh air to replace the air exhausted by the motorized exhaust fans.

Formal design documents for the SSDS and mechanical ventilation systems will be provided to NYSDEC at a later date, prior to the construction of the systems.

Operation, Monitoring, & Maintenance Manuals as well as inspection plans for the systems will included in the SMP and appended to the FER.

Following installation of the SSD and garage ventilation systems, the following will be completed to assess their effectiveness:

- The SSD and ventilation systems will be backdraft tested to verify there are no backdraft conditions caused by the system or the operation of HVAC units in the building.
- The pressure differential of buildings 2 and 3 sub-slab will be measured and documented.
- A PFET will be completed to ensure the sub-slab plenum is adequately negatively pressurized.
- Smoke tubes will be used to identify floor cracks and other penetrations to the sub-slab that could short-circuit the pressure field.
- SSDS components will be labeled, and instructions will be provided for the owner to effectively operate the system.
- Proper operation of the SSDS audible alarm devices and manometer will be confirmed.
- PFET data will be provided to NYSDEC and NYSDOH for review. Once each SSDS has been determined to be working effectively, indoor air sampling will be performed. Indoor air samples will be collected once the system has been operational for 30-days or more and prior to occupancy.

9. CRITERIA FOR COMPLETION OF REMEDIATION / TERMINATION OF REMEDIAL SYSTEMS

9.1 Composite Cover System

The composite cover system is a permanent control, and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

9.2 Sub-Slab Depressurization System (SSDS)

The active SSD and ventilation systems will not be discontinued without written approval by NYSDEC and NYSDOH. A proposal to discontinue the active SSD or ventilation system may be submitted by the property owner based on confirmatory data that justifies such request. Systems will remain in place and operational until permission to discontinue use is granted in writing by NYSDEC and NYSDOH.

10. ENGINEERING AND INSTITUTIONAL CONTROLS

After the remedy is complete, the Site will have residual contamination remaining in place. Engineering Controls (ECs) for the residual contamination have been incorporated into the remedy to render the overall Site remedy protective of public health and the environment. Two elements have been designed to ensure continual and proper management of residual contamination in perpetuity: an Environmental Easement and an SMP.

All as-built drawings, diagrams, calculation and manufacturer documentation for treatment systems will be presented in the FER. A Site-specific Environmental Easement will be recorded with Onondaga County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all Engineering and Institutional Controls (ECs / ICs) placed on this Site by this NYSDEC-approved remedy. ICs provide restrictions on Site usage and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. The SMP describes appropriate methods and procedures to ensure compliance with all ECs and ICs that are required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

10.1 Environmental Easement

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-Site after the Remedial Action is complete. As part of this remedy, an Environmental Easement approved by NYSDEC will be filed and recorded with Onondaga County. The Environmental Easement will be submitted as part of the Final Engineering Report.

The Environmental Easement renders the Site a Controlled Property. The Environmental Easement must be recorded with Onondaga County before the COC can be issued by NYSDEC. A series of Institutional Controls are required under this remedy to implement, maintain and monitor these Engineering Control systems, prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the Site to Commercial Use only. These Institutional Controls are requirements or restrictions placed on the Site that are listed in, and required by, the Environmental Easement. Institutional Controls can, generally, be subdivided between controls that support Engineering Controls, and those that place general restrictions on Site usage or other requirements. Institutional Controls in both of these groups are closely integrated with the SMP, which provides all of the methods and procedures to be followed to comply with this remedy.

The Institutional Controls that support Engineering Controls are:

- Compliance with the Environmental Easement by the Grantee and the Grantee's successors and adherence of all elements of the SMP is required;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- A site cover system consisting of asphalt covered roads, concrete covered sidewalks, and concrete building slabs must be inspected, certified and maintained as required in the SMP;
- A soil vapor mitigation system consisting of a sub-slab depressurization system all commercial / residential building structures and mechanical ventilation systems in parking garages must be inspected, certified, operated, and maintained as required by the SMP;
- All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP;
- Soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, must be protected and replaced as necessary to ensure proper functioning in the manner specified in the SMP; and
- Engineering Controls may not be discontinued without an amendment or extinguishment of the Environmental Easement.

Adherence to these Institutional Controls for the Site is mandated by the Environmental Easement and will be implemented under the SMP (discussed in the next section). The Controlled Property (Site) will also have a series of Institutional Controls in the form of Site restrictions and requirements. The Site restrictions that apply to the Controlled Property are:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;

- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;

- The Controlled Property may be used for restricted residential use only, provided the long-term Engineering and Institutional Controls included in the SMP are employed;

- The Controlled Property may not be used for a higher level of use, such as residential use without an amendment or extinguishment of this Environmental Easement;

- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

10.2 Site Management Plan

Site Management is the last phase of remediation and begins with the approval of the FER and issuance of the COC for the Remedial Action. The SMP is submitted as part of the FER but will be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all Site Management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP should include methods to incorporate and track GSR. Measures should be taken to maintain a cost-effective, protective remedy that remains conscientious of the Site's environmental footprint. At a minimum, the following should be assessed: waste generation, energy usage, emissions, and water usage.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the Site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes: (1) development, implementation, and management of all Engineering and Institutional Controls; (2) development and implementation of monitoring systems and a Monitoring

Plan; (3) development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual); (4) submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of Site information to NYSDEC; and (5) defining criteria for termination of treatment system operation.

To address these needs, this SMP will include four plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems; and (4) a Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC. The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification will be scheduled on a certification period basis. The certification period will be annually. The SMP will be based on the certifying period relative to the date of issuance of the COC. The first submission will be due16 months after the issuance of the COC, and annually (or at another frequency as approved by NYSDEC) thereafter.

No exclusions for handling of residual contaminated soils will be provided in the SMP. All handling of residual contaminated material will be subject to provisions contained in the SMP.

11. FINAL ENGINEERING REPORT

A FER will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP. The FER provides the documentation that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide a comprehensive account of the locations and characteristics of all material removed from the Site including the surveyed map(s) of all sources. The Final Engineering Report will include as-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete SMP. The FER will provide a description of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents. The FER will provide a tabular summary of all performance evaluation sampling results and all material characterization results and other sampling, and chemical analysis performed as part of the Remedial Action. The FER will provide test results demonstrating that all mitigation and remedial systems are functioning properly. The FER will be prepared in conformance with DER-10.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the Site Management Plan and Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.

The FER will include written and photographic documentation of all remedial work performed under this remedy.

The FER will include an itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

The FER will provide a thorough summary of all residual contamination left on the Site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil / fill remaining at the Site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil / fill remaining at the Site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the Site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of Site SCOs and a map that shows residual contamination in excess of Site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the Site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the Site.

The FER must include a discussion of the green remediation practices / technologies employed throughout the remedial program. A final footprint analysis using a DER accepted model, and any tracking methods used through the construction including restoration activities. Before approval of a FER and issuance of a COC, all project reports must be submitted in digital form on electronic media (PDF).

11.1 Certifications

The following certification will appear in front of the Executive Summary of the Final Engineering Report. The FER will be prepared, stamped and the following certification signed by an individual licensed or otherwise authorized in accordance with article 145 of the education law to practice the profession of engineering. The certification will include the following statements:

I, H. Nevin Bradford, III, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the Site are contained in an environmental easement created and recorded pursuant ECL 71-3605 and that all affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the Site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

12. SCHEDULE

The following is the schedule to implement the remedy and achieve a COC:

Table 12-1: Certificate of Completion Schedule

Date	Task
October 2025	AAR and RAWP Report submitted to NYSDEC
Fall 2025	Draft Environmental Easement (EE) Package Submitted to NYSDEC
Spring 2026	AAR / RAWP Approved by NYSDEC and DD Issued
Spring 2026	Remedial Action Commences (Performed Under Approved Interim Site Management Plan (ISMP) if DD has not yet been issued)
August 1, 2026	Draft Site Management Plan (SMP) submitted to NYSDEC
October 1, 2026	Remedial system construction complete, including installation / construction of cover system and IRM Completion
October 1, 2026	EE Executed and Final SMP submitted to NYSDEC
October 1, 2026	Draft FER submitted to NYSDEC
November 1, 2026	EE recorded and Notices provided
November 15, 2026	Final FER submitted in final form to NYSDEC

13. REFERENCES

6 NYCRR Part 703, *Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations*.

C&S Engineers, Inc., 2022. *Remedial Investigation Work Plan, Urban Villages (Former Will & Baumer Candle Co. Inc. Site, 100 Buckley Road, Town of Salina, Onondaga County, New York, Site No. C734154,* C&S Engineers, Inc., July 28, 2022.

C&S Engineers, Inc., 2024. *Remedial Investigation Report, Urban Villages (Former Will & Baumer Candle Co. Inc. Site, 100 Buckley Road, Town of Salina, Onondaga County, New York, Site No. C734154,* C&S Engineers, Inc., July 12, 2024.

Guidance for Evaluating Soil Vapor Intrusion in the State of New York, New York State Department of Health, October 2006.

Historic Facility Drawings, UR-BAN Villages PFA, LLC, 1951 – 1989.

LaBella Associates, D.P.C., 2020. *Phase I Environmental Site Assessment, 100 Buckley Road, Salina, New York, 13088,* LaBella Associates, D.P.C., April 3, 2020.

LaBella Associates, D.P.C., 2020. *Phase II Environmental Site Assessment, 100 Buckley Road, Salina, New York, 13088,* LaBella Associates, D.P.C., May 8, 2020.

New York Codes, Rules, and regulations, Title 6 (6 NYCRR), Chapter IV, Subpart 375-6: *Remedial Program Soil Cleanup Objectives*,

NYSDEC Program Policy DER-10, *Technical Guidance for Site Investigation and Remediation*, New York State Department of Environmental Conservation, May 2010.

NYSDEC Program Policy DER-31, *Green Remediation*, New York State Department of Environmental Conservation, August 11, 2010.

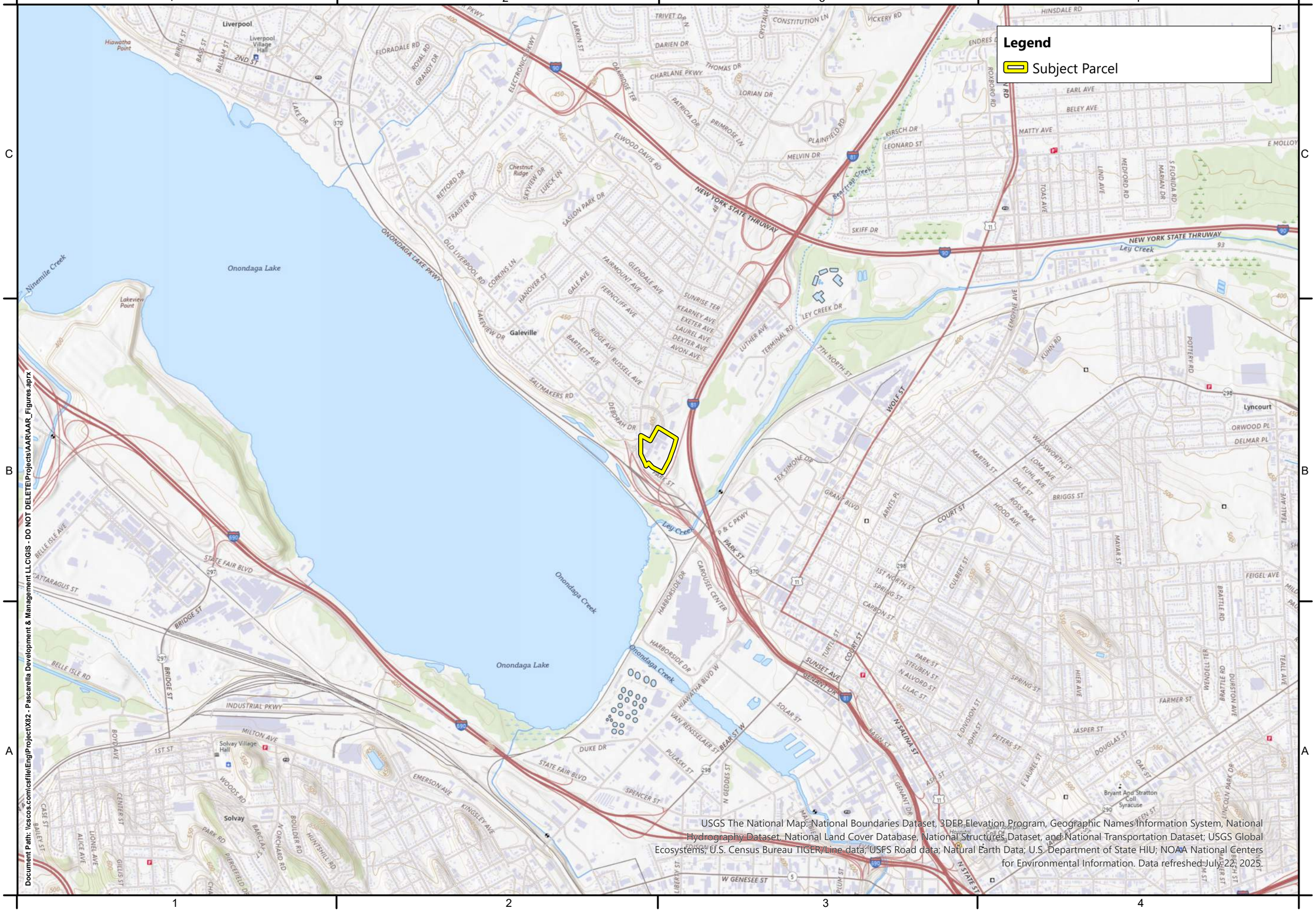
Sanborn Fire Insurance Maps, Bird Library – Syracuse University, 1911 – 1953.

Sanborn Fire Insurance Maps, Environmental Risk Information Services, 1911 – 1990.

Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, New York State Department of Environmental Conservation, June 1998.

Trichloroethene (TCE) in Indoor Air and Outdoor Air, New York State Department of Health, August 2015.

Figures



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road data; Natural Earth Data; U.S. Department of State HIU; NOAA National Centers for Environmental Information. Data refreshed July 22, 2025.

Document Path: \\cscos.com\csfile\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 2,000 Feet

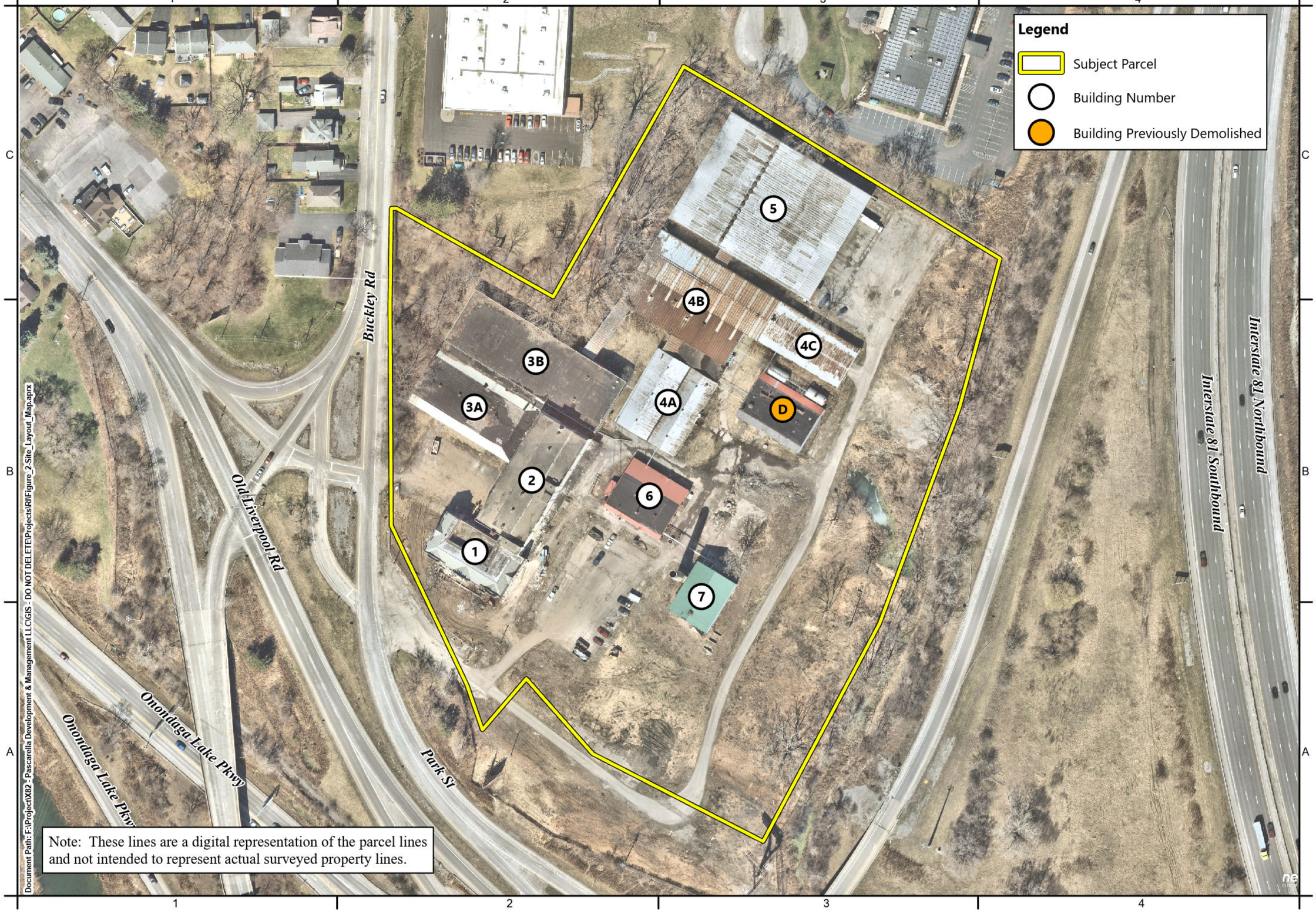
ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.003
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:05 AM

SITE LOCATION MAP

Figure 1



C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

ALTERNATIVES ANALYSISE REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/30/2025 @ 9:49 AM

SITE LAYOUT MAP

Figure 2

Legend

- Site
- 2021 Surface Soil Sample Location
- 2022 Surface Soil Sample Location

SS-120
SS-115
SS-116
SS-114
SS-121
SS-119
SS-08
SS-113
SS-117
SS-112
SS-111
SS-07
SS-110
SS-122
SS-118
SS-01
SS-109
SS-02
SS-06
SS-108
SS-05
SS-04
SS-103
SS-102
SS-106
SS-107
SS-03
SS-101
SS-104
SS-105

Buckley Rd
48
Old Liverpool Rd
Park St

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, New York State, Maxar, Microsoft

Document Path: \\cscos.com\cs\file\Eng\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

C&S COMPANIES®

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

0 100 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.003
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:13 AM

SURFACE SOIL LOCATIONS

Figure 3A

Legend

- Site
- 2021 Surface Soil Sample Location
- 2022 Surface Soil Sample Location

Soil Cleanup Objectives - 6 NYCRR PART 375

Unrestricted Use SCO	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Groundwater Use Restricted

Data reported in Parts Per Million (ppm)
No Exceedances of the Unrestricted or Groundwater Use SCOs are shown

LOCATION	SS-117	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	4.1	
Benzo(a)pyrene	4.5	
Benzo(b)fluoranthene	6.2	
Benzo(k)fluoranthene	1.8	
Chrysene	4.9	
Dibenzo(a,h)anthracene	0.62	
Indeno(1,2,3-cd)pyrene	3.3	

LOCATION	SS-118	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	5.4	
Benzo(a)pyrene	5.1	
Benzo(b)fluoranthene	7.3	
Benzo(k)fluoranthene	1.9	
Chrysene	5.7	
Dibenzo(a,h)anthracene	0.69	
Indeno(1,2,3-cd)pyrene	3.7	
Total Metals		
Manganese, Total	2670	

LOCATION	SS-102	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	1	
Benzo(a)pyrene	1	
Benzo(b)fluoranthene	1.4	
Chrysene	1.2	
Indeno(1,2,3-cd)pyrene	0.79	

LOCATION	SS-103	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	4.7	
Benzo(a)pyrene	4.3	
Benzo(b)fluoranthene	6	
Benzo(k)fluoranthene	1.5	
Chrysene	4.5	
Dibenzo(a,h)anthracene	0.62	J
Indeno(1,2,3-cd)pyrene	3.3	

LOCATION	SS-08	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(b)fluoranthene	0.65	
Indeno(1,2,3-cd)pyrene	0.65	
Total Metals		
Arsenic, Total	13.9	
Nickel, Total	60	

LOCATION	SS-116	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	1.4	
Benzo(a)pyrene	1.4	
Benzo(b)fluoranthene	1.9	
Chrysene	1.5	
Indeno(1,2,3-cd)pyrene	0.89	
Total Metals		
Manganese, Total	5970	JH

LOCATION	SS-114	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	26	
Benzo(a)pyrene	25	
Benzo(b)fluoranthene	30	
Benzo(k)fluoranthene	12	
Chrysene	24	
Dibenzo(a,h)anthracene	3.6	
Indeno(1,2,3-cd)pyrene	13	

LOCATION	SS-113	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	1.1	
Benzo(b)fluoranthene	1.4	
Chrysene	1.2	
Indeno(1,2,3-cd)pyrene	0.61	
Total Metals		
Manganese, Total	37200	JH

LOCATION	SS-112	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	1.1	
Benzo(b)fluoranthene	1.2	
Chrysene	1.2	
Indeno(1,2,3-cd)pyrene	0.58	

LOCATION	SS-111	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	4.7	
Benzo(a)pyrene	4.4	
Benzo(b)fluoranthene	4.6	
Benzo(k)fluoranthene	2.1	
Chrysene	4.7	
Dibenzo(a,h)anthracene	0.56	
Indeno(1,2,3-cd)pyrene	1.7	
Total Metals		
Arsenic, Total	93.3	JH
Mercury, Total	0.814	

LOCATION	SS-110	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Total Metals		
Arsenic, Total	20.9	JH
Manganese, Total	8180	JH

LOCATION	SS-109	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organic		
Benzo(b)fluoranthene	1.4	
Chrysene	1.2	
Indeno(1,2,3-cd)pyrene	0.51	J

LOCATION	SS-07	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(b)fluoranthene	1.1	
Indeno(1,2,3-cd)pyrene	0.57	

LOCATION	SS-05	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Indeno(1,2,3-cd)pyrene	0.55	

LOCATION	SS-06	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	1.5	
Benzo(a)pyrene	1.3	
Benzo(b)fluoranthene	2	
Chrysene	1.5	
Indeno(1,2,3-cd)pyrene	0.93	
Total Metals		
Zinc, Total	118	

LOCATION	SS-04	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	2.1	
Benzo(a)pyrene	1.7	
Benzo(b)fluoranthene	2.5	
Benzo(k)fluoranthene	0.99	
Chrysene	2.3	
Indeno(1,2,3-cd)pyrene	0.97	
Total Metals		
Lead, Total	63.8	
Zinc, Total	123	

LOCATION	SS-106	
SAMPLE DEPTH (ft.)	SURFACE (0 - 2")	
Analyte	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	5.4	
Benzo(a)pyrene	5.5	
Benzo(b)fluoranthene	5.8	
Benzo(k)fluoranthene	2.9	
Chrysene	4.8	
Dibenzo(a,h)anthracene	0.84	
Indeno(1,2,3-cd)pyrene	2.6	
Total Metals		
Mercury, Total	2.38	

SS-120, SS-115, SS-116, SS-114, SS-121, SS-119, SS-08, SS-113, SS-117, SS-112, SS-111, SS-07, SS-110, SS-118, SS-122, SS-01, SS-109, SS-02, SS-06, SS-108, SS-05, SS-04, SS-103, SS-102, SS-106, SS-107, SS-03, SS-101, SS-104, SS-105

Buckley Rd, Old Liverpool Rd, Park St, 48, 81

Document Path: \\cscos.com\cs\file\Engr\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

0 100 Feet

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

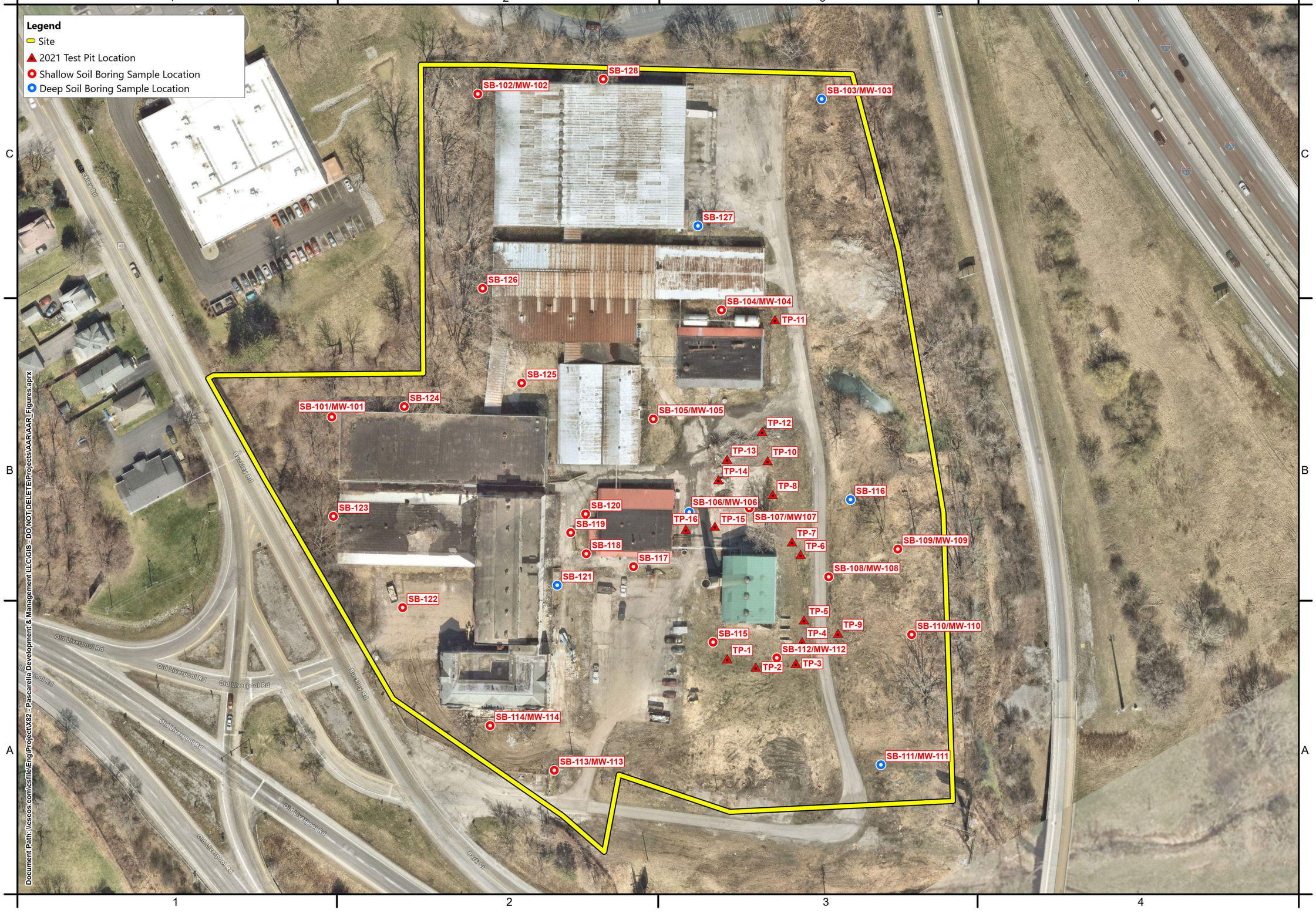
ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.003
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:23 AM

SURFACE SOIL DATA EXCEEDENCES

Figure 3B



Document Path: \\cscos.com\cs\file\Engr\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

0 100 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.003
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:31 AM

SUBSURFACE SOIL LOCATIONS

Figure 4A

Legend
- Site
- 2021 Test Pit Location
- Shallow Soil Boring Sample Location
- Deep Soil Boring Sample Location

Soil Cleanup Objectives - 6 NYCRR PART 375

Unrestricted Use SCO	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Groundwater Use Restricted

Data reported in Parts Per Million (ppm)
No Exceedances of the Unrestricted or Groundwater Use SCOs are shown

LOCATION	SB-101, 2-5
SAMPLE DEPTH (ft.)	2 - 5'
Analytes	Results Qual
Semivolatile Organics	
Benzo(a)anthracene	*9.9*
Benzo(a)pyrene	*11*
Benzo(b)fluoranthene	*13*
Benzo(k)fluoranthene	*5.1*
Chrysene	*10*
Dibenzo(a,h)anthracene	*1.6*
Indeno(1,2,3-cd)pyrene	*5.4*
LOCATION	**SB-101, 6-10**
SAMPLE DEPTH (ft.)	**6 - 10'**
Analytes	**Results Qual**
Semivolatile Organics	
Indeno(1,2,3-cd)pyrene	*0.57*

LOCATION	SB-121, 0.5-3
SAMPLE DEPTH (ft.)	0.5-3'
Analytes	Results Qual
Semivolatile Organics	
Benzo(a)anthracene	*6.9*
Benzo(a)pyrene	*6.1*
Benzo(b)fluoranthene	*6.1*
Benzo(k)fluoranthene	*2.9*
Chrysene	*6.8*
Dibenzo(a,h)anthracene	*0.91*
Indeno(1,2,3-cd)pyrene	*3.2*

LOCATION	SB-123, 1-2	SB-123, 1-2	
SAMPLE DEPTH (ft.)	1 - 2'	1 - 2'	
Analytes	Results Qual	Results	Qual
Semivolatile Organics			
Acenaphthene	*170*	-	
Fluoranthene	*1800*	*1000*	*E*
Naphthalene	*200*	-	-
Benzo(a)anthracene	*540*	-	-
Benzo(a)pyrene	*430*	-	-
Benzo(b)fluoranthene	*500*	-	-
Benzo(k)fluoranthene	*200*	-	-
Chrysene	*460*	-	-
Anthracene	*330*	-	-
Benzo(ghi)perylene	*200*	-	-
Fluorene	*200*	-	-
Phenanthrene	*1400*	*1100*	*E*
Dibenzo(a,h)anthracene	*64*	-	-
Indeno(1,2,3-cd)pyrene	*260*	-	-
Pyrene	*760*	-	-
Dibenzofuran	*140*	-	-
LOCATION	**SB-123, 2-5**		
SAMPLE DEPTH (ft.)	**2 - 5'**		
Analytes	**Results Qual**		
Semivolatile Organics			
Dibenzo(a,h)anthracene	*0.72*		
Indeno(1,2,3-cd)pyrene	*1.5*		

LOCATION	SB-115, 1-2	SB-115, 1-2	
SAMPLE DEPTH (ft.)	1-2'	1-2'	
Analytes	Results Qual	Results	
Semivolatile Organics			
Benzo(a)anthracene	*12*	*E*	*5.9*
Benzo(a)pyrene	*12*	*E*	*10*
Benzo(b)fluoranthene	*16*	*E*	*12*
Benzo(k)fluoranthene	*3.2*		-
Chrysene	*10*	*E*	*5.8*
Dibenzo(a,h)anthracene	*2.6*		-
Indeno(1,2,3-cd)pyrene	*7.3*		-

LOCATION	TP-13
SAMPLE DEPTH (ft.)	1.5-3'
Analytes	Results Qual
Total Metals	
Copper, Total	176
Lead, Total	218
Zinc, Total	527

LOCATION	TP-01
SAMPLE DEPTH (ft.)	3-5'
Analytes	Results Qual
Total Metals	
Copper, Total	66.7
Manganese, Total	208
Zinc, Total	412

LOCATION	TP-02
SAMPLE DEPTH (ft.)	2-3'
Analytes	Results Qual
Total Metals	
Arsenic, Total	15..3
Cadmium, Total	27.5
Copper, Total	3140
Lead, Total	208
Zinc, Total	8260

LOCATION	TP-03
SAMPLE DEPTH (ft.)	1.5-2.5'
Analytes	Results Qual
Total Metals	
Arsenic, Total	14.5
Mercury, Total	0.257
Zinc, Total	165

LOCATION	SB-127, 5-10'
SAMPLE DEPTH (ft.)	5-10'
Analytes	Results Qual
Total Metals	
Arsenic, Total	*189*
Cadmium, Total	*5.14*
Mercury, Total	*1.06*
Zinc, Total	*12400*

LOCATION	SB-104,1-3
SAMPLE DEPTH (ft.)	1 - 3'
Analytes	Results Qual
Semivolatile Organics	
Benzo(a)anthracene	*5.2*
Benzo(a)pyrene	*4.4*
Benzo(b)fluoranthene	*5.3*
Benzo(k)fluoranthene	*2*
Chrysene	*4.3*
Dibenzo(a,h)anthracene	*0.68*
Indeno(1,2,3-cd)pyrene	*2.9*
Total Metals	
Arsenic, Total	*18.6*

LOCATION	TP-06
SAMPLE DEPTH (ft.)	2-3'
Analytes	Results Qual
Total Metals	
Arsenic, Total	16.8
Mercury, Total	0.214

LOCATION	TP-08
SAMPLE DEPTH (ft.)	1.5-3
Analytes	Results Qual
Semivolatile Organics	
Benzo(a)anthracene	2.6
Benzo(a)pyrene	2.4
Benzo(b)fluoranthene	3.2
Benzo(k)fluoranthene	0.86
Chrysene	2.5
Dibenzo(a,h)anthracene	0.48
Indeno(1,2,3-cd)pyrene	1.8
Total Metals	
Arsenic, Total	16.5
Lead, Total	83
Mercury, Total	0.187

LOCATION	SB-107, 1.5-6
SAMPLE DEPTH (ft.)	1.5-6'
Analytes	Results Qual
Semivolatile Organics	
Benzo(b)fluoranthene	*1.3*
Chrysene	*1*
Indeno(1,2,3-cd)pyrene	*0.62*
LOCATION	**SB-107, 11-13**
SAMPLE DEPTH (ft.)	**11-13'**
Analytes	**Results Qual**
Semivolatile Organics	
Benzo(b)fluoranthene	*1.2*
Chrysene	*1*
Indeno(1,2,3-cd)pyrene	*0.63*

LOCATION	SB-116,1-5
SAMPLE DEPTH (ft.)	1-5'
Analytes	Results Qual
Volatile Organics by EPA 5035 High	
Benzene	*0.97*
Semivolatile Organics	
Benzo(a)anthracene	*3.4*
Benzo(a)pyrene	*2.7*
Benzo(b)fluoranthene	*3.5*
Benzo(k)fluoranthene	*1.1*
Chrysene	*3.2*
Dibenzo(a,h)anthracene	*0.41*
Indeno(1,2,3-cd)pyrene	*1.8*
Total Metals	
Mercury, Total	*0.845*

LOCATION	SB-108, 9'-13
SAMPLE DEPTH (ft.)	9-13'
Analytes	Results Qual
Total Metals	
Arsenic, Total	*20*
Chromium, Trivalent	*39.7*

LOCATION	TP-05
SAMPLE DEPTH (ft.)	2-3'
Analytes	Results Qual
Total Metals	
Arsenic, Total	338
Mercury, Total	20.4
Selenium, Total	165

LOCATION	SB-110, 1'-5'
SAMPLE DEPTH (ft.)	1-5'
Analytes	Results Qual
Semivolatile Organics	
Benzo(a)anthracene	*3.1*
Benzo(a)pyrene	*3.4*
Benzo(b)fluoranthene	*3.7*
Benzo(k)fluoranthene	*1.2*
Chrysene	*2.7*
Dibenzo(a,h)anthracene	*0.4 J*
Indeno(1,2,3-cd)pyrene	*2.5*
Total Metals	
Manganese, Total	*4420*

LOCATION	TP-04
SAMPLE DEPTH (ft.)	2-3'
Analytes	Results Qual
Semivolatile Organics	
Acenaphthene	*25*
Fluoranthene	*350*
Naphthalene	*48*
Benzo(a)anthracene	*140*
Benzo(a)pyrene	*85*
Benzo(b)fluoranthene	*140*
Benzo(k)fluoranthene	*44*
Chrysene	*120*
Fluorene	*33*
Phenanthrene	*160*
Dibenzo(a,h)anthracene	*14*
Indeno(1,2,3-cd)pyrene	*58*
Pyrene	*270*
Dibenzofuran	*23*
Total Metals	
Arsenic, Total	*29.2*

LOCATION	SB-112, 3'-6'
SAMPLE DEPTH (ft.)	3-6'
Analytes	Results Qual
Total Metals	
Arsenic, Total	*16.8*
LOCATION	**SB-112, 6'-8'**
SAMPLE DEPTH (ft.)	**6-8'**
Analytes	**Results Qual**
Semivolatile Organic	
Benzo(a)anthracene	*1.2*
Benzo(a)pyrene	*1*
Benzo(b)fluoranthene	*1.1*
Indeno(1,2,3-cd)pyrene	*0.62*

LOCATION	SB-111, 1'-5'
SAMPLE DEPTH (ft.)	1-5'
Analytes	Results Qual
Total Metals	
Zinc, Total	*2370*

SB-102/MW-102, SB-103/MW-103, SB-104/MW-104, SB-105/MW-105, SB-106/MW-106, SB-107/MW107, SB-108/MW-108, SB-109/MW-109, SB-110/MW-110, SB-111/MW-111, SB-112/MW-112, SB-113/MW-113, SB-114/MW-114, SB-101/MW-101, SB-116, SB-115, SB-117, SB-118, SB-119, SB-120, SB-121, SB-122, SB-123, SB-124, SB-125, SB-126, SB-127, SB-128, TP-1, TP-2, TP-3, TP-4, TP-5, TP-6, TP-7, TP-8, TP-9, TP-10, TP-11, TP-12, TP-13, TP-14, TP-15, TP-16

0 100 Feet

Document Path: \\cscos.com\csfile\Eng\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.003
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:25 AM

SUBSURFACE SOIL DATA EXCEEDENCES

Figure 4B

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

0 50 100 Feet

REMEDIAL ALTERNATIVES ANALYSIS REPORT
URBAN VILLAGES BCP SITE
SITE NO. C734154
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	January 2025
SCALE:	AS SHOWN
DRAWN BY:	WNR
DESIGNED BY:	
CHECKED BY:	

Modified: 1/20/2025 @ 8:25 AM

FILL DISTRIBUTION

Figure 5

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions

MW-102
MW-103
MW-104
MW-101
MW-105
MW-106
MW-107
MW-109
MW-108
MW-110
MW-112
MW-114
MW-113
MW-111

Anticipated Groundwater Flow

Buckley Rd

Old Liverpool Rd

Park St

Interstate 81 Northbound

Interstate 81 Southbound

New York State, Maxar, Microsoft

0 25 50 100 Feet

Document Path: \\cscos.com\cs\file\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\AAR\AAR_Figures.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:34 AM

GROUNDWATER MONITORING WELL SAMPLE LOCATIONS

Figure 6A

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions

LOCATION	MW-101	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Benzo(a)pyrene	*0.02*	*J*
Benzo(b)fluoranthene	*0.05*	*J*
Benzo(k)fluoranthene	*0.02*	*J*
Chrysene	*0.02*	*J*
Indeno(1,2,3-cd)pyrene	*0.04*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.08*	*J*

LOCATION	MW-105	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.08*	*J*
Benzo(a)pyrene	*0.04*	*J*
Benzo(b)fluoranthene	*0.05*	*J*
Benzo(k)fluoranthene	*0.02*	*J*
Chrysene	*0.03*	*J*
Indeno(1,2,3-cd)pyrene	*0.04*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*

LOCATION	MW-104	
GROUNDWATER WELL DEPTH (ft.)	**14.32**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.06*	*J*
Benzo(a)pyrene	*0.02*	*J*
Benzo(b)fluoranthene	*0.03*	*J*
Benzo(k)fluoranthene	*0.02*	*J*
Chrysene	*0.02*	*J*
Indeno(1,2,3-cd)pyrene	*0.03*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00403*	

Groundwater Standard Values
NYSDEC TOGS 111
NY-TOGS-GA / NY- SAA - PFAS
Data reported in part per billion (ppb)

LOCATION	MW-103	
GROUNDWATER WELL DEPTH (ft.)	**13.29**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J*
Chrysene	*0.02*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00354*	*J*

LOCATION	MW-107	
GROUNDWATER WELL DEPTH (ft.)	**10.32**	
Analytes	**Results**	**Qual**
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.07*	*J*
Benzo(a)pyrene	*0.02*	*J*
Benzo(b)fluoranthene	*0.03*	*J*
Benzo(k)fluoranthene	*0.02*	*J*
Chrysene	*0.03*	*J*
Indeno(1,2,3-cd)pyrene	*0.03*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00626*	*J*

LOCATION	MW-108	
GROUNDWATER WELL DEPTH (ft.)	**13.15**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J U*
Benzo(a)pyrene	*0.03*	*J*
Benzo(b)fluoranthene	*0.04*	*J U*
Benzo(k)fluoranthene	*0.01*	*J*
Chrysene	*0.04*	*J*
Indeno(1,2,3-cd)pyrene	*0.02*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00277*	*J*

LOCATION	MW-106	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.1*	
Benzo(a)pyrene	*0.1*	*J*
Benzo(b)fluoranthene	*0.25*	
Benzo(k)fluoranthene	*0.08*	*J*
Chrysene	*0.1*	
Indeno(1,2,3-cd)pyrene	*0.17*	

LOCATION	MW-114	
GROUNDWATER WELL DEPTH (ft.)	**11.01**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J U*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J U*
Benzo(b)fluoranthene	*0.01*	*J U*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.0064*	

LOCATION	MW-109	
GROUNDWATER WELL DEPTH (ft.)	**12.83**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J U*
Benzo(a)pyrene	*0.02*	*J*
Benzo(b)fluoranthene	*0.04*	*J U*
Benzo(k)fluoranthene	*0.03*	*J*
Chrysene	*0.03*	*J*
Indeno(1,2,3-cd)pyrene	*0.04*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.02*	*J U*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00474*	

LOCATION	MW-113	
GROUNDWATER WELL DEPTH (ft.)	**10.09**	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J U*
Benzo(a)pyrene	*0.02*	*J U*
Benzo(b)fluoranthene	*0.02*	*J U*
Chrysene	*0.01*	*J U*
Indeno(1,2,3-cd)pyrene	*0.01*	*J U*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.05*	*J U*
Benzo(b)fluoranthene	*0.01*	*J U*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00879*	

LOCATION	MW-112	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.07*	*J*
Benzo(a)pyrene	*0.03*	*J*
Benzo(b)fluoranthene	*0.03*	*J*
Benzo(k)fluoranthene	*0.02*	*J*
Chrysene	*0.03*	*J*
Indeno(1,2,3-cd)pyrene	*0.02*	*J*
Dissolved Semivolatile Organics		
Fluoranthene	*0.04*	*J*
Benzo(a)anthracene	*0.13*	
Benzo(a)pyrene	*0.16*	
Benzo(b)fluoranthene	*0.15*	
Benzo(k)fluoranthene	*0.05*	*J*
Chrysene	*0.09*	*J*
Indeno(1,2,3-cd)pyrene	*0.12*	

LOCATION	MW-111	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.1*	*J*
Benzo(a)pyrene	*0.06*	*J*
Benzo(b)fluoranthene	*0.11*	
Benzo(k)fluoranthene	*0.04*	*J*
Chrysene	*0.07*	*J*
Indeno(1,2,3-cd)pyrene	*0.06*	*J*

LOCATION	MW-110	
Analytes	**Results**	**Qual**
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Benzo(a)pyrene	*0.02*	*J*
Benzo(b)fluoranthene	*0.02*	*J*
Benzo(k)fluoranthene	*0.01*	*J*
Chrysene	*0.02*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Benzo(b)fluoranthene	*0.01*	*J*
Chrysene	*0.01*	*J*

MW-101 MW-102 MW-103 MW-104 MW-105 MW-106 MW-107 MW-108 MW-109 MW-110 MW-111 MW-112 MW-113 MW-114

Buckley Rd

Document Path: \\cscos.com\cs\file\Eng\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\RI\Figure_6B-R1 Groundwater Organics.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 11:43 AM

ROUND I GROUNDWATER SAMPLE ORGANICS EXCEEDANCES

Figure 6B

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions

Groundwater Standard Values
NYSDEC TOGS 111
NY-TOGS-GA / NY- SAA - PFAS
Data reported in part per billion (ppb)

LOCATION	MW-101	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Chrysene	*0.02*	*J*

LOCATION	MW-103	
GROUNDWATER WELL DEPTH (ft.)	13.15	
Analytes	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00408*	

LOCATION	MW-104	
GROUNDWATER WELL DEPTH (ft.)	13.94	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Benzo(b)fluoranthene	*0.02*	*J*
Benzo(k)fluoranthene	*0.01*	*J*
Chrysene	*0.02*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00552*	

LOCATION	MW-106	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.12*	

LOCATION	MW-105	
Analytes	Results	Qual
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.08*	*J*
Benzo(a)pyrene	*0.06*	*J*
Benzo(b)fluoranthene	*0.09*	*J*
Benzo(k)fluoranthene	*0.06*	*J*
Chrysene	*0.08*	*J*
Indeno(1,2,3-cd)pyrene	*0.07*	*J*

LOCATION	MW-114	
GROUNDWATER WELL DEPTH (ft.)	11.06	
Analytes	Results	Qual
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.02*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00657*	

LOCATION	MW-107	
GROUNDWATER WELL DEPTH (ft.)	11.42	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00522*	

LOCATION	MW-113	
GROUNDWATER WELL DEPTH (ft.)	10.18	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.07*	*J*
Benzo(a)pyrene	*0.03*	*J*
Benzo(b)fluoranthene	*0.08*	*J*
Benzo(k)fluoranthene	*0.08*	*J*
Chrysene	*0.08*	*J*
Indeno(1,2,3-cd)pyrene	*0.1*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00684*	

LOCATION	MW-112	
GROUNDWATER WELL DEPTH (ft.)	13.31	
Analytes	Results	Qual
Semivolatile Organics		
Benzo(a)anthracene	*0.04*	*J*
Benzo(b)fluoranthene	*0.02*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanoic Acid (PFOA)	*0.00708*	

LOCATION	MW-109	
GROUNDWATER WELL DEPTH (ft.)	13.10	
Analytes	Results	Qual
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.03*	*J*
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00467*	

LOCATION	MW-108	
GROUNDWATER WELL DEPTH (ft.)	13.05	
Analytes	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution		
Perfluorooctanesulfonic Acid (PFOS)	*0.00302*	

LOCATION	MW-110	
Analytes	Results	Qual
Dissolved Semivolatile Organics		
Benzo(a)anthracene	*0.06*	*J*
Benzo(a)pyrene	*0.04*	*J*
Benzo(b)fluoranthene	*0.07*	*J*
Benzo(k)fluoranthene	*0.03*	*J*
Chrysene	*0.05*	*J*
Indeno(1,2,3-cd)pyrene	*0.04*	*J*

MW-101, MW-102, MW-103, MW-104, MW-105, MW-106, MW-107, MW-108, MW-109, MW-110, MW-111, MW-112, MW-113, MW-114

Buckley Rd

Onondaga Lake Pkwy

Interstate 81 Southbound

Document Path: \\cscos.com\cs\file\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\R\Figure_6C_R2 Groundwater Organics.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

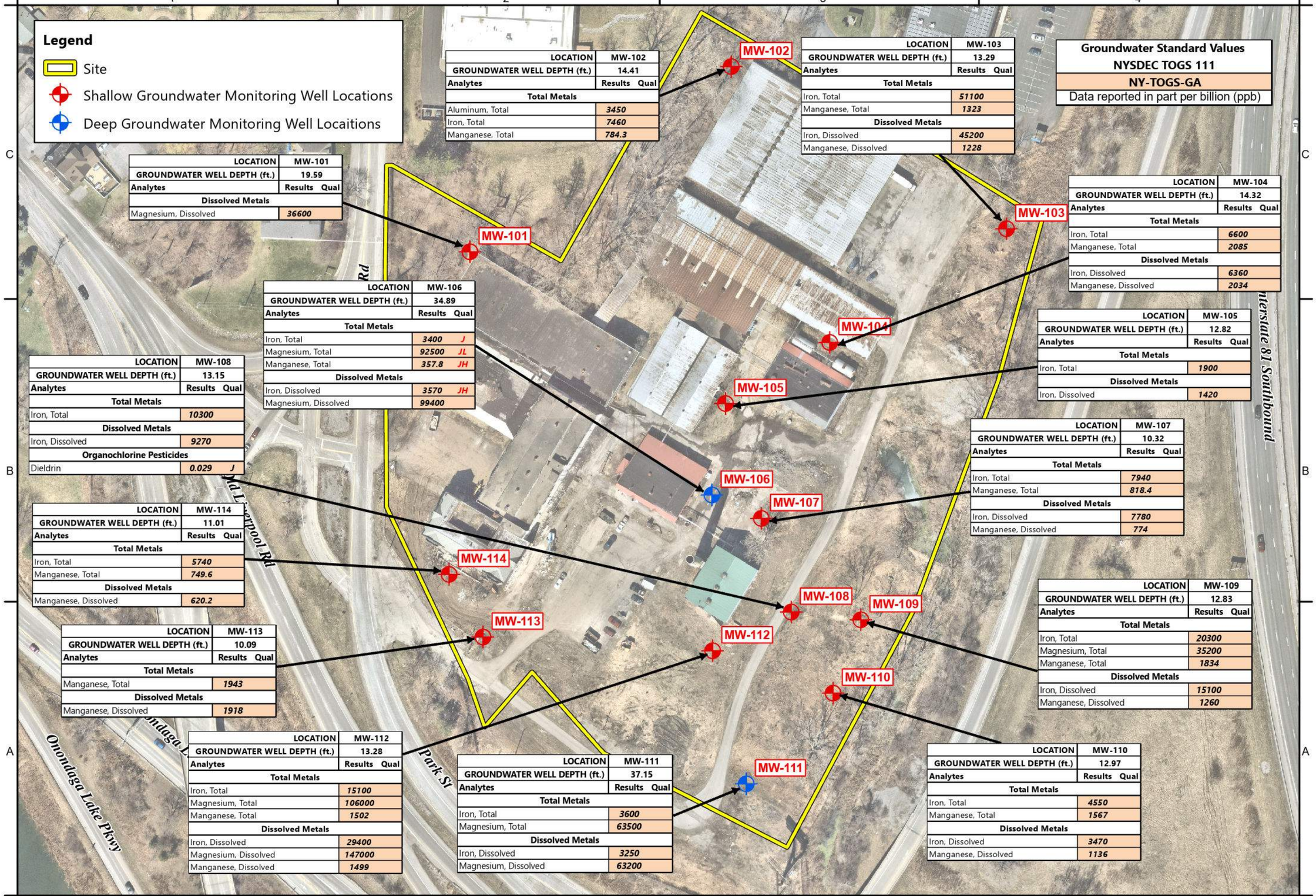
ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 12:22 PM

ROUND II GROUNDWATER SAMPLE ORGANIC EXCEEDANCES

Figure 6C



LOCATION	MW-102
GROUNDWATER WELL DEPTH (ft.)	14.41
Analytes	Results Qual
Total Metals	
Aluminum, Total	*3450*
Iron, Total	*7460*
Manganese, Total	*784.3*

LOCATION	MW-103
GROUNDWATER WELL DEPTH (ft.)	13.29
Analytes	Results Qual
Total Metals	
Iron, Total	*51100*
Manganese, Total	*1323*
Dissolved Metals	
Iron, Dissolved	*45200*
Manganese, Dissolved	*1228*

Groundwater Standard Values
NYSDEC TOGS 111
NY-TOGS-GA
Data reported in part per billion (ppb)

LOCATION	MW-101
GROUNDWATER WELL DEPTH (ft.)	19.59
Analytes	Results Qual
Dissolved Metals	
Magnesium, Dissolved	*36600*

LOCATION	MW-104
GROUNDWATER WELL DEPTH (ft.)	14.32
Analytes	Results Qual
Total Metals	
Iron, Total	*6600*
Manganese, Total	*2085*
Dissolved Metals	
Iron, Dissolved	*6360*
Manganese, Dissolved	*2034*

LOCATION	MW-106
GROUNDWATER WELL DEPTH (ft.)	34.89
Analytes	Results Qual
Total Metals	
Iron, Total	*3400* J
Magnesium, Total	*92500* JL
Manganese, Total	*357.8* JH
Dissolved Metals	
Iron, Dissolved	*3570* JH
Magnesium, Dissolved	*99400*

LOCATION	MW-105
GROUNDWATER WELL DEPTH (ft.)	12.82
Analytes	Results Qual
Total Metals	
Iron, Total	*1900*
Dissolved Metals	
Iron, Dissolved	*1420*

LOCATION	MW-107
GROUNDWATER WELL DEPTH (ft.)	10.32
Analytes	Results Qual
Total Metals	
Iron, Total	*7940*
Manganese, Total	*818.4*
Dissolved Metals	
Iron, Dissolved	*7780*
Manganese, Dissolved	*774*

LOCATION	MW-108
GROUNDWATER WELL DEPTH (ft.)	13.15
Analytes	Results Qual
Total Metals	
Iron, Total	*10300*
Dissolved Metals	
Iron, Dissolved	*9270*
Organochlorine Pesticides	
Dieldrin	*0.029* J

LOCATION	MW-109
GROUNDWATER WELL DEPTH (ft.)	12.83
Analytes	Results Qual
Total Metals	
Iron, Total	*20300*
Magnesium, Total	*35200*
Manganese, Total	*1834*
Dissolved Metals	
Iron, Dissolved	*15100*
Manganese, Dissolved	*1260*

LOCATION	MW-114
GROUNDWATER WELL DEPTH (ft.)	11.01
Analytes	Results Qual
Total Metals	
Iron, Total	*5740*
Manganese, Total	*749.6*
Dissolved Metals	
Manganese, Dissolved	*620.2*

LOCATION	MW-113
GROUNDWATER WELL DEPTH (ft.)	10.09
Analytes	Results Qual
Total Metals	
Manganese, Total	*1943*
Dissolved Metals	
Manganese, Dissolved	*1918*

LOCATION	MW-112
GROUNDWATER WELL DEPTH (ft.)	13.28
Analytes	Results Qual
Total Metals	
Iron, Total	*15100*
Magnesium, Total	*106000*
Manganese, Total	*1502*
Dissolved Metals	
Iron, Dissolved	*29400*
Magnesium, Dissolved	*147000*
Manganese, Dissolved	*1499*

LOCATION	MW-111
GROUNDWATER WELL DEPTH (ft.)	37.15
Analytes	Results Qual
Total Metals	
Iron, Total	*3600*
Magnesium, Total	*63500*
Dissolved Metals	
Iron, Dissolved	*3250*
Magnesium, Dissolved	*63200*

LOCATION	MW-110
GROUNDWATER WELL DEPTH (ft.)	12.97
Analytes	Results Qual
Total Metals	
Iron, Total	*4550*
Manganese, Total	*1567*
Dissolved Metals	
Iron, Dissolved	*3470*
Manganese, Dissolved	*1136*

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N
0 30 60 120 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Drafted: 9/29/2025 @ 12:33 PM

ROUND I GROUNDWATER SAMPLE INORGANICS EXCEEDANCES

Figure 6D

Document Path: \\cscos.com\csfile\Engl\Projects\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\R1\Figure_6D-R1 Groundwater InOrganics.aprx

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions

LOCATION	MW-102	
GROUNDWATER WELL DEPTH (ft.)	14.12	
Analytes	Results	Qual
Total Metals		
Iron, Total	*3930*	
Magnesium, Total	*36700*	
Manganese, Total	*494.8*	
Dissolved Metals		
Magnesium, Dissolved	*35000*	

LOCATION	MW-103	
GROUNDWATER WELL DEPTH (ft.)	13.15	
Analytes	Results	Qual
Total Metals		
Iron, Total	*46000*	
Manganese, Total	*1390*	
Dissolved Metals		
Iron, Dissolved	*44600*	
Manganese, Dissolved	*1378*	

Groundwater Standard Values
NYSDEC TOGS 111
NY-TOGS-GA
Data reported in part per billion (ppb)

LOCATION	MW-106	
GROUNDWATER WELL DEPTH (ft.)	34.95	
Analytes	Results	Qual
Total Metals		
Iron, Total	*2480*	
Magnesium, Total	*82200*	
Dissolved Metals		
Iron, Dissolved	*2630*	
Magnesium, Dissolved	*152000*	

LOCATION	MW-104	
GROUNDWATER WELL DEPTH (ft.)	13.94	
Analytes	Results	Qual
Total Metals		
Iron, Total	*6350*	
Manganese, Total	*1144*	
Dissolved Metals		
Iron, Dissolved	*5940*	
Manganese, Dissolved	*1183*	

LOCATION	MW-108	
GROUNDWATER WELL DEPTH (ft.)	13.05	
Analytes	Results	Qual
Total Metals		
Iron, Total	*10500*	
Dissolved Metals		
Iron, Dissolved	*10400*	

LOCATION	MW-105	
GROUNDWATER WELL DEPTH (ft.)	12.84	
Analytes	Results	Qual
Total Metals		
Iron, Total	*2430*	
Dissolved Metals		
Iron, Dissolved	*1560*	

LOCATION	MW-114	
GROUNDWATER WELL DEPTH (ft.)	11.06	
Analytes	Results	Qual
Total Metals		
Iron, Total	*696*	
Manganese, Total	*837.2*	
Dissolved Metals		
Manganese, Dissolved	*703.7*	

LOCATION	MW-107	
GROUNDWATER WELL DEPTH (ft.)	11.42	
Analytes	Results	Qual
Total Metals		
Iron, Total	*13000*	
Manganese, Total	*884.1*	
Dissolved Metals		
Iron, Dissolved	*13200*	
Manganese, Dissolved	*899.4*	

LOCATION	MW-113	
GROUNDWATER WELL DEPTH (ft.)	10.18	
Analytes	Results	Qual
Total Metals		
Manganese, Total	*2158*	
Dissolved Metals		
Manganese, Dissolved	*2030*	

LOCATION	MW-109	
GROUNDWATER WELL DEPTH (ft.)	13.10	
Analytes	Results	Qual
Total Metals		
Iron, Total	*12700*	
Manganese, Total	*851.3*	
Dissolved Metals		
Iron, Dissolved	*14200*	
Manganese, Dissolved	*914.2*	

LOCATION	MW-112	
GROUNDWATER WELL DEPTH (ft.)	13.31	
Analytes	Results	Qual
Total Metals		
Iron, Total	*61400*	
Magnesium, Total	*189000*	
Manganese, Total	*1973*	
Dissolved Metals		
Iron, Dissolved	*81900*	
Magnesium, Dissolved	*239000*	
Manganese, Dissolved	*2110*	

LOCATION	MW-111	
GROUNDWATER WELL DEPTH (ft.)	37.12	
Analytes	Results	Qual
Total Metals		
Iron, Total	*2520*	
Magnesium, Total	*46800*	
Dissolved Metals		
Iron, Dissolved	*2520*	
Magnesium, Dissolved	*44300*	

LOCATION	MW-110	
GROUNDWATER WELL DEPTH (ft.)	13.00	
Analytes	Results	Qual
Total Metals		
Iron, Total	*2580*	
Manganese, Total	*1287*	
Dissolved Metals		
Iron, Dissolved	*2890*	
Manganese, Dissolved	*1436*	

Buckley Rd

Interstate 81 Southbound

Onondaga

MW-101 MW-102 MW-103 MW-104 MW-105 MW-106 MW-107 MW-108 MW-109 MW-110 MW-111 MW-112 MW-113 MW-114

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 12:43 PM

ROUND II GROUNDWATER SAMPLE INORGANICS EXCEEDANCES

Figure 6E

Document Path: \\cscos.com\cs\file\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\RI\Figure_6E-R2 Groundwater InOrganics.aprx

Legend

- Site

Soil Vapor Sample Location

- Soil Vapor Sample Not Collected
- Soil Vapor Sample Collected

Subslab Soil Vapor Sample Location

- Subslab Soil Vapor Sample Not Collected
- Subslab Soil Vapor Sample Collected

SV-102
SSV-112
SV-103
Unable to sample due to high water table
SSV-113
Unable to sample due to high water table
Sample location moved due to accessibility
SV-101
SV-101
SSV-110
SSV-111
SSV-105
SSV-108
SSV-104
SSV-109
Unable to sample due to high water table
Building was demolished prior to sampling
SSV-103
Unable to sample due to high water table
SSV-106
SSV-102
Unable to sample due to high water table
SV-104
SV-104
SSV-101
SSV-107
Unable to sample due to high water table
Sample location moved due to high water table
SV-107
SV-105
SV-106
Unable to sample due to high water table
Unable to sample due to high water table
SV-105
Sample location moved due to high water table
Unable to sample due to high water table

Buckley Rd
Onondaga Lake Pkwy
Interstate 81 Northbound
Interstate 81 Southbound

Document Path: \\cscos.com\cs\file\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\Rtf\Figure_7 - Soil Vapor Sampling Locations-11.16.2023.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

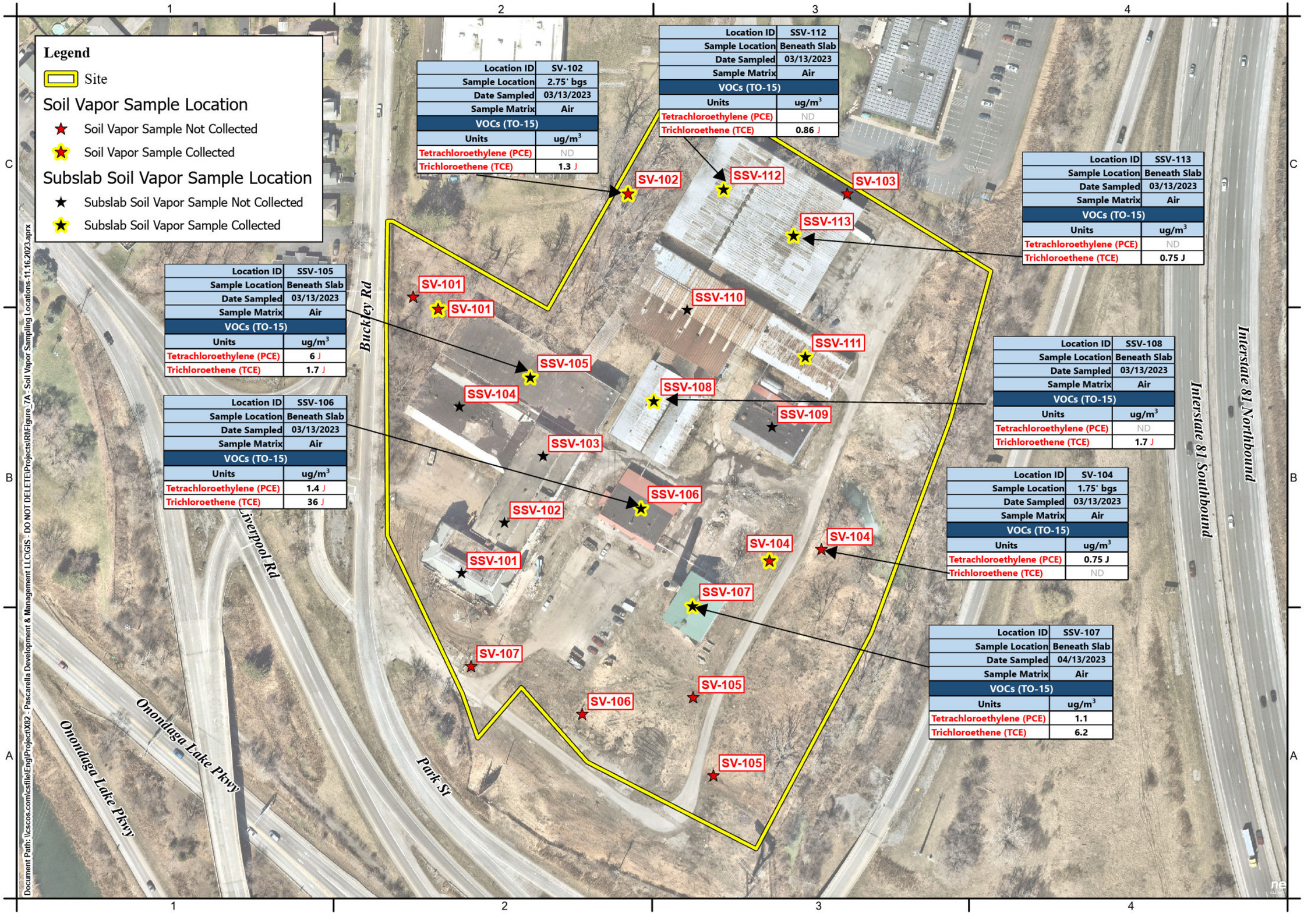
ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 12:48 PM

SOIL VAPOR SAMPLING LOCATION

Figure 7A



C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Plotted: 9/29/2025 @ 12:57 PM

SOIL VAPOR SAMPLING DATA

Figure 7B

Document Path: \\cscos.com\cs\file\Engl\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\Rtl\Figure_7A - Soil Vapor Sampling Locations-11.16.2023.aprx

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions
- 0.25 Foot Groundwater Contour

MW-101
MW-102
MW-103
MW-104
MW-105
MW-106
MW-107
MW-108
MW-109
MW-110
MW-111
MW-112
MW-113
MW-114

370.5 ft
370.25 ft
370 ft
369.75 ft
369.5 ft
369.25 ft
369 ft
368.75 ft
368.5 ft
368.5 ft
368.25 ft
368 ft

Buckley Rd
Old Liverpool Rd
Onondaga Lake Pkwy
Onondaga Lake Pkwy
Park St
Interstate 81 Southbound

Document Path: C:\Users\lhaas\Documents\ArcGIS\Projects\MyProject64\MyProject64.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 1:10 PM

ROUND I GROUNDWATER ELEVATION CONTOUR

Figure 8A

Legend

- Site
- Shallow Groundwater Monitoring Well Locations
- Deep Groundwater Monitoring Well Locaitions
- 0.25 Foot Groundwater Contour

MW-101
MW-102
MW-103
MW-104
MW-105
MW-106
MW-107
MW-108
MW-109
MW-110
MW-111
MW-112
MW-113
MW-114

370.5 ft
370 ft
369.75 ft
369.5 ft
369 ft
368.75 ft
368.5 ft
368.25 ft
368 ft
370.5 ft
370.75 ft
371 ft
371.25 ft
371.5 ft
370.25 ft
369.25 ft
369 ft
369.25 ft
369.5 ft
369.75 ft
368.75 ft

Buckley Rd
Old Liverpool Rd
Onondaga Lake Pkwy
Onondaga Lake Pkwy
Park St
Interstate 81 Northbound
Interstate 81 Southbound

Document Path: C:\Users\hhaas\Documents\ArcGIS\Projects\MyProject64\MyProject64.aprx

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

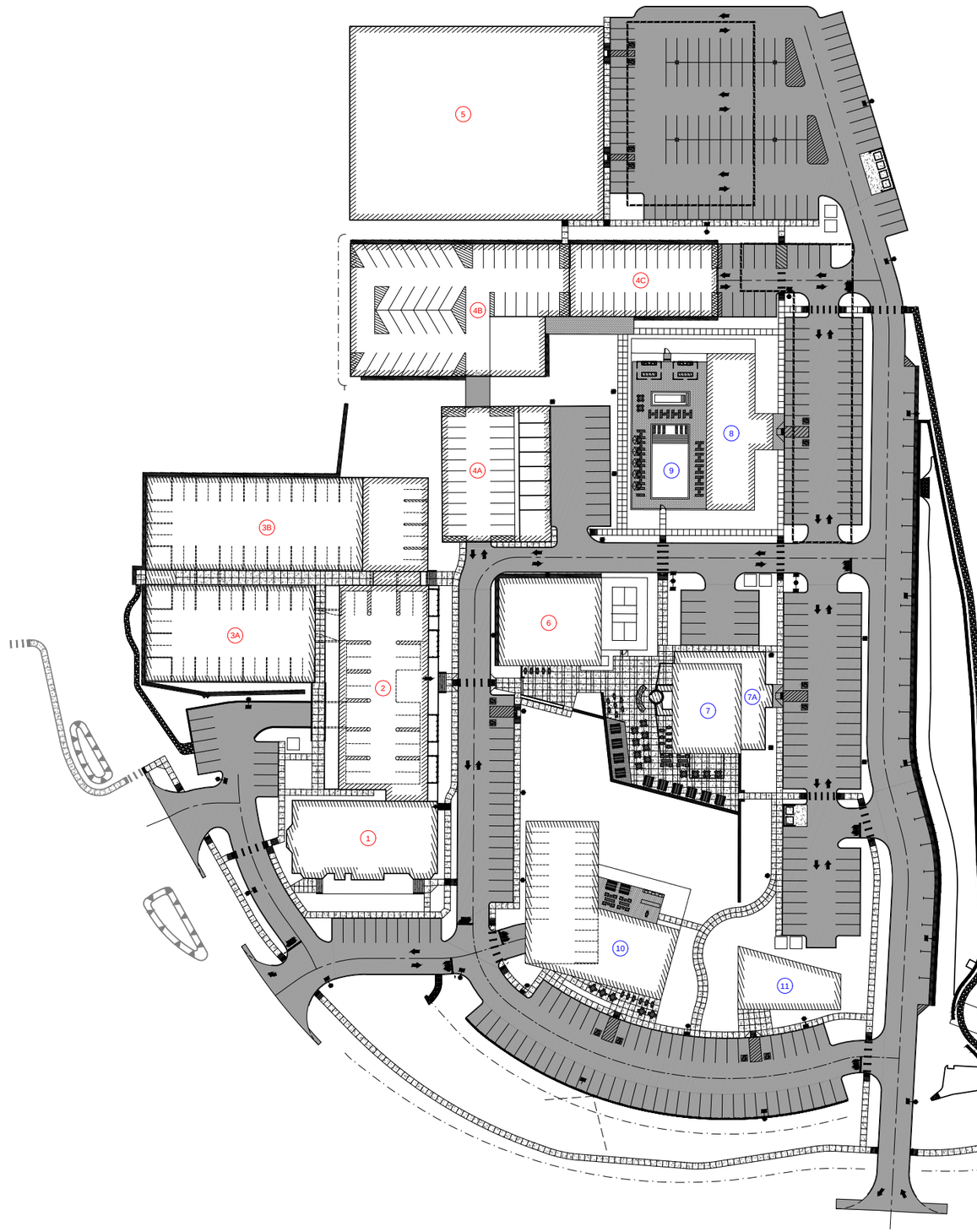
ALTERNATIVES ANALYSIS REPORT AND
REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	September 2025
SCALE:	AS SHOWN
DRAWN BY:	HPH
DESIGNED BY:	HPH
CHECKED BY:	HNB

Modified: 9/29/2025 @ 1:12 PM

ROUND II GROUNDWATER ELEVATION CONTOUR DATA

Figure 8B



LEGEND		
NUMBER	DESCRIPTION	PLANNED FUTURE USE
1	EX. BLDG 1	APARTMENTS
2	EX. BLDG 2	APARTMENTS, BASEMENT LEV. GARAGE
3A	EX. BLDG 3A	APARTMENTS, BASEMENT LEV. GARAGE
3B	EX. BLDG 3B	APARTMENTS, BASEMENT LEV. GARAGE
4A	EX. BLDG 4A	INDOOR GARAGE
4B	EX. BLDG 4B	INDOOR GARAGE
4C	EX. BLDG 4C	INDOOR GARAGE
5	EX. BLDG 5	INDOOR REC CENTER
6	EX. BLDG 6	OFFICE, COMMUNITY ROOM
7	EX. BLDG 7	RESTAURANT / BREWERY
7A	PROPOSED ADDITION	RESTAURANT / BREWERY
8	PROPOSED BLDG	SHORT-TERM RENTAL
9	PROPOSED BLDG	OUTDOOR POOL
10	PROPOSED BLDG	APARTMENTS
11	PROPOSED BLDG	APARTMENTS

A1 **PROPOSED FUTURE DEVELOPMENT PLAN**
SCALE: 1" = 50' When Printed on 24"X36"

0 50' 100'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	NJC
DESIGNED BY:	HNB
CHECKED BY:	HNB

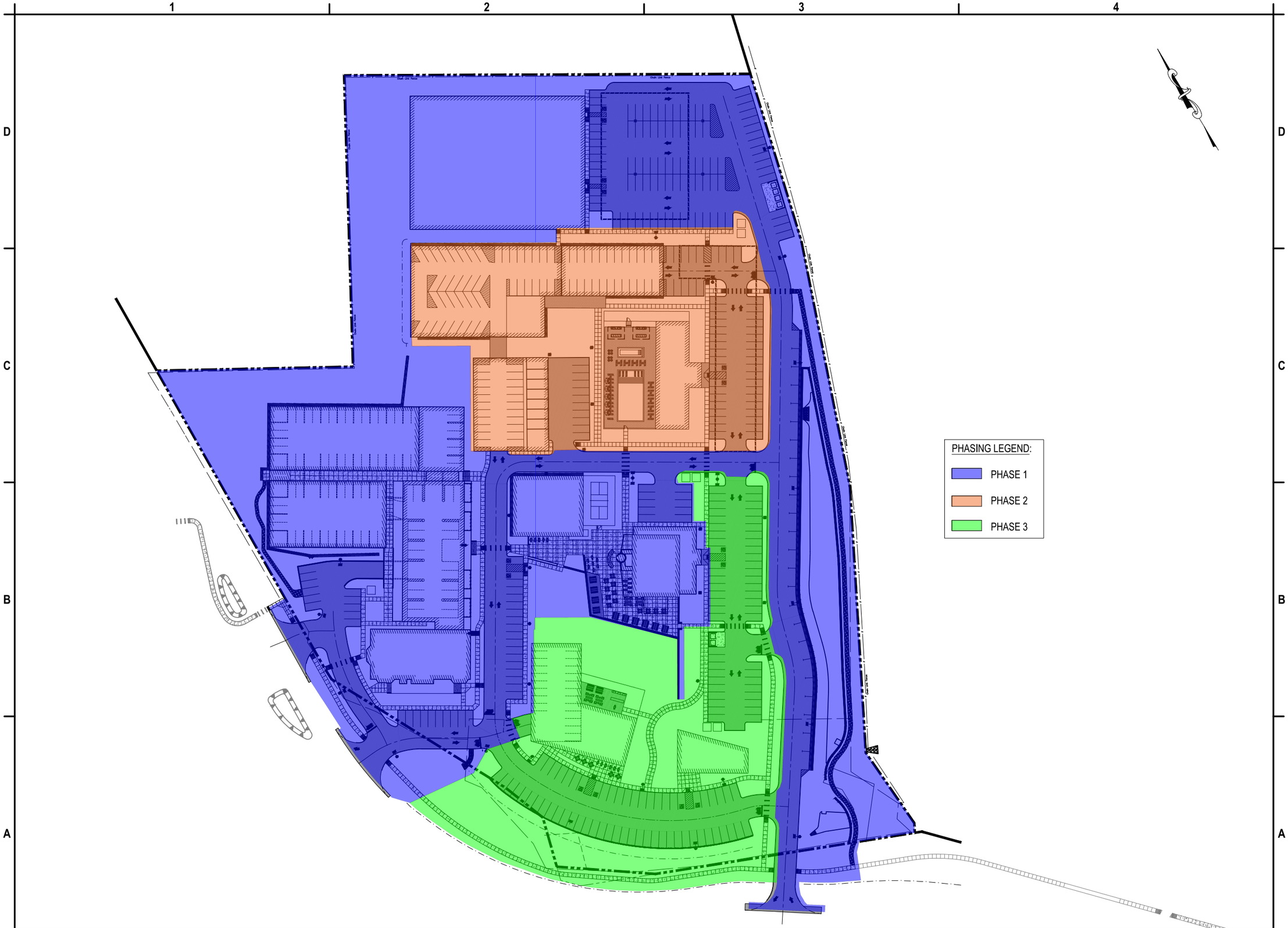
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

PROPOSED FUTURE DEVELOPMENT PLAN

FIGURE 9

Copyright ©

Sep 29, 2025 - 10:10am
P:\Projects\X82 - Pascarella Development & Management LLC\Mill & Baumer BCP AAR-RAWP\Planning-Study\CAD\AARR Drawings\Sheet files\Fig9_Proposed Future Dev Plan.dwg



A1 DEVELOPMENT PHASING PLAN
SCALE: 1" = 50' When Printed on 24"X36"

0 50' 100'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN URBAN VILLAGES (SITE NO. C734154) 100 BUCKLEY ROAD SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	NJC
DESIGNED BY:	HNB
CHECKED BY:	HNB

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

DEVELOPMENT PHASING PLAN

FIGURE 10

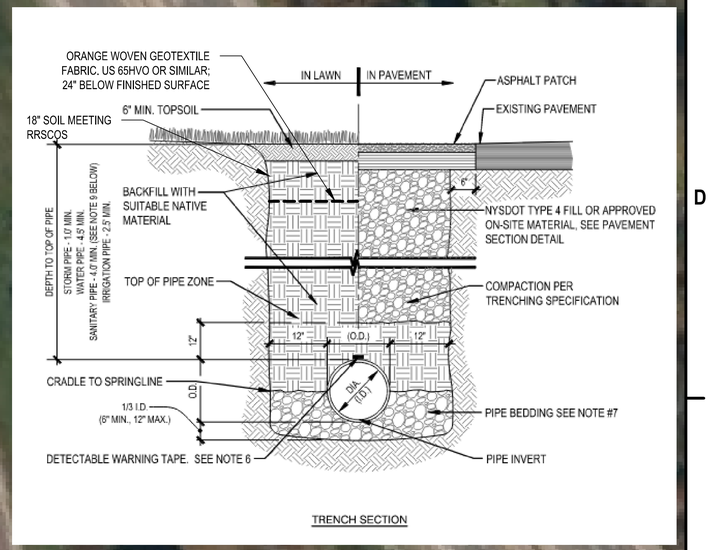
Copyright ©

Sep 29, 2025 - 10:12am
P:\Projects\X82 - Pascarella Development & Management LLC\Vol & Baumer BCP AAR-RAWP\Planning-Study\CAD\AAWR Drawings\Sheet files\Fig-4_Development Phasing Plan.dwg

NO COVER SYSTEM NEEDED

REFER TO APPENDIX B FOR HARDSCAPE COVER DETAILS

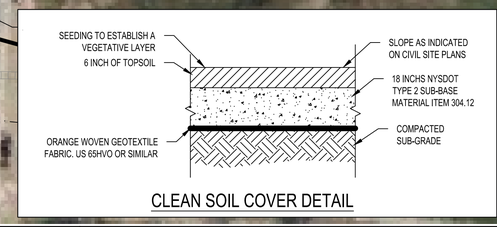
GENERAL LOCATION OF WAXY SUBSTANCE TO BE EXCAVATED



TRENCH SECTION

PHASING LEGEND:

- GREEN SPACE (2 FT. SOIL COVER)
- BUILDING FOUNDATION
- CONCRETE WALKWAY / PAD
- ASPHALT PAVEMENT
- STORMWATER RETENTION AREA



CLEAN SOIL COVER DETAIL

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Registration Expires: 04.30.2029

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	NJC
DESIGNED BY:	HNB
CHECKED BY:	HNB

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

ENGINEERING CONTROLS COVER SYSTEM

PLAN

FIGURE 11

Copyright ©

Jul 28, 2026 - 4:30pm
F:\Projects\X82 - Pascarella Development & Management LLC\Wil & Baumer BCP AAR-RAWP\Planning-Study\CAD\DAARR Drawings\Sheet files\Fig4_Engineering Controls Plan1.dwg

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	NJC
DESIGNED BY:	HNB
CHECKED BY:	HNB

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

PROPOSED ENGINEERING CONTROLS VAPOR MITIGATION PLAN

FIGURE 12

A1 PROPOSED ENGINEERING CONTROLS PLAN - VAPOR MITIGATION
SCALE: 1" = 50' When Printed on 24"X36"

0 50' 100'

Copyright ©

Sep 29, 2025 - 10:29am
P:\Projects\X82 - Pisacreta Development & Management LLC\Mill & Bluemer BCP AAR-RAWP\Planning\Study\CAD\AARR Drawings\Sheet files\Fig7_Engineering Controls Vapor.dwg

Tables

C&S Engineers, Inc.
499 Col Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Table 1A - Surface Soil Sample Log
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

Sample #	Lab Report #	Sample ID	Date	Time	100	Sample Type	Depth (ft)	Total Solids	VOC	SVOC	Pest Herb	PCB	Total Metals (incl. Hg)	Hex Cr	PFAS	1,4-Dioxane	MS	MSD	DUP
1	L2245736	SS-101	8/23/2022	1357	SOIL	Surface Soil	0.0-0.5	X	X	X	X	X	X	X	X	X			
2		SS-102		1420			0.0-0.5	X	X	X	X	X	X	X	X	X			
3		SS-103		1456			0.0-0.5	X	X	X	X	X	X	X	X	X			
4		SS-104		1532			0.0-0.5	X	X	X	X	X	X	X	X	X			
5		SS-105		1550			0.0-0.5	X	X	X	X	X	X	X	X	X			
6		SS-118		1507			0.0-0.5	X	X	X	X	X	X	X	X	X			
7		SS-119		1545			0.0-0.5	X	X	X	X	X	X	X	X	X			
8	L2246028	SS-112	8/24/2022	1210	SOIL	Surface Soil	0.0-0.5	X	X	X	X	X	X	X	X	X			
9		SS-113		1230			0.0-0.5	X	X	X	X	X	X	X	X	X			
10		SS-114		1246			0.0-0.5	X	X	X	X	X	X	X	X	X			
11		SS-115		1330			0.0-0.5	X	X	X	X	X	X	X	X	X			
12		SS-116		1400			0.0-0.5	X	X	X	X	X	X	X	X	X			
13		SS-117		1412			0.0-0.5	X	X	X	X	X	X	X	X	X			
14		SS-120		1425			0.0-0.5	X	X	X	X	X	X	X	X	X			
15		SS-121		1510			0.0-0.5	X	X	X	X	X	X	X	X	X			
16		SS-122		1530			0.0-0.5	X	X	X	X	X	X	X	X	X			
17	L2246032	SS-109	8/24/2022	1025	SOIL	Surface Soil	0.0-0.5	X	X	X	X	X	X	X	X	X			
18		SS-106		0830			0.0-0.5	X	X	X	X	X	X	X	X	X			
19		SS-107		0920			0.0-0.5	X	X	X	X	X	X	X	X	X	X	X	
20		SS-108		0950			0.0-0.5	X	X	X	X	X	X	X	X	X			X
21		SS-110		1055			0.0-0.5	X	X	X	X	X	X	X	X	X			
22		SS-111		1125			0.0-0.5	X	X	X	X	X	X	X	X	X			
23	L2266528	SS-120 12"	11/29/2022	1329	SOIL	Surface Soil	0.8-1.0	X	X	X	X	X	X	X	X	X			
24		SS-120 24"		1347			1.8-2.0	X	X	X	X	X	X	X	X	X			
25		SS-121 12"		1146			0.8-1.0	X	X	X	X	X	X	X	X	X			
26		SS-121 24"		1154			1.8-2.0	X	X	X	X	X	X	X	X	X			
27		SS-122 12"		1109			0.8-1.0	X	X	X	X	X	X	X	X	X			
28		SS-122 24"		1128			1.8-2.0	X	X	X	X	X	X	X	X	X			

C&S Engineers, Inc.
499 Col Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Table 1B - Subsurface Soil Sample Log
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

Sample #	Lab Report #	Sample ID	Date	Time	Matrix	Sample Type		Depth (ft)	Total Solids	VOC	SVOC	Pest Herb	PCB	Total Metals (incl. Hg)	Sub	PFAS	1,4-Dioxane	MS	MSD	DUP
1	L2246030	SB-113 0.5-4	8/24/2022	1345	SOIL	Subsurface Boring	HFM	0.5-4	X	X	X	X	X	X	X	X	X			
2		SB-113 4-5.5		1355			Native	4-5.5	X	X	X	X	X	X	X	X	X			
3		SB-114 4.5-6		1305			HFM	4.5-6	X	X	X	X	X		X	X	X			
4		SB-114 6-8		1315			Native	6-8	X	X	X	X	X	X	X	X	X			
5		SB-115 1-2		1520			HFM	1-2	X	X	X	X	X	X	X	X	X			
6		SB-115 10-12		1530			Native	10-12	X	X	X	X	X	X	X	X	X			
7		SB-115 15-16		1540			Native	15-16	X	X	X	X	X	X	X	X	X			
8	L2246033	SB-123 1-2	8/24/2022	0910	SOIL	Subsurface Boring	HFM	1-2	X	X	X	X	X	X	X	X	X			
9		SB-123 2-5		0926			Native	2-5	X	X	X	X	X	X	X	X	X			
10		SB-101 2-5		1015			HFM	2-5	X	X	X	X	X	X	X	X	X			
11		SB-101 6-10		1030			Native	6-10	X	X	X	X	X	X	X	X	X			
12		SB-124 1-5		1110			HFM	1-5	X	X	X	X	X	X	X	X	X			
13		SB-124 15-16		1120			Native	15-16	X	X	X	X	X	X	X	X	X			
14	L2246343	SB-111 1-5	8/25/2022	1130	SOIL	Subsurface Boring	HFM	1-5	X	X	X	X	X	X	X	X	X			
15		SB-111 20-30		1205			Deep Native	20-30	X	X	X	X	X	X	X	X	X	X	X	
16		SB-106 .5-5		1347			HFM	.5-5	X	X	X	X	X	X	X	X	X	X	X	
17		SB-106 25-30		1430			Deep Native	25-30	X	X	X	X	X	X	X	X	X			X
18	L2246346	SB-112 3-6	8/25/2022	0820	SOIL	Subsurface Boring	HFM	3-6	X	X	X	X	X	X	X	X	X			
19		SB-112 6-8		0837			Native	6-8	X	X	X	X	X	X	X	X	X			
20		SB-108 1-5		0910			HFM	1-5	X	X	X	X	X	X	X	X	X			
21		SB-108 9-13		0922			Native	9-13	X	X	X	X	X	X	X	X	X			
22		SB-109 5-7		0935			HFM	5-7	X	X	X	X	X	X	X	X	X			
23		SB-109 10-12		0940			Native	10-12	X	X	X	X	X	X	X	X	X			
24		SB-110 1-5		1031			HFM	1-5	X	X	X	X	X	X	X	X	X			
25		SB-110 13-15		1037			Native	13-15	X	X	X	X	X	X	X	X	X			
26	L2246347	SB-105 .5-5	8/25/2022	1530	SOIL	Subsurface Boring	HFM	.5-5	X	X	X	X	X	X	X	X	X			X
27		SB-105 6-9		1545			Native	6-9	X	X	X	X	X	X	X	X	X			
28	L2246524	SB-116 1-5	8/26/2022	0827	SOIL	Subsurface Boring	HFM	1-5	X	X	X	X	X	X	X	X	X			
29		SB-116 25-30		0905			Deep Native	25-30	X	X	X	X	X	X	X	X	X	X	X	
30		SB-127 5-10		1135			HFM	5-10	X	X	X	X	X	X	X	X	X			
31		SB-127 20-25		1150			Deep Native	20-25	X	X	X	X	X	X	X	X	X			X
32	L2246530	SB-103 1.5-5	8/26/2022	1340	SOIL	Subsurface Boring	HFM	1.5-5	X	X	X	X	X	X	X	X	X			
33		SB-103 26-28		1355			Deep Native	26-28	X	X	X	X	X	X	X	X	X			
34		SB-128 2.5-5		1440			HFM	2.5-5	X	X	X	X	X	X	X	X	X			
35		SB-128 11-15		1500			Native	11-15	X	X	X	X	X	X	X	X	X			
36	L2246814	SB-102 0.5-3	8/29/2022	0820	SOIL	Subsurface Boring	HFM	0.5-3	X	X	X	X	X	X	X	X	X			
37		SB-102 3-5		0835			Native	3-5	X	X	X	X	X	X	X	X	X			
38		SB-126 0.25-1		0907			HFM	0.25-1	X	X	X	X	X	X	X	X	X			
39		SB-126 5-9		0925			Native	5-9	X	X	X	X	X	X	X	X	X			
40		SB-125 0.5-3		1020			HFM	0.5-3	X	X	X	X	X	X	X	X	X			X
41		SB-125 5-8		1035			Native	5-8	X	X	X	X	X	X	X	X	X			
42	L2246815	SB-107 1.5-6	8/29/2022	1120	SOIL	Subsurface Boring	HFM	5-6	X	X	X	X	X	X	X	X	X			
43		SB-107 11-13		1146			Native	11-13	X	X	X	X	X	X	X	X	X	X	X	
44		SB-121 0.5-3		1325			HFM	0.5-3	X	X	X	X	X	X	X	X	X			
45		SB-121 25-30		1355			Deep Native	25-30	X	X	X	X	X	X	X	X	X			
46		SB-117 0.5-7		1542			HFM	0.5-7	X	X	X	X	X	X	X	X	X			
47		SB-117 7-10		1555			Native	7-10	X	X	X	X	X	X	X	X	X			
48	L2247097	SB-122 1-2	8/30/2022	0915	SOIL	Subsurface Boring	HFM	1-2	X	X	X	X	X	X	X	X	X			
49		SB-122 2-5		0928			Native	2-5	X	X	X	X	X	X	X	X	X			
50		SB-119 1		1337		PCB Impact Investigation		1					X							
51		SB-119 2		1339				2					X							
52		SB-119 5		1349				5					X							
53		SB-120 1		1532				1					X							
54		SB-120 2		1536				2					X							
55		SB-120 5		1540				5					X							
56		SB-118 1		1543				1					X							
57		SB-118 2		1554				2					X							
58		SB-118 5		1555				5					X							
59	L2247997	SB-104 1-3	9/2/2022	0840	SOIL	Subsurface Boring	HFM	1-3	X	X	X	X	X	X	X	X	X			
60		SB-104 11-13		0905			Native	11-13	X	X	X	X	X	X	X	X	X			

Notes:
HFM = Historical Fill Material, Sample was collected from an area of HFM.
Native = Sample was collected from an area of Native soil just below the HFM soil layer.
Deep Native = Sample was collected from a deeper area within the Native soil layer.

C&S Engineers, Inc.
499 Col Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Table 1C - Groundwater Sample Log
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

Sample #	Lab Report #	Sample ID	Date	Time	Matrix	Sample Type	Depth (ft)	Total Solids	VOC	SVOC	Pest Herb	PCB	Total Metals (incl. Hg)	Dissolved Metals (incl. Hg)	Hex Cr	PFAS	1,4-Dioxane	MS	MSD	DUP
1	L2254894	MW-101	10/4/2022	1105	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
2		MW-102		1455			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK		-			-		X											
		FIELD BLANK-01		1455												X				
		EQUIPMENT BLANK-01		1455												X				
3	L2255240	MW-113	10/5/2022	0950	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
4		MW-114		1310			Shallow		X	X	X	X	X	X	X	X	X			
5		MW-112		1515			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK-02		-			-		X											
		FIELD BLANK-02		1430												X				
		EQUIPMENT BLANK-02		1430												X				
6	L2255644	MW-108	10/6/2022	0935	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
7		MW-109		1155			Shallow		X	X	X	X	X	X	X	X	X			
8		MW-110		1500			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK-03		-			-		X											
		FIELD BLANK-03		1545												X				
		EQUIPMENT BLANK-03		1545												X				
9	L2256042	MW-105	10/7/2022	1015	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			X
10		MW-104		1500			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK-04		-			-		X											
		FIELD BLANK-04		1500												X				
		EQUIPMENT BLANK-04		1500												X				
11	L2256287	MW-111	10/10/2022	1130	Water	Groundwater	Deep		X	X	X	X	X	X	X	X	X			
12		MW-106		1515			Deep		X	X	X	X	X	X	X	X	X	X	X	
QA/QC		TRIP BLANK-05		1550			-		X											
		FIELD BLANK-05		1550												X				
		EQUIPMENT BLANK-05		1550												X				
13	L2256587	MW-107	10/11/2022	0930	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
14		MW-103		1150			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK-06		-			-		X											
		FIELD BLANK-06		1220												X				
		EQUIPMENT BLANK-07		1220												X				
1	L2266830	MW-109 (ROUND 2)	11/29/2022	1430	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
2		MW-110 (ROUND 2)		1240			Shallow		X	X	X	X	X	X	X	X	X			
3		MW-113 (ROUND 2)		0840			Shallow		X	X	X	X	X	X	X	X	X			
4		MW-114 (ROUND 2)		1030			Shallow		X	X	X	X	X	X	X	X	X			
QA/QC		TRIP BLANK-01 ROUND 2		-			-		X											
		FIELD BLANK-01 ROUND 2		-												X				
		EQUIPMENT BLANK-01 ROUND 2		-												X				
5	L2267172	MW-101 (ROUND 2)	11/30/2022	1225	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
6		MW-102 (ROUND 2)		0835			Shallow		X	X	X	X	X	X	X	X	X			
7		MW-103 (ROUND 2)		1035			Shallow		X	X	X	X	X	X	X	X	X			
8		MW-105 (ROUND 2)		1510			Shallow		X	X	X	X	X	X	X	X	X			
		POTABLE WATER		1210			-									X				
		TRIP BLANK-02 ROUND 2		-			-		X											
QA/QC		FIELD BLANK-02 ROUND 2		-			-									X				
		EQUIPMENT BLANK-02 ROUND 2		-												X				
9	L2267552	MW-104 (ROUND 2)	12/1/2022	0910	Water	Groundwater	Shallow		X	X	X	X	X	X	X	X	X			
10		MW-111 (ROUND 2)		1250			Deep		X	X	X	X	X	X	X	X	X			X
11		MW-108 (ROUND 2)		1500			Shallow		X	X	X	X	X	X	X	X	X			
		TRIP BLANK-03 ROUND 2		-			-		X											
QA/QC		FIELD BLANK-03 ROUND 2		-			-									X				
		EQUIPMENT BLANK-03 ROUND 2		-												X				
12	L2267896	MW-106	12/2/2022	1200	Water	Groundwater	Deep		X	X	X	X	X	X	X	X	X	X	X	
13		MW-107		1500			Shallow		X	X	X	X	X	X	X	X	X			
14		MW-112		0840			Shallow		X	X	X	X	X	X	X	X	X			
		TRIP BLANK-04 ROUND 2		-			-		X											
QA/QC		FIELD BLANK-04 ROUND 2		-			-									X				
		EQUIPMENT BLANK-04 ROUND 2		-												X				

Notes:
Shallow = Sample collected from a shallow groundwater monitoring well.
Deep = Sample was collected from a deep groundwater monitoring well.

C&S Engineers, Inc.
499 Col Eileen Collins Blvd
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

Table 1D - Soil Vapor Sample Log
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

Sample #	Lab Report #	Sample ID	Date	Matrix	Sample Type	Depth (ft)	VOC	DUP
1	C2303028	SV-101	3/13/2023	AIR	Soil Vapor	5	X	
2		SV-102			Soil Vapor	3	X	
3		SV-104			Soil Vapor	2	X	
4		SSV-105			Sub-slab Vapor	BS	X	
5		SSV-106			Sub-slab Vapor	BS	X	
6		SSV-108			Sub-slab Vapor	BS	X	
7		SSV-112			Sub-slab Vapor	BS	X	
8		SSV-113			Sub-slab Vapor	BS	X	
9		SSV-111			Sub-slab Vapor	BS	X	X
10		OA-100			Outdoor Air	A	X	
11	C2304031	SSV-107	4/13/2023	AIR	Sub-slab Vapor	BS	X	
12		OA-102			Outdoor Air	A	X	

Notes:

BS = Vapor sample collected from just below the building foundation cement slab.

A = Sample collected from an upwind ambient air location.

Table 2-1A - VOC Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION		SS-101		SS-102		SS-103		SS-104		SS-105		SS-106		SS-107		SS-108		SS-109		SS-110		SS-111	
								SAMPLING DATE		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID		L2245736-01		L2245736-02		L2245736-03		L2245736-04		L2245736-05		L2246032-02		L2246032-03		L2246032-04		L2246032-01		L2246032-05		L2246032-06	
								SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residential Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**																								
Volatile Organics by EPA 5035								**Volatile Organics by EPA 5035**																							
Methylene chloride	75-09-2	0.05	0.05	51	100	500	1000	0.0076	U	0.0091	U	0.011	U	0.0082	U	0.0073	U	0.012	U	0.0064	U UJ	0.0048	U	0.014	U	0.011	U	0.026	U
1,1-Dichloroethane	75-34-3	0.27	0.27	19	26	240	480	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
Chloroform	67-66-3	0.37	0.37	10	49	350	700	0.0023	U	0.0027	U	0.0032	U	0.0025	U	0.0022	U	***0.00036***	***J***	0.0019	U	0.0014	U	0.0043	U	0.0033	U	0.0078	U
Carbon tetrachloride	56-23-5	0.76	0.76	1.4	2.4	22	44	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U	0.00097	U	0.0029	U	0.0022	U	0.0052	U
Tetrachloroethene	127-18-4	1.3	1.3	5.5	19	150	300	0.00076	U	0.00091	U	0.0011	U	0.00082	U	0.00073	U	0.0012	U	0.00064	U UJ	0.00048	U	0.0014	U	0.0011	U	0.0026	U
Chlorobenzene	108-90-7	1.1	1.1	100	100	500	1000	0.00076	U	0.00091	U	0.0011	U	0.00082	U	0.00073	U	0.0012	U	0.00064	U UJ	0.00048	U	0.0014	U	0.0011	U	0.0026	U
1,2-Dichloroethane	107-06-2	0.02	0.02	2.3	3.1	30	60	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U	0.00097	U	0.0029	U	0.0022	U	0.0052	U
1,1,1-Trichloroethane	71-55-6	0.68	0.68	100	100	500	1000	0.00076	U	0.00091	U	0.0011	U	0.00082	U	0.00073	U	0.0012	U	0.00064	U	0.00048	U	0.0014	U	0.0011	U	0.0026	U
Benzene	71-43-2	0.06	0.06	2.9	4.8	44	89	0.00076	U	0.00091	U	0.0011	U	0.00082	U	0.00073	U	0.0012	U	0.00064	U	0.00048	U	0.0014	U	0.0011	U	0.0026	U
Toluene	108-88-3	0.7	0.7	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
Ethylbenzene	100-41-4	1	1	30	41	390	780	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
Vinyl chloride	75-01-4	0.02	0.02	0.21	0.9	13	27	0.0015	U UJ	0.0018	U UJ	0.0022	U UJ	0.0016	U	0.0015	U	0.0024	U	0.0013	U	0.00097	U	0.0029	U	0.0022	U	0.0052	U
1,1-Dichloroethene	75-35-4	0.33	0.33	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U	0.00097	U	0.0029	U	0.0022	U	0.0052	U
trans-1,2-Dichloroethene	156-60-5	0.19	0.19	100	100	500	1000	0.0023	U	0.0027	U	0.0032	U	0.0025	U	0.0022	U	0.0035	U	0.0019	U UJ	0.0014	U	0.0043	U	0.0033	U	0.0078	U
Trichloroethene	79-01-6	0.47	0.47	10	21	200	400	0.00076	U	0.00091	U	0.0011	U	***0.00065***	***J***	0.00073	U	0.0012	U	0.00064	U	0.00048	U	0.0014	U	0.0011	U UJ	0.0026	U UJ
1,2-Dichlorobenzene	95-50-1	1.1	1.1	100	100	500	1000	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
1,3-Dichlorobenzene	541-73-1	2.4	2.4	17	49	280	560	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
1,4-Dichlorobenzene	106-46-7	1.8	1.8	9.8	13	130	250	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
Methyl tert butyl ether	1634-04-4	0.93	0.93	62	100	500	1000	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U	0.0019	U	0.0058	U	0.0044	U	0.01	U
p/m-Xylene*	179601-23-1	0.26	1.6	100	100	500	1000	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
o-Xylene*	95-47-6	0.26	1.6	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
cis-1,2-Dichloroethene	156-59-2	0.25	0.25	59	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
Acetone	67-64-1	0.05	0.05	100	100	500	1000	0.015	U	0.018	U	0.022	U	0.016	U	0.015	U	0.024	U	0.013	U	***0.022***		0.029	U	***0.2***		***0.19***	
2-Butanone	78-93-3	0.12	0.12	100	100	500	1000	0.015	U	0.018	U	0.022	U	0.016	U	***0.078***		0.024	U	0.013	U UJ	0.0097	U	0.029	U	***0.037***		***0.049***	***J***
n-Butylbenzene	104-51-8	12	12	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
sec-Butylbenzene	135-98-8	11	11	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
tert-Butylbenzene	98-06-6	5.9	5.9	100	100	500	1000	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
n-Propylbenzene	103-65-1	3.9	3.9	100	100	500	1000	0.0015	U	0.0018	U	0.0022	U	0.0016	U	0.0015	U	0.0024	U	0.0013	U UJ	0.00097	U	0.0029	U	0.0022	U	0.0052	U
1,3,5-Trimethylbenzene	108-67-8	8.4	8.4	47	52	190	380	0.003	U	0.0036	U	0.0043	U	0.0033	U	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
1,2,4-Trimethylbenzene	95-63-6	3.6	3.6	47	52	190	380	0.003	U	0.0036	U	0.0043	U	0.00055	J	0.0029	U	0.0047	U	0.0026	U UJ	0.0019	U	0.0058	U	0.0044	U	0.01	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250	0.12	U UJ	0.15	U UJ	0.17	U UJ	0.13	U	0.12	U	0.19	U UJ	0.1	U UJ	0.078	U UJ	0.23	U UJ	0.18	U UJ	0.42	U UJ
Total Detected Concentrations of TICs:		-	-	-	-	-	-	0		0.01281		0.02459		0.00914		0.00306		0.04925		0.00633		0.012		0.01821		0		0	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
* SCOs listed for the individual xylene compounds represent the SCOs for mixed xylenes.

Table 2-1A - VOC Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-1B - SVOC Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-1B - SVOC Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-114		SS-115		SS-116		SS-117		SS-118		SS-119		SS-120		SS-121		SS-122		DUP	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/23/2022		8/23/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2246028-03		L2246028-04		L2246028-05		L2246028-06		L2245736-06		L2245736-07		L2246028-07		L2246028-08		L2246028-09		L2246032-07	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Semivolatile Organics by GC/MS								Semivolatile Organics by GC/MS																									
Acenaphthene	83-32-9	20	98	100	100	500	1000		***1.3***	***J***	***0.11***	***J***	***0.19***	***J***	***0.34***		***0.34***	***J***	***0.078***	***J***	0.24	U	0.18	U	***0.046***	***J***	0.16	U
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12		1.2	U	0.22	U	0.17	U	0.14	U	0.62	U	0.14	U	0.18	U	0.13	U	0.12	U	0.12	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000		***60***		***1***		***2.6***		***8.2***		***12***		***1***		***0.068***	***J***	***0.2***		***0.57***		***0.067***	***J***
Naphthalene	91-20-3	12	12	100	100	500	1000		***0.61***	***J***	***0.11***	***J***	***0.088***	***J***	***0.16***	***J***	***0.16***	***J***	0.24	U	0.3	U	0.22	U	***0.026***	***J***	0.2	U
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11		***26***		***0.55***		***1.4***		***4.1***		***5.4***		***0.51***		***0.048***	***J***	***0.11***	***J***	***0.26***		***0.04***	***J***
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1		***25***		***0.42***		***1.4***		***4.5***		***5.1***		***0.46***		0.24	U	***0.1***	***J***	***0.25***		***0.049***	***J***
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11		***30***		***0.47***		***1.9***		***6.2***		***7.3***		***0.55***		0.18	U	***0.14***		***0.32***		***0.066***	***J***
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110		***12***		***0.19***	***J***	***0.45***		***1.8***		***1.9***		***0.24***		0.18	U	***0.042***	***J***	***0.092***	***J***	0.12	U
Chrysene	218-01-9	1	1	1	3.9	56	110		***24***		***0.45***		***1.5***		***4.9***		***5.7***		***0.5***		***0.035***	***J***	***0.11***	***J***	***0.26***		***0.041***	***J***
Acenaphthylene	208-96-8	100	107	100	100	500	1000		***0.74***	***J***	***0.093***	***J***	***0.067***	***J***	***0.21***		0.82	U	0.19	U	0.24	U	0.18	U	0.16	U	0.16	U
Anthracene	120-12-7	100	1000	100	100	500	1000		***7.4***		***0.34***		***0.39***		***0.83***		***1***		***0.14***		0.18	U	0.13	U	***0.098***	***J***	0.12	U
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000		***13***		***0.17***	***J***	***0.74***		***2.9***		***3.1***		***0.25***		0.24	U	***0.059***	***J***	***0.13***	***J***	***0.062***	***J***
Fluorene	86-73-7	30	386	100	100	500	1000		***0.73***	***J***	***0.17***	***J***	***0.15***	***J***	***0.3***		***0.34***	***J***	***0.058***	***J***	0.3	U	0.22	U	***0.05***	***J***	0.2	U
Phenanthrene	85-01-8	100	1000	100	100	500	1000		***43***		***1***		***1.6***		***4.2***		***5.4***		***0.62***		***0.039***	***J***	***0.11***	***J***	***0.44***		***0.044***	***J***
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1		***3.6***		***0.048***	***J***	***0.2***		***0.62***		***0.69***		***0.054***	***J***	0.18	U	0.13	U	***0.032***	***J***	0.12	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11		***13***		***0.24***	***J***	***0.89***		***3.3***		***3.7***		***0.31***		0.24	U	***0.075***	***J***	***0.16***		***0.039***	***J***
Pyrene	129-00-0	100	1000	100	100	500	1000		***51***		***0.79***		***2.1***		***6.6***		***9.3***		***0.82***		***0.056***	***J***	***0.16***		***0.44***		***0.058***	***J***
Dibenzofuran	132-64-9	7	210	14	59	350	1000		***3.4***		***0.12***	***J***	***0.098***	***J***	***0.18***	***J***	***0.2***	***J***	***0.025***	***J***	0.3	U	0.22	U	***0.03***	***J***	0.2	U
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55		1.6	U	0.29	U	0.22	U	0.18	U	0.82	U	0.19	U	0.24	U	0.18	U	0.16	U	***0.15***	***J***
Phenol	108-95-2	0.33	0.33	100	100	500	1000		2	U	0.36	U	0.28	U	0.23	U	1	U	0.24	U	0.3	U	0.22	U	0.2	U	0.2	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000		2	U	0.36	U	0.28	U	0.23	U	1	U	0.24	U	0.3	U	0.22	U	0.2	U	0.2	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	0.33	0.33	34	100	500	1000		2.8	U	0.52	U	0.4	U	0.33	U	1.5	U	0.35	U	0.43	U	0.32	U	0.29	U	0.29	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250		0.3	U	0.054	U	0.042	U	0.034	U	0.15	U	0.036	U	0.045	U	0.033	U	0.03	U	0.03	U
Total Detected Concentrations of TICs:		-		-	-	-	-		58.55		0		4.128		16.308		19.311		0.957		3.945		0.396		0.171		0.278	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1C - Metals Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-1C - Metals Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-1D - PCB Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SS-101		SS-102		SS-103		SS-104		SS-105		SS-106		SS-107		SS-108		SS-109		SS-110		SS-111		SS-112	
							SAMPLING DATE	8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
							LAB SAMPLE ID	L2245736-01		L2245736-02		L2245736-03		L2245736-04		L2245736-05		L2246032-02		L2246032-03		L2246032-04		L2246032-01		L2246032-05		L2246032-06		L2246028-01	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC																		Polychlorinated Biphenyls by GC													
Aroclor 1016	12674-11-2	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	0.0437	U	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1221	11104-28-2	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	0.0437	U	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1232	11141-16-5	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	0.0437	U	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1242	53469-21-9	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	0.0437	U	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1248	12672-29-6	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	***0.0412***	***J J***	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1254	11097-69-1	0.1	3.2	1	1	1	25	0.0401	U	***0.0142***	***J J***	***0.0427***	***J J***	0.0426	U	***0.01***	***J J***	***0.0173***	***J J***	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1260	11096-82-5	0.1	3.2	1	1	1	25	0.0401	U	***0.00754***	***J J***	***0.0405***	***J***	***0.00866***	***J***	0.039	U	0.0549	U	0.0391	U	0.039	U	***0.056***		***0.0174***	***J***	***0.0287***	***J***	***0.0126***	***J J***
Aroclor 1262	37324-23-5	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	0.0437	U	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
Aroclor 1268	11100-14-4	0.1	3.2	1	1	1	25	0.0401	U	0.0369	U	***0.0227***	***J J***	0.0426	U	0.039	U	0.0549	U	0.0391	U	0.039	U	0.0486	U	0.0531	U	0.123	U	0.0519	U
PCBs, Total	1336-36-3	0.1	3.2	1	1	1	25	0.0401	U	***0.0217***	***J***	***0.147***	***J***	***0.00866***	***J***	***0.01***	***J***	***0.0173***	***J***	0.0391	U	0.039	U	***0.056***		***0.0174***	***J***	***0.0287***	***J***	***0.0126***	***J***

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1D - PCB Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-1E - PFAS Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-101		SS-102		SS-103		SS-104		SS-105		SS-106		SS-107	
								SAMPLING DATE	8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2245736-01		L2245736-02		L2245736-03		L2245736-04		L2245736-05		L2246032-02		L2246032-03	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution									**Perfluorinated Alkyl Acids by Isotope Dilution**													
Perfluorobutanoic Acid (PFBA)	375-22-4								***0.000103***	***J***	0.00052	U	***0.000138***	***J***	**0.000056**	**J**	***0.000053***	***J***	***0.000126***	***J***	***0.000108***	***J***
Perfluoropentanoic Acid (PFPeA)	2706-90-3								***0.000054***	***J***	0.00052	U	***0.000168***	***J***	0.0006	U	0.00058	U	0.000806	U	0.000596	U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.000288	U	0.00026	U	0.000309	U	0.0003	U	0.00029	U	0.000403	U UJ	0.000298	U UJ
Perfluorohexanoic Acid (PFHxA)	307-24-4								***0.00007***	***JF J***	0.00052	U	0.000617	U	0.0006	U	0.00058	U	0.000806	U	0.000596	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9								***0.000058***	***J***	0.00026	U	***0.000074***	***J***	0.0003	U	0.00029	U	0.000403	U UJ	0.000298	U UJ
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								***0.000102***	***J***	0.00026	U	0.000309	U	0.0003	U	0.00029	U	0.000403	U	0.000298	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		***0.000226***	***J***	***0.000272***		***0.000098***	***J***	***0.000102***	***J***	***0.000174***	***J***	***0.000323***	***JF J***	***0.000114***	***JF J***
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.000577	U	0.00052	U	0.000617	U	0.0006	U	0.00058	U	0.000806	U UJ	0.000596	U UJ
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.000577	U	0.00052	U	0.000617	U	0.0006	U	0.00058	U	0.000806	U	0.000596	U
Perfluorononanoic Acid (PFNA)	375-95-1								0.000288	U	0.00026	U	***0.000112***	***J***	0.0003	U	***0.000161***	***J***	***0.000237***	***JF J***	0.000298	U UJ
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		***0.00109***		***0.00918***		***0.00095***		***0.00064***		***0.000663***		***0.000938***	***J***	***0.000464***	***J***
Perfluorodecanoic Acid (PFDA)	335-76-2								0.000288	U	0.00026	U	0.000309	U	0.0003	U	0.00029	U	0.000403	U UJ	0.000298	U UJ
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.000577	U UJ	0.00052	U UJ	0.000617	U UJ	0.0006	U UJ	0.00058	U UJ	0.000806	U UJ	0.000596	U UJ
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.000577	U UJ	0.00052	U UJ	0.000617	U UJ	0.0006	U UJ	0.00058	U UJ	0.000806	U UJ	0.000596	U UJ
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								0.000577	U	0.00052	U	***0.000058***	***JF J***	0.0006	U	***0.000073***	***J***	***0.000122***	***JF J***	0.000596	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								0.000577	U	0.00052	U	0.000617	U	0.0006	U	0.00058	U	0.000806	U UJ	0.000596	U UJ
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.000577	U UJ	***0.000661***		0.000617	U	0.0006	U	0.00058	U UJ	0.000806	U UJ	0.000596	U UJ
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								***0.000187***	***JF J***	***0.000381***	***J J***	0.000617	U UJ	0.0006	U UJ	0.00058	U UJ	0.000806	U UJ	0.000596	U UJ
Perfluorododecanoic Acid (PFDoA)	307-55-1								0.000577	U	0.00052	U	0.000617	U	0.0006	U	0.00058	U	0.000806	U UJ	0.000596	U UJ
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.000577	U	0.00052	U UJ	0.000617	U	0.0006	U	0.00058	U	0.000806	U UJ	0.000596	U UJ
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.000577	U	0.00052	U UJ	0.000617	U	0.0006	U	0.00058	U	0.000806	U UJ	0.000596	U UJ
PFOA/PFOS, Total	null								***0.00132***	***J***	***0.00945***		***0.00105***	***J***	***0.000742***	***J***	***0.000837***	***J***	***0.00126***	***J***	***0.000578***	***J***

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"JF" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

"R" indicates the data is unusable. The sample results are rejected to serious deficiencies in meeting quality control limits.

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1E - PFAS Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-108		SS-108		SS-109		SS-110		SS-111		SS-112		SS-113	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2246032-04		L2246032-04 R1		L2246032-01		L2246032-05		L2246032-06		L2246028-01		L2246028-02	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution									Perfluorinated Alkyl Acids by Isotope Dilution														
Perfluorobutanoic Acid (PFBA)	375-22-4								***0.000106***	***J***	**-**	**-**	***0.000225***	***J***	***0.000132***	***J***	***0.000219***	***J***	***0.000772***		***0.000189***	***J***
Perfluoropentanoic Acid (PFPeA)	2706-90-3								***0.000049***	***J***	-	-	0.000702	U	***0.000091***	***J***	0.00162	U	***0.00033***	***J***	***0.000111***	***J***
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.000262	U UJ	-	-	0.000351	U UJ	0.000364	U UJ	0.000811	U UJ	0.000375	U	0.00045	U
Perfluorohexanoic Acid (PFHxA)	307-24-4								0.000525	U	-	-	0.000702	U	0.000728	U	0.00162	U	***0.000312***	***J***	***0.00012***	***J***
Perfluoroheptanoic Acid (PFHpA)	375-85-9								0.000262	U UJ	-	-	***0.000089***	***J J***	0.000364	U UJ	0.000811	U UJ	***0.000408***		***0.00009***	***J***
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								0.000262	U	-	-	0.000351	U UJ	0.000364	U	0.000811	U	0.000375	U	0.00045	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		0.000262	U UJ	-	-	***0.000279***	***JF J***	***0.000108***	***JF J***	***0.000255***	***JF J***	***0.000878***		***0.000268***	***J***
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U	0.000901	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.000525	U	-	-	0.000702	U	0.000728	U	0.00162	U	0.000749	U	0.000901	U
Perfluorononanoic Acid (PFNA)	375-95-1								0.000262	U UJ	-	-	***0.000182***	***JF J***	***0.000111***	***JF J***	0.000811	U UJ	***0.000431***		0.00045	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		***0.000402***	***J***	**-**	**-**	***0.00163***	***J***	***0.000489***	***J***	***0.00492***	***J***	***0.0022***		***0.00145***	
Perfluorodecanoic Acid (PFDA)	335-76-2								0.000262	U UJ	-	-	0.000351	U UJ	0.000364	U UJ	0.000811	U UJ	***0.000148***	***J***	0.00045	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U UJ	0.000901	U UJ
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U UJ	0.000901	U UJ
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								0.000525	U	-	-	***0.000096***	***JF J***	0.000728	U	***0.000214***	***JF J***	***0.000137***	***J***	0.000901	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U	0.000901	U
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U UJ	0.000901	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U UJ	0.000901	U UJ
Perfluorododecanoic Acid (PFDoA)	307-55-1								0.000525	U UJ	-	-	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U	0.000901	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.000525	U R	0.00176	U UJ	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U	0.000901	U
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.000525	U R	0.00176	U UJ	0.000702	U UJ	0.000728	U UJ	0.00162	U UJ	0.000749	U UJ	0.000901	U UJ
PFOA/PFOS, Total	null								***0.000402***		**-**	**-**	***0.00191***	***J***	***0.000597***	***J***	***0.00518***	***J***	***0.00308***		***0.00172***	***J***

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"JF" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

"R" indicates the data is unusable. The sample results are rejected to serious deficiencies in meeting quality control limits.

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1E - PFAS Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-114		SS-115		SS-116		SS-117		SS-118		SS-119	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/23/2022		8/23/2022	
								LAB SAMPLE ID	L2246028-03		L2246028-04		L2246028-05		L2246028-06		L2245736-06		L2245736-07	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution									**Perfluorinated Alkyl Acids by Isotope Dilution**											
Perfluorobutanoic Acid (PFBA)	375-22-4								0.000566	U	***0.0001***	***J***	***0.000091***	***J***	***0.0002***	***J***	***0.000139***	***J***	***0.000192***	***J***
Perfluoropentanoic Acid (PFPeA)	2706-90-3								0.000566	U	0.000983	U	0.000807	U	***0.000297***	***J***	***0.000331***	***J***	***0.000129***	***J***
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.000283	U	0.000492	U	0.000403	U	0.000322	U	0.000299	U	0.000315	U
Perfluorohexanoic Acid (PFHxA)	307-24-4								0.000566	U	0.000983	U	0.000807	U	***0.000174***	***J***	***0.000168***	***J***	***0.000113***	***J***
Perfluoroheptanoic Acid (PFHpA)	375-85-9								0.000283	U	0.000492	U	***0.000085***	***J***	***0.000169***	***J***	***0.000134***	***J***	***0.000147***	***J***
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								0.000283	U	0.000492	U	0.000403	U	0.000322	U	0.000299	U	0.000315	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		***0.000048***	***J***	***0.000103***	***J***	***0.000235***	***J***	***0.000199***	***J***	***0.000095***	***J***	***0.000512***	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.000566	U	0.000983	U	0.000807	U	0.000645	U	0.000599	U	0.000629	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.000566	U	0.000983	U	0.000807	U	0.000645	U	0.000599	U	0.000629	U
Perfluorononanoic Acid (PFNA)	375-95-1								0.000283	U	0.000492	U	***0.000238***	***J***	***0.000114***	***J***	0.000299	U	***0.000287***	***J***
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		***0.000267***	***J***	***0.00112***		***0.00234***		***0.00599***		***0.00118***		***0.00208***	
Perfluorodecanoic Acid (PFDA)	335-76-2								0.000283	U	***0.000202***	***J***	***0.000264***	***J***	***0.000203***	***J***	***0.000132***	***J***	***0.000121***	***J***
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.000566	U UJ	0.000983	U UJ	0.000807	U UJ	0.000645	U UJ	0.000599	U UJ	0.000629	U UJ
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.000566	U UJ	0.000983	U UJ	0.000807	U UJ	0.000645	U UJ	0.000599	U UJ	0.000629	U UJ
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								0.000566	U	***0.000138***	***J***	***0.000226***	***J***	***0.000214***	***J***	***0.000126***	***J***	***0.00009***	***J***
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								0.000566	U	0.000983	U	0.000807	U	0.000645	U	0.000599	U	0.000629	U
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.000566	U UJ	0.000983	U	0.000807	U UJ	0.000645	U UJ	0.000599	U	0.000629	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								***0.000109***	***J J***	0.000983	U UJ	0.000807	U UJ	0.000645	U UJ	***0.000142***	***J J***	***0.00016***	***J J***
Perfluorododecanoic Acid (PFDoA)	307-55-1								0.000566	U	0.000983	U	***0.000124***	***J***	***0.00013***	***J***	***0.000111***	***J***	0.000629	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.000566	U	0.000983	U UJ	0.000807	U	0.000645	U	0.000599	U UJ	0.000629	U UJ
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.000566	U UJ	0.000983	U UJ	0.000807	U UJ	**0.000097**	**J U**	0.000599	U UJ	0.000629	U UJ
PFOA/PFOS, Total	null								***0.000315***	***J***	***0.00122***	***J***	***0.00258***	***J***	**0.00619**	**J**	***0.00128***	***J***	***0.00259***	

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"JF" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

"R" indicates the data is unusable. The sample results are rejected to serious deficiencies in meeting quality control limits.

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1E - PFAS Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-120		SS-121		SS-122		DUP		DUP	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2246028-07		L2246028-08		L2246028-09		L2246032-07		L2246032-07 R2	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residential Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Perfluorinated Alkyl Acids by Isotope Dilution								**Perfluorinated Alkyl Acids by Isotope Dilution**										
Perfluorobutanoic Acid (PFBA)	375-22-4								***0.000576***	***J***	***0.000452***	***J***	***0.000335***	***J***	***0.00012***	***J***	-	-
Perfluoropentanoic Acid (PFPeA)	2706-90-3								***0.000359***	***J***	***0.000208***	***J***	***0.000114***	***J***	***0.000054***	***J***	-	-
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.000421	U	0.000306	U	0.000293	U	0.000273	U UJ	-	-
Perfluorohexanoic Acid (PFHxA)	307-24-4								***0.000453***	***J***	***0.00015***	***J***	***0.000082***	***JF J***	0.000546	U UJ	-	-
Perfluoroheptanoic Acid (PFHpA)	375-85-9								***0.000574***		***0.00024***	***J***	***0.000117***	***J***	0.000273	U UJ	-	-
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								0.000421	U	0.000306	U	0.000293	U	0.000273	U	-	-
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		***0.00125***		***0.000604***		***0.000141***	***J***	0.000273	U UJ	-	-
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.000841	U	0.000611	U	0.000587	U	0.000546	U UJ	-	-
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.000841	U	0.000611	U	0.000587	U	0.000546	U	-	-
Perfluorononanoic Acid (PFNA)	375-95-1								***0.000545***		***0.000447***		***0.00016***	***J***	0.000273	U UJ	-	-
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		***0.00256***		***0.0021***		***0.000826***		0.000469	***J***	-	-
Perfluorodecanoic Acid (PFDA)	335-76-2								***0.000383***	***J***	***0.00023***	***J***	***0.000104***	***J***	0.000273	U UJ	-	-
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.000841	U UJ	0.000611	U UJ	0.000587	U UJ	0.000546	U UJ	-	-
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.000841	U UJ	0.000611	U UJ	0.000587	U UJ	0.000546	U UJ	-	-
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								***0.000254***	***J***	***0.00018***	***J***	***0.00007***	***J***	0.000546	U UJ	-	-
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								***0.00149***		0.000611	U	0.000587	U	0.000546	U UJ	-	-
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.000841	U	0.000611	U UJ	0.000587	U	0.000546	U UJ	-	-
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								0.000841	U UJ	0.000611	U UJ	0.000587	U UJ	0.000546	U UJ	0.00208	U R
Perfluorododecanoic Acid (PFDoA)	307-55-1								***0.000125***	***J***	0.000611	U	0.000587	U	0.000546	U UJ	-	-
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.000841	U UJ	0.000611	U UJ	0.000587	U UJ	0.00208	U R	-	-
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.000841	U UJ	0.000611	U UJ	0.000587	U UJ	0.00208	U R	-	-
PFOA/PFOS, Total	null								***0.00381***		***0.0027***		***0.000967***	***J***	***0.000469***		-	-

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"JF" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

"R" indicates the data is unusable. The sample results are rejected to serious deficiencies in meeting quality control limits.

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1F - Pest and Herb Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-101		SS-101		SS-102		SS-103		SS-104		SS-105		SS-106		SS-107		SS-108		SS-109		SS-110		SS-111	
								SAMPLING DATE	8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/23/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2245736-01		L2245736-01 R1		L2245736-02		L2245736-03		L2245736-04		L2245736-05		L2246032-02		L2246032-03		L2246032-04		L2246032-01		L2246032-05		L2246032-06	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"		0 - 2"	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Chlorinated Herbicides by GC																			**Chlorinated Herbicides by GC**											
2,4,5-TP (Silvex)	93-72-1	3.8	3.8	58	100	500	1000		0.202	U	-	-	0.191	U	0.218	U	0.22	U	0.195	U	0.272	U	0.203	U	0.193	U	0.242	U	0.266	U	0.616	U
Organochlorine Pesticides by GC																			**Organochlorine Pesticides by GC**											
Delta-BHC	319-86-8	0.04	0.25	100	100	500	1000		0.00189	U	-	-	0.0018	U	0.00201	U	0.00201	U	0.00191	U	0.00262	U	0.00193	U	0.00189	U	0.00234	U	0.00247	U	0.00595	U
Lindane	58-89-9	0.1	0.1	0.28	1.3	9.2	23		0.000786	U	-	-	0.000749	U	0.000837	U	0.000837	U	0.000794	U	0.00109	U	0.000806	U	0.000787	U	0.000973	U	0.00103	U	0.00248	U
Alpha-BHC	319-84-6	0.02	0.02	0.097	0.48	3.4	6.8		0.000786	U	-	-	0.000749	U	0.000837	U	0.000837	U	0.000794	U	0.00109	U	0.000806	U	0.000787	U	0.000973	U	0.00103	U	0.00248	U
Beta-BHC	319-85-7	0.036	0.09	0.072	0.36	3	14		0.00189	U	-	-	0.0018	U	0.00201	U	0.00201	U	0.00191	U	0.00262	U	0.00193	U	0.00189	U	0.00234	U	0.00247	U	0.00595	U
Heptachlor	76-44-8	0.042	0.38	0.42	2.1	15	29		0.000943	U	-	-	0.000899	U	0.001	U	0.001	U	0.000953	U	0.00131	U	0.000967	U UJ	0.000944	U	0.00117	U	0.00123	U	0.00298	U
Aldrin	309-00-2	0.005	0.19	0.019	0.097	0.68	1.4		0.00189	U	-	-	0.0018	U	0.00201	U	0.00201	U	0.00191	U	0.00262	U	0.00193	U UJ	0.00189	U	0.00234	U	0.00247	U	0.00595	U
Endrin	72-20-8	0.014	0.06	2.2	11	89	410		0.000786	U	-	-	0.000749	U	0.000837	U	0.000837	U	0.000794	U	0.00109	U	***0.0381***		0.000787	U	0.000973	U	0.00103	U	0.00248	U
Dieldrin	60-57-1	0.005	0.1	0.039	0.2	1.4	2.8		***0.0142***		-	-	***0.0106***	***JH***	0.00126	U	***0.00617***	***IP J***	0.00119	U	0.00164	U	0.00121	U UJ	0.00118	U	0.00146	U	0.00154	U	0.00372	U
4,4'-DDE	72-55-9	0.0033	17	1.8	8.9	62	120		***0.22***	***E***	***0.276***		***0.0106***		***0.00284***	***P JH***	***0.0213***		***0.00157***	***J***	***0.00358***		0.00193	U	***0.000612***	***JIP J***	***0.00659***		0.00247	U	***0.0032***	***JIP J***
4,4'-DDD	72-54-8	0.0033	14	2.6	13	92	180		***0.0065***	***P J***	-	-	0.0018	U	0.00201	U	***0.00208***	***IP J***	0.00191	U	0.00262	U	0.00193	U	0.00189	U	0.00234	U	0.00247	U	0.00595	U
4,4'-DDT	50-29-3	0.0033	136	1.7	7.9	47	94		***0.0558***		-	-	***0.0204***		0.00201	U	***0.00786***		0.00191	U	0.00262	U	0.00193	U	0.00189	U	***0.0155***	***IP J***	0.00247	U	***0.0124***	***J***
Endosulfan I	959-98-8	2.4	102	4.8	24	200	920		0.00189	U	-	-	0.0018	U	0.00201	U	0.00201	U	0.00191	U	0.00262	U	0.00193	U	0.00189	U	0.00234	U	0.00247	U	0.00595	U
Endosulfan II	33213-65-9	2.4	102	4.8	24	200	920		0.00189	U	-	-	0.0018	U	0.00201	U	0.00201	U	0.00191	U	0.00262	U	0.00193	U	0.00189	U	0.00234	U	0.00247	U	0.00595	U
Endosulfan sulfate	1031-07-8	2.4	1000	4.8	24	200	920		0.000786	U	-	-	0.000749	U	0.000837	U	0.000837	U	0.000794	U	0.00109	U	0.000806	U	0.000787	U	0.000973	U	0.00103	U	0.00248	U
cis-Chlordane	5103-71-9	0.094	2.9	0.91	4.2	24	47		0.00236	U	-	-	***0.00454***	***JH***	0.00251	U	0.00251	U	0.00238	U	0.00327	U	***0.00187***	***JIP J***	0.00236	U	0.00292	U	0.00308	U	0.00744	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
"I" indicated the lower value for the two columns has been reported due to obvious interference.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-1F - Pest and Herb Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 2-2A - VOC 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SS-120 12"		SS-120 24"		SS-121 12"		SS-121 24"		SS-122 12"		SS-122 24"	
							SAMPLING DATE	11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022	
							LAB SAMPLE ID	L2266528-01		L2266528-02		L2266528-03		L2266528-04		L2266528-05		L2266528-06	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	1.0		2.0		1.0		2.0		1.0		2.0	
Analyte	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residential Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by EPA 5035								**Volatile Organics by EPA 5035**											
Methylene chloride	75-09-2	0.05	0.05	51	100	500	1000	0.0051	U	0.0038	U	0.0044	U	0.0053	U	0.0046	U	0.0044	U
1,1-Dichloroethane	75-34-3	0.27	0.27	19	26	240	480	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Chloroform	67-66-3	0.37	0.37	10	49	350	700	0.0015	U	0.0011	U	0.0013	U	0.0016	U	0.0014	U	0.0013	U
Carbon tetrachloride	56-23-5	0.76	0.76	1.4	2.4	22	44	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
1,2-Dichloropropane	78-87-5							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Dibromochloromethane	124-48-1							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
1,1,2-Trichloroethane	79-00-5							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Tetrachloroethene	127-18-4	1.3	1.3	5.5	19	150	300	0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Chlorobenzene	108-90-7	1.1	1.1	100	100	500	1000	0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Trichlorofluoromethane	75-69-4							0.0041	U	0.003	U	0.0036	U	0.0042	U	0.0036	U	0.0036	U
1,2-Dichloroethane	107-06-2	0.02	0.02	2.3	3.1	30	60	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
1,1,1-Trichloroethane	71-55-6	0.68	0.68	100	100	500	1000	0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Bromodichloromethane	75-27-4							0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
trans-1,3-Dichloropropene	10061-02-6							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
cis-1,3-Dichloropropene	10061-01-5							0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Bromoform	75-25-2							0.0041	U	0.003	U	0.0036	U	0.0042	U	0.0036	U	0.0036	U
1,1,2,2-Tetrachloroethane	79-34-5							0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Benzene	71-43-2	0.06	0.06	2.9	4.8	44	89	0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
Toluene	108-88-3	0.7	0.7	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Ethylbenzene	100-41-4	1	1	30	41	390	780	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Chloromethane	74-87-3							0.0041	U	0.003	U	0.0036	U	0.0042	U	0.0036	U	0.0036	U
Bromomethane	74-83-9							0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
Vinyl chloride	75-01-4	0.02	0.02	0.21	0.9	13	27	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Chloroethane	75-00-3							0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,1-Dichloroethene	75-35-4	0.33	0.33	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
trans-1,2-Dichloroethene	156-60-5	0.19	0.19	100	100	500	1000	0.0015	U	0.0011	U	0.0013	U	0.0016	U	0.0014	U	0.0013	U
Trichloroethene	79-01-6	0.47	0.47	10	21	200	400	0.00051	U	0.00038	U	0.00044	U	0.00053	U	0.00046	U	0.00044	U
1,2-Dichlorobenzene	95-50-1	1.1	1.1	100	100	500	1000	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,3-Dichlorobenzene	541-73-1	2.4	2.4	17	49	280	560	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,4-Dichlorobenzene	106-46-7	1.8	1.8	9.8	13	130	250	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
Methyl tert butyl ether	1634-04-4	0.93	0.93	62	100	500	1000	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
p/m-Xylene*	179601-23-1	0.26	1.6	100	100	500	1000	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
o-Xylene*	95-47-6	0.26	1.6	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
cis-1,2-Dichloroethene	156-59-2	0.25	0.25	59	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Styrene	100-42-5							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Dichlorodifluoromethane	75-71-8							0.01	U	0.0076	U	0.0089	U	0.01	U	0.0091	U	0.0089	U
Acetone	67-64-1	0.05	0.05	100	100	500	1000	0.01	U	***0.0068***	J	0.0089	U	0.01	U	0.0091	U	0.0089	U
Carbon disulfide	75-15-0							0.01	U	0.0076	U	0.0089	U	0.01	U	0.0091	U	0.0089	U
2-Butanone	78-93-3	0.12	0.12	100	100	500	1000	0.01	U	0.0076	U	0.0089	U	0.01	U	0.0091	U	0.0089	U
4-Methyl-2-pentanone	108-10-1							0.01	U	0.0076	U	0.0089	U	0.01	U	0.0091	U	0.0089	U
2-Hexanone	591-78-6							0.01	U	0.0076	U	0.0089	U	0.01	U	0.0091	U	0.0089	U
1,2-Dibromoethane	106-93-4							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
n-Butylbenzene	104-51-8	12	12	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
sec-Butylbenzene	135-98-8	11	11	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
tert-Butylbenzene	98-06-6	5.9	5.9	100	100	500	1000	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,2-Dibromo-3-chloropropane	96-12-8							0.0031	U	0.0023	U	0.0027	U	0.0032	U	0.0027	U	0.0027	U
Isopropylbenzene	98-82-8							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
p-Isopropyltoluene	99-87-6							0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
Naphthalene	91-20-3	12	12	100	100	500	1000	0.0041	U	0.003	U	0.0036	U	0.0042	U	0.0036	U	0.0036	U
n-Propylbenzene	103-65-1	3.9	3.9	100	100	500	1000	0.001	U	0.00076	U	0.00089	U	0.001	U	0.00091	U	0.00089	U
1,2,4-Trichlorobenzene	120-82-1							0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,3,5-Trimethylbenzene	108-67-8	8.4	8.4	47	52	190	380	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U
1,2,4-Trimethylbenzene	95-63-6	3.6	3.6	47	52	190	380	0.002	U	0.0015	U	0.0018	U	0.0021	U	0.0018	U	0.0018	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
* SCOs listed for the individual xylene compounds represent the SCOs for mixed xylenes.

Table 2-2B - SVOC 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	**SS-120 12"**		**SS-120 24"**		**SS-121 12"**		**SS-121 24"**		**SS-122 12"**		**SS-122 24"**	
							SAMPLING DATE	**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**	
							LAB SAMPLE ID	**L2266528-01**		**L2266528-02**		**L2266528-03**		**L2266528-04**		**L2266528-05**		**L2266528-06**	
							SAMPLE TYPE	**SOIL**		**SOIL**		**SOIL**		**SOIL**		**SOIL**		**SOIL**	
							SAMPLE DEPTH (ft.)	**1.0**		**2.0**		**1.0**		**2.0**		**1.0**		**2.0**	
Analyte	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residential Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Semivolatile Organics by GC/MS								**Semivolatile Organics by GC/MS**											
Acenaphthene	83-32-9	20	98	100	100	500	1000	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12	0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.11	U
Bis(2-chloroethyl)ether	111-44-4							0.18	U	0.18	U	0.17	U	0.18	U	0.17	U	0.17	U
2-Chloronaphthalene	91-58-7							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
3,3'-Dichlorobenzidine	91-94-1							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2,4-Dinitrotoluene	121-14-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2,6-Dinitrotoluene	606-20-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000	***0.035***	J	***0.065***	J	***0.1***	J	0.12	U	***0.05***	J	***0.076***	J
4-Chlorophenyl phenyl ether	7005-72-3							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
4-Bromophenyl phenyl ether	101-55-3							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Bis(2-chloroisopropyl)ether	108-60-1							0.24	U	0.24	U	0.23	U	0.24	U	0.23	U	0.22	U
Bis(2-chloroethoxy)methane	111-91-1							0.22	U	0.22	U	0.21	U	0.22	U	0.2	U	0.2	U
Hexachlorobutadiene	87-68-3							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Hexachlorocyclopentadiene	77-47-4							0.58	U	0.57	U	0.56	U	0.58	U	0.54	U	0.53	U
Hexachloroethane	67-72-1							0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Isophorone	78-59-1							0.18	U	0.18	U	0.17	U	0.18	U	0.17	U	0.17	U
Naphthalene	91-20-3	12	12	100	100	500	1000	0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Nitrobenzene	98-95-3							0.18	U	0.18	U	0.17	U	0.18	U	0.17	U	0.17	U
NDPA/DPA	86-30-6							0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
n-Nitrosodi-n-propylamine	621-64-7							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Bis(2-ethylhexyl)phthalate	117-81-7							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Butyl benzyl phthalate	85-68-7							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Di-n-butylphthalate	84-74-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Di-n-octylphthalate	117-84-0							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Diethyl phthalate	84-66-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Dimethyl phthalate	131-11-3							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11	***0.023***	J	***0.029***	J	***0.054***	J	0.12	U	***0.03***	J	***0.042***	J
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11	0.12	U	***0.038***	J	***0.058***	J	0.12	U	***0.036***	J	***0.052***	J
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110	0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.11	U
Chrysene	218-01-9	1	1	1	3.9	56	110	0.12	U	***0.031***	J	***0.051***	J	0.12	U	***0.029***	J	***0.043***	J
Acenaphthylene	208-96-8	100	107	100	100	500	1000	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Anthracene	120-12-7	100	1000	100	100	500	1000	0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.11	U
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000	0.16	U	0.16	U	***0.024***	J	0.16	U	0.15	U	***0.024***	J
Fluorene	86-73-7	30	386	100	100	500	1000	0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Phenanthrene	85-01-8	100	1000	100	100	500	1000	0.12	U	***0.056***	J	***0.081***	J	0.12	U	***0.028***	J	***0.049***	J
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1	0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.11	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11	0.16	U	0.16	U	***0.028***	J	0.16	U	0.15	U	***0.028***	J
Pyrene	129-00-0	100	1000	100	100	500	1000	***0.031***	J	***0.05***	J	***0.084***	J	0.12	U	***0.046***	J	***0.066***	J
Biphenyl	92-52-4							0.46	U	0.46	U	0.44	U	0.46	U	0.43	U	0.42	U
4-Chloroaniline	106-47-8							0.2	UUJ	0.2	UUJ	0.19	UUJ	0.2	UUJ	0.19	UUJ	0.19	UUJ
2-Nitroaniline	88-74-4							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
3-Nitroaniline	99-09-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
4-Nitroaniline	100-01-6							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Dibenzofuran	132-64-9	7	210	14	59	350	1000	0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2-Methylnaphthalene	91-57-6							0.24	U	0.24	U	0.23	U	0.24	U	0.23	U	0.22	U
1,2,4,5-Tetrachlorobenzene	95-94-3							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Acetophenone	98-86-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2,4,6-Trichlorophenol	88-06-2							0.12	U	0.12	U	0.12	U	0.12	U	0.11	U	0.11	U
p-Chloro-m-cresol	59-50-7							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2-Chlorophenol	95-57-8							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2,4-Dichlorophenol	120-83-2							0.18	U	0.18	U	0.17	U	0.18	U	0.17	U	0.17	U
2,4-Dimethylphenol	105-67-9							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2-Nitrophenol	88-75-5							0.44	U	0.43	U	0.42	U	0.44	U	0.41	U	0.4	U
4-Nitrophenol	100-02-7							0.28	U	0.28	U	0.27	U	0.28	U	0.26	U	0.26	U
2,4-Dinitrophenol	51-28-5							0.98	U	0.96	U	0.93	U	0.98	U	0.91	U	0.89	U
4,6-Dinitro-o-cresol	534-52-1							0.53	U	0.52	U	0.5	U	0.53	U	0.49	U	0.48	U
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55	0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Phenol	108-95-2	0.33	0.33	100	100	500	1000	0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000	0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
3-Methylphenol/4-Methylphenol	108-39-4/ 106-44-5	0.33	0.33	34	100	500	1000	0.29	U	0.29	U	0.28	U	0.29	U	0.27	U	0.27	U
2,4,5-Trichlorophenol	95-95-4							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Carbazole	86-74-8							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
Atrazine	1912-24-9							0.16	U	0.16	U	0.16	U	0.16	U	0.15	U	0.15	U
Benzaldehyde	100-52-7							0.27	U	0.26	U	0.26	U	0.27	U	0.25	U	0.25	U
Caprolactam	105-60-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
2,3,4,6-Tetrachlorophenol	58-90-2							0.2	U	0.2	U	0.19	U	0.2	U	0.19	U	0.19	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250	0.03	UR	0.03	UR	0.029	UR	0.03	UR	0.028	UR	0.028	UR

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"R" indicates the data is unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"UJ" indicates The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-2C - Metals 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION		SS-120 12"		SS-120 24"		SS-121 12"		SS-121 24"		SS-122 12"		SS-122 24"	
								SAMPLING DATE		11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022	
								LAB SAMPLE ID		L2266528-01		L2266528-02		L2266528-03		L2266528-04		L2266528-05		L2266528-06	
								SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)		1.0		2.0		1.0		2.0		1.0		2.0	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals								Total Metals													
Aluminum, Total	7429-90-5							***4390***		***7970***		***7240***		***11100***		***6950***		***8320***	
Antimony, Total	7440-36-0							4.78	U	4.67	U	4.59	U	4.67	U	4.64	U	4.54	U
Arsenic, Total	7440-38-2	13	16	16	16	16	16	***4.23***		***6.44***		***2.94***		***5.11***		***4.3***		***4.81***	
Barium, Total	7440-39-3	350	820	350	400	400	10000	***24.8***		***34.2***		***18.8***		***43***		***14.9***		***19.6***	
Beryllium, Total	7440-41-7	7.2	47	14	72	590	2700	***0.178***	JU	***0.291***	JU	***0.184***	JU	***0.385***	JU	***0.238***	JU	***0.305***	JU
Cadmium, Total	7440-43-9	2.5	7.5	2.5	4.3	9.3	60	0.957	U	0.935	U	0.918	U	0.934	U	0.929	U	0.907	U
Calcium, Total	7440-70-2							***33900***		***22500***		***1420***		***2240***		***1450***		***1770***	
Chromium, Total	7440-47-3							***6.67***		***11.3***		***9.81***		***14***		***9.3***		***11.5***	
Cobalt, Total	7440-48-4							***4.8***		***7.86***		***7.71***		***8.43***		***8.57***		***7.27***	
Copper, Total	7440-50-8	50	1720	270	270	270	10000	***19.5***		***40.3***		***21.3***		***23.8***		***22.8***		***24.6***	
Iron, Total	7439-89-6							***11800***		***16300***		***13600***		***19200***		***13400***		***16700***	
Lead, Total	7439-92-1	63	450	400	400	1000	3900	***13.6***		***15.1***		***5.02***		***7***		***7.25***		***6.94***	
Magnesium, Total	7439-95-4							***12100***		***12200***		***2600***		***3160***		***3020***		***4520***	
Manganese, Total	7439-96-5	1600	2000	2000	2000	10000	10000	***403***		***459***		***336***		***428***		***375***		***562***	
Mercury, Total	7439-97-6	0.18	0.73	0.81	0.81	2.8	5.7	0.086	U	0.079	U	0.081	U	0.08	U	0.078	U	0.08	U
Nickel, Total	7440-02-0	30	130	140	310	310	10000	***9.61***		***16.7***		***11.5***		***20.2***		***13***		***19.4***	
Potassium, Total	7440-09-7							***526***		***792***		***497***		***654***		***432***		***558***	
Selenium, Total	7782-49-2	3.9	4	36	180	1500	6800	1.91	U	***0.262***	J	1.84	U	1.87	U	1.86	U	***0.304***	J
Silver, Total	7440-22-4	2	8.3	36	180	1500	6800	0.478	U	0.467	U	0.459	U	0.467	U	0.464	U	0.454	U
Sodium, Total	7440-23-5							***38.9***	J	***43.2***	J	***20.8***	J	***37.9***	J	***13.7***	J	***18.2***	J
Thallium, Total	7440-28-0							1.91	U	1.87	U	1.84	U	1.87	U	1.86	U	1.81	U
Vanadium, Total	7440-62-2							***9.64***		***16.1***		***15.7***		***21.2***		***13.9***		***15.6***	
Zinc, Total	7440-66-6	109	2480	2200	10000	10000	10000	***34.4***		***56.6***		***25.8***		***43.1***		***22.9***		***30.8***	
Chromium, Trivalent	16065-83-1	30		36	180	1500	6800	***6.67***		***11.3***		***9.81***		***14***		***9.3***		***11.5***	
Cyanide, Total	57-12-5	27	40	27	27	27	10000	1.1	UUJ	1.1	UUJ	1.1	UUJ	1.1	UUJ	1.1	UUJ	1.1	UUJ
Chromium, Hexavalent	18540-29-9	1	19	22	110	400	800	1.01	U	0.974	U	0.956	U	0.978	U	0.93	U	0.917	U

Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"UJ" indicates The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-2D - PCB 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SS-120 12"		SS-120 24"		SS-121 12"		SS-121 24"		SS-122 12"		SS-122 24"	
							SAMPLING DATE	11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022	
							LAB SAMPLE ID	L2266528-01		L2266528-02		L2266528-03		L2266528-04		L2266528-05		L2266528-06	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	1.0		2.0		1.0		2.0		1.0		2.0	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Polychlorinated Biphenyls by GC								Polychlorinated Biphenyls by GC											
Aroclor 1016	12674-11-2	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1221	11104-28-2	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1232	11141-16-5	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1242	53469-21-9	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1248	12672-29-6	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1254	11097-69-1	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1260	11096-82-5	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1262	37324-23-5	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
Aroclor 1268	11100-14-4	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U
PCBs, Total	1336-36-3	0.1	3.2	1	1	1	25	0.0398	U	0.0404	U	0.039	U	0.0398	U	0.0368	U	0.0365	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
"U" indicates analyte not detected at concentration greater than laboratory detection limit
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-2E - PFAS 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SS-120 12"		SS-120 24"		SS-121 12"		SS-121 24"		SS-122 12"		SS-122 24"	
								SAMPLING DATE	11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022		11/28/2022	
								LAB SAMPLE ID	L2266528-01		L2266528-02		L2266528-03		L2266528-04		L2266528-05		L2266528-06	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	1.0		2.0		1.0		2.0		1.0		2.0	
Analyte	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residential Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution								**Perfluorinated Alkyl Acids by Isotope Dilution**											
Perfluorobutanoic Acid (PFBA)	375-22-4							***0.000066***	J	0.000542	U	***0.00014***	JJ	***0.000076***	JJ	***0.000071***	J	***0.000045***	J
Perfluoropentanoic Acid (PFPeA)	2706-90-3							***0.00006***	J	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5							0.000298	U	0.000271	UUJ	0.000282	UUJ	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
Perfluorohexanoic Acid (PFHxA)	307-24-4							***0.000072***	J	0.000542	U	0.000565	UUJ	0.000558	UUJ	0.000567	U	0.000514	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9							0.000298	U	0.000271	UUJ	0.000282	UUJ	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4							0.000298	U	0.000271	UUJ	0.000282	UUJ	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600	***0.000094***	JFEMPC	0.000271	UUJ	***0.00011***	JFEMPC	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2							0.000595	U	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8							0.000595	U	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
Perfluorononanoic Acid (PFNA)	375-95-1							0.000298	U	0.000271	U	0.000282	UUJ	0.000279	UUJ	0.000284	U	0.000257	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440	***0.000166***	J	0.000271	UUJ	***0.000163***	JJ	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
Perfluorodecanoic Acid (PFDA)	335-76-2							0.000298	U	0.000271	UUJ	0.000282	UUJ	0.000279	UUJ	0.000284	UUJ	0.000257	UUJ
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4							0.000595	U	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9							0.000595	U	0.000542	UUJ	0.00153	U	0.00211	UUJ	0.000567	UUJ	0.000514	U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8							0.000595	U	0.000542	U	0.000565	UUJ	0.000558	UUJ	0.000567	U	0.000514	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3							0.000595	U	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
Perfluorooctanesulfonamide (FOSA)	754-91-6							0.000595	U	0.000542	U	0.000565	U	0.000558	U	0.000567	U	0.000514	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6							0.000595	UUJ	0.00168	UUJ	0.00153	U	0.00211	UUJ	0.000567	UUJ	0.000514	U
Perfluorododecanoic Acid (PFDoA)	307-55-1							0.000595	U	0.000542	U	0.000565	UUJ	0.000558	UUJ	0.000567	U	0.000514	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8							0.00164	U	0.00168	UUJ	0.00153	UUJ	0.00211	UR	0.00164	UR	0.00188	UUJ
Perfluorotetradecanoic Acid (PFTA)	376-06-7							0.00164	U	0.00168	UUJ	0.00153	UUJ	0.00211	UR	0.00164	UR	0.00188	UUJ
PFOA/PFOS, Total	null							***0.00026***	JJ	0.000271	U	***0.000273***	J	0.000279	U	0.000284	U	0.000257	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"UJ" indicates The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"EMPC" indicates the results do not meet all criteria for a confirmed identification. The quantitative value represents the Estimated Maximum Possible Concentration of the analyte in the sample.
"JF" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 2-2F - Pest Herb 12" / 24" Surface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	**SS-120 12"**		**SS-120 24"**		**SS-121 12"**		**SS-121 24"**		**SS-122 12"**		**SS-122 24"**	
								SAMPLING DATE	**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**		**11/28/2022**	
								LAB SAMPLE ID	**L2266528-01**		**L2266528-02**		**L2266528-03**		**L2266528-04**		**L2266528-05**		**L2266528-06**	
								SAMPLE TYPE	**SOIL**		**SOIL**		**SOIL**		**SOIL**		**SOIL**		**SOIL**	
								SAMPLE DEPTH (ft.)	**1.0**		**2.0**		**1.0**		**2.0**		**1.0**		**2.0**	
Analyte	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residential Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Chlorinated Herbicides by GC									**Chlorinated Herbicides by GC**											
2,4,5-TP (Silvex)	93-72-1	3.8	3.8	58	100	500	1000		0.206	U	0.201	U	0.194	U	0.198	U	0.193	U	0.189	U
Organochlorine Pesticides by GC									**Organochlorine Pesticides by GC**											
Delta-BHC	319-86-8	0.04	0.25	100	100	500	1000		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Lindane	58-89-9	0.1	0.1	0.28	1.3	9.2	23		0.000832	U	0.000794	U	0.000748	U	0.000807	U	0.000751	U	0.000754	U
Alpha-BHC	319-84-6	0.02	0.02	0.097	0.48	3.4	6.8		0.000832	U	0.000794	U	0.000748	U	0.000807	U	0.000751	U	0.000754	U
Beta-BHC	319-85-7	0.036	0.09	0.072	0.36	3	14		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Heptachlor	76-44-8	0.042	0.38	0.42	2.1	15	29		0.000999	U	0.000952	U	0.000897	U	0.000969	U	0.000901	U	0.000905	U
Aldrin	309-00-2	0.005	0.19	0.019	0.097	0.68	1.4		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Endrin	72-20-8	0.014	0.06	2.2	11	89	410		0.000832	U	0.000794	U	0.000748	U	0.000807	U	0.000751	U	0.000754	U
Dieldrin	60-57-1	0.005	0.1	0.039	0.2	1.4	2.8		0.00125	U	0.00119	U	0.00112	U	0.00121	U	0.00113	U	0.00113	U
4,4'-DDE	72-55-9	0.0033	17	1.8	8.9	62	120		0.002	U	***0.000528***	JU	0.00179	U	0.00194	U	0.0018	U	0.00181	U
4,4'-DDD	72-54-8	0.0033	14	2.6	13	92	180		0.002	U	***0.000766***	JU	0.00179	U	0.00194	U	0.0018	U	0.00181	U
4,4'-DDT	50-29-3	0.0033	136	1.7	7.9	47	94		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Endosulfan I	959-98-8	2.4	102	4.8	24	200	920		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Endosulfan II	33213-65-9	2.4	102	4.8	24	200	920		0.002	U	0.0019	U	0.00179	U	0.00194	U	0.0018	U	0.00181	U
Endosulfan sulfate	1031-07-8	2.4	1000	4.8	24	200	920		0.000832	U	0.000794	U	0.000748	U	0.000807	U	0.000751	U	0.000754	U
cis-Chlordane	5103-71-9	0.094	2.9	0.91	4.2	24	47		0.0025	U	0.00238	U	0.00224	U	0.00242	U	0.00225	U	0.00226	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3A - VOC Subsurface Soil Data Summary

Remedial Investigation

Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site

100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-101, 2-5		SB-101, 6-10		SB-102, 0.5-3		SB-102, 3-5		SB-103, 1.5-5		SB-103, 26-28		SB-104, 1-3		SB-104, 11-13		SB-105, 0.5-5		SB-105, 6-9		SB-106, 0.5-5		SB-106, 25-30		SB-107, 1.5-6		SB-107, 11-13	
								SAMPLING DATE	8/24/2022		8/24/2022		8/29/2022		8/29/2022		8/26/2022		8/26/2022		9/2/2022		9/2/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/29/2022		8/29/2022	
								LAB SAMPLE ID	L2246033-03		L2246033-04		L2246814-01		L2246814-02		L2246530-01		L2246530-02		L2247997-01		L2247997-02		L2246347-01		L2246347-02		L2246343-03		L2246343-04		L2246815-01		L2246815-02	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	2 - 5'		6 - 10'		0.5 - 3'		3 - 5'		1.5 - 5'		26 - 28'		1 - 3'		11 - 13'		0.5 - 5'		6 - 9'		0.5 - 5'		25 - 30'		1.5 - 6'		11 - 13'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by EPA 5035 High									**Volatile Organics by EPA 5035 High**																											
Methylene chloride	75-09-2	0.05	0.05	51	100	500	1000																											
1,1-Dichloroethane	75-34-3	0.27	0.27	19	26	240	480																											
Chloroform	67-66-3	0.37	0.37	10	49	350	700																											
Carbon tetrachloride	56-23-5	0.76	0.76	1.4	2.4	22	44																											
Tetrachloroethene	127-18-4	1.3	1.3	5.5	19	150	300																											
Chlorobenzene	108-90-7	1.1	1.1	100	100	500	1000																											
1,2-Dichloroethane	107-06-2	0.02	0.02	2.3	3.1	30	60																											
1,1,1-Trichloroethane	71-55-6	0.68	0.68	100	100	500	1000																											
Benzene	71-43-2	0.06	0.06	2.9	4.8	44	89																											
Toluene	108-88-3	0.7	0.7	100	100	500	1000																											
Ethylbenzene	100-41-4	1	1	30	41	390	780																											
Vinyl chloride	75-01-4	0.02	0.02	0.21	0.9	13	27																											
1,1-Dichloroethene	75-35-4	0.33	0.33	100	100	500	1000																											
trans-1,2-Dichloroethene	156-60-5	0.19	0.19	100	100	500	1000																											
Trichloroethene	79-01-6	0.47	0.47	10	21	200	400																											
1,2-Dichlorobenzene	95-50-1	1.1	1.1	100	100	500	1000																											
1,3-Dichlorobenzene	541-73-1	2.4	2.4	17	49	280	560																											
1,4-Dichlorobenzene	106-46-7	1.8	1.8	9.8	13	130	250																											
Methyl tert butyl ether	1634-04-4	0.93	0.93	62	100	500	1000																											
p/m-Xylene*	179601-23-1	0.26	1.6	100	100	500	1000																											
o-Xylene*	95-47-6	0.26	1.6	100	100	500	1000																											
cis-1,2-Dichloroethene	156-59-2	0.25	0.25	59	100	500	1000																											
Acetone	67-64-1	0.05	0.05	100	100	500	1000																											
2-Butanone	78-93-3	0.12	0.12	100	100	500	1000																											
n-Butylbenzene	104-51-8	12	12	100	100	500	1000																											
sec-Butylbenzene	135-98-8	11	11	100	100	500	1000																											
tert-Butylbenzene	98-06-6	5.9	5.9	100	100	500	1000																											
n-Propylbenzene	103-65-1	3.9	3.9	100	100	500	1000																											
1,3,5-Trimethylbenzene	108-67-8	8.4	8.4	47	52	190	380																											
1,2,4-Trimethylbenzene	95-63-6	3.6	3.6	47	52	190	380																											
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250																											
Total Detected Concentrations of TICs									0.00539		0.00741		0		0		0.01896		0.00857		0		0		0.00333		0.00343		0		0		0		0.00772	

Samples not analyzed by the 5035 High Method

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
* SCOs listed for the individual xylene compounds represent the SCOs for mixed xylenes.

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-114, 4.5-6		SB-114, 6-8		SB-115, 1-2		SB-115, 10-12		SB-115, 15-16		SB-116, 1-5		SB-116, 1-5		SB-116, 25-30		SB-117, 0.5-7		SB-117, 7-10		SB-118, 1		SB-118, 2		SB-118, 5		SB-119, 1	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/26/2022		8/26/2022		8/26/2022		8/29/2022		8/29/2022		8/30/2022		8/30/2022		8/30/2022		8/30/2022	
								LAB SAMPLE ID	L2246030-03		L2246030-04		L2246030-05		L2246030-06		L2246030-07		L2246524-01		L2246524-01 R2		L2246524-02		L2246815-05		L2246815-06		L2247097-09		L2247097-10		L2247097-11		L2247097-03	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	4.5 - 6'		6 - 8'		1 - 2'		10 - 12'		15 - 16'		1 - 5'		1 - 5'		25 - 30'		0.5 - 7'		7 - 10'		1'		2'		5'		1'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by EPA 5035 High									**Volatile Organics by EPA 5035 High**																											
Methylene chloride	75-09-2	0.05	0.05	51	100	500	1000												1.4	U														
1,1-Dichloroethane	75-34-3	0.27	0.27	19	26	240	480												0.28	U														
Chloroform	67-66-3	0.37	0.37	10	49	350	700												0.42	U														
Carbon tetrachloride	56-23-5	0.76	0.76	1.4	2.4	22	44												0.28	U														
Tetrachloroethene	127-18-4	1.3	1.3	5.5	19	150	300												0.14	U														
Chlorobenzene	108-90-7	1.1	1.1	100	100	500	1000												0.14	U														
1,2-Dichloroethane	107-06-2	0.02	0.02	2.3	3.1	30	60												0.28	U														
1,1,1-Trichloroethane	71-55-6	0.68	0.68	100	100	500	1000												0.14	U														
Benzene	71-43-2	0.06	0.06	2.9	4.8	44	89												***0.97***															
Toluene	108-88-3	0.7	0.7	100	100	500	1000												***4.3***															
Ethylbenzene	100-41-4	1	1	30	41	390	780												***1.4***															
Vinyl chloride	75-01-4	0.02	0.02	0.21	0.9	13	27												0.28	U														
1,1-Dichloroethene	75-35-4	0.33	0.33	100	100	500	1000												0.28	U														
trans-1,2-Dichloroethene	156-60-5	0.19	0.19	100	100	500	1000												0.42	U														
Trichloroethene	79-01-6	0.47	0.47	10	21	200	400												0.14	U														
1,2-Dichlorobenzene	95-50-1	1.1	1.1	100	100	500	1000		**Samples not analyzed by the 5035 High Method**										0.56	U	**Samples not analyzed by the 5035 High Method**								**Only PCBs Collected**					
1,3-Dichlorobenzene	541-73-1	2.4	2.4	17	49	280	560												0.56	U														
1,4-Dichlorobenzene	106-46-7	1.8	1.8	9.8	13	130	250												0.56	U														
Methyl tert butyl ether	1634-04-4	0.93	0.93	62	100	500	1000												0.56	U														
p/m-Xylene*	179601-23-1	0.26	1.6	100	100	500	1000												***3.5***															
o-Xylene*	95-47-6	0.26	1.6	100	100	500	1000												***3***															
cis-1,2-Dichloroethene	156-59-2	0.25	0.25	59	100	500	1000												0.28	U														
Acetone	67-64-1	0.05	0.05	100	100	500	1000												***1.3***	***J***														
2-Butanone	78-93-3	0.12	0.12	100	100	500	1000												2.8	U														
n-Butylbenzene	104-51-8	12	12	100	100	500	1000												***0.2***	***J***														
sec-Butylbenzene	135-98-8	11	11	100	100	500	1000												***0.26***	***J***														
tert-Butylbenzene	98-06-6	5.9	5.9	100	100	500	1000												0.56	U														
n-Propylbenzene	103-65-1	3.9	3.9	100	100	500	1000												***0.89***															
1,3,5-Trimethylbenzene	108-67-8	8.4	8.4	47	52	190	380												***0.31***	***J***														
1,2,4-Trimethylbenzene	95-63-6	3.6	3.6	47	52	190	380												***1.6***															
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250												22	U UJ														
Total Detected Concentrations of TICs									0.0595		0.02113		1.153		0.16137		0.01849		0		0.03514		0		0.01698		0		**Only PCBs Collected**					

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
* SCOs listed for the individual xylene compounds represent the SCOs for mixed xylenes.

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary

Remedial Investigation

Urban Villages (Former Will and Baummer Candle Company Factory) BCP Site

100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3A - VOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumm Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-125, 5-8		SB-126, 0.25-1		SB-126, 5-9		SB-127, 5-10		SB-127, 20-25		SB-128, 2.5-5		SB-128, 11-15		DUP-1		DUP-2		DUP-2		DUP-3		DUP-4	
								SAMPLING DATE	8/29/2022		8/29/2022		8/29/2022		8/26/2022		8/26/2022		8/26/2022		8/26/2022		8/25/2022		8/25/2022		8/25/2022		8/26/2022		8/29/2022	
								LAB SAMPLE ID	L2246814-06		L2246814-03		L2246814-04		L2246524-03		L2246524-04		L2246530-03		L2246530-04		L2246343-05		L2246347-03		L2246347-03 R1		L2246524-05		L2246814-07	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	5 - 8'		0.25 - 1'		5 - 9'		5 - 10'		20 - 25'		2.5 - 5'		11 - 15'		SB-106 25-30		SB-105 0.5-5							
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035 High								Volatile Organics by EPA 5035 High																						
Methylene chloride	75-09-2	0.05	0.05	51	100	500	1000	Samples not analyzed by the 5035 High Method																						
1,1-Dichloroethane	75-34-3	0.27	0.27	19	26	240	480																							
Chloroform	67-66-3	0.37	0.37	10	49	350	700																							
Carbon tetrachloride	56-23-5	0.76	0.76	1.4	2.4	22	44																							
Tetrachloroethene	127-18-4	1.3	1.3	5.5	19	150	300																							
Chlorobenzene	108-90-7	1.1	1.1	100	100	500	1000																							
1,2-Dichloroethane	107-06-2	0.02	0.02	2.3	3.1	30	60																							
1,1,1-Trichloroethane	71-55-6	0.68	0.68	100	100	500	1000																							
Benzene	71-43-2	0.06	0.06	2.9	4.8	44	89																							
Toluene	108-88-3	0.7	0.7	100	100	500	1000																							
Ethylbenzene	100-41-4	1	1	30	41	390	780																							
Vinyl chloride	75-01-4	0.02	0.02	0.21	0.9	13	27																							
1,1-Dichloroethene	75-35-4	0.33	0.33	100	100	500	1000																							
trans-1,2-Dichloroethene	156-60-5	0.19	0.19	100	100	500	1000																							
Trichloroethene	79-01-6	0.47	0.47	10	21	200	400																							
1,2-Dichlorobenzene	95-50-1	1.1	1.1	100	100	500	1000																							
1,3-Dichlorobenzene	541-73-1	2.4	2.4	17	49	280	560																							
1,4-Dichlorobenzene	106-46-7	1.8	1.8	9.8	13	130	250																							
Methyl tert butyl ether	1634-04-4	0.93	0.93	62	100	500	1000																							
p/m-Xylene*	179601-23-1	0.26	1.6	100	100	500	1000																							
o-Xylene*	95-47-6	0.26	1.6	100	100	500	1000																							
cis-1,2-Dichloroethene	156-59-2	0.25	0.25	59	100	500	1000																							
Acetone	67-64-1	0.05	0.05	100	100	500	1000																							
2-Butanone	78-93-3	0.12	0.12	100	100	500	1000																							
n-Butylbenzene	104-51-8	12	12	100	100	500	1000																							
sec-Butylbenzene	135-98-8	11	11	100	100	500	1000																							
tert-Butylbenzene	98-06-6	5.9	5.9	100	100	500	1000																							
n-Propylbenzene	103-65-1	3.9	3.9	100	100	500	1000																							
1,3,5-Trimethylbenzene	108-67-8	8.4	8.4	47	52	190	380																							
1,2,4-Trimethylbenzene	95-63-6	3.6	3.6	47	52	190	380																							
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250																							
Total Detected Concentrations of TICs									0		0		0		0.4148		0.00325		0.01046		0.00549		0		0.01716				0.00616		0	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
* SCOs listed for the individual xylene compounds represent the SCOs for mixed xylenes.

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION		SB-107, 11-13		SB-108, 1-5		SB-108, 9-13		SB-109, 5-7		SB-109, 10-12		SB-110, 1-5		SB-110, 13-15		SB-111, 1-5		SB-111, 20-30		SB-112, 3-6		SB-112, 6-8		SB-113, 0.5-4		SB-113, 4-5.5	
								SAMPLING DATE		8/29/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID		L2246815-02		L2246346-03		L2246346-04		L2246346-05		L2246346-06		L2246346-07		L2246346-08		L2246343-01		L2246343-02		L2246346-01		L2246346-02		L2246030-01		L2246030-02	
								SAMPLE TYPE		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)		11 - 13'		1 - 5'		9 - 13'		5 - 7'		10 - 12'		1 - 5'		13 - 15'		1 - 5'		20 - 30'		3 - 6'		6 - 8'		0.5 - 4'		4 - 5.5'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**																												
Semivolatile Organics by GC/MS								**Semivolatile Organics by GC/MS**																											
Acenaphthene	83-32-9	20	98	100	100	500	1000		***0.048***	***J***	***0.22***		0.47	U	***0.054***	***J***	0.26	U	***0.23***	***J***	0.28	U	0.16	U	0.16	U	1.5	U	***0.057***	***J***	0.15	U	0.16	U
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12		0.17	U	0.13	U	0.35	U	0.13	U	0.19	U	0.58	U	0.21	U	0.12	U	0.12	U	1.1	U	0.12	U	0.11	U	0.12	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000		***1.8***		***1.7***		0.35	U	***0.42***		0.19	U	***5.2***		***0.049***	***J***	***0.27***		0.12	U	***1.1***		***2.7***		***0.23***		0.12	U
Naphthalene	91-20-3	12	12	100	100	500	1000		***0.19***	***J***	***0.89***		0.59	U	***0.076***	***J***	0.32	U	***1.2***		0.35	U	***0.056***	***J***	0.2	U	***0.28***	***J***	***0.064***	***J***	***0.048***	***J***	0.2	U
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11		***0.93***		***0.89***		0.35	U	***0.25***		0.19	U	***3.1***		***0.04***	***J***	***0.12***		0.12	U	***0.52***	***J***	***1.2***		***0.16***		0.12	U
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1		***0.95***		***0.74***		0.47	U	***0.2***		0.26	U	***3.4***		0.28	U	***0.13***	***J***	0.16	U	***0.48***	***J***	***1***		***0.18***		0.16	U
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11		***1.2***		***0.9***		0.35	U	***0.25***		0.19	U	***3.7***		0.21	U	***0.14***		0.12	U	***0.66***	***J***	***1.1***		***0.26***		0.12	U
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110		***0.48***		***0.28***		0.35	U	***0.09***	***J***	0.19	U	***1.2***		0.21	U	***0.052***	***J***	0.12	U	1.1	U	***0.31***		***0.063***	***J***	0.12	U
Chrysene	218-01-9	1	1	1	3.9	56	110		***1***		***0.89***		0.35	U	***0.3***		0.19	U	***2.7***		0.21	U	***0.12***		0.12	U	***0.56***	***J***	***0.93***		***0.22***		0.12	U
Acenaphthylene	208-96-8	100	107	100	100	500	1000		***0.17***	***J***	***0.046***	***J***	0.47	U	0.17	U	0.26	U	***0.58***	***J***	0.28	U	0.16	U	0.16	U	1.5	U	***0.13***	***J***	0.15	U	0.16	U
Anthracene	120-12-7	100	1000	100	100	500	1000		***0.22***		***0.4***		0.35	U	***0.097***	***J***	0.19	U	***0.97***		0.21	U	0.12	U	0.12	U	1.1	U	***0.52***		0.11	U	0.12	U
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000		***0.77***		***0.34***		0.47	U	***0.1***	***J***	0.26	U	***2.3***		0.28	U	***0.076***	***J***	0.16	U	***0.43***	***J***	***0.5***		***0.1***	***J***	0.16	U
Fluorene	86-73-7	30	386	100	100	500	1000		***0.065***	***J***	***0.29***		0.59	U	***0.059***	***J***	0.32	U	***0.24***	***J***	0.35	U	***0.022***	***J***	0.2	U	1.8	U	***0.16***	***J***	0.19	U	0.2	U
Phenanthrene	85-01-8	100	1000	100	100	500	1000		***1.2***		***1.8***		0.35	U	***0.37***		0.19	U	***3.5***		0.21	U	***0.23***		0.12	U	***0.84***	***J***	***1.6***		***0.18***		0.12	U
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1		***0.19***		***0.09***	***J***	0.35	U	***0.034***	***J***	0.19	U	***0.4***	***J***	0.21	U	0.12	U	0.12	U	1.1	U	***0.09***	***J***	***0.037***	***J***	0.12	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11		***0.63***		***0.42***		0.47	U	***0.12***	***J***	0.26	U	***2.5***		0.28	U	***0.078***	***J***	0.16	U	***0.44***	***J***	***0.62***		***0.1***	***J***	0.16	U
Pyrene	129-00-0	100	1000	100	100	500	1000		***1.6***		***1.4***		0.35	U	***0.4***		0.19	U	***5.3***		***0.044***	***J***	***0.26***		0.12	U	***0.95***	***J***	***2.2***		***0.21***		0.12	U
Dibenzofuran	132-64-9	7	210	14	59	350	1000		***0.082***	***J***	***0.3***		0.59	U	***0.037***	***J***	0.32	U	***0.44***	***J***	0.35	U	***0.02***	***J***	0.2	U	1.8	U	***0.06***	***J***	0.19	U	0.2	U
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55		0.23	U	0.18	U	0.47	U	0.17	U	0.26	U	0.77	U	0.28	U	0.16	U	0.16	U	1.5	U	0.16	U	0.15	U	0.16	U
Phenol	108-95-2	0.33	0.33	100	100	500	1000		0.29	U	0.22	U	0.59	U	0.21	U	0.32	U	0.96	U	0.35	U	0.2	U	0.2	U	1.8	U	0.2	U	0.19	U	0.2	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000		0.29	U	0.22	U	0.59	U	0.21	U	0.32	U	0.96	U	0.35	U	0.2	U	0.2	U	1.8	U	0.2	U	0.19	U	0.2	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	0.33	0.33	34	100	500	1000		0.42	U	***0.17***	***J***	0.85	U	0.31	U	0.46	U	1.4	U	0.51	U	0.29	U	0.28	U	2.7	U	0.29	U	0.28	U	0.29	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250		0.044	U	0.033	U	0.088	U	0.032	U	0.048	U	0.14	U	0.053	U	0.03	U	0.029	U	0.28	U	0.03	U	0.029	U	0.03	U
Total Detected Concentration of TICs									3.298		6.903		0.848		5.108		0.893		13.87		0.616		196		0.939		0		5.105		0.579		0	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SB-119, 1		SB-119, 2		SB-119, 5		SB-120, 1		SB-120, 2		SB-120, 5		SB-121, 0.5-3		SB-121, 25-30		SB-122, 1-2		SB-122, 2-5	
							SAMPLING DATE	8/30/2022		8/30/2022		8/30/2022		8/30/2022		8/30/2022		8/30/2022		8/29/2022		8/29/2022		8/30/2022		8/30/2022	
							LAB SAMPLE ID	L2247097-03		L2247097-04		L2247097-05		L2247097-06		L2247097-07		L2247097-08		L2246815-03		L2246815-04		L2247097-01		L2247097-02	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	1'		2'		5'		1'		2'		5'		0.5 - 3'		25 - 30'		1 - 2'		2 - 5'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Semivolatile Organics by GC/MS								**Semivolatile Organics by GC/MS**																			
Acenaphthene	83-32-9	20	98	100	100	500	1000													0.9		0.16	U	0.16	U	0.15	U
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12													0.61	U	0.12	U	0.12	U	0.12	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000													***14***		0.12	U	***0.095***	***J***	0.12	U
Naphthalene	91-20-3	12	12	100	100	500	1000													***0.26***	***J***	0.21	U	0.2	U	0.19	U
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11													***6.9***		0.12	U	***0.03***	***J***	0.12	U
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1													***6.1***		0.16	U	0.16	U	0.15	U
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11													***6.1***		0.12	U	0.12	U	0.12	U
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110													***2.9***		0.12	U	0.12	U	0.12	U
Chrysene	218-01-9	1	1	1	3.9	56	110													***6.8***		0.12	U	***0.036***	***J***	0.12	U
Acenaphthylene	208-96-8	100	107	100	100	500	1000													***0.3***	***J***	0.16	U	0.16	U	0.15	U
Anthracene	120-12-7	100	1000	100	100	500	1000													***3.7***		0.12	U	0.12	U	0.12	U
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000													***3.7***		0.16	U	0.16	U	0.15	U
Fluorene	86-73-7	30	386	100	100	500	1000													***1.2***		0.21	U	0.2	U	0.19	U
Phenanthrene	85-01-8	100	1000	100	100	500	1000													***9***		0.12	U	***0.026***	***J***	0.12	U
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1													***0.91***		0.12	U	0.12	U	0.12	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11													***3.2***		0.16	U	0.16	U	0.15	U
Pyrene	129-00-0	100	1000	100	100	500	1000													***14***		0.12	U	***0.081***	***J***	0.12	U
Dibenzofuran	132-64-9	7	210	14	59	350	1000													***0.52***	***J***	0.21	U	0.2	U	0.19	U
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55													0.81	U	0.16	U	0.16	U	0.15	U
Phenol	108-95-2	0.33	0.33	100	100	500	1000													1	U	0.21	U	0.2	U	0.19	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000													1	U	0.21	U	0.2	U	0.19	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	0.33	0.33	34	100	500	1000													1.5	U	0.3	U	0.28	U	0.28	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250													0.15	U	0.031	U	0.03	U UJ	0.029	U UJ
Total Detected Concentration of TICs																				26.404		0.422		0.186		0	

Only PCBs Collected

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-123, 1-2		SB-123, 1-2		SB-123, 2-5		SB-124, 1-5		SB-124, 15-16		SB-125, 0.5-3		SB-125, 5-8		SB-126, 0.25-1		SB-126, 5-9		SB-127, 5-10	
								SAMPLING DATE	8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/29/2022		8/29/2022		8/29/2022		8/29/2022		8/26/2022	
								LAB SAMPLE ID	L2246033-01		L2246033-01 R1		L2246033-02		L2246033-05		L2246033-06		L2246814-05		L2246814-06		L2246814-03		L2246814-04		L2246524-03	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	1 - 2'		1 - 2'		2 - 5'		1 - 5'		15 - 16'		0.5 - 3'		5 - 8'		0.25 - 1'		5 - 9'		5 - 10'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Semivolatile Organics by GC/MS																															
Acenaphthene	83-32-9	20	98	100	100	500	1000		***170***		-	-	***0.12***	***J***	***0.13***	***J***	***0.038***	***J JH***	***0.033***	***J***	0.16	U	0.15	U	0.18	U	***0.039***	***J***
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12		13	U	-	-	0.1	U	0.11	U	0.12	U	0.11	U	0.12	U	0.12	U	0.14	U	0.19	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000		***1000***	***E***	***1800***		***0.99***		***1.3***		***0.3***		***0.56***		0.12	U	0.12	U	0.14	U	***0.34***	
Naphthalene	91-20-3	12	12	100	100	500	1000		***200***		-	-	***0.12***	***J***	***0.032***	***J***	***0.19***	***J***	0.18	U	0.2	U	0.19	U	0.23	U	***0.3***	***J***
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11		***540***		-	-	***0.44***		***0.59***		***0.14***		***0.23***		0.12	U	0.12	U	0.14	U	***0.23***	
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1		***430***		-	-	***0.43***		***0.65***		***0.14***	***J***	***0.22***		0.16	U	0.15	U	0.18	U	***0.23***	***J***
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11		***500***		-	-	***0.56***		***0.7***		***0.18***		***0.27***		0.12	U	0.12	U	0.14	U	***0.31***	
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110		***200***		-	-	***0.14***		***0.39***		***0.061***	***J***	***0.094***	***J***	0.12	U	0.12	U	0.14	U	***0.096***	***J***
Chrysene	218-01-9	1	1	1	3.9	56	110		***460***		-	-	***0.36***		***0.6***		***0.16***		***0.21***		0.12	U	0.12	U	0.14	U	***0.23***	
Acenaphthylene	208-96-8	100	107	100	100	500	1000		***21***		-	-	***0.058***	***J***	0.15	U	0.16	U	0.14	U	0.16	U	0.15	U	0.18	U	0.25	U
Anthracene	120-12-7	100	1000	100	100	500	1000		***330***		-	-	***0.29***		***0.18***		***0.067***	***J JH***	***0.091***	***J***	0.12	U	0.12	U	0.14	U	0.19	U
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000		***200***		-	-	***2.2***		***0.23***		***0.093***	***J***	***0.14***		0.16	U	0.15	U	0.18	U	***0.21***	***J***
Fluorene	86-73-7	30	386	100	100	500	1000		***200***		-	-	***0.15***	***J***	***0.074***	***J***	***0.04***	***J JH***	***0.041***	***J***	0.2	U	0.19	U	0.23	U	0.32	U
Phenanthrene	85-01-8	100	1000	100	100	500	1000		***1100***	***E***	***1400***		***0.94***		***0.9***		***0.29***	***JH***	***0.37***		0.12	U	0.12	U	0.14	U	***0.23***	
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1		***64***		-	-	***0.72***		***0.088***	***J***	0.12	U	***0.036***	***J***	0.12	U	0.12	U	0.14	U	***0.054***	***J***
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11		***260***		-	-	***1.5***		***0.28***		***0.078***	***J***	***0.13***	***J***	0.16	U	0.15	U	0.18	U	***0.22***	***J***
Pyrene	129-00-0	100	1000	100	100	500	1000		***760***		-	-	***0.74***		***1***		***0.24***		***0.45***		0.12	U	0.12	U	0.14	U	***0.3***	
Dibenzofuran	132-64-9	7	210	14	59	350	1000		***140***		-	-	***0.097***	***J***	***0.048***	***J***	***0.049***	***J JH***	***0.018***	***J***	0.2	U	0.19	U	0.23	U	***0.044***	***J***
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55		18	U	-	-	0.14	U	0.15	U	0.16	U	0.14	U	0.16	U	0.15	U	0.18	U	0.25	U
Phenol	108-95-2	0.33	0.33	100	100	500	1000		***4.2***	***J***	-	-	0.18	U	0.19	U	0.2	U	0.18	U	0.2	U	0.19	U	0.23	U	0.32	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000		22	U	-	-	0.18	U	0.19	U	0.2	U	0.18	U	0.2	U	0.19	U	0.23	U	0.32	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	0.33	0.33	34	100	500	1000		***11***	***J***	-	-	0.25	U	0.27	U	0.29	U	0.26	U	0.29	U	0.28	U	0.32	U	***0.2***	***J***
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250		3.4	U	-	-	0.026	U	0.028	U	0.03	U	0.027	U	0.03	U	0.029	U	0.034	U	0.048	U
Total Detected Concentration of TICs									3729		0		0		0.383		0.25		0		0		9.909		0		53.068	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3B - SVOC Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SB-127, 20-25		SB-128, 2.5-5		SB-128, 11-15		DUP-1		DUP-2		DUP-3		DUP-4	
							SAMPLING DATE	8/26/2022		8/26/2022		8/26/2022		8/25/2022		8/25/2022		8/26/2022		8/29/2022	
							LAB SAMPLE ID	L2246524-04		L2246530-03		L2246530-04		L2246343-05		L2246347-03		L2246524-05		L2246814-07	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	20 - 25'		2.5 - 5'		11 - 15'									
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Semivolatile Organics by GC/MS								**Semivolatile Organics by GC/MS**													
Acenaphthene	83-32-9	20	98	100	100	500	1000	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	***0.043***	***J***
Hexachlorobenzene	118-74-1	0.33	3.2	0.33	1.2	6	12	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	0.11	U
Fluoranthene	206-44-0	100	1000	100	100	500	1000	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	***0.31***	
Naphthalene	91-20-3	12	12	100	100	500	1000	0.21	U	***0.1***	***J***	0.21	U	0.21	U	0.2	U	0.21	U	***0.028***	***J***
Benzo(a)anthracene	56-55-3	1	1	1	1	5.6	11	0.12	U	***0.026***	***J***	0.13	U	0.12	U	0.12	U	0.13	U	***0.12***	
Benzo(a)pyrene	50-32-8	1	22	1	1	1	1.1	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	***0.14***	
Benzo(b)fluoranthene	205-99-2	1	1.7	1	1	5.6	11	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	***0.16***	
Benzo(k)fluoranthene	207-08-9	0.8	1.7	1	3.9	56	110	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	***0.088***	***J***
Chrysene	218-01-9	1	1	1	3.9	56	110	0.12	U	***0.031***	***J***	0.13	U	0.12	U	0.12	U	0.13	U	***0.14***	
Acenaphthylene	208-96-8	100	107	100	100	500	1000	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	0.14	U
Anthracene	120-12-7	100	1000	100	100	500	1000	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	***0.049***	***J***
Benzo(ghi)perylene	191-24-2	100	1000	100	100	500	1000	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	***0.084***	***J***
Fluorene	86-73-7	30	386	100	100	500	1000	0.21	U	0.23	U	0.21	U	0.21	U	0.2	U	0.21	U	***0.033***	***J***
Phenanthrene	85-01-8	100	1000	100	100	500	1000	0.12	U	***0.11***	***J***	0.13	U	0.12	U	0.12	U	0.13	U	***0.26***	
Dibenzo(a,h)anthracene	53-70-3	0.33	1000	0.33	0.33	0.56	1.1	0.12	U	0.14	U	0.13	U	0.12	U	0.12	U	0.13	U	0.11	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	8.2	0.5	0.5	5.6	11	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	***0.069***	***J***
Pyrene	129-00-0	100	1000	100	100	500	1000	0.12	U	***0.027***	***J***	0.13	U	0.12	U	0.12	U	0.13	U	***0.25***	
Dibenzofuran	132-64-9	7	210	14	59	350	1000	0.21	U	***0.045***	***J***	0.21	U	0.21	U	0.2	U	0.21	U	***0.024***	***J***
Pentachlorophenol	87-86-5	0.8	0.8	2.4	6.7	6.7	55	0.16	U	0.18	U	0.17	U	0.16	U	0.16	U	0.17	U	***0.1***	***J***
Phenol	108-95-2	0.33	0.33	100	100	500	1000	0.21	U	0.23	U	0.21	U	0.21	U	0.2	U	0.21	U	0.18	U
2-Methylphenol	95-48-7	0.33	0.33	100	100	500	1000	0.21	U	0.23	U	0.21	U	0.21	U	0.2	U	0.21	U	0.18	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	0.33	0.33	34	100	500	1000	0.3	U	0.33	U	0.31	U	0.3	U	0.29	U	0.31	U	0.26	U
1,4-Dioxane	123-91-1	0.1	0.1	9.8	13	130	250	0.031	U	0.034	U	0.032	U	0.031	U	0.03	U	0.032	U	0.027	U
Total Detected Concentration of TICs								0.199		0.437		0		0.603		0.0892		0		0.203	

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-101, 2-5		SB-101, 6-10		SB-102, 0.5-3		SB-102, 3-5		SB-103, 1.5-5		SB-103, 26-28		SB-104, 1-3		SB-104, 11-13		SB-105, 0.5-5		SB-105, 6-9		SB-106, 0.5-5		SB-106, 25-30		SB-107, 1.5-6		SB-107, 11-13	
								SAMPLING DATE	8/24/2022		8/24/2022		8/29/2022		8/29/2022		8/26/2022		8/26/2022		9/2/2022		9/2/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/29/2022		8/29/2022	
								LAB SAMPLE ID	L2246033-03		L2246033-04		L2246814-01		L2246814-02		L2246530-01		L2246530-02		L2247997-01		L2247997-02		L2246347-01		L2246347-02		L2246343-03		L2246343-04		L2246815-01		L2246815-02	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	2 - 5'		6 - 10'		0.5 - 3'		3 - 5'		1.5 - 5'		26 - 28'		1 - 3'		11 - 13'		0.5 - 5'		6 - 9'		0.5 - 5'		25 - 30'		1.5 - 6'		11 - 13'	
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals									Total Metals																											
Aluminum, Total	7429-90-5								***6180***		***4690***		***8450***		***5880***		***2590***		***4000***		***6780***		***1530***		***2890***		***681***		***4080***		***2070***		***4470***		***5680***	
Antimony, Total	7440-36-0								4.16	U	4.67	U	5.72	U	4.45	U	4.55	U	4.59	U	4.44	U	8.8	U UJ	***0.482***	***J U***	4.89	U	***0.706***	***J U***	5.34	U	4.65	U	6.68	U UJ
Arsenic, Total	7440-38-2	13	16	16	16	16	16		***2.39***		***2.1***		***2.61***		***2.55***		***3.89***	***JH***	***7.87***	***JH***	***18.6***	***JH***	***1.76***	***J U***	***10.5***		***3.26***		***15.1***		***3.27***		***9.64***		***10.2***	
Barium, Total	7440-39-3	350	820	350	400	400	10000		***64.2***		***16.7***		***46.5***		***28.5***		***11.5***		***16.4***		***161***		***130***		***35.8***		***8.87***		***135***	***J***	***84.1***		***73.8***		***65.7***	
Beryllium, Total	7440-41-7	7.2	47	14	72	590	2700		***0.213***	***J***	***0.182***	***J***	***0.458***	***J***	***0.303***	***J***	***0.145***	***J U***	***0.147***	***J U***	***0.398***	***J***	***0.088***	***J***	***0.77***		***0.059***	***J***	***0.659***		***0.086***	***J U***	***0.456***	***J***	***0.574***	***J***
Cadmium, Total	7440-43-9	2.5	7.5	2.5	4.3	9.3	60		***0.092***	***J***	0.935	U	***0.275***	***J***	***0.222***	***J***	***0.227***	***J***	***0.239***	***J***	***0.325***	***J***	1.76	U	***0.547***	***J***	***0.147***	***J***	***0.574***	***J***	***0.256***	***J***	***0.316***	***J***	***0.321***	***J***
Calcium, Total	7440-70-2								***128000***		***53000***		***3270***		***1810***		***17300***	***JH***	***21400***	***JH***	***108000***		***378000***		***1840***		***5400***		***15700***		***26000***	***JH***	***8380***		***19800***	
Chromium, Total	7440-47-3								***8.68***		***7.65***		***8.97***		***8.35***		***5.05***		***7.2***		***12.8***		***2.11***		***5.08***		***1.96***		***6.7***		***4.51***		***7.48***		***8.44***	
Cobalt, Total	7440-48-4								***5.1***		***3.82***		***4.7***		***4.23***		***3.97***		***4.94***		***9.9***		***1.15***	***J***	***10.2***		***0.616***	***J***	***5.31***	***JL***	***2.74***		***9.65***		***6.91***	
Copper, Total	7440-50-8	50	1720	270	270	270	10000		***22.1***		***14.5***		***5.02***		***5.66***		***21.3***		***20***		***42.2***		***22.7***		***28***		***5.63***		***79.6***		***10.2***		***88.5***		***60.4***	
Iron, Total	7439-89-6								***11100***		***10100***		***15400***		***13700***		***7310***	***JH***	***8880***	***JH***	***19100***		***3510***		***10200***	***JH***	***2720***	***JH***	***15500***	***J***	***8470***	***JH***	***12000***		***20600***	
Lead, Total	7439-92-1	63	450	400	400	1000	3900		***3.84***	***J***	***3.44***	***J***	***4.74***	***J***	***3.44***	***J***	***4.91***		***3.3***	***J***	***65.5***		***10.2***		***9.44***		***0.577***	***J***	***35.6***	***J***	***7.17***		***25.1***		***33.2***	
Magnesium, Total	7439-95-4								***22400***		***19600***		***2820***		***2950***		***4810***	***JH***	***11000***	***JH***	***15600***		***4280***		***256***		***682***		***3880***	***J***	***8010***	***JH***	***3380***		***5770***	
Manganese, Total	7439-96-5	1600	2000	2000	2000	10000	10000		***422***	***JH***	***273***	***JH***	***339***		***121***		***124***		***185***		***482***		***682***		***14.6***		***31.6***		***190***	***J***	***140***		***94.3***		***205***	***J***
Mercury, Total	7439-97-6	0.18	0.73	0.81	0.81	2.8	5.7		0.068	U	0.075	U	0.105	U	0.084	U	0.086	U	0.09	U	***0.088***	***JH***	***0.154***	***J UJ***	0.075	U	0.079	U	***0.124***		0.102	U	***0.236***		***0.424***	
Nickel, Total	7440-02-0	30	130	140	310	310	10000		***11.6***		***9.66***		***9.98***		***9.44***		***7.04***		***9.66***		***38.9***		***4.49***		***15.7***		***1.82***	***J***	***10.4***		***5.53***		***17.3***		***13.9***	
Potassium, Total	7440-09-7								***700***		***599***		***782***		***532***		***372***		***543***		***596***		***433***	***J***	***118***	***J***	***105***	***J***	***294***		***339***		***406***		***416***	
Selenium, Total	7782-49-2	3.9	4	36	180	1500	6800		1.66	U UJ	1.87	U UJ	2.29	U	1.78	U	1.82	U	1.84	U	***0.376***	***J***	3.52	U	***3.38***		***0.734***	***J***	***0.556***	***J***	2.14	U	***0.316***	***J***	2.67	U
Silver, Total	7440-22-4	2	8.3	36	180	1500	6800		0.832	U	0.935	U	1.14	U	0.89	U	0.909	U	0.918	U	***0.387***	***J***	1.76	U	0.928	U	0.979	U	0.942	U	1.07	U	0.93	U	1.34	U
Sodium, Total	7440-23-5								***82.7***	***J***	***61***	***J***	***74.9***	***J U***	***39.2***	***J U***	***185***	***JH***	***316***	***JH***	***108***	***J***	***1580***		***116***	***J U***	***2000***	***JH***	***207***		***696***		***166***	***J U***	***454***	***JH***
Thallium, Total	7440-28-0								1.66	U	1.87	U	2.29	U	1.78	U	1.82	U	1.84	U	***0.397***	***J***	3.52	U	***0.445***	***J***	1.96	U	1.88	U UJ	2.14	U	1.86	U	2.67	U UJ
Vanadium, Total	7440-62-2								***9.28***		***7.57***		***15.4***		***14.7***		***11***		***10.1***		***13.5***		***1.92***		***14.4***		***2.92***		***15.2***		***7.78***		***12.1***		***16.8***	
Zinc, Total	7440-66-6	109	2480	2200	10000	10000	10000		***19***		***17***		***40.8***		***19.5***		***18.2***		***21.5***		***60.4***		***38.8***		***34.7***		***12.4***		***35.5***	***JH***	***14.8***	***JH***	***170***		***114***	
Chromium, Trivalent	16065-83-1	30		36	180	1500	6800		***8.68***		***7.27***	***J***	***8.97***		***8.35***		***5.05***		***7.2***		***12.8***		***2.11***		***5.08***		***1.96***		***6.7***		***4.51***		***7.48***		***8.44***	
Cyanide, Total	57-12-5	27	40	27	27	27	10000		0.97	U	1.1	U	***0.84***	***J***	1.1	U	1.1	U UJ	1.1	U UJ	1.1	U	2.2	U UJ	1.1	U UJ	1.1	U UJ	1.1	U UJ	1.3	U UJ	1.1	U	2	U
Chromium, Hexavalent	18540-29-9	1	19	22	110	400	800		0.854	U	***0.38***	***J***	1.18	U	0.924	U	0.948	U	0.963	U	0.907	U	1.77	U	0.95	U	0.986	U	0.967	U	1.1	U	0.93	U	1.42	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	SB-119, 5		SB-120, 1		SB-120, 2		SB-120, 5		SB-121, 0.5-3		SB-121, 25-30		SB-122, 1-2		SB-122, 2-5		SB-123, 1-2		SB-123, 2-5	
							SAMPLING DATE	8/30/2022		8/30/2022		8/30/2022		8/30/2022		8/29/2022		8/29/2022		8/30/2022		8/30/2022		8/24/2022		8/24/2022	
							LAB SAMPLE ID	L2247097-05		L2247097-06		L2247097-07		L2247097-08		L2246815-03		L2246815-04		L2247097-01		L2247097-02		L2246033-01		L2246033-02	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)	5'		1'		2'		5'		0.5 - 3'		25 - 30'		1 - 2'		2 - 5'		1 - 2'		2 - 5'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Total Metals								**Total Metals**																			
Aluminum, Total	7429-90-5															***6450***		***3360***		***4600***		***6880***		***7470***		***3600***	
Antimony, Total	7440-36-0															4.85	U	5	U	4.8	U	11.2	U	12.8	U	4	U
Arsenic, Total	7440-38-2	13	16	16	16	16	16									***13.6***		***2.66***		***3.5***		***3.58***		***5.37***		***2.44***	
Barium, Total	7440-39-3	350	820	350	400	400	10000									***112***		***16.3***		***17.5***		***29.1***		***148***		***23.9***	
Beryllium, Total	7440-41-7	7.2	47	14	72	590	2700									***0.62***		***0.12***	***J***	***0.24***	***J***	***0.336***	***J***	***0.642***	***J***	***0.158***	***J***
Cadmium, Total	7440-43-9	2.5	7.5	2.5	4.3	9.3	60									***0.388***	***J***	***0.15***	***J***	***0.192***	***J***	2.24	U	***0.591***	***J***	0.8	U
Calcium, Total	7440-70-2															***4090***		***148000***		***1940***		***1790***		***55800***		***18900***	
Chromium, Total	7440-47-3															***10.2***		***5.88***		***9.71***		***9.84***		***10.7***		***5.83***	
Cobalt, Total	7440-48-4															***9.04***		***4.58***		***5.44***		***4.32***	***J***	***4.96***	***J***	***3.93***	
Copper, Total	7440-50-8	50	1720	270	270	270	10000									***81.9***		***19.8***		***17.4***		***10.9***		***70.9***		***28.9***	
Iron, Total	7439-89-6															***15700***		***9540***		***12400***	***JH***	***13500***	***JH***	***10400***		***8280***	
Lead, Total	7439-92-1	63	450	400	400	1000	3900									***259***		***3.3***	***J***	***3.87***	***J***	***5.04***	***J***	***41.2***		***4.41***	
Magnesium, Total	7439-95-4															***2410***		***31700***		***2640***		***2050***		***7910***		***5520***	
Manganese, Total	7439-96-5	1600	2000	2000	2000	10000	10000									***463***		***463***		***458***		***371***		***679***	***JH***	***236***	***JH***
Mercury, Total	7439-97-6	0.18	0.73	0.81	0.81	2.8	5.7									***0.211***		0.083	U	0.077	U	0.075	U	0.085	U	0.067	U
Nickel, Total	7440-02-0	30	130	140	310	310	10000									***14.7***		***8.23***		***12.3***		***10.6***		***8.7***		***7.66***	
Potassium, Total	7440-09-7															***491***		***345***		***329***		***482***	***J***	***1000***		***428***	
Selenium, Total	7782-49-2	3.9	4	36	180	1500	6800									1.94	U	2	U	1.92	U	4.48	U	5.14	U	1.6	U UJ
Silver, Total	7440-22-4	2	8.3	36	180	1500	6800									0.969	U	1	U	0.961	U	2.24	U	2.57	U	0.8	U
Sodium, Total	7440-23-5															***61.6***	***J U***	***2230***	***JH***	***120***	***J U***	***73***	***J U***	***413***	***J***	***40.7***	***J***
Thallium, Total	7440-28-0															1.94	U	2	U	***0.317***	***J***	4.48	U	5.14	U	1.6	U
Vanadium, Total	7440-62-2															***16.3***		***6.96***		***10.4***		***13.6***		***22.5***		***7.32***	
Zinc, Total	7440-66-6	109	2480	2200	10000	10000	10000									***92.6***		***20.4***		***25.5***		***27.4***		***69.6***		***16.8***	
Chromium, Trivalent	16065-83-1	30		36	180	1500	6800									***10.2***		***5.88***		***9.33***	***J***	***9.84***		***10.7***		***5.61***	***J***
Cyanide, Total	57-12-5	27	40	27	27	27	10000									1.2	U	1.1	U	1.1	U	1.1	U	***2.9***		1.2	U
Chromium, Hexavalent	18540-29-9	1	19	22	110	400	800									0.995	U	1	U	***0.378***	***J***	0.936	U	1.08	U	***0.223***	***J***

Only PCBs Collected

Only PCBs Collected

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-124, 1-5		SB-124, 15-16		SB-125, 0.5-3		SB-125, 5-8		SB-126, 0.25-1		SB-126, 5-9		SB-127, 5-10		SB-127, 20-25		SB-128, 2.5-5		SB-128, 11-15	
								SAMPLING DATE	8/24/2022		8/24/2022		8/29/2022		8/29/2022		8/29/2022		8/29/2022		8/26/2022		8/26/2022		8/26/2022		8/26/2022	
								LAB SAMPLE ID	L2246033-05		L2246033-06		L2246814-05		L2246814-06		L2246814-03		L2246814-04		L2246524-03		L2246524-04		L2246530-03		L2246530-04	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	1 - 5'		15 - 16'		0.5 - 3'		5 - 8'		0.25 - 1'		5 - 9'		5 - 10'		20 - 25'		2.5 - 5'		11 - 15'	
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Total Metals									Total Metals																			
Aluminum, Total	7429-90-5								***6920***		***2130***		***3440***		***2440***		***2060***		***2210***		***19300***	***JH***	***7050***		***1390***		***3450***	
Antimony, Total	7440-36-0								4.43	U	4.84	U	4.24	U	4.78	U	4.41	U	5.33	U	18.6	U	5.05	U	5.55	U	5.18	U
Arsenic, Total	7440-38-2	13	16	16	16	16	16		***6.26***		***1.82***		***4.55***		***2.04***		***1.99***		***1***	***J***	***189***		***12.7***	***JH***	***6.93***	***JH***	***1.46***	***JH***
Barium, Total	7440-39-3	350	820	350	400	400	10000		***42.9***		***9.52***		***30.1***		***6.86***		***5.99***		***9.81***		***51.4***		***35.6***		***175***		***27.5***	
Beryllium, Total	7440-41-7	7.2	47	14	72	590	2700		***0.365***	***J***	***0.107***	***J***	***0.22***	***J***	***0.134***	***J***	***0.106***	***J***	***0.107***	***J***	***1.53***	***J U***	***0.344***	***J***	***0.921***	***JH***	***0.155***	***J U***
Cadmium, Total	7440-43-9	2.5	7.5	2.5	4.3	9.3	60		***0.152***	***J***	0.968	U	***0.22***	***J***	***0.115***	***J***	***0.106***	***J***	***0.117***	***J***	***5.14***		***0.414***	***J***	***0.266***	***J***	***0.238***	***J***
Calcium, Total	7440-70-2								***15900***		***36400***		***9440***		***1430***		***690***		***28900***		***75400***	***JH***	***38400***	***JH***	***935***	***JH***	***37700***	***JH***
Chromium, Total	7440-47-3								***13.4***		***3.79***		***5.49***		***4.13***		***3.76***		***4.68***		***13.4***		***12***		***3.64***		***6.85***	
Cobalt, Total	7440-48-4								***6.71***		***2.96***		***4.13***		***3.6***		***3.64***		***3.07***		***2.9***	***J***	***9.02***		***3.36***		***3.36***	
Copper, Total	7440-50-8	50	1720	270	270	270	10000		***73.7***		***18.9***		***17.4***		***11.7***		***10.8***		***9.79***		***269***		***14.4***		***10.8***		***8.6***	
Iron, Total	7439-89-6								***13900***		***6460***		***9520***		***7420***		***6970***		***7450***		***13200***	***JH***	***14100***	***JH***	***11000***	***JH***	***8710***	***JH***
Lead, Total	7439-92-1	63	450	400	400	1000	3900		***12.7***		***2.34***	***J***	***78.5***		***2.43***	***J***	***2.27***	***J***	***2.34***	***J***	***288***		***5.89***		***8.42***		***3.53***	***J***
Magnesium, Total	7439-95-4								***8610***		***9420***		***3560***		***1140***		***1260***		***8210***		***12600***	***JH***	***12200***	***JH***	***155***	***JH***	***14000***	***JH***
Manganese, Total	7439-96-5	1600	2000	2000	2000	10000	10000		***500***	***JH***	***199***	***JH***	***245***		***191***		***84.7***		***244***		***346***		***313***		***53.3***		***252***	
Mercury, Total	7439-97-6	0.18	0.73	0.81	0.81	2.8	5.7		0.071	U	0.078	U	0.075	U	0.089	U	0.081	U	0.097	U	***1.06***		0.09	U	***0.082***	***J***	0.103	U
Nickel, Total	7440-02-0	30	130	140	310	310	10000		***15.6***		***5.19***		***8.15***		***6.28***		***6.92***		***5.88***		***6.52***	***J***	***15.4***		***12***		***6.83***	
Potassium, Total	7440-09-7								***533***		***365***		***260***		***221***	***J***	***238***		***228***	***J***	***2690***		***1110***		***198***	***J***	***468***	
Selenium, Total	7782-49-2	3.9	4	36	180	1500	6800		***0.238***	***J J***	1.94	U UJ	1.69	U	1.91	U	1.76	U	2.13	U	7.45	U	2.02	U	2.22	U	2.07	U
Silver, Total	7440-22-4	2	8.3	36	180	1500	6800		0.886	U	0.968	U	0.847	U	0.956	U	0.883	U	1.07	U	3.72	U	1.01	U	1.11	U	1.04	U
Sodium, Total	7440-23-5								***38.3***	***J***	***154***	***J***	***42.8***	***J U***	***21.4***	***J U***	***45.6***	***J U***	***125***	***J U***	***692***	***J U***	***227***	***JH***	***146***	***J U***	***859***	***JH***
Thallium, Total	7440-28-0								1.77	U	1.94	U	1.69	U	1.91	U	1.76	U	2.13	U	7.45	U	2.02	U	2.22	U	2.07	U
Vanadium, Total	7440-62-2								***11.9***		***5.36***		***9.6***		***6.44***		***5.39***		***7.76***		***11.6***		***16.4***		***12.2***		***10.5***	
Zinc, Total	7440-66-6	109	2480	2200	10000	10000	10000		***39.1***		***12.5***		***31.4***		***11.8***		***16.6***		***14.6***		***12400***		***38.9***		***5.27***	***J***	***19.6***	
Chromium, Trivalent	16065-83-1	30		36	180	1500	6800		***13.4***		3.79	U	***5.49***		***4.13***		***3.76***		***4.68***		***13.4***		***12***		***3.64***		***6.85***	
Cyanide, Total	57-12-5	27	40	27	27	27	10000		1.1	U UJ	1.2	U UJ	1	U	1.1	U	1.1	U	1.3	U	1.8	U UJ	1.2	U UJ	1.4	U UJ	1.3	U UJ
Chromium, Hexavalent	18540-29-9	1	19	22	110	400	800		0.907	U	0.985	U	0.872	U	0.973	U	0.94	U	1.12	U	1.53	U	1.02	U	1.13	U	1.06	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3C - Metals Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	DUP-1		DUP-2		DUP-3		DUP-4	
							SAMPLING DATE	8/25/2022		8/25/2022		8/26/2022		8/29/2022	
							LAB SAMPLE ID	L2246343-05		L2246347-03		L2246524-05		L2246814-07	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)								
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Total Metals								**Total Metals**							
Aluminum, Total	7429-90-5							***1660***		***4080***		***5140***		***4310***	
Antimony, Total	7440-36-0							5.04	U	4.72	U	5.11	U	4.36	U
Arsenic, Total	7440-38-2	13	16	16	16	16	16	***1.58***		***2.21***		***6.8***	***JH***	***5.38***	
Barium, Total	7440-39-3	350	820	350	400	400	10000	***11.4***		***16.4***		***41.5***		***40.4***	
Beryllium, Total	7440-41-7	7.2	47	14	72	590	2700	***0.06***	***J U***	***0.189***	***J***	***0.235***	***J U***	***0.244***	***J***
Cadmium, Total	7440-43-9	2.5	7.5	2.5	4.3	9.3	60	***0.181***	***J***	***0.321***	***J***	***0.317***	***J***	***0.27***	***J***
Calcium, Total	7440-70-2							***24500***	***JH***	***16500***		***39700***	***JH***	***8730***	
Chromium, Total	7440-47-3							***3.36***		***6.84***		***9.44***		***7.99***	
Cobalt, Total	7440-48-4							***2.3***		***3.11***		***5.69***		***4.36***	
Copper, Total	7440-50-8	50	1720	270	270	270	10000	***15.6***		***12.6***		***10.9***		***17***	
Iron, Total	7439-89-6							***6210***	***JH***	***7960***	***JH***	***11700***	***JH***	***10400***	
Lead, Total	7439-92-1	63	450	400	400	1000	3900	***2.95***	***J***	***3.63***	***J***	***4.83***	***J***	***31.4***	
Magnesium, Total	7439-95-4							***7310***	***JH***	***6060***		***12200***	***JH***	***4720***	
Manganese, Total	7439-96-5	1600	2000	2000	2000	10000	10000	***151***		***130***		***590***		***178***	
Mercury, Total	7439-97-6	0.18	0.73	0.81	0.81	2.8	5.7	0.087	U	0.077	U	0.102	U	***0.051***	***J***
Nickel, Total	7440-02-0	30	130	140	310	310	10000	***4.72***		***7.05***		***10.6***		***10.2***	
Potassium, Total	7440-09-7							***299***		***434***		***754***		***300***	
Selenium, Total	7782-49-2	3.9	4	36	180	1500	6800	2.01	U	***0.274***	***J***	2.04	U	1.74	U
Silver, Total	7440-22-4	2	8.3	36	180	1500	6800	1.01	U	0.944	U	1.02	U	0.871	U
Sodium, Total	7440-23-5							***2490***		***132***	***J U***	***221***	***JH***	***32***	***J U***
Thallium, Total	7440-28-0							2.01	U	1.89	U	2.04	U	1.74	U
Vanadium, Total	7440-62-2							***5.55***		***11.4***		***14.2***		***12.9***	
Zinc, Total	7440-66-6	109	2480	2200	10000	10000	10000	***9.33***	***JH***	***22***		***37.5***		***49.7***	
Chromium, Trivalent	16065-83-1	30		36	180	1500	6800	***3.36***		***6.84***		***9.44***		***7.99***	
Cyanide, Total	57-12-5	27	40	27	27	27	10000	1.2	U UJ	1.1	U UJ	1.2	U UJ	1.1	U
Chromium, Hexavalent	18540-29-9	1	19	22	110	400	800	1.01	U	0.982	U	1.03	U	0.881	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3D - PCB Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Stite
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3D - PCB Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Stite
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3D - PCB Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Stite
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3D - PCB Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Stite
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3D - PCB Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Stite
100 Buckley Road, Town of Salina, Onondaga County, New York

							LOCATION	DUP-1		DUP-2		DUP-3		DUP-4	
							SAMPLING DATE	8/25/2022		8/25/2022		8/26/2022		8/29/2022	
							LAB SAMPLE ID	L2246343-05		L2246347-03		L2246524-05		L2246814-07	
							SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	
							SAMPLE DEPTH (ft.)								
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Polychlorinated Biphenyls by GC								**Polychlorinated Biphenyls by GC**							
Aroclor 1016	12674-11-2	0.1	3.2	1	1	1	25	0.0406	U UJ	0.0402	U UJ	0.042	U	0.0348	U
Aroclor 1221	11104-28-2	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1232	11141-16-5	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1242	53469-21-9	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1248	12672-29-6	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1254	11097-69-1	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1260	11096-82-5	0.1	3.2	1	1	1	25	0.0406	U UJ	0.0402	U UJ	0.042	U	0.0348	U UJ
Aroclor 1262	37324-23-5	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
Aroclor 1268	11100-14-4	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U
PCBs, Total	1336-36-3	0.1	3.2	1	1	1	25	0.0406	U	0.0402	U	0.042	U	0.0348	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-111, 20-30		SB-112, 3-6		SB-112, 6-8		SB-113, 0.5-4		SB-113, 4-5.5		SB-114, 4.5-6		SB-114, 6-8		SB-115, 1-2		SB-115, 10-12		SB-115, 15-16		SB-116, 1-5	
								SAMPLING DATE	8/25/2022		8/25/2022		8/25/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/26/2022	
								LAB SAMPLE ID	L2246343-02		L2246346-01		L2246346-02		L2246030-01		L2246030-02		L2246030-03		L2246030-04		L2246030-05		L2246030-06		L2246030-07		L2246524-01	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	20 - 30'		3 - 6'		6 - 8'		0.5 - 4'		4 - 5.5'		4.5 - 6'		6 - 8'		1 - 2'		10 - 12'		15 - 16'		1 - 5'	
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution								Perfluorinated Alkyl Acids by Isotope Dilution																						
Perfluorobutanoic Acid (PFBA)	375-22-4								0.00053	U	***0.000028***	***J***	***0.0002***	***J***	***0.000078***	***J***	***0.000076***	***J***	0.00052	U	0.00058	U	***0.000033***	***J***	0.00062	U	0.0006	U	0.000033	U
Perfluoropentanoic Acid (PFPeA)	2706-90-3								0.00053	U	0.000505	U	0.00058	U	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000067	U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.00027	U	0.000252	U	0.00029	U	0.000275	U	0.000283	U	0.00026	U	0.00029	U	0.00025	U	0.00031	U	0.0003	U	0.000057	U UJ
Perfluorohexanoic Acid (PFHxA)	307-24-4								0.00053	U	0.000505	U	0.00058	U	***0.000068***	***JF J***	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000076	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9								0.00027	U	0.000252	U	0.00029	U	***0.000066***	***J***	0.000283	U	0.00026	U	0.00029	U	0.00025	U	0.00031	U	0.0003	U	0.000065	U
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								0.00027	U	0.000252	U UJ	0.00029	U UJ	0.000275	U	0.000283	U	0.00026	U	0.00029	U	0.00025	U	0.00031	U	0.0003	U	0.000088	U UJ
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		0.00027	U UJ	0.000252	U	0.00029	U	***0.000182***	***J***	0.000283	U	0.00026	U	0.00029	U	***0.000044***	***J***	0.00031	U	0.0003	U	0.000061	U UJ
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.00053	U	0.000505	U	0.00058	U	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.00026	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.00053	U	0.000505	U UJ	0.00058	U UJ	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000198	U
Perfluorononanoic Acid (PFNA)	375-95-1								0.00027	U	0.000252	U	0.00029	U	0.000275	U	0.000283	U	0.00026	U	0.00029	U	0.00025	U	0.00031	U	0.0003	U	0.000109	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		0.00027	U UJ	0.000252	U UJ	0.00029	U UJ	***0.000609***		0.000283	U	0.00026	U	0.00029	U	***0.000304***		0.00031	U	0.0003	U	0.000188	U UJ
Perfluorodecanoic Acid (PFDA)	335-76-2								0.00027	U UJ	0.000252	U	0.00029	U	0.000275	U	0.000283	U	0.00026	U	0.00029	U	0.00025	U	0.00031	U	0.0003	U	0.000097	U UJ
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.00053	U	0.000505	U UJ	0.00058	U UJ	0.00055	U UJ	0.000566	U UJ	0.00052	U UJ	0.00058	U UJ	0.000499	U UJ	0.00062	U	0.0006	U	0.000416	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.00053	U UJ	0.000505	U UJ	0.00058	U UJ	0.00055	U UJ	0.000566	U UJ	0.00052	U UJ	0.00058	U UJ	0.000499	U UJ	0.00062	U UJ	0.0006	U UJ	0.000292	U UJ
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								0.00053	U	0.000505	U	0.00058	U	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000068	U UJ
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								0.00053	U UJ	0.000505	U UJ	0.00058	U UJ	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000222	U UJ
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.00053	U	0.000505	U	0.00058	U	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000142	U UJ
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								0.00053	U UJ	0.000505	U UJ	0.00058	U UJ	0.00055	U UJ	0.000566	U UJ	0.00052	U UJ	0.00058	U UJ	0.000499	U UJ	0.00062	U UJ	0.0006	U UJ	0.000122	U UJ
Perfluorododecanoic Acid (PFDoA)	307-55-1								0.00053	U	0.000505	U	0.00058	U	0.00055	U	0.000566	U	0.00052	U	0.00058	U	0.000499	U	0.00062	U	0.0006	U	0.000101	U UJ
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.00053	U	0.000505	U UJ	0.00058	U UJ	0.00055	U	0.000566	U UJ	0.00052	U UJ	0.00058	U UJ	0.000499	U UJ	0.00062	U	0.0006	U	0.000296	U UJ
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.00053	U UJ	0.000505	U UJ	0.00058	U UJ	0.00055	U	0.000566	U UJ	0.00052	U UJ	0.00058	U UJ	0.000499	U UJ	0.00062	U	0.0006	U	0.000078	U UJ
PFOA/PFOS, Total	null								0.00027	U	0.000252	U	0.00029	U	***0.000791***	***J***	0.000283	U	0.00026	U	0.00029	U	***0.000348***	***J***	0.00031	U	0.0003	U	0.000061	U

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.

Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"H" Detected target analytes in those samples estimated high off the non-conforming column.

"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.

"P" The RPD between the results for the two columns exceeds the method-specified criteria.

"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-116, 25-30		SB-117, 0.5-7		SB-117, 7-10		SB-118, 1	SB-118, 2	SB-118, 5	SB-119, 1	SB-119, 2	SB-119, 5	SB-120, 1	SB-120, 2	SB-120, 5
								SAMPLING DATE	8/26/2022		8/29/2022		8/29/2022		8/30/2022	8/30/2022	8/30/2022	8/30/2022	8/30/2022	8/30/2022	8/30/2022	8/30/2022	8/30/2022
								LAB SAMPLE ID	L2246524-02		L2246815-05		L2246815-06		L2247097-09	L2247097-10	L2247097-11	L2247097-03	L2247097-04	L2247097-05	L2247097-06	L2247097-07	L2247097-08
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
								SAMPLE DEPTH (ft.)	25 - 30'		0.5 - 7'		7 - 10'		1'	2'	5'	1'	2'	5'	1'	2'	5'
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Perfluorinated Alkyl Acids by Isotope Dilution																													
Perfluorobutanoic Acid (PFBA)	375-22-4								0.000027	U	0.000024	U	0.000026	U	Only PCBs Collected														
Perfluoropentanoic Acid (PFPeA)	2706-90-3								0.000054	U	0.00005	U	0.000052	U															
Perfluorobutanesulfonic Acid (PFBS)	375-73-5								0.000046	U UJ	0.000042	U	0.000044	U															
Perfluorohexanoic Acid (PFHxA)	307-24-4								0.000062	U	0.000057	U	0.00006	U															
Perfluoroheptanoic Acid (PFHpA)	375-85-9								0.000053	U	0.000049	U	0.000051	U															
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4								0.000072	U UJ	0.000065	U	0.000069	U															
Perfluorooctanoic Acid (PFOA)	335-67-1	0.66	0.8	6.6	33	500	600		0.00005	U UJ	0.000045	U	0.000048	U															
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2								0.000212	U	0.000193	U	0.000204	U															
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8								0.000161	U	0.000147	U	0.000155	U															
Perfluorononanoic Acid (PFNA)	375-95-1								0.000089	U	0.000081	U	0.000085	U															
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.88	1	6.6	44	440	440		0.000154	U UJ	0.00014	U	0.000148	U															
Perfluorodecanoic Acid (PFDA)	335-76-2								0.000079	U UJ	0.000072	U	0.000076	U															
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4								0.00034	U	0.000309	U	0.000326	U															
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9								0.000238	U UJ	0.000217	U	0.000229	U UJ															
Perfluoroundecanoic Acid (PFUnA)	2058-94-8								0.000055	U UJ	0.00005	U	0.000053	U															
Perfluorodecanesulfonic Acid (PFDS)	335-77-3								0.000181	U UJ	0.000165	U UJ	0.000174	U UJ															
Perfluorooctanesulfonamide (FOSA)	754-91-6								0.000116	U	0.000106	U UJ	0.000111	U															
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6								0.0001	U UJ	0.000091	U UJ	0.000096	U UJ															
Perfluorododecanoic Acid (PFDoA)	307-55-1								0.000083	U UJ	0.000075	U	0.00008	U															
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8								0.000242	U UJ	0.00022	U UJ	0.000232	U UJ															
Perfluorotetradecanoic Acid (PFTA)	376-06-7								0.000064	U UJ	0.000058	U	0.000061	U															
PFOA/PFOS, Total	null								0.00005	U	0.000045	U	0.000048	U															

Notes:

Results and soil cleanup objectives (SCO) in ug/kg

BOLD - Indicates the analyte was detected above the RL.

Analytical data compared to NYSDEC Part 375-6

Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.

Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.

Red border indicates the analyte exceeds Protection of Groundwater SCO.

Blank space indicates that a SCO does not exist

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

"H" Detected target analytes in those samples estimated high off the non-conforming column.

"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.

"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.

"P" The RPD between the results for the two columns exceeds the method-specified criteria.

"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3E - PFAS Subsurface Soil Sampling Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Compnay Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3F - Pest Herbicide Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-101, 2-5		SB-101, 6-10		SB-102, 0.5-3		SB-102, 3-5		SB-103, 1.5-5		SB-103, 26-28		SB-104, 1-3		SB-104, 11-13		SB-105, 0.5-5		SB-105, 6-9		SB-106, 0.5-5		SB-106, 25-30		SB-107, 1.5-6		SB-107, 11-13		SB-108, 1-5	
								SAMPLING DATE	8/24/2022		8/24/2022		8/29/2022		8/29/2022		8/26/2022		8/26/2022		9/2/2022		9/2/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/29/2022		8/29/2022		8/25/2022	
								LAB SAMPLE ID	L2246033-03		L2246033-04		L2246814-01		L2246814-02		L2246530-01		L2246530-02		L2247997-01		L2247997-02		L2246347-01		L2246347-02		L2246343-03		L2246343-04		L2246815-01		L2246815-02		L2246346-03	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	2 - 5'		6 - 10'		0.5 - 3'		3 - 5'		1.5 - 5'		26 - 28'		1 - 3'		11 - 13'		0.5 - 5'		6 - 9'		0.5 - 5'		25 - 30'		1.5 - 6'		11 - 13'		1 - 5'	
Analytes	CasNum	Unrestricted Use SCO	Protection of Groundwater	Residential Use SCO	Restricted Residentail Use SCO	Restricted Commercial Use SCO	Restricted Industrial Use SCO		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Chlorinated Herbicides by GC									**Chlorinated Herbicides by GC**																													
2,4,5-TP (Silvex)	93-72-1	3.8	3.8	58	100	500	1000		0.175	U	0.198	U	0.244	U	0.191	U	0.195	U UJ	0.198	U UJ	0.185	U	0.359	U	0.195	U UJ	0.204	U UJ	0.196	U	0.226	U	0.191	U	0.294	U	0.219	U
Organochlorine Pesticides by GC									**Organochlorine Pesticides by GC**																													
Delta-BHC	319-86-8	0.04	0.25	100	100	500	1000		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	0.00175	U	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U UJ	0.00208	U
Lindane	58-89-9	0.1	0.1	0.28	1.3	9.2	23		0.00069	U	0.00078	U	0.00096	U	0.00074	U	0.00077	U	0.00076	U	0.00073	U	0.00142	U	0.00075	U	0.00079	U	0.00077	U	0.00086	U	0.00076	U	0.00115	U	0.00087	U
Alpha-BHC	319-84-6	0.02	0.02	0.097	0.48	3.4	6.8		0.00069	U	0.00078	U	0.00096	U	0.00074	U	0.00077	U	0.00076	U	***0.0004***	***JP JH***	0.00142	U	0.00075	U	0.00079	U	0.00077	U	0.00086	U	0.00076	U	0.00115	U	0.00087	U
Beta-BHC	319-85-7	0.036	0.09	0.072	0.36	3	14		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	0.00175	U	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
Heptachlor	76-44-8	0.042	0.38	0.42	2.1	15	29		0.00082	U	0.00094	U	0.00116	U	0.00089	U	0.00092	U	0.00091	U	0.00088	U	0.0017	U	0.0009	U	0.00094	U	0.00092	U	0.00103	U	0.00092	U	0.00138	U	0.00104	U
Aldrin	309-00-2	0.005	0.19	0.019	0.097	0.68	1.4		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	0.00175	U	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
Endrin	72-20-8	0.014	0.06	2.2	11	89	410		0.00069	U	0.00078	U	0.00096	U	0.00074	U	0.00077	U	0.00076	U	0.00073	U	0.00142	U	0.00075	U	0.00079	U	0.00077	U	0.00086	U	0.00076	U	0.00115	U	0.00087	U
Dieldrin	60-57-1	0.005	0.1	0.039	0.2	1.4	2.8		0.00103	U	0.00117	U	0.00145	U	0.00111	U	***0.0176***		0.00114	U	0.00109	U	0.00212	U	0.00113	U	0.00118	U	0.00115	U	0.00129	U	0.00114	U	0.00172	U	0.0013	U
4,4'-DDE	72-55-9	0.0033	17	1.8	8.9	62	120		0.00165	U	0.00188	U	0.00231	U	0.00177	U	***0.0012***	***JIP J***	0.00182	U	***0.0022***		0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
4,4'-DDD	72-54-8	0.0033	14	2.6	13	92	180		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	***0.0015***	***JP JH***	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
4,4'-DDT	50-29-3	0.0033	136	1.7	7.9	47	94		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	***0.0028***	***IP JH***	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
Endosulfan I	959-98-8	2.4	102	4.8	24	200	920		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	0.00175	U	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
Endosulfan II	33213-65-9	2.4	102	4.8	24	200	920		0.00165	U	0.00188	U	0.00231	U	0.00177	U	0.00184	U	0.00182	U	0.00175	U	0.0034	U	0.00181	U	0.00188	U	0.00185	U	0.00206	U	0.00183	U	0.00276	U	0.00208	U
Endosulfan sulfate	1031-07-8	2.4	1000	4.8	24	200	920		0.00069	U	0.00078	U	0.00096	U	0.00074	U	0.00077	U	0.00076	U	0.00073	U	0.00142	U	0.00075	U	0.00079	U	0.00077	U	0.00086	U	0.00076	U	0.00115	U	0.00087	U
cis-Chlordane	5103-71-9	0.094	2.9	0.91	4.2	24	47		0.00206	U	0.00235	U	0.00289	U	0.00222	U	0.0023	U	0.00228	U	0.00219	U	0.00425	U	0.00226	U	0.00235	U	0.00231	U	0.00258	U	0.00229	U	0.00344	U	0.0026	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
"I" The lower value for the two columns has been reported due to obvious interference.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3F - Pest Herbicide Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	SB-108, 9-13		SB-109, 5-7		SB-109, 10-12		SB-110, 1-5		SB-110, 13-15		SB-111, 1-5		SB-111, 20-30		SB-112, 3-6		SB-112, 6-8		SB-113, 0.5-4		SB-113, 4-5.5		SB-114, 4.5-6		SB-114, 6-8		SB-115, 1-2		SB-115, 10-12	
								SAMPLING DATE	8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/25/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022		8/24/2022	
								LAB SAMPLE ID	L2246346-04		L2246346-05		L2246346-06		L2246346-07		L2246346-08		L2246343-01		L2246343-02		L2246346-01		L2246346-02		L2246030-01		L2246030-02		L2246030-03		L2246030-04		L2246030-05		L2246030-06	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)	9 - 13'		5 - 7'		10 - 12'		1 - 5'		13 - 15'		1 - 5'		20 - 30'		3 - 6'		6 - 8'		0.5 - 4'		4 - 5.5'		4.5 - 6'		6 - 8'		1 - 2'		10 - 12'	
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Chlorinated Herbicides by GC									**Chlorinated Herbicides by GC**																												
2,4,5-TP (Silvex)	93-72-1	3.8	3.8	58	100	500	1000		0.605	U	0.211	U UJ	0.318	U UJ	0.189	U UJ	0.353	U UJ	0.2	U	0.2	U	0.182	U	0.2	U	0.189	U	0.202	U	0.199	U	0.2	U	0.186	U	0.217	U
Organochlorine Pesticides by GC									**Organochlorine Pesticides by GC**																												
Delta-BHC	319-86-8	0.04	0.25	100	100	500	1000		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
Lindane	58-89-9	0.1	0.1	0.28	1.3	9.2	23		0.00241	U	0.00086	U	0.00126	U	0.00077	U	0.00138	U	0.00077	U	0.00079	U	0.00352	U	0.00081	U	0.00077	U	0.00078	U	0.00076	U	0.00081	U	0.00072	U	0.00086	U
Alpha-BHC	319-84-6	0.02	0.02	0.097	0.48	3.4	6.8		0.00241	U	0.00086	U	0.00126	U	0.00077	U	0.00138	U	0.00077	U	0.00079	U	0.00352	U	0.00081	U	0.00077	U	0.00078	U	0.00076	U	0.00081	U	0.00072	U	0.00086	U
Beta-BHC	319-85-7	0.036	0.09	0.072	0.36	3	14		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
Heptachlor	76-44-8	0.042	0.38	0.42	2.1	15	29		0.00289	U	0.00103	U	0.00151	U	0.00092	U	0.00166	U	0.00092	U	0.00095	U	0.00422	U	0.00098	U	0.00092	U	0.00094	U	0.00091	U	0.00097	U	0.00086	U	0.00103	U
Aldrin	309-00-2	0.005	0.19	0.019	0.097	0.68	1.4		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
Endrin	72-20-8	0.014	0.06	2.2	11	89	410		0.00241	U	0.00086	U	0.00126	U	0.00077	U	0.00138	U	0.00077	U	0.00079	U	0.00352	U	0.00081	U	0.00077	U	0.00078	U	0.00076	U	0.00081	U	0.00072	U	0.00086	U
Dieldrin	60-57-1	0.005	0.1	0.039	0.2	1.4	2.8		0.00361	U	0.00129	U	0.00189	U	0.00115	U	0.00207	U	0.00115	U	0.00119	U	***0.0039***	***J*** ***J***	0.00122	U	0.00115	U	0.00117	U	0.00113	U	0.00121	U	***0.0092***		0.00129	U
4,4'-DDE	72-55-9	0.0033	17	1.8	8.9	62	120		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	***0.0136***		0.00207	U
4,4'-DDD	72-54-8	0.0033	14	2.6	13	92	180		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
4,4'-DDT	50-29-3	0.0033	136	1.7	7.9	47	94		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	***0.0209***		0.00207	U
Endosulfan I	959-98-8	2.4	102	4.8	24	200	920		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
Endosulfan II	33213-65-9	2.4	102	4.8	24	200	920		0.00578	U	0.00206	U	0.00303	U	0.00184	U	0.00332	U	0.00184	U	0.0019	U	0.00844	U	0.00195	U	0.00184	U	0.00188	U	0.00181	U	0.00193	U	0.00172	U	0.00207	U
Endosulfan sulfate	1031-07-8	2.4	1000	4.8	24	200	920		0.00241	U	0.00086	U	0.00126	U	0.00077	U	0.00138	U	0.00077	U	0.00079	U	0.00352	U	0.00081	U	0.00077	U	0.00078	U	0.00076	U	0.00081	U	0.00072	U	0.00086	U
cis-Chlordane	5103-71-9	0.094	2.9	0.91	4.2	24	47		0.00723	U	0.00258	U	0.00378	U	0.0023	U	0.00415	U	0.00231	U	0.00237	U	0.0105	U	0.00244	U	0.0023	U	0.00235	U	0.00227	U	0.00242	U	0.00215	U	0.00258	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
"I" The lower value for the two columns has been reported due to obvious interference.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 3F - Pest Herbicide Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3F - Pest Herbicide Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

| | | |

Table 3F - Pest Herbicide Subsurface Soil Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

								LOCATION	DUP-1		DUP-2		DUP-3		DUP-4	
								SAMPLING DATE	8/25/2022		8/25/2022		8/26/2022		8/29/2022	
								LAB SAMPLE ID	L2246343-05		L2246347-03		L2246524-05		L2246814-07	
								SAMPLE TYPE	SOIL		SOIL		SOIL		SOIL	
								SAMPLE DEPTH (ft.)								
Analytes	**CasNum**	**Unrestricted Use SCO**	**Protection of Groundwater**	**Residential Use SCO**	**Restricted Residentail Use SCO**	**Restricted Commercial Use SCO**	**Restricted Industrial Use SCO**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Chlorinated Herbicides by GC									**Chlorinated Herbicides by GC**							
2,4,5-TP (Silvex)	93-72-1	3.8	3.8	58	100	500	1000		0.21	U	0.201	U UJ	0.213	U UJ	0.179	U
Organochlorine Pesticides by GC									**Organochlorine Pesticides by GC**							
Delta-BHC	319-86-8	0.04	0.25	100	100	500	1000		0.00197	U	0.00191	U	0.00204	U	0.00168	U
Lindane	58-89-9	0.1	0.1	0.28	1.3	9.2	23		0.00082	U	0.0008	U	0.00085	U	0.0007	U
Alpha-BHC	319-84-6	0.02	0.02	0.097	0.48	3.4	6.8		0.00082	U	***0.0009***	***IP J***	0.00085	U	0.0007	U
Beta-BHC	319-85-7	0.036	0.09	0.072	0.36	3	14		0.00197	U	0.00191	U	0.00204	U	0.00168	U
Heptachlor	76-44-8	0.042	0.38	0.42	2.1	15	29		0.00099	U	0.00095	U	0.00102	U	0.00084	U
Aldrin	309-00-2	0.005	0.19	0.019	0.097	0.68	1.4		0.00197	U	0.00191	U	0.00204	U	0.00168	U
Endrin	72-20-8	0.014	0.06	2.2	11	89	410		0.00082	U	0.0008	U	0.00085	U	0.0007	U
Dieldrin	60-57-1	0.005	0.1	0.039	0.2	1.4	2.8		0.00123	U	0.00119	U	0.00128	U	0.00105	U
4,4'-DDE	72-55-9	0.0033	17	1.8	8.9	62	120		0.00197	U	0.00191	U	0.00204	U	***0.0082***	
4,4'-DDD	72-54-8	0.0033	14	2.6	13	92	180		0.00197	U	0.00191	U	0.00204	U	0.00168	U
4,4'-DDT	50-29-3	0.0033	136	1.7	7.9	47	94		0.00197	U	0.00191	U	0.00204	U	***0.0067***	***J***
Endosulfan I	959-98-8	2.4	102	4.8	24	200	920		0.00197	U	0.00191	U	0.00204	U	0.00168	U
Endosulfan II	33213-65-9	2.4	102	4.8	24	200	920		0.00197	U	0.00191	U	0.00204	U	0.00168	U
Endosulfan sulfate	1031-07-8	2.4	1000	4.8	24	200	920		0.00082	U	0.0008	U	0.00085	U	0.0007	U
cis-Chlordane	5103-71-9	0.094	2.9	0.91	4.2	24	47		0.00246	U	0.00238	U	0.00256	U	0.0021	U

Notes:
Results and soil cleanup objectives (SCO) in mg/kg
BOLD - Indicates the analyte was detected above the RL.
Analytical data compared to NYSDEC Part 375-6
Highlighted color indicates the respective use SCO(s) exceeded. Use type SCOs are listed from left to right from most restrictive to least restrictive.
Gray highlight indicates the respective analyte's reporting limit is higher than the SCO, the analyte was not detected but could exceed the respective SCO.
Red border indicates the analyte exceeds Protection of Groundwater SCO.
Blank space indicates that a SCO does not exist
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
"I" The lower value for the two columns has been reported due to obvious interference.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4A - VOCs Round I Groudwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

LOCATION			MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108		MW-109		MW-110		MW-111		MW-112		MW-113		MW-114		DUP		TRIP BLANK		TRIP BLANK-02		TRIP BLANK-04		TRIP BLANK-05		TRIP BLANK-06	
SAMPLING DATE			10/4/2022		10/4/2022		10/11/2022		10/7/2022		10/7/2022		10/10/2022		10/11/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022		10/4/2022		10/5/2022		10/7/2022		10/10/2022		10/11/2022	
LAB SAMPLE ID			L2254894-01		L2254894-02		L2256587-02		L2256042-02		L2256042-01		L2256287-02		L2256587-01		L2255644-01		L2255644-02		L2255644-03		L2256287-01		L2255240-03		L2255240-01		L2255240-02		L2256042-03		L2254894-03		L2255240-04		L2256042-04		L2256287-03		L2256587-03	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
GROUNDWATER WELL DEPTH (ft.)			19.59		14.41		13.29		14.32		12.82		34.89		10.32		13.15		12.83		12.97		37.15		13.28		10.09		11.01		DUP Collected at MW-105											
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by GC/MS			**Volatile Organics by GC/MS**																																							
Methylene chloride	75-09-2	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	75-34-3	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U UJ	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	67-66-3	7	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	***1.8***	***J***	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	56-23-5	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Tetrachloroethene	127-18-4	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	107-06-2	0.6	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	71-55-6	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Benzene	71-43-2	1	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	108-88-3	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethylbenzene	100-41-4	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	75-01-4	2	1	U UJ	1	U UJ	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U UJ	1	U	1	U UJ	1	U	1	U UJ	1	U	1	U	1	U	1	U
1,1-Dichloroethene	75-35-4	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	156-60-5	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	79-01-6	5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U UJ	0.5	U	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	3	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	541-73-1	3	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	106-46-7	3	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert butyl ether	1634-04-4	10	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p/m-Xylene	179601-23-1	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
o-Xylene	95-47-6	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,2-Dichloroethene	156-59-2	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U UJ	2.5	U	2.5	U UJ	2.5	U UJ	2.5	U UJ	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Acetone	67-64-1	50	5	U	***1.8***	***J***	5	U	5	U	***6.8***	***JH***	5	U	5	U	***2.2***	***J***	***4.6***	***J JH***	5	U	5	U	5	U	5	U	***3***	***J U***	***6.3***	***JH***	5	U	***2.2***	***J***	***2.4***	***J***	5	U	***2***	***J***
2-Butanone	78-93-3	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
n-Butylbenzene	104-51-8	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	135-98-8	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	98-06-6	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Propylbenzene	103-65-1	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	108-67-8	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	95-63-6	5	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dioxane	123-91-1		250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U UJ	250	U	250	U UJ	250	U UJ
Total TICS			0		0		7.32		0		0		0		0		0		3.24		0		1.13		3.08		0		0		0		0		1.07		1.26		0		1.06	

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4B - SVOC Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101		MW-101 (FILTERED)		MW-102		MW-102 (FILTERED)		MW-103		MW-103 (FILTERED)		MW-104		MW-104 (DISSOLVED)		MW-105		MW-105 (DISSOLVED)		MW-106		MW-106 (FILTERED)		MW-107		MW-107 (FILTERED)		MW-108		MW-108 (FILTERED)	
		SAMPLING DATE	10/4/2022		10/4/2022		10/4/2022		10/4/2022		10/11/2022		10/11/2022		10/7/2022		10/7/2022		10/7/2022		10/7/2022		10/10/2022		10/10/2022		10/11/2022		10/11/2022		10/6/2022		10/6/2022	
		LAB SAMPLE ID	L2254894-01		L2254894-06		L2254894-02		L2254894-07		L2256587-02		L2256587-07		L2256042-02		L2256042-08		L2256042-01		L2256042-07		L2256287-02		L2256287-07		L2256587-01		L2256587-06		L2255644-01		L2255644-07	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.59				14.41				13.29				14.32				12.82				34.89				10.32				13.15			
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
1,4 Dioxane by 8270E-SIM			**1,4 Dioxane by 8270E-SIM**																															
1,4-Dioxane	123-91-1		0.139	U	-	-	0.142	U	-	-	***0.28***		-	-	0.134	U	-	-	0.139	U	-	-	0.144	U	-	-	0.139	U	-	-	***0.0586***	***J***	-	-
Semivolatile Organics by GC/MS-SIM			**Semivolatile Organics by GC/MS-SIM**																															
Acenaphthene	83-32-9	20	0.1	U	0.2	U	0.1	U	0.1	U	***0.07***	***J***	0.1	U	***0.27***		0.1	U	***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.04***	***J***	0.1	U
2-Chloronaphthalene	91-58-7	10	0.2	U	0.4	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Fluoranthene	206-44-0	50	0.1	U	0.2	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	***0.11***	***JH***	0.1	U	***0.1***	***J U***	0.1	U	0.1	U	***0.02***	***J***	0.1	U	***0.05***	***J***	***0.05***	***J U***	0.1	U
Hexachlorobutadiene	87-68-3	0.5	0.5	U	1	U	0.5	U	0.5	U	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U UJ	0.5	U	0.5	U
Naphthalene	91-20-3	10	0.1	U	0.2	U	***0.13***		***0.09***	***J***	0.1	U	0.1	U	***0.61***		0.1	U	0.1	U	0.1	U	***0.12***	***J***	***0.05***	***J U***	***0.08***	***J***	***0.06***	***J JH***	***0.07***	***J***	0.1	U
Benzo(a)anthracene	56-55-3	0.002	***0.03***	***J U***	***0.08***	***J U***	0.1	U	0.1	U	***0.05***	***J U***	0.1	U	***0.06***	***J U***	***0.04***	***J U***	***0.08***	***J U***	***0.04***	***J U***	***0.04***	***J U***	***0.1***	***JH***	0.1	U	***0.07***	***J U***	***0.05***	***J U***	0.1	U
Benzo(a)pyrene	50-32-8	0	***0.02***	***J***	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J U***	0.1	U	***0.04***	***J U***	0.1	U	0.1	U	***0.1***	***J***	0.1	U	***0.02***	***J***	***0.03***	***J***	0.1	U
Benzo(b)fluoranthene	205-99-2	0.002	***0.05***	***J***	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J U***	0.1	U	***0.05***	***J U***	0.1	U	0.1	U	***0.25***		0.1	U	***0.03***	***J***	***0.04***	***J U***	0.1	U
Benzo(k)fluoranthene	207-08-9	0.002	***0.02***	***J***	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J U***	0.1	U	***0.02***	***J U***	0.1	U	0.1	U	***0.08***	***J***	0.1	U	***0.02***	***J***	***0.01***	***J***	0.1	U
Chrysene	218-01-9	0.002	***0.02***	***J***	0.2	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	***0.02***	***J U***	0.1	U	***0.03***	***J U***	0.1	U	0.1	U	***0.1***		0.1	U	***0.03***	***J***	***0.04***	***J***	0.1	U
Acenaphthylene	208-96-8		0.1	U	0.2	U	0.1	U	0.1	U	0.1	U UJ	0.1	U UJ	***0.01***	***J J***	0.1	U UJ	0.1	U UJ	0.1	U UJ	0.1	U UJ	0.1	U UJ	***0.01***	***J J***	***0.02***	***J J***	0.1	U	0.1	U
Anthracene	120-12-7	50	0.1	U	0.2	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	***0.06***	***J***	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	***0.03***	***J***	0.1	U
Benzo(ghi)perylene	191-24-2		***0.04***	***J***	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J U***	0.1	U	***0.03***	***J U***	0.1	U	0.1	U	***0.14***		0.1	U	***0.02***	***J***	***0.03***	***J***	0.1	U
Fluorene	86-73-7	50	0.1	U	0.2	U	0.1	U	0.1	U	***0.05***	***J***	0.1	U	***0.16***		0.1	U	***0.02***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.04***	***J***	***0.02***	***J***	0.1	U
Phenanthrene	85-01-8	50	0.1	U	0.2	U	***0.03***	***J***	0.1	U	***0.1***	***JH***	***0.03***	***J U***	***0.29***	***JH***	0.1	U	***0.1***	***JH***	0.1	U	***0.03***	***J***	0.1	U	0.1	U	***0.08***	***J U***	***0.08***	***J U***	0.1	U
Dibenzo(a,h)anthracene	53-70-3		0.1	U	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.01***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	***0.01***	***J***	0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	***0.04***	***J***	0.2	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J U***	0.1	U	***0.04***	***J U***	0.1	U	0.1	U	***0.17***		0.1	U	***0.03***	***J***	***0.02***	***J***	0.1	U
Pyrene	129-00-0	50	0.1	U	0.2	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	***0.08***	***J U***	0.1	U	***0.08***	***J U***	0.1	U	0.1	U	***0.03***	***J***	0.1	U	***0.04***	***J***	***0.07***	***J***	0.1	U
2-Methylnaphthalene	91-57-6		0.1	U	0.2	U	0.1	U	***0.03***	***J***	***0.03***	***J***	0.1	U	***0.07***	***J***	0.1	U	0.1	U	0.1	U	***0.04***	***J***	0.1	U	***0.04***	***J***	***0.07***	***J***	0.1	U	0.1	U
Pentachlorophenol	87-86-5	2	0.8	U UJ	1.6	U UJ	0.8	U UJ	0.8	U UJ	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	***0.19***	***J JH***	0.8	U	0.8	U
Hexachlorobenzene	118-74-1	0.04	0.8	U	1.6	U	0.8	U	0.8	U	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	***0.02***	***J J***	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U	0.8	U
Hexachloroethane	67-72-1	5	0.8	U	1.6	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Semivolatile Organics by GC/MS			**Semivolatile Organics by GC/MS**																															
Bis(2-chloroethyl)ether	111-44-4	1	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U UJ	2	U UJ	2	U UJ	2	U	2	U UJ	2	U	2	U	2	U	2	U
3,3'-Dichlorobenzidine	91-94-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrotoluene	121-14-2	5	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	606-20-2	5	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ	5	U	5	U
4-Chlorophenyl phenyl ether	7005-72-3		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Bromophenyl phenyl ether	101-55-3		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroisopropyl)ether	108-60-1	5	2	U	2	U	2	U	2	U	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U UJ	2	U	2	U
Bis(2-chloroethoxy)methane	111-91-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	77-47-4	5	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
Isophorone	78-59-1	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
Nitrobenzene	98-95-3	0.4	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U UJ	2	U	2	U	2	U	2	U
NDPA/DPA	86-30-6	50	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Nitrosodi-n-propylamine	621-64-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bis(2-ethylhexyl)phthalate	117-81-7	5	***1.7***	***J***	3	U	3		3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	***3.9***		3	U	3	U	3	U
Butyl benzyl phthalate	85-68-7	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butylphthalate	84-74-2	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octylphthalate	117-84-0	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	84-66-2	50	5	U	5	U	5	U	5	U	5	U	5	U	***0.6***	***J***	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dimethyl phthalate	131-11-3	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Biphenyl	92-52-4		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Chloroaniline	106-47-8	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	88-74-4	5	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ	5	U	5	U
3-Nitroaniline	99-09-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	100-01-6	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	132-64-9		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetophenone	98-86-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	88-06-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
p-Chloro-m-cresol	59-50-7		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2-Chlorophenol	95-57-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2,4-Dichlorophenol	120-83-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	105-67-9	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ	5	U UJ	5	U UJ	5	U	5	U	5	U	5	U	5	U	5	U

Table 4B - SVOC Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101		MW-101 (FILTERED)		MW-102		MW-102 (FILTERED)		MW-103		MW-103 (FILTERED)		MW-104		MW-104 (DISSOLVED)		MW-105		MW-105 (DISSOLVED)		MW-106		MW-106 (FILTERED)		MW-107		MW-107 (FILTERED)		MW-108		MW-108 (FILTERED)	
		SAMPLING DATE	10/4/2022		10/4/2022		10/4/2022		10/4/2022		10/11/2022		10/11/2022		10/7/2022		10/7/2022		10/7/2022		10/7/2022		10/10/2022		10/10/2022		10/11/2022		10/11/2022		10/6/2022		10/6/2022	
		LAB SAMPLE ID	L2254894-01		L2254894-06		L2254894-02		L2254894-07		L2256587-02		L2256587-07		L2256042-02		L2256042-08		L2256042-01		L2256042-07		L2256287-02		L2256287-07		L2256587-01		L2256587-06		L2255644-01		L2255644-07	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.59				14.41				13.29				14.32				12.82				34.89				10.32				13.15			
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
2-Nitrophenol	88-75-5		10	U	10	U	10	U	10	U	10	U UJ	10	U UJ	10	U	10	U	10	U	10	U	10	U	10	U UJ	10	U UJ	10	U UJ	10	U	10	U
4-Nitrophenol	100-02-7		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	2	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-o-cresol	534-52-1		10	U	10	U	10	U	10	U	10	U UJ	10	U UJ	10	U UJ	10	U	10	U	10	U	10	U	10	U	10	U UJ	10	U UJ	10	U	10	U
Phenol	108-95-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ	5	U UJ	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	95-48-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		5	U	5	U	5	U	5	U	5	U	5	U	***0.84***	***J***	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	95-95-4		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbazole	86-74-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Atrazine	1912-24-9	7.5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzaldehyde	100-52-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U	5	U	5	U	5	U
Caprolactam	105-60-2		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,3,4,6-Tetrachlorophenol	58-90-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Total TICs			30.97		87.02		33.38		94.63		111.17		133.91		94.44		168.26		64.39		99.38		22.43		50.03		628.64		101.3		87.33		85.03	

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4B - SVOC Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-109		MW-109 (FILTERED)		MW-110		MW-110 (FILTERED)		MW-111		MW-111 (FILTERED)		MW-112		MW-112 (FILTERED)		MW-113		MW-113 (FILTERED)		MW-114		MW-114 (FILTERED)		DUP		DUP (DISSOLVED)	
		SAMPLING DATE	10/6/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022		10/7/2022	
		LAB SAMPLE ID	L2255644-02		L2255644-08		L2255644-03		L2255644-09		L2256287-01		L2256287-06		L2255240-03		L2255240-09		L2255240-01		L2255240-07		L2255240-02		L2255240-08		L2256042-03		L2256042-09	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	12.83				12.97				37.15				13.28				10.09				11.01				DUP Collected at MW-105			
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
1,4 Dioxane by 8270E-SIM			**1,4 Dioxane by 8270E-SIM**																											
1,4-Dioxane	123-91-1		***0.11***	***J***	-	-	0.139	U	-	-	***0.0427***	***J***	-	-	***1.07***		-	-	0.139	U	-	-	0.139	U	-	-	0.139	U	-	-
Semivolatile Organics by GC/MS-SIM			**Semivolatile Organics by GC/MS-SIM**																											
Acenaphthene	83-32-9	20	***0.04***	***J***	0.1	U	***0.09***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.01***	***J***	***0.23***		0.1	U	***0.04***	***J***	***0.02***	***J***	0.1	U
2-Chloronaphthalene	91-58-7	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	***0.02***	***J***	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Fluoranthene	206-44-0	50	***0.04***	***J U***	0.1	U	***0.08***	***J U***	0.1	U	0.1	U	***0.03***	***J***	***0.05***	***J***	***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.07***	***J U***	0.1	U
Hexachlorobutadiene	87-68-3	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U UJ	0.5	U UJ	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U UJ	0.5	U UJ
Naphthalene	91-20-3	10	***0.06***	***J***	0.1	U	***0.18***		0.1	U	***0.06***	***J U***	0.1	U	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	***0.09***	***J***	***0.12***		0.1	U
Benzo(a)anthracene	56-55-3	0.002	***0.04***	***J U***	***0.02***	***J U***	***0.04***	***J U***	***0.03***	***J U***	***0.04***	***J U***	***0.1***	***J U***	***0.07***	***J U***	***0.13***	***JH***	***0.05***	***J U***	***0.05***	***J U***	***0.05***	***J U***	***0.05***	***J U***	***0.08***	***J U***	***0.05***	***J U***
Benzo(a)pyrene	50-32-8	0	***0.02***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.06***	***J***	***0.03***	***J U***	***0.16***	***JH***	***0.02***	***J U***	0.1	U	0.1	U	0.1	U	***0.05***	***J U***	0.1	U
Benzo(b)fluoranthene	205-99-2	0.002	***0.04***	***J U***	0.1	U	***0.02***	***J U***	***0.01***	***J U***	0.1	U	***0.11***		***0.03***	***J U***	***0.15***	***JH***	***0.02***	***J U***	***0.01***	***J U***	0.1	U	***0.01***	***J U***	***0.07***	***J U***	***0.02***	***J U***
Benzo(k)fluoranthene	207-08-9	0.002	***0.03***	***J***	0.1	U	***0.01***	***J***	0.1	U	0.1	U	***0.04***	***J***	***0.02***	***J U***	***0.05***	***J U***	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J U***	0.1	U
Chrysene	218-01-9	0.002	***0.03***	***J***	0.1	U	***0.02***	***J***	***0.01***	***J***	0.1	U	***0.07***	***J***	***0.03***	***J U***	***0.09***	***J U***	***0.01***	***J U***	0.1	U	0.1	U	0.1	U	***0.04***	***J U***	0.1	U
Acenaphthylene	208-96-8		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U UJ	0.1	U UJ	0.1	U UJ	***0.1***	***J J***	0.1	U UJ	0.1	U UJ	0.1	U UJ	0.1	U UJ	0.1	U UJ	0.1	U UJ
Anthracene	120-12-7	50	***0.03***	***J***	0.1	U	***0.06***	***J***	***0.02***	***J***	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U
Benzo(ghi)perylene	191-24-2		***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.06	J	***0.02***	***J U***	***0.12***	***JH***	***0.02***	***J U***	0.1	U	0.1	U	0.1	U	***0.06***	***J U***	0.1	U
Fluorene	86-73-7	50	***0.02***	***J***	0.1	U	***0.09***	***J***	0.1	U	***0.02***	***J***	0.1	U	***0.02***	***J***	0.1	U	***0.01***	***J***	0.1	U	0.1	U	0.1	U	***0.02***	***J***	***0.01***	***J***
Phenanthrene	85-01-8	50	***0.05***	***J U***	0.1	U	***0.26***	***JH***	0.1	U	***0.03***	***J***	0.1	U	***0.03***	***J***	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	***0.07***	***J U***	0.1	U
Dibenzo(a,h)anthracene	53-70-3		***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.06***	***J***	***0.02***	***J U***	***0.12***	***JH***	***0.01***	***J U***	0.1	U	0.1	U	0.1	U	***0.07***	***J U***	***0.01***	***J U***
Pyrene	129-00-0	50	***0.03***	***J***	0.1	U	***0.07***	***J***	***0.02***	***J***	0.1	U	***0.03***	***J***	***0.07***	***J***	***0.07***	***J***	***0.02***	***J***	0.1	U	***0.03***	***J***	0.1	U	***0.06***	***J U***	0.1	U
2-Methylnaphthalene	91-57-6		***0.03***	***J***	0.1	U	***0.05***	***J***	0.1	U	***0.04***	***J***	0.1	U	***0.03***	***J***	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U
Pentachlorophenol	87-86-5	2	0.8	U	0.8	U	0.8	U	0.8	U	***0.13***	***J***	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	***0.1***	***J***
Hexachlorobenzene	118-74-1	0.04	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	0.8	U UJ	***0.03***	***J J***
Hexachloroethane	67-72-1	5	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Semivolatile Organics by GC/MS			**Semivolatile Organics by GC/MS**																											
Bis(2-chloroethyl)ether	111-44-4	1	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U UJ	2	U UJ
3,3'-Dichlorobenzidine	91-94-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrotoluene	121-14-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	606-20-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	7005-72-3		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Bromophenyl phenyl ether	101-55-3		2	U	2	U	2	U	2	U	2	U UJ	2	U UJ	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroisopropyl)ether	108-60-1	5	2	U	2	U	2	U	2	U	2	U UJ	2	U UJ	2	U	2	U	2	U	2	U	2	U	2	U	2	U UJ	2	U UJ
Bis(2-chloroethoxy)methane	111-91-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	77-47-4	5	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
Isophorone	78-59-1	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	98-95-3	0.4	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
NDPA/DPA	86-30-6	50	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Nitrosodi-n-propylamine	621-64-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bis(2-ethylhexyl)phthalate	117-81-7	5	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U
Butyl benzyl phthalate	85-68-7	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butylphthalate	84-74-2	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octylphthalate	117-84-0	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	84-66-2	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dimethyl phthalate	131-11-3	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Biphenyl	92-52-4		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Chloroaniline	106-47-8	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	88-74-4	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	99-09-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	100-01-6	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	132-64-9		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetophenone	98-86-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	88-06-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
p-Chloro-m-cresol	59-50-7		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2-Chlorophenol	95-57-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2,4-Dichlorophenol	120-83-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	105-67-9	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ

Table 4B - SVOC Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-109		MW-109 (FILTERED)		MW-110		MW-110 (FILTERED)		MW-111		MW-111 (FILTERED)		MW-112		MW-112 (FILTERED)		MW-113		MW-113 (FILTERED)		MW-114		MW-114 (FILTERED)		DUP		DUP (DISSOLVED)	
		SAMPLING DATE	10/6/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022		10/7/2022	
		LAB SAMPLE ID	L2255644-02		L2255644-08		L2255644-03		L2255644-09		L2256287-01		L2256287-06		L2255240-03		L2255240-09		L2255240-01		L2255240-07		L2255240-02		L2255240-08		L2256042-03		L2256042-09	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	12.83				12.97				37.15						13.28		10.09				11.01				DUP Collected at MW-105			
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
2-Nitrophenol	88-75-5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitrophenol	100-02-7		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	2	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-o-cresol	534-52-1		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Phenol	108-95-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U UJ	5	U UJ
2-Methylphenol	95-48-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	***0.7***	***J***	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	95-95-4		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbazole	86-74-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Atrazine	1912-24-9	7.5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzaldehyde	100-52-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Caprolactam	105-60-2		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,3,4,6-Tetrachlorophenol	58-90-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Total TICs			103.01		202.39		171.38		149.76		29.09		116.12		90.76		92.47		39.41		213.28		48.43		74.29		103.15		154.96	

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4C - Metals Round I Groundwater Data Summary
Remedial Investigation
Urband Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108		MW-109		MW-110		MW-111		MW-112		MW-113		MW-114		DUP	
		SAMPLING DATE	10/4/2022		10/4/2022		10/11/2022		10/7/2022		10/7/2022		10/10/2022		10/11/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022	
		LAB SAMPLE ID	L2254894-01		L2254894-02		L2256587-02		L2256042-02		L2256042-01		L2256287-02		L2256587-01		L2255644-01		L2255644-02		L2255644-03		L2256287-01		L2255240-03		L2255240-01		L2255240-02		L2256042-03	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.59		14.41		13.29		14.32		12.82		34.89		10.32		13.15		12.83		12.97		37.15		13.28		10.09		11.01		DUP Collected at MW-105	
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Dissolved Metals			**Dissolved Metals**																													
Aluminum, Dissolved	7429-90-5	2000	10	U	***4.32***	***J***	***8.12***	***J***	***3.86***	***J***	***8.35***	***J***	100	U	***5.54***	***J***	***3.57***	***J***	***4.82***	***J***	***7.72***	***J***	100	U	***5.57***	***J***	***4.41***	***J***	***4.35***	***J***	***7.14***	***J***
Antimony, Dissolved	7440-36-0	6	4	U	4	U	4	U	4	U	4	U	40	U	4	U	4	U	4	U	4	U	40	U	4	U	4	U	4	U	4	U
Arsenic, Dissolved	7440-38-2	50	***0.41***	***J***	***4.31***		***6.95***		***1.9***		***1.91***		***3.25***	***J***	***6.97***		***7.27***		***1.8***		***5.84***		***8.43***		***1.62***		0.5	U	***0.47***	***J***	***1.77***	
Barium, Dissolved	7440-39-3	2000	***108.6***		***85.96***		***261.8***	***JH***	***65.56***		***20.42***		***33.22***	***JH***	***94.78***	***JH***	***80.43***		***844.9***		***269.1***		***22.53***	***JH***	***40.12***		***210.3***		***59.02***		***18.09***	
Beryllium, Dissolved	7440-41-7	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	5	U	0.5	U	0.5	U	0.5	U	0.5	U	5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cadmium, Dissolved	7440-43-9	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U	2	U	0.2	U	0.2	U	0.2	U	0.2	U
Calcium, Dissolved	7440-70-2		***135000***	***JH***	***97600***	***JH***	***104000***		***117000***		***59200***		***752000***		***118000***		***151000***		***195000***		***144000***		***547000***		***668000***		***169000***	***JH***	***104000***	***JH***	***54700***	
Chromium, Dissolved	7440-47-3	100	***0.9***	***J***	***0.19***	***J***	***0.39***	***J***	***0.41***	***J U***	***0.59***	***J U***	10	U UJ	***0.43***	***J***	***0.7***	***J***	***0.23***	***J***	***0.61***	***J***	10	U	***0.23***	***J***	***0.18***	***J***	***0.26***	***J***	***0.37***	***J U***
Cobalt, Dissolved	7440-48-4		***0.23***	***J***	***1.81***		***0.78***		***0.31***	***J***	0.5	U	5	U	***0.86***		0.5	U	***0.3***	***J***	***0.72***		5	U	***1.43***		***1.16***		***0.71***		0.5	U
Copper, Dissolved	7440-50-8	1000	***1.15***	***JH***	***0.56***	***J U***	***0.92***	***J***	1	U	1	U	10	U	1	U	1	U	1	U	***0.59***	***J***	10	U	***0.65***	***J U***	***0.55***	***J U***	***0.59***	***J U***	1	U
Iron, Dissolved	7439-89-6	600	50	U	50	U	***45200***	***JH***	***6360***	***JH***	***1420***	***JH***	***3570***	***JH***	***7780***	***JH***	***9270***	***JH***	***15100***	***JH***	***3470***	***JH***	***3250***	***JH***	***29400***		50	U	50	U	***1330***	***JH***
Lead, Dissolved	7439-92-1	50	1	U	1	U	1	U	1	U	1	U	10	U	1	U	1	U	1	U	1	U	10	U	1	U	1	U	1	U	1	U
Magnesium, Dissolved	7439-95-4	35000	***36600***		***25800***		***17400***		***18300***		***8890***		***99400***		***19400***		***11800***		***29900***		***17400***		***63200***		***147000***		***31000***		***26900***		***8560***	
Manganese, Dissolved	7439-96-5	600	***63.95***		***385***		***1228***		***2034***		***23.64***		***357.4***	***J***	***774***		***464.4***		***1260***		***1136***		235.2		***1499***		***1918***		***620.2***		***21.15***	
Mercury, Dissolved	7439-97-6	1.4	0.2	U	0.2	U	0.2	U	***0.19***	***J***	***0.42***		1	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	***0.14***	***J***
Nickel, Dissolved	7440-02-0	200	***0.55***	***J U***	***1.57***	***J U***	2	U	2	U	2	U	20	U	2	U	2	U	***0.59***	***J***	***1.43***	***J***	20	U	***1.74***	***J U***	***1.94***	***J U***	***1.39***	***J U***	2	U
Potassium, Dissolved	7440-09-7		***4750***	***JH***	***6710***	***JH***	***35300***		***65200***		***10800***		***42500***		***6910***		***5100***		***14800***		***8830***		***33400***		***31600***	***JH***	***4460***	***JH***	***4580***	***JH***	***9970***	
Selenium, Dissolved	7782-49-2	20	5	U	5	U	5	U	5	U	5	U	50	U	5	U	5	U	5	U	5	U	50	U	5	U	5	U	5	U	5	U
Silver, Dissolved	7440-22-4	100	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	4	U	0.4	U	0.4	U	0.4	U	0.4	U	4	U	0.4	U	0.4	U	0.4	U	0.4	U
Sodium, Dissolved	7440-23-5		***589000***		***246000***		***589000***		***269000***		***1150000***	***JH***	***9080000***	***JH***	***140000***		***59000***		***1970000***		***756000***		***6670000***		***197000***		***214000***		***233000***		***1300000***	
Thallium, Dissolved	7440-28-0	0.5	1	U	1	U	2	U	2	U	2	U	3.64	J U	2	U	1	U	1	U	1	U	10	U	1	U	1	U	1	U	2	U
Vanadium, Dissolved	7440-62-2		5	U	***1.8***	***J***	5	U	5	U	5	U	50	U UJ	5	U	5	U	5	U	***1.71***	***J***	50	U	5	U	5	U	5	U	5	U
Zinc, Dissolved	7440-66-6	5000	10	U	10	U	10	U	10	U	10	U	100	U UJ	10	U	10	U	10	U	10	U	100	U	***7.37***	***J***	10	U	10	U	10	U
Total Metals			**Total Metals**																													
Aluminum, Total	7429-90-5	2000	***136***	***JH***	***3450***	***JH***	***42.8***		***35.1***		***193***		200	U	***14.3***		***37.2***		***39.8***	***J***	***39.9***	***J***	***87***	***J***	***17.8***		***206***		***2780***		***169***	
Antimony, Total	7440-36-0	6	4	U	4	U	4	U	***0.53***	***J U***	4	U	80	U	4	U	4	U	4	U	4	U	80	U	4	U	4	U	4	U	4	U
Arsenic, Total	7440-38-2	50	***2.39***	***JH***	***10.22***	***JH***	***7.01***		***2.08***		***2.17***		10	U	***7.09***		***8.34***		***2.06***		***6.46***		***9.09***	***J***	***1.24***		***0.5***		***2.69***		***2.13***	
Barium, Total	7440-39-3	2000	***119.3***		***158.8***		***270.8***		***66.54***		***25.27***		***25.46***		***99***		***80.92***		***767.8***		***274.7***		***20.48***		***44.29***		***217***		***89.11***		***24.31***	
Beryllium, Total	7440-41-7	3	0.5	U	***0.18***	***J***	0.5	U	0.5	U	0.5	U	10	U	0.5	U	0.5	U	0.5	U	0.5	U	10	U	0.5	U	0.5	U	***0.14***	***J***	0.5	U
Cadmium, Total	7440-43-9	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	4	U	0.2	U	0.2	U	0.2	U	0.2	U	4	U	***0.11***	***J***	0.2	U	0.2	U	0.2	U
Calcium, Total	7440-70-2		***86000***		***92400***		***114000***		***125000***		***55500***		***734000***	***J***	***123000***		***167000***		***208000***		***161000***		***549000***		***665000***		***165000***		***106000***		***53600***	
Chromium, Total	7440-47-3	100	***0.67***	***J***	***4.13***		***0.45***	***J***	***0.4***	***J***	***0.7***	***J***	20	U	***0.3***	***J***	***0.48***	***J***	***0.32***	***J***	***0.66***	***J***	20	U	***0.28***	***J***	***0.39***	***J***	***4.1***		***0.53***	***J***
Cobalt, Total	7440-48-4		***0.29***	***J***	***6.9***		***0.92***		***0.35***	***J***	***0.23***	***J***	10	U	***0.85***		0.5	U	***0.36***	***J***	***0.78***		10	U	***1.8***		***1.36***		***3.84***		***0.21***	***J***
Copper, Total	7440-50-8	1000	***0.98***	***J***	***27.18***		***0.57***	***J***	***1.29***		***0.77***	***J***	20	U	***1.57***		***0.67***	***J***	1	U	***1.97***		20	U	***1.7***		***1.27***		***12.3***		***0.62***	***J***
Iron, Total	7439-89-6	600	***362***	***JH***	***7460***	***JH***	***51100***	***JH***	***6600***	***JH***	***1900***	***JH***	***3400***	***J***	***7940***	***JH***	***10300***	***JH***	***20300***	***JH***	***4550***	***JH***	***3600***	***JH***	***15100***	***JH***	***408***	***JH***	***5740***	***JH***	***1830***	***JH***
Lead, Total	7439-92-1	50	1	U	***3.9***		10	U	***1.76***		1	U	20	U	***0.66***	***J***	1	U	1	U	***1.75***		20	U	1	U	***0.68***	***J***	***5.18***		1	U
Magnesium, Total	7439-95-4	35000	***33600***		***34200***		***18500***		***20100***		***10300***		***92500***	***JL***	***20500***		***13600***		***35200***		***21400***		***63500***		***106000***		***30500***		***32000***		***10300***	
Manganese, Total	7439-96-5	600	***40.65***		***784.3***		***1323***		***2085***		***39.28***		***357.8***	***JH***	***818.4***		***562.6***	***JH***	***1834***	***JH***	***1567***	***JH***	***268.6***	***JH***	***1502***		***1943***		***749.6***		***37.78***	
Mercury, Total	7439-97-6	1.4	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	5	U	0.2	U	0.2	U	***0.13***	***J***	***0.14***	***J***	5	U	0.2	U	0.2	U	0.2	U	0.2	U
Nickel, Total	7440-02-0	200	***0.59***	***J***	***8.97***		2	U	2	U	***1.65***	***J***	40	U	2	U	***0.89***	***J***	2	U	***1.47***	***J***	40	U	***2.49***		***2.28***		***8.12***		***0.66***	***J***
Potassium, Total	7440-09-7		***4530***	***JH***	***7100***	***JH***	***38100***		***67700***		***11200***		***39300***	***JL***	***6940***		***5330***	***JH***	***17200***	***JH***	***11000***	***JH***	***34300***		***37700***		***4520***		***5310***		***10900***	
Selenium, Total	7782-49-2	20	5	U	5	U	5	U	5	U	5	U	100	U	5	U	5	U	5	U	5	U	100	U	5	U	5	U	5	U	5	U
Silver, Total	7440-22-4	100	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	8	U	0.4	U	0.4	U	0.4	U	0.4	U	8	U	0.4	U	0.4	U	0.4	U	0.4	U
Sodium, Total	7440-23-5		***494000***	***JH***	***225000***		***652000***		***283000***		***1420000***		***7700000***	***JH***	***144000***		***52800***		***1800000***		***849000***		***6290000***	***JH***	***156000***		***156000***		***222000***		***1370000***	
Thallium, Total	7440-28-0	0.5	1	U	1	U	20	U	1	U	1	U	20	U	2	U	1	U	1	U	1	U	20	U	1	U	1	U	1	U	1	U
Vanadium, Total	7440-62-2		5	U	5	U	5	U	5	U	5	U	100	U	5	U	5	U	5	U	***2.02***	***J***	100	U	5	U	5	U	***5.62***		5	U
Zinc, Total	7440-66-6	5000	10	U	***30.27***		10	U	***4.68***	***J***	10	U	200	U	10	U	***4.37***	***J***	10	U	10	U	200	U	***13.53***		***8.03***	***J***	***12.4***		10	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4D - PCBs Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, New York

		LOCATION	MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108		MW-109		MW-110		MW-111		MW-112		MW-113		MW-114		DUP	
		SAMPLING DATE	10/4/2022		10/4/2022		10/11/2022		10/7/2022		10/7/2022		10/10/2022		10/11/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022	
		LAB SAMPLE ID	L2254894-01		L2254894-02		L2256587-02		L2256042-02		L2256042-01		L2256287-02		L2256587-01		L2255644-01		L2255644-02		L2255644-03		L2256287-01		L2255240-03		L2255240-01		L2255240-02		L2256042-03	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.59		14.41		13.29		14.32		12.82		34.89		10.32		13.15		12.83		12.97		37.15		13.28		10.09		11.01		DUP Collected at MW-105	
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Polychlorinated Biphenyls by GC			**Polychlorinated Biphenyls by GC**																													
Aroclor 1016	12674-11-2	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U UJ	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1221	11104-28-2	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1232	11141-16-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1242	53469-21-9	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1248	12672-29-6	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1254	11097-69-1	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1260	11096-82-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1262	37324-23-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1268	11100-14-4	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
PCBs, Total	1336-36-3		0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4E - PFAS Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108		MW-109		MW-110		MW-111		MW-112		MW-113		MW-114		DUP	
			SAMPLING DATE	10/4/2022		10/4/2022		10/11/2022		10/7/2022		10/7/2022		10/10/2022		10/11/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022	
			LAB SAMPLE ID	L2254894-01		L2254894-02		L2256587-02		L2256042-02		L2256042-01		L2256287-02		L2256587-01		L2255644-01		L2255644-02		L2255644-03		L2256287-01		L2255240-03		L2255240-01		L2255240-02		L2256042-03	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.59		14.41		13.29		14.32		12.82		34.89		10.32		13.15		12.83		12.97		37.15		13.28		10.09		11.01		DUP Collected at MW-105	
Analytes	**CasNum**	**NY-SAA-PFAS**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Perfluorinated Alkyl Acids by Isotope Dilution				**Perfluorinated Alkyl Acids by Isotope Dilution**																													
Perfluorobutanoic Acid (PFBA)	375-22-4			***0.00305***	***JH***	***0.00422***	***JH***	***0.0065***		***0.00512***		***0.00144***	***J***	0.00174	U	***0.00687***		***0.00633***		***0.0166***		***0.0093***		0.00181	U	***0.614***	***JH***	***0.0064***	***JH***	***0.0058***	***JH***	***0.00137***	***J***
Perfluoropentanoic Acid (PFPeA)	2706-90-3			0.00175	U	***0.00111***	***J***	***0.0031***		***0.00264***		***0.00085***	***J***	0.00174	U	***0.00422***		***0.00164***	***J***	***0.00588***		***0.0024***		0.00181	U	***0.00285***		***0.0007***	***J***	***0.0029***		***0.00087***	***J***
Perfluorobutanesulfonic Acid (PFBS)	375-73-5			***0.00093***	***J***	***0.00104***	***J***	0.00179	U	***0.00066***	***J***	0.0018	U	0.00174	U	***0.00286***		***0.00102***	***J***	***0.0014***	***J***	***0.0014***	***J***	0.00181	U	***0.00089***	***JF***	***0.00107***	***J***	***0.0011***	***J***	0.00178	U
Perfluorohexanoic Acid (PFHxA)	307-24-4			0.00175	U	***0.00077***	***J***	***0.0028***		***0.001***	***J U***	0.0018	U	0.00174	U	***0.00301***		***0.00146***	***J***	***0.00482***		***0.0015***	***J***	0.00181	U	***0.00139***	***J U***	***0.00091***	***J U***	***0.0024***	***JH***	0.00178	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9			0.00175	U	***0.0006***	***J***	***0.0018***		***0.00073***	***J***	***0.00023***	***J***	0.00174	U	***0.00232***		***0.00131***	***J***	***0.00374***		***0.0013***	***J***	0.00181	U	***0.00109***	***J U***	***0.00081***	***J U***	***0.0019***	***JH***	***0.00023***	***J***
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4			***0.000444***	***J J***	0.00176	U	***0.0014***	***J***	0.00177	U	0.0018	U	0.00174	U	***0.00267***		***0.00285***		***0.00269***	***F J***	***0.0011***	***J***	0.00181	U	0.00177	U	***0.0028***		***0.0017***	***J***	0.00178	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067		***0.000318***	***J***	***0.00101***	***J***	***0.0027***		***0.00099***	***J U***	0.0018	U	0.00174	U	***0.00327***		***0.00278***		***0.0053***		***0.0021***		0.00181	U UJ	***0.0019***	***JH***	***0.00502***	***JH***	***0.0038***	***JH***	0.00178	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2			0.00175	U	***0.00234***	***JH***	***0.0098***	***JH***	***0.00171***	***JF J***	***0.00225***	***J***	0.00174	U	***0.00978***	***JH***	***0.0017***	***J J***	***0.0022***	***J***	***0.002***	***J***	0.00181	U	***0.00442***	***JH***	***0.00534***	***JH***	***0.0016***	***JF U***	***0.00184***	***F J***
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U	0.00177	U	0.0018	U	0.00177	U	0.00178	U
Perfluorononanoic Acid (PFNA)	375-95-1			0.00175	U	***0.00039***	***J***	***0.0016***	***J***	***0.00041***	***J***	0.0018	U	0.00174	U	***0.00053***	***J***	***0.00035***	***J***	***0.00062***	***J***	0.00176	U	0.00181	U	0.00177	U	***0.00036***	***J***	0.00177	U	0.00178	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027		0.00175	U UJ	***0.00108***	***JF J***	***0.0035***	***J***	***0.00403***		0.0018	U	0.00174	U	***0.00626***	***J***	***0.00277***	***J***	***0.00474***		***0.0022***	***J***	0.00181	U	0.00177	U	***0.00879***		***0.0064***		0.00178	U
Perfluorodecanoic Acid (PFDA)	335-76-2			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U	0.00177	U	0.0018	U	0.00177	U	0.00178	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4			0.00175	U	0.00176	U UJ	0.00179	U UJ	0.00177	U UJ	0.0018	U	0.00174	U UJ	0.00179	U UJ	0.00179	U UJ	0.00181	U	0.00176	U UJ	0.00181	U UJ	0.00177	U UJ	0.0018	U UJ	0.00177	U UJ	0.00178	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9			0.00175	U UJ	0.00176	U UJ	0.00179	U UJ	0.00177	U	0.0018	U	0.00174	U UJ	0.00179	U UJ	0.00179	U UJ	0.00181	U	0.00176	U UJ	0.00181	U UJ	0.00177	U UJ	0.0018	U UJ	0.00177	U UJ	0.00178	U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U	0.00177	U	0.0018	U	0.00177	U	0.00178	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U UJ	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U UJ	0.00177	U	0.0018	U	0.00177	U	0.00178	U
Perfluorooctanesulfonamide (FOSA)	754-91-6			0.00175	U	0.00176	U	0.00179	U UJ	0.00177	U UJ	0.0018	U UJ	0.00174	U UJ	0.00179	U UJ	0.00179	U UJ	0.00181	U UJ	0.00176	U UJ	0.00181	U UJ	0.00177	U UJ	0.0018	U UJ	0.00177	U UJ	0.00178	U UJ
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6			0.00175	U UJ	0.00176	U UJ	0.00179	U UJ	0.00177	U	0.0018	U	0.00174	U UJ	0.00179	U UJ	0.00179	U UJ	0.00181	U	0.00176	U UJ	0.00181	U UJ	0.00177	U UJ	0.0018	U UJ	0.00177	U UJ	0.00178	U
Perfluorododecanoic Acid (PFDoA)	307-55-1			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U	0.00177	U	0.0018	U	0.00177	U	0.00178	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U UJ	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U UJ	0.00177	U	0.0018	U	0.00177	U	0.00178	U
Perfluorotetradecanoic Acid (PFTA)	376-06-7			0.00175	U	0.00176	U	0.00179	U	0.00177	U	0.0018	U	0.00174	U UJ	0.00179	U	0.00179	U	0.00181	U	0.00176	U	0.00181	U UJ	0.00177	U	0.0018	U	0.00177	U	0.00178	U
PFOA/PFOS, Total	null			***0.000318***	***J***	***0.00209***	***J***	***0.0063***		***0.00502***	***J***	0.0018	U	0.00174	U	***0.00953***		***0.00555***		***0.01***		***0.0042***		0.00181	U	***0.0019***		***0.0138***		***0.0102***		0.00178	U

Notes:
Results and SAA guidance values reported in ug/l.
Orange highlighted indicates the respective SAA exceeded.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4E - PFAS Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

LOCATION			POTABLE WATER		EQUIPMENT BLANK-01		EQUIPMENT BLANK-02		EQUIPMENT BLANK-03		EQUIPMENT BLANK-04		EQUIPMENT BLANK-05		EQUIPMENT BLANK-06		FIELD BLANK-01		FIELD BLANK-02		FIELD BLANK-03		FIELD BLANK-04		FIELD BLANK-05		FIELD BLANK-06	
SAMPLING DATE			11/30/2022		10/4/2022		10/5/2022		10/6/2022		10/7/2022		10/10/2022		10/11/2022		10/4/2022		10/5/2022		10/6/2022		10/7/2022		10/10/2022		10/11/2022	
LAB SAMPLE ID			L2267172-05		L2254894-05		L2255240-06		L2255644-06		L2256042-06		L2256287-05		L2256587-05		L2254894-04		L2255240-05		L2255644-05		L2256042-05		L2256287-04		L2256587-04	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
GROUNDWATER WELL DEPTH (ft.)			Collected during Round II																									
Analytes	**CasNum**	**NY-SAA-PFAS**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Perfluorinated Alkyl Acids by Isotope Dilution			**Perfluorinated Alkyl Acids by Isotope Dilution**																									
Perfluorobutanoic Acid (PFBA)	375-22-4		***0.00162***	***J***	***0.0005***	***J***	***0.0647***		0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluoropentanoic Acid (PFPeA)	2706-90-3		***0.000563***	***J***	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	***0.0011***	***J***	0.00176	U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5		***0.000316***	***J***	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorohexanoic Acid (PFHxA)	307-24-4		***0.000563***	***J***	0.00174	U	***0.0003***	***J***	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	***0.0003***	***J***	0.00192	U	0.00176	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9		***0.000492***	***J***	0.00174	U	***0.0002***	***J***	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067	***0.000809***	***J***	0.00174	U	***0.0003***	***J***	0.00174	U	***0.0003***	***J***	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2		***0.00257***		***0.0018***		0.00192	U	0.00174	U	0.00185	U	0.00177	U	***0.0018***		0.00193	U	***0.0013***	***J***	0.00184	U	0.00194	U	0.00192	U	***0.0025***	
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorononanoic Acid (PFNA)	375-95-1		***0.000281***	***J***	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027	***0.000985***	***JF***	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U UJ	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorodecanoic Acid (PFDA)	335-76-2		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4		0.00176	U	0.00174	U UJ	0.00192	U UJ	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U UJ	0.00193	U UJ	0.00183	U UJ	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U UJ
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9		0.00176	U	0.00174	U UJ	0.00192	U UJ	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U UJ	0.00193	U UJ	0.00183	U UJ	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U
Perfluorooctanesulfonamide (FOSA)	754-91-6		0.00176	U	0.00174	U	0.00192	U UJ	0.00174	U	0.00185	U UJ	0.00177	U UJ	0.00174	U UJ	0.00193	U UJ	0.00183	U UJ	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6		0.00176	U	0.00174	U UJ	0.00192	U UJ	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U UJ	0.00193	U UJ	0.00183	U UJ	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U UJ
Perfluorododecanoic Acid (PFDoA)	307-55-1		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U
Perfluorotetradecanoic Acid (PFTA)	376-06-7		0.00176	U	0.00174	U	0.00192	U	0.00174	U	0.00185	U	0.00177	U UJ	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U UJ	0.00176	U
PFOA/PFOS, Total	null		***0.00179***	***J***	0.00174	U	***0.0003***	***J***	0.00174	U	***0.0003***	***J***	0.00177	U	0.00174	U	0.00193	U	0.00183	U	0.00184	U	0.00194	U	0.00192	U	0.00176	U

Notes:
Results and SAA guidance values reported in ug/l.
Orange highlighted indicates the respective SAA exceeded.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4F - Pest and Herbs Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108		MW-109		MW-110		MW-111		MW-112		MW-113		MW-114		DUP	
			SAMPLING DATE	10/4/2022		10/4/2022		10/11/2022		10/7/2022		10/7/2022		10/10/2022		10/11/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022	
			LAB SAMPLE ID	L2254894-01		L2254894-02		L2256587-02		L2256042-02		L2256042-01		L2256287-02		L2256587-01		L2255644-01		L2255644-02		L2255644-03		L2256287-01		L2255240-03		L2255240-01		L2255240-02		L2256042-03	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.59		14.41		13.29		14.32		12.82		34.89		10.32		13.15		12.83		12.97		37.15		13.28		10.09		11.01		DUP Collected at MW-105	
Analytes	**CasNum**	**TOGS-GA**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Chlorinated Herbicides by GC																		**Chlorinated Herbicides by GC**													
2,4,5-TP (Silvex)	93-72-1	0.26		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Organochlorine Pesticides by GC																		**Organochlorine Pesticides by GC**													
Delta-BHC	319-86-8	0.04		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Lindane	58-89-9	0.05		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Alpha-BHC	319-84-6	0.01		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Beta-BHC	319-85-7	0.04		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Heptachlor	76-44-8	0.04		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Aldrin	309-00-2	0		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Endrin	72-20-8	0		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Dieldrin	60-57-1	0.004		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	***0.029***	***J*** ***J***	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDE	72-55-9	0.2		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	***0.013***	***J***	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDD	72-54-8	0.3		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	***0.053***		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDT	50-29-3	0.2		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	***0.018***	***J***	***0.006***	***J*** ***J***	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endosulfan I	959-98-8			0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Endosulfan II	33213-65-9			0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endosulfan sulfate	1031-07-8			0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
cis-Chlordane	5103-71-9			0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	***0.029***	***IP*** ***J***	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Blue highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4G - General Chem Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101		MW-101 (FILTERED)		MW-102		MW-102 (FILTERED)		MW-103		MW-103 (FILTERED)		MW-104		MW-104 (DISSOLVED)		MW-105		MW-105 (DISSOLVED)		MW-106		MW-106 (FILTERED)		MW-107		MW-107 (FILTERED)		MW-108		MW-108 (FILTERED)	
		SAMPLING DATE	10/4/2022		10/4/2022		10/4/2022		10/4/2022		10/11/2022		10/11/2022		10/7/2022		10/7/2022		10/7/2022		10/7/2022		10/10/2022		10/10/2022		10/11/2022		10/11/2022		10/6/2022		10/6/2022	
		LAB SAMPLE ID	L2254894-01		L2254894-06		L2254894-02		L2254894-07		L2256587-02		L2256587-07		L2256042-02		L2256042-08		L2256042-01		L2256042-07		L2256287-02		L2256287-07		L2256587-01		L2256587-06		L2255644-01		L2255644-07	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.59				14.41				13.29				14.32				12.82				34.89				10.32				13.15			
Analytes	**CasNum**	**TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
General Chemistry			**General Chemistry**																															
Chromium, Trivalent	16065-83-1	50	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	20	U	-	-	10	U	-	-	10	U	-	-
Cyanide, Total	57-12-5	400	5	U	-	-	5	U	-	-	***2***	***J***	-	-	***2***	***J***	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-
Chromium, Hexavalent	18540-29-9	50	10	U	10	U	10	U	10	U	10	U	10	U	***7***	***J***	10	U	***4***	***J***	3	J	10	U	10	U	10	U	10	U	10	U	10	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 4G - General Chem Round I Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-109		MW-109 (FILTERED)		MW-110		MW-110 (FILTERED)		MW-111		MW-111 (FILTERED)		MW-112		MW-112 (FILTERED)		MW-113		MW-113 (FILTERED)		MW-114		MW-114 (FILTERED)		DUP		DUP (DISSOLVED)	
			SAMPLING DATE	10/6/2022		10/6/2022		10/6/2022		10/6/2022		10/10/2022		10/10/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/5/2022		10/7/2022		10/7/2022	
			LAB SAMPLE ID	L2255644-02		L2255644-08		L2255644-03		L2255644-09		L2256287-01		L2256287-06		L2255240-03		L2255240-09		L2255240-01		L2255240-07		L2255240-02		L2255240-08		L2256042-03		L2256042-09	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	12.83				12.97				37.15				13.28				10.09				11.01				DUP Collected at MW-105			
Analytes	**CasNum**	**TOGS-GA**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
General Chemistry				General Chemistry																											
Chromium, Trivalent	16065-83-1	50		10	U	-	-	10	U	-	-	20	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-
Cyanide, Total	57-12-5	400		5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	***2***	***J***	-	-	5	U	-	-
Chromium, Hexavalent	18540-29-9	50		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	***9***	***J***	10	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5A - VOC Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101 (ROUND 2)		MW-102 (ROUND 2)		MW-103 (ROUND 2)		MW-104 (ROUND 2)		MW-105 (ROUND 2)		MW-106 (ROUND 2)		MW-107 (ROUND 2)		MW-108 (ROUND 2)		MW-109 (ROUND 2)		MW-110 (ROUND 2)		MW-111 (ROUND 2)		MW-112 (ROUND 2)		MW-113 (ROUND 2)		MW-114 (ROUND 2)		TRIP BLANK-01 ROUND 2		TRIP BLANK-02 ROUND 2		TRIP BLANK-03 ROUND 2		TRIP BLANK-04 ROUND 2		DUPLICATE	
			SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		12/1/2022		11/30/2022		12/2/2022		12/2/2022		12/1/2022		11/29/2022		11/29/2022		12/1/2022		12/2/2022		11/29/2022		11/29/2022		11/29/2022		11/30/2022		12/1/2022		12/2/2022		12/1/2022	
			LAB SAMPLE ID	L2267172-01		L2267172-02		L2267172-03		L2267552-01		L2267172-04		L2267896-01		L2267896-03		L2267552-03		L2266830-01		L2266830-02		L2267552-02		L2267896-05		L2266830-03		L2266830-04		L2266830-05		L2267172-06		L2267552-05		L2267896-07		L2267552-04	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.46		14.12		13.15		13.94		12.84		34.95		11.42		13.05		13.10		13.00		37.12		13.31		10.18		11.06										DUP Collected at MW-106	
Analytes	**CasNum**	**NY-TOGS-GA**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Volatile Organics by GC/MS				**Volatile Organics by GC/MS**																																			
Methylene chloride	75-09-2	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethane	75-34-3	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloroform	67-66-3	7		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	***1***	***J***	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Carbon tetrachloride	56-23-5	5		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichloropropane	78-87-5	1		1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Dibromochloromethane	124-48-1	50		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,2-Trichloroethane	79-00-5	1		1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U	1.5	U
Tetrachloroethene	127-18-4	5		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Chlorobenzene	108-90-7	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichlorofluoromethane	75-69-4	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dichloroethane	107-06-2	0.6		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,1,1-Trichloroethane	71-55-6	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromodichloromethane	75-27-4	50		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,3-Dichloropropene	10061-02-6	0.4		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
cis-1,3-Dichloropropene	10061-01-5	0.4		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Bromoform	75-25-2	50		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,1,2,2-Tetrachloroethane	79-34-5	5		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Benzene	71-43-2	1		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Toluene	108-88-3	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Ethylbenzene	100-41-4	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Chloromethane	74-87-3			2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Bromomethane	74-83-9	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Vinyl chloride	75-01-4	2		1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Chloroethane	75-00-3	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,1-Dichloroethene	75-35-4	5		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
trans-1,2-Dichloroethene	156-60-5	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Trichloroethene	79-01-6	5		0.5	U	0.21	J	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
1,2-Dichlorobenzene	95-50-1	3		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3-Dichlorobenzene	541-73-1	3		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,4-Dichlorobenzene	106-46-7	3		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl tert butyl ether	1634-04-4	10		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p/m-Xylene	179601-23-1	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
o-Xylene	95-47-6	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
cis-1,2-Dichloroethene	156-59-2	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Styrene	100-42-5	930		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Dichlorodifluoromethane	75-71-8	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Acetone	67-64-1	50		5	U	2.3	J	5	U	5	U	5	U	5	U	5	U	5	U	***5***	U	5	U	5	U	***1.8***	***J***	5	U	***1.9***	***J***	5	U	5	U	***3.9***	***J***	***3.4***	***J***	5	U
Carbon disulfide	75-15-0	60		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Butanone	78-93-3	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-pentanone	108-10-1			5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Hexanone	591-78-6	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	106-93-4	0.0006		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Butylbenzene	104-51-8	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
sec-Butylbenzene	135-98-8	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
tert-Butylbenzene	98-06-6	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2-Dibromo-3-chloropropane	96-12-8	0.04		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Isopropylbenzene	98-82-8	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
p-Isopropyltoluene	99-87-6	5		2.5	U	1.4	J	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	***2.7***		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Naphthalene	91-20-3	10		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
n-Propylbenzene	103-65-1	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trichlorobenzene	120-82-1	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,3,5-Trimethylbenzene	108-67-8	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
1,2,4-Trimethylbenzene	95-63-6	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	***0.71***	***J***	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl Acetate	79-20-9			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Cyclohexane	110-82-7			10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	***0.46***	***J***	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Freon-113	76-13-1	5		2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U	2.5	U
Methyl cyclohexane	108-87-2			10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	***2.6***	***J***	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Total TIC Compounds	null			-	-	-	-	***25.5***	***J***	-	-	-	-	-	-	-	-	-	-	***1.41***	***J***	-	-	***1.3***	***J***	**-**		-	-	-	-	-	-	***1.07***	***J***	-	-	-	-	-	-

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5B - SVOC Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101 (ROUND 2)		MW-101 (ROUND 2)-DISSOLVED		MW-102 (ROUND 2)		MW-102 (ROUND 2)-DISSOLVED		MW-103 (ROUND 2)		MW-103 (ROUND 2)-DISSOLVED		MW-104 (ROUND 2)		MW-104 (ROUND 2)-DISSOLVED		MW-105 (ROUND 2)		MW-105 (ROUND 2)-DISSOLVED		MW-106 (ROUND 2)		MW-106 (ROUND 2)-DISSOLVED		MW-107 (ROUND 2)		MW-107 (ROUND 2)-DISSOLVED		MW-108 (ROUND 2)		MW-108 (ROUND 2)-DISSOLVED	
			SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		12/1/2022		12/1/2022		11/30/2022		11/30/2022		12/2/2022		12/2/2022		12/2/2022		12/2/2022		12/1/2022		12/1/2022	
			LAB SAMPLE ID	L2267172-01		L2267172-09		L2267172-02		L2267172-10		L2267172-03		L2267172-11		L2267552-01		L2267552-08		L2267172-04		L2267172-12		L2267896-01		L2267896-02		L2267896-03		L2267896-04		L2267552-03		L2267552-10	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.46				14.12				13.15				13.94				12.84				34.95				11.42				13.05			
Analytes	**CasNum**	**NY-TOGS-GA**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
1,4 Dioxane by 8270E-SIM				**1,4 Dioxane by 8270E-SIM**																															
1,4-Dioxane	123-91-1			0.139	U	-	-	0.142	U	-	-	0.209		-	-	0.144	U	-	-	0.134	U	-	-	0.139	U	-	-	***0.082***	***J***	-	-	0.147	U	-	-
Semivolatile Organics by GC/MS-SIM				**Semivolatile Organics by GC/MS-SIM**																															
Acenaphthene	83-32-9	20		0.1	U	0.1	U	0.1	U	0.1	U	***0.12***		0.1	U	***0.3***		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
2-Chloronaphthalene	91-58-7	10		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Fluoranthene	206-44-0	50		***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.08	J	0.1	U	0.1	U	***0.1***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Hexachlorobutadiene	87-68-3	0.5		0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	91-20-3	10		***0.08***	***J***	***0.05***	***J***	0.1	U	0.1	U	***0.06***	***J***	***0.07***	***J***	***0.17***		***0.1***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)anthracene	56-55-3	0.002		***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	***0.08***	***J***	***0.12***		0.1	U	***0.04***	***J***	0.1	U	0.1	U	0.1	U
Benzo(a)pyrene	50-32-8	0		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.06***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(b)fluoranthene	205-99-2	0.002		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.09***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(k)fluoranthene	207-08-9	0.002		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.01***	***J***	0.1	U	0.1	U	***0.06***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chrysene	218-01-9	0.002		***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Acenaphthylene	208-96-8			0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.01***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Anthracene	120-12-7	50		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.05***	***J***	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.01***	***J***	0.1	U
Benzo(ghi)perylene	191-24-2			0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.06***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Fluorene	86-73-7	50		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.13***		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Phenanthrene	85-01-8	50		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.22***		0.1	U	0.1	U	***0.09***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U
Dibenzo(a,h)anthracene	53-70-3			0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.07***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Pyrene	129-00-0	50		***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.06***	***J***	0.1	U	0.1	U	***0.1***		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
2-Methylnaphthalene	91-57-6			0.1	U	0.1	U	***0.03***	***J***	0.1	U	***0.03***	***J***	0.1	U	***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Pentachlorophenol	87-86-5	2		0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Hexachlorobenzene	118-74-1	0.04		0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	***0.01***	***J***	0.8	U	***0.01***	***J***	0.8	U	0.8	U
Hexachloroethane	67-72-1	5		0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Semivolatile Organics by GC/MS				**Semivolatile Organics by GC/MS**																															
Bis(2-chloroethyl)ether	111-44-4	1		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
3,3'-Dichlorobenzidine	91-94-1	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrotoluene	121-14-2	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	606-20-2	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	7005-72-3			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Bromophenyl phenyl ether	101-55-3			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroisopropyl)ether	108-60-1	5		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroethoxy)methane	111-91-1	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	77-47-4	5		20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
Isophorone	78-59-1	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	98-95-3	0.4		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
NDPA/DPA	86-30-6	50		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	***2***	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Nitrosodi-n-propylamine	621-64-7			5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bis(2-ethylhexyl)phthalate	117-81-7	5		3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	3	U	***1.8***	***J***	3	U	3	U	3	U	3	U	3	U	3	U
Butyl benzyl phthalate	85-68-7	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butylphthalate	84-74-2	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octylphthalate	117-84-0	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	***16***		5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	84-66-2	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dimethyl phthalate	131-11-3	50		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Biphenyl	92-52-4			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Chloroaniline	106-47-8	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	88-74-4	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	99-09-2	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	100-01-6	5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	132-64-9			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetrachlorobenzene	95-94-3	5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetophenone	98-86-2			5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	88-06-2			5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
p-Chloro-m-cresol	59-50-7			2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U

Table 5B - SVOC Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101 (ROUND 2)		MW-101 (ROUND 2)-DISSOLVED		MW-102 (ROUND 2)		MW-102 (ROUND 2)-DISSOLVED		MW-103 (ROUND 2)		MW-103 (ROUND 2)-DISSOLVED		MW-104 (ROUND 2)		MW-104 (ROUND 2)-DISSOLVED		MW-105 (ROUND 2)		MW-105 (ROUND 2)-DISSOLVED		MW-106 (ROUND 2)		MW-106 (ROUND 2)-DISSOLVED		MW-107 (ROUND 2)		MW-107 (ROUND 2)-DISSOLVED		MW-108 (ROUND 2)		MW-108 (ROUND 2)-DISSOLVED	
		SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		12/1/2022		12/1/2022		11/30/2022		11/30/2022		12/2/2022		12/2/2022		12/2/2022		12/2/2022		12/1/2022		12/1/2022	
		LAB SAMPLE ID	L2267172-01		L2267172-09		L2267172-02		L2267172-10		L2267172-03		L2267172-11		L2267552-01		L2267552-08		L2267172-04		L2267172-12		L2267896-01		L2267896-02		L2267896-03		L2267896-04		L2267552-03		L2267552-10	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.46				14.12				13.15				13.94				12.84				34.95				11.42				13.05			
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
2-Chlorophenol	95-57-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2,4-Dichlorophenol	120-83-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	105-67-9	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitrophenol	88-75-5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitrophenol	100-02-7		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	2	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-o-cresol	534-52-1		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Phenol	108-95-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	95-48-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		5	U	5	U	5	U	5	U	5	U	***0.72***	***J***	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,5-Trichlorophenol	95-95-4		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbazole	86-74-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Atrazine	1912-24-9	7.5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzaldehyde	100-52-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Caprolactam	105-60-2		10	U	***7.5***	***J***	10	U	***7.1***	***J***	10	U	***11***		10	U	***9***	***J***	10	U	***10***		10	U	***10***		10	U	***9.4***	***J***	10	U	***34***	
2,3,4,6-Tetrachlorophenol	58-90-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Total TIC Compounds	null		***86***	***J***	***81.9***	***J***	***73.4***	***J***	***97.9***	***J***	***68***	***J***	***119***	***J***	***144***	***J***	***115***	***J***	***54.3***	***J***	***513***	***J***	***202***	***J***	***44.6***	***J***	***84.6***	***J***	***45.8***	***J***	***67***	***J***	***67.3***	***J***

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5B - SVOC Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

LOCATION			MW-109 (ROUND 2)		MW-109 (ROUND 2) - DISSOLVED		MW-110 (ROUND 2)		MW-110 (ROUND 2) - DISSOLVED		MW-111 (ROUND 2)		MW-111 (ROUND 2)- DISSOLVED		MW-112 (ROUND 2)		MW-112 (ROUND 2)- DISSOLVED		MW-113 (ROUND 2)		MW-113 (ROUND 2) - DISSOLVED		MW-114 (ROUND 2)		MW-114 (ROUND 2) - DISSOLVED		DUPLICATE		DUPLICATE-DISSOLVED	
SAMPLING DATE			11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022		12/2/2022		12/2/2022		11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022	
LAB SAMPLE ID			L2266830-01		L2266830-08		L2266830-02		L2266830-09		L2267552-02		L2267552-09		L2267896-05		L2267896-06		L2266830-03		L2266830-10		L2266830-04		L2266830-11		L2267552-04		L2267552-11	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
GROUNDWATER WELL DEPTH (ft.)			13.10				13.00				37.12				13.31				10.18				11.06				DUP Collected at MW-106			
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
1,4 Dioxane by 8270E-SIM			1,4 Dioxane by 8270E-SIM																											
1,4-Dioxane	123-91-1		***0.09***	***J***	-	-	0.139	U	-	-	0.142	U	-	-	***0.959***		-	-	0.139	U	-	-	0.139	U	-	-	0.142	U	-	-
Semivolatile Organics by GC/MS-SIM			**Semivolatile Organics by GC/MS-SIM**																											
Acenaphthene	83-32-9	20	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
2-Chloronaphthalene	91-58-7	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Fluoranthene	206-44-0	50	0.1	U	***0.03***	***J***	***0.05***	***J***	***0.06***	***J***	0.1	U	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.05***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Hexachlorobutadiene	87-68-3	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Naphthalene	91-20-3	10	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(a)anthracene	56-55-3	0.002	0.1	U	***0.03***	***J***	0.1	U	***0.06***	***J***	0.1	U	0.1	U	***0.04***	***J***	0.1	U	***0.03***	***J***	***0.07***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U
Benzo(a)pyrene	50-32-8	0	0.1	U	0.1	U	0.1	U	***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(b)fluoranthene	205-99-2	0.002	0.1	U	0.1	U	0.1	U	***0.07***	***J***	0.1	U	0.1	U	***0.02***	***J***	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(k)fluoranthene	207-08-9	0.002	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Chrysene	218-01-9	0.002	0.1	U	0.1	U	0.1	U	***0.05***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.08***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Acenaphthylene	208-96-8		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Anthracene	120-12-7	50	0.1	U	***0.04***	***J***	***0.04***	***J***	***0.03***	***J***	0.1	U	0.1	U	***0.02***	***J***	***0.01***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Benzo(ghi)perylene	191-24-2		0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.07***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Fluorene	86-73-7	50	0.1	U	***0.04***	***J***	***0.05***	***J***	0.1	U	***0.01***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Phenanthrene	85-01-8	50	***0.02***	***J***	***0.05***	***J***	***0.17***		***0.06***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.03***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Dibenzo(a,h)anthracene	53-70-3		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.1***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.002	0.1	U	0.1	U	0.1	U	***0.04***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.1***	***J***	0.1	U	0.1	U	0.1	U	0.1	U
Pyrene	129-00-0	50	0.1	U	***0.03***	***J***	***0.05***	***J***	***0.05***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	***0.05***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U
2-Methylnaphthalene	91-57-6		0.1	U	***0.04***	***J***	***0.05***	***J***	0.1	U	***0.02***	***J***	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Pentachlorophenol	87-86-5	2	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Hexachlorobenzene	118-74-1	0.04	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	***0.02***	***J***	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Hexachloroethane	67-72-1	5	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U	0.8	U
Semivolatile Organics by GC/MS			**Semivolatile Organics by GC/MS**																											
Bis(2-chloroethyl)ether	111-44-4	1	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
3,3'-Dichlorobenzidine	91-94-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dinitrotoluene	121-14-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,6-Dinitrotoluene	606-20-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Chlorophenyl phenyl ether	7005-72-3		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Bromophenyl phenyl ether	101-55-3		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroisopropyl)ether	108-60-1	5	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Bis(2-chloroethoxy)methane	111-91-1	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Hexachlorocyclopentadiene	77-47-4	5	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
Isophorone	78-59-1	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Nitrobenzene	98-95-3	0.4	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
NDPA/DPA	86-30-6	50	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
n-Nitrosodi-n-propylamine	621-64-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Bis(2-ethylhexyl)phthalate	117-81-7	5	3	U	3	U	3	U	***2.4***	***J***	3	U	3	U	3	U	3	U	3	U	***2.4***	***J***	3	U	3	U	3	U	3	U
Butyl benzyl phthalate	85-68-7	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-butylphthalate	84-74-2	50	5	U	5	U	5	U	5	U	5	U	5	U	***1.1***	***J***	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Di-n-octylphthalate	117-84-0	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Diethyl phthalate	84-66-2	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dimethyl phthalate	131-11-3	50	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Biphenyl	92-52-4		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
4-Chloroaniline	106-47-8	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitroaniline	88-74-4	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Nitroaniline	99-09-2	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
4-Nitroaniline	100-01-6	5	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Dibenzofuran	132-64-9		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
1,2,4,5-Tetrachlorobenzene	95-94-3	5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Acetophenone	98-86-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4,6-Trichlorophenol	88-06-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
p-Chloro-m-cresol	59-50-7		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U

Table 5B - SVOC Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-109 (ROUND 2)		MW-109 (ROUND 2) - DISSOLVED		MW-110 (ROUND 2)		MW-110 (ROUND 2) - DISSOLVED		MW-111 (ROUND 2)		MW-111 (ROUND 2)- DISSOLVED		MW-112 (ROUND 2)		MW-112 (ROUND 2)- DISSOLVED		MW-113 (ROUND 2)		MW-113 (ROUND 2) - DISSOLVED		MW-114 (ROUND 2)		MW-114 (ROUND 2) - DISSOLVED		DUPLICATE		DUPLICATE-DISSOLVED	
		SAMPLING DATE	11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022		12/2/2022		12/2/2022		11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022	
		LAB SAMPLE ID	L2266830-01		L2266830-08		L2266830-02		L2266830-09		L2267552-02		L2267552-09		L2267896-05		L2267896-06		L2266830-03		L2266830-10		L2266830-04		L2266830-11		L2267552-04		L2267552-11	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	13.10				13.00				37.12				13.31				10.18				11.06				DUP Collected at MW-106			
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
2-Chlorophenol	95-57-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2,4-Dichlorophenol	120-83-2	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2,4-Dimethylphenol	105-67-9	2	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Nitrophenol	88-75-5		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
4-Nitrophenol	100-02-7		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	51-28-5	2	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U	20	U
4,6-Dinitro-o-cresol	534-52-1		10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Phenol	108-95-2	2	***0.93***	***J***	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
2-Methylphenol	95-48-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	***0.67***	***J***	5	U	5	U	5	U
2,4,5-Trichlorophenol	95-95-4		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Carbazole	86-74-8		2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Atrazine	1912-24-9	7.5	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
Benzaldehyde	100-52-7		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Caprolactam	105-60-2		10	U	***11***		10	U	10	U	10	U	***16***		10	U	***30***		10	U	10	U	10	U	10	U	10	U	***7.5***	***J***
2,3,4,6-Tetrachlorophenol	58-90-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Total TIC Compounds	null		***160***	***J***	***121***	***J***	***142***	***J***	***115***	***J***	***111***	***J***	***45.8***	***J***	***148***	***J***	***81.8***	***J***	***56***	***J***	***115***	***J***	***141***	***J***	***152***	***J***	***78.1***	***J***	***62.3***	***J***

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5C - Metal Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101 (ROUND 2)		MW-102 (ROUND 2)		MW-103 (ROUND 2)		MW-104 (ROUND 2)		MW-105 (ROUND 2)		MW-106 (ROUND 2)		MW-107 (ROUND 2)		MW-108 (ROUND 2)		MW-109 (ROUND 2)		MW-110 (ROUND 2)		MW-111 (ROUND 2)		MW-112 (ROUND 2)		MW-113 (ROUND 2)		MW-114 (ROUND 2)		DUPLICATE	
		SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		12/1/2022		11/30/2022		12/2/2022		12/2/2022		12/1/2022		11/29/2022		11/29/2022		12/1/2022		12/2/2022		11/29/2022		11/29/2022		12/1/2022	
		LAB SAMPLE ID	L2267172-01		L2267172-02		L2267172-03		L2267552-01		L2267172-04		L2267896-01		L2267896-03		L2267552-03		L2266830-01		L2266830-02		L2267552-02		L2267896-05		L2266830-03		L2266830-04		L2267552-04	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.46		14.12		13.15		13.94		12.84		34.95		11.42		13.05		13.10		13.00		37.12		13.31		10.18		11.06		DUP Collected at MW-106	
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Dissolved Metals			**Dissolved Metals**																													
Aluminum, Dissolved	7429-90-5	2000	***4.74***	***J***	***4***	***J***	***6.99***	***J***	***5.23***	***J***	***6.99***	***J***	10	U	***7.49***	***J***	***6.72***	***J***	***4.76***	***J***	***6.35***	***J***	10	U	***5.8***	***J***	10	U	***5.23***	***J***	10	U
Antimony, Dissolved	7440-36-0	6	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U
Arsenic, Dissolved	7440-38-2	50	***0.44***	***J***	***2.69***		***7.04***		***1.05***		***1.94***		***3.37***		***7.29***		***5.55***		***1.22***		***3.34***		***8.98***		***3.51***		***0.35***	***J***	***0.99***		***8.83***	
Barium, Dissolved	7440-39-3	2000	***70.5***		***129.5***		***201.1***		***40.61***		***20.68***		***22.87***		***88.21***		***81.37***		***623.5***		***267.9***		***15.77***		***36.63***		***207.9***		***62.92***		***15.97***	
Beryllium, Dissolved	7440-41-7	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cadmium, Dissolved	7440-43-9	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Calcium, Dissolved	7440-70-2		***82000***		***118000***		***113000***		***121000***		***65300***		***234000***		***159000***		***167000***		***184000***		***177000***		***352000***		***771000***		***163000***		***100000***		***355000***	
Chromium, Dissolved	7440-47-3	100	***0.98***	***J***	***0.26***	***J***	***0.35***	***J***	***0.35***	***J***	***0.34***	***J***	1	U	***0.4***	***J***	***0.31***	***J***	***0.28***	***J***	***0.58***	***J***	1	U	***0.34***	***J***	1	U	***0.4***	***J***	1	U
Cobalt, Dissolved	7440-48-4		0.5	U	***1.13***		***0.59***		***0.27***	***J***	0.5	U	***0.62***		***0.93***		0.5	U	***0.31***	***J***	***0.79***		***0.22***	***J***	***0.96***		***1.12***		***1.81***		***0.25***	***J***
Copper, Dissolved	7440-50-8	1000	***0.65***	***J***	***0.39***	***J***	1	U	1	U	1	U	1	U	1	U	1	U	1	U	***0.68***	***J***	1	U	1	U	***0.54***	***J***	***0.53***	***J***	1	U
Iron, Dissolved	7439-89-6	600	50	U	***198***		***44600***		***5940***		***1560***		***2630***		***13200***		***10400***		***14200***		***2890***		***2520***		***81900***		***28***	***J***	50	U	***2580***	
Lead, Dissolved	7439-92-1	50	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
Magnesium, Dissolved	7439-95-4	35000	***25200***		***35000***		***19600***		***19900***		***10500***		***152000***		***29000***		***14400***		***32500***		***24400***		***44300***		***239000***		***30100***		***32600***		***44400***	
Manganese, Dissolved	7439-96-5	600	***3.02***		***250.8***		***1378***		***1183***		***32.64***		***230.3***		***899.4***		***251.9***		***914.2***		***1436***		***160.5***		***2110***		***2030***		***703.7***		***163.9***	
Mercury, Dissolved	7439-97-6	1.4	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	***0.1***	***J***	0.2	U	0.2	U	0.2	U	0.2	U
Nickel, Dissolved	7440-02-0	200	2	U	***1.14***	***J***	2	U	2	U	2	U	***0.7***	***J***	2	U	2	U	2	U	***1.51***	***J***	2	U	***1.53***	***J***	***2.09***		***1.89***	***J***	2	U
Potassium, Dissolved	7440-09-7		***3750***		***3940***		***32200***		***60500***		***11400***		***26700***		***7600***		***5170***		***14000***		***9170***		***22900***		***41000***		***4600***		***5830***		***22800***	
Selenium, Dissolved	7782-49-2	20	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Silver, Dissolved	7440-22-4	100	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Sodium, Dissolved	7440-23-5		***489000***		***304000***		***568000***		***238000***		***1380000***		***9570000***		***263000***		***71900***		***2160000***		***841000***		***5560000***		***240000***		***162000***		***279000***		***5580000***	
Thallium, Dissolved	7440-28-0	0.5	***0.25***	***J***	1	U	2	U	***0.23***	***J***	2	U	***0.45***	***J***	***0.23***	***J***	1	U	2	U	2	U	***0.16***	***J***	1	U	2	U	2	U	***0.27***	***J***
Vanadium, Dissolved	7440-62-2		5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	***2.1***	***J***	5	U	5	U	5	U	5	U	5	U
Zinc, Dissolved	7440-66-6	5000	10	U	10	U	10	U	10	U	10	U	***4.08***	***J***	***4.13***	***J***	10	U	10	U	***4.93***	***J***	10	U	***11.77***		10	U	10	U	***11.04***	
Total Metals			**Total Metals**																													
Aluminum, Total	7429-90-5	2000	***98.3***		***1490***		***113***		***73.3***		***484***		***5.2***	***J***	***20.1***		***17.6***		***86.8***		***28.8***		***14.2***		***23.4***		***148***		***392***		***17.8***	
Antimony, Total	7440-36-0	6	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U	4	U
Arsenic, Total	7440-38-2	50	***0.53***		***4.16***		***7.01***		***1.61***		***2.21***		***3.38***		***8.28***		***6.47***		***1.31***		***4.04***		***10.1***		***3.31***		***0.49***	***J***	***1.07***		***9.13***	
Barium, Total	7440-39-3	2000	***74.58***		***146***		***208.7***		***41.58***		***22.24***		***22.14***		***91.47***		***75.51***		***574.7***		***308***		***15.58***		***33.4***		***213.5***		***65.28***		***14.7***	
Beryllium, Total	7440-41-7	3	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Cadmium, Total	7440-43-9	10	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	***0.09***	***J***	0.2	U	0.2	U	0.2	U
Calcium, Total	7440-70-2		***88600***		***122000***		***113000***		***119000***		***63400***		***328000***		***150000***		***169000***		***174000***		***168000***		***318000***		***751000***		***175000***		***112000***		***362000***	
Chromium, Total	7440-47-3	100	***1.1***		***2.03***		***0.44***	***J***	***0.72***	***J***	***0.94***	***J***	1	U	***0.46***	***J***	***0.47***	***J***	***0.5***	***J***	***0.72***	***J***	1	U	***0.43***	***J***	***0.44***	***J***	***0.71***	***J***	1	U
Cobalt, Total	7440-48-4		0.5	U	***3.6***		***0.74***		***0.4***	***J***	***0.61***		***0.61***		***0.88***		0.5	U	***0.37***	***J***	***0.78***		***0.24***	***J***	***1.5***		***1.29***		***1.67***		***0.24***	***J***
Copper, Total	7440-50-8	1000	***1.08***		***13.67***		***1.14***		***3.09***		***2.18***		1	U	***1.13***		1	U	***0.58***	***J***	***1.79***		1	U	***0.56***	***J***	***1.01***		***2.28***		1	U
Iron, Total	7439-89-6	600	***166***		***3930***		***46000***		***6350***		***2430***		***2480***		***13000***		***10500***		***12700***		***2580***		***2520***		***61400***		***255***		***696***		***2640***	
Lead, Total	7439-92-1	50	1	U	***2.07***		1	U	***3.87***		***0.91***	***J***	1	U	***0.54***	***J***	1	U	***0.59***	***J***	***0.89***	***J***	1	U	1	U	***0.47***	***J***	***0.78***	***J***	1	U
Magnesium, Total	7439-95-4	35000	***27100***		***36700***		***19500***		***19400***		***11100***		***82200***		***25400***		***14200***		31300		***25700***		***46800***		***189000***		***32300***		***32100***		***44800***	
Manganese, Total	7439-96-5	600	***9.81***		***494.8***		***1390***		***1144***		***41.02***		***221.3***		***884.1***		***245.1***		***851.3***		***1287***		***157.6***		***1973***		***2158***		***837.2***		***163.7***	
Mercury, Total	7439-97-6	1.4	0.2	U	0.2	U	0.2	U	***0.16***	***J***	0.2	U	***0.36***		***0.11***	***J***	0.2	U	***0.09***	***J***	0.2	U	***0.1***	***J***	***0.13***	***J***	***0.09***	***J***	***0.09***	***J***	0.2	U
Nickel, Total	7440-02-0	200	***0.55***	***J***	***4.69***		2	U	2	U	***1.36***	***J***	***0.69***	***J***	2	U	2	U	***0.84***	***J***	***1.56***	***J***	2	U	***2.07***		***2.28***		***2.61***		2	U
Potassium, Total	7440-09-7		***4010***		***3800***		***33400***		***59100***		***10500***		***25700***		***7510***		***5020***		***13200***		***10100***		***21600***		***35400***		***4910***		***5240***		***22400***	
Selenium, Total	7782-49-2	20	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U	5	U
Silver, Total	7440-22-4	100	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Sodium, Total	7440-23-5		***496000***		***284000***		***565000***		***248000***		***1340000***		***9460000***		***224000***		***70600***		***2090000***		***1160000***		***5680000***		***204000***		***172000***		***236000***		***5940000***	
Thallium, Total	7440-28-0	0.5	2	U	1	U	2	U	1	U	2	U	***0.44***	***J***	***0.19***	***J***	1	U	***0.16***	***J***	1	U	1	U	1	U	1	U	1	U	1	U
Vanadium, Total	7440-62-2		5	U	***3.26***	***J***	5	U	5	U	***1.94***	***J***	5	U	5	U	5	U	5	U	***2.81***	***J***	5	U	5	U	5	U	5	U	5	U
Zinc, Total	7440-66-6	5000	10	U	***14.54***		***9.18***	***J***	***14.53***		***4.79***	***J***	***12.17***		10	U	10	U	***3.65***	***J***	***9.44***	***J***	10	U	***26.01***		10	U	10	U	***11.64***	

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5D - PCB Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-101 (ROUND 2)		MW-102 (ROUND 2)		MW-103 (ROUND 2)		MW-104 (ROUND 2)		MW-105 (ROUND 2)		MW-106 (ROUND 2)		MW-107 (ROUND 2)		MW-108 (ROUND 2)		MW-109 (ROUND 2)		MW-110 (ROUND 2)		MW-111 (ROUND 2)		MW-112 (ROUND 2)		MW-113 (ROUND 2)		MW-114 (ROUND 2)		DUPLICATE	
		SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		12/1/2022		11/30/2022		12/2/2022		12/2/2022		12/1/2022		11/29/2022		11/29/2022		12/1/2022		12/2/2022		11/29/2022		11/29/2022		12/1/2022	
		LAB SAMPLE ID	L2267172-01		L2267172-02		L2267172-03		L2267552-01		L2267172-04		L2267896-01		L2267896-03		L2267552-03		L2266830-01		L2266830-02		L2267552-02		L2267896-05		L2266830-03		L2266830-04		L2267552-04	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	19.46		14.12		13.15		13.94		12.84		34.95		11.42		13.05		13.10		13.00		37.12		13.31		10.18		11.06		DUP Collected at MW-106	
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Polychlorinated Biphenyls by GC			**Polychlorinated Biphenyls by GC**																													
Aroclor 1016	12674-11-2	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1221	11104-28-2	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1232	11141-16-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1242	53469-21-9	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1248	12672-29-6	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1254	11097-69-1	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1260	11096-82-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1262	37324-23-5	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
Aroclor 1268	11100-14-4	0.09	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U
PCBs, Total	1336-36-3		0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U	0.071	U

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5E - PFAS Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101 (ROUND 2)		MW-102 (ROUND 2)		MW-103 (ROUND 2)		MW-104 (ROUND 2)		MW-105 (ROUND 2)		MW-106 (ROUND 2)		MW-107 (ROUND 2)		MW-108 (ROUND 2)		MW-109 (ROUND 2)		MW-110 (ROUND 2)		MW-111 (ROUND 2)		MW-112 (ROUND 2)		MW-113 (ROUND 2)		MW-114 (ROUND 2)	
			SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		12/1/2022		11/30/2022		12/2/2022		12/2/2022		12/1/2022		11/29/2022		11/29/2022		12/1/2022		12/2/2022		11/29/2022		11/29/2022	
			LAB SAMPLE ID	L2267172-01		L2267172-02		L2267172-03		L2267552-01		L2267172-04		L2267896-01		L2267896-03		L2267552-03		L2266830-01		L2266830-02		L2267552-02		L2267896-05		L2266830-03		L2266830-04	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.46		14.12		13.15		13.94		12.84		34.95		11.42		13.05		13.10		13.00		37.12		13.31		10.18		11.06	
Analytes	**CasNum**	**NY- SAA - PFAS**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Perfluorinated Alkyl Acids by Isotope Dilution				**Perfluorinated Alkyl Acids by Isotope Dilution**																											
Perfluorobutanoic Acid (PFBA)	375-22-4			***0.00202***		***0.0022***		***0.00532***		***0.00327***		***0.00115***	***J***	0.00181	U	***0.00643***		***0.00451***		***0.0152***		***0.0108***		0.0018	U	***0.528***		***0.0068***		***0.0066***	
Perfluoropentanoic Acid (PFPeA)	2706-90-3			0.0018	U	***0.00102***	***J***	***0.00434***		***0.00151***	***J***	***0.000593***	***J***	0.00181	U	***0.00426***		***0.00298***		***0.00562***		***0.00259***		0.0018	U	***0.00729***		***0.001***	***J***	***0.005***	
Perfluorobutanesulfonic Acid (PFBS)	375-73-5			***0.000973***	***J***	***0.000606***	***J***	***0.00146***	***J***	0.00184	U	0.00174	U	0.00181	U	***0.00374***		***0.000413***	***JF***	***0.00157***	***J***	***0.0018***		0.0018	U	***0.00413***	***F***	***0.0012***	***J***	***0.0013***	***J***
Perfluorohexanoic Acid (PFHxA)	307-24-4			0.0018	U	***0.00053***	***J***	***0.00295***		***0.000699***	***JF***	0.00174	U	0.00181	U	***0.00312***		***0.00455***	***F***	***0.00409***		***0.00205***		0.0018	U	***0.00468***		***0.001***	***J***	***0.0041***	
Perfluoroheptanoic Acid (PFHpA)	375-85-9			0.0018	U	***0.000265***	***J***	***0.00215***		***0.000662***	***J***	0.00174	U	0.00181	U	***0.00214***		***0.00393***		***0.00329***		***0.00133***	***J***	0.0018	U	***0.00228***		***0.0007***	***J***	***0.0028***	
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4			***0.00036***	***J***	0.00189	U	***0.00109***	***J***	0.00184	U	0.00174	U	0.00181	U	***0.00217***		***0.00174***	***JF***	***0.00413***	***F***	***0.00126***	***J***	0.0018	U	0.0019	U	***0.0034***		***0.002***	
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067		***0.000685***	***J***	***0.000454***	***J***	***0.00438***		***0.00232***		***0.000314***	***J***	0.00181	U	***0.00324***		***0.00529***		***0.00646***		***0.00345***		0.0018	U	***0.00708***		***0.0054***		***0.006***	
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2			0.0018	U	***0.00166***	***J***	***0.00226***		***0.00927***		***0.00984***		0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorononanoic Acid (PFNA)	375-95-1			0.0018	U	0.00189	U	***0.00175***	***J***	***0.000552***	***J***	0.00174	U	0.00181	U	***0.000451***	***J***	***0.00116***	***J***	***0.00073***	***J***	0.0018	U	0.0018	U	0.0019	U	***0.0003***	***J***	***0.0004***	***J***
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027		***0.000793***	***JF***	***0.000568***	***J***	***0.00408***		***0.00552***		***0.000558***	***JF***	0.00181	U	***0.00522***		***0.00302***		***0.00467***		***0.00244***		0.0018	U	***0.000971***	***JF***	***0.0068***		***0.0066***	
Perfluorodecanoic Acid (PFDA)	335-76-2			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorooctanesulfonamide (FOSA)	754-91-6			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorododecanoic Acid (PFDoA)	307-55-1			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
Perfluorotetradecanoic Acid (PFTA)	376-06-7			0.0018	U	0.00189	U	0.00182	U	0.00184	U	0.00174	U	0.00181	U	0.00179	U	0.00207	U	0.00183	U	0.0018	U	0.0018	U	0.0019	U	0.00176	U	0.00179	U
PFOA/PFOS, Total	null			***0.00148***	***J***	***0.00102***	***J***	***0.00846***		***0.00784***		***0.000872***	***J***	0.00181	U	***0.00846***		***0.00831***		***0.0111***		***0.00589***		0.0018	U	***0.00805***	***J***	***0.0123***		***0.0126***	

Notes:
Results and SAA guidance values reported in ug/l.
Orange highlighted indicates the respective SAA exceeded.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5E - PFAS Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

	LOCATION		**POTABLE WATER**		**EQUIPMENT BLANK-01 ROUND2**		**EQUIPMENT BLANK-02 ROUND 2**		**EQUIPMENT BLANK-03 ROUND 2**	
	SAMPLING DATE		**11/30/2022**		**11/29/2022**		**11/30/2022**		**12/1/2022**	
	LAB SAMPLE ID		**L2267172-05**		**L2266830-07**		**L2267172-08**		**L2267552-07**	
	SAMPLE TYPE		**WATER**		**WATER**		**WATER**		**WATER**	
	GROUNDWATER WELL DEPTH (ft.)									
Analytes	**CasNum**	**NY- SAA - PFAS**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Perfluorinated Alkyl Acids by Isotope Dilution			**Perfluorinated Alkyl Acids by Isotope Dilution**							
Perfluorobutanoic Acid (PFBA)	375-22-4		***0.0016***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluoropentanoic Acid (PFPeA)	2706-90-3		***0.0006***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluorobutanesulfonic Acid (PFBS)	375-73-5		***0.0003***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluorohexanoic Acid (PFHxA)	307-24-4		***0.0006***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluoroheptanoic Acid (PFHpA)	375-85-9		***0.0005***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorooctanoic Acid (PFOA)	335-67-1	0.0067	***0.0008***	***J***	***0.0003***	***J***	0.00173	U	0.00182	U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2		***0.0026***		0.00186	U	***0.0014***	***J***	0.00182	U
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorononanoic Acid (PFNA)	375-95-1		***0.0003***	***J***	0.00186	U	0.00173	U	0.00182	U
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0027	***0.001***	***JF***	***0.0006***	***JF***	***0.002***	***F***	***0.0011***	***JF***
Perfluorodecanoic Acid (PFDA)	335-76-2		0.00176	U	0.00186	U	0.00173	U	0.00182	U
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4		0.00176	U	0.00186	U	0.00173	U	0.00182	U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	2355-31-9		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluoroundecanoic Acid (PFUnA)	2058-94-8		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorodecanesulfonic Acid (PFDS)	335-77-3		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorooctanesulfonamide (FOSA)	754-91-6		0.00176	U	0.00186	U	0.00173	U	0.00182	U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorododecanoic Acid (PFDoA)	307-55-1		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8		0.00176	U	0.00186	U	0.00173	U	0.00182	U
Perfluorotetradecanoic Acid (PFTA)	376-06-7		0.00176	U	0.00186	U	0.00173	U	0.00182	U
PFOA/PFOS, Total	null		***0.0018***	***J***	***0.0009***	***J***	***0.002***		***0.0011***	***J***

Notes:
Results and SAA guidance values reported in ug/l.
Orange highlighted indicates the respective SAA exceeded.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
"H" Detected target analytes in those samples estimated high off the non-conforming column.
"UJ" The analyte was analyzed for, but was not detected. The associated reported quantitation limit is approximate and may be inaccurate or imprecise.
"R" The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control limits. The analyte may or may not be present.
"P" The RPD between the results for the two columns exceeds the method-specified criteria.
"E" Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
"F" The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5F - Pest Herbs Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

LOCATION			MW-101 (ROUND 2)		MW-102 (ROUND 2)		MW-103 (ROUND 2)		MW-104 (ROUND 2)		MW-105 (ROUND 2)		MW-106 (ROUND 2)		MW-107 (ROUND 2)		MW-108 (ROUND 2)		MW-109 (ROUND 2)		MW-110 (ROUND 2)		MW-111 (ROUND 2)		MW-112 (ROUND 2)		MW-113 (ROUND 2)		MW-114 (ROUND 2)		DUPLICATE	
SAMPLING DATE			11/30/2022		11/30/2022		11/30/2022		12/1/2022		11/30/2022		12/2/2022		12/2/2022		12/1/2022		11/29/2022		11/29/2022		12/1/2022		12/2/2022		11/29/2022		11/29/2022		12/1/2022	
LAB SAMPLE ID			L2267172-01		L2267172-02		L2267172-03		L2267552-01		L2267172-04		L2267896-01		L2267896-03		L2267552-03		L2266830-01		L2266830-02		L2267552-02		L2267896-05		L2266830-03		L2266830-04		L2267552-04	
SAMPLE TYPE			WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
GROUNDWATER WELL DEPTH (ft.)			19.46		14.12		13.15		13.94		12.84		34.95		11.42		13.05		13.10		13.00		37.12		13.31		10.18		11.06		DUP Collected at MW-106	
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
Chlorinated Herbicides by GC			**Chlorinated Herbicides by GC**																													
2,4-D	94-75-7	50	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U	10	U
2,4,5-T	93-76-5	35	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
2,4,5-TP (Silvex)	93-72-1	0.26	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U	2	U
Organochlorine Pesticides by GC			**Organochlorine Pesticides by GC**																													
Delta-BHC	319-86-8	0.04	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Lindane	58-89-9	0.05	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Alpha-BHC	319-84-6	0.01	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Beta-BHC	319-85-7	0.04	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Heptachlor	76-44-8	0.04	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Aldrin	309-00-2	0	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Heptachlor epoxide	1024-57-3	0.03	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Endrin	72-20-8	0	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endrin aldehyde	7421-93-4	5	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endrin ketone	53494-70-5	5	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Dieldrin	60-57-1	0.004	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDE	72-55-9	0.2	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDD	72-54-8	0.3	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
4,4'-DDT	50-29-3	0.2	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endosulfan I	959-98-8		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Endosulfan II	33213-65-9		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Endosulfan sulfate	1031-07-8		0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U	0.029	U
Methoxychlor	72-43-5	35	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U
Toxaphene	8001-35-2	0.06	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U
cis-Chlordane	5103-71-9		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
trans-Chlordane	5103-74-2		0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U	0.014	U
Chlordane	57-74-9	0.05	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U	0.143	U

Notes:

Results and Ambient Water Quality Standards (AWQS) reported in ug/l.

Orange highlighted indicates the respective AWQS exceeded.

Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.

BOLD - Indicates the analyte was detected above the RL.

Blank space indicates that a AWQS value(s) does not exist for the respective analyte.

"J" indicates estimated concentration

"U" indicates analyte not detected at concentration greater than laboratory detection limit

NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.

Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5G - General Chem Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

			LOCATION	MW-101 (ROUND 2)		MW-101 (ROUND 2)-DISSOLVED		MW-102 (ROUND 2)		MW-102 (ROUND 2)-DISSOLVED		MW-103 (ROUND 2)		MW-103 (ROUND 2)-DISSOLVED		MW-104 (ROUND 2)		MW-104 (ROUND 2)-DISSOLVED		MW-105 (ROUND 2)		MW-105 (ROUND 2)-DISSOLVED		MW-106 (ROUND 2)		MW-106 (ROUND 2)-DISSOLVED		MW-107 (ROUND 2)		MW-107 (ROUND 2)-DISSOLVED		MW-108 (ROUND 2)		MW-108 (ROUND 2)-DISSOLVED	
			SAMPLING DATE	11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		11/30/2022		12/1/2022		12/1/2022		11/30/2022		11/30/2022		12/2/2022		12/2/2022		12/2/2022		12/2/2022		12/1/2022		12/1/2022	
			LAB SAMPLE ID	L2267172-01		L2267172-09		L2267172-02		L2267172-10		L2267172-03		L2267172-11		L2267552-01		L2267552-08		L2267172-04		L2267172-12		L2267896-01		L2267896-02		L2267896-03		L2267896-04		L2267552-03		L2267552-10	
			SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
			GROUNDWATER WELL DEPTH (ft.)	19.46				14.12				13.15				13.94				12.84				34.95				11.42				13.05			
Analytes	**CasNum**	**NY-TOGS-GA**		**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
General Chemistry				**General Chemistry**																															
Cyanide, Total	57-12-5	400		5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	***3***	***J***	-	-	5	U	-	-	5	U	-	-
Chromium, Hexavalent	18540-29-9	100		-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U	-	-	10	U
Chromium, Hexavalent (Unfiltered)	18540-29-9			10	U	-	-	10	U	-	-	***3***	***J***	-	-	***4***	***J***	-	-	10	U	-	-	***7***	***J***	-	-	***4***	***J***	-	-	10	U	-	-

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 5G - General Chem Round II Groundwater Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company Factory) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

		LOCATION	MW-109 (ROUND 2)		MW-109 (ROUND 2) - DISSOLVED		MW-110 (ROUND 2)		MW-110 (ROUND 2) - DISSOLVED		MW-111 (ROUND 2)		MW-111 (ROUND 2)-DISSOLVED		MW-112 (ROUND 2)		MW-1112 (ROUND 2)-DISSOLVED		MW-113 (ROUND 2)		MW-113 (ROUND 2) - DISSOLVED		MW-114 (ROUND 2)		MW-114 (ROUND 2) - DISSOLVED		DUPLICATE		DUPLICATE-DISSOLVED	
		SAMPLING DATE	11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022		12/2/2022		12/2/2022		11/29/2022		11/29/2022		11/29/2022		11/29/2022		12/1/2022		12/1/2022	
		LAB SAMPLE ID	L2266830-01		L2266830-08		L2266830-02		L2266830-09		L2267552-02		L2267552-09		L2267896-05		L2267896-06		L2266830-03		L2266830-10		L2266830-04		L2266830-11		L2267552-04		L2267552-11	
		SAMPLE TYPE	WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER		WATER	
		GROUNDWATER WELL DEPTH (ft.)	13.10				13.00				37.12				13.31				10.18				11.06				DUP Collected at MW-106			
Analytes	**CasNum**	**NY-TOGS-GA**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**	**Results**	**Qual**
General Chemistry			**General Chemistry**																											
Cyanide, Total	57-12-5	400	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-	5	U	-	-
Chromium, Hexavalent	18540-29-9	100	10	U	10	U	10	U	10	U	-	-	10	U	-	-	10	U	10	U	10	U	10	U	10	U	-	-	10	U
Chromium, Hexavalent (Unfiltered)	18540-29-9		-	-	-	-	-	-	-	-	10	U	-	-	***7***	***J***	-	-	-	-	-	-	-	-	-	-	10	U	-	-

Notes:
Results and Ambient Water Quality Standards (AWQS) reported in ug/l.
Orange highlighted indicates the respective AWQS exceeded.
Gray highlight indicates the respective analytes RL is higher than the AWQS, the analyte is ND but could exceed the respective AWQS.
BOLD - Indicates the analyte was detected above the RL.
Blank space indicates that a AWQS value(s) does not exist for the respective analyte.
"J" indicates estimated concentration
"U" indicates analyte not detected at concentration greater than laboratory detection limit
NY-AWQS - New York TOGS 111 Ambient Water Quality Standards criteria reflects all addendum to criteria through June 2004.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.

Table 6 - Soil Vapor Data Summary
Remedial Investigation
Urban Villages (Former Will and Baumer Candle Company) BCP Site
100 Buckley Road, Town of Salina, Onondaga County, New York

Location ID	SV-101	SV-102	SV-104	SSV-105	SSV-106	SSV-107	SSV-108	SSV-111	SSV-112	SSV-113	DUP	OA-100	OA-102
Sample Location	4.75' bgs	2.75' bgs	1.75' bgs	Beneath Slab	Beneath Slab	Beneath Slab	Beneath Slab	Beneath Slab	Beneath Slab	Beneath Slab	SSV-113	Outdoor Air	Outdoor Air
Date Sampled	03/13/2023	03/13/2023	03/13/2023	03/13/2023	03/13/2023	04/13/2023	03/13/2023	03/13/2023	03/13/2023	03/13/2023	03/13/2023	03/13/2023	04/13/2023
Sample Matrix	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air
VOLATILE ORGANIC COMPOUNDS (TO-15)													
Units	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3	ug/m^3
1,1,1-Trichloroethane	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.16)
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	**1.4** J	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	**1.1** J	ND (0.74)	**1.1**	ND (0.74)	**0.69 J** J	**1.1**	ND (0.74)	**1.5** J	ND (0.74)	**1.1**	**1.2**	ND (0.74)	ND (0.74)
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	**0.49 J** J	ND (0.74)	ND (0.74)	ND (0.74)	ND (0.74)	**0.54**	ND (0.74)	**0.49 J** J	ND (0.74)	**0.54 J**	ND (0.74)	ND (0.74)	ND (0.74)
1,3-butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,2,4-Trimethylpentane	ND (0.70)	ND (0.70)	ND (0.70)	ND (0.70)	**2.5** J	ND (0.70)	ND (0.70)	**0.70** J	ND (0.70)	**0.61 J**	ND (0.70)	ND (0.70)	ND (0.70)
4-ethyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	**21** J	**16** J	**88** J-	**44** J	**27** J	**26**	**14** J	**37** J	**26** J	**42** J+	**44** J+	**8.3** J	**11**
Allyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	**0.42** J	**0.51** J	ND (0.48)	**0.93** J	**2.9** J	**1.8**	**2.5** J	**2.4** J	**5.7** J	**8.6**	**9.9**	**0.48** J	**0.35**
Benzyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	**0.47 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	**2.8** J	**1.7** J	**340** J-	**1.2** J	**2.1** J	**1.2**	**2.1** J	**2.4** J	**2.2** J	**4.6**	**4.7**	ND	ND
Carbon tetrachloride	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.94)	ND (0.19)
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	**0.45**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	**3.7** J	**0.59 J** J	**2.1**	**4.8** J	**0.63 J** J	**5.8**	**0.54 J** J	ND	**3.0** J	ND	ND	ND	ND
Chloromethane	**0.45** J	**1.2** J	**9.7**	**0.41** J	**0.83** J	ND	ND	ND	**0.52** J	ND	ND	**1.2** J	**0.97**
cis-1,2-Dichloroethene	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	**2.7** J	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.59)	ND (0.16)
cis-1,3-Dichloropropene	ND	ND	**1.2**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	ND (0.52)	ND (0.52)	ND (0.52)	**1.2** J	**5.9** J	**1.5**	**1.7** J	**0.89** J	**5.0** J	**8.9**	**9.6**	ND (0.52)	ND (0.52)
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl acetate	ND	ND	ND	ND	ND	ND	ND	**1.2** J	ND	**1.3**	**0.76**	ND	ND
Ethylbenzene	**0.48 J** J	ND (0.65)	**1.0**	ND (0.65)	**0.65** J	ND (0.65)	ND (0.65)	**1.5** J	ND (0.65)	**1.1**	**1.2**	ND (0.65)	ND (0.65)
Freon 11	**1.2** J	**1.4** J	**1.0**	**1.2** J	**1.4** J	**1.3**	**0.79 J** J	**0.73 J** J	**1.2** J	ND	ND	**1.3** J	**1.3**
Freon 113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 114	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane	**22** J	**21** J	**1600 E** J-	**1.1** J	**9.4** J	**7**	**1.1** J	**1.8** J	**7.8** J	**11**	**13**	ND (0.61)	ND (0.61)
Hexachloro-1,3-butadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexane	ND (0.53)	ND (0.53)	**1.2**	**1.8** J	**8.1** J	**6.7**	**1.7** J	**2.6** J	**11** J	**18**	**20**	ND (0.53)	ND (0.53)
Isopropyl alcohol	ND	**1.3** J	ND	**1.5** J	**1.6** J	**1.5**	**1.2** J	**1.7** J	**1.0** J	**2.6**	**2.2**	**0.39** J	**1.1**
m&p-Xylene	**0.96 J** J	ND (1.3)	**1.1 J**	ND (1.3)	**2.0** J	**0.78**	ND (1.3)	**3.8** J	**0.61 J** J	**3.2**	**3.4**	ND (1.3)	ND (1.3)
Methyl Butyl Ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	**2.9** J	**0.83 J** J	**36**	**2.2** J	**5.3** J	**8.6**	**2.3** J	**3.3** J	**2.0** J	**3.8**	**5.2**	**0.59 J** J	**0.97**
Methyl Isobutyl Ketone	ND	ND	**0.57 J**	**0.7 J** J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride	**0.59** J	**12** J	**1.1**	**2.4** J	**3.3** J	**6.8**	**11** J	**0.76** J	**2.3** J	**5.0**	ND (0.52)	**0.97** J	**0.76**
o-Xylene	**0.65** J	ND (0.65)	**0.65**	ND (0.65)	**0.74** J	ND (0.65)	ND (0.65)	**1.1** J	ND (0.65)	**1.0**	**0.96**	ND (0.65)	ND (0.65)
Propylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	**0.51 J** J	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	ND (1.0)	ND (1.0)	**0.75 J**	**6** J	**1.4** J	**1.1**	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	**1.9**	ND (1.0)	ND (1.0)
Tetrahydrofuran	**1.1** J	ND	ND	ND	**5.4** J	ND	ND	**5.3** J	ND	**2.4**	**3.3**	ND	ND
Toluene	**1.2** J	**0.57** J	**1.2**	**0.94** J	**7.3** J	**2.3**	**1.1** J	**15** J	**4.0** J	**13**	**15**	**0.41** J	**0.79**
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	ND (0.81)	**1.3** J	ND (0.81)	**1.7** J	**36** J	**6.2**	**1.7** J	ND (0.81)	**0.86** J	**0.75 J**	**0.54 J**	ND (0.81)	ND (0.16)
Vinyl acetate	ND	ND	**0.42 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Bromide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.38)	ND (0.10)

Notes:
ND - Non Detect
(#.#) - The value provided indicates the laboratory reporting limit
BOLD - Sample concentration was detected above the laboratory detection limit
BOLD RED TEXT - Compound associated with the NYSDOH Matrices
E - Estimated value above the quantitation range.
J - The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
J- - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased low.
J+ - The analyte was positively identified; the associated numerical value is an estimated quantity that may be biased high.
Laboratory qualifier is displayed in black text; validation data qualifier is displayed in red text.
SV - Soil Vapor Samples
SSV - Sub-Slab Vapor Samples
bgs - feet below ground surface

Table 7
SVOC Data - C & S Supplemental Investigation, May 2021

							SAMPLE ID:															
							LAB ID:															
							LECTION DATE:															
							SAMPLE MATRIX:															
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO	SS-03, 0-2"				SS-04, 0-2"				SS-05, 0-2"				SS-06, 0-2"			
							L2128854-03				L2128854-04				L2128854-05				L2128854-06			
							5/28/2021				5/28/2021				5/28/2021				5/28/2021			
							SURFACE SOIL				SURFACE SOIL				SURFACE SOIL				SURFACE SOIL			
ANALYTE							Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
SEMIVOLATILE ORGANICS BY GC/MS																						
Acenaphthene	20	100	100	500	1000	98	ND		0.68	0.088	0.29		0.16	0.02	ND		0.17	0.022	0.11	J	0.16	0.021
Fluoranthene	100	100	100	500	1000	1000	0.38	J	0.51	0.097	3.4		0.12	0.023	0.9		0.13	0.025	2.8		0.12	0.023
Naphthalene	12	100	100	500	1000	12	0.15	J	0.84	0.1	2		0.2	0.024	2.4		0.22	0.026	0.57		0.2	0.024
Bis(2-ethylhexyl)phthalate	NL	NL	NL	NL	NL	NL	ND		0.84	0.29	0.86		0.2	0.068	0.14	J	0.22	0.075	2.1		0.2	0.069
Di-n-butylphthalate	NL	NL	NL	NL	NL	NL	ND		0.84	0.16	0.08	J	0.2	0.037	ND		0.22	0.041	0.13	J	0.2	0.038
Benzo(a)anthracene	1	1	1	5.6	11	1	0.22	J	0.51	0.095	**2.1**		0.12	0.022	0.57		0.13	0.024	**1.5**		0.12	0.023
Benzo(a)pyrene	1	1	1	1	1.1	22	0.21	J	0.68	0.21	**1.7**		0.16	0.048	0.49		0.17	0.053	**1.3**		0.16	0.049
Benzo(b)fluoranthene	1	1	1	5.6	11	1.7	0.3	J	0.51	0.14	**2.5**		0.12	0.033	0.63		0.13	0.037	**2**		0.12	0.034
Benzo(k)fluoranthene	0.8	1	3.9	56	110	1.7	ND		0.51	0.14	**0.99**		0.12	0.032	0.32		0.13	0.035	0.56		0.12	0.032
Chrysene	1	1	3.9	56	110	1	0.23	J	0.51	0.088	**2.3**		0.12	0.02	0.65		0.13	0.023	**1.5**		0.12	0.021
Acenaphthylene	100	100	100	500	1000	107	ND		0.68	0.13	0.31		0.16	0.03	ND		0.17	0.034	0.12	J	0.16	0.031
Anthracene	100	100	100	500	1000	1000	ND		0.51	0.16	0.72		0.12	0.038	0.27		0.13	0.042	0.32		0.12	0.039
Benzo(ghi)perylene	100	100	100	500	1000	1000	0.18	J	0.68	0.099	0.77		0.16	0.023	0.77		0.17	0.026	0.86		0.16	0.024
Fluorene	30	100	100	500	1000	386	ND		0.84	0.082	0.28		0.2	0.019	0.1	J	0.22	0.021	0.11	J	0.2	0.02
Phenanthrene	100	100	100	500	1000	1000	0.28	J	0.51	0.1	3.1		0.12	0.024	1.5		0.13	0.026	1.7		0.12	0.024
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.56	1.1	1000	ND		0.51	0.098	0.26		0.12	0.023	ND		0.13	0.025	0.23		0.12	0.023
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	11	8.2	0.16	J	0.68	0.12	**0.97**		0.16	0.028	**0.55**		0.17	0.03	**0.93**		0.16	0.028
Pyrene	100	100	100	500	1000	1000	0.32	J	0.51	0.084	3		0.12	0.02	0.84		0.13	0.022	2.4		0.12	0.02
Biphenyl	NL	NL	NL	NL	NL	NL	ND		1.9	0.2	0.26	J	0.45	0.046	0.29	J	0.5	0.05	0.066	J	0.46	0.046
Dibenzofuran	7	14	59	350	1000	210	ND		0.84	0.08	0.73		0.2	0.019	0.69		0.22	0.02	0.2		0.2	0.019
2-Methylnaphthalene	NL	NL	NL	NL	NL	NL	0.2	J	1	0.1	2.6		0.24	0.024	3		0.26	0.026	0.65		0.24	0.024
2-Methylphenol	NL	NL	NL	NL	NL	NL	ND		0.84	0.13	ND		0.2	0.031	ND		0.22	0.034	ND		0.2	0.031
3-Methylphenol/4-Methylphenol	NL	NL	NL	NL	NL	NL	ND		1.2	0.13	ND		0.28	0.031	ND		0.31	0.034	ND		0.29	0.031
Carbazole	NL	NL	NL	NL	NL	NL	ND		0.84	0.082	0.46		0.2	0.019	0.2	J	0.22	0.021	0.23		0.2	0.02
Benzaldehyde	NL	NL	NL	NL	NL	NL	ND		1.1	0.23	ND		0.26	0.053	ND		0.29	0.059	200	J	0.26	0.054
Total SVOCs	NL	NL	NL	NL	NL	NL	2.63	-	-	-	29.68	-	-	-	14.31	-	-	-	20.586	-	-	-

NOTES:
All values are in mg/Kg.
SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.
NL = Not Listed.
ND = Not Detected.
Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.
Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.
Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.
Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.
Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.
Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 7
SVOC Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-07, 0-2"				SS-08, 0-2"				TP-01, 3 to 5 FT.				TP-02, 2 to 3 FT.			
						LAB ID:	L2128854-07				L2128854-08				L2128854-09				L2128854-10			
						LECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
SEMIVOLATILE ORGANICS BY GC/MS																						
Acenaphthene	20	100	100	500	1000	98	0.08	J	0.15	0.019	0.091	J	0.14	0.018	ND		0.25	0.032	ND		0.17	0.022
Fluoranthene	100	100	100	500	1000	1000	1.6		0.11	0.021	1.9		0.1	0.02	0.063	J	0.19	0.036	0.27		0.13	0.024
Naphthalene	12	100	100	500	1000	12	0.096	J	0.18	0.022	0.082	J	0.17	0.021	ND		0.31	0.038	0.03	J	0.21	0.026
Bis(2-ethylhexyl)phthalate	NL	NL	NL	NL	NL	NL	0.44		0.18	0.063	0.077	J	0.17	0.06	ND		0.31	0.11	ND		0.21	0.073
Di-n-butylphthalate	NL	NL	NL	NL	NL	NL	ND		0.18	0.035	ND		0.17	0.033	ND		0.31	0.059	ND		0.21	0.04
Benzo(a)anthracene	1	1	1	5.6	11	1	0.84		0.11	0.02	0.96		0.1	0.02	ND		0.19	0.035	0.22		0.13	0.024
Benzo(a)pyrene	1	1	1	1	1.1	22	0.8		0.15	0.045	0.9		0.14	0.043	ND		0.25	0.076	0.26		0.17	0.052
Benzo(b)fluoranthene	1	1	1	5.6	11	1.7	**1.1**		0.11	0.031	**1.2**		0.1	0.029	ND		0.19	0.052	0.44		0.13	0.036
Benzo(k)fluoranthene	0.8	1	3.9	56	110	1.7	0.36		0.11	0.029	0.46		0.1	0.028	ND		0.19	0.05	0.15		0.13	0.034
Chrysene	1	1	3.9	56	110	1	0.89		0.11	0.019	0.98		0.1	0.018	ND		0.19	0.032	0.24		0.13	0.022
Acenaphthylene	100	100	100	500	1000	107	0.032	J	0.15	0.028	0.031	J	0.14	0.027	ND		0.25	0.048	0.072	J	0.17	0.033
Anthracene	100	100	100	500	1000	1000	0.2		0.11	0.036	0.25		0.1	0.034	ND		0.19	0.061	0.046	J	0.13	0.041
Benzo(ghi)perylene	100	100	100	500	1000	1000	0.51		0.15	0.022	0.54		0.14	0.02	ND		0.25	0.037	0.28		0.17	0.025
Fluorene	30	100	100	500	1000	386	0.066	J	0.18	0.018	0.075	J	0.17	0.017	ND		0.31	0.03	ND		0.21	0.02
Phenanthrene	100	100	100	500	1000	1000	0.96		0.11	0.022	1.1		0.1	0.021	ND		0.19	0.038	0.14		0.13	0.026
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.56	1.1	1000	0.14		0.11	0.021	0.16		0.1	0.02	ND		0.19	0.036	0.062	J	0.13	0.024
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	11	8.2	**0.57**		0.15	0.025	**0.65**		0.14	0.024	ND		0.25	0.043	0.28		0.17	0.029
Pyrene	100	100	100	500	1000	1000	1.4		0.11	0.018	1.5		0.1	0.017	0.047	J	0.19	0.031	0.21		0.13	0.021
Biphenyl	NL	NL	NL	NL	NL	NL	ND		0.42	0.042	ND		0.4	0.04	ND		0.71	0.072	ND		0.48	0.049
Dibenzofuran	7	14	59	350	1000	210	0.064	J	0.18	0.017	0.059	J	0.17	0.016	ND		0.31	0.029	ND		0.21	0.02
2-Methylnaphthalene	NL	NL	NL	NL	NL	NL	0.097	J	0.22	0.022	0.084	J	0.21	0.021	ND		0.37	0.038	ND		0.25	0.026
2-Methylphenol	NL	NL	NL	NL	NL	NL	ND		0.18	0.028	ND		0.17	0.027	ND		0.31	0.048	ND		0.21	0.033
3-Methylphenol/4-Methylphenol	NL	NL	NL	NL	NL	NL	ND		0.26	0.029	ND		0.25	0.027	ND		0.45	0.049	ND		0.3	0.033
Carbazole	NL	NL	NL	NL	NL	NL	0.15	J	0.18	0.018	0.19		0.17	0.017	ND		0.31	0.03	ND		0.21	0.02
Benzaldehyde	NL	NL	NL	NL	NL	NL	0.22	J	0.24	0.049	0.12	J	0.23	0.047	ND		0.41	0.084	ND		0.28	0.057
Total SVOCs	NL	NL	NL	NL	NL	NL	10.615	-	-	-	11.409	-	-	-	0.11	-	-	-	2.7	-	-	-

NOTES:
All values are in mg/Kg.
SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.
NL = Not Listed.
ND = Not Detected.
Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.
Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.
Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.
Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.
Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.
Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 7
SVOC Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-03, 1.5 to 2.5 FT.				TP-04, 2 to 3 FT.				TP-04, 2 to 3 FT.				TP-05, 2 to 3 FT.			
						LAB ID:	L2128854-11				L2128854-12				L2128854-12 R1				L2128854-13			
						LECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
SEMIVOLATILE ORGANICS BY GC/MS																						
Acenaphthene	20	100	100	500	1000	98	ND		0.83	0.11	**25**		2.6	0.33	-		-	-	ND		0.16	0.021
Fluoranthene	100	100	100	500	1000	1000	ND		0.62	0.12	**350**	E	1.9	0.37	**340**		9.7	1.8	0.068	J	0.12	0.023
Naphthalene	12	100	100	500	1000	12	1.3		1	0.13	**48**		3.2	0.39	-		-	-	0.38		0.2	0.024
Bis(2-ethylhexyl)phthalate	NL	NL	NL	NL	NL	NL	ND		1	0.36	ND		3.2	1.1	-		-	-	ND		0.2	0.07
Di-n-butylphthalate	NL	NL	NL	NL	NL	NL	ND		1	0.2	ND		3.2	0.61	-		-	-	ND		0.2	0.038
Benzo(a)anthracene	1	1	1	5.6	11	1	ND		0.62	0.12	**140**	E	1.9	0.36	**140**		9.7	1.8	0.061	J	0.12	0.023
Benzo(a)pyrene	1	1	1	1	1.1	22	ND		0.83	0.25	**85**		2.6	0.79	-		-	-	ND		0.16	0.049
Benzo(b)fluoranthene	1	1	1	5.6	11	1.7	ND		0.62	0.17	**140**	E	1.9	0.54	**160**		9.7	2.7	0.07	J	0.12	0.034
Benzo(k)fluoranthene	0.8	1	3.9	56	110	1.7	ND		0.62	0.17	**44**		1.9	0.52	-		-	-	ND		0.12	0.032
Chrysene	1	1	3.9	56	110	1	ND		0.62	0.11	**120**		1.9	0.34	-		-	-	0.14		0.12	0.021
Acenaphthylene	100	100	100	500	1000	107	ND		0.83	0.16	30		2.6	0.5	-		-	-	ND		0.16	0.031
Anthracene	100	100	100	500	1000	1000	0.23	J	0.62	0.2	37		1.9	0.63	-		-	-	ND		0.12	0.039
Benzo(ghi)perylene	100	100	100	500	1000	1000	ND		0.83	0.12	46		2.6	0.38	-		-	-	0.032	J	0.16	0.024
Fluorene	30	100	100	500	1000	386	ND		1	0.1	**33**		3.2	0.31	-		-	-	0.024	J	0.2	0.02
Phenanthrene	100	100	100	500	1000	1000	0.65		0.62	0.13	**160**	E	1.9	0.39	**160**		9.7	2	0.21		0.12	0.024
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.56	1.1	1000	ND		0.62	0.12	**14**		1.9	0.37	-		-	-	ND		0.12	0.023
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	11	8.2	ND		0.83	0.14	**58**		2.6	0.45	-		-	-	0.031	J	0.16	0.028
Pyrene	100	100	100	500	1000	1000	1		0.62	0.1	**270**	E	1.9	0.32	**260**		9.7	1.6	0.078	J	0.12	0.02
Biphenyl	NL	NL	NL	NL	NL	NL	ND		2.4	0.24	3.2	J	7.4	0.75	-		-	-	ND		0.46	0.047
Dibenzofuran	7	14	59	350	1000	210	0.28	J	1	0.098	**23**		3.2	0.3	-		-	-	0.092	J	0.2	0.019
2-Methylnaphthalene	NL	NL	NL	NL	NL	NL	3.2		1.2	0.12	18		3.9	0.39	-		-	-	0.36		0.24	0.024
2-Methylphenol	NL	NL	NL	NL	NL	NL	ND		1	0.16	ND		3.2	0.5	-		-	-	ND		0.2	0.031
3-Methylphenol/4-Methylphenol	NL	NL	NL	NL	NL	NL	ND		1.5	0.16	0.66	J	4.6	0.5	-		-	-	ND		0.29	0.031
Carbazole	NL	NL	NL	NL	NL	NL	ND		1	0.1	6.8		3.2	0.31	-		-	-	ND		0.2	0.02
Benzaldehyde	NL	NL	NL	NL	NL	NL	ND		1.4	0.28	ND		4.3	0.87	-		-	-	ND		0.26	0.054
Total SVOCs	NL	NL	NL	NL	NL	NL	6.66	-	-	-	1651.66	-	-	-	1060	-	-	-	1.546	-	-	-

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

NL = Not Listed.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 7
SVOC Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-06, 1.5 to 2.5 FT.				TP-08, 1.5 to 3 FT.				TP-13 1.5 to 2.5 FT.			
						LAB ID:	L2128854-14				L2128854-15				L2128854-16			
						LECTION DATE:	5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO												
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
SEMIVOLATILE ORGANICS BY GC/MS																		
Acenaphthene	20	100	100	500	1000	98	ND		0.15	0.02	ND		0.16	0.021	ND		13	1.7
Fluoranthene	100	100	100	500	1000	1000	0.33		0.11	0.022	4.3		0.12	0.023	2.8	J	10	1.9
Naphthalene	12	100	100	500	1000	12	2.5		0.19	0.023	3.4		0.2	0.024	ND		17	2
Bis(2-ethylhexyl)phthalate	NL	NL	NL	NL	NL	NL	ND		0.19	0.066	0.073	J	0.2	0.07	ND		17	5.8
Di-n-butylphthalate	NL	NL	NL	NL	NL	NL	ND		0.19	0.036	ND		0.2	0.038	ND		17	3.2
Benzo(a)anthracene	1	1	1	5.6	11	1	0.38		0.11	0.022	**2.6**		0.12	0.023	ND		10	1.9
Benzo(a)pyrene	1	1	1	1	1.1	22	0.22		0.15	0.047	**2.4**		0.16	0.049	ND		13	4
Benzo(b)fluoranthene	1	1	1	5.6	11	1.7	0.64		0.11	0.032	**3.2**		0.12	0.034	ND		10	2.8
Benzo(k)fluoranthene	0.8	1	3.9	56	110	1.7	0.21		0.11	0.031	**0.86**		0.12	0.032	ND		10	2.7
Chrysene	1	1	3.9	56	110	1	0.64		0.11	0.02	**2.5**		0.12	0.021	ND		10	1.7
Acenaphthylene	100	100	100	500	1000	107	ND		0.15	0.03	0.36		0.16	0.031	ND		13	2.6
Anthracene	100	100	100	500	1000	1000	0.076	J	0.11	0.037	0.68		0.12	0.039	ND		10	3.2
Benzo(ghi)perylene	100	100	100	500	1000	1000	0.2		0.15	0.022	1.8		0.16	0.024	ND		13	2
Fluorene	30	100	100	500	1000	386	0.11	J	0.19	0.018	0.3		0.2	0.02	ND		17	1.6
Phenanthrene	100	100	100	500	1000	1000	1.2		0.11	0.023	3.8		0.12	0.024	2.8	J	10	2
Dibenzo(a,h)anthracene	0.33	0.33	0.33	0.56	1.1	1000	0.083	J	0.11	0.022	0.48		0.12	0.023	ND		10	1.9
Indeno(1,2,3-cd)pyrene	0.5	0.5	0.5	5.6	11	8.2	0.22		0.15	0.027	1.8		0.16	0.028	ND		13	2.3
Pyrene	100	100	100	500	1000	1000	0.4		0.11	0.019	3.8		0.12	0.02	2.1	J	10	1.6
Biphenyl	NL	NL	NL	NL	NL	NL	0.36	J	0.44	0.044	**0.48**		0.46	0.047	ND		38	3.8
Dibenzofuran	7	14	59	350	1000	210	0.72		0.19	0.018	**1.1**		0.2	0.019	ND		17	1.6
2-Methylnaphthalene	NL	NL	NL	NL	NL	NL	3.1		0.23	0.023	4.4		0.24	0.024	ND		20	2
2-Methylphenol	NL	NL	NL	NL	NL	NL	0.034	J	0.19	0.03	0.045	J	0.2	0.031	ND		17	2.6
3-Methylphenol/4-Methylphenol	NL	NL	NL	NL	NL	NL	ND		0.28	0.03	0.047	J	0.29	0.032	ND		24	2.6
Carbazole	NL	NL	NL	NL	NL	NL	0.088	J	0.19	0.018	0.48		0.2	0.02	ND		17	1.6
Benzaldehyde	NL	NL	NL	NL	NL	NL	ND		0.25	0.052	ND		0.27	0.054	ND		22	4.5
Total SVOCs	NL	NL	NL	NL	NL	NL	11.511	-	-	-	38.905	-	-	-	7.7	-	-	-

NOTES:
All values are in mg/Kg.
SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.
NL = Not Listed.
ND = Not Detected.
Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.
Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.
Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.
Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.
Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.
Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 8
Metals Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-03, 0-2"				SS-04, 0-2"				SS-05, 0-2"				SS-06, 0-2"			
						LAB ID:	L2128854-03				L2128854-04				L2128854-05				L2128854-06			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SURFACE SOIL				SURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO															
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
TOTAL METALS																						
Aluminum, Total	NL	NL	NL	NL	NL	NL	1810		7.95	2.15	3110		9.18	2.48	2880		10.1	2.72	5340		9.64	2.6
Antimony, Total	NL	NL	NL	NL	NL	NL	0.477	J	3.98	0.302	0.716	J	4.59	0.349	0.765	J	5.03	0.382	0.858	J	4.82	0.366
Arsenic, Total	13	16	16	16	16	16	4.21		0.795	0.165	8.79		0.918	0.191	7.82		1.01	0.209	7.28		0.964	0.201
Barium, Total	350	350	400	400	10000	10000	22.8		0.795	0.138	79.7		0.918	0.16	133		1.01	0.175	59.9		0.964	0.168
Beryllium, Total	7.2	14	72	590	2700	2700	0.119	J	0.398	0.026	0.257	J	0.459	0.03	0.232	J	0.503	0.033	0.318	J	0.482	0.032
Cadmium, Total	2.5	2.5	4.3	9.3	60	60	0.27	J	0.795	0.078	0.753	J	0.918	0.09	0.513	J	1.01	0.099	0.617	J	0.964	0.095
Calcium, Total	NL	NL	NL	NL	NL	NL	275000		79.5	27.8	157000		91.8	32.1	184000		101	35.2	24300		96.4	33.8
Chromium, Total	30	36	180	1500	6800	6800	4.55		0.795	0.076	14.9		0.918	0.088	7.24		1.01	0.097	13.8		0.964	0.093
Cobalt, Total	NL	NL	NL	NL	NL	NL	4.18		1.59	0.132	5.55		1.84	0.152	4.03		2.01	0.167	6.08		1.93	0.16
Copper, Total	50	270	270	270	10000	10000	12.6		0.795	0.205	31.6		0.918	0.237	27.7		1.01	0.26	38.7		0.964	0.249
Iron, Total	NL	NL	NL	NL	NL	NL	5440		3.98	0.718	14100		4.59	0.829	13900		5.03	0.909	14400		4.82	0.871
Lead, Total	63	400	400	1000	3900	3900	15.8		3.98	0.213	63.8		4.59	0.246	26.7		5.03	0.27	53		4.82	0.258
Magnesium, Total	NL	NL	NL	NL	NL	NL	8260		7.95	1.22	10600		9.18	1.41	9120		10.1	1.55	7260		9.64	1.48
Manganese, Total	1600	2000	2000	10000	10000	10000	390		0.795	0.126	733		0.918	0.146	362		1.01	0.16	1360		0.964	0.153
Mercury, Total	0.18	0.81	0.81	2.8	5.7	5.7	0.068		0.066	0.043	0.074	J	0.078	0.051	0.272		0.085	0.055	0.056	J	0.078	0.051
Nickel, Total	30	140	310	310	10000	10000	7.96		1.99	0.192	13.6		2.29	0.222	8.62		2.52	0.244	15		2.41	0.233
Potassium, Total	NL	NL	NL	NL	NL	NL	535		199	11.4	553		229	13.2	492		252	14.5	550		241	13.9
Selenium, Total	3.9	36	180	1500	6800	6800	ND		1.59	0.205	0.964	J	1.84	0.237	0.825	J	2.01	0.26	1.36	J	1.93	0.249
Silver, Total	2	36	180	1500	6800	6800	ND		0.795	0.225	ND		0.918	0.26	ND		1.01	0.285	ND		0.964	0.273
Sodium, Total	NL	NL	NL	NL	NL	NL	170		159	2.5	153	J	184	2.89	211		201	3.17	81.4	J	193	3.04
Vanadium, Total	NL	NL	NL	NL	NL	NL	10.2		0.795	0.161	17.1		0.918	0.186	14.8		1.01	0.204	17.4		0.964	0.196
Zinc, Total	109	2200	10000	10000	10000	10000	65.5		3.98	0.233	123		4.59	0.269	59.5		5.03	0.295	118		4.82	0.282

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

NL = Not Listed.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 8
Metals Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-07, 0-2"				SS-08, 0-2"				TP-01, 3 to 5 FT.				TP-02, 2 to 3 FT.			
						LAB ID:	L2128854-07				L2128854-08				L2128854-09				L2128854-10			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
TOTAL METALS																						
Aluminum, Total	NL	NL	NL	NL	NL	NL	3780		8.5	2.3	2070		8.16	2.2	9840		9.51	2.57	794		10.1	2.73
Antimony, Total	NL	NL	NL	NL	NL	NL	0.502	J	4.25	0.323	1.3	J	4.08	0.31	ND		4.76	0.361	0.799	J	5.06	0.384
Arsenic, Total	13	16	16	16	16	16	3.48		0.85	0.177	13.9		0.816	0.17	3.36		0.951	0.198	**15.3**		1.01	0.21
Barium, Total	350	350	400	400	10000	10000	49.6		0.85	0.148	57		0.816	0.142	21.2		0.951	0.166	37.8		1.01	0.176
Beryllium, Total	7.2	14	72	590	2700	2700	0.204	J	0.425	0.028	0.196	J	0.408	0.027	0.342	J	0.476	0.031	ND		0.506	0.033
Cadmium, Total	2.5	2.5	4.3	9.3	60	60	0.34	J	0.85	0.083	0.645	J	0.816	0.08	0.875	J	0.951	0.093	**27.5**		1.01	0.099
Calcium, Total	NL	NL	NL	NL	NL	NL	110000		85	29.8	185000		81.6	28.6	9130		9.51	3.33	2740		10.1	3.54
Chromium, Total	30	36	180	1500	6800	6800	9.87		0.85	0.082	5.56		0.816	0.078	14.8		0.951	0.091	2.49		1.01	0.097
Cobalt, Total	NL	NL	NL	NL	NL	NL	3.89		1.7	0.141	20.1		1.63	0.135	8.12		1.9	0.158	2.34		2.02	0.168
Copper, Total	50	270	270	270	10000	10000	18.6		0.85	0.219	24.4		0.816	0.21	66.7		0.951	0.245	**3140**		1.01	0.261
Iron, Total	NL	NL	NL	NL	NL	NL	8790		4.25	0.768	22600		4.08	0.737	19400		4.76	0.859	3380		5.06	0.914
Lead, Total	63	400	400	1000	3900	3900	15.3		4.25	0.228	27.6		4.08	0.219	8.11		4.76	0.255	**478**		5.06	0.271
Magnesium, Total	NL	NL	NL	NL	NL	NL	24900		8.5	1.31	11800		8.16	1.26	7990		9.51	1.46	271		10.1	1.56
Manganese, Total	1600	2000	2000	10000	10000	10000	406		0.85	0.135	598		0.816	0.13	208		0.951	0.151	32.3		1.01	0.161
Mercury, Total	0.18	0.81	0.81	2.8	5.7	5.7	ND		0.071	0.047	ND		0.068	0.044	ND		0.08	0.052	ND		0.081	0.053
Nickel, Total	30	140	310	310	10000	10000	9.92		2.13	0.206	60		2.04	0.197	18.1		2.38	0.23	6.69		2.53	0.245
Potassium, Total	NL	NL	NL	NL	NL	NL	546		213	12.2	420		204	11.8	991		238	13.7	452		253	14.6
Selenium, Total	3.9	36	180	1500	6800	6800	1.2	J	1.7	0.219	1.74		1.63	0.21	0.533	J	1.9	0.245	ND		2.02	0.261
Silver, Total	2	36	180	1500	6800	6800	ND		0.85	0.241	ND		0.816	0.231	ND		0.951	0.269	0.405	J	1.01	0.286
Sodium, Total	NL	NL	NL	NL	NL	NL	141	J	170	2.68	261		163	2.57	70.2	J	190	3	29.9	J	202	3.19
Vanadium, Total	NL	NL	NL	NL	NL	NL	10.9		0.85	0.173	8.43		0.816	0.166	18.3		0.951	0.193	2.77		1.01	0.205
Zinc, Total	109	2200	10000	10000	10000	10000	59.1		4.25	0.249	71.3		4.08	0.239	412		4.76	0.279	**8260**		5.06	0.296

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

NL = Not Listed.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 8
Metals Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-03, 1.5 to 2.5 FT.				TP-04, 2 to 3 FT.				TP-05, 2 to 3 FT.				TP-06, 1.5 to 2.5 FT.			
						LAB ID:	L2128854-11				L2128854-12				L2128854-13				L2128854-14			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO															
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
TOTAL METALS																						
Aluminum, Total	NL	NL	NL	NL	NL	NL	860		9.76	2.64	2620		10.2	2.76	830		9.63	2.6	764		8.89	2.4
Antimony, Total	NL	NL	NL	NL	NL	NL	ND		4.88	0.371	1.88	J	5.11	0.388	2.86	J	4.81	0.366	0.702	J	4.45	0.338
Arsenic, Total	13	16	16	16	16	16	**14.5**		0.976	0.203	**29.2**		1.02	0.213	**338**		0.963	0.2	**16.8**		0.889	0.185
Barium, Total	350	350	400	400	10000	10000	21		0.976	0.17	93.6		1.02	0.178	159		0.963	0.168	154		0.889	0.155
Beryllium, Total	7.2	14	72	590	2700	2700	0.127	J	0.488	0.032	0.409	J	0.511	0.034	0.221	J	0.481	0.032	0.231	J	0.445	0.029
Cadmium, Total	2.5	2.5	4.3	9.3	60	60	1.34		0.976	0.096	0.746	J	1.02	0.1	1.14		0.963	0.094	0.347	J	0.889	0.087
Calcium, Total	NL	NL	NL	NL	NL	NL	3320		9.76	3.42	23800		10.2	3.58	4470		96.3	33.7	2390		8.89	3.11
Chromium, Total	30	36	180	1500	6800	6800	9.47		0.976	0.094	5.61		1.02	0.098	1.35		0.963	0.092	1.83		0.889	0.085
Cobalt, Total	NL	NL	NL	NL	NL	NL	1.46	J	1.95	0.162	5.44		2.04	0.17	3.98		1.92	0.16	1.31	J	1.78	0.148
Copper, Total	50	270	270	270	10000	10000	13.1		0.976	0.252	28.1		1.02	0.264	20		0.963	0.248	9.95		0.889	0.229
Iron, Total	NL	NL	NL	NL	NL	NL	3890		4.88	0.882	36600		5.11	0.923	57200		48.1	8.69	18600		4.45	0.803
Lead, Total	63	400	400	1000	3900	3900	40.4		4.88	0.262	57.8		5.11	0.274	53.1		4.81	0.258	13.1		4.45	0.238
Magnesium, Total	NL	NL	NL	NL	NL	NL	3070		9.76	1.5	1290		10.2	1.57	412		9.63	1.48	243		8.89	1.37
Manganese, Total	1600	2000	2000	10000	10000	10000	33.1		0.976	0.155	63.6		1.02	0.162	112		0.963	0.153	32.2		0.889	0.141
Mercury, Total	0.18	0.81	0.81	2.8	5.7	5.7	**0.257**		0.08	0.052	0.111		0.084	0.055	**0.443**		0.078	0.051	**0.217**		0.073	0.048
Nickel, Total	30	140	310	310	10000	10000	12.4		2.44	0.236	9.54		2.56	0.247	6.45		2.41	0.233	3.7		2.22	0.215
Potassium, Total	NL	NL	NL	NL	NL	NL	177	J	244	14.1	378		256	14.7	370		241	13.9	317		222	12.8
Selenium, Total	3.9	36	180	1500	6800	6800	2.77		1.95	0.252	2.01	J	2.04	0.264	**20.4**		1.92	0.248	1.57	J	1.78	0.229
Silver, Total	2	36	180	1500	6800	6800	ND		0.976	0.276	ND		1.02	0.289	ND		0.963	0.272	ND		0.889	0.252
Sodium, Total	NL	NL	NL	NL	NL	NL	37.4	J	195	3.08	155	J	204	3.22	511		192	3.03	148	J	178	2.8
Vanadium, Total	NL	NL	NL	NL	NL	NL	9.12		0.976	0.198	14.5		1.02	0.207	13.8		0.963	0.195	7.9		0.889	0.18
Zinc, Total	109	2200	10000	10000	10000	10000	**165**		4.88	0.286	42.7		5110	299	37.1		4810	282	7.77		4.45	0.26

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

NL = Not Listed.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 8
Metals Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-08, 1.5 to 3 FT.				TP-13 1.5 to 2.5 FT.			
						LAB ID:	L2128854-15				L2128854-16			
						COLLECTION DATE:	5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO								
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
TOTAL METALS														
Aluminum, Total	NL	NL	NL	NL	NL	NL	7990		9.65	2.6	2510		13.1	3.53
Antimony, Total	NL	NL	NL	NL	NL	NL	1.21	J	4.82	0.367	1.54	J	6.53	0.496
Arsenic, Total	13	16	16	16	16	16	**16.5**		0.965	0.201	11.3		1.31	0.272
Barium, Total	350	350	400	400	10000	10000	191		0.965	0.168	69.3		1.31	0.227
Beryllium, Total	7.2	14	72	590	2700	2700	0.531		0.482	0.032	0.196	J	0.653	0.043
Cadmium, Total	2.5	2.5	4.3	9.3	60	60	0.84	J	0.965	0.095	2.25		1.31	0.128
Calcium, Total	NL	NL	NL	NL	NL	NL	11000		9.65	3.38	56200		13.1	4.57
Chromium, Total	30	36	180	1500	6800	6800	8.46		0.965	0.093	4.73		1.31	0.125
Cobalt, Total	NL	NL	NL	NL	NL	NL	5.04		1.93	0.16	5.17		2.61	0.217
Copper, Total	50	270	270	270	10000	10000	45.3		0.965	0.249	**176**		1.31	0.337
Iron, Total	NL	NL	NL	NL	NL	NL	32300		4.82	0.871	8530		6.53	1.18
Lead, Total	63	400	400	1000	3900	3900	**83**		4.82	0.259	**218**		6.53	0.35
Magnesium, Total	NL	NL	NL	NL	NL	NL	1620		9.65	1.49	1380		13.1	2.01
Manganese, Total	1600	2000	2000	10000	10000	10000	394		0.965	0.153	186		1.31	0.208
Mercury, Total	0.18	0.81	0.81	2.8	5.7	5.7	**0.187**		0.077	0.05	0.08	J	0.108	0.07
Nickel, Total	30	140	310	310	10000	10000	14.4		2.41	0.234	11.7		3.26	0.316
Potassium, Total	NL	NL	NL	NL	NL	NL	567		241	13.9	339		326	18.8
Selenium, Total	3.9	36	180	1500	6800	6800	1.53	J	1.93	0.249	1.72	J	2.61	0.337
Silver, Total	2	36	180	1500	6800	6800	ND		0.965	0.273	ND		1.31	0.37
Sodium, Total	NL	NL	NL	NL	NL	NL	355		193	3.04	227	J	261	4.11
Vanadium, Total	NL	NL	NL	NL	NL	NL	26.2		0.965	0.196	8.62		1.31	0.265
Zinc, Total	109	2200	10000	10000	10000	10000	101		4820	283	**527**		6.53	0.383

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

NL = Not Listed.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 9
Soil Pesticide Data - C & S Supplemental Investigation, May 2021

							SS-03, 0-2"				SS-04, 0-2"				SS-05, 0-2"				SS-06, 0-2"			
						SAMPLE ID:																
						LAB ID:	L2128854-03				L2128854-04				L2128854-05				L2128854-06			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SURFACE SOIL				SURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
CHLORINATED HERBICIDES BY GC																						
MCPP	NL	NL	NL	NL	NL	NL	ND		3.4	1.07	ND		3.94	1.24	ND		4.41	1.39	ND		4.11	1.3
MCPA	NL	NL	NL	NL	NL	NL	ND		3.4	0.961	ND		3.94	1.11	ND		4.41	1.25	ND		4.11	1.16
Dalapon	NL	NL	NL	NL	NL	NL	ND		0.034	0.0111	ND		0.0394	0.0129	ND		0.0441	0.0144	ND		0.0411	0.0134
Dicamba	NL	NL	NL	NL	NL	NL	ND		0.034	0.00571	ND		0.0394	0.00661	ND		0.0441	0.00741	ND		0.0411	0.00691
Dichloroprop	NL	NL	NL	NL	NL	NL	ND		0.034	0.00975	ND		0.0394	0.0113	ND		0.0441	0.0126	ND		0.0411	0.0118
2,4-D	NL	NL	NL	NL	NL	NL	ND		0.17	0.0107	ND		0.197	0.0124	ND		0.22	0.0139	ND		0.206	0.013
2,4-DB	NL	NL	NL	NL	NL	NL	ND		0.17	0.00873	ND		0.197	0.0101	ND		0.22	0.0113	ND		0.206	0.0106
2,4,5-T	NL	NL	NL	NL	NL	NL	ND		0.17	0.00526	ND		0.197	0.0061	ND		0.22	0.00683	ND		0.206	0.00637
2,4,5-TP (Silvex)	3.8	58	100	500	1000	3.8	ND		0.17	0.00452	ND		0.197	0.00524	ND		0.22	0.00586	ND		0.206	0.00547
ORGANOCHLORINE PESTICIDES BY GC																						
Delta-BHC	0.04	100	100	500	1000	0.25	ND		0.00776	0.00152	ND		0.00918	0.0018	ND		0.0103	0.00201	ND		0.00968	0.0019
Lindane	0.1	0.28	1.3	9.2	23	0.1	ND		0.00324	0.00145	ND		0.00382	0.00171	ND		0.00428	0.00191	ND		0.00403	0.0018
Alpha-BHC	0.02	0.097	0.48	3.4	6.8	0.02	ND		0.00324	0.000919	ND		0.00382	0.00108	ND		0.00428	0.00121	ND		0.00403	0.00114
Beta-BHC	0.0036	0.072	0.36	3	14	0.09	ND		0.00776	0.00294	ND		0.00918	0.00348	ND		0.0103	0.00389	ND		0.00968	0.00367
Heptachlor	0.042	0.42	2.1	15	29	0.38	ND		0.00388	0.00174	ND		0.00459	0.00206	ND		0.00513	0.0023	ND		0.00484	0.00217
Aldrin	0.005	0.019	0.097	0.68	1.4	0.19	ND		0.00776	0.00273	ND		0.00918	0.00323	ND		0.0103	0.00361	ND		0.00968	0.00341
Heptachlor epoxide	NL	NL	NL	NL	NL	NL	ND		0.0146	0.00437	ND		0.0172	0.00516	ND		0.0192	0.00577	ND		0.0181	0.00544
Endrin	0.014	2.2	11	89	410	0.06	ND		0.00324	0.00133	ND		0.00382	0.00157	ND		0.00428	0.00175	ND		0.00403	0.00165
Endrin aldehyde	NL	NL	NL	NL	NL	NL	ND		0.00971	0.0034	ND		0.0115	0.00401	ND		0.0128	0.00449	ND		0.0121	0.00423
Endrin ketone	NL	NL	NL	NL	NL	NL	ND		0.00776	0.002	ND		0.00918	0.00236	ND		0.0103	0.00264	ND		0.00968	0.00249
Dieldrin	0.005	0.039	0.2	1.4	2.8	0.1	ND		0.00485	0.00243	ND		0.00574	0.00287	ND		0.00642	0.00321	ND		0.00605	0.00302
4,4'-DDE	0.0033	1.8	8.9	62	120	17	ND		0.00776	0.0018	**0.0402**		0.00918	0.00212	**0.0298**		0.0103	0.00237	ND		0.00968	0.00224
4,4'-DDD	0.0033	2.6	13	92	180	14	ND		0.00776	0.00277	ND		0.00918	0.00327	ND		0.0103	0.00366	ND		0.00968	0.00345
4,4'-DDT	0.0033	1.7	7.9	47	94	136	ND		0.0146	0.00624	**0.0494**		0.0172	0.00738	**0.0321**		0.0192	0.00825	ND		0.0181	0.00778
Endosulfan I	2.4	4.8	24	200	920	102	ND		0.00776	0.00183	ND		0.00918	0.00217	ND		0.0103	0.00242	ND		0.00968	0.00229
Endosulfan II	2.4	4.8	24	200	920	102	ND		0.00776	0.0026	ND		0.00918	0.00307	ND		0.0103	0.00343	ND		0.00968	0.00323
Endosulfan sulfate	2.4	4.8	24	200	920	1000	ND		0.00324	0.00154	ND		0.00382	0.00182	ND		0.00428	0.00204	ND		0.00403	0.00192
Methoxychlor	NL	NL	NL	NL	NL	NL	ND		0.0146	0.00453	ND		0.0172	0.00535	ND		0.0192	0.00599	ND		0.0181	0.00565
Toxaphene	NL	NL	NL	NL	NL	NL	ND		0.146	0.0408	ND		0.172	0.0482	ND		0.192	0.0539	ND		0.181	0.0508
cis-Chlordane	NL	NL	NL	NL	NL	NL	ND		0.00971	0.0027	ND		0.0115	0.0032	ND		0.0128	0.00358	ND		0.0121	0.00337
trans-Chlordane	NL	NL	NL	NL	NL	NL	ND		0.00971	0.00256	ND		0.0115	0.00303	ND		0.0128	0.00339	ND		0.0121	0.00319
Chlordane	0.0094	0.91	4.2	24	47	2.9	ND		0.0647	0.0257	ND		0.0765	0.0304	ND		0.0855	0.034	ND		0.0807	0.0321

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

NL = Not Listed.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in RED indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 9
Soil Pesticide Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-07, 0-2"				SS-08, 0-2"			
						LAB ID:	L2128854-07				L2128854-08			
						COLLECTION DATE:	5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO								
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
CHLORINATED HERBICIDES BY GC														
MCPP	NL	NL	NL	NL	NL	NL	ND		3.66	1.15	ND		3.52	1.11
MCPA	NL	NL	NL	NL	NL	NL	ND		3.66	1.04	ND		3.52	0.996
Dalapon	NL	NL	NL	NL	NL	NL	ND		0.0366	0.012	ND		0.0352	0.0115
Dicamba	NL	NL	NL	NL	NL	NL	ND		0.0366	0.00615	ND		0.0352	0.00591
Dichloroprop	NL	NL	NL	NL	NL	NL	ND		0.0366	0.0105	ND		0.0352	0.0101
2,4-D	NL	NL	NL	NL	NL	NL	ND		0.183	0.0115	ND		0.176	0.0111
2,4-DB	NL	NL	NL	NL	NL	NL	ND		0.183	0.00941	ND		0.176	0.00904
2,4,5-T	NL	NL	NL	NL	NL	NL	ND		0.183	0.00568	ND		0.176	0.00545
2,4,5-TP (Silvex)	3.8	58	100	500	1000	3.8	ND		0.183	0.00487	ND		0.176	0.00468
ORGANOCHLORINE PESTICIDES BY GC														
Delta-BHC	0.04	100	100	500	1000	0.25	ND		0.00851	0.00167	ND		0.0083	0.00162
Lindane	0.1	0.28	1.3	9.2	23	0.1	ND		0.00354	0.00158	ND		0.00346	0.00154
Alpha-BHC	0.02	0.097	0.48	3.4	6.8	0.02	ND		0.00354	0.00101	ND		0.00346	0.000982
Beta-BHC	0.0036	0.072	0.36	3	14	0.09	ND		0.00851	0.00323	ND		0.0083	0.00315
Heptachlor	0.042	0.42	2.1	15	29	0.38	ND		0.00425	0.00191	ND		0.00415	0.00186
Aldrin	0.005	0.019	0.097	0.68	1.4	0.19	ND		0.00851	0.003	ND		0.0083	0.00292
Heptachlor epoxide	NL	NL	NL	NL	NL	NL	ND		0.016	0.00479	ND		0.0156	0.00467
Endrin	0.014	2.2	11	89	410	0.06	ND		0.00354	0.00145	ND		0.00346	0.00142
Endrin aldehyde	NL	NL	NL	NL	NL	NL	ND		0.0106	0.00372	ND		0.0104	0.00363
Endrin ketone	NL	NL	NL	NL	NL	NL	ND		0.00851	0.00219	ND		0.0083	0.00214
Dieldrin	0.005	0.039	0.2	1.4	2.8	0.1	ND		0.00532	0.00266	ND		0.00519	0.00259
4,4'-DDE	0.0033	1.8	8.9	62	120	17	ND		0.00851	0.00197	ND		0.0083	0.00192
4,4'-DDD	0.0033	2.6	13	92	180	14	ND		0.00851	0.00304	ND		0.0083	0.00296
4,4'-DDT	0.0033	1.7	7.9	47	94	136	ND		0.016	0.00684	ND		0.0156	0.00667
Endosulfan I	2.4	4.8	24	200	920	102	ND		0.00851	0.00201	ND		0.0083	0.00196
Endosulfan II	2.4	4.8	24	200	920	102	ND		0.00851	0.00284	ND		0.0083	0.00277
Endosulfan sulfate	2.4	4.8	24	200	920	1000	ND		0.00354	0.00169	ND		0.00346	0.00164
Methoxychlor	NL	NL	NL	NL	NL	NL	ND		0.016	0.00496	ND		0.0156	0.00484
Toxaphene	NL	NL	NL	NL	NL	NL	ND		0.16	0.0447	ND		0.156	0.0436
cis-Chlordane	NL	NL	NL	NL	NL	NL	ND		0.0106	0.00296	ND		0.0104	0.00289
trans-Chlordane	NL	NL	NL	NL	NL	NL	ND		0.0106	0.00281	ND		0.0104	0.00274
Chlordane	0.0094	0.91	4.2	24	47	2.9	ND		0.0709	0.0282	ND		0.0692	0.0275

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

NL = Not Listed.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in RED indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 10

Soil PCB Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-01, 0-2"				SS-02, 0-2"				SS-03, 0-2"				SS-04, 0-2"			
						LAB ID:	L2128854-01				L2128854-02				L2128854-03				L2128854-04			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SURFACE SOIL				SURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO															
ANALYTE							Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
POLYCHLORINATED BIPHENYLS BY GC																						
Aroclor 1016	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00346	ND		0.0356	0.00316	ND		0.033	0.00293	ND		0.0387	0.00344
Aroclor 1221	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.0039	ND		0.0356	0.00356	ND		0.033	0.00331	ND		0.0387	0.00388
Aroclor 1232	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00826	ND		0.0356	0.00754	ND		0.033	0.007	ND		0.0387	0.0082
Aroclor 1242	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00525	ND		0.0356	0.00479	ND		0.033	0.00445	ND		0.0387	0.00522
Aroclor 1248	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00584	ND		0.0356	0.00534	ND		0.033	0.00496	ND		0.0387	0.0058
Aroclor 1254	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00426	0.158		0.0356	0.00389	ND		0.033	0.00361	ND		0.0387	0.00423
Aroclor 1260	0,1	1.0	1.0	1.0	25	3.2	0.22		0.0389	0.0072	ND		0.0356	0.00657	ND		0.033	0.0061	0.0197	J	0.0387	0.00715
Aroclor 1262	0.1	1.0	1.0	1.0	25	3.2	ND		0.0389	0.00494	ND		0.0356	0.00452	ND		0.033	0.0042	ND		0.0387	0.00491
Aroclor 1268	0.1	1.0	1.0	1.0	25	3.2	0.228		0.0389	0.00403	ND		0.0356	0.00368	ND		0.033	0.00342	ND		0.0387	0.00401
PCBs, Total	0.1	1.0	1.0	1.0	25	3.2	0.448		0.0389	0.00346	0.158		0.0356	0.00316	ND		0.033	0.00293	0.0197	J	0.0387	0.00344

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 10

Soil PCB Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	SS-05, 0-2"				SS-06, 0-2"				SS-07, 0-2"				SS-08, 0-2"			
						LAB ID:	L2128854-05				L2128854-06				L2128854-07				L2128854-08			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SURFACE SOIL				SURFACE SOIL				SURFACE SOIL				SURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
POLYCHLORINATED BIPHENYLS BY GC																						
Aroclor 1016	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00379	ND		0.0397	0.00352	ND		0.0366	0.00325	ND		0.0352	0.00312
Aroclor 1221	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00427	ND		0.0397	0.00398	ND		0.0366	0.00366	ND		0.0352	0.00352
Aroclor 1232	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00904	ND		0.0397	0.00841	ND		0.0366	0.00775	ND		0.0352	0.00745
Aroclor 1242	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00575	ND		0.0397	0.00535	ND		0.0366	0.00493	ND		0.0352	0.00474
Aroclor 1248	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.0064	ND		0.0397	0.00595	ND		0.0366	0.00548	ND		0.0352	0.00527
Aroclor 1254	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00467	0.408		0.0397	0.00434	ND		0.0366	0.004	0.00399	J	0.0352	0.00385
Aroclor 1260	0,1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00788	ND		0.0397	0.00733	ND		0.0366	0.00676	ND		0.0352	0.0065
Aroclor 1262	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00542	ND		0.0397	0.00504	ND		0.0366	0.00464	ND		0.0352	0.00446
Aroclor 1268	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00442	ND		0.0397	0.00411	ND		0.0366	0.00379	ND		0.0352	0.00364
PCBs, Total	0.1	1.0	1.0	1.0	25	3.2	ND		0.0427	0.00379	0.408		0.0397	0.00352	ND		0.0366	0.00325	0.00399	J	0.0352	0.00312

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 10

Soil PCB Data - C & S Supplemental Investigation, May 2021

							SAMPLE ID:	TP-01, 3 to 5 FT.				TP-02, 2 to 3 FT.				TP-03, 1.5 to 2.5 FT.				TP-04, 2 to 3 FT.			
							LAB ID:	L2128854-09				L2128854-10				L2128854-11				L2128854-12			
							COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
							SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																		
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
POLYCHLORINATED BIPHENYLS BY GC																						
Aroclor 1016	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00354	ND		0.0419	0.00372	ND		0.0404	0.00359	ND		0.042	0.00373
Aroclor 1221	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.004	ND		0.0419	0.0042	ND		0.0404	0.00405	ND		0.042	0.0042
Aroclor 1232	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00846	ND		0.0419	0.00888	ND		0.0404	0.00857	ND		0.042	0.0089
Aroclor 1242	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00538	ND		0.0419	0.00565	ND		0.0404	0.00545	ND		0.042	0.00566
Aroclor 1248	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00598	ND		0.0419	0.00628	ND		0.0404	0.00607	ND		0.042	0.0063
Aroclor 1254	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00436	ND		0.0419	0.00458	ND		0.0404	0.00442	ND		0.042	0.00459
Aroclor 1260	0,1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00737	ND		0.0419	0.00774	ND		0.0404	0.00747	ND		0.042	0.00776
Aroclor 1262	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00506	ND		0.0419	0.00532	ND		0.0404	0.00514	ND		0.042	0.00533
Aroclor 1268	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00413	ND		0.0419	0.00434	ND		0.0404	0.00419	ND		0.042	0.00435
PCBs, Total	0.1	1.0	1.0	1.0	25	3.2	ND		0.0399	0.00354	ND		0.0419	0.00372	ND		0.0404	0.00359	ND		0.042	0.00373

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 10

Soil PCB Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-05, 2 to 3 FT.				TP-06, 1.5 to 2.5 FT.				TP-08, 1.5 to 3 FT.				TP-13 1.5 to 2.5 FT.			
						LAB ID:	L2128854-13				L2128854-14				L2128854-15				L2128854-16			
						COLLECTION DATE:	5/28/2021				5/28/2021				5/28/2021				5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL				SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO																
ANALYTE							**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
POLYCHLORINATED BIPHENYLS BY GC																						
Aroclor 1016	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.0035	ND		0.0367	0.00326	ND		0.0406	0.0036	ND		0.0556	0.00494
Aroclor 1221	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00395	ND		0.0367	0.00368	ND		0.0406	0.00406	ND		0.0556	0.00557
Aroclor 1232	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00836	ND		0.0367	0.00779	ND		0.0406	0.0086	ND		0.0556	0.0118
Aroclor 1242	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00532	ND		0.0367	0.00495	ND		0.0406	0.00547	ND		0.0556	0.00749
Aroclor 1248	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00591	ND		0.0367	0.00551	ND		0.0406	0.00608	ND		0.0556	0.00834
Aroclor 1254	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00431	ND		0.0367	0.00402	ND		0.0406	0.00444	ND		0.0556	0.00608
Aroclor 1260	0,1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00729	ND		0.0367	0.00679	0.0187	J	0.0406	0.0075	ND		0.0556	0.0103
Aroclor 1262	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00501	ND		0.0367	0.00467	ND		0.0406	0.00515	ND		0.0556	0.00706
Aroclor 1268	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.00408	ND		0.0367	0.00381	ND		0.0406	0.0042	ND		0.0556	0.00576
PCBs, Total	0.1	1.0	1.0	1.0	25	3.2	ND		0.0394	0.0035	ND		0.0367	0.00326	0.0187	J	0.0406	0.0036	ND		0.0556	0.00494

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Table 10

Soil PCB Data - C & S Supplemental Investigation, May 2021

						SAMPLE ID:	TP-13 1.5 to 2.5 FT.			
						LAB ID:	L2128854-16 R1			
						COLLECTION DATE:	5/28/2021			
						SAMPLE MATRIX:	SUBSURFACE SOIL			
	6 NYCRR Part 375 Unrestricted Use SCO	6 NYCRR Part 375 Residential SCO	6 NYCRR Part 375 Restricted Residential SCO	6 NYCRR Part 375 Commercial SCO	6 NYCRR Part 375 Industrial SCO	6 NYCRR Part 375 Protection of Groundwater SCO				
ANALYTE							**Conc**	**Q**	**RL**	**MDL**
POLYCHLORINATED BIPHENYLS BY GC										
Aroclor 1016	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00498
Aroclor 1221	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00562
Aroclor 1232	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.0119
Aroclor 1242	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00756
Aroclor 1248	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00841
Aroclor 1254	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00613
Aroclor 1260	0,1	1.0	1.0	1.0	25	3.2	ND		0.056	0.0104
Aroclor 1262	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00712
Aroclor 1268	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00581
PCBs, Total	0.1	1.0	1.0	1.0	25	3.2	ND		0.056	0.00498

NOTES:

All values are in mg/Kg.

SCO = Soil Cleanup Objective established in 6 NYCRR Part 375.

ND = Not Detected.

Yellow Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Unrestricted Use SCO.

Pink Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Residential SCO.

Green Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Restricted Residential SCO.

Blue Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Commercial SCO.

Purple Highlighted Cells indicate compound concentrations above 6 NYCRR Part 375 Industrial SCO.

Cells outlined in **RED** indicate compound concentrations above 6 NYCRR Part 375 Protection of Groundwater SCO.

Appendices

Appendix A

Metes and Bounds

Appendix A
Metes and Bounds Description

***BEGINNING AT A POINT**, said point being the following courses and distances from the intersection of the westerly line of Interstate Route 81 and the northerly line of Park Street, North28 degrees 23 minutes 00 seconds East a distance of 11.58' & North 03 degrees 15 minutes 40 seconds West for a distance of 102.78 feet to the northerly line of the City of Syracuse and the southerly line of the Town of Salina.*

***THENCE** North 58 degrees 08 minutes 30 seconds West for a distance of 265.25 feet along the southerly line of the Town of Salina to a point;*

***THENCE** North 42 degrees 19 minutes 10 seconds West for a distance of 139.24 feet along the southerly line of the Town of Salina to a point on the northeasterly line of Buckley Road;*

***THENCE** South 47 degrees 32 minutes 35 seconds East for a distance of 93.97 feet along the easterly line of the town of Salina to a point;*

***THENCE** North 20 degrees 00 minutes 00 seconds West for a distance of 8.87 feet to a point;*

***THENCE** North 26 degrees 45 minutes 00 seconds West for a distance of 247.42 feet to a point;*

***THENCE** North 01 degrees 09 minutes 02 seconds West for a distance of 17.16 feet to a point;*

***THENCE** North 01 degrees 51 minutes 38 seconds East for a distance of 409.02 feet along the northeasterly line of Buckley Road to a point;*

***THENCE** South 59 degrees 53 minutes 50 seconds East for a distance of 235.97 feet to a point;*

***THENCE** North 29 degrees 32 minutes 00 seconds East for a distance of 350.27 feet to a point;*

***THENCE** South 58 degrees 56 minutes 10 seconds East for a distance of 488.12 feet to a point on the westerly line of Interstate Route 81;*

***THENCE** South 14 degrees 19 minutes 35 seconds West for a distance of 210.22 feet along the westerly line of Interstate Route 81 to a point; 3*

***THENCE** South 20 degrees 05 minutes 22 seconds West for a distance of 300.19 feet continuing along the westerly line of Interstate Route 81 to a point;*

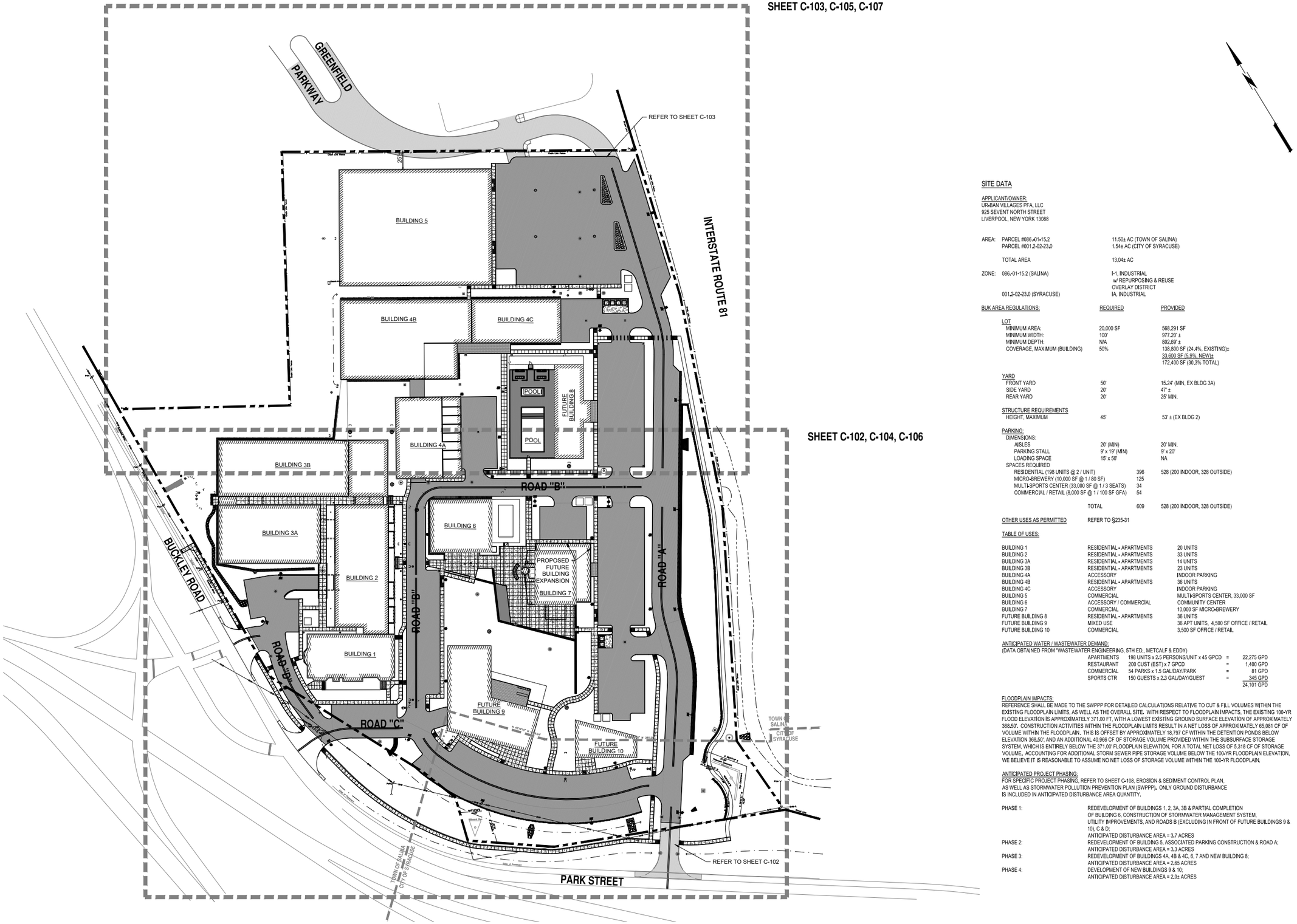
***THENCE** South 27 degrees 51 minutes 43 seconds West for a distance of 320.89 feet continuing along the westerly line of Interstate Route 81 **TO THE POINT AND PLACE OF BEGINNING**.*

Together with and subject to covenants, easements, and restrictions of record.

Said property contains 11.68 acres more or less.

Appendix B

Development Plan



SHEET C-103, C-105, C-107

SHEET C-102, C-104, C-106

SITE DATA

APPLICANT/OWNER:
UR-BAN VILLAGES PFA, LLC
925 SEVENT NORTH STREET
LIVERPOOL, NEW YORK 13088

AREA:	PARCEL #086.-01-15.2	11.50± AC (TOWN OF SALINA)	
	PARCEL #001.2-02-23.0	1.54± AC (CITY OF SYRACUSE)	
	TOTAL AREA	13.04± AC	
ZONE:	086.-01-15.2 (SALINA)	I-1, INDUSTRIAL w/ REPURPOSING & REUSE OVERLAY DISTRICT	
	001.2-02-23.0 (SYRACUSE)	IA, INDUSTRIAL	

BUK AREA REGULATIONS:	REQUIRED	PROVIDED
LOT		
MINIMUM AREA:	20,000 SF	568,291 SF
MINIMUM WIDTH:	100'	977.20' ±
MINIMUM DEPTH:	N/A	802.69' ±
COVERAGE, MAXIMUM (BUILDING)	50%	138,800 SF (24.4%, EXISTING)± 33,600 SF (5.9%, NEW)± 172,400 SF (30.3% TOTAL)
YARD		
FRONT YARD	50'	15.24' (MIN, EX BLDG 3A)
SIDE YARD	20'	47' ±
REAR YARD	20'	25' MIN.
STRUCTURE REQUIREMENTS		
HEIGHT, MAXIMUM	45'	53' ± (EX BLDG 2)
PARKING:		
DIMENSIONS:		
AISLES	20' (MIN)	20' MIN.
PARKING STALL	9' x 19' (MIN)	9' x 20'
LOADING SPACE	15' x 50'	NA
SPACES REQUIRED		
RESIDENTIAL (198 UNITS @ 2 / UNIT)	396	528 (200 INDOOR, 328 OUTSIDE)
MICRO-BREWERY (10,000 SF @ 1 / 80 SF)	125	
MULTI-SPORTS CENTER (33,000 SF @ 1 / 3 SEATS)	34	
COMMERCIAL / RETAIL (8,000 SF @ 1 / 100 SF GFA)	54	
TOTAL	609	528 (200 INDOOR, 328 OUTSIDE)

OTHER USES AS PERMITTED — REFER TO §235-31

TABLE OF USES:

BUILDING 1	RESIDENTIAL - APARTMENTS	20 UNITS
BUILDING 2	RESIDENTIAL - APARTMENTS	33 UNITS
BUILDING 3A	RESIDENTIAL - APARTMENTS	14 UNITS
BUILDING 3B	RESIDENTIAL - APARTMENTS	23 UNITS
BUILDING 4A	ACCESSORY	INDOOR PARKING
BUILDING 4B	RESIDENTIAL - APARTMENTS	36 UNITS
BUILDING 4C	ACCESSORY	INDOOR PARKING
BUILDING 5	COMMERCIAL	MULTI-SPORTS CENTER, 33,000 SF
BUILDING 6	ACCESSORY / COMMERCIAL	COMMUNITY CENTER
BUILDING 7	COMMERCIAL	10,000 SF MICRO-BREWERY
FUTURE BUILDING 8	RESIDENTIAL - APARTMENTS	36 UNITS
FUTURE BUILDING 9	MIXED USE	36 APT UNITS, 4,500 SF OFFICE / RETAIL
FUTURE BUILDING 10	COMMERCIAL	3,500 SF OFFICE / RETAIL

ANTICIPATED WATER / WASTEWATER DEMAND:
(DATA OBTAINED FROM "WASTEWATER ENGINEERING, 5TH ED., METCALF & EDDY)

APARTMENTS	198 UNITS x 2.5 PERSONS/UNIT x 45 GPCD	=	22,275 GPD
RESTAURANT	200 CUST (EST) x 7 GPCD	=	1,400 GPD
COMMERCIAL	54 PARKS x 1.5 GAL/DAY/PARK	=	81 GPD
SPORTS CTR	150 GUESTS x 2.3 GALDAY/GUEST	=	345 GPD
			24,101 GPD

FLOODPLAIN IMPACTS:
REFERENCE SHALL BE MADE TO THE SWPPP FOR DETAILED CALCULATIONS RELATIVE TO CUT & FILL VOLUMES WITHIN THE EXISTING FLOODPLAIN LIMITS, AS WELL AS THE OVERALL SITE. WITH RESPECT TO FLOODPLAIN IMPACTS, THE EXISTING 100-YR FLOOD ELEVATION IS APPROXIMATELY 371.00 FT, WITH A LOWEST EXISTING GROUND SURFACE ELEVATION OF APPROXIMATELY 368.50'. CONSTRUCTION ACTIVITIES WITHIN THE FLOODPLAIN LIMITS RESULT IN A NET LOSS OF APPROXIMATELY 65,081 CF OF VOLUME WITHIN THE FLOODPLAIN. THIS IS OFFSET BY APPROXIMATELY 18,797 CF WITHIN THE DETENTION PONDS BELOW ELEVATION 368.50', AND AN ADDITIONAL 40,966 CF OF STORAGE VOLUME PROVIDED WITHIN THE SUBSURFACE STORAGE SYSTEM, WHICH IS ENTIRELY BELOW THE 371.00' FLOODPLAIN ELEVATION, FOR A TOTAL NET LOSS OF 5,318 CF OF STORAGE VOLUME. ACCOUNTING FOR ADDITIONAL STORM SEWER PIPE STORAGE VOLUME BELOW THE 100-YR FLOODPLAIN ELEVATION, WE BELIEVE IT IS REASONABLE TO ASSUME NO NET LOSS OF STORAGE VOLUME WITHIN THE 100-YR FLOODPLAIN.

ANTICIPATED PROJECT PHASING:
FOR SPECIFIC PROJECT PHASING, REFER TO SHEET C-108, EROSION & SEDIMENT CONTROL PLAN, AS WELL AS STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ONLY GROUND DISTURBANCE IS INCLUDED IN ANTICIPATED DISTURBANCE AREA QUANTITY.

PHASE 1:	REDEVELOPMENT OF BUILDINGS 1, 2, 3A, 3B & PARTIAL COMPLETION OF BUILDING 6, CONSTRUCTION OF STORMWATER MANAGEMENT SYSTEM, UTILITY IMPROVEMENTS, AND ROADS B (EXCLUDING IN FRONT OF FUTURE BUILDINGS 9 & 10), C & D; ANTICIPATED DISTURBANCE AREA = 3.7 ACRES
PHASE 2:	REDEVELOPMENT OF BUILDING 5, ASSOCIATED PARKING CONSTRUCTION & ROAD A; ANTICIPATED DISTURBANCE AREA = 3.3 ACRES
PHASE 3:	REDEVELOPMENT OF BUILDINGS 4A, 4B & 4C, 6, 7 AND NEW BUILDING 8; ANTICIPATED DISTURBANCE AREA = 2.65 ACRES
PHASE 4:	DEVELOPMENT OF NEW BUILDINGS 9 & 10; ANTICIPATED DISTURBANCE AREA = 2.0± ACRES

A1 OVERALL SITE PLAN
SCALE: 1" = 60-0"

0 60 120

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · LICENSED PROFESSIONAL ENGINEER · 076781

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
3	04.07.25	REVIEW COMMENTS
2	03.04.25	REVIEW COMMENTS
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

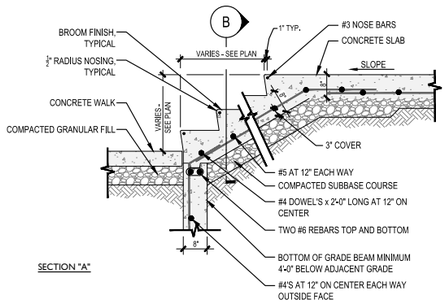
NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CIVIL

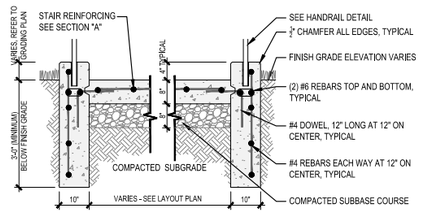
OVERALL SITE PLAN

C-101

Copyright ©



SECTION "A"

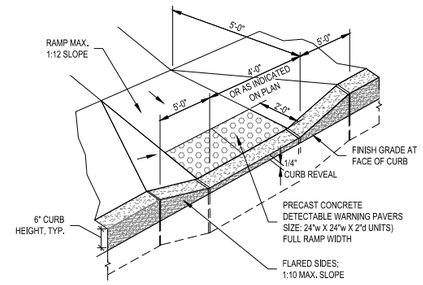


SECTION "B"

NOTE:
PROVIDE 2" MINIMUM COVER FOR ALL REINFORCING BARS UNLESS OTHERWISE NOTED

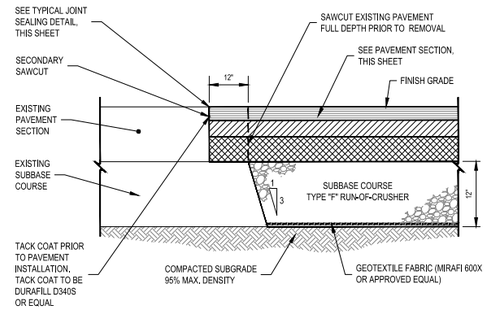
D1 CONCRETE STAIRS DETAIL

SCALE: NOT TO SCALE



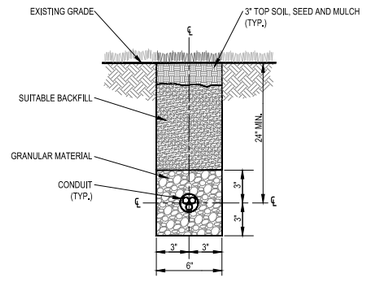
D3 TYPICAL CURB CUT DETAIL

SCALE: NOT TO SCALE



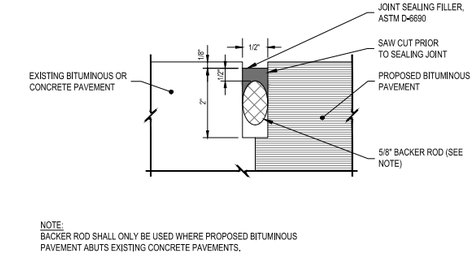
D4 KEYING DETAIL @ EXISTING PAVEMENT

SCALE: NOT TO SCALE



C1 CONDUIT TRENCHING DETAIL

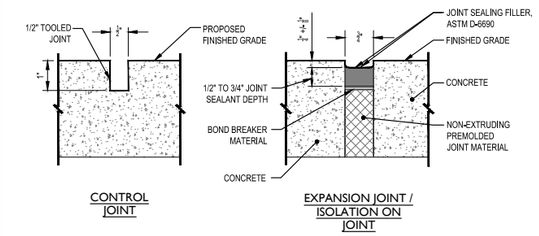
SCALE: NOT TO SCALE



NOTE:
BACKER ROD SHALL ONLY BE USED WHERE PROPOSED BITUMINOUS PAVEMENT ABUTS EXISTING CONCRETE PAVEMENTS.

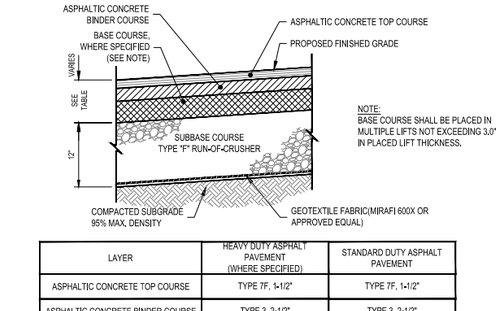
C2 JOINT SEALING DETAIL

SCALE: NOT TO SCALE



C3 CONCRETE JOINT DETAILS

SCALE: NOT TO SCALE

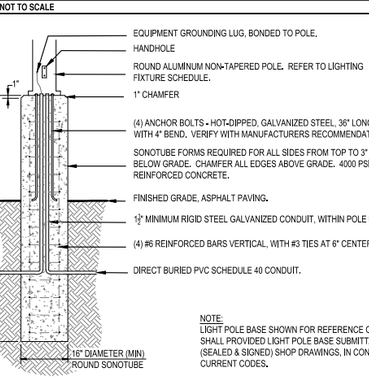


NOTE:
BASE COURSE SHALL BE PLACED IN MULTIPLE LIFTS NOT EXCEEDING 3.0" IN PLACED LIFT THICKNESS.

LAYER	HEAVY DUTY ASPHALT PAVEMENT (WHERE SPECIFIED)	STANDARD DUTY ASPHALT PAVEMENT
ASPHALTIC CONCRETE TOP COURSE	TYPE 7F, 1-1/2"	TYPE 7F, 1-1/2"
ASPHALTIC CONCRETE BINDER COURSE	TYPE 3, 2-1/2"	TYPE 3, 2-1/2"
BASE COURSE	TYPE 1 ASPHALTIC CONCRETE, 6" (SEE NOTE)	N/A

C4 TYPICAL ASPHALT PAVEMENT SECTION DETAIL

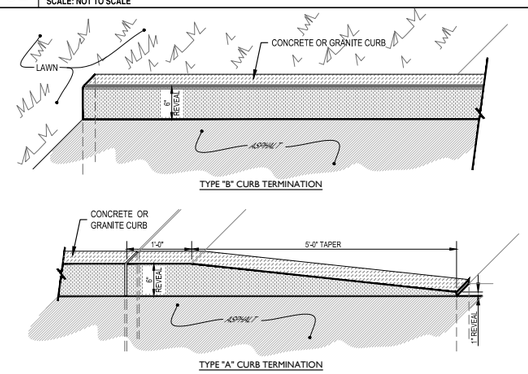
SCALE: NOT TO SCALE



NOTE:
LIGHT POLE BASE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL PROVIDED LIGHT POLE BASE SUBMITTAL WITH ENGINEERED (SEALED & SIGNED) SHOP DRAWINGS, IN CONFORMANCE WITH CURRENT CODES.

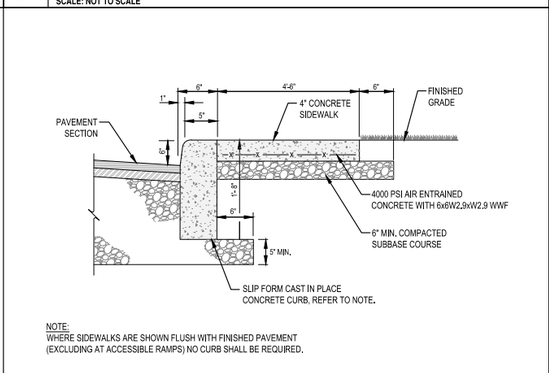
B1 SITE LIGHTING POLE BASE DETAIL

SCALE: NOT TO SCALE



B2 CURB TERMINATIONS

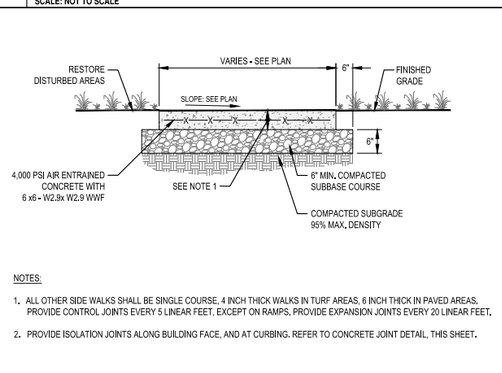
SCALE: NOT TO SCALE



NOTE:
WHERE SIDEWALKS ARE SHOWN FLUSH WITH FINISHED PAVEMENT (EXCLUDING AT ACCESSIBLE RAMPS) NO CURB SHALL BE REQUIRED.

B3 CONCRETE CURB DETAIL WITH INTEGRAL SIDEWALK

SCALE: NOT TO SCALE

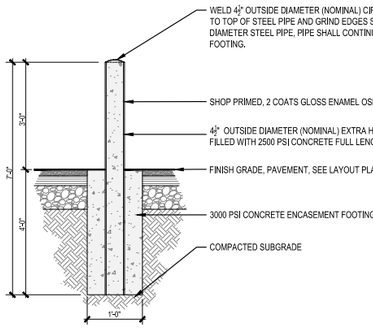


NOTES:

1. ALL OTHER SIDE WALKS SHALL BE SINGLE COURSE, 4 INCH THICK WALKS IN TURF AREAS, 6 INCH THICK IN PAVED AREAS. PROVIDE CONTROL JOINTS EVERY 5 LINEAR FEET, EXCEPT ON RAMPS. PROVIDE EXPANSION JOINTS EVERY 20 LINEAR FEET.
2. PROVIDE ISOLATION JOINTS ALONG BUILDING FACE, AND AT CURBING. REFER TO CONCRETE JOINT DETAIL, THIS SHEET.

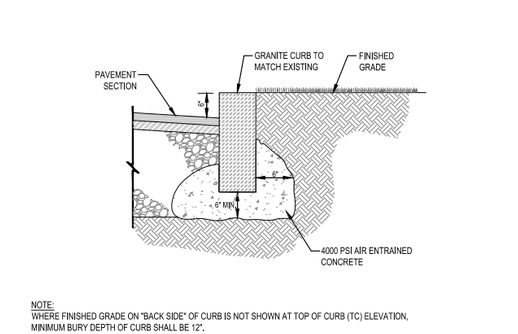
B4 TWO-COURSE CONCRETE SIDEWALK DETAIL

SCALE: NOT TO SCALE



A1 STEEL PIPE BOLLARD DETAIL

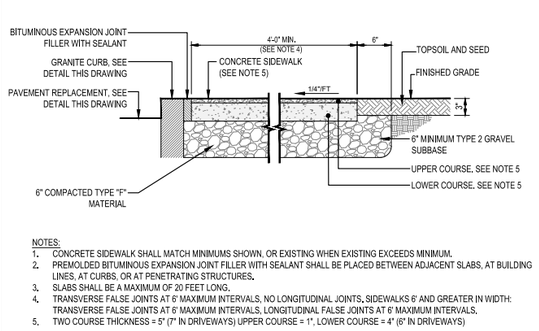
SCALE: NOT TO SCALE



NOTE:
WHERE FINISHED GRADE ON "BACK SIDE" OF CURB IS NOT SHOWN AT TOP OF CURB (TC) ELEVATION, MINIMUM BURY DEPTH OF CURB SHALL BE 12".

A2 GRANITE CURB DETAIL

SCALE: NOT TO SCALE



NOTES:

1. CONCRETE SIDEWALK SHALL MATCH MINIMUMS SHOWN, OR EXISTING WHEN EXISTING EXCEEDS MINIMUM.
2. PREMOLDED BITUMINOUS EXPANSION JOINT FILLER WITH SEALANT SHALL BE PLACED BETWEEN ADJACENT SLABS, AT BUILDING LINES, AT CURBS, OR AT PENETRATING STRUCTURES.
3. SLABS SHALL BE A MAXIMUM OF 20 FEET LONG.
4. TRANSVERSE FALSE JOINTS AT 6' MAXIMUM INTERVALS, NO LONGITUDINAL JOINTS, SIDEWALKS 6' AND GREATER IN WIDTH: TRANSVERSE FALSE JOINTS AT 6' MAXIMUM INTERVALS, LONGITUDINAL FALSE JOINTS AT 6' MAXIMUM INTERVALS.
5. TWO COURSE THICKNESS = 5" (7" IN DRIVEWAYS) UPPER COURSE = 1", LOWER COURSE = 4" (6" IN DRIVEWAYS)

A3 TYPICAL SIDEWALK AT GRANITE CURB DETAIL

SCALE: NOT TO SCALE

TYPE "F" GRANULAR MATERIAL SHALL CONSIST OF RUN OF CRUSHER HARD DURABLE LIMESTONE OR APPROVED EQUAL HAVING THE FOLLOWING GRADATION BY WEIGHT.

PERCENT PASSING	SQUARE OPENING (INCHES)
100	1 ½
95-100	1
65-80	¾
40-60	¼
0-10	# 200 SIEVE

TYPE "B" GRANULAR MATERIAL SHALL CONSIST OF CLEAN, SOUND, TOUGH HARD CRUSHED LIMESTONE OR APPROVED EQUAL, FREE FROM COATINGS AND SHALL BE THOROUGHLY WASHED HAVING THE FOLLOWING GRADATION BY WEIGHT.

PERCENT PASSING	SQUARE OPENING (INCHES)
100	1 ½
Not More Than 25	¾
Not More Than 5	¼

A4 GRANULAR MATERIAL NOTES

SCALE: NOT TO SCALE

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · LICENSED PROFESSIONAL ENGINEER · 076781

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
3	04.07.25	REVIEW COMMENTS
2	03.04.25	REVIEW COMMENTS
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

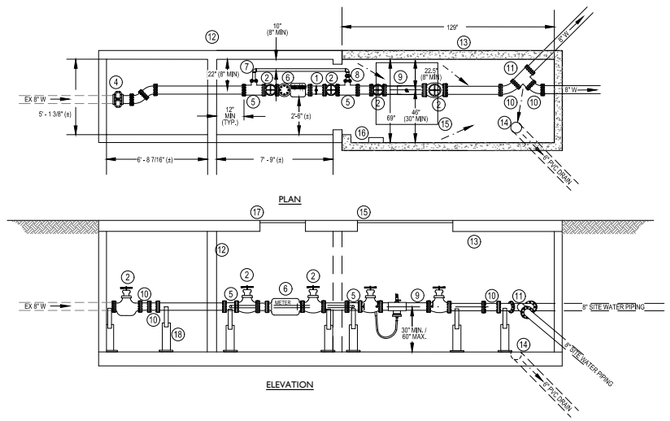
NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CIVIL

SITE DETAILS

C-501

Copyright ©



KEYED NOTES:

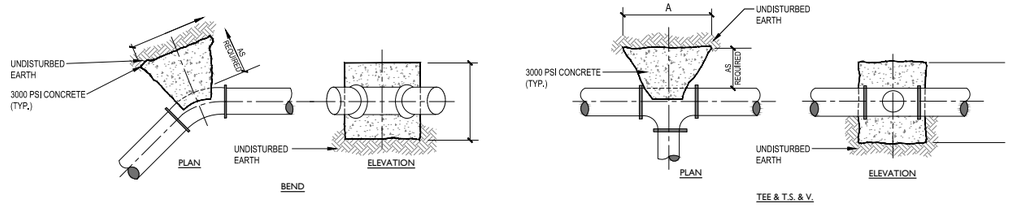
1. ¾ INCH TAPPING SADDLE w/FPT OUTLET THREADS AND ¾ INCH CURB STOP w/MPT ENDS. PADLOCK WINGS AND THREADED CAP ON OUTLET
2. 8" OS&Y GATE VALVE
3. 8" RISING STEM FLANGED GATE VALVE w/HAND WHEEL (OPEN LEFT)
4. 8" NON-RISING STEM MECHANICAL JOINT GATE VALVE (OPEN RIGHT) w/MECHANICAL JOINT RESTRAINT (TO BE INSTALLED BY OCWA ON EXISTING 8" SERVICE LINE
5. 8" x 3" FLANGED TEE, WITH 3" X 2" REDUCER OFF 3" BRANCH
6. METER SHALL BE 8" SENSUS T2 TURBO METER, OR EQUAL, AS PROVIDED & INSTALLED BY O.C.W.A. STRAINER SHALL BE INSTALLED UPSTREAM OF METER
7. 2" DI BYPASS PIPE
8. 2" RISING STEM FLANGED GATE VALVE w/HAND WHEEL (OPEN LEFT)
9. 8" RPZ ASSEMBLY. REFER TO NOTE 1.
10. 8" 45-DEGREE MJ BEND
11. 8" TEE
12. EXISTING 2-CELL CONCRETE FIRE-SERVICE PIT
13. PROPOSED CONCRETE BLOCK RPZ PIT. GRADE PIT FLOOR TO DRAIN TO FLOOR DRAIN, 2% MIN.
14. PROPOSED 6" PVC FLOOR DRAIN. DAYLIGHT TO OUTSIDE, 12" MIN. ABOVE EXISTING GRADE
15. 36" x 36" ACCESS HATCH, CENTERED (LONGITUDINALLY) OVER RPZ.
16. PROPOSED 12" STEEL OR POLYMER REINFORCED MANHOLE STEPS.
17. EXISTING STEEL ACCESS HATCH OVER METER PIT.
18. PROPOSED PIPE STANCHION

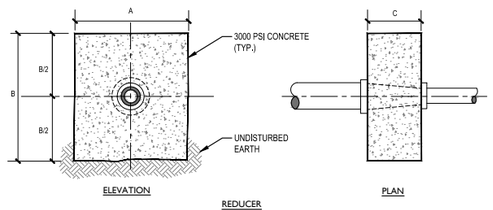
NOTES:

1. 8" REDUCED PRESSURE ZONE (RPZ) ASSEMBLY SHALL BE FURNISHED WITH OS&Y SHUTOFFS, WATTS MODEL 957-OSY-FS 8, OR APPROVED EQUAL.
2. RPZ PIT DRAIN SHALL DISCHARGE TO EXISTING OUTSIDE GRADE A MINIMUM OF 12-INCHES ABOVE FINISHED GRADE. DRAIN LINE SHALL HAVE AN INLINE CHECK VALVE, AND RODENT SCREEN AT THE OUTLET.
3. RPZ SHALL BE INSTALLED BETWEEN 30" AND 60" ABOVE THE PIT FLOOR, AND SHALL HAVE A MINIMUM OF 8" CLEARANCE BEHIND, 18" CLEARANCE ABOVE, AND 30" CLEARANCE IN FRONT OF THE DEVICE. ADDITIONALLY, THE RPZ SHALL BE NO CLOSER THAN 12" TO ANY SIDE WALL.
4. ALL PIPING AND DEVICES SHALL BE ADEQUATELY SUPPORTED BY PIPE STANCHIONS OR BLOCKING.

C1 WATER METER & RPZ ASSEMBLY AND METER PIT

SCALE: NOT TO SCALE





THRUST BLOCK NOTES

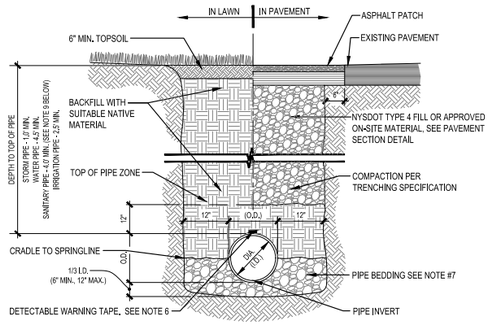
1. CONCRETE NOT TO OVERLAP ANY JOINT.
2. CONCRETE TO BE PLACED SO AS NOT TO INTERFERE WITH REMOVING OR INSTALLING ANY OF THE JOINTING HARDWARE.

CONCRETE ANCHOR & THRUST BLOCK DIMENSIONS

SIZE	12"			10"			8"			6"			4"		
DIMENSIONS	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
BEND 90°	3' 6"	3' 6"	-	2' 11"	2' 11"	-	2' 4"	2' 4"	-	1' 6"	1' 6"	-	1' 2"	1' 2"	-
45°	2' 6"	2' 6"	-	2' 2"	2' 2"	-	1' 9"	1' 9"	-	1' 2"	1' 2"	-	0' 10"	0' 10"	-
22 1/2°	1' 10"	1' 10"	-	1' 6"	1' 6"	-	1' 3"	1' 3"	-	1' 0"	1' 0"	-	1' 0"	1' 0"	-
11 1/4°	1' 4"	1' 4"	-	1' 2"	1' 2"	-	0' 11"	0' 11"	-	1' 0"	1' 0"	-	1' 0"	1' 0"	-
D.I. ANCHOR	7' 0"	5' 0"	1' 0"	7' 0"	4' 0"	1' 0"	6' 0"	3' 0"	1' 0"	5' 4"	2' 6"	1' 0"	4' 6"	2' 0"	1' 0"
T.S.&V. TEE BRANCH SIZE	3' 0"	3' 0"	-	2' 6"	2' 6"	-	2' 0"	2' 0"	-	1' 10"	1' 10"	-	1' 0"	1' 0"	-
REDUCER 12" x	-	-	-	2' 6"	2' 6"	1' 2"	3' 8"	3' 8"	1' 2"	4' 0"	4' 0"	1' 2"	4' 6"	4' 6"	1' 2"
10" x	-	-	-	-	-	-	2' 6"	2' 6"	1' 0"	2' 6"	2' 6"	1' 0"	4' 0"	4' 0"	1' 0"
8" x	-	-	-	-	-	-	-	-	-	2' 0"	2' 0"	0' 11"	2' 8"	2' 8"	0' 11"
6" x	-	-	-	-	-	-	-	-	-	-	-	-	1' 8"	1' 8"	0' 9"

A1 TRUST BLOCK DETAILS

SCALE: NOT TO SCALE



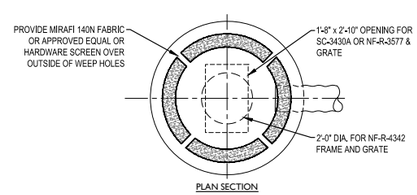
TRENCH SECTION

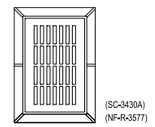
NOTES:

1. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. TRENCHING OPERATIONS SHALL INCLUDE SHORING AND DEWATERING.
3. TRENCH DETAILS ARE ONLY SHOWN FOR PURPOSES OF MATERIAL PLACEMENT AND MAXIMUM PAY LIMITS. THICKNESSES INDICATED ARE MINIMUMS, WHERE EXISTING CONDITIONS EXCEED THOSE SHOWN, MATCH EXISTING.
4. MOVABLE PROTECTIVE TRENCH SHIELDS SHALL BE USED IN UNSHEETED TRENCH AREAS AS REQUIRED BY OSHA REGULATIONS.
5. MINIMUM BURY DEPTHS SHOWN ABOVE APPLY UNLESS OTHERWISE INDICATED.
6. PROVIDE DETECTABLE WARNING TAPE AS SPECIFIED.
7. PIPE BEDDING SHALL BE:
   - STORM - USE MATERIAL EXCAVATED FROM TRENCH WITH 6" AND LARGER STONE REMOVED IN PIPE ZONE.
   - SANITARY - USE CRUSHED STONE IN PIPE CRADLE. USE MATERIAL EXCAVATED FROM TRENCH WITH 6" AND LARGER STONE REMOVED IN REMAINING PIPE ZONE.
   - WATER - USE CRUSHED STONE IN PIPE CRADLE. USE MATERIAL EXCAVATED FROM TRENCH WITH 6" AND LARGER STONE REMOVED IN REMAINING PIPE ZONE.
   - IRRIGATION - USE SAND IN PIPE CRADLE. USE MATERIAL EXCAVATED FROM TRENCH WITH 6" AND LARGER STONE REMOVED IN REMAINING PIPE ZONE.
8. AREAS OF BRICK PAVER REMOVAL SHALL BE RESTORED TO MEET OR EXCEED EXISTING CONDITIONS.
9. WHERE SANITARY SEWERS HAVE LESS THAN 4'-0" OF COVER OVER THE TOP OF PIPE, THE UTILITY PIPE SHALL BE WRAPPED IN FOAMGLAS® INSULATION WITH PITTWRAP CW PLUS JACKETING, OR A BARRIER OF EXPANDED POLYSTYRENE (EPS) INSULATION, INSTALLED HORIZONTALLY ABOVE THE PIPE. A MINIMUM OF 4'-0" EXTENDING OUTWARD LATERALLY (EACH SIDE) FROM THE CENTERLINE OF THE PIPE. THE EPS INSULATION SHALL BE INSTALLED 2'-0" BELOW FINISHED GRADE.

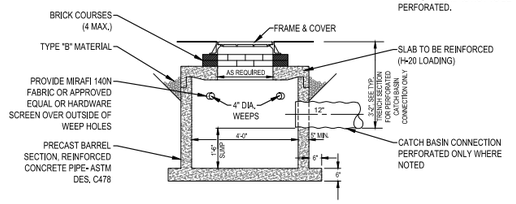
C3 UTILITY TRENCH RESTORATION DETAIL

SCALE: NOT TO SCALE





CATCH BASIN FRAME & GRATE

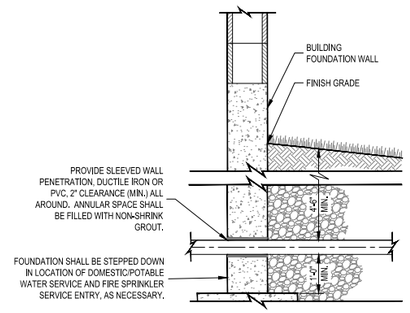


NOTE:
WHERE CATCH BASIN CONNECTIONS CROSS WATER MAINS, THE CMP IS NOT TO BE PERFORATED.

NOTE:
INLET MANHOLE IS SIMILAR TO CATCH BASIN EXCEPT NO SUMP. INLET MANHOLES ARE TO HAVE CONCRETE BENCHWALLS AND TROUGHS SIMILAR TO STANDARD MANHOLES.

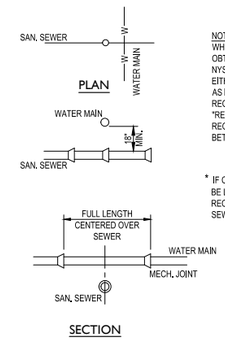
A3 STANDARD CATCH BASIN

SCALE: NOT TO SCALE



D4 WATER LINE LEAD-IN DETAIL

SCALE: NOT TO SCALE

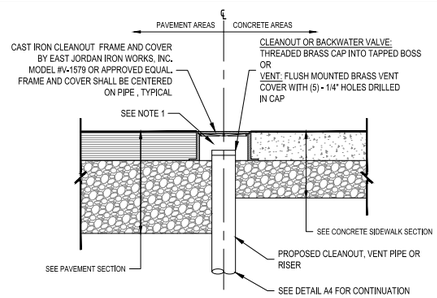


NOTE:
WHEREVER REQUIRED VERTICAL CLEARANCE CAN NOT BE OBTAINED, THE SANITARY SEWER SHALL BE ENCASED IN NYSDOT CLASS "A" CONCRETE FOR A DISTANCE OF 10' EITHER SIDE OF THE INTERSECTION WITH THE WATER MAIN AS INSTRUCTED BY THE ENGINEER. CLEARANCE REQUIREMENTS SHALL BE AS OUTLINED IN PART 8.6 IN THE "RECOMMENDED STANDARDS FOR WATER WORKS." ALSO REQUIRED IS A 10' MINIMUM HORIZONTAL SEPARATION BETWEEN STORM SEWERS & WATER MAINS.

* IF CLEARANCE CAN NOT BE OBTAINED, WATER MAIN SHALL BE LOWERED TO PROVIDE 18" CLEARANCE, OR RECONSTRUCTED WITH M.J. PIPE 10' ON EACH SIDE OF THE SEWER.

C4 SEWER MAIN & WATER MAIN SEPARATION DETAIL

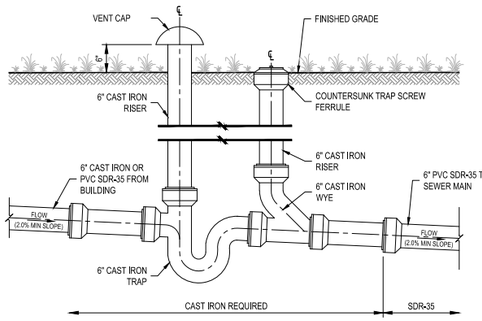
SCALE: NOT TO SCALE



NOTE:
1. PROVIDE 4" SPACE BETWEEN BOTTOM OF COVER AND TOP OF PIPE.

B4 GROUND TREATMENT FOR SEWER VENT AND CLEANOUT IN PAVEMENTS

SCALE: NOT TO SCALE



A4 SEWER VENT, TRAP & CLEANOUT DETAIL

SCALE: NOT TO SCALE

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
3	04.07.25	REVIEW COMMENTS
2	03.04.25	REVIEW COMMENTS
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

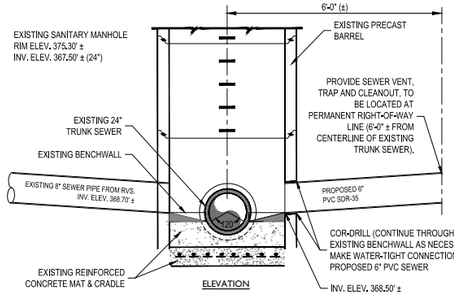
NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

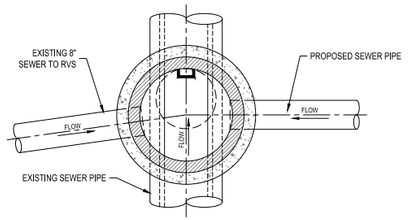
CIVIL

SITE DETAILS

C-502

Copyright ©

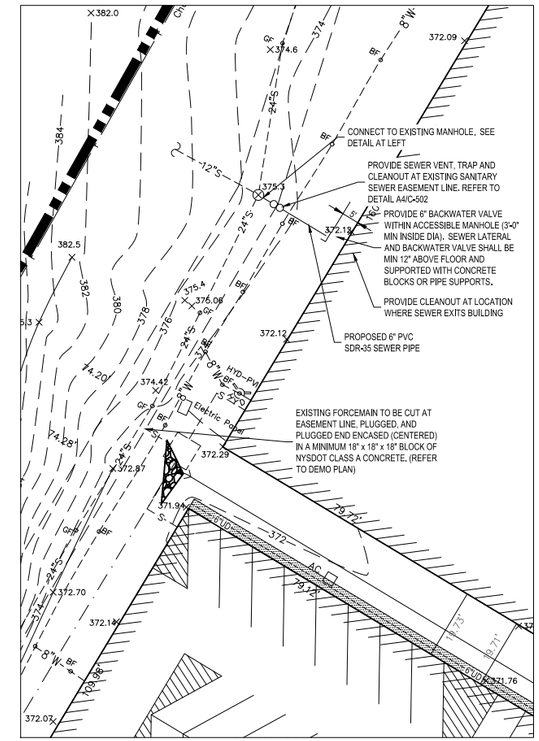


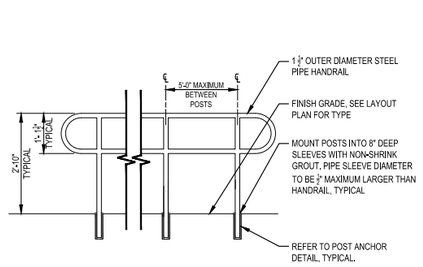


NOTES:
1. WORK WITHIN THE ONONDAGA COUNTY DEPARTMENT OF WATER ENVIRONMENT PROTECTION (OCDWEP) PERMANENT RIGHT-OF-WAY SHALL ONLY BE PERFORMED AT THE APPROVAL OF AND/OR UNDER SUPERVISION OF AN OCDWEP REPRESENTATIVE(S).
2. SEWER CONNECTION SHALL ONLY BE MADE DURING DRY WEATHER CONDITIONS.
3. SEWER CONNECTION INVERT SHOWN IS APPROXIMATE ONLY. CONNECTION SHALL BE A MINIMUM OF 12" ABOVE THE INVERT OF THE EXISTING 24-INCH TRUNK SEWER.
4. AN INLINE CHECK VALVE SHALL BE INSTALLED WITHIN THE PROPOSED 6-INCH LATERAL TO PREVENT SEWAGE BACKUP FROM THE 24-INCH TRUNK SEWER INTO THE BUILDING
5. A SEWER VENT AND CLEANOUT SHALL BE INSTALLED AT THE SANITARY SEWER EASEMENT LINE.

C1 BLDG 5 SANITARY SEWER CONNECTION DETAIL TO EX MANHOLE

SCALE: NOT TO SCALE

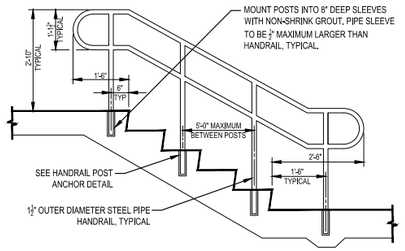




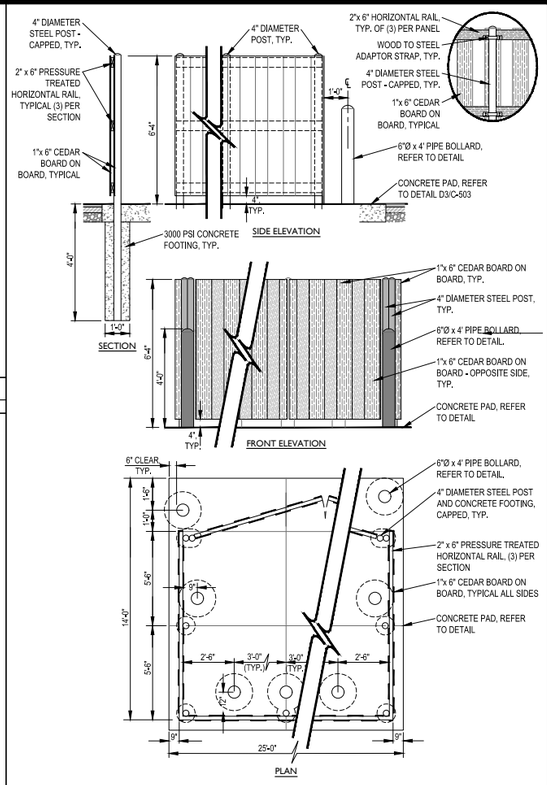
NOTES:
1. REFER TO MISCELLANEOUS METALS SPECIFICATIONS SECTION, ALL PIPING USED IN RAIL CONSTRUCTION TO BE HOT DIPPED GALVANIZED STEEL.
2. GRIND ALL STEEL AND WELDS SMOOTH, PRIME AND PAINT PER PAINTING SPECIFICATIONS SECTION. COLOR TO BE SELECTED BY ARCHITECT.
3. CORE DRILLING FOR RAILS IS NOT ALLOWED. PROVIDE SLEEVES AS DETAILED.

D3 HANDRAIL - PAINTED STEEL

SCALE: NOT TO SCALE

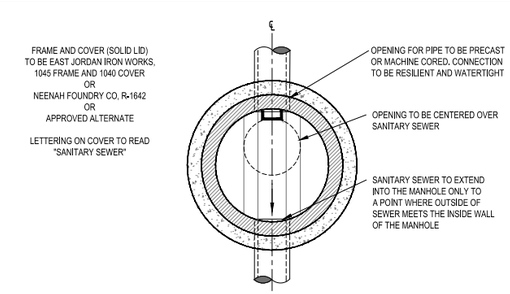


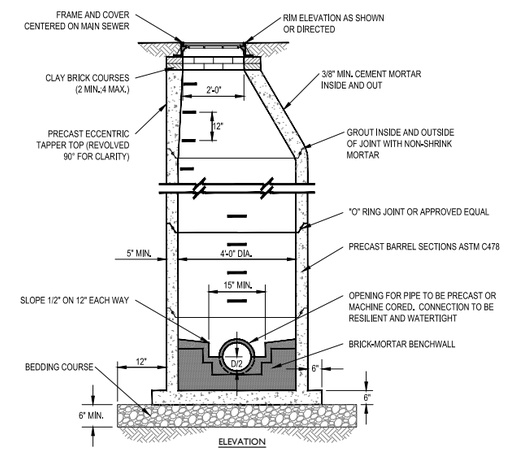
NOTES:
1. REFER TO MISCELLANEOUS METALS SPECIFICATION SECTION. ALL PIPING USED IN RAIL CONSTRUCTION TO BE HOT DIPPED GALVANIZED STEEL.
2. GRIND ALL STEEL AND WELDS SMOOTH.
3. CORE DRILLING FOR RAILS IS NOT ALLOWED. PROVIDE SLEEVES AS DETAILED.



C4 WASTE/RECYCLING ENCLOSURE

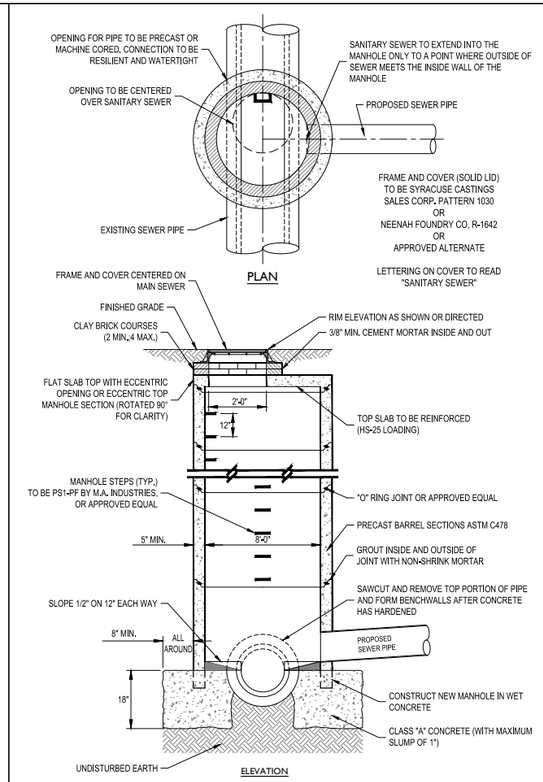
SCALE: NOT TO SCALE





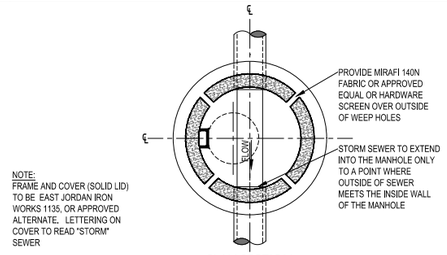
A1 STANDARD PRECAST CONCRETE SANITARY SEWER MANHOLE

SCALE: NOT TO SCALE



A2 TYPICAL DOGHOUSE MANHOLE DETAIL

SCALE: NOT TO SCALE



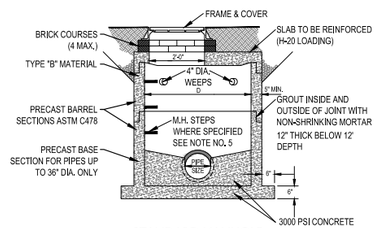
NOTE:
FRAME AND COVER (SOLID LID) TO BE EAST JORDAN IRON WORKS 1135, OR APPROVED ALTERNATE. LETTERING ON COVER TO READ "STORM" SEWER

EAST JORDAN IRON WORKS 1135

MANHOLE FRAME & COVER

PIPE SIZE	D
12"	4'-0"
15"	4'-0"
18"	4'-0"
24"	4'-0"
30"	5'-0"
36"	5'-0"

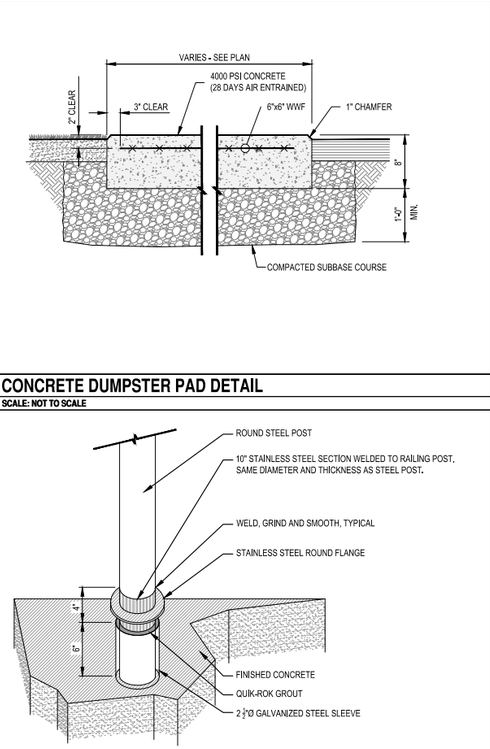
SPECIAL STRUCTURES TO BE USED FOR PIPES OVER 36" DIA.



STANDARD MANHOLE PRECAST BASE

A3 DRAINAGE MANHOLE

SCALE: NOT TO SCALE



B4 CONCRETE DUMPSTER PAD DETAIL

SCALE: NOT TO SCALE

A4 HANDRAIL POST ANCHOR - ROUND

SCALE: NOT TO SCALE

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · LICENSED PROFESSIONAL ENGINEER · 076781

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
3	04.07.25	REVIEW COMMENTS
2	03.04.25	REVIEW COMMENTS
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

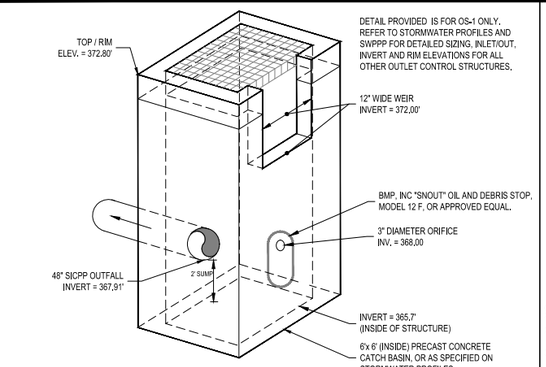
NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CIVIL

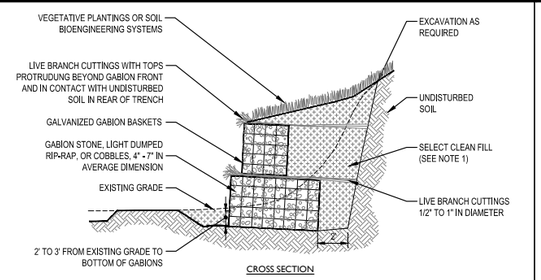
SITE DETAILS

C-503

Copyright ©



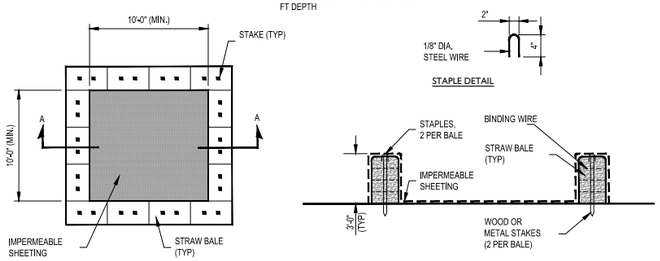
D1 OUTLET STRUCTURE DETAIL - OS-1
SCALE: NOT TO SCALE



CONSTRUCTION SPECIFICATIONS
1. BACKFILL BEHIND GABIONS HAND TAMPED IN 6" LIFTS.
2. A 1' LAYER OF BACKFILL SHALL BE PLACED ON TOP OF THE ROW OF GABIONS AND RAKED. THE CUTTINGS SHALL BE PLACED ON THE BACKFILL MATERIAL AND ANOTHER 1' LAYER OF BACKFILL SHALL BE PLACED ON THE CUTTINGS BETWEEN THE GABIONS.
3. CLASS 2, TYPE B OR C, INTERMEDIATE EROSION CONTROL PRODUCT SHALL BE INSTALLED ON THE FRONT INSIDE FACE AND ANY OTHER EXPOSED VERTICAL SURFACE OF THE GABIONS.

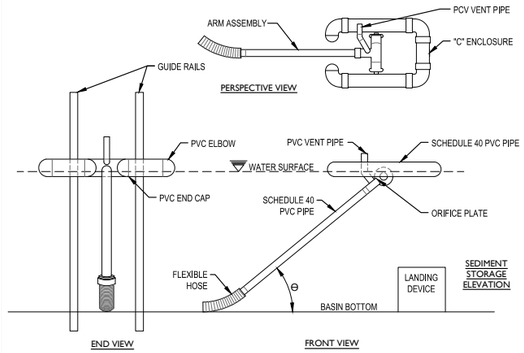
D2 VEGETATED ROCK GABIONS
SCALE: NOT TO SCALE

NOTE:
CAN BE TWO STACKED BALES OR PARTIALLY EXCAVATED TO REACH 3 FT DEPTH

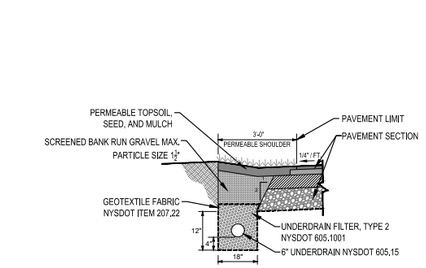


CONSTRUCTION SPECIFICATIONS
1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING. FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER.
6. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

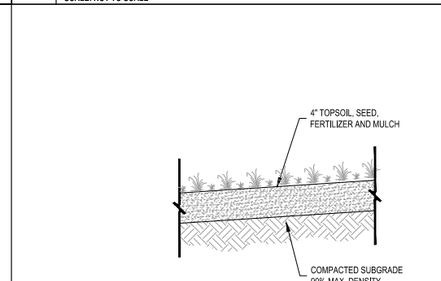
D3 TEMPORARY CONCRETE WASHOUT AREA (STRAW BALE)
SCALE: NOT TO SCALE



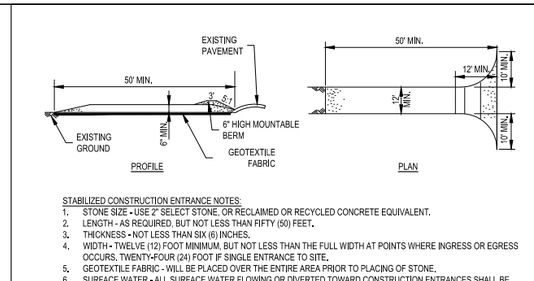
C1 SKIMMER DEWATERING DEVICE
SCALE: NOT TO SCALE



C2 PERMEABLE SHOULDER DETAIL
SCALE: NOT TO SCALE

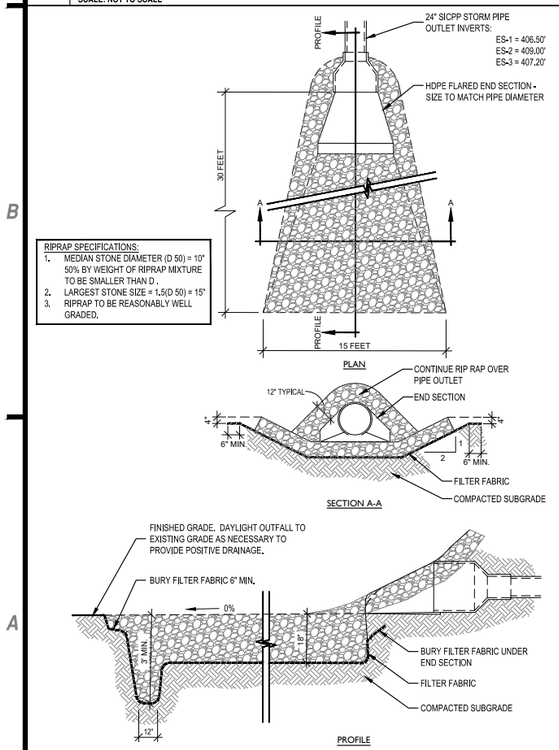


C3 TYPICAL GRASS RESTORATION DETAIL
SCALE: NOT TO SCALE



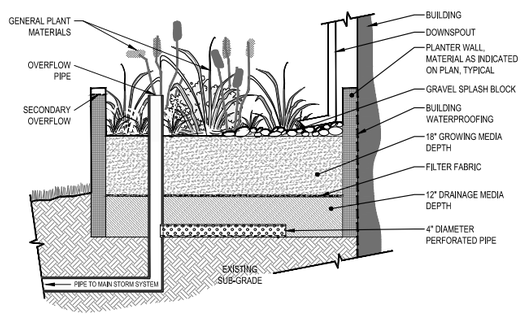
STABILIZED CONSTRUCTION ENTRANCE NOTES:
1. STONE SIZE - USE 2" SELECT STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN FIFTY (50) FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF- WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

C4 STABILIZED CONSTRUCTION ENTRANCE
SCALE: NOT TO SCALE



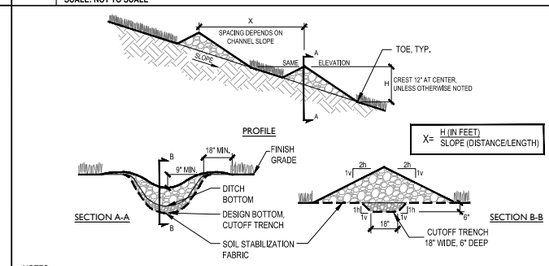
RIPRAP SPECIFICATIONS:
1. MEDIAN STONE DIAMETER (D 50) = 10" 50% BY WEIGHT OF RIPRAP MIXTURE TO BE SMALLER THAN D .
2. LARGEST STONE SIZE = 1.5(D 50) = 15"
3. RIPRAP TO BE REASONABLY WELL GRADED.

A1 END-SECTION WITH RIP-RAP DETAIL
SCALE: NOT TO SCALE



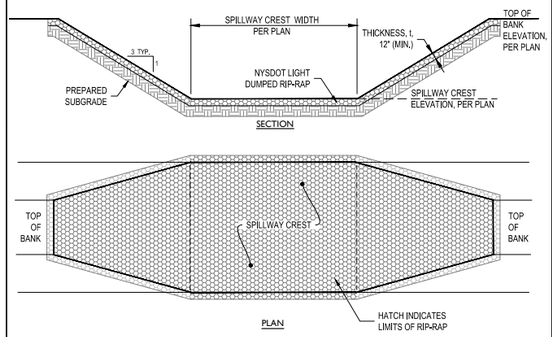
NOTE:
DETAIL PROVIDED TO SHOW TYPICAL PLANTING LAYERS AND THICKNESS. TREE PITS SHALL BE UTILIZED FOR ALL DECIDUOUS TREE PLANTINGS AS SHOWN ON THE LANDSCAPING PLANS AND SHALL BE CONSTRUCTED SUCH THAT TREE SHALL BE CENTERED WITHIN PLANTING MEDIA, AND TREE PIT SHALL HAVE A MINIMUM PONDING DEPTH OF 6" AND BE AT LEAST 16' IN DIAMETER, OR 15' x 15' SQUARE.

A2 STORMWATER PLANTER / TREE PIT DETAIL
SCALE: NOT TO SCALE

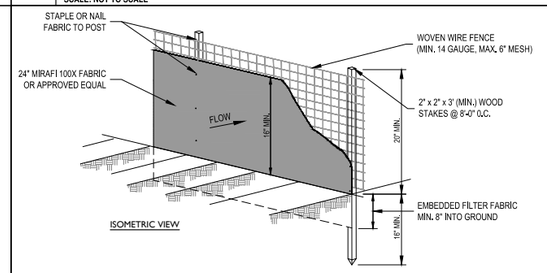


NOTES:
1. PLACE STONE ON SOIL STABILIZATION FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS INDICATED ON THE PLAN.
2. SPACE CHECK DAMS TO ASSURE THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE ROCK CHECK DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROVED BY ARCHITECT.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
6. MAXIMUM DRAINAGE AREA TWO ACRES.

B3 CHECK DAM DETAIL (TEMPORARY OR PERMANENT)
SCALE: NOT TO SCALE

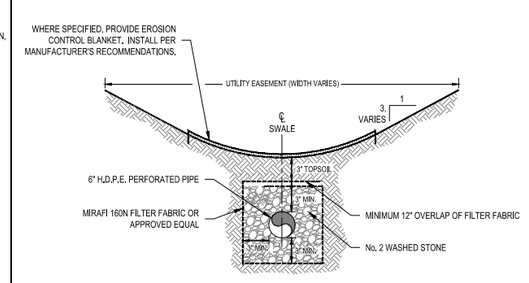


B4 TYPICAL SILT FENCE DETAIL
SCALE: NOT TO SCALE



NOTES:
1. WOVEN WIRE FENCE SHALL BE SECURELY FASTENED TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. SILT FENCE FABRIC SHALL BE SECURELY FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24' AT TOP AND MID-SECTION. WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
3. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR AS DIRECTED BY ENGINEER AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
4. CONTRACTOR SHALL REMOVE THE SILT FENCE AT THE APPROPRIATE TIME. DRESS THE DISTURBED AREAS, AND DISPOSE OF THE SILT FENCE.

B4 TYPICAL SILT FENCE DETAIL
SCALE: NOT TO SCALE



NOTES:
1. THE 6" UNDER-DRAIN MAY BE OMITTED WHERE THE LONGITUDINAL SLOPE OF THE SWALE IS GREATER THAN 2%.
2. ALL SWALES CONTAINED WITHIN A UTILITY EASEMENT REQUIRE TOPOGRAPHIC AS-BUILTS BE SUBMITTED TO THE VILLAGE ENGINEER FOR REVIEW AND FINAL ACCEPTANCE.

A3 EARTHEN SPILLWAY
SCALE: NOT TO SCALE

A4 SWALE DETAIL
SCALE: NOT TO SCALE

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · LICENSED PROFESSIONAL ENGINEER · 076781

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
3	04.07.25	REVIEW COMMENTS
2	03.04.25	REVIEW COMMENTS
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CIVIL

SITE DETAILS

C-505

Copyright ©

1. GENERAL

1.1. INSTALLATION PRACTICES RELATED HEREIN APPLY TO PIPE MANUFACTURED IN ACCORDANCE WITH AASHTO M294 AND AASHTO M330, CORRUGATED HDPE AND POLYPROPYLENE PIPE, RESPECTIVELY.

1.2. THIS INSTALLATION GUIDE DOES NOT ATTEMPT TO ADDRESS SAFETY CONCERNS ASSOCIATED WITH PIPE INSTALLATION OR UNDERGROUND CONSTRUCTION IN GENERAL.

1.3. CORRUGATED PLASTIC PIPE DERIVES STRUCTURAL STABILITY FROM THE STRENGTH AND RELATIVE STIFFNESS OF THE EMBEDMENT MATERIAL, IF IS THE RESULTING SOIL-PIPE INTERACTION SYSTEM THAT DEFINES THE PERFORMANCE OF THE INSTALLED PIPE.

1.4. PIPE DEFLECTIONS, OR VERTICAL REDUCTIONS IN DIAMETER, ARE MINIMIZED BY PROPER BACKFILL SELECTION, APPROPRIATE CONSTRUCTION PRACTICES, AND INCREASED INSTALLATION INSPECTION ACTIVITIES.

1.5. PIPE COVER HEIGHT, GROUNDWATER, AND DESIGN LIVE LOADS MAY BE A FACTOR IN APPROPRIATE BACKFILL MATERIAL SELECTION AND COMPACTION LEVELS.

1.6. BACKFILL LIFT CONSTRUCTION AND COMPACTION METHODS MAY VARY WITH THE BACKFILL MATERIALS AVAILABLE.

1.7. THIS INSTALLATION GUIDE RELATES METHODS CONSISTENT WITH ASTM D2321, STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS, WITH NO CLAIMS TO BE A REPLACEMENT TO THE MORE EXHAUSTIVE ASTM STANDARD.

1.8. AASHTO REGULATED INSTALLATIONS SHALL BE IN ACCORDANCE WITH SECTION 30 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.

1.9. THERE ARE MANY EFFECTIVE NON-STANDARD METHODS OF ACHIEVING A GOOD INSTALLATION WHICH ARE NOT MENTIONED HEREIN. CONSULT THE ABOVE-MENTIONED ASTM AND AASHTO STANDARDS FOR VARIOUS ALTERNATIVE METHODS.

2. PIPE INSPECTION HANDLING AND STORAGE

2.1. ONCE THE PIPE IS RECEIVED ON THE JOB SITE AND PRIOR TO FINAL ACCEPTANCE, AN INSPECTION SHALL BE PERFORMED TO ENSURE THE MATERIAL IS FREE FROM DAMAGE AND MEETS PROJECT SPECIFICATIONS.

2.2. PIPE IS PROPERLY LIFTED WITH A SLING FORMED FROM A NYLON STRAP WITH LOOPED ENDS. USING TWO EQUALLY SPACED LIFT POINTS FOR THE LARGER SIZES WILL PREVENT THE PIPE ENDS FROM STRIKING OBJECTS OR BEING DRAGGED ALONG THE GROUND.

2.3. STACKING PIPE ON LEVEL GROUND WILL HELP MAINTAIN THE MANUFACTURED SHAPE ALONG THE LENGTH OF THE PIPE, ENSURING THE PIPE LAYS FLAT AND STRAIGHT ON THE PIPE BEDDING WHEN INSTALLED.

3. TRENCH CONSTRUCTION

3.1. TRENCH WIDTH MUST BE SUFFICIENT FOR PROPER PLACEMENT AND COMPACTION OF THE EMBEDMENT MATERIAL USING STANDARD MEANS AND METHODS. ESPECIALLY HAUNCHING WHERE MANUAL RODDING OR MECHANICAL TAMPERS ARE USED TO ENSURE THE PIPE HAUNCH IS PROPERLY FILLED AND COMPACTED.

3.2. NARROWER TRENCH WIDTHS NORMALLY PROVIDE BETTER PIPE SUPPORT IF THE NATIVE SOILS FORMING THE TRENCH WALL ARE STABLE. MINIMUM TRENCH WIDTH TABLE SHOWS MINIMUM ALLOWABLE TRENCH WIDTHS NEEDED FOR PROPER EMBEDMENT.

3.3. IF THE NATIVE SOILS FORMING THE TRENCH WALL ARE UNSTABLE BUT CAN SUSTAIN A VERTICAL CUT, THE TRENCH WIDTH SHOULD BE INCREASED TO PROVIDE SPACE ON EACH SIDE OF THE PIPE EQUAL TO ONE-HALF ITS OUTSIDE DIAMETER; OTHERWISE, SPACE EQUIVALENT TO A FULL OUTSIDE DIAMETER SHOULD BE PROVIDED ON EACH SIDE OF THE PIPE.

3.4. EMBANKMENT INSTALLATIONS ARE TYPICALLY CONDUCTED IN THE SAME MANNER AS TRENCH INSTALLATIONS ONCE THE EMBANKMENT REACHES A HEIGHT CORRESPONDING TO ONE FOOT ABOVE THE TOP OF PIPE. THE TRENCH WIDTH IS THEN MANAGED AS IF CUT IN UNSTABLE NATIVE SOILS.

3.5. THE TRENCH BOTTOM SHOULD BE FIRM AND STABLE. RESTORE OR OTHERWISE REPLACE SOFT OR UNSTABLE MATERIAL WITH A MORE SUITABLE, STABLE MATERIAL. DISPLACE FOUNDATION MATERIAL WITH HEAVY, DENSE MATERIAL (E.G. COARSE GRAVEL OR CRUSHED ROCK) TO MITIGATE A "SOUPY" OR "QUICK" CONDITION.

3.6. ROCK OR UNYIELDING MATERIAL AT THE TRENCH BOTTOM SHOULD BE REMOVED AND REPLACED TO PROVIDE FOR AN ADDITIONAL TWO INCHES OF BEDDING MATERIAL BEYOND THE MINIMUM BEDDING THICKNESS.

3.7. SLOUGHED MATERIAL FROM THE TRENCH SIDEWALLS SHOULD BE REMOVED.

4. TRENCH BOX CONSTRUCTION

4.1. TRENCH WIDTH REQUIREMENTS CORRESPOND TO THE DISTANCE BETWEEN THE INTERIOR WALLS OF THE TRENCH BOX AND THEREFORE THE EXCAVATION WIDTH WILL INCREASE ACCORDINGLY.

4.2. DO NOT COMPACT EMBEDMENT MATERIAL AGAINST THE WALLS OF THE TRENCH BOX SO AS NOT TO DISTURB THE INSTALLED PIPE AND ITS EMBEDMENT WHEN MOVING THE TRENCH BOX.

4.3. PROPER PLACEMENT AND COMPACTION OF THE SIDEFILL IS DONE BELOW THE BOTTOM EDGE OF THE TRENCH BOX AS IT IS RAISED VERTICALLY IN APPROXIMATE 12-INCH INCREMENTS, REMOVING ANY SLOUGHED MATERIAL AS THE PROCESS CONTINUES.

4.4. THE PRACTICE OF USING A SUB-TRENCH WILL MITIGATE THE CHALLENGES ASSOCIATED WITH HAUNCH AND SIDEFILL PLACEMENT AND COMPACTION, WHERE SUB-TRENCHES ARE NOT ALLOWED THE TRENCH BOX SHOULD BE WIDENED TO MITIGATE THE CHALLENGES.

4.5. USING MANUFACTURED AGGREGATES THAT REQUIRE LITTLE COMPACTIVE EFFORT WILL PRODUCE THE BEST RESULTS FOR TRENCH BOX INSTALLATIONS.

5. BEDDING

5.1. THE BEDDING MUST ENSURE UNIFORM PIPE SUPPORT TO THE DESIGN LINE AND GRADE, WITH THE MIDDLE-THIRD BENEATH THE PIPE OD LEFT LOOSE TO CRADLE THE PIPE AND MITIGATE THE EFFECTS OF POOR HAUNCHING.

5.2. THE BEDDING MATERIAL IS TYPICALLY THE SAME MATERIAL USED FOR PIPE EMBEDMENT, IDEALLY A CLEAN, COHESIONLESS, FREE-DRAINING SOIL WITH PARTICLES THAT MOVE AROUND EASILY IN ORDER TO CONFORM TO THE SHAPE OF THE PIPE BOTTOM.

6. HAUNCHING

6.1. HAUNCH FILLING IS CARRIED OUT ON BOTH SIDES SIMULTANEOUSLY TO AVOID ROLLING THE PIPE. GENTLY DUMPING SMALL AMOUNTS OF MATERIAL ON TOP OF THE PIPE WILL PROVIDE SOME STABILITY WHILE MATERIAL FALLING BESIDE THE PIPE CAN BE PUSHED INTO THE HAUNCH ZONE.

6.2. FILLING ADJACENT SIDEFILL ZONES WILL PROVIDE LATERAL SUPPORT TO THE HAUNCH MATERIAL DURING THE PROCESS. LOOSE LAYERS IN FOUR TO SIX-INCH LIFTS WILL PERMIT THE BACKFILL MATERIAL TO BE WORKED INTO THE HAUNCH ZONE.

6.3. MATERIAL SHOULD BE MANUALLY PLACED IN THE HAUNCHES. TECHNIQUES SUCH AS RODDING, KNIFING, OR SHOVEL SLICING ARE EFFECTIVE TO ENSURE THE HAUNCH IS FILLED.

6.4. MECHANICAL TAMPERS, MANUAL TAMPERS, OR OTHER MEANS THAT FILL VOIDS AND MEET SPECIFIED COMPACTION LEVELS MUST BE USED CAREFULLY, CONTROLLING THE COMPACTION FORCE WILL PREVENT THE PIPE FROM LIFTING OFF GRADE. DO NOT PERMIT COMPACTION EQUIPMENT TO CONTACT THE PIPE.

7. LIFT THICKNESS AND COMPACTION

7.1. LIFT THICKNESS AND COMPACTION MUST BE DONE EVENLY ON EACH SIDE OF THE PIPE, THE MAXIMUM DIFFERENCE IN THE SIDEFILL ELEVATIONS AT ANY GIVEN TIME IS GENERALLY LIMITED TO ONE LIFT THICKNESS.

7.2. WHILE SIX-INCH LIFTS ARE COMMONLY SPECIFIED, 12-INCH LIFTS CAN PRODUCE GOOD RESULTS WITH COARSE-GRAINED BACKFILLS PROVIDED PLACEMENT AND COMPACTION PRACTICES ARE APPROPRIATE.

7.3. USE COMPACTION EQUIPMENT AND TECHNIQUES THAT ARE COMPATIBLE WITH THE MATERIALS USED AND LOCATION IN THE TRENCH, MECHANICAL TAMPERS WILL BE MORE EFFICIENT IN TRENCH BOX CONDITIONS, OTHERWISE WALK-BEHIND VIBRATORY COMPACTORS ARE TYPICALLY USED.

7.4. COMPACTION EFFICIENCY IS ACHIEVED BY ESTABLISHING THE NUMBER OF PASSES THAT PRODUCES THE DESIRED DENSITY, IF THE SPECIFIED DENSITY IS 95% OF MAXIMUM STANDARD PROCTOR DENSITY, THEN GOOD PIPE PERFORMANCE WILL RESULT EVEN IF THE COMPACTION IS SLIGHTLY LESS THAN SPECIFIED.

7.5. AN ADDITIONAL SIX INCHES OF STRUCTURAL BACKFILL OVER THE TOP OF THE PIPE PROVIDES A COMPLETE ENVELOPE THAT BETTER LOCKS UNDERLYING MATERIAL TOGETHER AND PROTECTS THE PIPE FROM ANY DAMAGING IMPACTS FROM THE FINAL BACKFILL.

8. FINAL BACKFILL

8.1. FINAL BACKFILL DOES NOT DIRECTLY SUPPORT THE PIPE AND IS MORE APPROPRIATELY DEALT WITH IN CONNECTION WITH THE INTENDED USE AT THE SURFACE, SELECTION, PLACEMENT AND COMPACTION OF FINAL BACKFILL IS THEREFORE DIRECTED BY THE DESIGN ENGINEER, HOWEVER, WHEN FINAL BACKFILL CONTAINS LARGE FRAGMENTS OR COBBLES, THE INITIAL BACKFILL COVER LEVELS MAY NEED TO BE INCREASED ACCORDINGLY TO PROTECT THE PIPE FROM ANY POTENTIAL IMPACT OR POINT LOADING.

9. EMBEDMENT MATERIALS & ASTM D2321 SOIL CLASSIFICATIONS

9.1. GOOD PIPE PERFORMANCE IS MORE LIKELY REALIZED WHEN THE BACKFILL MATERIALS ARE LIMITED TO WELL-GRADED, COARSE-GRAINED SOILS (SANDS AND GRAVELS) WITH LESS THAN 12% FINES, OR UNIFORMLY SIZED COARSE-GRAINED SOILS (GRAVELS) WHEN SOIL MIGRATION INTO THE VOIDS IS EITHER UNLIKELY OR ADDRESSED. UNIFORM FINE SANDS SHOULD BE AVOIDED. COARSE-GRAINED SOILS WITH FINES OR FINE-GRAINED SOILS WITH AT LEAST 30% COARSE-GRAINED MATERIAL PROVIDE GOOD PERFORMANCE IF PLACED AND COMPACTED PROPERLY, BUT INCREASED INSPECTION DURING INSTALLATION IS RECOMMENDED, BACKFILL SHOULD BE COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY FOR APPLICATIONS IN ROADWAYS.

9.2. ASTM D2321 SOIL CLASSIFICATIONS ARE GROUPED BY TYPICAL SOIL STIFFNESS (I.E. STRENGTH) WHEN COMPACTED, CLASS I INDICATES A MATERIAL THAT GENERALLY PROVIDES THE HIGHEST STIFFNESS AT ANY GIVEN PERCENT COMPACTION, AND PROVIDES A GIVEN STIFFNESS WITH THE LEAST COMPACTIVE EFFORT, EACH HIGHER NUMBER SOIL CLASS PROVIDES SUCCESSIVELY LESS STIFFNESS AT A GIVEN PERCENT COMPACTION AND REQUIRES GREATER COMPACTIVE EFFORT TO PROVIDE A GIVEN LEVEL OF SOIL STIFFNESS.

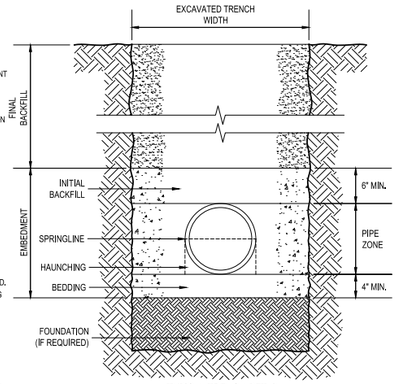
9.3. USING THE STIFFER EMBEDMENT MATERIALS (ESP. CLASSES I AND II) IS KEY TO MINIMIZING PIPE DEFLECTION AND THE NEED FOR DETAILED INSTALLATION INSPECTION AND COMPACTION TESTING, FOR THESE REASONS ONLY SOIL CLASSIFICATIONS I, II AND III ARE PRESENTED HERE, CLASS IV MATERIALS REQUIRE A GEOTECHNICAL EVALUATION PRIOR TO USE AND MAY NOT BE SUITABLE FOR DEEP FILL OR SHALLOW COVER APPLICATIONS, CLASS V MATERIALS ARE NOT ALLOWED IN THE PIPE-ZONE EMBEDMENT.

9.4. CLASS I MATERIALS PROVIDE MAXIMUM STABILITY AND PIPE SUPPORT FOR A GIVEN PERCENT COMPACTION, WITH MINIMUM EFFORT, THESE MATERIALS CAN BE INSTALLED AT RELATIVELY HIGH STIFFNESSES, SUITABLE COMPACTION IS TYPICALLY ACHIEVED WITH A DUMPED PLACEMENT PROVIDED MATERIAL IS WORKED INTO THE HAUNCH ZONE, VIBRATION OR IMPACT COMPACTION METHODS WILL ENSURE THE HIGHEST LEVELS OF STIFFNESS FOR THE DEEPER FILLS.

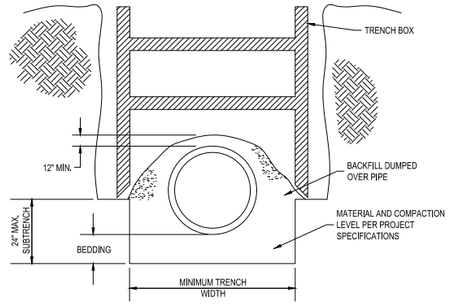
9.5. CLASS II MATERIALS PROVIDE A RELATIVELY HIGH LEVEL OF PIPE SUPPORT WHEN MODERATELY COMPACTED WITH EITHER VIBRATION OR IMPACT COMPACTION METHODS.

9.6. CLASS III MATERIALS PROVIDE LESS SUPPORT FOR A GIVEN PERCENT COMPACTION THAN CLASS I OR CLASS II MATERIALS, HIGHER LEVELS OF COMPACTIVE EFFORT ARE REQUIRED AND MOISTURE CONTENT MUST BE NEAR OPTIMUM TO MINIMIZE COMPACTIVE EFFORT AND ACHIEVE THE REQUIRED PERCENT COMPACTION, THESE MATERIALS PROVIDE REASONABLE LEVELS OF PIPE SUPPORT ONCE PROPER PERCENT COMPACTION IS ACHIEVED.

NOTES:
DETAILS SHOWN HEREON ARE FOR REFERENCE PURPOSES ONLY AND DEPICT COMMON COMPONENTS OF THE SUBSURFACE STORMWATER DETENTION FACILITIES PROPOSED FOR THIS PROJECT, REFERENCE SHALL BE MADE TO THE STORMWATER PROFILES AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR DETAILED DESIGN INFORMATION.



TYPICAL TRENCH DETAIL



SHORED TRENCH DETAIL

LANE HD 100/PRO 100 - ALLOWABLE BURIED DEPTHS (FT)						
DIAMETER	CLASS I		CLASS II		CLASS III	
(in)	COMPACTED	DUMPED	95%	90%	95%	90%
12	29/39	21/30	21/31	15/23	15/23	10/12
15	26/30	23/28	19/23	13/17	14/18	10/11
18	29/30	22/23	21/23	15/16	15/17	10/11
24	27/30	21/23	20/23	14/16	14/16	9/11
30	25/27	19/20	18/20	12/14	13/14	9/10
36	27/29	22/22	20/21	13/15	14/16	9/10
42	33/	23/	22/	15/	15/	10/
48	23/25	17/19	16/18	10/12	11/13	7/9
60	25/25	19/19	18/18	12/12	12/13	7/8

1. INSTALLATION IN ACCORDANCE WITH ASTM D2321
2. CLASS I INDICATES A SOIL THAT GENERALLY PROVIDES THE HIGHEST SOIL STIFFNESS AT ANY GIVEN PERCENT COMPACTION, AND PROVIDES A GIVEN SOIL STIFFNESS WITH THE LEAST COMPACTIVE EFFORT, EACH HIGHER NUMBER SOIL CLASS PROVIDES SUCCESSIVELY LESS SOIL STIFFNESS AT A GIVEN COMPACTION AND REQUIRES GREATER COMPACTIVE EFFORT TO PROVIDE A GIVEN LEVEL OF SOIL STIFFNESS.
3. ALL ACCEPTABLE BACKFILL MATERIALS ARE NOT PRESENTED HERE. SEE ASTM D2321 FOR A COMPLETE LISTING OF CLASSIFICATIONS.
4. RESULTS BASED ON AASHTO LRFD DESIGN METHOD USING ZERO HYDROSTATIC PRESSURE AND A SOIL DENSITY OF 120 PCF. GREATER COVER HEIGHTS ARE ATTAINABLE WITH APPROPRIATE MODIFICATIONS TO THE DESIGN METHOD - CONTACT LANE FOR FURTHER DETAILS.
5. DUMPED CLASS I MATERIAL IS ESTIMATED AT 90% MAXIMUM STANDARD PROCTOR DENSITY.

MINIMUM COVER HEIGHTS FOR LIVE LOADS		
PIPE DIAMETER	LOADING[1]	MIN. COVER
8"-48"	H20,H25 OR HL93	12"
60"	H20,H25 OR HL93	24"

NOTES: 1. MAY BE SUBJECT TO LOCAL AGENCY MINIMUM COVER REQUIREMENTS.

TEMPORARY MIN. COVER FOR CONSTRUCTION LOADS				
NOMINAL PIPE DIAMETER (FT)	MINIMUM COVER (IN) FOR INDICATED AXLE LOADS (KIPS)			
	18-50	50-75	75-110	110-150
2.0-3.0	2.0	2.5	3.0	3.0
3.5-5.0	3.0	3.0	3.5	4.0
MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.				

MULTIPLE PIPE RUNS

INSTALLATION METHODS FOR MULTIPLE RUNS OF PIPE SHALL BE CONSISTENT WITH TRENCH AND EMBANKMENT INSTALLATIONS WITH THE ADDED CONDITION THAT BACKFILLING PROGRESS EVENLY ACROSS ALL PIPE RUNS, SPACING BETWEEN PIPES SHALL BE SUFFICIENT TO PERMIT THE PROPER PLACEMENT AND COMPACTION OF STRUCTURAL BACKFILL IN THE HAUNCH AND BETWEEN THE STRUCTURES. AS A GUIDE, AASHTO INDICATES THE MINIMUM SPACING BETWEEN PIPES SHOULD NOT BE LESS THAN THAT SHOWN IN THE TABLE BELOW:

PIPE DIAMETER	MINIMUM SPACING
UP TO 24"	12"
24"-60"	$\frac{1}{2}$"D
SPACING SHALL BE BETWEEN THE OUTSIDE DIAMETER (OD) OF THE PIPE	

THE USE OF A TRENCH BOX FOR THE DEEPER INSTALLATIONS TYPICALLY CHALLENGES THE ABILITY TO MAINTAIN SIDE FILL SUPPORT AS THE TRENCH BOX IS ADVANCED, VOIDS LEFT BY THE TRENCH BOX WALLS, AS WELL AS THE VOID LEFT BETWEEN THE TRENCH BOX AND THE EXCAVATION AND/OR DISTURBED MATERIAL SLOUGHING AGAINST THE OUTSIDE OF THE TRENCH BOX SHALL BE ADDRESSED TO ENSURE COMPACTED SUPPORT EXTENDING TO UNDISTURBED NATIVE MATERIALS. THE PRACTICE OF USING A SUB-TRENCH MITIGATES THE CHALLENGES ASSOCIATED WITH TRENCH BOX CONSTRUCTION.

MINIMUM TRENCH WIDTH (T_{MIN}) PER ASTM D2321 FOR STABLE TRENCH WALLS					
ID (in)	OD (in)	T_{MIN}(in)	ID (in)	OD (in)	T_{MIN} (in)
6	7.05	24	24	28	47
8	9.4	26	30	34.5	56
10	12	28	36	41	64
12	14.5	31	42	47.5	72
15	17.5	34	48	57.5	81
18	21.5	39	60	66.9	96

BACKFILL CLASSIFICATION TABLE			
ASTM D2321 SOIL CLASS	GENERAL SOIL DESCRIPTION	ASTM D2321 SOIL GROUP	AASHTO M145 SOIL GROUP
CLASS I[1]	MANUFACTURED AGGREGATE	CRUSHED ROCK WITH ANGULAR, FRACTURED PARTICLE FACES AND 100% PASSING THE 1½" SIEVE 15% OR LESS PASSING THE #4 SIEVE 25% OR LESS PASSING THE ⅜" SIEVE 12" OR LESS PASSING THE #200 SIEVE	
CLASS II	CLEAN, COURSE GRAINED SOILS	SAND AND GRAVELS WITH 12% OR LESS PASSING #200 SIEVE. ASTM D2487 SOIL GROUP: GW WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES GP POORLY GRADED GRAVELS AND GRAVEL-SAND MIXTURES SW WELL-GRADED SANDS AND GRAVELLY SANDS SP POORLY-GRADED SANDS AND GRAVELLY SANDS	A1, A3
CLASS III	COARSE GRAINED SOILS AND FINES	COARSE GRAINED SOILS WITH MORE THAN 12% PASSING #200 SIEVE. ASTM D2487 SOIL GROUP: GM SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES GC CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES SM SILTY SANDS, SAND SILT MIXTURES	A-2-4, A-2-5, A-2-6 OR A-4
CLASS IV	SANDY OR GRAVELLY FINE-GRAINED SOILS	SANDY OR GRAVELLY FINE-GRAINED SOILS WITH 30% MORE RETAINED ON #200 SIEVE. ASTM D2487 SOIL GROUP: CL GRAVELLY CLAYS, SANDY CLAYS ML SILTY OR CLAYEY FINE SANDS	A-6

NOTES: 1. OPEN GRADED, HIGH PERMEABILITY AASHTO NO. 57 COMMONLY USED.

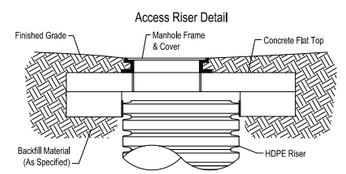


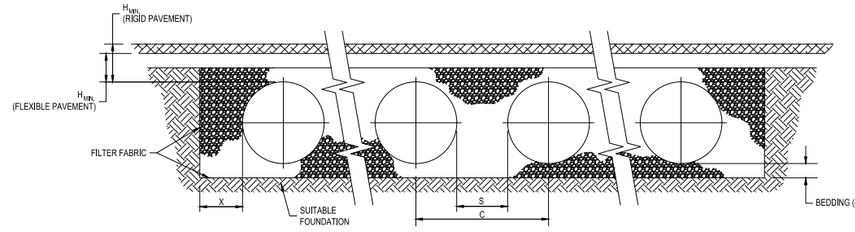
Table 1.

Riser Diameters	
Mainline	Typical
12"	12"
15"	15"
18"	18"
24"	24"
30"	24"
36"	24"
42"	24"
48"	24"
60"	24"

Standard In-Line Bell & Spigot with a Manufacturer Installed Gasket

Table 2.
Temporary Minimum Cover for Construction Equipment

Pipe Dia.	Minimum Cover (ft) for Indicated Axle Loads			
(in)	18-50 kips	50-75 Kips	75-110 kips	110-150 kips
12-42	2.0	2.5	3.0	3.0
48-60	3.0	3.0	3.5	4.0



TYPICAL CROSS SECTION

NOMINAL DIAMETER	NOMINAL O.D.	TYPICAL SPACING "S"	TYPICAL SPACING "C"	TYPICAL SIDE WALL "X"	$H_{MIN.}$ (NON-TRAFFIC)	$H_{MIN.}$ (TRAFFIC)
12"	14.5"	9.00"	23.50"	6"	12"	12"
15"	17.5"	13.50"	31.00"	8"	12"	12"
18"	21.5"	14.00"	35.50"	9"	12"	12"
24"	28.0"	19.25"	47.25"	10"	12"	12"
30"	34.5"	21.50"	56.00"	15"	12"	12"
36"	41.0"	23.00"	64.00"	15"	12"	12"
42"	47.5"	27.25"	74.75"	15"	12"	24"
48"	54.5"	20.25"	74.75"	15"	12"	24"
60"	66.8"	23.25"	90.00"	15"	12"	24"

*CLASS II BACKFILL REQUIRED AROUND ALL 60" DIAMETER FITTINGS.

GENERAL NOTES:

1.) THE LANE HD100/HD100EC STORM WATER MANAGEMENT SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARD INSTALLATION PRACTICES ADAPTED TO THE SPECIAL INSTALLATION PROCEDURES CONTAINED ON SHEET C-506 AND THIS SHEET.

2.) CONSTRUCTION EQUIPMENT SHALL NOT TRAVERSE OR OTHERWISE BE LOCATED ATOP THE PIPE SYSTEM OR ITS COMPONENTS UNTIL SUFFICIENT COVER IS PROPERLY PLACED AND COMPACTED, CONSTRUCTION LOADING RESTRICTIONS ARE CONTAINED HEREIN, THE INSTALLER SHALL CONTACT THE MANUFACTURER TO ADDRESS ANY UNCERTAINTIES IN THIS REGARD.

3.) THE FOUNDATION AND/OR BEDDING STONE MUST BE PROPERLY LEVELED TO THE ELEVATION SHOWN ON THE PROJECT PLAN PRIOR TO THE PLACEMENT OF ANY PIPE OR FITTINGS.

4.) SPACING SHOWN BETWEEN PIPE RUNS ARE STANDARD AND WILL ENSURE SUFFICIENT SPACE FOR MATERIAL PLACEMENT AND COMPACTION. CONSIDERATIONS FOR SPACING REDUCTIONS WILL NOT BE MADE UNLESS THE INSTALLER FORMALLY ACKNOWLEDGES THAT THE DESIRED REDUCTION WILL NOT COMPROMISE THE ABILITY TO PROPERLY PLACE AND COMPACT BACKFILL IN AFFECTED AREAS.

5.) BACKFILL AND BEDDING MATERIALS SHALL BE SPECIFIED IN THE PROJECT PLANS AND CONSISTENT WITH THE NOTES CONTAINED HEREIN.

6.) CONTACT YOUR LOCAL LANE SALES REPRESENTATIVE FOR ANY MODIFICATIONS NEEDED TO THE SYSTEM DESIGN.

GENERAL INSTALLATION NOTES:

1.) THE CONTRACTOR SHALL BE ADVISED THAT CORRUGATED HDPE PIPE IS FLEXIBLE AND THEREFORE DERIVES STRUCTURAL STABILITY FROM THE STRENGTH AND RELATIVE STIFFNESS OF THE SURROUNDING BACKFILL MATERIAL. THE RESULTING SOIL-CULVERT INTERACTION SYSTEM DEFINES THE ABILITY OF THE FLEXIBLE PIPE TO WITHSTAND ANTICIPATED LOADS.

2.) IT SHALL L BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESEARCH AND IMPLEMENT APPLICABLE SAFETY, HAZARD, AND HEALTH REGULATIONS, AND OBTAIN THE NECESSARY APPROVALS, CONSENTS OR PERMITS FROM APPLICABLE AGENCIES, PRIVATE LANDOWNERS, OR PUBLIC ROAD AUTHORITIES.

3.) DETENTION SYSTEMS SHALL BE INSTALLED IN A MANNER CONSISTENT WITH THE STANDARD PRACTICE USED FOR CORRUGATED HDPE PIPE INSTALLATIONS, ASTM D2321, AND THE MANUFACTURER'S PUBLISHED INSTALLATION GUIDELINES, CLASS I AND CLASS II MATERIAL REFERENCES ARE PER THE LATEST EDITION OF ASTM D2321.

4.) PIPE BEDDING AND EMBEDMENT SHALL BE CLASS I AND CLASS II MATERIALS FOR NON-PERFORATED PIPE APPLICATIONS, EXCEPT FOR 60-INCH DIAMETER INSTALLATIONS, WHICH SHALL BE EMBEDDED WITH CLASS I MATERIALS ONLY. APPLICATIONS THAT INVOLVE PERFORATED PIPE SHALL BE BEDDED AND BACKFILLED WITH CLASS I MATERIALS. FILTER FABRIC IS REQUIRED WHEN USING CLASS I MATERIALS TO ELIMINATE THE POTENTIAL OF SOIL MIGRATION FROM ADJACENT SOILS.

5.) THE BACKFILL OPERATION SHALL COMMENCE AND PROGRESS EVENLY ON BOTH SIDES OF THE MANIFOLD AND ALONGSIDE THE PIPE RUNS SIMULTANEOUSLY, IN THIS MANNER, THE OVERALL BACKFILL OPERATION SHALL PROGRESS IN THE DIRECTION OF THE PIPE RUNS AND TOWARDS THE OPPOSITE MANIFOLD, WHERE CARE IS AGAIN TAKEN TO ENSURE THE BACKFILLING IS DONE EVENLY, PERIMETER BACKFILL MUST BE BROUGHT UP EVENLY AS WELL, AND EXTENDED HORIZONTALLY TO STABLE AND/OR UNDISTURBED TRENCH WALLS, SPECIAL CARE SHALL BE TAKEN TO ENSURE THE HAUNCH REGIONS OF THE PIPE ARE COMPLETELY FILLED AND PROPERLY COMPACTED, FILLING THE INSIDE HAUNCH REGIONS OF THE MANIFOLD BETWEEN STUBS IS MORE CHALLENGING AND WILL REQUIRE ADDITIONAL CARE.

6.) NO EQUIPMENT SHALL BE OPERATED ON THE SYSTEM UNTIL A MINIMUM OF 12-INCHES OF COVER HAS BEEN ESTABLISHED, AT WHICH TIME ONLY WALK-BEHIND COMPACTION EQUIPMENT AND SMALL SPREADING EQUIPMENT MAY BE USED. EXCAVATORS MUST BE LOCATED OFF THE BED, AND DUMP TRUCKS SHALL NOT DUMP STONE DIRECTLY ONTO THE BED.

ACCESS RISER NOTES:

1.) THE ACCESS RISER DETAIL SHALL BE CONSIDERED CONCEPTUAL WITH THE INTENTION OF ILLUSTRATING HOW LOADS PLACED ON THE COVER OR SURROUNDING PAVEMENT WILL BE TRANSFERRED TO THE SUBGRADE AND NOT BE BROUGHT TO BEAR DIRECTLY ON THE RISER PIPE.

2.) ALL RISERS SHALL BE FIELD CUT TO THE ELEVATION NEEDED TO ACCOMMODATE CONSTRUCTION OF THE RISER DETAIL.

3.) POURED-IN-PLACE CONCRETE COLLARS SHALL BE PROPERLY FORMED TO PROVIDE A SMALL GAP AROUND THE OUTSIDE DIAMETER FOR THE RISER, WITH THE TOP LEVEL OF THE COLLAR SET APPROXIMATELY TWO INCHES ABOVE THE TOP OF THE RISER PIPE.

4.) FLAT TOPS, MANHOLE OPENINGS, AND APPURTENANCES SHALL BE CONSTRUCTED AND/OR PROVIDE IN ACCORDANCE WITH THE STANDARD DETAILS AND SPECIFICATIONS OF THE STATE OR LOCAL ROAD AUTHORITY FOR THE H20/HS20 HIGHWAY TRUCK LOADING.

5.) STUBS FOR RISERS AND IN GENERAL ARE DETERMINED BY THE MANUFACTURER BASED ON FABRICATION STANDARDS AND/OR SHIPPING LIMITATIONS.

TEMPORARY MINIMUM COVER FOR CONSTRUCTION EQUIPMENT NOTES:

1.) DURING CONSTRUCTION AND PRIOR TO THE CONSTRUCTION OF PAVEMENT, ADDITIONAL TEMPORARY COVER MAY BE REQUIRED TO ACCOMMODATE CONSTRUCTION EQUIPMENT TRAFFIC OVER THE PIPE SYSTEM IN ACCORDANCE WITH TABLE 2.

2.) MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

3.) TEMPORARY COVER SHALL BE DULY COMPACTED AND MAINTAINED AT THE PROPER ELEVATION TO ENSURE NO LOSS OF REQUIRED COVER OVER TIME. CLEAN, OPEN-GRADED MANUFACTURED AGGREGATE MAY BE UNSUITEABLE FOR THESE PURPOSES UNLESS PROPERLY LOCKED-IN PLACE OR CONFINED WITH A BINDER MATERIAL.

JOINT PERFORMANCE NOTES:

1.) SOIL-TIGHT. SILT-TIGHT AND WATER-TIGHT JOINT PERFORMANCE DESIGNATIONS SHALL BE AS DEFINED BY AASTHO M294.

2.) STANDARD HD100 AND HD100EC IN-LINE BELL AND SPIGOT CONNECTIONS WITH A MANUFACTURER-INSTALLED GASKET SHALL BE PROVIDED TO MEET THE WATER-TIGHT PERFORMANCE REQUIREMENTS OF ASTM D3212.

3.) A REINFORCED MASTIC POLYSEAL COUPLER SHALL BE USED TO JOIN FIELD CUT OR PLAIN END PIPES WHEN MEETING THE WATER-TIGHT PERFORMANCE REQUIREMENTS.

4.) REQUIREMENTS FOR SILT-TIGHT PERFORMANCE SHALL BE MET BY WRAPPING THE STANDARD COUPLER WITH A SUITABLE FILTER FABRIC.

5.) ALL JOINT CONFIGURAT

Appendix C

Wetland and SEQR Documents

MINUTES of a SPECIAL MEETING
SALINA TOWN BOARD
January 27, 2023

The Town Board of the Town of Salina held a special meeting on Friday January 27, 2023 at 8:00 A.M. at the Town Hall, 201 School Road, Liverpool, New York with the following members present:

Nicholas Paro	Supervisor
Daniel Ciciarelli	Councilor
David Carnie	Councilor
Joseph Frateschi	Town Attorney

PUBLIC HEARING- RATIFYING AND RE-ADOPTING A RESOLUTION OF THE TOWN OF SALINA BOARD AUTHORIZING THE SUBMITTAL OF AN APPLICATION FOR FUNDING TO THE RESTORE NY COMMUNITIES INITIATIVE MUNICIPAL GRANT PROGRAM; AND AUTHORIZING THE SUPERVISOR OR HIS DESIGNEES TO SIGN AND SUBMIT ALL REQUIRED DOCUMENTATION FOR THE APPLICATION AND GRANT AGREEMENT DOCUMENTS

At 8:00 A.M., Mr. Carnie made a motion to open the public hearing. Mr. Ciciarelli seconded the motion. All voted in favor of opening the public hearing.

No public comments.

At 8:01 A.M., Mr. Carnie made a motion to close the public hearing. Mr. Ciciarelli seconded the motion. All voted in favor of closing the public hearing.

MOTION RATIFYING AND RE-ADOPTING A RESOLUTION OF THE TOWN OF SALINA BOARD AUTHORIZING THE SUBMITTAL OF AN APPLICATION FOR FUNDING TO THE RESTORE NY COMMUNITIES INITIATIVE MUNICIPAL GRANT PROGRAM; AND AUTHORIZING THE SUPERVISOR OR HIS DESIGNEES TO SIGN AND SUBMIT ALL REQUIRED DOCUMENTATION FOR THE APPLICATION AND GRANT AGREEMENT DOCUMENTS

At 8:02 A.M., the following resolution was put forward by Mr. Carnie:

WHEREAS the Town of Salina is eligible for grant funding (the "Grant") under the Restore NY Communities Initiative Municipal Grant Program (the "Grant Program"), and

WHEREAS the Town Board has considered projects that qualify for funding under the Grant Program and selected one project to be included in an application that will be submitted to Empire State Development Corporation (ESDC) as follows:

Redevelopment of 100 Buckley Road, Town of Salina, County of Onondaga, State of New York, the project will renovate a vacant and abandoned candle factory into a mixed-use building containing commercial use on the first floor and market rate apartments (the "Project")

WHEREAS the Project is consistent with all existing local plans, the proposed financing is appropriate for the Project, the Project will facilitate effective and efficient use of existing and future public resources so as to promote both economic development and preservation of community resources and the Project develops and enhances infrastructure and/or other facilities in a manner that will attract, create and sustain employment opportunities in Town of Salina.

WHEREAS this resolution was previously adopted by the Board, however, out of an abundance of caution, the Town would like to ratify and re-affirm this resolution.

NOW THEREFORE BE IT RESOLVED AND DETERMINED, that the Supervisor or his designees are authorized to execute any and all applications, contracts and other documents necessary and to take such actions as are necessary to bring about the Grant and to fulfill the Grant Program.

Mr. Ciciarelli seconded the motion. All voted in favor of adopting this resolution.

MOTION RATIFYING AND RE-ADOPTING A NEGATIVE SEQR DECLARATION RELATED TO THE PROJECT

At 8:03 A.M., a motion was put forth by Mr. Carnie re-designating the Town of Salina Town Board as lead agency for SEQR purposes as it relates to the redevelopment project at 100 Buckley Road, Town of Salina, County of Onondaga, and State of New York (the "Project"), and, re-affirming the negative declaration for SEQR purposes related to the Project.

Mr. Ciciarelli seconded the motion. All voted in favor.

ADJOURNMENT

At 8:05 A.M., a motion was made to adjourn the special meeting by Mr. Carnie and was seconded by Mr. Ciciarelli. All were in favor.

Respectfully submitted

Joseph Frateschi, Town Attorney

Full Environmental Assessment Form
Part 1 - Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the applicant or project sponsor to verify that the information contained in Part 1is accurate and complete.

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Will & Baumer Luxury Lofts		
Project Location (describe, and attach a general location map): 100 Buckley Rd, Liverpool, NY 13088		
Brief Description of Proposed Action (include purpose or need): Redevelopment of former Will & Baumer Candle Factory property into approximately 250-unit multi-family development. Project will consist of renovation of existing buildings, and potential addition of three (3) new buildings to site, and will include site infrastructure improvements necessary for the project.		
Name of Applicant/Sponsor: Ur-Ban Villages PFA, LLC	Telephone: (315)457-1305 E-Mail: vittorio@pdm-llc.com	
Address: 925 Seventh North Street		
City/PO: Liverpool	State: NY	Zip Code: 13088
Project Contact (if not same as sponsor; give name and title/role): alocerinos Engineering, PLLC, Project Engineer	Telephone: (315)214-5861 E-Mail: scalocerinos@ce-pllc.com	
Address: PO Box 2187		
City/PO: Syracuse	State: NY	Zip Code: 13220
Property Owner (if not same as sponsor): Syracuse Gateway Holdings, LLC	Telephone: E-Mail:	
Address: 93 Lamay Cres		
City/PO: Scarborough	State: Ontario, Canada	Zip Code: M1X1J4

B. Government Approvals

B. Government Approvals, Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
Government Entity	**If Yes: Identify Agency and Approval(s) Required**	**Application Date (Actual or projected)**
a. City Counsel, Town Board, or Village Board of Trustees ☑Yes☐No	Town of Salina Town Board	12/11/2020
b. City, Town or Village Planning Board or Commission ☐Yes☐No		
c. City, Town or Village Zoning Board of Appeals ☐Yes☐No		
d. Other local agencies ☐Yes☐No		
e. County agencies ☐Yes☐No		
f. Regional agencies ☐Yes☐No		
g. State agencies ☐Yes☐No		
h. Federal agencies ☐Yes☐No		

i. Coastal Resources.
i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☐Yes☑No

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? ☐Yes☑No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐Yes☑No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐Yes☑No

- **If Yes,** complete sections C, F and G.
- **If No,** proceed to question C.2 and complete all remaining sections and questions in Part 1

C.2. Adopted land use plans.

a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐Yes☑No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐Yes☑No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway; Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐Yes☑No

If Yes, identify the plan(s):

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐Yes☑No

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☑ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
I-1, Industrial District

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☑ No

c. Is a zoning change requested as part of the proposed action? ☑ Yes ☐ No
If Yes,
i. What is the proposed new zoning for the site? Repurposing & Reuse Overlay District, with underlying I-1

C.4. Existing community services.

a. In what school district is the project site located? Liverpool Central School District

b. What police or other public protection forces serve the project site?
Onondaga County Sherriff, New York State Police

c. Which fire protection and emergency medical services serve the project site?
Liverpool Fire Protection District

d. What parks serve the project site?
Onondaga Lake Park

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Residential

b. a. Total acreage of the site of the proposed action? 11.50 acres
b. Total acreage to be physically disturbed? 0.0 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 13.04 acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☑ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % _____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☑ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will the proposed action be constructed in multiple phases? ☑ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated 3 - 5
- Anticipated commencement date of phase 1 (including demolition) 1 month 2020 year
- Anticipated completion date of final phase 12 month 2025 year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

In order to manage development costs, project will be completed in phases of 2 to 3 structures at a time, including any necessary site infrastructure improvements for each phase

f. Does the project include new residential uses? ☑ Yes ☐ No

If Yes, show numbers of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase				40
At completion of all phases				250

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☑ No

If Yes,

i. Total number of structures 10 +/-

ii. Dimensions (in feet) of largest proposed structure: 60' +/- height; 75 width; and 200 length

iii. Approximate extent of building space to be heated or cooled: 500,000 +/- square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☑ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify: _____

iii. If other than water, identify the type of impounded/contained liquids and their source. _____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): _____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite) ☐ Yes ☑ No

If Yes:

i .What is the purpose of the excavation or dredging? _____

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): _____
- Over what duration of time? _____

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. _____

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No

If yes, describe. _____

v. What is the total area to be dredged or excavated? _____ acres

vi. What is the maximum area to be worked at any one time? _____ acres

vii. What would be the maximum depth of excavation or dredging? _____ feet

viii. Will the excavation require blasting? ☐ Yes ☐ No

ix. Summarize site reclamation goals and plan: _____

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☑ No

If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): _____

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

iii. Will the proposed action cause or result in disturbance to bottom sediments? ☐Yes ☐No
If Yes, describe:

iv. Will the proposed action cause or result in the destruction or removal of aquatic vegetation? ☐Yes ☐No
If Yes:

- acres of aquatic vegetation proposed to be removed:
- expected acreage of aquatic vegetation remaining after project completion:
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access):
- proposed method of plant removal:
- if chemical/herbicide treatment will be used, specify product(s):

v. Describe any proposed reclamation/mitigation following disturbance:

c. Will the proposed action use, or create a new demand for water? ☑Yes ☐No
If Yes:

i. Total anticipated water usage/demand per day: 45,000 gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☑Yes ☐No
If Yes:

- Name of district or service area: Onondaga County Water Authority
- Does the existing public water supply have capacity to serve the proposal? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No
- Do existing lines serve the project site? ☑Yes ☐No

iii. Will line extension within an existing district be necessary to supply the project? ☐Yes ☑No
If Yes:

- Describe extensions or capacity expansions proposed to serve this project:
- Source(s) of supply for the district:

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐Yes ☑No
If, Yes:

- Applicant/sponsor for new district:
- Date application submitted or anticipated:
- Proposed source(s) of supply for new district:

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generate liquid wastes? ☑Yes ☐No
If Yes:

i. Total anticipated liquid waste generation per day: 45,000 gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):
Sanitary wastewater

iii. Will the proposed action use any existing public wastewater treatment facilities? ☑Yes ☐No
If Yes:

- Name of wastewater treatment plant to be used: Syracuse Metropolitan Wastewater Treatment plant
- Name of district: Onondaga County Sanitary District
- Does the existing wastewater treatment plant have capacity to serve the project? ☑Yes ☐No
- Is the project site in the existing district? ☑Yes ☐No
- Is expansion of the district needed? ☐Yes ☑No

- Do existing sewer lines serve the project? ☑Yes ☐No
- Will a line extension within an existing district be necessary to serve the project? ☐Yes ☑No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐Yes ☑No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- What is the receiving water for the wastewater discharge? _____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge or describe subsurface disposal plans):

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: _____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction? ☑Yes ☐No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

_____ Square feet or -1.0 acres (impervious surface)

_____ Square feet or 13.0 acres (parcel size)

ii. Describe types of new point sources. Existing point source discharge locations will be maintained - existing on-site pond, ultimately discharging to Ley Creek and Onondaga Lake

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

existing on-site pond

- If to surface waters, identify receiving water bodies or wetlands: Ley Creek & Onondaga Lake
- Will stormwater runoff flow to adjacent properties? ☐Yes ☑No

iv. Does the proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☑Yes ☐No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐Yes ☑No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit? ☐Yes ☑No

If Yes:

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐Yes ☐No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)? ☐Yes ☑No

If Yes:

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): _____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐Yes ☑No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☑Yes ☐No

If Yes:

i. When is the peak traffic expected (Check all that apply): ☑ Morning ☑ Evening ☐ Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

iii. Parking spaces: Existing 100+/- Proposed 500 Net increase/decrease +400

iv. Does the proposed action include any shared use parking? ☐Yes ☑No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:
Proposed new access via Park Street.

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☑Yes ☐No

vii Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☑Yes ☐No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☑Yes ☐No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☑Yes ☐No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: _____
TBD

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):
National Grid

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐Yes ☑No

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday - Friday: 7:00am - 7:00pm
- Saturday: 7:00am - 7:00pm
- Sunday: 7:00am - 7:00pm
- Holidays: _____

ii. During Operations:

- Monday - Friday: _____
- Saturday: _____
- Sunday: _____
- Holidays: _____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☐ Yes ☑ No

If yes:

i. Provide details including sources, time of day and duration:

ii. Will the proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☑ No

Describe:

n. Will the proposed action have outdoor lighting? ☑ Yes ☐ No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

Site & Security Lighting. Site Lighting - Est. 25' pole mounted, dark-sky compliant downward-facing LED

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen? ☐ Yes ☑ No

Describe:

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☑ No

If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures:

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage? ☐ Yes ☑ No

If Yes:

i. Product(s) to be stored

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally, describe the proposed storage facilities:

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☑ No

If Yes:

i. Describe proposed treatment(s):

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☑ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation : _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:
- Operation:

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:
- Operation:

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will the proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: _____

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

iii. Specify amount to be handled or generated _____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: _____

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility: _____

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

☑ Urban ☑ Industrial ☑ Commercial ☑ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☑ Aquatic ☐ Other (specify): _____

ii. If mix of uses, generally describe:

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	8	7	-1
• Forested	0.5	0.5	0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	2	4	+2.0
• Agricultural (includes active orchards, field, greenhouse etc.)	0	0	0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.5	0.5	0
• Wetlands (freshwater or tidal)	1.0	1.0	0
• Non-vegetated (bare rock, earth or fill)	1.0	0	-1.0
• Other Describe: _____			

c. Is the project site presently used by members of the community for public recreation? ☐ Yes ☑ No

i. If Yes: explain: _____

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☐ Yes ☑ No

If Yes,

i. Identify Facilities:

_____

_____

e. Does the project site contain an existing dam? ☐ Yes ☑ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☑ No

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

_____

iii. Describe any development constraints due to the prior solid waste activities: _____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste? ☐ Yes ☑ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☑ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database — Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database — Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures: _____

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☑ Yes ☐ No

If yes, provide DEC ID number(s): 734075, C734132, 734048, C734131, 734123, 734030

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

Unknown

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☑ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? >6 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☑ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? _____ %

c. Predominant soil type(s) present on project site:

Urban	100 %
	%
	%

d. What is the average depth to the water table on the project site? Average: 2 feet

e. Drainage status of project site soils:

☐	Well Drained:	% of site
☑	Moderately Well Drained:	50 % of site
☑	Poorly Drained	50 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	98 % of site
☐	10-15%:	% of site
☑	15% or greater:	2 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☑ No
If Yes, describe: _____

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☐ Yes ☑ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☑ Yes ☐ No

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☑ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name _____ Classification _____
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Delineated by Consultant Approximate Size 1.0 ac
- Wetland No. (if regulated by DEC) _____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☐ Yes ☑ No

If yes, name of impaired water body/bodies and basis for listing as impaired: _____

i. Is the project site in a designated Floodway? ☐ Yes ☑ No

j. Is the project site in the 100-year Floodplain? ☑ Yes ☐ No

k. Is the project site in the 500-year Floodplain? ☑ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☑ Yes ☐ No
If Yes:

i. Name of aquifer: Principal Aquifer, Primary Aquifer

m. Identify the predominant wildlife species that occupy or use the project site:
NA

n. Does the project site contain a designated significant natural community? ☑ Yes ☐ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation):
Inland Salt Pond

ii. Source(s) of description or evaluation:

iii. Extent of community/habitat:

- Currently: 0.0 acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☑ Yes ☐ No

If Yes:

i. Species and listing (endangered or threatened):
Straight-leaved Pondweed, Lake Sturgeon, Bald Eagle

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☑ No

If Yes:

i. Species and listing:

q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? ☐ Yes ☑ No

If yes, give a brief description of how the proposed action may affect that use:

E.3. Designated Public Resources On or Near Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? ☐ Yes ☑ No

If Yes, provide county plus district name/number:

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☑ No

i. If Yes: acreage(s) on project site?

ii. Source(s) of soil rating(s):

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☑ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? ☐ Yes ☑ No

If Yes:

i. CEA name:

ii. Basis for designation:

iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☑ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☑ Yes ☐ No

g. Have additional archaeological or historic site(s) or resources been identified on the project site? ☐ Yes ☑ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☑ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☑ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contained in 6NYCRR Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name Steven Calocerinos, P.E. Date 12/11/2020

Signature _____ Title Project Engineer

PRINT FORM

Agency Use Only [If applicable]

Project:

Date:

Short Environmental Assessment Form
Part 2 - Impact Assessment

Part 2 is to be completed by the Lead Agency.
Answer all of the following questions in Part 2 using the information contained in Part 1 and other materials submitted by the project sponsor or otherwise available to the reviewer. When answering the questions the reviewer should be guided by the concept "Have my responses been reasonable considering the scale and context of the proposed action?"

	No, or small impact may occur	Moderate to large impact may occur
1. Will the proposed action create a material conflict with an adopted land use plan or zoning regulations?	☑	☐
2. Will the proposed action result in a change in the use or intensity of use of land?	☑	☐
3. Will the proposed action impair the character or quality of the existing community?	☑	☐
4. Will the proposed action have an impact on the environmental characteristics that caused the establishment of a Critical Environmental Area (CEA)?	☑	☐
5. Will the proposed action result in an adverse change in the existing level of traffic or affect existing infrastructure for mass transit, biking or walkway?	☑	☐
6. Will the proposed action cause an increase in the use of energy and it fails to incorporate reasonably available energy conservation or renewable energy opportunities?	☑	☐
7. Will the proposed action impact existing: a. public / private water supplies?	☑	☐
b. public / private wastewater treatment utilities?	☑	☐
8. Will the proposed action impair the character or quality of important historic, archaeological, architectural or aesthetic resources?	☑	☐
9. Will the proposed action result in an adverse change to natural resources (e.g., wetlands, waterbodies, groundwater, air quality, flora and fauna)?	☑	☐
10. Will the proposed action result in an increase in the potential for erosion, flooding or drainage problems?	☑	☐
11. Will the proposed action create a hazard to environmental resources or human health?	☑	☐

PRINT FORM

Agency Use Only [If applicable]

Project:

Date:

Short Environmental Assessment Form
Part 3 Determination of Significance

For every question in Part 2 that was answered "moderate to large impact may occur", or if there is a need to explain why a particular element of the proposed action may or will not result in a significant adverse environmental impact, please complete Part 3. Part 3 should, in sufficient detail, identify the impact, including any measures or design elements that have been included by the project sponsor to avoid or reduce impacts. Part 3 should also explain how the lead agency determined that the impact may or will not be significant. Each potential impact should be assessed considering its setting, probability of occurring, duration, irreversibility, geographic scope and magnitude. Also consider the potential for short-term, long-term and cumulative impacts.

☐ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action may result in one or more potentially large or significant adverse impacts and an environmental impact statement is required.

☑ Check this box if you have determined, based on the information and analysis above, and any supporting documentation, that the proposed action will not result in any significant adverse environmental impacts.

Town of Salina	1-27-2023
Name of Lead Agency	Date
Nicholas Paro	Supervisor
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from Responsible Officer)

PRINT FORM

DELTA
ENGINEERS, ARCHITECTS, & SURVEYORS

6700 Thompson Road, Suite 1
Syracuse, NY 13211
Tel: 315.695.7228
www.delta-eas.com

October 20, 2020

Mr. Steven Metivier
U.S. Army Corps of Engineers
Buffalo District – Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207

RE: Approved Jurisdictional Determination Request for Delineated Wetlands - 100 Buckley Road
City of Syracuse and Town of Salina, Onondaga County, New York
Delta Project No.: 2020.274.001

Dear Mr. Metivier:

Delta Engineers, Architects, Land Surveyors, and Landscape Architects, DPC (Delta) on behalf of PDM Estates, LLC is submitting a wetland delineation report to support a request for wetland boundary verification and an approved jurisdictional determination for a site located at 100 Buckley Road. If required, please schedule the field review as soon as feasibly possible. Delta would like to attend the field review at the site with the U.S. Army Corps of Engineers.

The site is located east of Buckley Road and west of Interstate 81 in the City of Syracuse and Town of Salina, Onondaga County, New York. The coordinates for the site are: 43.0793 N, -76.1756 W.

The site was previously developed and we believe that most wetlands on site may be considered excluded, as there are no apparent surface connections to intermittent or perennial streams.

If you have any questions, need additional information or to schedule a site visit, please contact me at (315) 695-7228 or emacewen@delta-eas.com. Thank you for your time and attention.

Respectfully,
DELTA ENGINEERS, ARCHITECTS, LAND SURVEYORS, & LANDSCAPE ARCHITECTS, DPC

Elizabeth A. MacEwen

Elizabeth A. MacEwen
Environmental Scientist

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

January 29, 2021

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01459

Vittorio Pascarella
PDM Estates, LLC
925 Seventh North Street
Liverpool, NY 13088

Dear Mr. Pascarella:

I have reviewed your request for an approved jurisdictional determination (JD) for the 12-acre subject parcel located at 100 Buckley Road, in the City of Syracuse, Onondaga County County, New York.

Enclosed is an approved JD which verifies the limits of waters of the U.S. within the subject parcel. This approved JD will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the approved JD before the expiration date. At the end of this period, a new aquatic resource delineation and JD will be required.

I have determined that the following aquatic resources are not waters of the U.S. as noted on the attached Interim Approved Jurisdictional Determination Form: Wetlands A, C and D. Therefore, these aquatic resources are not regulated under Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act of 1899. Department of the Army authorization is not required if you propose work or propose a discharge of dredged or fill material in these aquatic resources.

Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in your request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above JD, you must

Regulatory Branch

SUBJECT: Approved Jurisdictional Determination for Department of the Army Processing No. LRB-2020-01459

submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

Suzanne Chubb
Regulatory Appeals Review Officer
US Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: 513-684-7261 Fax: 513-684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by March 30, 2021

It is not necessary to submit an RFA to the Division office if you do not object to the determination in this letter.

Questions pertaining to this matter should be directed to me at (315) 255-8090 X 3, by writing to the following address: U.S. Army Corps of Engineers, 7413 County House Road, Auburn, New York 13021, or by e-mail at: Margaret.A.Crawford@usace.army.mil

Sincerely,

Margaret Crawford

Margaret Crawford
Biologist

Enclosures
Cc: Elizabeth MacEwen, Delta Engineers

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: PDM Estates, LLC	File Number: 2020-01459	Date: 1/29/2021
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

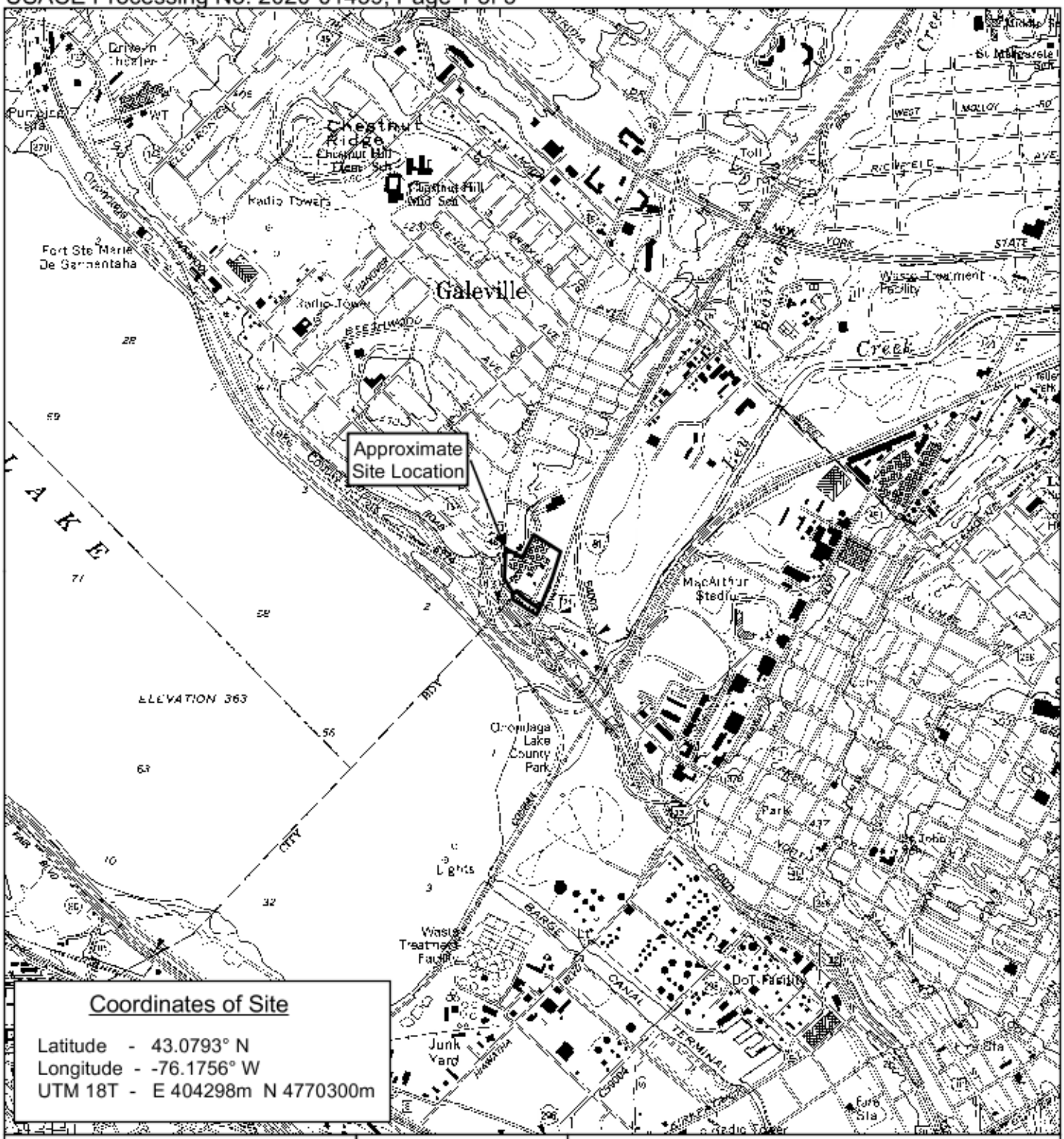
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Margaret Crawford U.S. Army Corps of Engineers 1776 Niagara Street Buffalo, New York 14207 716-879-6331 Margaret.a.crawford@usace.army.mil	Suzanne Chubb Regulatory Appeals Review Officer US Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10-714 Cincinnati, Ohio 45202-3222 Phone: 513-684-7261 Fax: 513-684-2460

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		



0 2,000 Feet

1 inch = 2,000 feet

N

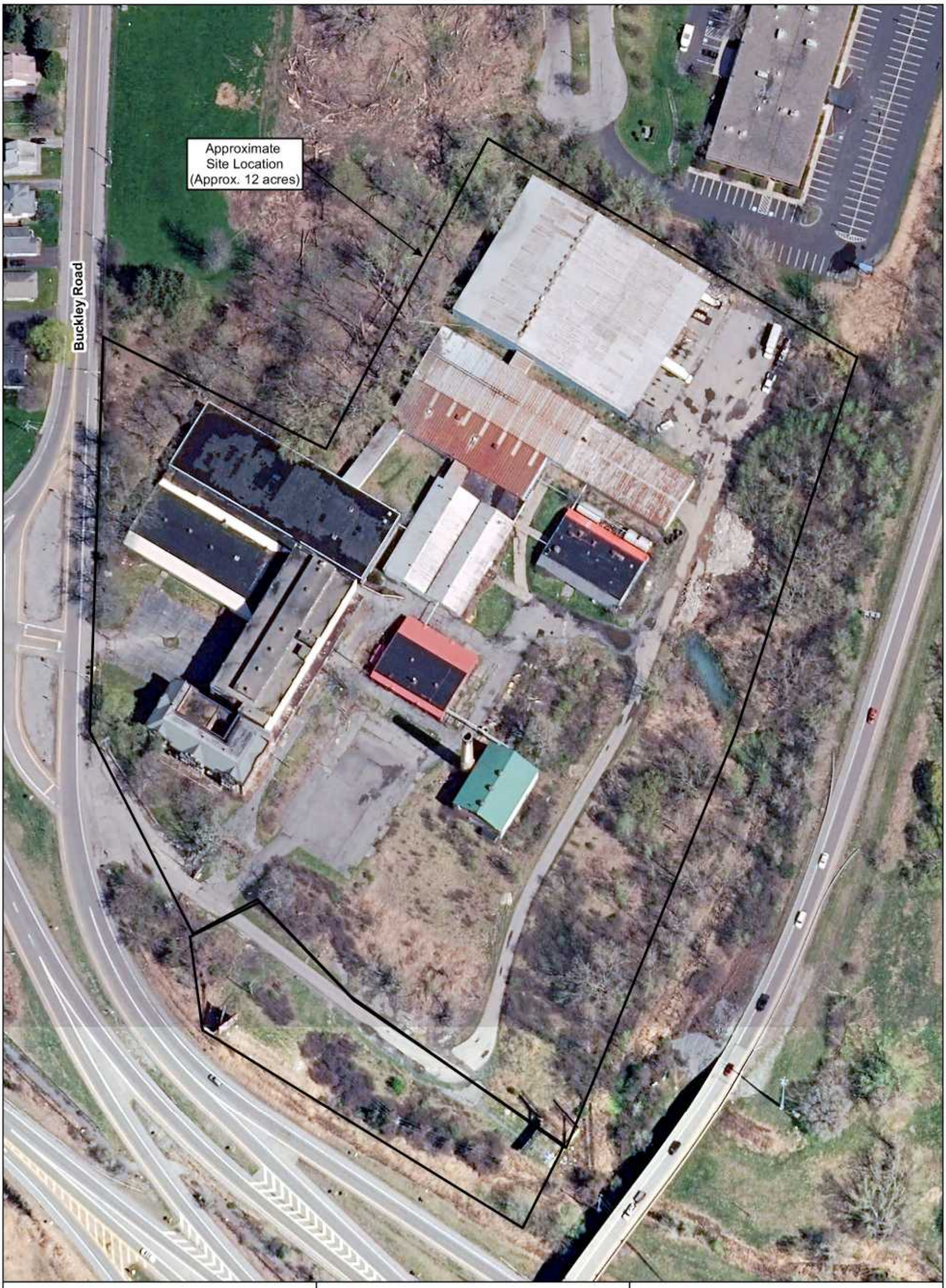
Figure 1. NYS DOT Topographic Map

Site Location

Syracuse West
1990

Prepared by Delta Engineers, Architects, and Land Surveyors

Delta File: 2020.274.001-Fig1.mxd\8-10-2020



N

0 100 Feet

1 inch = 100 feet

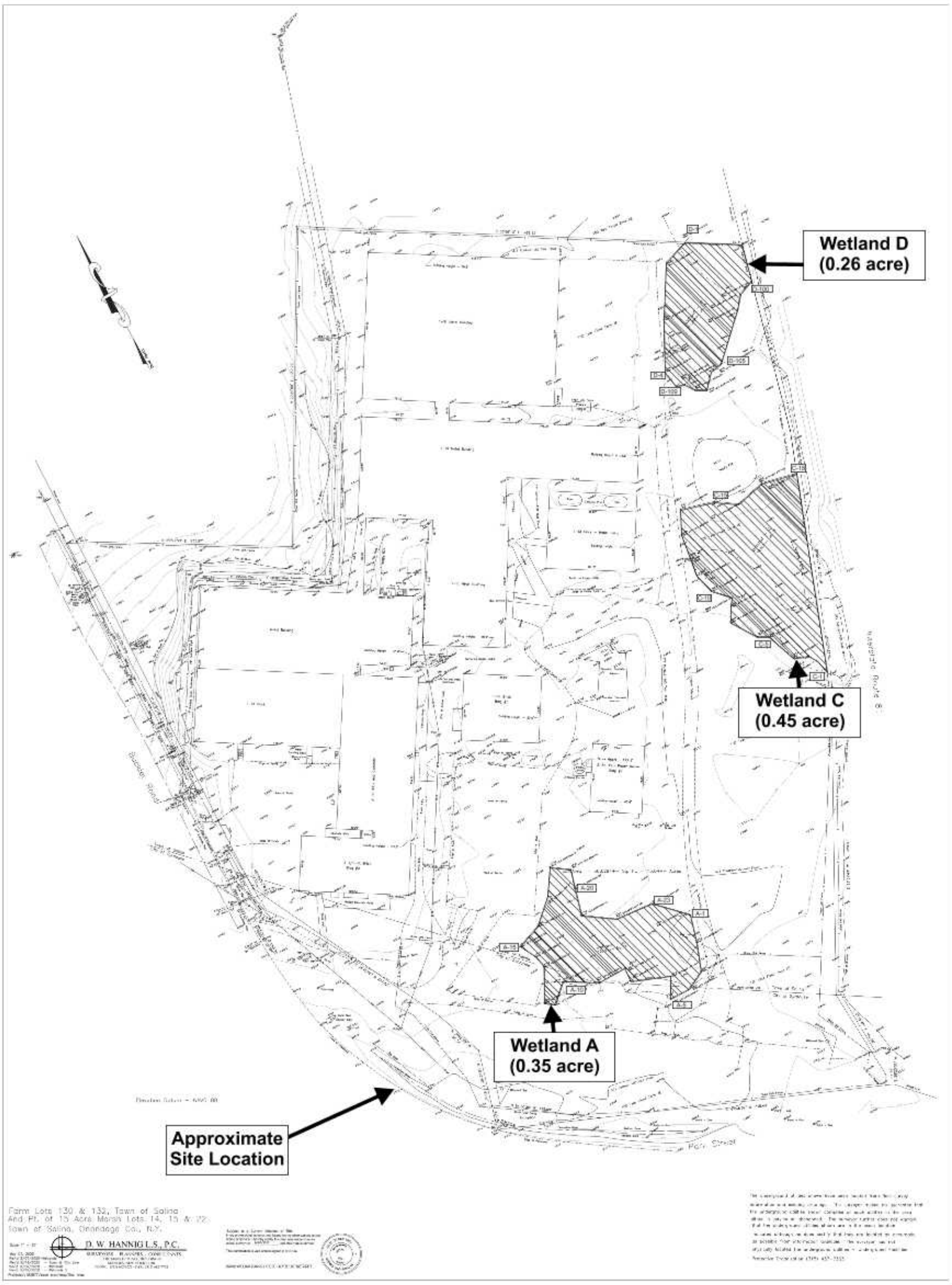
Aerial Photograph obtained from NYS GIS Clearinghouse 2018

Figure Prepared by
Delta Engineers, Architects, and Land Surveyors

Figure 7.

Aerial Photograph of Site

Delta File: ABC-0000\0000-Aerial.mxd\12-8-2020



NORTH

0' 60' 120'

APPROXIMATE SCALE IN FEET

Base Map Provided By
D.W. Hannig L.S., P.C.

Figure Prepared by
Delta Engineers

Figure 8.

Wetland Location Map

Delta File: 2020.274.001\2020.274.001-Wet-Survey.cdr\12-14-2020

U.S. ARMY CORPS OF ENGINEERS
REGULATORY PROGRAM
APPROVED JURISDICTIONAL DETERMINATION FORM (INTERIM)
NAVIGABLE WATERS PROTECTION RULE

I. ADMINISTRATIVE INFORMATION

Completion Date of Approved Jurisdictional Determination (AJD): 1/29/2021
ORM Number: LRB-2020-01459
Associated JDs: N/A
Review Area Location[1]:
State/Territory: NY City: Syracuse County/Parish/Borough: Onondaga County
Center Coordinates of Review Area: Latitude 43.0793 Longitude -76.1756

II. FINDINGS

A. Summary: Check all that apply. At least one box from the following list MUST be selected. Complete the corresponding sections/tables and summarize data sources.

- ☐ The review area is comprised entirely of dry land (i.e., there are no waters or water features, including wetlands, of any kind in the entire review area). Rationale: N/A or describe rationale.
- ☐ There are "navigable waters of the United States" within Rivers and Harbors Act jurisdiction within the review area (complete table in section II.B).
- ☐ There are "waters of the United States" within Clean Water Act jurisdiction within the review area (complete appropriate tables in section II.C).
- ☒ There are waters or water features excluded from Clean Water Act jurisdiction within the review area (complete table in section II.D).

B. Rivers and Harbors Act of 1899 Section 10 (§ 10)[2]

§ 10 Name	§ 10 Size	§ 10 Criteria	Rationale for § 10 Determination
N/A	N/A	N/A	N/A

C. Clean Water Act Section 404

Territorial Seas and Traditional Navigable Waters ((a)(1) waters)[3]

(a)(1) Name	(a)(1) Size	(a)(1) Criteria	Rationale for (a)(1) Determination
N/A	N/A	N/A	N/A

Tributaries ((a)(2) waters):

(a)(2) Name	(a)(2) Size	(a)(2) Criteria	Rationale for (a)(2) Determination
N/A	N/A	N/A	N/A

Lakes and ponds, and impoundments of jurisdictional waters ((a)(3) waters):

(a)(3) Name	(a)(3) Size	(a)(3) Criteria	Rationale for (a)(3) Determination
N/A	N/A	N/A	N/A

Adjacent wetlands ((a)(4) waters):

(a)(4) Name	(a)(4) Size	(a)(4) Criteria	Rationale for (a)(4) Determination
N/A	N/A	N/A	N/A

[1] Map(s)/Figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

D. Excluded Waters or Features

Excluded waters ((b)(1) – (b)(12))[4]:

Exclusion Name	Exclusion Size	Exclusion[5]	Rationale for Exclusion Determination
Wetland A	0.35 acres	(b)(1) Non-adjacent wetland	The site is largely developed, with several buildings and a perimeter road. Wetland 1 is a 0.35-acre PEM depressional wetland, located within the perimeter road. There are no culverts under the road connecting the wetland to any other waters. It is located over 1300 linear feet to the nearest USGS and NHD mapped stream located off site to the east. There is no hydrologic connection between the wetland and streams. There are no obvious man-made berms or other obstructions between the wetland and the creeks. There is no indication that any a(1)-a(3) water inundates the wetland in a typical year. This wetland is mapped within Urban soils, with a hydric indicator of 10, suggesting that the site has been modified in the past. The wetland is mapped In Zone X of the FEMA floodplain map, noting it is in an area of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot. Based on the above information, the wetland does not abut an (a)(1)through (a)(3) water, nor is the wetland inundated by flooding by an (a)(1) through a(3) water in a typical year, is not separated from an (a)(1) through (a)(3) water via a natural berm or barrier, and is not separated from an a(1) – a(3) water via an artificial structure/feature which allows water exchange at least once in a typical year.
Wetland C	0.45 acres	(b)(1) Non-adjacent wetland	The site is largely developed, with several buildings and a perimeter road. Wetland C is a 0.45 acre PEM wetland. It is located approximately 1300 linear feet to the nearest USGS and NHD mapped stream located off site to the east. As seen during the site inspection, it appears that wetland C is largely created by a historical outlet pipe from the abandoned buildings on site. This can be seen in the aerial photographs as a green open water area. This suggests that Wetland C was created from an artificial outfall. Wetland C continued off site onto the I-81 right-of-way into what appears to be a linear wetland, but was likely a constructed roadside ditch. This ditch continues south, and then east under I-81. While it appears that this ditch flows into Ley Creek, there is no indicating that this ditch was a relocated tributary or was constructed in a tributary. It also does not appear that

[1] Map(s)/Figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

			this ditch along I-81 was constructed in an adjacent wetland, largely because Wetland C appears to have been created by the outflow on site. Because of this determination, it was not necessary to determine the flow regime of the ditch, as it is already an excluded water. This wetland (and the ditch all the way to Ley Creek) is mapped within Urban soils, with a hydric indicator of 10, suggesting that the site has been modified in the past. The wetland is mapped In Zone AE of the FEMA floodplain map, subject to inundation by 1% annual chance flood. Despite this, using the APT, there is no indication that any a(1)-a(3) water inundates the wetland in a typical year. In addition, this wetland does not appear to be physically separated from an (a)(1)-(a)(3) water only by a natural berm, bank, dune, or similar natural feature.
Wetland D	0.26 acres	(b)(1) Non-adjacent wetland	The site is largely developed, with several buildings and a perimeter road. Wetland D is a 0.26 acre PFO wetland. It is located approximately 1300 linear feet to the nearest USGS and NHD mapped stream located off site to the east. Wetlands C and D were not connected, and there did not appear to be any ditch connecting them off-site on the I-81 right-of-way. Wetland D appeared to be connected to a roadside ditch to the north onto the I-81 right away into what appears to be a linear wetland, but was likely a constructed roadside ditch. There is no indication that this ditch was a relocated tributary or was constructed in a tributary. It also does not appear that this ditch along I-81 was constructed in an adjacent wetland. It is unclear where the ditch to the north flows, but this information is not relevant as the wetland is excluded since the ditch would also be an excluded water. Because of this determination, it was not necessary to determine the flow regime of the ditch. This wetland (and the ditch to the north) is mapped within Urban soils, with a hydric indicator of 10, suggesting that the site has been modified in the past. The wetland is mapped In Zone AE of the FEMA floodplain map, subject to inundation by 1% annual chance flood. Despite this, using the APT, there is no indication that any a(1)-a(3) water inundates the wetland in a typical year. In addition, this wetland does not appear to be physically separated from an (a)(1)-(a)(3) water only by a natural berm, bank, dune, or similar natural feature.

[1] Map(s)/Figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

III. SUPPORTING INFORMATION

A. Select/enter all resources that were used to aid in this determination and attach data/maps to this document and/or references/citations in the administrative record, as appropriate.

_x_ Information submitted by, or on behalf of, the applicant/consultant: *Wetland Delineation Report, prepared by Delta Engineers, dated October 23, 2020.*
This information *is* sufficient for purposes of this AJD.
Rationale: *N/A*

___ Data sheets prepared by the Corps: *Title(s) and/or date(s).*

_x_ Photographs: *on-site photos contained in wetland delineation report; and aerial photos from 10/10/2019; 4/13/2017; 3/31/06*

_x_ Corps Site visit(s) conducted on: *12/11/2020*

___ Previous Jurisdictional Determinations (AJDs or PJDs): *ORM Number(s) and date(s).*

_x_ Antecedent Precipitation Tool: *provide detailed discussion in Section III.B.*

_x_ USDA NRCS Soil Survey: *Onondaga County Soil Survey, provided in delineation report, as well as the web soil survey, accessed on 1/27/2020*

_x_ USFWS NWI maps: *Syracuse West Quad. www.fws.gov/nwi*

_x_ USGS topographic maps: *Syracuse West Quad*

Other data sources used to aid in this determination:

Data Source (select)	Name and/or date and other relevant information
USGS Sources	NHD
USDA Sources	N/A.
NOAA Sources	N/A.
USACE Sources	Maps and information available in the ORM database
State/Local/Tribal Sources	NYSDEC Environmental Resource Mapper
Other Sources	FEMA mapping

B. Typical year assessment(s): N/A or provide typical year assessment for each relevant data source used to support the conclusions in the AJD.

The APT pulls precipitation data from NOAA's Daily Global Historical Climatology Network. The APT evaluates normal precipitation conditions based on the three 30-day periods preceding the observation date. For each period, a weighted condition value is assigned by determining whether the 30-day precipitation total falls within, above, or below the 70th and 30th percentiles for totals from the same date range over the preceding 30 years. The APT then makes a determination of "normal," "wetter than normal," or "drier than normal" based on the condition value sum. The APT also displays results generated via the Palmer Drought Severity Index and the University of Delaware WebWIMP.

[1] Map(s)/Figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

The attached table summarizes the APT results for each aerial photograph reviewed and three site visits by the consultant. This information is referenced above.

Latitude	Longitude	Date	Season	ARC Score	Antecedent Precip Condition
43.0793	-76.1756	12/11/2020	Wet Season	8	Drier than Normal
43.0793	-76.1756	10/10/2019	Wet Season	15	Wetter than Normal
43.0793	-76.1756	4/13/2017	Wet Season	18	Wetter than Normal
43.0793	-76.1756	3/31/2006	Wet Season	10	Normal Conditions
43.0793	-76.1756	8/20/2020	Dry Season	13	Normal Conditions

This information above supports that there is no indication that any a(1)-a(3) water inundates any of the wetlands in a typical year, as the Google Earth Pro photos from 10/10/2019 and 4/13/2017 were taken during wetter than normal conditions and during the wet season, and there is no indication that Ley Creek, which appears to be the nearest a(1)-a(3) water, inundates the wetlands.

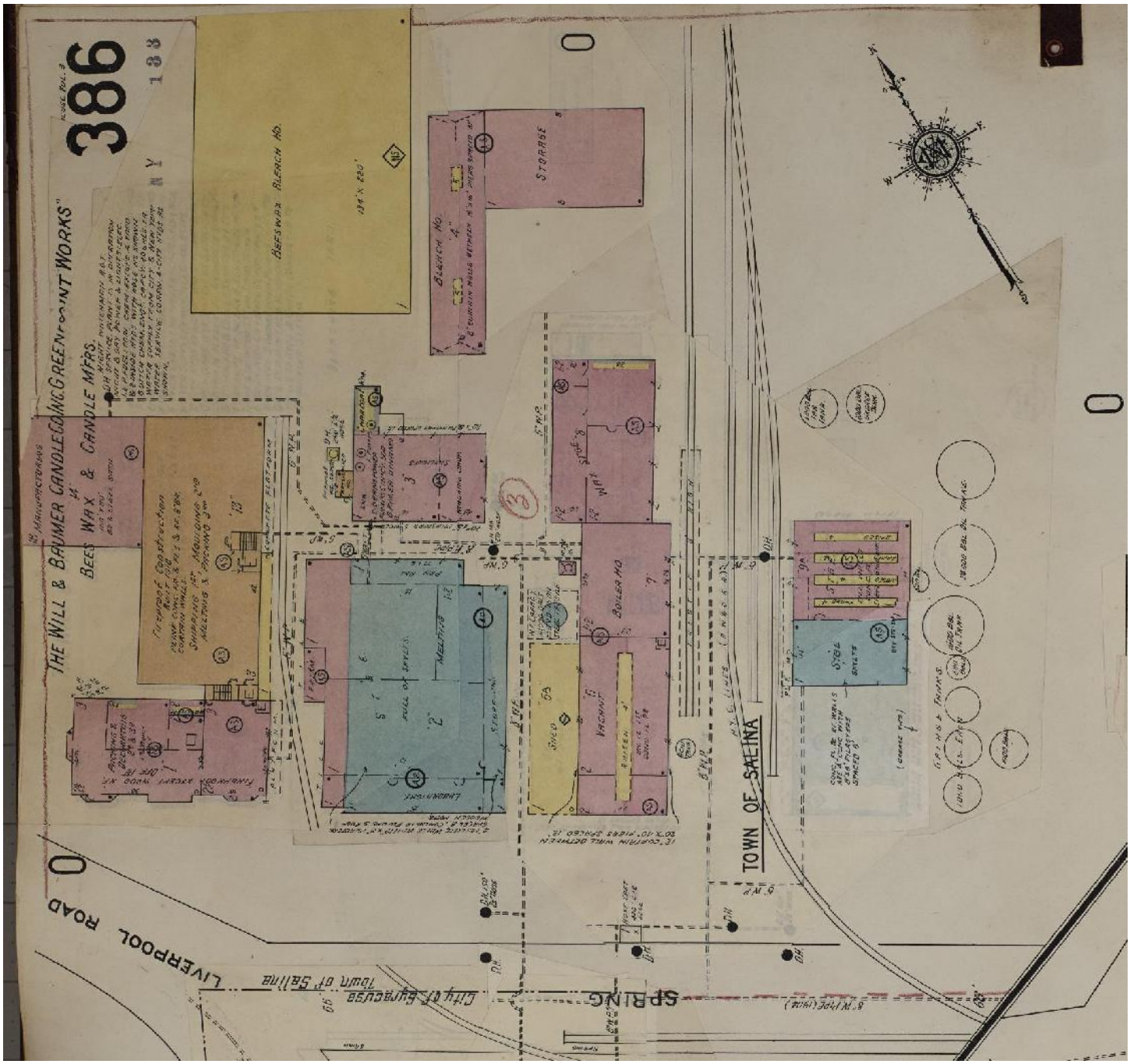
C. Additional comments to support AJD: N/A.

[1] Map(s)/Figure(s) are attached to the AJD provided to the requestor.
[2] If the navigable water is not subject to the ebb and flow of the tide or included on the District's list of Rivers and Harbors Act Section 10 navigable waters list, do NOT use this document to make the determination. The District must continue to follow the procedure outlined in 33 CFR part 329.14 to make a Rivers and Harbors Act Section 10 navigability determination.
[3] A stand-alone TNW determination is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where independent upstream or downstream limits or lake borders are established. A stand-alone TNW determination should be completed following applicable guidance and should NOT be documented on the AJD form.
[4] Some excluded waters, such as (b)(2) and (b)(4), may not be specifically identified on the AJD form unless a requestor specifically asks a Corps district to do so. Corps Districts may, in case-by-case instances, choose to identify some or all of these waters within the review area.
[5] Because of the broad nature of the (b)(1) exclusion and in an effort to collect data on specific types of waters that would be covered by the (b)(1) exclusion, four sub-categories of (b)(1) exclusions were administratively created for the purposes of the AJD Form. These four sub-categories are not new exclusions, but are simply administrative distinctions and remain (b)(1) exclusions as defined by the NWPR.

Appendix D

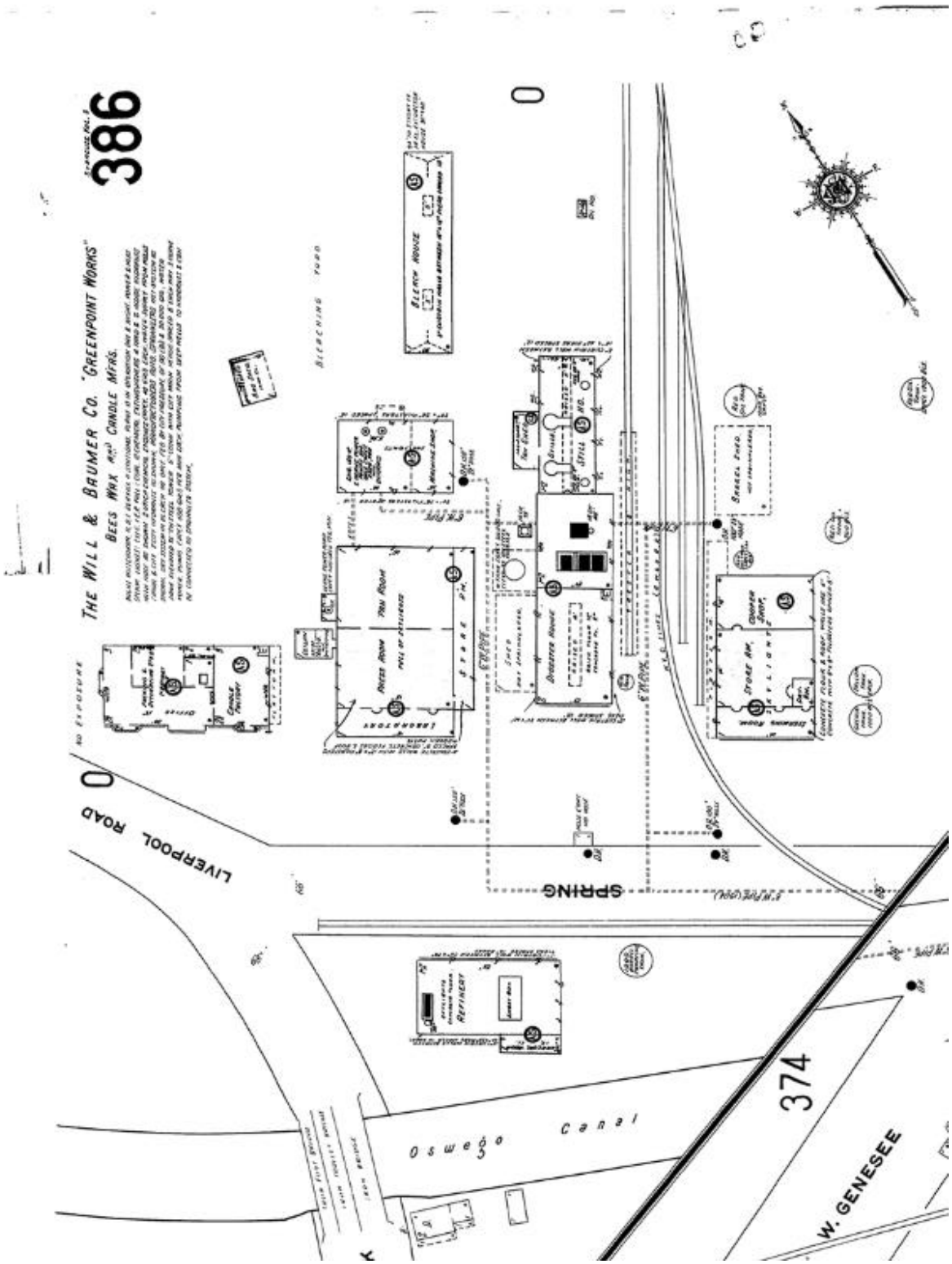
Sanborn Maps and Historic Facility Drawings

Sanborn Fire Insurance Map (1911)



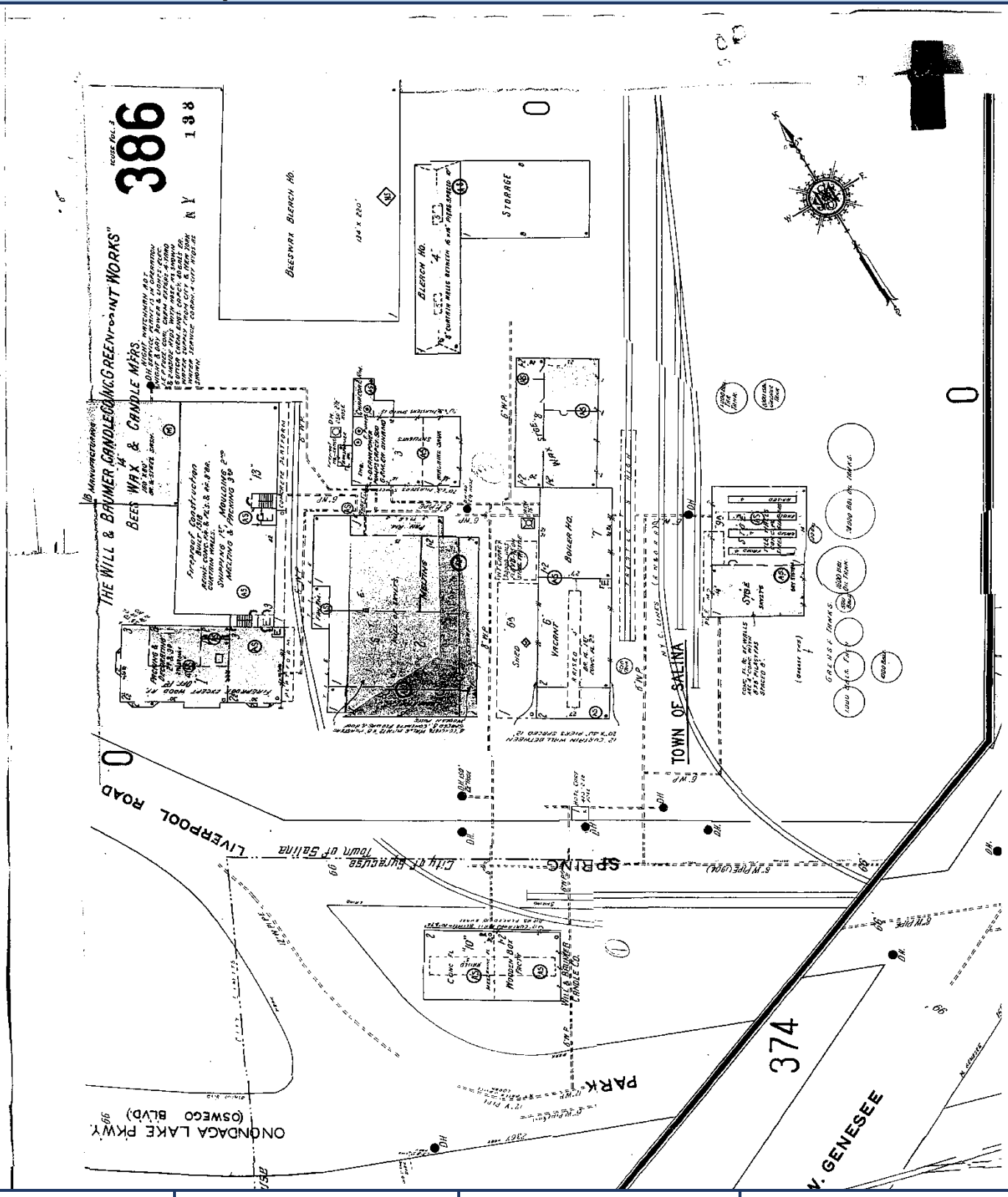
C&S COMPANIES	**C&S Engineers, Inc.** 499 Col. Eileen Collins Blvd. Syracuse, New York 13212	Urban Villages Site 100 Buckley Road Salina, New York 13090	**1911** Source: Bird Library, Syracuse University

Sanborn Fire Insurance Map (1928)



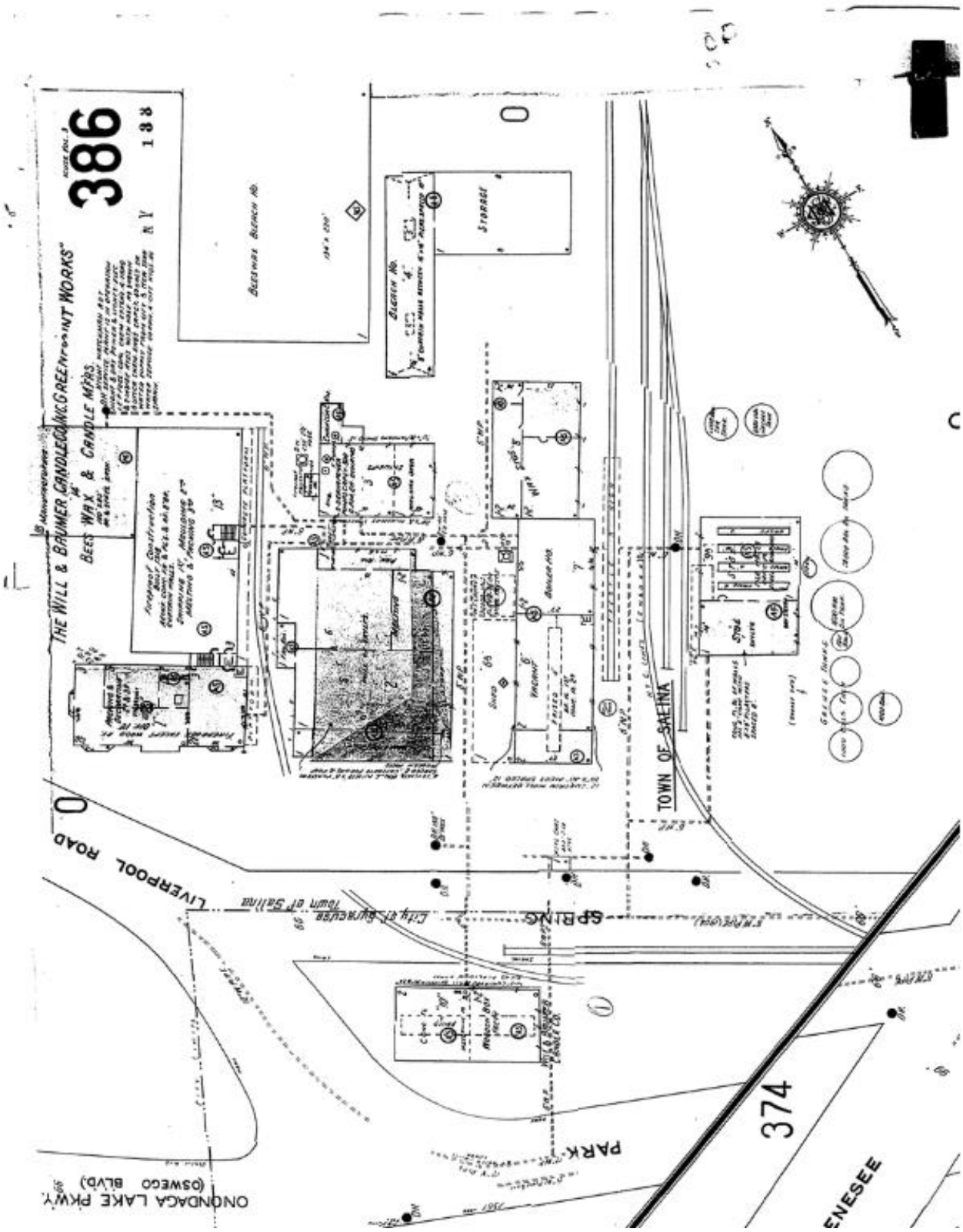
C&S COMPANIES	**C&S Engineers, Inc.** 499 Col. Eileen Collins Blvd. Syracuse, New York 13212	Urban Villages Site 100 Buckley Road Salina, New York 13090	**1928** Source: Bird Library, Syracuse University

Sanborn Fire Insurance Map (1942)



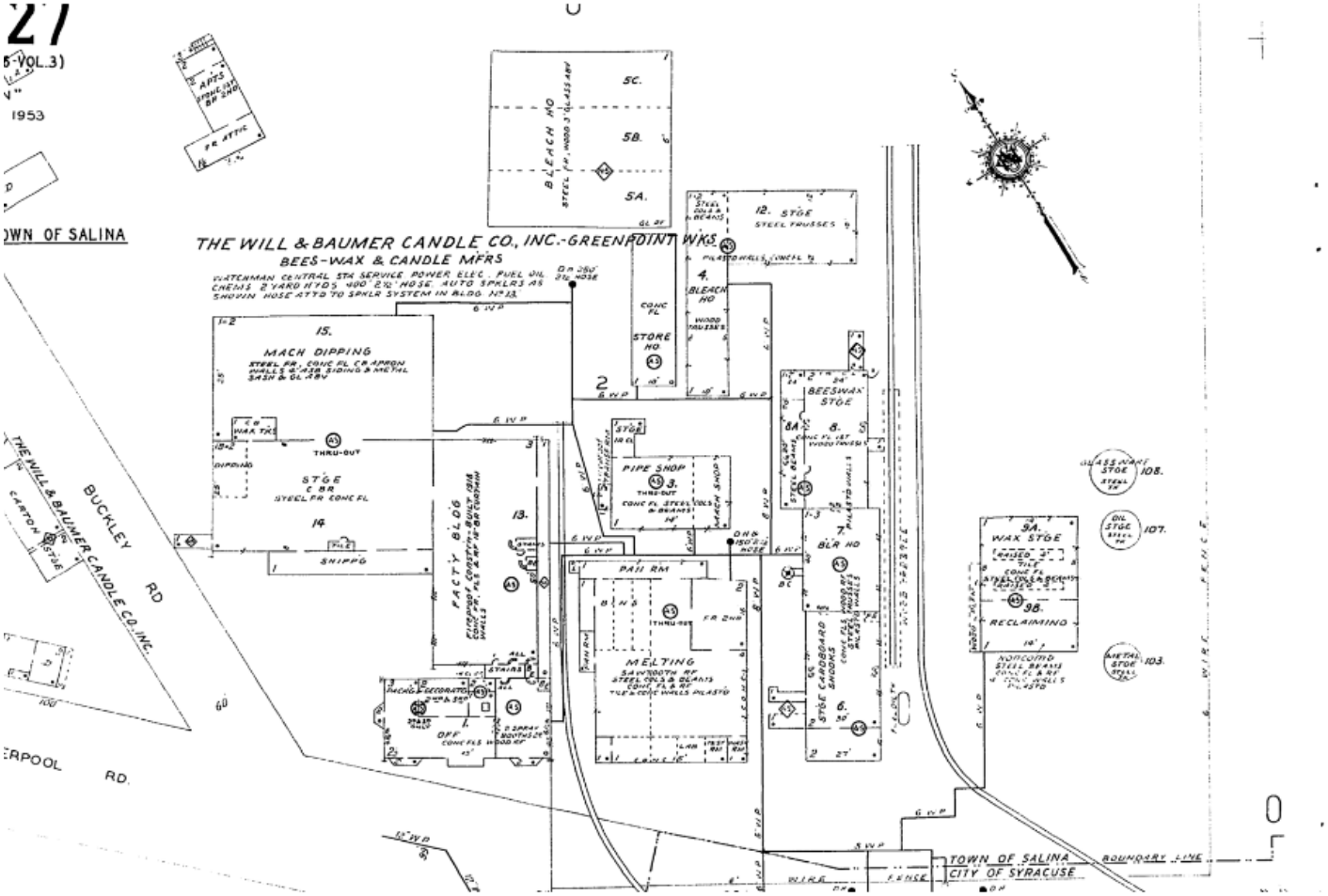
C&S COMPANIES	**C&S Engineers, Inc.** 499 Col. Eileen Collins Blvd. Syracuse, New York 13212	Urban Villages Site 100 Buckley Road Salina, New York 13090	**1942** Source: Bird Library, Syracuse University

Sanborn Fire Insurance Map (1950)



C&S COMPANIES®	**C&S Engineers, Inc.** 499 Col. Eileen Collins Blvd. Syracuse, New York 13212	Urban Villages Site 100 Buckley Road Salina, New York 13090	**1950** Source: Bird Library, Syracuse University

Sanborn Fire Insurance Map (1953)



C&S COMPANIES®	**C&S Engineers, Inc.** 499 Col. Eileen Collins Blvd. Syracuse, New York 13212	Urban Villages Site 100 Buckley Road Salina, New York 13090	**1953** Source: Bird Library, Syracuse University

ENVIRONMENTAL RISK INFORMATION SERVICES

FIRE INSURANCE MAPS

Project Property: 2201144
100 Buckley Road
Liverpool NY 13088

Project No:

Requested By: LaBella Associates

Order No: 20200311022

Date Completed: March 12, 2020

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

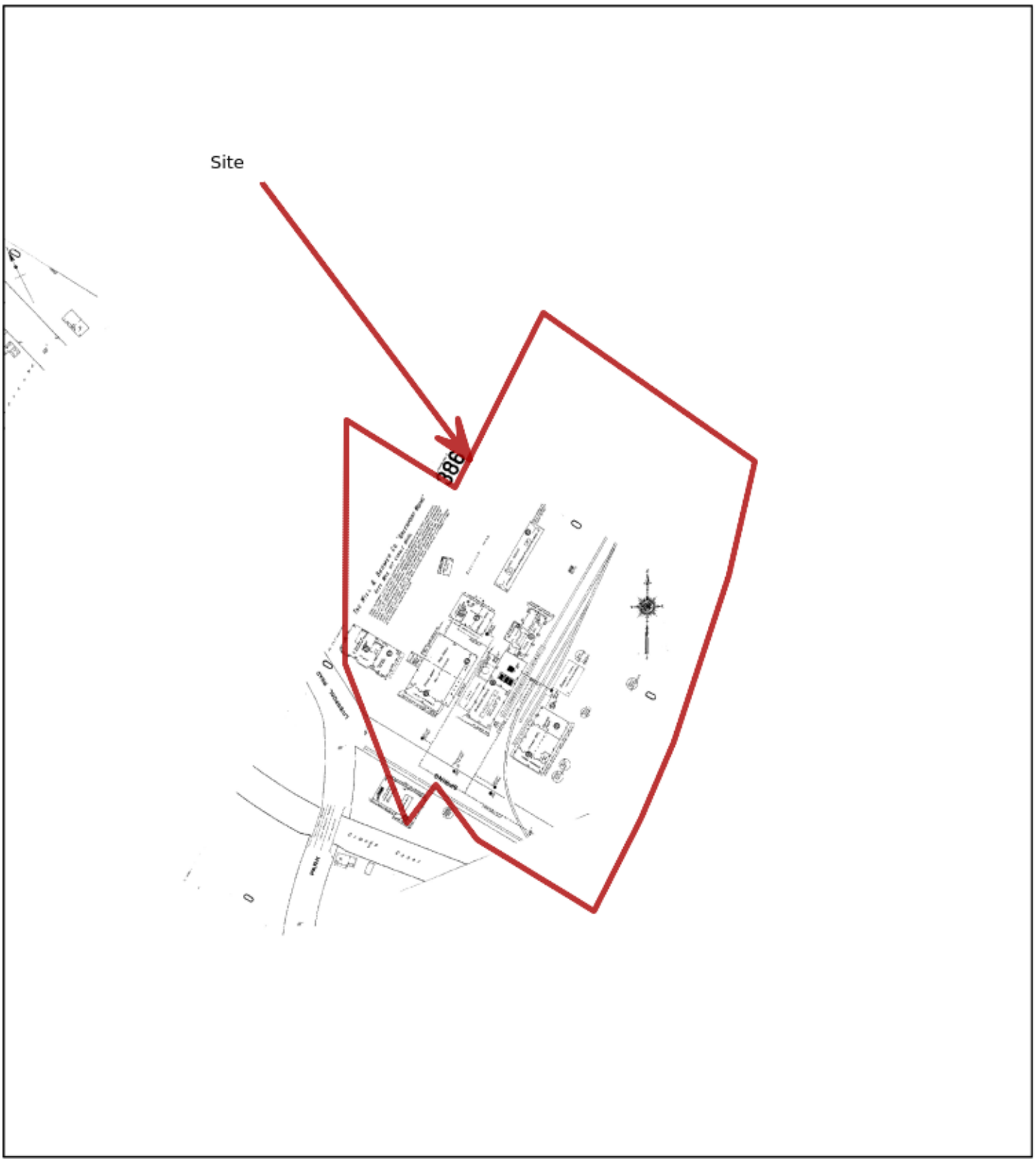
Listed below, please find the results of our search for historic fire insurance maps from our in-house collection, performed in conjuction with your ERIS report.

Date	City	State	Volume	Sheet Number(s)
1911	Syracuse	New York	3	375, 386
1950	Syracuse	New York	3	375, 386
1953	Syracuse	New York	4	427
1968	Syracuse	New York	4	427
1969	Syracuse	New York	4	427
1970	Syracuse	New York	4	427
1971	Syracuse	New York	4	427
1990	Syracuse	New York	4	427

Individual Fire Insurance Maps for the subject property and/or adjacent sites are included with the ERIS environmental database report to be used for research purposes only and cannot be resold for any other commercial uses other than for use in a Phase I environmental assessment.

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Fire Insurance Map



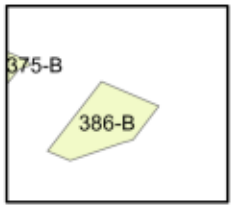
1911

Address: 100 Buckley Road Liverpool NY 13088

N

0 130 260 520 780 1,040

Feet

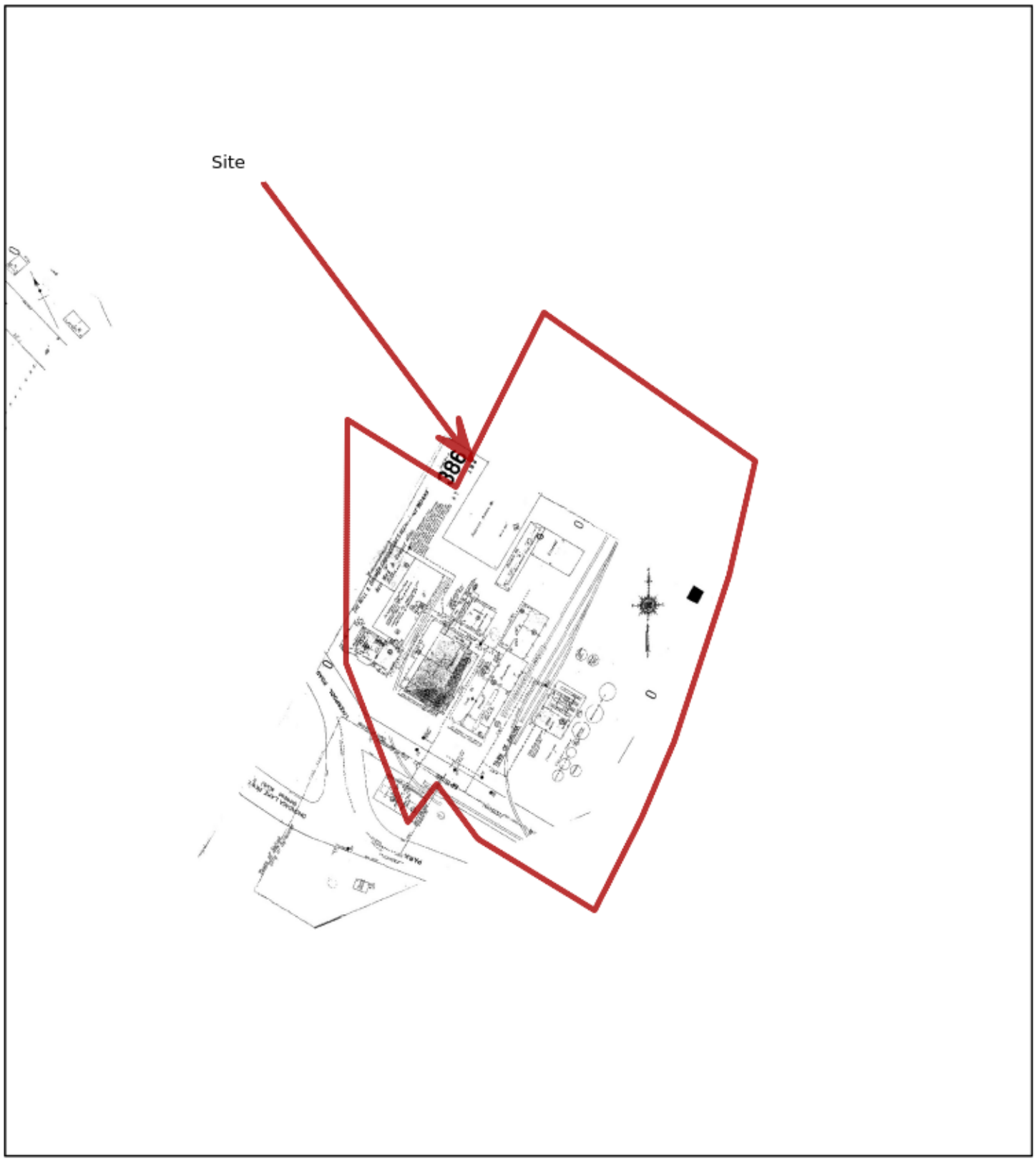


Map sheet(s):
Volume 3:375,386;

Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map



1950

Address: 100 Buckley Road Liverpool NY 13088

Map sheet(s):
Volume 3:375,386;
375,386;
375,386;

N

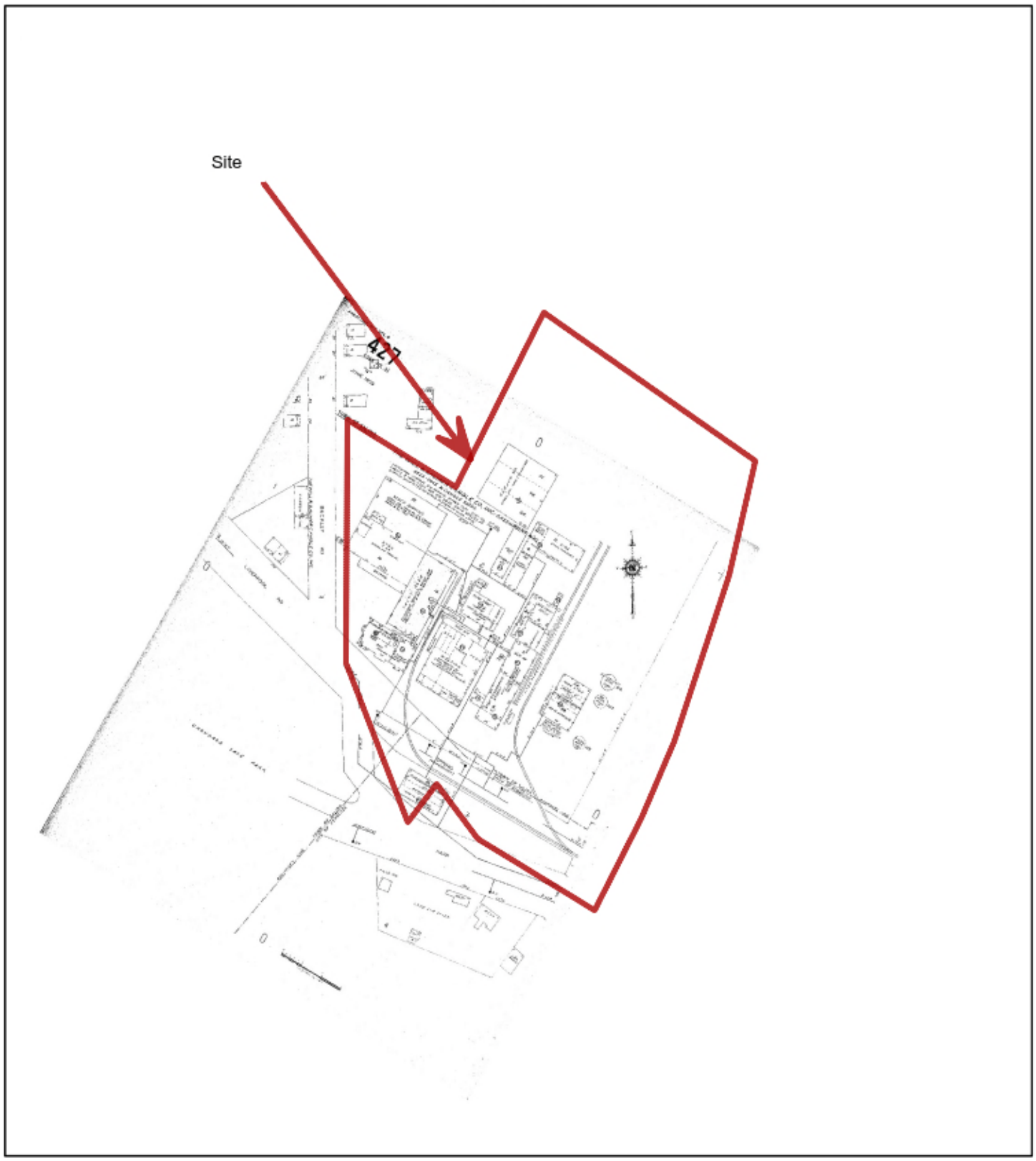
0 130 260 520 780 1,040

Feet

Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map



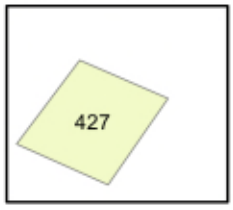
1953

Address: 100 Buckley Road Liverpool NY 13088

N

0 130 260 520 780 1,040

Feet

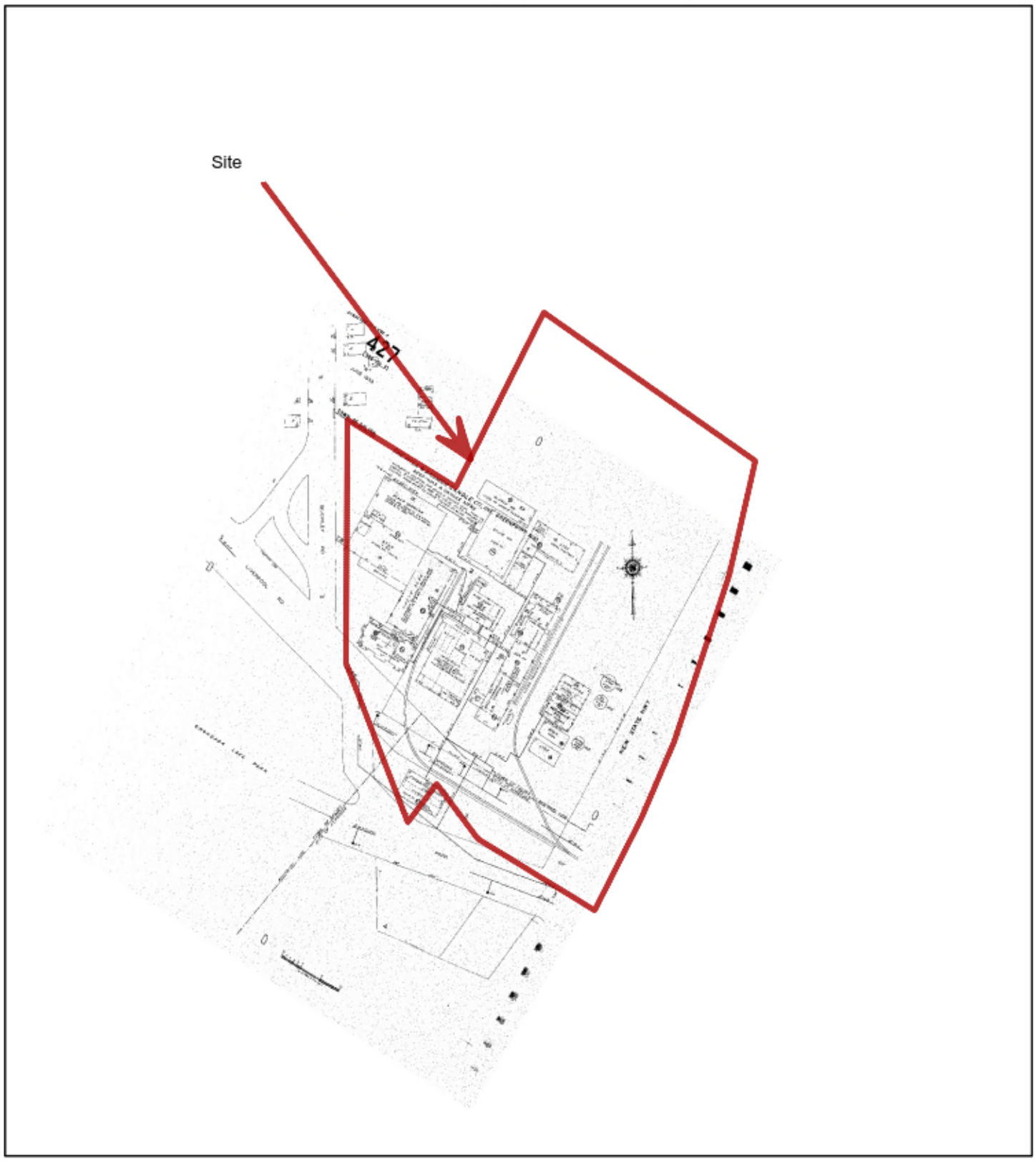


Map sheet(s):
Volume 4:427;

Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map



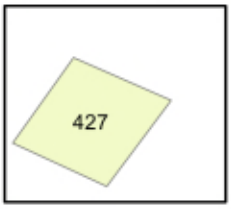
1968

Address: 100 Buckley Road Liverpool NY 13088

N

0 130 260 520 780 1,040

Feet



Map sheet(s):
Volume 4:427;

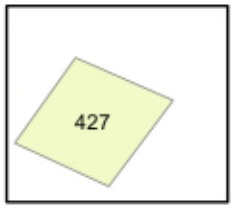
Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map

1969

Address: 100 Buckley Road Liverpool NY 13088



Map sheet(s):
Volume 4:427;

N

0 130 260 520 780 1,040

Feet

Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map

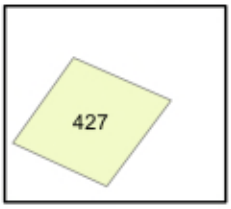
1970

Address: 100 Buckley Road Liverpool NY 13088

N

0 130 260 520 780 1,040

Feet



Map sheet(s):
Volume 4:427;

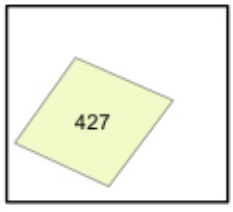
Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map

1971

Address: 100 Buckley Road Liverpool NY 13088



Map sheet(s):
Volume 4:427;

N

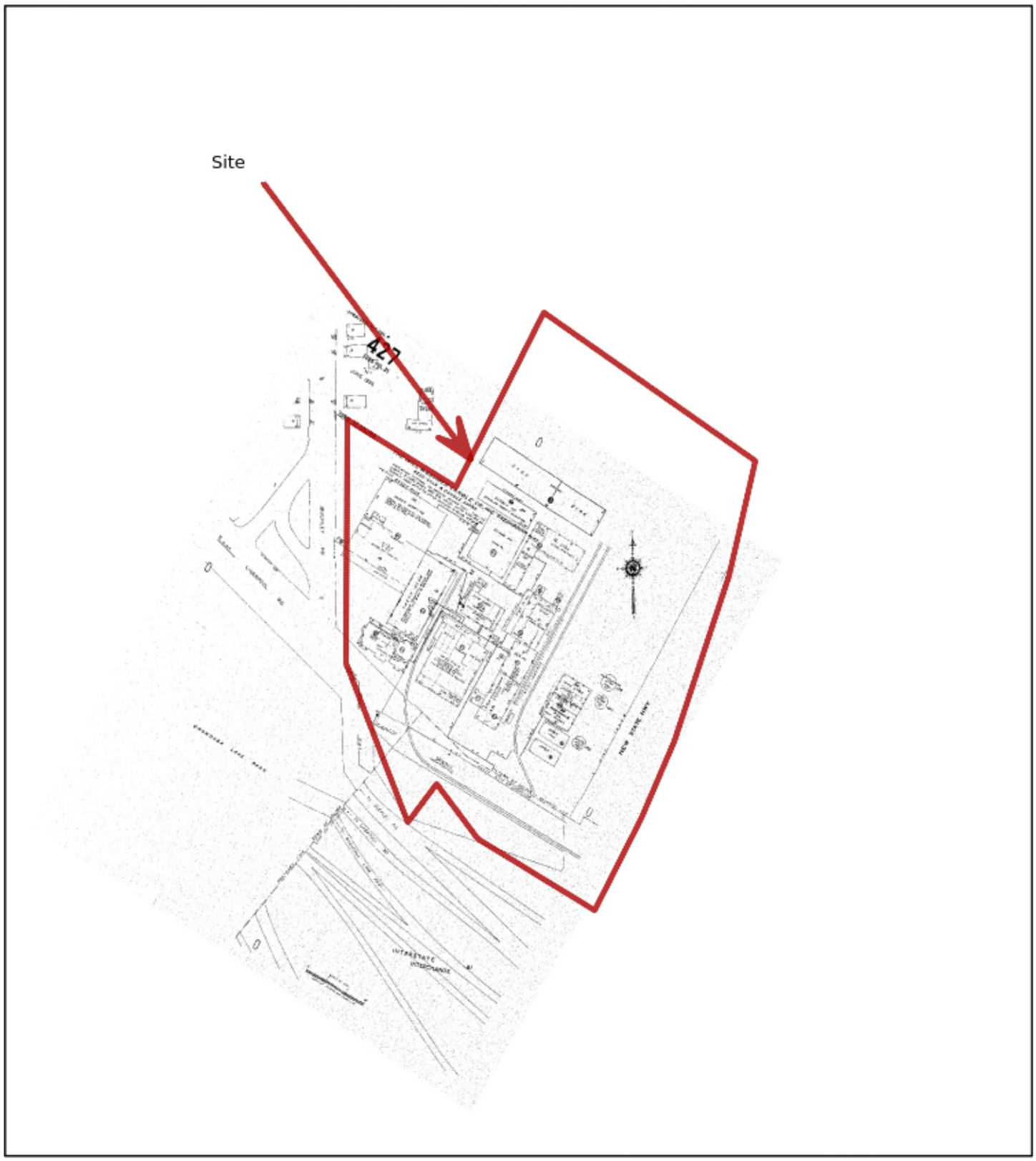
0 130 260 520 780 1,040

Feet

Order Number 20200311022

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Fire Insurance Map



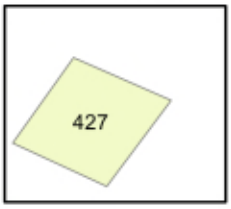
1990

Address: 100 Buckley Road Liverpool NY 13088

N

0 130 260 520 780 1,040

Feet



Map sheet(s):
Volume 4:427;

Order Number 20200311022

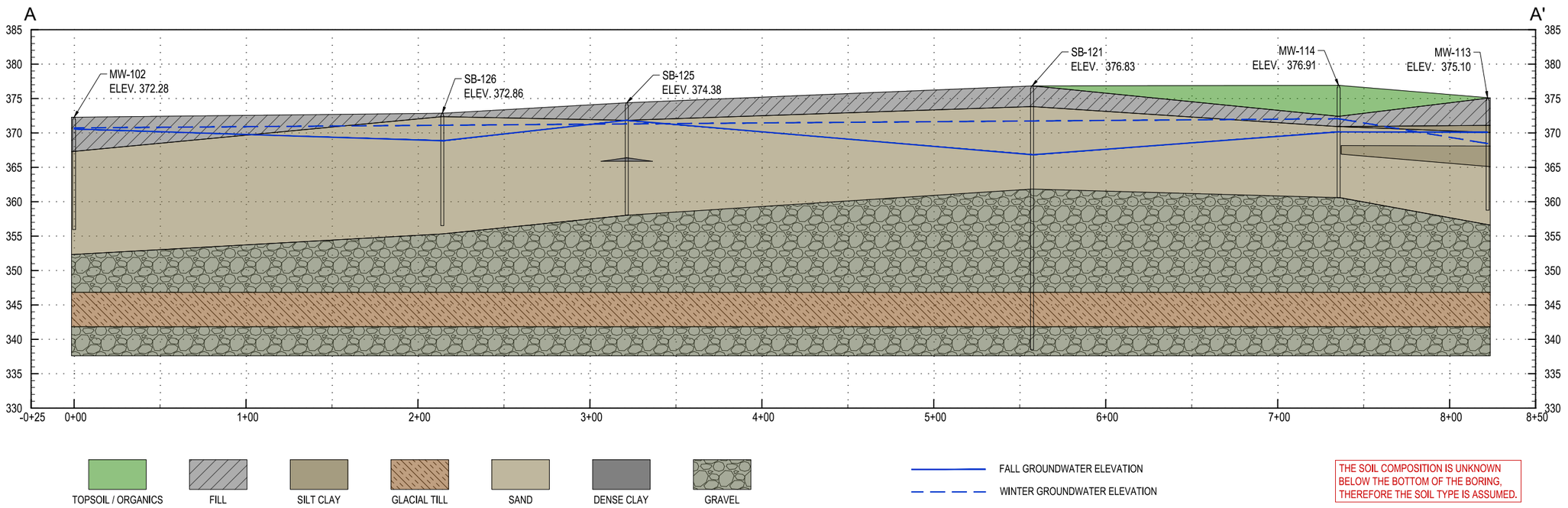
ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

Appendix E

Geologic Cross Sections

B1 PLAN
SCALE: 1" = 40' (22 x 34) 1" = 80' (11 x 17)

0 40' 80'



A1 SECTION A - A'
NOT TO SCALE

Oct 02, 2025 - 9:26am
C:\temp\acadtemp\AsPublish_11261\Section A.dwg

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	H. HAAS
CHECKED BY:	N. BRADFORD

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

SOIL CROSS SECTION A - A'

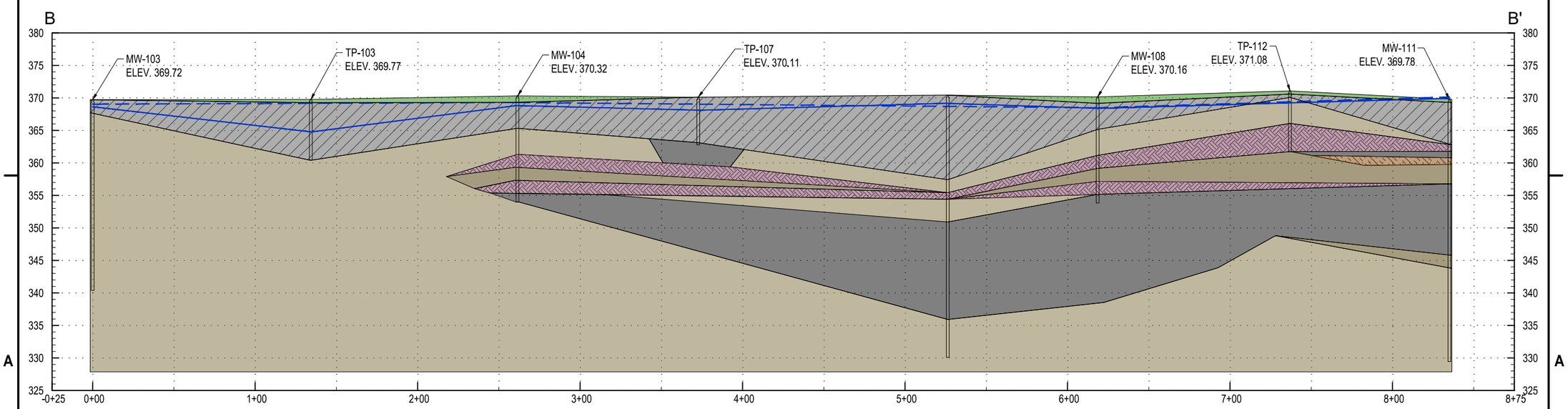
APP. D-1

Copyright ©

B1 PLAN

SCALE: 1" = 30' (22 x 34) 1" = 60' (11 x 17)

0 30' 60'



THE SOIL COMPOSITION IS UNKNOWN BELOW THE BOTTOM OF THE BORING, THEREFORE THE SOIL TYPE IS ASSUMED.

A1 SECTION B - B'

NOT TO SCALE

Oct 02, 2025 - 9:26am
C:\temp\acadtemp\AcPublish_11261\[Section B.dwg

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

MARK	DATE	DESCRIPTION
		REVISIONS

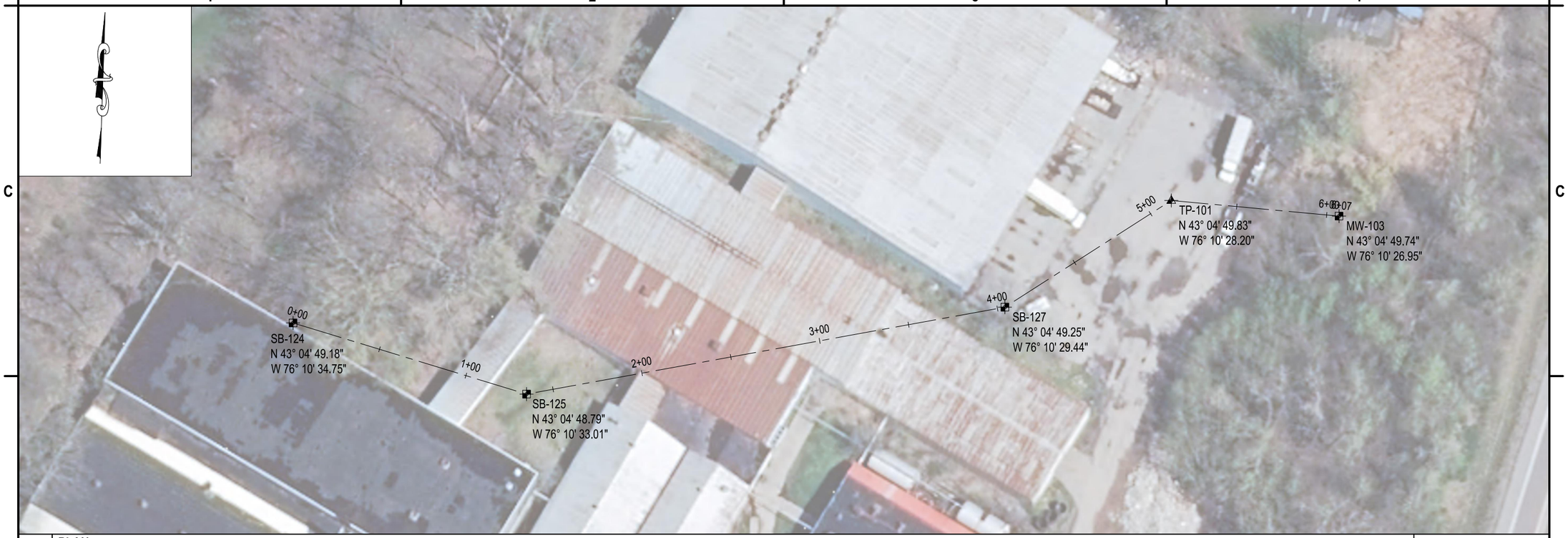
PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	H. HAAS
CHECKED BY:	N. BRADFORD

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

SOIL CROSS SECTION B - B'

APP. D-2

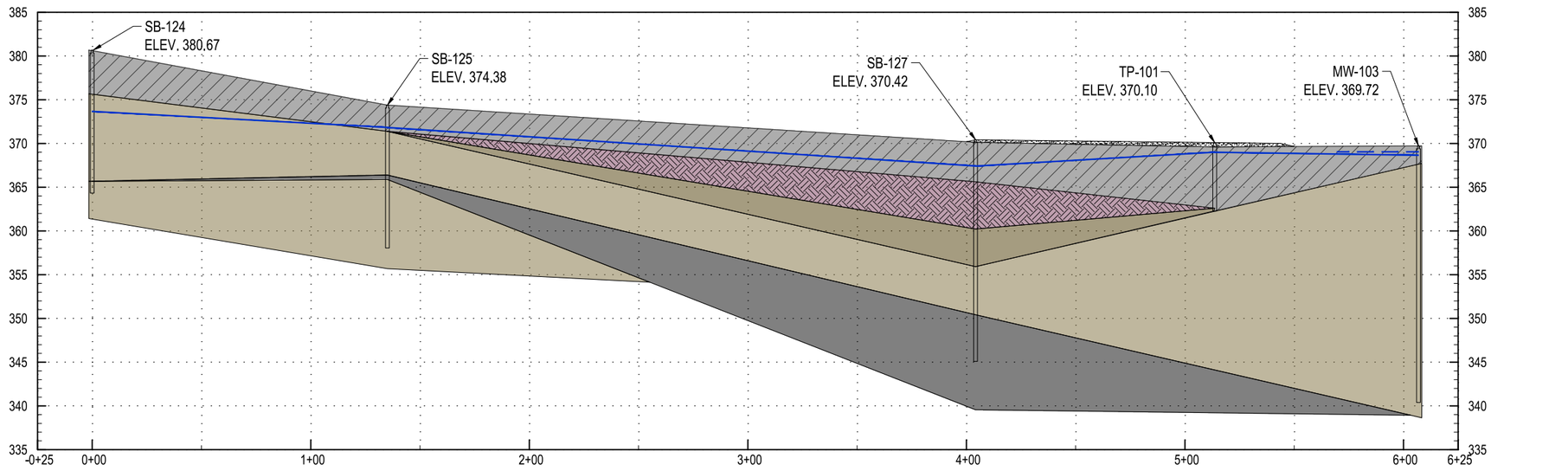
Copyright ©



B1 **PLAN**
SCALE: 1" = 30' (22 x 34) 1" = 60' (11 x 17)

0 30' 60'

C C'



THE SOIL COMPOSITION IS UNKNOWN BELOW THE BOTTOM OF THE BORING, THEREFORE THE SOIL TYPE IS ASSUMED.

A1 **SECTION C - C'**
NOT TO SCALE

1 2 3 4

Oct 02, 2025 - 9:26am
C:\temp\acadtemp\AcPublish_11216\Section C.dwg

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	H. HAAS
CHECKED BY:	N. BRADFORD

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

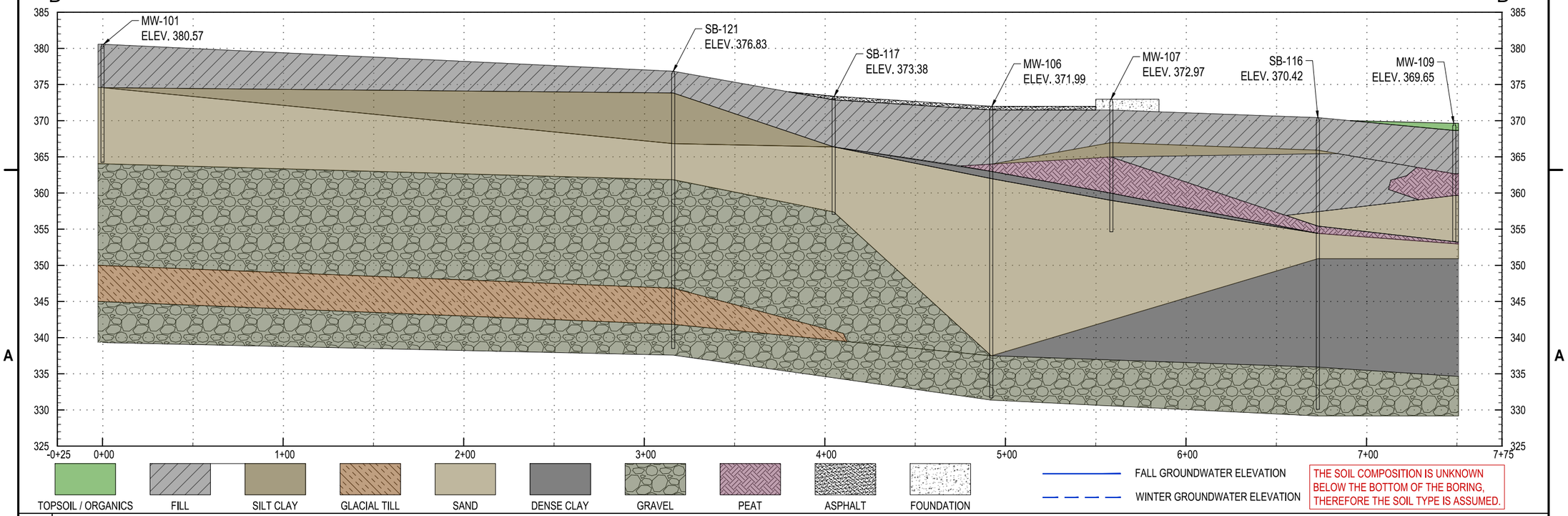
SOIL CROSS SECTION C - C'

APP. D-3

Copyright ©

B1 PLAN
SCALE: 1" = 30' (22 x 34) 1" = 60' (11 x 17)

0 30' 60'



A1 SECTION D - D'
NOT TO SCALE

Oct 02, 2025 - 9:26am
C:\temp\acadtemp\AcPublish_11216\Section D.dwg

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

ALTERNATIVES ANALYSIS REPORT AND REMEDIAL ACTION WORK PLAN
URBAN VILLAGES (SITE NO. C734154)
100 BUCKLEY ROAD
SALINA, NEW YORK 13088

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	X82.002.002
DATE:	09/29/2025
DRAWN BY:	B. BUCKINGHAM
DESIGNED BY:	H. HAAS
CHECKED BY:	N. BRADFORD

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK EDUCATION LAW

SOIL CROSS SECTION D - D'

APP. D-4

Copyright ©

Appendix F

Climate Screening Checklist

Climate Screening Checklist

Background Information

- Project Manager: Nevin Bradford, PE - C&S Engineers, Inc
- Site Name: Urban Villages (Former Will & Baumer Candle Co., Inc) BCP Site
- Site Number: C734154
- Site Location: 100 Buckley Rd, Town of Salina, Onondaga County, New York
- Site Elevation (average above sea level): 370 Feet
- ClimAID Region (Responding Climate Change in New York State (ClimAID) - NYSERDA): Region 6
- Remedial Stage/site classification:

  Brownfield Cleanup Program (BCP Site ID: C734154)
  Alternative Analysis Report (AAR) and Remedial Action Work Plan
- Contamination - Media Impacted/ Contaminants of Concern:

  SVOCs and Metals were detected in the layer of historic fill material (HFM) located across the Site and was found to exceed the planned Restricted Residential Use soil cleanup objectives (SCO). In addition, similar SVOCs were detected in Site groundwater.

  VOCs (particularly TCE) are present in soil vapor beneath certain building slabs.
- Proposed/Current Remedy:

  The construction of a soil/hard scape cover system under the NYSDEC BCP program Track 4 Cleanup meeting Restricted Residential Use.
- What is the predicted timeframe of the remedy? Will components of the remedy still be in place in 10+ years?

  The prosed project completion and receipt of the COC is by the end of 2026. The remedy will be in-place for longer than 10 years.
- Is the site in proximity to any sensitive receptors? (e.g. wetlands, waterbodies, residential properties, hospitals, schools, drinking water supplies, etc.)

Yes, residential properties to the east, medical offices to the north, located within the Onondaga Salt Marsh, and the in the vicinity of rare animals (Lake Sturgeon) and rare plants.

Is the site in a disadvantaged community (DAC) or potential environmental justice area (PEJA) (Use DECinfolocator: DECinfo Locator (ny.gov))?

☒ **Yes** ☐ **No**

If the site is in a DAC or PEJA, will climate impacts be magnified? If yes, list how and why.

☐ **Yes** ☒ **No**

Should thresholds of concern be lowered to account for magnification of impacts? If yes, indicate how lower thresholds will be used in the screening.

☐ **Yes** ☒ **No**

Climate Screening Table*

Potential Climate Hazards	**Relevant to the Site Location** (Y/N/NA)[1]	**Projected Change** (Reference data source/Model)[3]	**Potential to Impact Remedy** (Y/N)	**Is remedy/site already resilient?** (Y/N)[4]
Precipitation	Y	3 Inches of Rain Fall	Y	Y
Temperature[2] (Extreme Heat or Cold Weather Impacts)	Y	33 days above 89.7 7 above 96.56	N	N
Sea Level Rise	N	NA	NA	NA
Flooding	Y	58% of the Site located in the 1% Flood Zone	Y	Y
Storm Surge	N	NA	NA	NA
Wildfire	Y	Increase 5 days per year	N	N
Drought	Y	1.5% increase in water demand	N	NA
Storm Severity	N	NA	NA	NA
Landslides	N	NA	NA	NA
Other Hazards:				

* Links to potential data sources can be found on the following page

[1] If the first column is N --> The rest of the columns will be N/A, the hazard is not applicable to the site.

[2] Extreme Heat: periods of three or more days above 90°F- Extreme Cold: Individual days with minimum temperatures at or below 0 degrees F (NYSERDA ClimAID report)

[3] List the projected change in specific terms or units e.g. inches of rain fall, feet of sea level rise, etc.

[4] If final column is Y, provide reasoning, if the final column is N --> Climate Vulnerability Assessment (CVA) required.

Required Next Steps (If no further action is required, provide justification):

No Further Action, the proposed site redevelopment includes a large retention pond and storm water management system. The Site final grade is being raised and will reduce the flooding hazard.

Potential Data Sources (not an exhaustive list)- from Superfund Climate Resilience: Vulnerability Assessment | US EPA

NYSERDA ClimAID report- Responding Climate Change in New York State (ClimAID) - NYSERDA

FEMA- National Flood Hazard Layer | FEMA.gov

NOAA- National Storm Surge Risk Maps - Version 3 (noaa.gov)

Department of Agriculture Forest Service Wildfire Risk to Communities

EPA Climate Change Indicators in the United States

EPA Climate Resilience Evaluation & Awareness Tool (CREAT) | U.S. Climate Resilience Toolkit

EPA National Stormwater Calculator

National Integrated Drought Information System U.S. Drought Portal

National Interagency Coordination Center National Interagency Fire Center

National Oceanic and Atmospheric Administration Coastal Services Digital Coast

- Resources to help communities assess coastal hazards, such as the Sea Level Rise Viewer for visualizing community-level impacts of flooding or sea level rise and downloadable LIDAR data

National Oceanic and Atmospheric Administration National Centers for Environmental Information website

National Oceanic and Atmospheric Administration Sea Level Trends

National Weather Service Climate Prediction Center

National Weather Service National Hurricane Center

National Weather Service Sea, Lake, and Overland Surges from Hurricanes (SLOSH)

National Weather Service Storm Surge Hazard Maps

U.S. Federal Government Climate Resilience Toolkit: The Climate Explorer

U.S. Army Corps of Engineers Climate Prepardness and Resilience

U.S. Geological Survey Coastal Change Hazards Portal

U.S. Geological Survey Landslide Hazards Program

U.S. Geological Survey National Ground-water Monitoring Network Data Portal

U.S. Geological Survey National Climate Change Viewer

U.S. Geological Survey National Water Dashboard

U.S. Geological Survey StreamStats

NYS Department of State- Assess | Department of State (ny.gov)

NYSERDA NY Costal Floodplain Mapper- Home Page (ny.gov)

NYSDEC Costal Erosion Hazards- Coastal Areas Regulated By The CEHA Permit Program - NYDEC

NYSDOH Heat Index- health.ny.gov/environmental/weather/vulnerability_index/county_maps.htm

CLIMATE RISK ASSESSMENT REPORT

Project Property:	*Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP Site, 100 Buckley Road* *100 Buckley Road, Liverpool, NY 13088 US*
Project No:	*X82.002.002*
Requested By:	*C&S Companies*
Order No:	*24052100225*
Date Completed:	*May 21, 2024*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

CLIMATE RISK ASSESSMENT

POWERED BY ClimateCheck®

LOCATION

Urban Villages (Former Will & Baumer Candle Co., Inc

RISK RATINGS

10-86 /100

REPORT CONTENTS

Page 3	**Flood** Extreme risk 68% of search area	Flood Depth (in.)	1990: 54 → 2050: 54	86
8	**Wind** Extreme risk	Gale Force Winds	28 → 29	84
11	**Precipitation** Extreme risk	Rain in Extremes (in.)	14 → 18	80
14	**Heat** High risk	Extremely Hot Days	7 → 33	55
17	**Drought** Significant risk	Water Stress	5% → 6%	33
20	**Fire** Relatively Low risk	Fire Weather Days	4 → 9	10

Supplemental Data

25 National Risk Index

26 Emissions Scenarios

Landslides: there is **no recorded landslide** within about 30km of this property.

Selected Geometry

Address

Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP Site, 100 Buckley Road

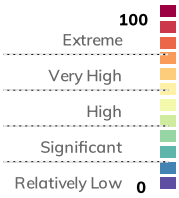
Coordinates

-76.175575°, 43.079847°

Boundaries

Rating Information

Our ratings reflect hazard risk at a property relative to the rest of our data coverage area. Ratings are based on historical risk and projected 2050 risk. A rating of 1 represents the least risk (but not necessarily none).



Projected Flood Risk

COVERAGE: This assessment is based on the **highest potential flooding risk** within the geometry provided for this location. See maps for details.

About **68%** of this search area has **fluvial (riverine) flooding or pluvial (surface) flooding** risk.

RISK PROJECTIONS:

- **Fluvial and Pluvial Flooding**

Our models project that this property has about a **51%** chance of a significant pluvial or fluvial flood about **over 4 feet** deep over the next thirty years. See map for details.

- **FEMA Analysis**

Zone AE. *The risk of a major flood is at least **26% in 30 years.***

86

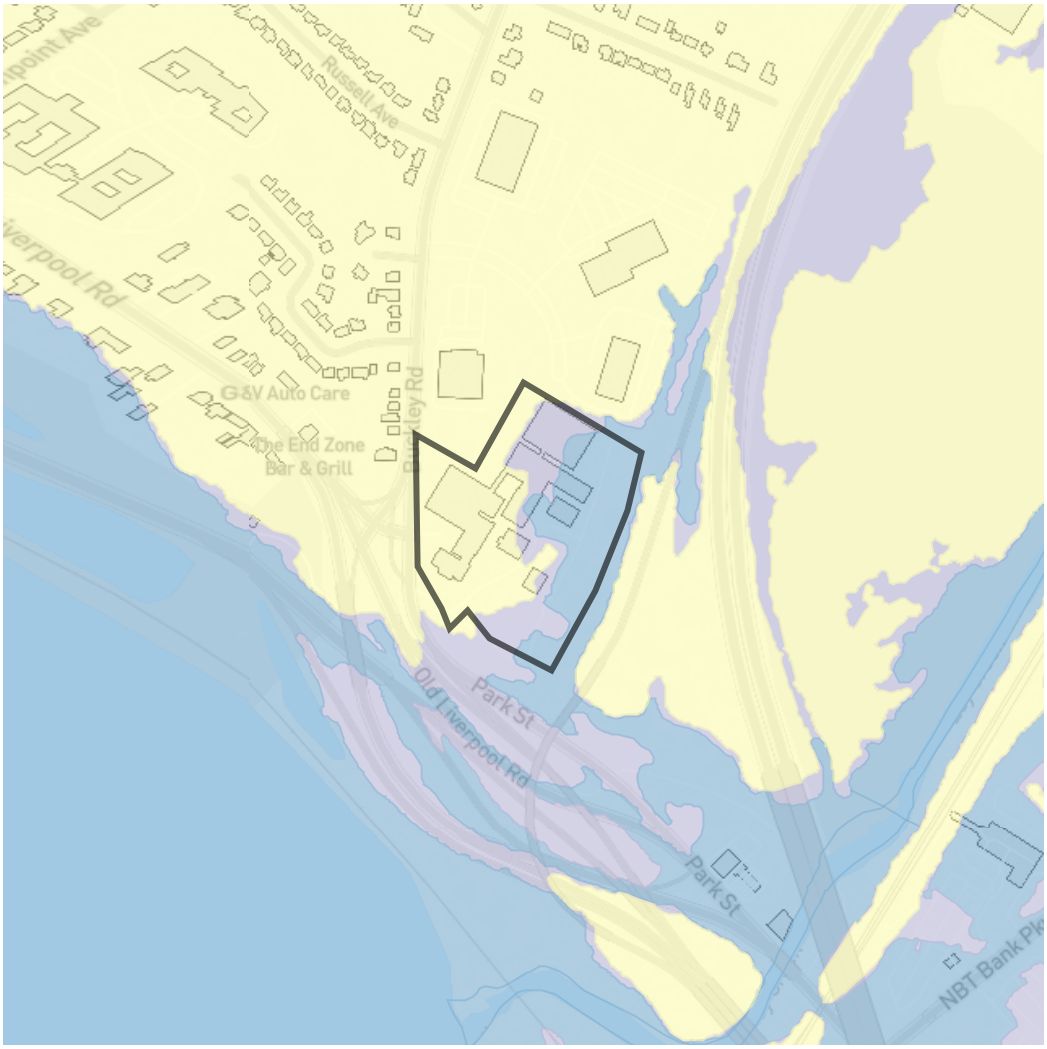
Flood
Extreme Risk

Pluvial and Fluvial Flooding Risk Within About 500 meters

86

Flood
Extreme Risk

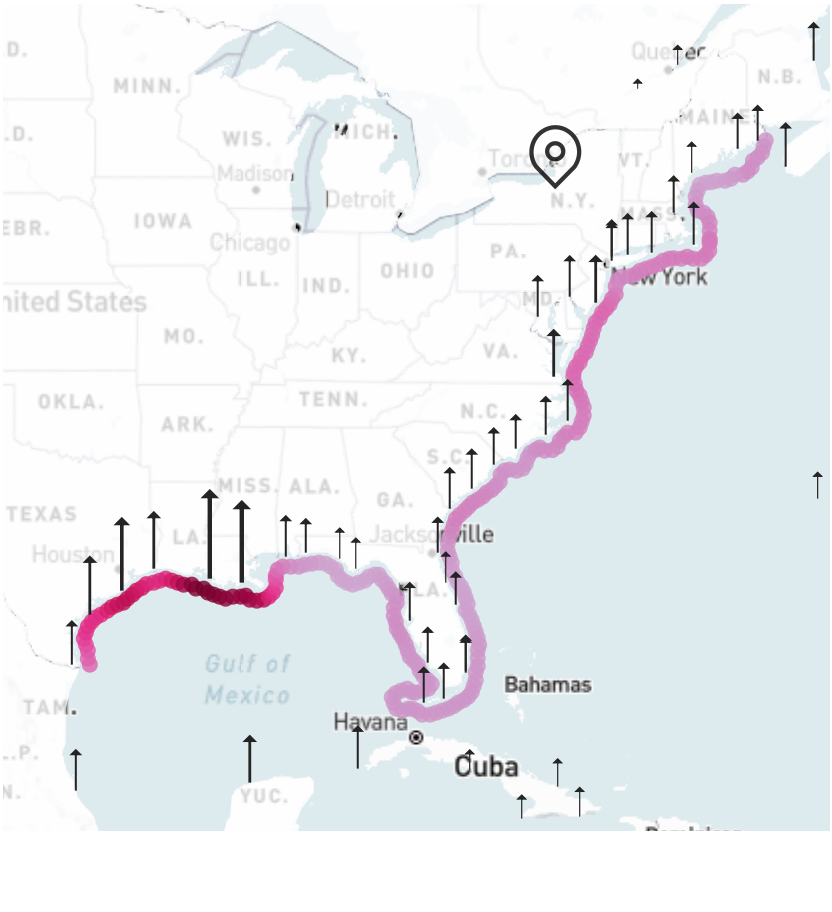
FEMA Risk Within About 500 meters

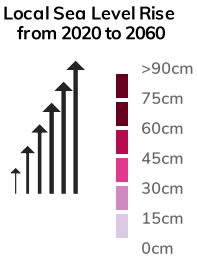


FEMA zone

- 0.2 percent flood zone
- 1 percent flood zone
- minimal

Sea Level Rise Along the Atlantic Coast





Data and Methodology

Our flood risk assessment includes several causes of flooding: coastal (storm surge and sea level rise), fluvial (flooding from bodies of water overflowing, e.g. riverine), and pluvial (surface water flooding). We combine risk analyses for each of these causes to measure your probability of a significant flood between 2020 and 2050, and how deep a flood is likely to be.

High-Tide Coastal Flooding and Sea Level Rise

High-tide coastal flooding occurs when water inundates land during the highest tides. As the planet warms, sea levels are rising: warmer water takes up more space than cooler water, and melting glaciers and ice sheets contribute to ocean volume. The mean sea level is rising across the globe, but the amount of sea level rise varies locally. We use observed tidal gauge data and coastal flooding models from NOAA to quantify the typical range of high tide heights for a location and the associated inundation. We then use NOAA forecasts of local sea level rise through 2050 to augment these tide heights and estimate how much land will be inundated in the future.

Storm Surge

A storm surge is a rise in ocean water, higher than any normal tide, generated by a storm. Storm surges happen when a hurricane's winds push water toward the shore. The depth of the resulting flood depends on the strength of the storm and its direction, as well the shape of the coastline and local terrain. We use models from NOAA and NHC that estimate the worst-case scenario flood depth at a 10-meter resolution along the Atlantic and Gulf coasts for each category of hurricane. To quantify the likelihood of these floods, we analyze observed hurricane tracks between 1900-2000 to measure how often category 1-5 storms pass within about 50 miles of a location.

Pluvial and Fluvial Flooding

These types of flooding can occur away from the coast. Fluvial, or riverine, flooding happens when a river, lake, or stream overflows onto the surrounding land. Pluvial flooding includes flash floods and surface water, and occurs when extreme rainfall creates a flood away from a body of water. We use two-dimensional flooding models with nationwide digital elevation maps to derive the probability and depth of these types of floods now and in the future with climate change.

Data Sources:
NOAA sea level rise inundation maps: https://coast.noaa.gov/slrdata/
Sea level rise data: Sweet, W.V., R.E. Kopp, C. P. Weaver, J. Obeysekera, R. M. Horton, E.R. Thieler and C. Zervas (2017), Global and Regional Sea Level Rise Scenarios for the United States. NOAA Tech. Rep. NOS CO-OPS 83. *Assumption: "intermediate" scenario*
USGS Digital Elevation Models

Tornado and Cyclone-Scale High Wind Risk

Tornado Touchdowns

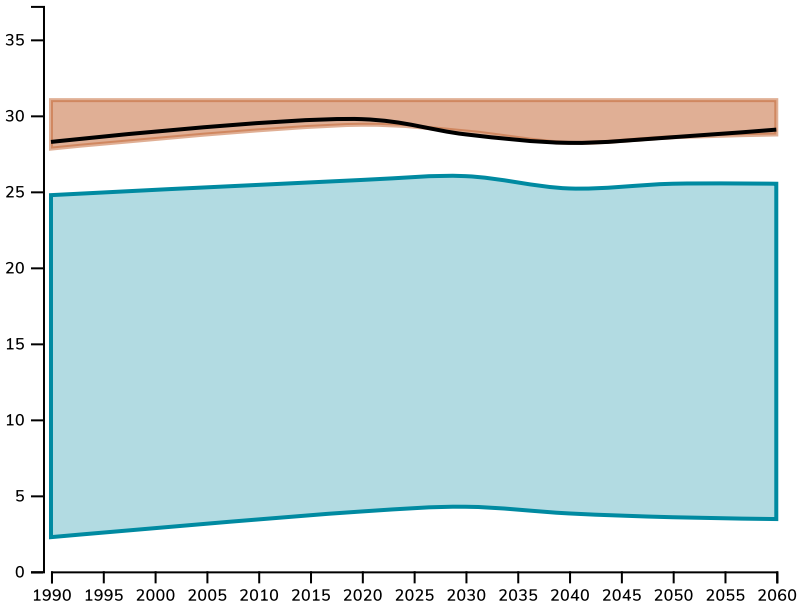
There have been about **1** tornadoes detected within about 14km of this location during the recorded period (1950-2021), with **intensities averaging 0.47 and up to about 1.** Note that tornado touchdowns are more likely to be recorded when near more heavily populated areas.

Cyclone-Scale High Winds

Historically, this location exceeded gale-force winds about **28.3 times every 30 years.** By 2050, this is expected to stay about the same. Historically, the top wind speeds in this location were at least 49 mph (22 m/s). In 2050, they are projected to be at least 50 mph (22 m/s).

Projected Number of Gale-Force Winds Per 30 Years

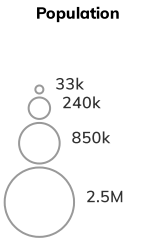
	1990	2020	2030	2040	2050	2060
Property	28.3	29.8	28.8	28.2	28.6	29.1
NY**	30.9	31.0	31.0	31.0	30.9	30.9
U.S.**	9.2	11.2	12.1	11.1	10.9	11.1



** Colored area represents 25th-75th percentile estimate for population. Table shows 50th percentile.

Risk Ratings for Wind in New York

The numbers of people with each Wind Risk level in New York, and their approximate locations, are shown below. Larger circles represent a greater number of people.



Wind Risk Ratings by Population in NY

Risk Level	Population	Total	%
93-100		11M	66%
87-93		1.4M	9%
80-87		1.4M	8%
74-80		1.3M	8%
67-74		320k	2%
60-67		350k	2%
54-60		180k	1%
47-54		250k	1%
41-47		270k	2%
34-41		150k	1%

Data and Methodology

Data Sources:

• Cyclone-scale wind projections: North American Coordinated Regional Climate Downscaling Experiment (NA-CORDEX)

• Land Surface Data: North American Land Data Assimilation System

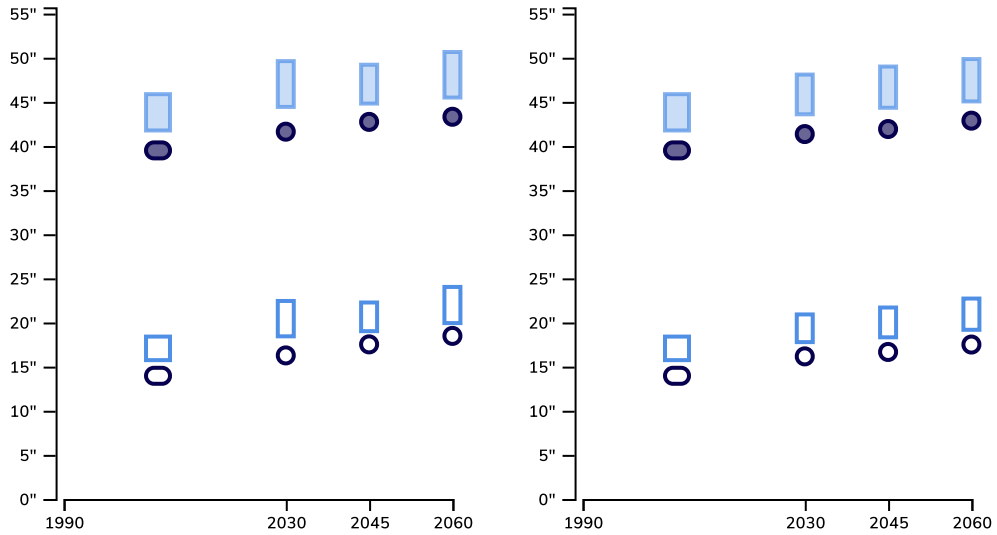
• Tornado observations: National Weather Service Storm Prediction Center

Projected Extreme Precipitation Risk

Risk Rating: 80/100. Based on historical risk exposure and climate change through 2050, this property has **extreme** risk from extreme precipitation. This risk rating is based on the typical rainfall in a location, and the amount of precipitation projected to occur during the most extreme 48-hour periods.

Around 1990, this location exceeded **0.8" (20 mm)** of rain in about **11** 48-hour storms per year, with an average of about **1.3" (32 mm)** per storm. In 2050, this will happen about **14** times per year, averaging about **1.3" (32 mm)** per storm. Total annual precipitation is projected to change from the historical average of **40" (1003 mm)** to **43" (1083 mm)** in 2050.

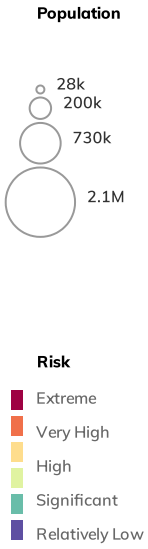
SCENARIO*	RCP8.5				RCP4.5			
	1990	2030	2045	2060	1990	2030	2045	2060
Annual Rainfall (This Location)	40 "	42	43	43	40 "	41	42	43
Extreme Rainfall† (This Location)	14	16	18	18	14	16	17	18
Annual Rainfall (This Region)	40-50	40-50	40-50	50-50	40-50	40-50	40-50	50-50
Extreme Rainfall† (This Region‡)	20-20	20-20	20-20	20-20	20-20	20-20	20-20	20-20



* See emissions scenario data in Supplemental Data section.
† average annual rainfall in all events that exceed this location's threshold in a 48-hour period.
‡ 25th-75th percentile for region including New Jersey, New York, Pennsylvania.

Risk Ratings for Precipitation in New York

The numbers of people with each Precipitation Risk level in New York, and their approximate locations, are shown below. Larger circles represent a greater number of people.



Precipitation Risk Ratings by Population in NY

Risk Level	Population	Total	%
95-99		530k	3%
91-95		1.0M	6%
88-91		1.1M	7%
84-88		1.3M	8%
80-84		2.2M	13%
76-80		5.4M	32%
72-76		3.8M	23%
69-72		1.1M	7%
65-69		220k	1%
61-65		12k	0%

Data and Methodology

Climatecheck's extreme precipitation risk rating is based on the amount of precipitation projected to fall during the most extreme storms each year.

We include modeled historical (1980-2005) and projected (through 2065) daily rainfall totals from an ensemble of 32 global CMIP5 climate models that have been downscaled to model North America at a 1/16° resolution. We use the top 2% of daily maximum precipitation from the historical period to define the threshold for each grid cell. We define "extreme precipitation" as rainfall that exceeds this threshold total over a 2-day period. Two quantities determine the risk rating: the number of times in 2050 that this rainfall threshold is exceeded in a 2-day period, and the amount of rain falling within these events. The sums of these quantites are projected onto a 1-100 scale using the cumulative distribution function of the sums across all grid cells within the conterminous U.S. and Canada (omitting Nunavut, Northwest Territories, and Yukon from this distribution) to determine the final risk rating. Ratings are based on the RCP8.5 scenario.

Data Source: LOCA Statistically Downscaled CMIP5 Projections for North America

Extreme Heat Risk

Risk Rating: 55/100. Compared to the contiguous U.S. and Canada, this property has **high** risk from extreme heat due to climate change.

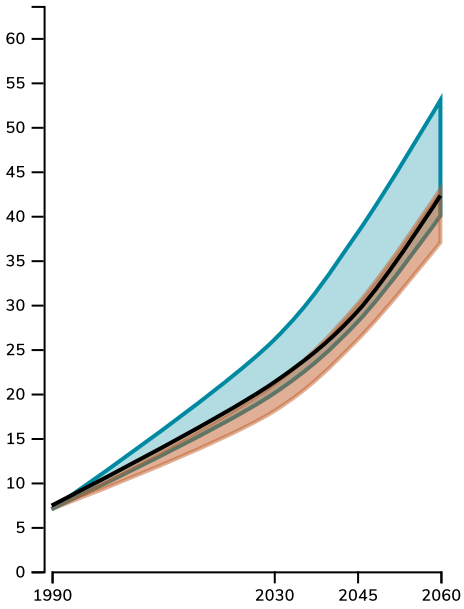
In this location, historically, an average of about **7** days per year reached above **89.7°F (32.1°C).**
In 2050,

- about **33** days in an average year will reach above **89.7°F,** and
- about **7** days per year will reach above **95.56°F (35.3°C).**

Projected Extremely Hot Days Per Year

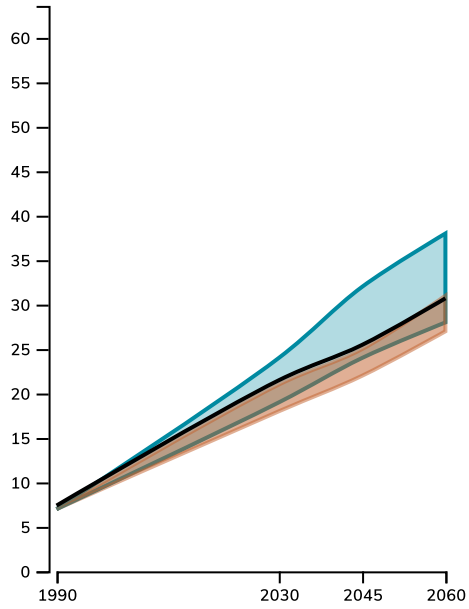
SCENARIO* **RCP8.5**

	Threshold	1990	2030	2045	2060
Property	89.7°F	7	21	29	42
NY**	91.1°F	7	19	27	39
U.S.**	93.3°F	7	24	33	47



RCP4.5

	1990	2030	2045	2060
Property	7	21	25	31
NY**	7	19	23	28
U.S.**	7	22	28	33



* See emissions scenario data in Supplemental Data section.
** Colored area represents 25th-75th percentile estimate for population. Table shows 50th percentile.

Risk Ratings for Heat in New York

The numbers of people with each Heat Risk level in New York, and their approximate locations, are shown below. Larger circles represent a greater number of people.

Population

44k
320k
1.1M
3.3M

Risk

- Extreme
- Very High
- High
- Significant
- Relatively Low

Heat Risk Ratings by Population in NY

Risk Level	Population	Total	%
68-71		6.2M	37%
65-68		2.5M	15%
61-65		1.7M	10%
58-61		2.7M	16%
55-58		2.3M	14%
52-55		870k	5%
49-52		250k	1%
45-49		94k	1%
42-45		49k	0%
39-42		7.6k	0%

Data and Methodology

ClimateCheck's heat risk rating incorporates:

- the temperature of the hottest days in a location, historically;
- the highest wet bulb temperatures on the most hot and humid days in a location, historically;
- and the projected number and temperatures of these days around 2050.

Wet bulb temperature is a measurement that accounts for both heat and humidity. A wet bulb temperature above about 90°F (32° C) is the limit for humans to perform outdoor activities. In this report, 'temperature' refers to dry bulb temperature unless specified as wet bulb.

We include modeled historical (1980-2005) and projected (through 2065) daily maximum temperatures from an ensemble of 32 global climate models that have been downscaled to model North America at a 1/16° resolution. We use the top 2% of daily maximum dry bulb and wet bulb temperatures from the historical period to define the thresholds for extremely hot days and extremely high wet bulb days. We use the projected period from 2046-2055 to estimate the number of days with maximum dry bulb and wet bulb temperatures exceeding these historical top 2% thresholds. We also estimate the top 2% wet bulb and dry bulb daily temperatures for this projected period. The 2050 estimates for these four quantities ("dry bulb magnitude," "wet bulb magnitude," "dry bulb days," and "wet bulb days") are summed and projected onto a 1-100 scale using the cumulative distribution function of the sums across all grid cells within the conterminous U.S. and Canada (omitting Nunavut, Northwest Territories, and Yukon from this distribution). Ratings are based on the RCP8.5 scenario.

Data Sources:

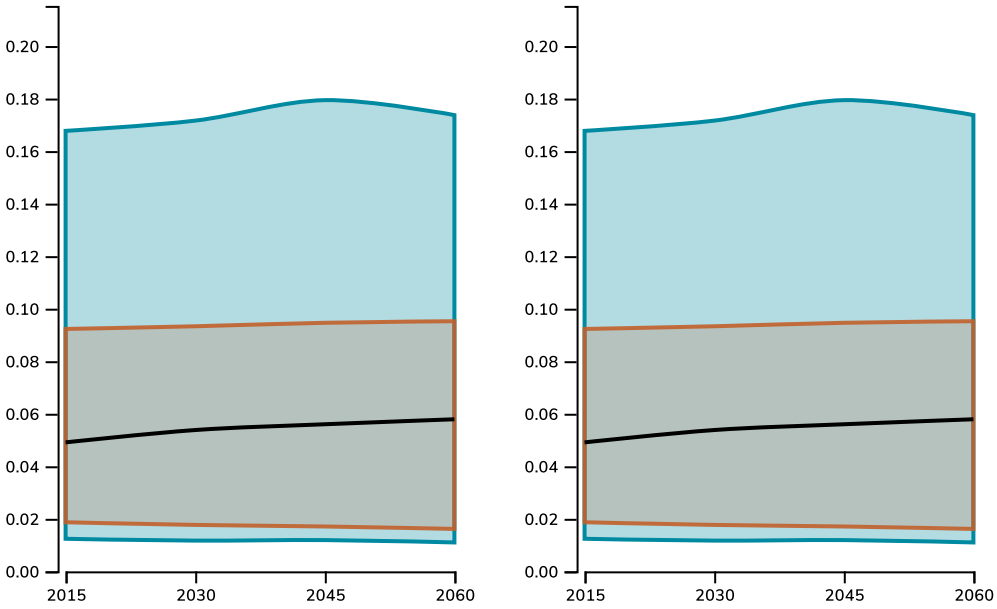
- LOCA Statistically Downscaled CMIP5 Projections for North America
- Multivariate Adaptive Constructed Analogs (MACA) downscaled Global Climate Models

Projected Water Stress

Risk Rating: 33/100. Compared to the contiguous U.S., this property has **significant** risk of water stress due to climate change.

In this location, historically, average water stress is about **4.91%.** In 2050, based on projected climate change and water demand, the average water stress is about **6.41%.**

SCENARIO*	RCP8.5				RCP4.5			
	2015	2030	2045	2060	2015	2030	2045	2060
Property	4.9%	5.4%	5.6%	5.8%	4.9%	5.4%	5.6%	5.8%
Region***	6.4%	6.2%	6.2%	6.1%	6.4%	6.2%	6.2%	6.1%
U.S.**	4.9%	4.8%	4.8%	4.9%	4.9%	4.8%	4.8%	4.9%



* See emissions scenario data in Supplemental Data section.
** Colored area represents 25th-75th percentile estimate for population. Table shows 50th percentile.

Risk Ratings for Drought in New York

The numbers of people with each Drought Risk level in New York, and their approximate locations, are shown below. Larger circles represent a greater number of people.

Population

28k
200k
720k
2.1M

Risk

- Extreme
- Very High
- High
- Significant
- Relatively Low

Drought Risk Ratings by Population in NY

Risk Level	Population	Total	%
45-50		3.1M	18%
40-45		51k	0%
35-40		230k	1%
30-35		660k	4%
26-30		1.9M	11%
21-26		570k	3%
16-21		3.3M	20%
11-16		1.3M	8%
6-11		400k	2%
1-6		5.2M	31%

Data and Methodology

Climatecheck's drought risk rating in the U.S. represents the risk a property faces of experiencing significant water stress with climate change. We measure water stress by calculating the average ratio of water demand to water supply within a watershed region. Projections are based on trends in the climate, demographics, and uses such as irrigation and thermoelectric power. Our analysis is based on data using an ensemble of 20 climate models to estimate water supply and demand across the United States. This dataset includes interbasin transfers (places where water sourced from one area is used in another). Water Stress for your property is measured within your local HUC8 watershed. This watershed does not necessarily account for a water provider's strategies to overcome water stress such as through aqueducts and other infrastructure. For further detail, please check with your local water utility to understand the sources of your water supply.

Data Sources:
Duan, Kai & Caldwell, Peter & Sun, Ge & Mcnulty, Steven & Zhang, Yang & Shster, Erik & Liu, Bingjun & Bolstad, Paul. (2019). Understanding the role of regional water connectivity in mitigating climate change impacts on surface water supply stress in the United States. Journal of Hydrology. 570. 10.1016/j.jhydrol.2019.01.011.

Projected Fire Risk

Historically, the 4 days per year with the most dangerous conditions for fire spread had **low** risk. These conditions are projected for about 9 days per year in 2050.

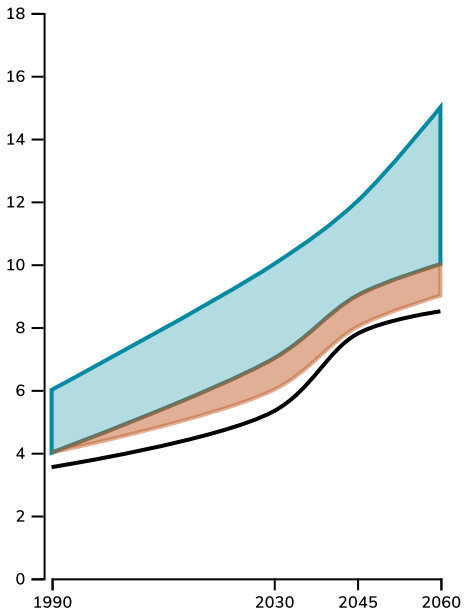
This location has about a **0.1%** chance of burning in a 30-year period, corresponding to about a **0.00%** chance of burning in an individual year.

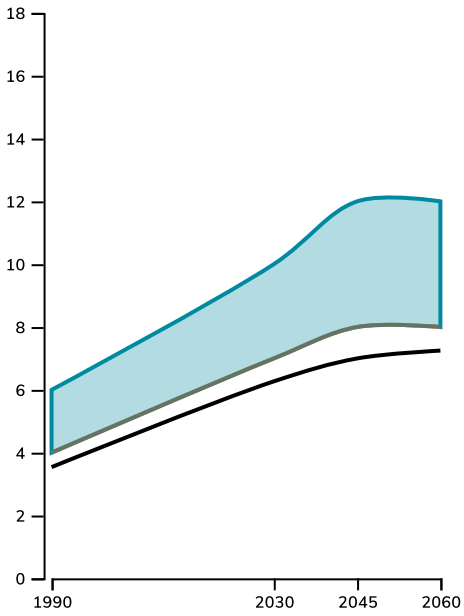
If a fire occurs here, it has:
• About a **0%** chance of **flames over 4 feet.** Fires reaching this height are generally beyond manual control; firefighters may be able to control the fire using equipment.
• About a **0%** chance of **flames over 8 feet.** Fires reaching this height are generally considered high intensity, and control efforts are likely to be ineffective.

Projected Number of Highest Fire Weather Index (FWI) Days Per Year

SCENARIO*	FWI Threshold	RCP8.5 1990	RCP8.5 2030	RCP8.5 2045	RCP8.5 2060
NY**	21	4	5	8	9
U.S.**	23	4	7	9	9
	25	4	8	10	12

	RCP4.5 1990	RCP4.5 2030	RCP4.5 2045	RCP4.5 2060
NY**	4	6	7	7
U.S.**	4	7	8	8
	4	8	10	10





* See emissions scenario data in Supplemental Data section.
** Colored area represents 25th-75th percentile estimate for population. Table shows 50th percentile.

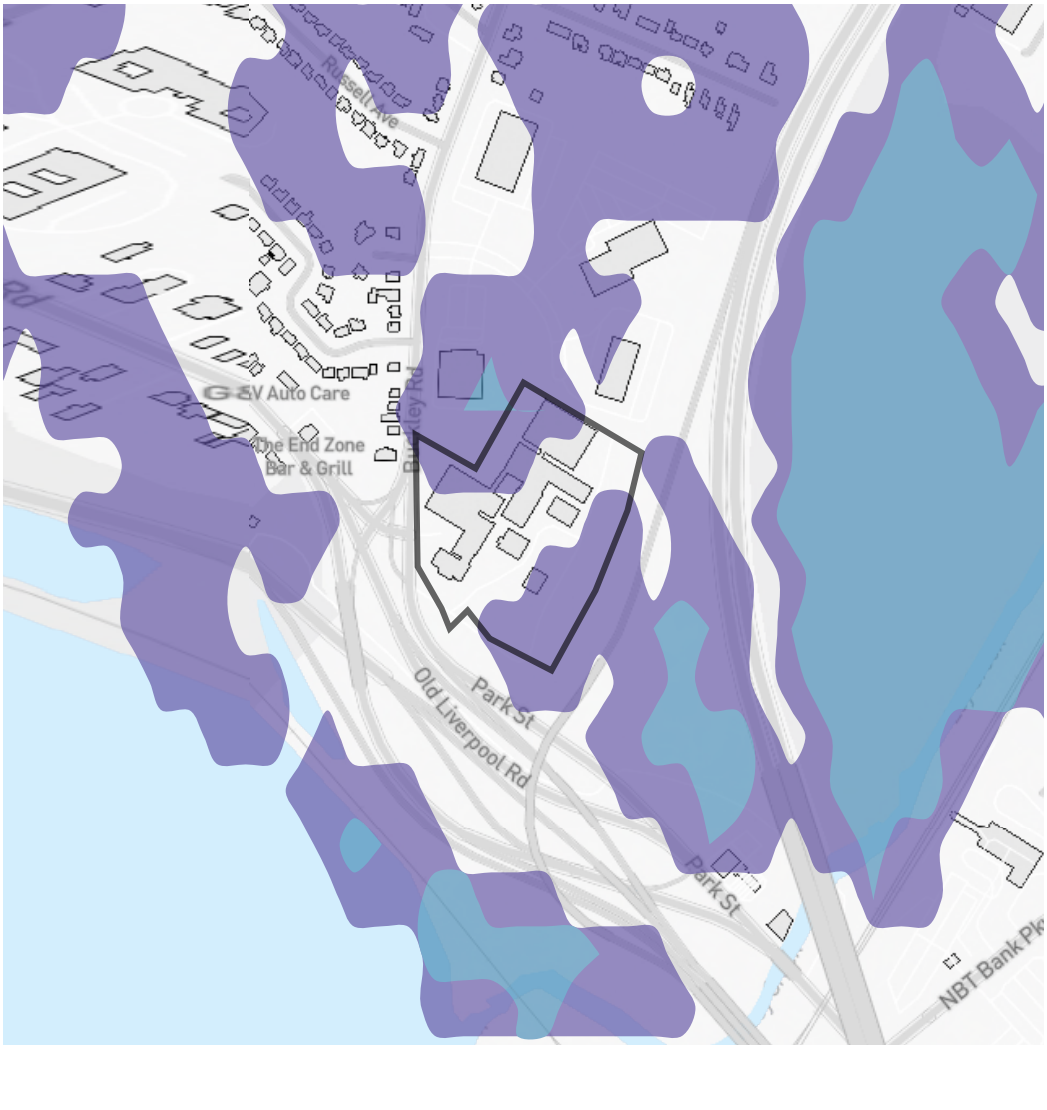
10

Fire

Relatively Low Risk

Fire Risk Ratings Within About 500 meters

The Fire Risk within about **0.3 miles (500 m)** of this location ranges from **0** to **11.**



10

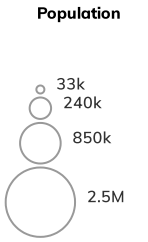
Fire
Relatively Low Risk

Fire Risk Ratings Within About 1 km

The Fire Risk within about **0.6 miles (1000 m)** of this location ranges from **0** to **14.**

Risk Ratings for Fire in New York

The numbers of people with each Fire Risk level in New York, and their approximate locations, are shown below. Larger circles represent a greater number of people.



Fire Risk Ratings by Population in NY

Risk Level	Population	Total	%
29-32		41k	0%
26-29		100k	1%
23-26		220k	1%
20-23		230k	1%
17-20		410k	2%
13-17		620k	4%
10-13		1.1M	6%
7-10		1.9M	11%
4-7		3.7M	22%
1-4		8.4M	50%

Data and Methodology

Climatecheck's fire risk rating is based on the probability of burning, the severity of a fire if it were to occur in a given location, and the historical and future (circa 2050) risk of high fire weather index days. We use climate model projections of temperature, precipitation, relative humidity, and wind speed to estimate the Fire Weather Index (FWI), a widely-accepted wildfire danger rating system metric. FWI is a daily measure of fire danger with 1/24° (approximately 4km) spatial resolution that accounts for the effects of fuel moisture and wind on fire behavior and spread. We define a threshold for each grid cell based on the 98th percentile of daily FWI values over the historical period (1981-2005), and a national threshold based on the 98th percentile of average daily FWI across all of CONUS. We use a weighted threshold (90% cell, 10% national) to count daily exceedances historically and in the future.

We integrate this FWI danger with 30m-resolution 2020 US Forest Service (USFS) wildfire risk datasets that represent wildfire likelihood and severity based on extensive fire behavior modeling. These datasets are based on conditions in 2020. The final risk rating is weighted evenly by: cell FWI threshold, daily FWI exceedances of the blended threshold circa 2050, burn probability, and conditional flame height.

Data Sources:

• U.S. Forest Service Research Data Archive. Wildfire Risk to Communities: Spatial datasets of landscape-wide wildfire risk components for the United States

• 20 CMIP5 Global Climate Models downscaled with Multivariate Adaptive Constructed Analogs (MACA)

Supplemental Data

FEMA National Risk Index

About this Assessment The FEMA National Risk Index (NRI) provides risk designations for 18 hazards for census tracts in the United States. This information is not provided for all 18 hazards in each tract. **Hazards omitted from the NRI may still pose a significant risk.** See the location-specific analysis in this report for more information, including projected risk with climate change. Annual Events are an estimate of how many times a year the hazard occurs.

Risk	Annual Events
Relatively Low	
Cold Wave	1.053
Heat Wave	0.433
Ice Storm	1.415
Landslide	0.01
Lightning	32.569
Riverine Flooding	1
Strong Wind	1.474
Tornado	0
Winter Weather	9.536
Very Low	
Earthquake	0
Hail	2.705
Hurricane	0.023
Wildfire	0
No Rating	
Drought	0
Not Applicable	
Avalanche	
Coastal Flooding	
Tsunami	
Volcanic Activity	

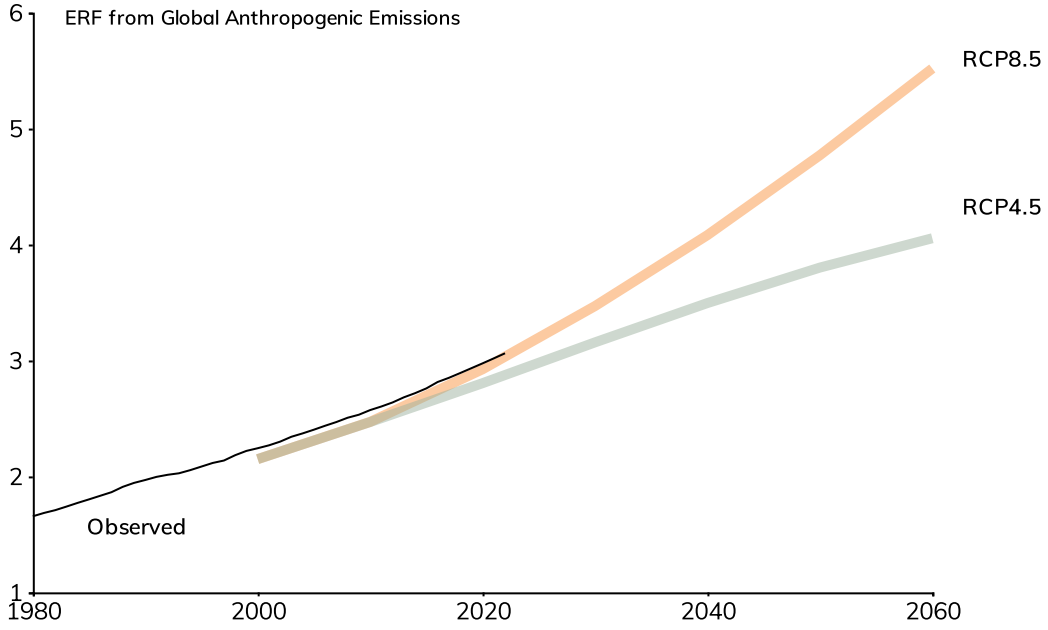
Emissions Scenarios

Representative Concentration Pathways

Climate models use information about the concentrations of greenhouse gases in Earth's atmosphere over time. Representative Concentration Pathways (RCPs) describe different emissions scenarios used in climate models within CMIP5. The descriptions and ratings in this report are based on the RCP8.5 scenario through 2050. Where available, we also provide data for RCP4.5.

The data below reflect effective radiative forcing (ERF) from CO2, N20, CH4, and HFCs for two modeled scenarios and for observed worldwide emissions.

Emissions Data Sources: Modeled: IPCC, 2013: Annex II: Climate System Scenario Tables. Observed: NOAA Annual Greenhouse Gas Index (through 2022).



Notice: IMPORTANT LIMITATIONS and YOUR LIABILITY

Reliance on information in Report: Information provided is for general guidance only and is not a guarantee. Errors in the information contained in our service sometimes occur. Please use this information at your own risk. You should thoroughly investigate all attributes of any property before purchasing. This report has been provided by Climate Check or by our licensee and is for the sole use of the subscriber. No other party may rely on it.

License for use of information in Report: No page of this report can be used without this cover page, this notice and the project property identifier. The information in Report(s) may not be modified or re-sold.

Your Liability for misuse: Using this Service and/or its reports in a manner contrary to this Notice or your agreement will be in breach of copyright and contract and Climate Check may obtain damages for such mis-use, including damages caused to third parties , and gives Climate Check the right to terminate your account, rescind any license to any previous reports and to bar you from future use of Climate Check's reports and services.

No warranty of Accuracy or Liability for Climate Check: The information contained in this report has been produced by Climate Check Inc. ("Climate Check") using various sources of information, including information provided by Federal and State government departments and third party licensors, if any. The report applies only to the address and up to the date specified on the cover of this report, and any alterations or deviation from this description will require a new report. This report and the data contained herein does not purport to be and does not constitute a guarantee of the accuracy of the information contained herein and does not constitute a legal opinion nor real property advice. Although Climate Check has endeavored to present you with information that is accurate, Climate Check and its licensors disclaim, any and all liability for any errors, omissions, or inaccuracies in such information and data, whether attributable to inadvertence, negligence or otherwise, and for any consequences arising therefrom. All warranties are disclaimed. Liability on the part of Climate Check and its licensors is limited to the monetary value paid for this report or $100, whichever is less.

Trademark and Copyright: You may not use the Climate Check trademarks or attribute any work to Climate Check other than as outlined above. This Service and Report (s) are protected by copyright owned by Climate Check Inc. Copyright in data used in the Service or Report(s) (the "Data") is owned by Climate Check or its licensors. The Service, Report(s) and Data may not be copied or reproduced in whole or in any substantial part without prior written consent of Climate Check.

Appendix G

Green Remediation Evaluation

Input Summary

Remedy Component Number →		1	2	3	4	5	6									Remedy Component Subtotals						
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)																				
Item		Site Grading	Cover System	Vapor Mitigation												1	2	3	4	5	6	Total
On-Site																						
On-site Renewable Energy																						
Renewable electricity generated on-site	MWh	0	0	0												0	0	0	0	0	0	0
Landfill gas combusted on-site for energy use	ccf CH_4	0	0	0												0	0	0	0	0	0	0
On-site biodiesel use	gal	0	0	0												0	0	0	0	0	0	0
On-site biodiesel use - Other	gal	0	0	0												0	0	0	0	0	0	0
User-defined on-site renewable energy use #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0												0	0	0	0	0	0	0
On-Site Conventional Energy																						
Grid electricity	MWh	0.172	0.26	17.3448												0.172	0.26	17.3448	0	0	0	17.7768
On-site diesel use - Other	Gal	0	4381.875	0												0	4381.875	0	0	0	0	4381.875
On-site diesel use <75 hp	Gal	0	0	0												0	0	0	0	0	0	0
On-site diesel use 75<hp<750	Gal	31257.69231	0	0												31257.6923	0	0	0	0	0	31257.6923
On-site diesel use >750 hp	Gal	0	0	0												0	0	0	0	0	0	0
On-site gasoline use - Other	Gal	0	0	0												0	0	0	0	0	0	0
On-site gasoline use <25 hp	Gal	0	0	0												0	0	0	0	0	0	0
On-site gasoline use >25 hp	Gal	0	0	0												0	0	0	0	0	0	0
On-site natural gas use	ccf	0	0	0												0	0	0	0	0	0	0
On-site compressed natural gas use - Other	ccf	0	0	0												0	0	0	0	0	0	0
On-site compressed natural gas use	ccf	0	0	0												0	0	0	0	0	0	0
On-site liquified petroleum gas use - Other	gal	0	0	0												0	0	0	0	0	0	0
On-site liquified petroleum gas use	gal	0	0	0												0	0	0	0	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0												0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0												0	0	0	0	0	0	0
Other On-site Emissions																						
On-site HAP process emissions	Lbs	0	0	0												0	0	0	0	0	0	0
On-site GHG emissions	Lbs CO2e	0	0	0												0	0	0	0	0	0	0
On-site carbon storage	Lbs CO2e	0	0	0												0	0	0	0	0	0	0
GHG avoided by flaring on-site landfill methane	ccf CH4	0	0	0												0	0	0	0	0	0	0
Other on-site NOx emissions or reductions	Lbs	0	0	0												0	0	0	0	0	0	0
Other on-site SOx emissions or reductions	Lbs	0	0	0												0	0	0	0	0	0	0
Other on-site PM emissions or reductions	Lbs	0	0	0												0	0	0	0	0	0	0
Electricity Generation																						
Grid electricity	MWh	0.172	0.26	17.3448												0.172	0.26	17.3448	0	0	0	17.7768
Voluntary purchase of renewable electricity	MWh	0	0	0												0	0	0	0	0	0	0
Voluntary purchase of RECs	MWh	0	0	0												0	0	0	0	0	0	0
Transportation																						
Transportation Fuel Use Breakdown																						
Biodiesel use - Personnel Transport	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Personnel Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Equipment Transport	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Equipment Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Material Transport	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Material Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Waste Transport	gal	0	0	0												0	0	0	0	0	0	0
Biodiesel use - Waste Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Personnel Transport - other vehicles	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Personnel Transport - car	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Personnel Transport - passenger truck	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Personnel Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Equipment Transport	gal	0	4.8	0												0	4.8	0	0	0	0	4.8
Diesel use - Equipment Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Material Transport	gal	0	187.501	87.5												0	187.501	87.5	0	0	0	275.001
Diesel use - Material Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Waste Transport	gal	0	0	0												0	0	0	0	0	0	0
Diesel use - Waste Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Gasoline use - Personnel Transport - other vehicles	gal	0	0	0												0	0	0	0	0	0	0
Gasoline use - Personnel Transport - car	gal	0	0	0												0	0	0	0	0	0	0
Gasoline use - Personnel Transport - passenger truck	gal	129	281.9	90.7												129	281.9	90.7	0	0	0	501.6
Gasoline use - Personnel Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Gasoline use - Equipment Transport	gal	0	0	0												0	0	0	0	0	0	0
Gasoline use - Equipment Transport - User Defined	gal	0	0	0												0	0	0	0	0	0	0
Natural Gas use - Personnel Transport	ccf	0	0	0												0	0	0	0	0	0	0
Natural Gas use - Personnel Transport - User Defined	ccf	0	0	0												0	0	0	0	0	0	0
Natural Gas use - Equipment Transport	ccf	0	0	0												0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	6									Remedy Component Subtotals						
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)																				
Item		Site Grading	Cover System	Vapor Mitigation												1	2	3	4	5	6	Total
Conventional Energy																						
Transportation diesel use	gal	0	192.301	87.5												0	192.301	87.5	0	0	0	279.801
Transportation gasoline use	gal	129	281.9	90.7												129	281.9	90.7	0	0	0	501.6
Transportation natural gas use	ccf	0	0	0												0	0	0	0	0	0	0
User-defined conventional energy transportation #1	TBD	10	10	10												10	10	10	0	0	0	30
User-defined conventional energy transportation #2	TBD	0	0	0												0	0	0	0	0	0	0
Renewable Energy																						
Transportation biodiesel use	gal	0	0	0												0	0	0	0	0	0	0
User-defined renewable energy transportation #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined renewable energy transportation #2	TBD	0	0	0												0	0	0	0	0	0	0
Off-Site																						
Construction Materials																						
Aluminum, Rolled Sheet	lb	0	0	0												0	0	0	0	0	0	0
Asphalt, mastic	lb	0	6605023	0												0	6605023	0	0	0	0	6605023
Asphalt, paving-grade	lb	0	6605023	0												0	6605023	0	0	0	0	6605023
Ethanol, Corn, 95%	lb	0	0	0												0	0	0	0	0	0	0
Ethanol, Corn, 99.7%	lb	0	0	0												0	0	0	0	0	0	0
Ethanol, Petroleum, 99.7%	lb	0	0	0												0	0	0	0	0	0	0
Gravel/Sand Mix, 65% Gravel	lb	0	17856000	0												0	17856000	0	0	0	0	17856000
Gravel/sand/clay	lb	0	23259000	0												0	23259000	0	0	0	0	23259000
HDPE	lb	0	0	0												0	0	0	0	0	0	0
Photovoltaic system (installed)	W	0	0	0												0	0	0	0	0	0	0
PVC	lb	0	0	1400												0	0	1400	0	0	0	1400
Portland cement, US average	lb	0	0	0																		
Ready-mixed concrete, 20 MPa	ft3	0	28999	50												0	28999	50	0	0	0	29049
Round Gravel	lb	0	0	0												0	0	0	0	0	0	0
Sand	lb	0	0	0												0	0	0	0	0	0	0
Stainless Steel	lb	0	0	0												0	0	0	0	0	0	0
Steel	lb	0	0	0												0	0	0	0	0	0	0
Other refined construction materials	lb	0	6976800	0												0	6976800	0	0	0	0	6976800
Other unrefined construction materials	lb	0	0	0												0	0	0	0	0	0	0
Treatment Materials & Chemicals																						
Cheese Whey	lbs	0	0	0												0	0	0	0	0	0	0
Emulsified vegetable oil	lbs	0	0	0												0	0	0	0	0	0	0
Granular activated carbon, primary	lbs	0	0	0												0	0	0	0	0	0	0
Granular activated carbon, regenerated	lbs	0	0	0												0	0	0	0	0	0	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0	0												0	0	0	0	0	0	0
Iron (II) Sulfate	lbs	0	0	0												0	0	0	0	0	0	0
Lime, Hydrated, Packed	lbs	0	0	0												0	0	0	0	0	0	0
Molasses	lbs	0	0	0												0	0	0	0	0	0	0
Phosphoric Acid, 70% in H2O	lbs	0	0	0												0	0	0	0	0	0	0
Potassium Permanganate	lbs	0	0	0												0	0	0	0	0	0	0
Sodium Hydroxide, 50% in H2O	lbs	0	0	0												0	0	0	0	0	0	0
Other Treatment Chemicals & Materials	lbs	0	0	0												0	0	0	0	0	0	0
Material Type																						
Total Virgin Refined Materials	tons	0	13980.8855	2.575												0	13980.8855	2.575	0	0	0	13983.4605
Total Recycled Refined Materials	tons	0	0	0												0	0	0	0	0	0	0
Total Reused Refined Materials	tons	0	0	0												0	0	0	0	0	0	0
Total Refined Material	tons	0	13980.8855	2.575												0	13980.8855	2.575	0	0	0	13983.4605
Total Virgin Unrefined Materials	tons	0	20557.5	0												0	20557.5	0	0	0	0	20557.5
Total Recycled Unrefined Materials	tons	0	0	0												0	0	0	0	0	0	0
Total Reused Unrefined Materials	tons	0	0	0												0	0	0	0	0	0	0
Total Unrefined Material	tons	0	20557.5	0												0	20557.5	0	0	0	0	20557.5
Fuel Processing																						
Biodiesel produced	gal	0	0	0												0	0	0	0	0	0	0
Diesel produced	gal	31257.69231	4574.176	87.5												31257.6923	4574.176	87.5	0	0	0	35919.3683
Gasoline produced	gal	129	281.9	90.7												129	281.9	90.7	0	0	0	501.6
Compressed natural gas produced	ccf	0	0	0												0	0	0	0	0	0	0
Liquified petroleum gas produced	gal	0	0	0												0	0	0	0	0	0	0
Natural gas produced	ccf	0	0	0												0	0	0	0	0	0	0
Water Use																						
Public Water Supply	gal x 1000	0	10	0												0	10	0	0	0	0	10
Extracted Groundwater	gal x 1000	0	0	0												0	0	0	0	0	0	0
Surface Water	gal x 1000	0	0	0												0	0	0	0	0	0	0
Reclaimed Water	gal x 1000	0	0	0												0	0	0	0	0	0	0
Collected/Diverted Storm Water	gal x 1000	0	0	0												0	0	0	0	0	0	0
User-defined water resource #1	gal x 1000	0	0	0												0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0												0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	6									Remedy Component Subtotals						
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)																				
Item		Site Grading	Cover System	Vapor Mitigation												1	2	3	4	5	6	Total
Waste/Recycle Handling																						
Hazardous waste incineration	lbs	0	0	0												0	0	0	0	0	0	0
Off-site waste water treatment (POTW)	gal x 1000	0	0	0												0	0	0	0	0	0	0
Off-site non-hazardous waste landfill	tons	0	0	0												0	0	0	0	0	0	0
Off-site hazardous waste landfill	tons	0	0	0												0	0	0	0	0	0	0
Recycled/Reused On-Site	tons	4571	0	0												4571	0	0	0	0	0	4571
Recycled/Reused Off-Site	tons	0	0	0												0	0	0	0	0	0	0
Solid Waste Totals																						
Total Non-Hazardous Waste	tons	0	0	0												0	0	0	0	0	0	0
Total Hazardous Waste	tons	0	0	0												0	0	0	0	0	0	0
Total Recycled/Reused	tons	4571	0	0												4571	0	0	0	0	0	4571
Total Waste (all types)	tons	4571	0	0												4571	0	0	0	0	0	4571
Lab Services																						
Off-site Laboratory Analysis - Other	sample	0	39	0												0	39	0	0	0	0	39
Off-site Laboratory Analysis - Metals	sample	0	13	0												0	13	0	0	0	0	13
Off-site Laboratory Analysis - Mercury	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - Sulfate	sample	0	0	0												0	0	0	0	0	0	0
Off-site Laboratory Analysis - PCBs	sample	0	13	0												0	13	0	0	0	0	13
Off-site Laboratory Analysis - VOCs	sample	0	32	32												0	32	32	0	0	0	64
Off-site Laboratory Analysis - SVOCs	sample	0	13	0												0	13	0	0	0	0	13
Resource Extraction for Electricity																						
Coal extraction and processing	MWh	0.05246	0.0156	1.040688												0.05246	0.0156	1.040688	0	0	0	1.108748
Natural gas extraction and processing	MWh	0.058308	0.026	1.73448												0.058308	0.026	1.73448	0	0	0	1.818788
Nuclear fuel extraction and processing	MWh	0.034056	0.0052	0.346896												0.034056	0.0052	0.346896	0	0	0	0.386152
Oil extraction and processing	MWh	0.001204	0.013	0.86724												0.001204	0.013	0.86724	0	0	0	0.881444
Other fuel extraction and processing	MWh	0.000172	0	0												0.000172	0	0	0	0	0	0.000172
Electricity Transmission																						
Transmission and distribution losses	MWh	0.172	0.26	17.3448												0.172	0.26	17.3448	0	0	0	17.7768

Input Summary

Remedy Component Number →		1	2	3	4	5	6									Remedy Component Subtotals						
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)																				
Item		Site Grading	Cover System	Vapor Mitigation												1	2	3	4	5	6	Total
Other																						
User-defined material #1	lb	0	2800	0												0	2800	0	0	0	0	2800
User-defined material #2	0	0	0	0												0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0												0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0												0	0	0	0	0	0	0
User-defined Waste Destinations																						
User-defined recycled/reused on-site #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined recycled/reused on-site #2	TBD	0	0	0												0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0												0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0												0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	0	0												0	0	0	0	0	0	0
User-defined non-hazardous waste destination #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0												0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0												0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0												0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0												0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0												0	0	0	0	0	0	0

Input Worksheet for Site Grading

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 1**	**Site Grading**

General Scope

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Hayden Haas (C&S Field Staff)	5	14	Light-Duty/Passenger Truck	Gasoline	70	18.9		3.7	
Jared Thiel (C&S Field Staff)	43	14	Light-Duty/Passenger Truck	Gasoline	602	18.9		31.9	
Nevin Bradford (C&S PM)	3	14	Light-Duty/Passenger Truck	Gasoline	42	18.9		2.2	
Vittorio Pascarella	43	10	Light-Duty/Passenger Truck	Gasoline	430	18.9		22.8	
Operator	43	10	Light-Duty/Passenger Truck	Gasoline	430	18.9		22.8	
Laborer 1	43	10	Light-Duty/Passenger Truck	Gasoline	430	18.9		22.8	
Site Super	43	10	Light-Duty/Passenger Truck	Gasoline	430	18.9		22.8	

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes
Excavator - large (250 HP)	75	75%	Diesel between 75 and 750 hp	3.090659341	1032	3189.56044		0								
Skid-steer - small (60 HP)	60	75%	Diesel between 75 and 750 hp	2.472527473	1032	2551.648352		0								
Dump truck (400 HP)	400	75%	Diesel between 75 and 750 hp	16.48351648	1032	17010.98901		0								
Dozer - large (200 HP)	200	75%	Diesel between 75 and 750 hp	8.241758242	1032	8505.494505		0								

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Site Grading

Remedy Component that this Input worksheet is part of:	Component 1	Site Grading

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
CAMP Equipment						172	Charging CAMP Equipment for 43 days
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
Estimated Total Electricity Usage Based on Above						172	
Renewable Electricity Generated On-Site*							
Total Electricity Usage Based on Personnel Transportation						0	
Total Grid Electricity Used						172	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
Totals			0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
Total				0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Site Grading

Remedy Component that this Input worksheet is part of:	Component 1	Site Grading

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
Recycled/reused on-site	tons	4571	4571	0				0						
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Site Grading

Remedy Component that this Input worksheet is part of:	Component 1	Site Grading

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Cover System

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 2	Cover System

General Scope

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Hayden Haas (C&S Field Staff)	65	14	Light-Duty/Passenger Truck	Gasoline	910	18.9		48.1	
Jared Thiel (C&S Field Staff)	65	14	Light-Duty/Passenger Truck	Gasoline	910	18.9		48.1	
Nevin Bradford (C&S PM)	65	14	Light-Duty/Passenger Truck	Gasoline	910	18.9		48.1	
Vittorio Pascarella	65	10	Light-Duty/Passenger Truck	Gasoline	650	18.9		34.4	
Operator	65	10	Light-Duty/Passenger Truck	Gasoline	650	18.9		34.4	
Laborer 1	65	10	Light-Duty/Passenger Truck	Gasoline	650	18.9		34.4	
Site Super	65	10	Light-Duty/Passenger Truck	Gasoline	650	18.9		34.4	

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes
Asphalt paver (150 HP)	150	75%	Diesel	5.625	130	731.25	15	1	5	5	Truck (mpg)	Diesel	6		0.8	
Dozer - small (100 HP)	100	75%	Diesel	3.75	260	975	20	1	5	5	Truck (mpg)	Diesel	6		0.8	
Roller (100 HP)	100	75%	Diesel	3.75	130	487.5	2	1	5	5	Truck (mpg)	Diesel	6		0.8	
Skid-steer - small (60 HP)	60	75%	Diesel	2.25	260	585	2	1	5	5	Truck (mpg)	Diesel	6		0.8	
Excavator - large (250 HP)	250	75%	Diesel	9.375	80	750	35	1	5	5	Truck (mpg)	Diesel	6		0.8	
Excavator - medium (175 HP)	175	75%	Diesel	6.5625	130	853.125	25	1	5	5	Truck (mpg)	Diesel	6		0.8	

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Cover System

Remedy Component that this Input worksheet is part of:	Component 2	Cover System

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
CAMP Equipment						260	Charging CAMP equipment for 65 days
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
Estimated Total Electricity Usage Based on Above						260	
Renewable Electricity Generated On-Site*							
Total Electricity Usage Based on Personnel Transportation						0	
Total Grid Electricity Used						260	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
Totals			0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
Total				0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
Asphalt, paving-grade	lb	6605023	3302.5115	Refined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
Ready-mixed concrete, 20 MPa	ft3	28999	1087.4625	Refined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
Gravel/Sand Mix, 65% Gravel	lb	17856000	8928	Unrefined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
Gravel/sand/clay	lb	23259000	11629.5	Unrefined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
Other refined construction materials	lb	6976800	3488.4	Refined	Virgin	Yes	500			No	500	Truck (mpg)	Diesel	6		83.333	
User-defined material #1	lb	2800	2800	Refined	Virgin	Yes	500			No	500	Truck (mpg)	Diesel	6		83.333	
Asphalt, mastic	lb	6605023	3302.5115	Refined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Cover System

Remedy Component that this Input worksheet is part of:	Component 2	Cover System

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
Public Water	gal x 1000	10	41.7	OCWA			CAMP implementation
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Cover System

Remedy Component that this Input worksheet is part of:	Component 2	Cover System

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Off-site Laboratory Analysis - VOCs	32	
Off-site Laboratory Analysis - SVOCs	13	
Off-site Laboratory Analysis - PCBs	13	
Off-site Laboratory Analysis - Metals	13	
Off-site Laboratory Analysis - Other	13	
Off-site Laboratory Analysis - Other	13	
Off-site Laboratory Analysis - Other	13	
Totals	**110**	

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Vapor Mitigation

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 3	Vapor Mitigation System

General Scope

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Hayden Haas (C&S Field Staff)	6	14	Light-Duty/Passenger Truck	Gasoline	84	18.9		4.4	
Jared Thiel (C&S Field Staff)									
Nevin Bradford (C&S PM)	2	14	Light-Duty/Passenger Truck	Gasoline	28	18.9		1.5	
Vittorio Pascarella	40	10	Light-Duty/Passenger Truck	Gasoline	400	18.9		21.2	
Operator	40	10	Light-Duty/Passenger Truck	Gasoline	400	18.9		21.2	
Laborer 1	40	10	Light-Duty/Passenger Truck	Gasoline	400	18.9		21.2	
Site Super	40	10	Light-Duty/Passenger Truck	Gasoline	400	18.9		21.2	

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Vapor Mitigation

Remedy Component that this Input worksheet is part of:	Component 3	Vapor Mitigation System

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
Radon Fans				0.18	96360	17344.8	Total of 11 fans operatin continuous
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
Estimated Total Electricity Usage Based on Above						17344.8	
Renewable Electricity Generated On-Site*							
Total Electricity Usage Based on Personnel Transportation						0	
Total Grid Electricity Used						17344.8	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
Totals			0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
Total				0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
PVC	lb	1400	0.7	Refined	Virgin	Yes	500			No	500	Truck (mpg)	Diesel	6		83.333	
Ready-mixed concrete, 20 MPa	ft3	50	1.875	Refined	Virgin	Yes	25			No	25	Truck (mpg)	Diesel	6		4.167	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Vapor Mitigation

Remedy Component that this Input worksheet is part of:	Component 3	Vapor Mitigation System

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Vapor Mitigation

Remedy Component that this Input worksheet is part of:	**Component 3**	**Vapor Mitigation System**

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Off-site Laboratory Analysis - VOCs	32	
Totals	**32**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Site Grading - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0.172	3.413	0.587036										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	31257.692	0.139	4344.8192	22.24	695171.08	0.101	3157.0269	0.00013	4.0635	0.009	281.31923	0.00004	1.2503077
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**4,345**		**695,171**		**3,157**		**4**		**281**		**1**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**4,345.41**		**695,171**		**3,157**		**4**		**281**		**1**

Site Grading - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0.172	6.929	1.191788	1124.3	193.3796	2.2421	0.3856412	4.6078874	0.7925566	0.057518	0.0098931	0.2102371	0.0361608
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												

Notes:

Site Grading - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	129	0.124	15.996	19.79	2552.91	0.035	4.515	0.00036	0.04644	0.003	0.387	0.00661	0.85269
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**16**		**2,553**		**5**		**0**		**0**		**1**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**16**		**2553**		**5**		**0**		**0**		**1**

Site Grading - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	0.0000846	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	0.0000589	0
Gravel/Sand Mix, 65% Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	0.0000641	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	0.0000029	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.0040375	0	0.0051325	0	0.0014428	0	0.0001625	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Site Grading - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	0.0000629	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	0.0000041	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	31257.692	0.017	531.38077	3.02	94398.231	0.0051	159.41423	0.0062	193.79769	0.0017	53.138077	0.0011	34.383462
Gasoline produced	gal	129	0.033	4.257	2.8	361.2	0.0046	0.5934	0.005	0.645	0.0015	0.1935	0.001	0.129
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Fuel Processing Subtotals				**535.63777**		**94759.431**		**160.00763**		**194.44269**		**53.331577**		**34.512462**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Site Grading - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.8534384	0	0.131402	0	0.3038758	0	0.0455698	0	0.0330165	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.0731715	0	9.325458	0	0.2127439	0	0.4982396	0	0.0747359	0	0.0542332	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.0074025	0	0.6459478	0	0.0067681	0	0.0147929	0	0.0022024	0	0.0015542	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.0174398	0	1.3381922	0	0.0070106	0	0.0132496	0	0.00194	0	0.0012831	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.8717054	0	0.0079807	0	0.0141535	0	0.0020547	0	0.0012875	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.0336475	0	4.29897	0	0.0954592	0	0.2226646	0	0.0335099	0	0.0242506	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.0141225	0	1.4726728	0	0.0079807	0	0.0136024	0	0.0019797	0	0.0012015	0
Off-site Laboratory Analysis - PCBs	sample	0	0.0512769	0	5.224902	0	0.0833339	0	0.1904774	0	0.0284393	0	0.0212083	0
Off-site Laboratory Analysis - VOCs	sample	0	0.0762045	0	9.016814	0	0.104498	0	0.2270738	0	0.0339508	0	0.0235892	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.0715602	0	7.870422	0	0.1459445	0	0.3373038	0	0.0504853	0	0.0372577	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0.05246	3.1	0.1602023	180.0	9.4428	0.8	0.0403942	0.2	0.007869	0.0	0.0009443	NP	
Natural gas extraction and processing	MWh	0.058308	1.6	0.095147	270.0	15.74316	0.2	0.0104954	13.0	0.758004	0.0	0.000414	NP	
Nuclear fuel extraction and processing	MWh	0.034056	0.2	0.0052948	25.0	0.8514	0.2	0.0051084	0.5	0.017028	0.0	5.108E-05	NP	
Oil extraction and processing	MWh	0.001204	2.3	0.0027637	270.0	0.32508	1.7	0.0020468	0.1	8.308E-05	0.0	5.057E-05	NP	
Other fuel extraction and processing	MWh	0.000172	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0.2634078**		**26.36244**		**0.0580448**		**0.7829841**		**0.0014599**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0.172	1.0342	0.1778824	112.43	19.33796	0.22421	0.0385641	0.4607887	0.0792557	0.0057518	0.0009893	0.0210237	0.0036161
Notes:														

Site Grading - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
User-defined material #1	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/u		(lbs CO2e/u		Ox(lbs/unit)		Ox(lbs/unit)		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**536.07906**		**94805.131**		**160.10424**		**195.30493**		**53.334026**		**34.516078**

Site Grading - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0.172	3.413	0.587036										
Electricity Generation														
Grid electricity	MWh	0.172	6.929	1.191788	1124.3	193.3796	2.2421	0.3856412	4.6078874	0.7925566	0.057518	0.0098931	0.2102371	0.0361608
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0.05246	3.1	0.1602023	180.0	9.4428	0.8	0.0403942	0.2	0.007869	0.0	0.0009443	NP	
Natural gas extraction and processing	MWh	0.058308	1.6	0.095147	270.0	15.74316	0.2	0.0104954	13.0	0.758004	0.0	0.000414	NP	
Nuclear fuel extraction and processing	MWh	0.034056	0.2	0.0052948	25.0	0.8514	0.2	0.0051084	0.5	0.017028	0.0	5.108E-05	NP	
Oil extraction and processing	MWh	0.001204	2.3	0.0027637	270.0	0.32508	1.7	0.0020468	0.1	8.308E-05	0.0	5.057E-05	NP	
Other fuel extraction and processing	MWh	0.000172	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0.172	1.0342	0.1778824	112.43	19.33796	0.22421	0.0385641	0.4607887	0.0792557	0.0057518	0.0009893	0.0210237	0.0036161
Total Grid Electricity Footprint				**2**		**239**		**0**		**2**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	129	0.124	15.996	19.79	2552.91	0.035	4.515	0.00036	0.04644	0.003	0.387	0.00661	0.85269
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	129	0.033	4.257	2.8	361.2	0.0046	0.5934	0.005	0.645	0.0015	0.1935	0.001	0.129
Total Gasoline Footprint		**129**		**20.253**		**2914.11**		**5.1084**		**0.69144**		**0.5805**		**0.98169**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	31257.692	0.139	4344.8192	22.24	695171.08	0.101	3157.0269	0.00013	4.0635	0.009	281.31923	0.00004	1.2503077
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Diesel produced	gal	31257.692	0.017	531.38077	3.02	94398.231	0.0051	159.41423	0.0062	193.79769	0.0017	53.138077	0.0011	34.383462
Total Diesel Footprint		**31257.692**		**4876.2**		**789569.31**		**3316.4412**		**197.86119**		**334.45731**		**35.633769**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Space below available for notes and calculations:

Cover System - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0.26	3.413	0.88738										
On-site diesel use - Other	Gal	4381.875	0.139	609.08063	22.5	98592.188	0.17	744.91875	0.0054	23.662125	0.0034	14.898375	0.0000052	0.0227858
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**610**		**98,592**		**745**		**24**		**15**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**609.97**		**98,592**		**745**		**24**		**15**		**0**

Cover System - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0.26	6.929	1.80154	352	91.52	1.504	0.39104	1.46966	0.3821116	0.07546	0.0196196	0.0454035	0.0118049
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												

Notes:

Cover System - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	192.301	0.139	26.729839	22.5	4326.7725	0.17	32.69117	0.0054	1.0384254	0.0034	0.6538234	0.0000052	0.001
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	281.9	0.124	34.9556	19.79	5578.801	0.035	9.8665	0.00036	0.101484	0.003	0.8457	0.00661	1.863359
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**62**		**9,906**		**43**		**1**		**1**		**2**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**62**		**9906**		**43**		**1**		**1**		**2**

Cover System - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	6605023	0.0412	272126.95	0.85	5614269.6	0.00271	17899.612	0.00798	52708.084	0.000766	5059.4476	0.00107	7067.3746
Asphalt, paving-grade	lb	6605023	0.5	3302511.5	8.58	56671097	0.0299	197490.19	0.0969	640026.73	0.0091	60105.709	0.0133	87846.806
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	0.0000846	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	0.0000589	0
Gravel/Sand Mix, 65% Gravel	lb	17856000	0.0000248	442.8288	0.0024	42854.4	0.000018	321.408	4.52E-06	80.70912	2.61E-06	46.60416	3.08E-07	5.499648
Gravel/sand/clay	lb	23259000	0.000028	651.252	0.00335	77917.65	0.0000165	383.7735	0.000015	348.885	0.000002	46.518	2.05E-10	0.0047681
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	0.0000641	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	0.0000029	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	28999	0.217	6292.783	19.5	565480.5	0.0975	2827.4025	0.154	4465.846	0.057	1652.943	0.0141	408.8859
Round Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	6976800	0.01885	131512.68	2.115	14755932	0.0040375	28168.83	0.0051325	35808.426	0.0014428	10065.778	0.0001625	1133.9044
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Cover System - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	0.0000629	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	0.0000041	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	4574.176	0.017	77.760992	3.02	13814.012	0.0051	23.328298	0.0062	28.359891	0.0017	7.7760992	0.0011	5.0315936
Gasoline produced	gal	281.9	0.033	9.3027	2.8	789.32	0.0046	1.29674	0.005	1.4095	0.0015	0.42285	0.001	0.2819
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Fuel Processing Subtotals				**87.063692**		**14603.332**		**24.625038**		**29.769391**		**8.1989492**		**5.3134936**
Notes:														
Public water	gal x 1000	10	0.0092	0.092	5	50	0.0097	0.097	0.0059	0.059	0.016	0.16	0.000015	0.00015
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Cover System - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	**Units**	**Usage**	**Factor**	**MMBtus**	**Factor**	**lbs CO2e**	**Factor**	**lbs**	**Factor**	**lbs**	**Factor**	**lbs**	**Factor**	**lbs**
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	39	0.058071	2.2647701	6.8534384	267.2841	0.131402	5.1246763	0.3038758	11.851155	0.0455698	1.7772231	0.0330165	1.2876446
Off-site Laboratory Analysis - Metals	sample	13	0.212	2.756	27.4693	357.1009	0.6423	8.3499	1.5072	19.5936	0.2264	2.9432	0.1643	2.1359
Off-site Laboratory Analysis - Mercury	sample	0	0.0731715	0	9.325458	0	0.2127439	0	0.4982396	0	0.0747359	0	0.0542332	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.0074025	0	0.6459478	0	0.0067681	0	0.0147929	0	0.0022024	0	0.0015542	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.0174398	0	1.3381922	0	0.0070106	0	0.0132496	0	0.00194	0	0.0012831	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.8717054	0	0.0079807	0	0.0141535	0	0.0020547	0	0.0012875	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.0336475	0	4.29897	0	0.0954592	0	0.2226646	0	0.0335099	0	0.0242506	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.0141225	0	1.4726728	0	0.0079807	0	0.0136024	0	0.0019797	0	0.0012015	0
Off-site Laboratory Analysis - PCBs	sample	13	0.0512769	0.6665997	5.224902	67.923726	0.0833339	1.0833404	0.1904774	2.4762067	0.0284393	0.3697114	0.0212083	0.2757073
Off-site Laboratory Analysis - VOCs	sample	32	0.0762045	2.4385436	9.016814	288.53805	0.104498	3.3439373	0.2270738	7.2663616	0.0339508	1.0864269	0.0235892	0.754855
Off-site Laboratory Analysis - SVOCs	sample	13	0.0715602	0.9302824	7.870422	102.31549	0.1459445	1.8972788	0.3373038	4.3849494	0.0504853	0.6563094	0.0372577	0.4843506
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0.0156	3.1	0.0476393	180.0	2.808	0.8	0.012012	0.2	0.00234	0.0	0.0002808	NP	
Natural gas extraction and processing	MWh	0.026	1.6	0.0424268	270.0	7.02	0.2	0.00468	13.0	0.338	0.0	0.0001846	NP	
Nuclear fuel extraction and processing	MWh	0.0052	0.2	0.0008085	25.0	0.13	0.2	0.00078	0.5	0.0026	0.0	0.0000078	NP	
Oil extraction and processing	MWh	0.013	2.3	0.0298402	270.0	3.51	1.7	0.0221	0.1	0.000897	0.0	0.000546	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0.1207147**		**13.468**		**0.039572**		**0.343837**		**0.0010192**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0.26	1.0342	0.268892	35.2	9.152	0.1504	0.039104	0.146966	0.0382112	0.007546	0.001962	0.0045403	0.0011805
Notes:														

Cover System - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
User-defined material #1	lb	2800	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/u		(lbs CO2e/u		Ox(lbs/unit)		Ox(lbs/unit)		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**3713634.6**		**77743311**		**247135.81**		**733514.46**		**76992.195**		**96472.729**

Cover System - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0.26	3.413	0.88738										
Electricity Generation														
Grid electricity	MWh	0.26	6.929	1.80154	1124.3	292.318	2.2421	0.582946	4.6078874	1.1980507	0.057518	0.0149547	0.2102371	0.0546616
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0.0156	3.1	0.0476393	180.0	2.808	0.8	0.012012	0.2	0.00234	0.0	0.0002808	NP	
Natural gas extraction and processing	MWh	0.026	1.6	0.0424268	270.0	7.02	0.2	0.00468	13.0	0.338	0.0	0.0001846	NP	
Nuclear fuel extraction and processing	MWh	0.0052	0.2	0.0008085	25.0	0.13	0.2	0.00078	0.5	0.0026	0.0	0.0000078	NP	
Oil extraction and processing	MWh	0.013	2.3	0.0298402	270.0	3.51	1.7	0.0221	0.1	0.000897	0.0	0.000546	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0.26	1.0342	0.268892	112.43	29.2318	0.22421	0.0582946	0.4607887	0.1198051	0.0057518	0.0014955	0.0210237	0.0054662
Total Grid Electricity Footprint				**3**		**335**		**1**		**2**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	281.9	0.124	34.9556	19.79	5578.801	0.035	9.8665	0.00036	0.101484	0.003	0.8457	0.00661	1.863359
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	281.9	0.033	9.3027	2.8	789.32	0.0046	1.29674	0.005	1.4095	0.0015	0.42285	0.001	0.2819
Total Gasoline Footprint		**281.9**		**44.2583**		**6368.121**		**11.16324**		**1.510984**		**1.26855**		**2.145259**
Total Diesel Footprint														
On-site diesel use - Other	gal	4381.875	0.139	609.08063	22.5	98592.188	0.17	744.91875	0.0054	23.662125	0.0034	14.898375	0.0000052	0.0227858
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	192.301	0.139	26.729839	22.5	4326.7725	0.17	32.69117	0.0054	1.0384254	0.0034	0.6538234	0.0000052	0.001
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Diesel produced	gal	4574.176	0.017	77.760992	3.02	13814.012	0.0051	23.328298	0.0062	28.359891	0.0017	7.7760992	0.0011	5.0315936
Total Diesel Footprint		**4574.176**		**713.57146**		**116732.97**		**800.93822**		**53.060442**		**23.328298**		**5.0553793**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Space below available for notes and calculations:

Vapor Mitigation System - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	17.3448	3.413	59.197802										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**59**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**59.20**		**0**		**0**		**0**		**0**		**0**

Vapor Mitigation System - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	17.3448	6.929	120.18212	352	6105.3696	1.504	26.086579	1.46966	25.490959	0.07546	1.3088386	0.0454035	0.7875146
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Vapor Mitigation System - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	87.5	0.139	12.1625	22.5	1968.75	0.17	14.875	0.0054	0.4725	0.0034	0.2975	0.0000052	0.000455
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	90.7	0.124	11.2468	19.79	1794.953	0.035	3.1745	0.00036	0.032652	0.003	0.2721	0.00661	0.599527
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**23**		**3,764**		**18**		**1**		**1**		**1**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**23**		**3764**		**18**		**1**		**1**		**1**

Vapor Mitigation System - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	0.0000846	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	0.0000589	0
Gravel/Sand Mix, 65% Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	0.0000641	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	0.0000029	0
PVC	lb	1400	0.0262	36.68	2.02	2828	0.004	5.6	0.00274	3.836	0.000372	0.5208	0.000375	0.525
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	50	0.217	10.85	19.5	975	0.0975	4.875	0.154	7.7	0.057	2.85	0.0141	0.705
Round Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.0040375	0	0.0051325	0	0.0014428	0	0.0001625	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0
Notes:														

Vapor Mitigation System - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	0.0000629	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	0.0000041	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	87.5	0.017	1.4875	3.02	264.25	0.0051	0.44625	0.0062	0.5425	0.0017	0.14875	0.0011	0.09625
Gasoline produced	gal	90.7	0.033	2.9931	2.8	253.96	0.0046	0.41722	0.005	0.4535	0.0015	0.13605	0.001	0.0907
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Fuel Processing Subtotals				**4.4806**		**518.21**		**0.86347**		**0.996**		**0.2848**		**0.18695**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Vapor Mitigation System - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.8534384	0	0.131402	0	0.3038758	0	0.0455698	0	0.0330165	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.0731715	0	9.325458	0	0.2127439	0	0.4982396	0	0.0747359	0	0.0542332	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.0074025	0	0.6459478	0	0.0067681	0	0.0147929	0	0.0022024	0	0.0015542	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.0174398	0	1.3381922	0	0.0070106	0	0.0132496	0	0.00194	0	0.0012831	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.8717054	0	0.0079807	0	0.0141535	0	0.0020547	0	0.0012875	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.0336475	0	4.29897	0	0.0954592	0	0.2226646	0	0.0335099	0	0.0242506	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.0141225	0	1.4726728	0	0.0079807	0	0.0136024	0	0.0019797	0	0.0012015	0
Off-site Laboratory Analysis - PCBs	sample	0	0.0512769	0	5.224902	0	0.0833339	0	0.1904774	0	0.0284393	0	0.0212083	0
Off-site Laboratory Analysis - VOCs	sample	32	0.0762045	2.4385436	9.016814	288.53805	0.104498	3.3439373	0.2270738	7.2663616	0.0339508	1.0864269	0.0235892	0.754855
Off-site Laboratory Analysis - SVOCs	sample	0	0.0715602	0	7.870422	0	0.1459445	0	0.3373038	0	0.0504853	0	0.0372577	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	1.040688	3.1	3.178053	180.0	187.32384	0.8	0.8013298	0.2	0.1561032	0.0	0.0187324	NP	
Natural gas extraction and processing	MWh	1.73448	1.6	2.8303245	270.0	468.3096	0.2	0.3122064	13.0	22.54824	0.0	0.0123148	NP	
Nuclear fuel extraction and processing	MWh	0.346896	0.2	0.0539326	25.0	8.6724	0.2	0.0520344	0.5	0.173448	0.0	0.0005203	NP	
Oil extraction and processing	MWh	0.86724	2.3	1.9906627	270.0	234.1548	1.7	1.474308	0.1	0.0598396	0.0	0.0364241	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**8.0529728**		**898.46064**		**2.6398786**		**22.937631**		**0.0679916**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	17.3448	1.0342	17.937992	35.2	610.53696	0.1504	2.6086579	0.146966	2.5490959	0.007546	0.1308839	0.0045403	0.0787515
Notes:														

Vapor Mitigation System - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
User-defined Materials														
User-defined material #1	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/u		(lbs CO2e/u		Ox(lbs/unit)		Ox(lbs/unit)		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**80.440109**		**6118.7456**		**19.930944**		**45.285088**		**4.9409024**		**2.2505565**

Vapor Mitigation System - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	17.3448	3.413	59.197802										
Electricity Generation														
Grid electricity	MWh	17.3448	6.929	120.18212	1124.3	19500.759	2.2421	38.888776	4.6078874	79.922885	0.057518	0.9976382	0.2102371	3.6465203
Resource Extraction for Electricity														
Coal extraction and processing	MWh	1.040688	3.1	3.178053	180.0	187.32384	0.8	0.8013298	0.2	0.1561032	0.0	0.0187324	NP	
Natural gas extraction and processing	MWh	1.73448	1.6	2.8303245	270.0	468.3096	0.2	0.3122064	13.0	22.54824	0.0	0.0123148	NP	
Nuclear fuel extraction and processing	MWh	0.346896	0.2	0.0539326	25.0	8.6724	0.2	0.0520344	0.5	0.173448	0.0	0.0005203	NP	
Oil extraction and processing	MWh	0.86724	2.3	1.9906627	270.0	234.1548	1.7	1.474308	0.1	0.0598396	0.0	0.0364241	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	17.3448	1.0342	17.937992	112.43	1950.0759	0.22421	3.8888776	0.4607887	7.9922885	0.0057518	0.0997638	0.0210237	0.364652
Total Grid Electricity Footprint				**205**		**22349**		**45**		**111**		**1**		**4**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	90.7	0.124	11.2468	19.79	1794.953	0.035	3.1745	0.00036	0.032652	0.003	0.2721	0.00661	0.599527
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	90.7	0.033	2.9931	2.8	253.96	0.0046	0.41722	0.005	0.4535	0.0015	0.13605	0.001	0.0907
Total Gasoline Footprint		**90.7**		**14.2399**		**2048.913**		**3.59172**		**0.486152**		**0.40815**		**0.690227**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	87.5	0.139	12.1625	22.5	1968.75	0.17	14.875	0.0054	0.4725	0.0034	0.2975	0.0000052	0.000455
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Diesel produced	gal	87.5	0.017	1.4875	3.02	264.25	0.0051	0.44625	0.0062	0.5425	0.0017	0.14875	0.0011	0.09625
Total Diesel Footprint		**87.5**		**13.65**		**2233**		**15.32125**		**1.015**		**0.44625**		**0.096705**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Space below available for notes and calculations:

All Components - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	17.7768	3.413	60.672218										
On-site diesel use - Other	Gal	4381.875	0.139	609.08063	22.5	98592.188	0.17	744.91875	0.0054	23.662125	0.0034	14.898375	0.0000052	0.0227858
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	31257.692	0.139	4344.8192	22.24	695171.08	0.101	3157.0269	0.00013	4.0635	0.009	281.31923	0.00004	1.2503077
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**5,015**		**793,763**		**3,902**		**28**		**296**		**1**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**5,014.57**		**793,763**		**3,902**		**28**		**296**		**1**

All Components - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	17.7768	6.929	123.17545	N/A*	6390.2692	N/A*	26.86326	N/A*	26.665627	N/A*	1.3383513	N/A*	0.8354803
**** Conversion factors are not applied to grid electricity in the "All Components" tab since multiple fuel mixes may be used. The value for each cell shaded yellow in Row 51 is the sum of values from Components 1 - 6.***														
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

All Components - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	279.801	0.139	38.892339	22.5	6295.5225	0.17	47.56617	0.0054	1.5109254	0.0034	0.9513234	0.0000052	0.001455
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	501.6	0.124	62.1984	19.79	9926.664	0.035	17.556	0.00036	0.180576	0.003	1.5048	0.00661	3.315576
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
User-defined conventional energy transportation #1	TBD	30	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**101**		**16,222**		**65**		**2**		**2**		**3**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**101**		**16222**		**65**		**2**		**2**		**3**

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	6605023	0.0412	272126.95	0.85	5614269.6	0.00271	17899.612	0.00798	52708.084	0.000766	5059.4476	0.00107	7067.3746
Asphalt, paving-grade	lb	6605023	0.5	3302511.5	8.58	56671097	0.0299	197490.19	0.0969	640026.73	0.0091	60105.709	0.0133	87846.806
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	0.0000846	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	0.0000589	0
Gravel/Sand Mix, 65% Gravel	lb	17856000	0.0000248	442.8288	0.0024	42854.4	0.000018	321.408	4.52E-06	80.70912	2.61E-06	46.60416	3.08E-07	5.499648
Gravel/sand/clay	lb	23259000	0.000028	651.252	0.00335	77917.65	0.0000165	383.7735	0.000015	348.885	0.000002	46.518	2.05E-10	0.0047681
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	0.0000641	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	0.0000029	0
PVC	lb	1400	0.0262	36.68	2.02	2828	0.004	5.6	0.00274	3.836	0.000372	0.5208	0.000375	0.525
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	29049	0.217	6303.633	19.5	566455.5	0.0975	2832.2775	0.154	4473.546	0.057	1655.793	0.0141	409.5909
Round Gravel	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	0.0000248	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	6976800	0.01885	131512.68	2.115	14755932	0.0040375	28168.83	0.0051325	35808.426	0.0014428	10065.778	0.0001625	1133.9044
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	0.0000165	0	0.000015	0	0.000002	0	2.05E-10	0
Notes:														

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	0.0000629	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	0.0000041	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	35919.368	0.017	610.62926	3.02	108476.49	0.0051	183.18878	0.0062	222.70008	0.0017	61.062926	0.0011	39.511305
Gasoline produced	gal	501.6	0.033	16.5528	2.8	1404.48	0.0046	2.30736	0.005	2.508	0.0015	0.7524	0.001	0.5016
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Fuel Processing Subtotals				**627.18206**		**109880.97**		**185.49614**		**225.20808**		**61.815326**		**40.012905**
Notes:														
Public water	gal x 1000	10	0.0092	0.092	5	50	0.0097	0.097	0.0059	0.059	0.016	0.16	0.000015	0.00015
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

All Components - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	**Units**	**Usage**	**Factor**	**MMBtus**	**Factor**	**lbs CO2e**	**Factor**	**lbs**	**Factor**	**lbs**	**Factor**	**lbs**	**Factor**	**lbs**
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	39	0.058071	2.2647701	6.8534384	267.2841	0.131402	5.1246763	0.3038758	11.851155	0.0455698	1.7772231	0.0330165	1.2876446
Off-site Laboratory Analysis - Metals	sample	13	0.212	2.756	27.4693	357.1009	0.6423	8.3499	1.5072	19.5936	0.2264	2.9432	0.1643	2.1359
Off-site Laboratory Analysis - Mercury	sample	0	0.0731715	0	9.325458	0	0.2127439	0	0.4982396	0	0.0747359	0	0.0542332	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.0074025	0	0.6459478	0	0.0067681	0	0.0147929	0	0.0022024	0	0.0015542	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.0174398	0	1.3381922	0	0.0070106	0	0.0132496	0	0.00194	0	0.0012831	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.8717054	0	0.0079807	0	0.0141535	0	0.0020547	0	0.0012875	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.0336475	0	4.29897	0	0.0954592	0	0.2226646	0	0.0335099	0	0.0242506	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.0141225	0	1.4726728	0	0.0079807	0	0.0136024	0	0.0019797	0	0.0012015	0
Off-site Laboratory Analysis - PCBs	sample	13	0.0512769	0.6665997	5.224902	67.923726	0.0833339	1.0833404	0.1904774	2.4762067	0.0284393	0.3697114	0.0212083	0.2757073
Off-site Laboratory Analysis - VOCs	sample	64	0.0762045	4.8770872	9.016814	577.0761	0.104498	6.6878746	0.2270738	14.532723	0.0339508	2.1728538	0.0235892	1.5097101
Off-site Laboratory Analysis - SVOCs	sample	13	0.0715602	0.9302824	7.870422	102.31549	0.1459445	1.8972788	0.3373038	4.3849494	0.0504853	0.6563094	0.0372577	0.4843506
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	1.108748	3.1	3.3858946	180.0	199.57464	0.8	0.853736	0.2	0.1663122	0.0	0.0199575	NP	
Natural gas extraction and processing	MWh	1.818788	1.6	2.9678983	270.0	491.07276	0.2	0.3273818	13.0	23.644244	0.0	0.0129134	NP	
Nuclear fuel extraction and processing	MWh	0.386152	0.2	0.0600358	25.0	9.6538	0.2	0.0579228	0.5	0.193076	0.0	0.0005792	NP	
Oil extraction and processing	MWh	0.881444	2.3	2.0232666	270.0	237.98988	1.7	1.4984548	0.1	0.0608196	0.0	0.0370206	NP	
Other fuel extraction and processing	MWh	0.000172	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**8.4370953**		**938.29108**		**2.7374954**		**24.064452**		**0.0704707**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	17.7768	1.0342	18.384767										
Notes:														

All Components - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
User-defined Materials														
User-defined material #1	lb	2800	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/u		(lbs CO2e/u		Ox(lbs/unit)		Ox(lbs/unit)		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**3714251.1**		**77843595**		**247313.16**		**733752.38**		**77050.336**		**96509.412**

All Components - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	17.7768	3.413	60.672218										
Electricity Generation														
Grid electricity	MWh	17.7768	6.929	123.17545	1124.3	19986.456	2.2421	39.857363	4.6078874	81.913493	0.057518	1.022486	0.2102371	3.7373427
Resource Extraction for Electricity														
Coal extraction and processing	MWh	1.108748	3.1	3.3858946	180.0	199.57464	0.8	0.853736	0.2	0.1663122	0.0	0.0199575	NP	
Natural gas extraction and processing	MWh	1.818788	1.6	2.9678983	270.0	491.07276	0.2	0.3273818	13.0	23.644244	0.0	0.0129134	NP	
Nuclear fuel extraction and processing	MWh	0.386152	0.2	0.0600358	25.0	9.6538	0.2	0.0579228	0.5	0.193076	0.0	0.0005792	NP	
Oil extraction and processing	MWh	0.881444	2.3	2.0232666	270.0	237.98988	1.7	1.4984548	0.1	0.0608196	0.0	0.0370206	NP	
Other fuel extraction and processing	MWh	0.000172	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	17.7768	1.0342	18.384767	112.43	1998.6456	0.22421	3.9857363	0.4607887	8.1913493	0.0057518	0.1022486	0.0210237	0.3737343
Total Grid Electricity Footprint				**211**		**22923**		**47**		**114**		**1**		**4**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	501.6	0.124	62.1984	19.79	9926.664	0.035	17.556	0.00036	0.180576	0.003	1.5048	0.00661	3.315576
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	501.6	0.033	16.5528	2.8	1404.48	0.0046	2.30736	0.005	2.508	0.0015	0.7524	0.001	0.5016
Total Gasoline Footprint		**501.6**		**78.7512**		**11331.144**		**19.86336**		**2.688576**		**2.2572**		**3.817176**
Total Diesel Footprint														
On-site diesel use - Other	gal	4381.875	0.139	609.08063	22.5	98592.188	0.17	744.91875	0.0054	23.662125	0.0034	14.898375	0.0000052	0.0227858
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	31257.692	0.139	4344.8192	22.24	695171.08	0.101	3157.0269	0.00013	4.0635	0.009	281.31923	0.00004	1.2503077
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	279.801	0.139	38.892339	22.5	6295.5225	0.17	47.56617	0.0054	1.5109254	0.0034	0.9513234	0.0000052	0.001455
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	0.0000052	0
Diesel produced	gal	35919.368	0.017	610.62926	3.02	108476.49	0.0051	183.18878	0.0062	222.70008	0.0017	61.062926	0.0011	39.511305
Total Diesel Footprint		**35919.368**		**5603.4215**		**908535.28**		**4132.7006**		**251.93663**		**358.23186**		**40.785854**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	0.0000063	0	0.00076	0	0.0000084	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	0.0000061	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Space below available for notes and calculations:

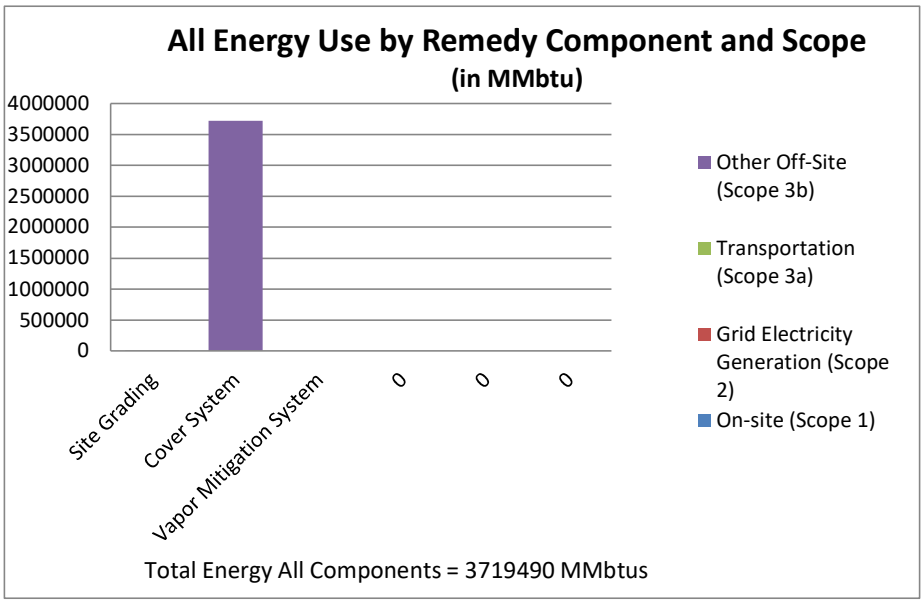
Environmental Footprint Summary

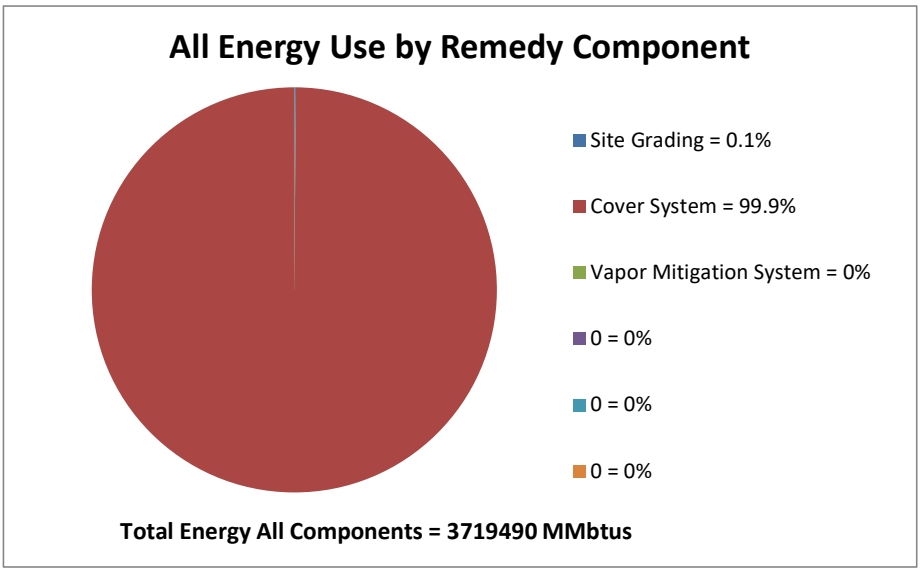
Core Element	Metric		Unit of Measure	Footprint						
				Site Grading	Cover System	Vapor Mitigation System				Total
Materials & Waste	M&W-1	Refined materials used on-site	Tons	0.0	13,980.9	2.6	0.0	0.0	0.0	13,983.5
	M&W-2	% of refined materials from recycled or reused material	%		0.0%	0.0%				0.0%
	M&W-3	Unrefined materials used on-site	Tons	0.000	20,557.500	0.000	0.000	0.000	0.000	20,557.5
	M&W-4	% of unrefined materials from recycled or reused material	%		0.0%					0.0%
	M&W-5	On-site hazardous waste disposed of off-site	Tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-6	On-site non-hazardous waste disposed of off-site	Tons	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-7	Recycled or reused waste	Tons	4,571.0	0.0	0.0	0.0	0.0	0.0	4,571.0
	M&W-8	% of total potential waste recycled or reused	%	100.0%						100.0%
Water (used on-site)	W-1	Public water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-2	Groundwater use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-3	Surface water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-4	Reclaimed water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-5	Storm water use	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-6	User-defined water resource #1	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-7	User-defined water resource #2	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	W-8	Wastewater generated	MG	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Energy	E-1	Total energy used (on-site and off-site)	MMBtu	4,898.7	3,714,308.0	283.2	0.0	0.0	0.0	3,719,490.0
	E-2	Energy voluntarily derived from renewable resources								
	E-2A	On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-2B	Voluntary purchase of renewable electricity	MWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-3	Voluntary purchase of RECs	MWh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	E-4	On-site grid electricity use	MWh	0.172	0.260	17.345	0.000	0.000	0.000	17.8
Air	A-1	On-site NOx, SOx, and PM emissions	Pounds	3,442.4	783.5	0.0	0.0	0.0	0.0	4,225.9
	A-2	On-site HAP emissions	Pounds	1.3	0.0	0.0	0.0	0.0	0.0	1.3
	A-3	Total NOx, SOx, and PM emissions	Pounds	3,857.3	1,058,471.9	142.2	0.0	0.0	0.0	1,062,471.4
	A-3A	Total NOx emissions	Pounds	3,322.0	247,923.7	64.1	0.0	0.0	0.0	251,309.8
	A-3B	Total SOx emissions	Pounds	200.2	733,539.6	71.3	0.0	0.0	0.0	733,811.1
	A-3C	Total PM emissions	Pounds	335.1	77,008.6	6.8	0.0	0.0	0.0	77,350.5
	A-4	Total HAP emissions	Pounds	36.7	96,474.6	3.6	0.0	0.0	0.0	96,514.9
	A-5	Total greenhouse gas emissions	Tons CO2e*	396.4	38,925.9	8.0	0.0	0.0	0.0	39,330.3
Land & Ecosystems	Qualitative Description									

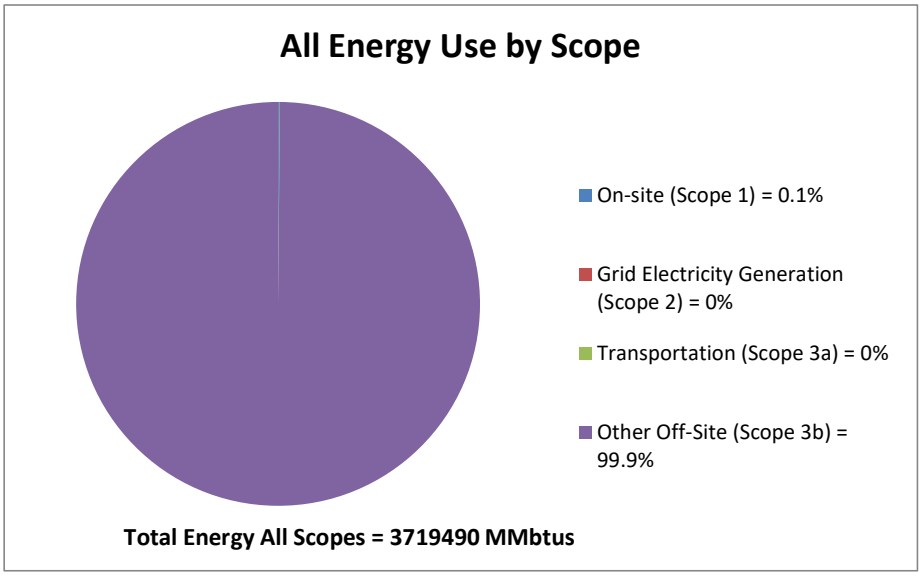
** Total greenhouse gases emissions (in CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.*
"MMBtu" = millions of Btus
"MG" = millions of gallons
"CO2e" = carbon dioxide equivalents of global warming potential
"MWh" = megawatt hours (i.e., thousands of kilowatt-hours or millions of Watt-hours)
"Tons" = short tons (2,000 pounds)

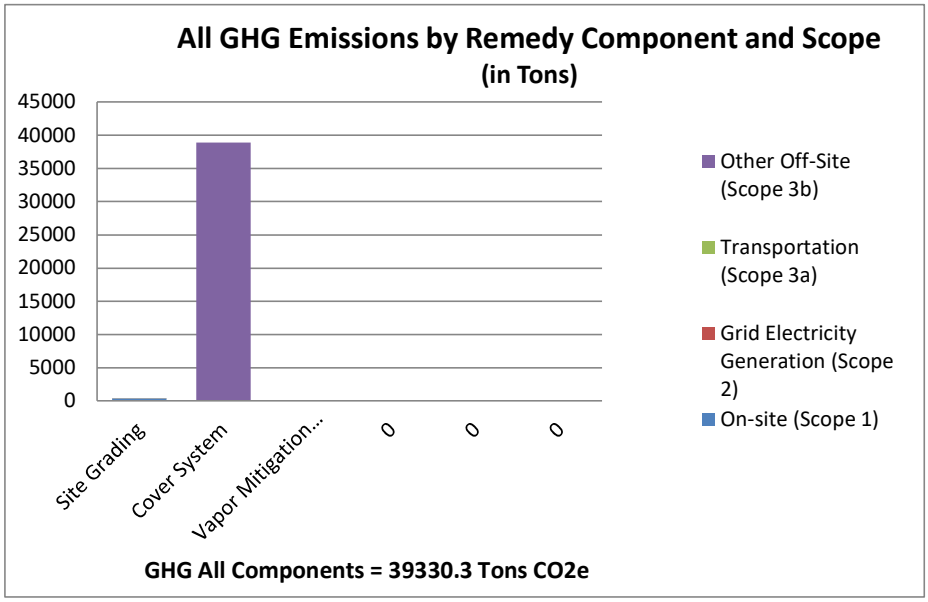
The above metrics are consistent with EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint (EPA 542-R-12-002), February 2012

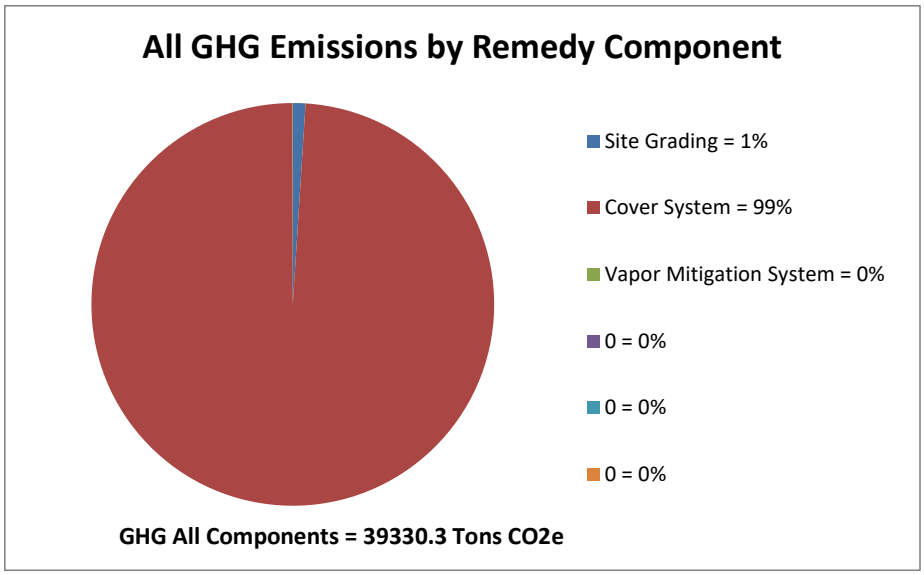
Notes:

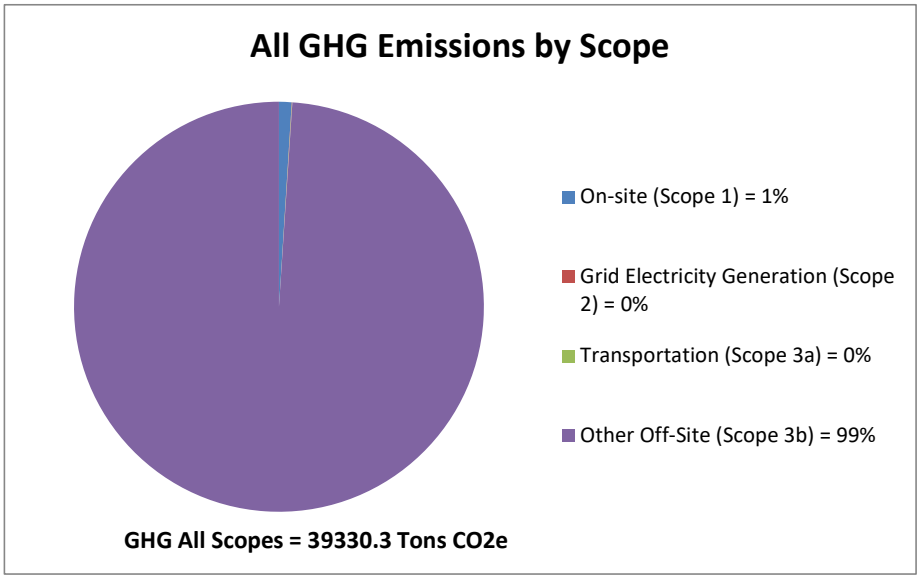

All Energy Use by Remedy Component and Scope
(in MMbtu)
4000000
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
Site Grading
Cover System
Vapor Mitigation System
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
Total Energy All Components = 3719490 MMbtus

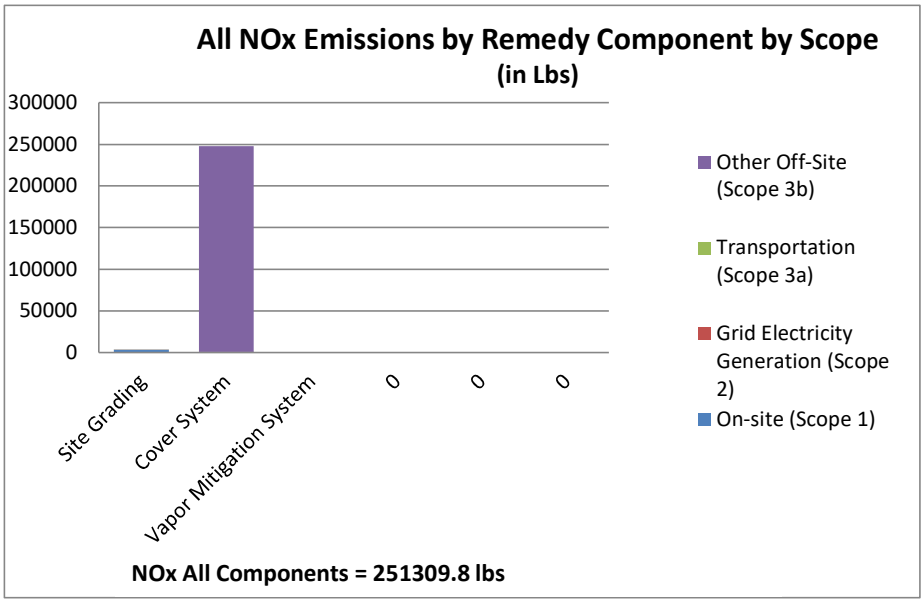

All Energy Use by Remedy Component
Site Grading = 0.1%
Cover System = 99.9%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
Total Energy All Components = 3719490 MMbtus

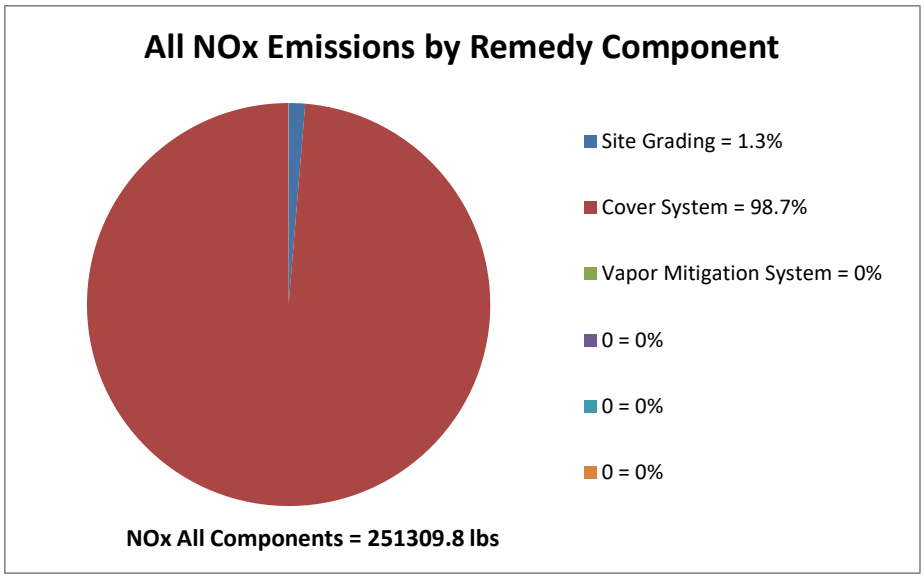

All Energy Use by Scope
On-site (Scope 1) = 0.1%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 99.9%
Total Energy All Scopes = 3719490 MMbtus

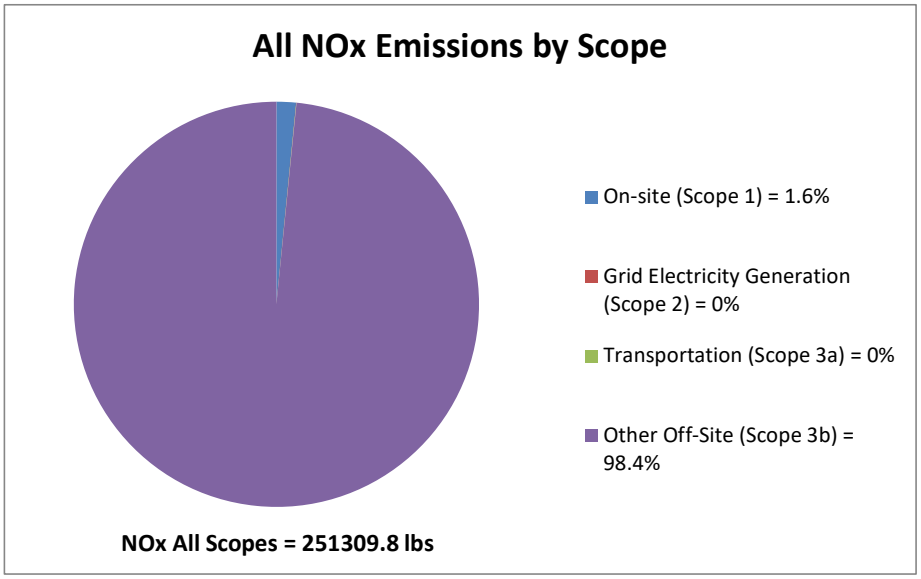

All GHG Emissions by Remedy Component and Scope
(in Tons)
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
Site Grading
Cover System
Vapor Mitigation...
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
GHG All Components = 39330.3 Tons CO2e

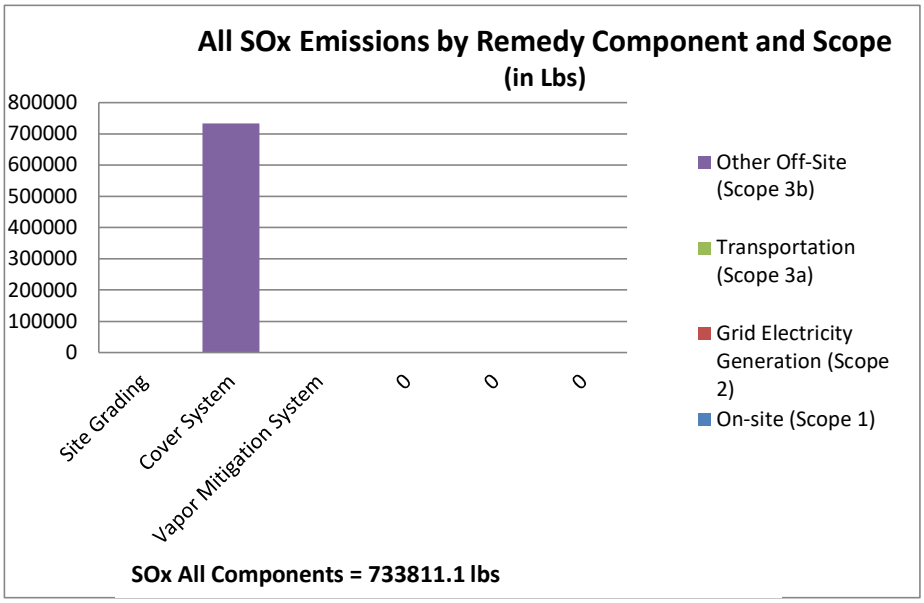

All GHG Emissions by Remedy Component
Site Grading = 1%
Cover System = 99%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
GHG All Components = 39330.3 Tons CO2e

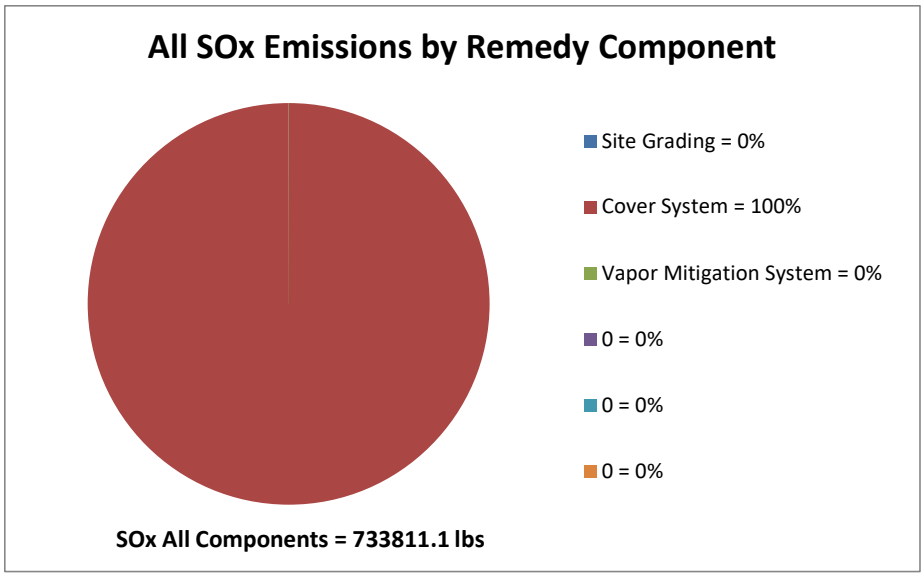

All GHG Emissions by Scope
On-site (Scope 1) = 1%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 99%
GHG All Scopes = 39330.3 Tons CO2e

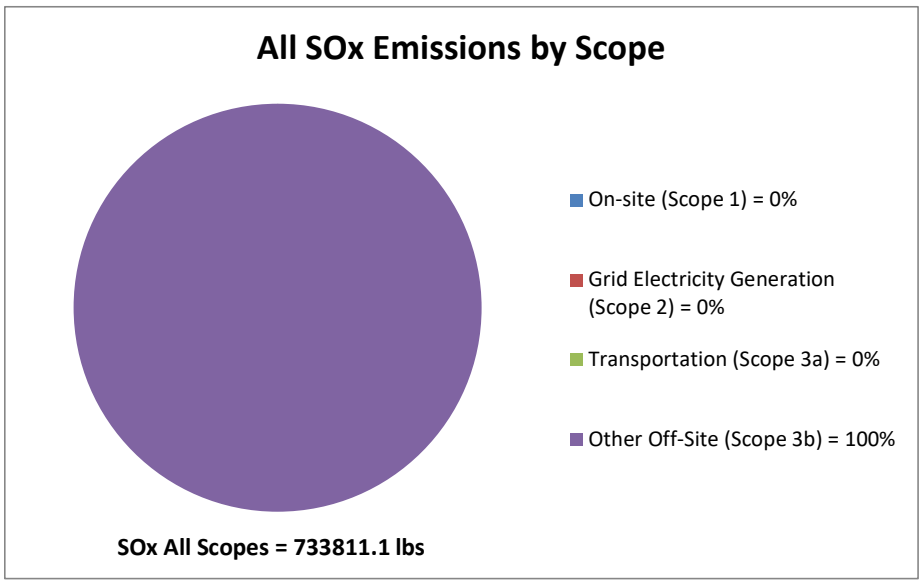

All NOx Emissions by Remedy Component by Scope
(in Lbs)
300000
250000
200000
150000
100000
50000
0
Site Grading
Cover System
Vapor Mitigation System
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
NOx All Components = 251309.8 lbs

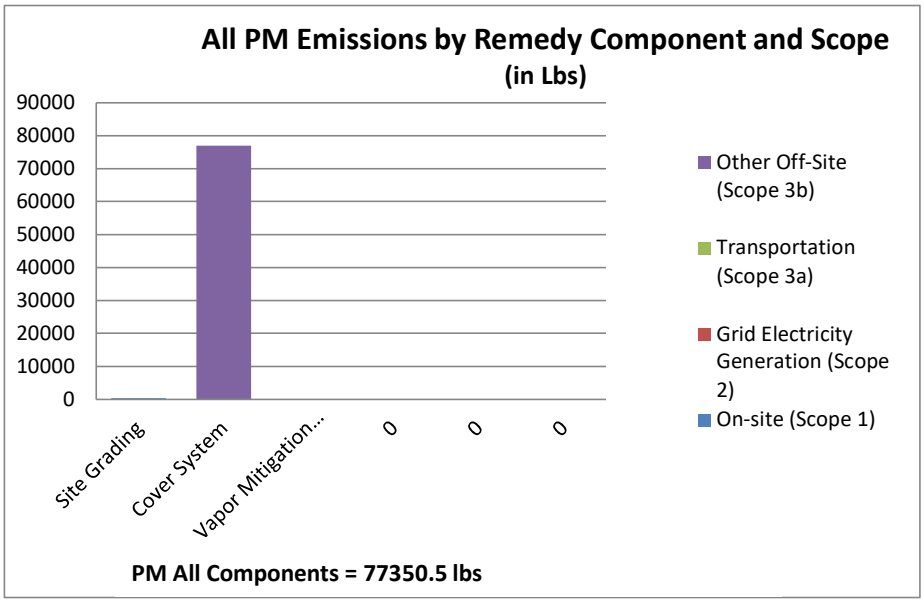

All NOx Emissions by Remedy Component
Site Grading = 1.3%
Cover System = 98.7%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
NOx All Components = 251309.8 lbs

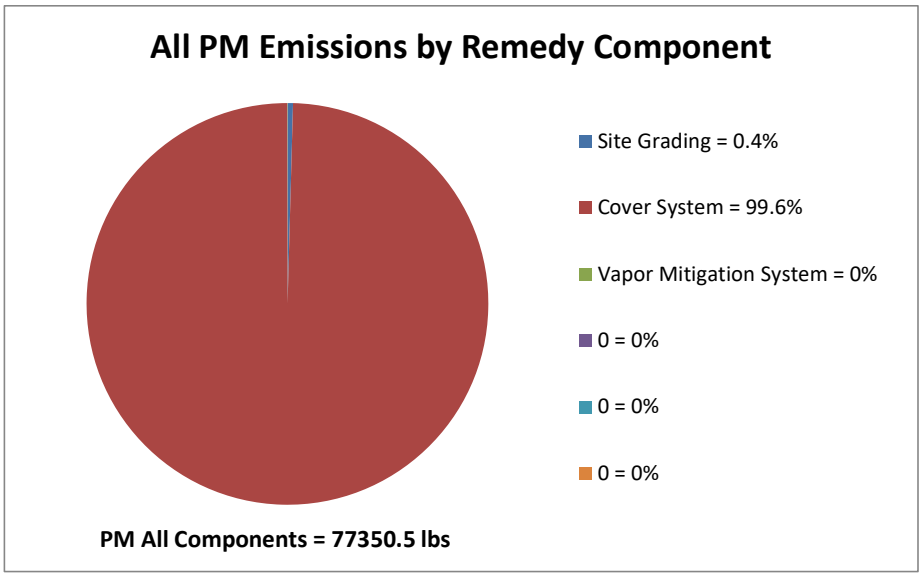

All NOx Emissions by Scope
On-site (Scope 1) = 1.6%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 98.4%
NOx All Scopes = 251309.8 lbs

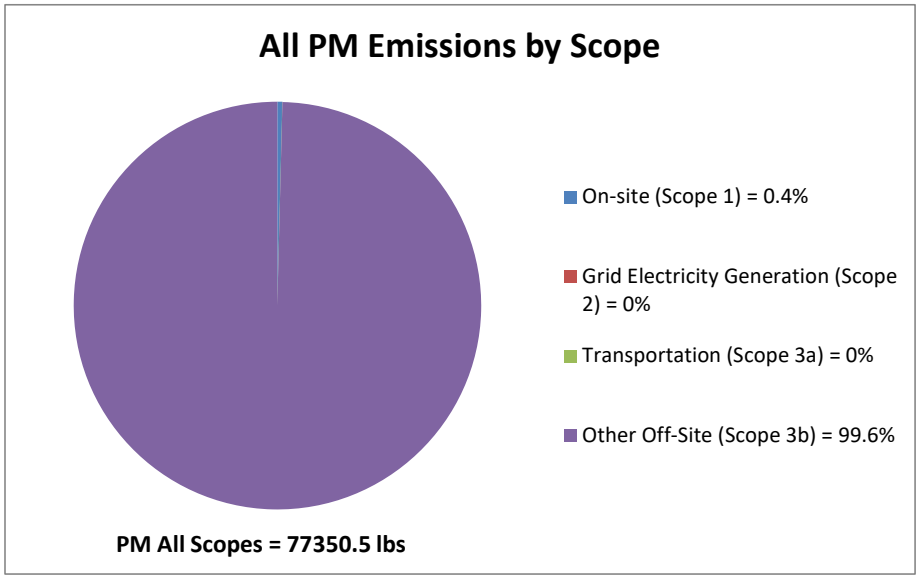

All SOx Emissions by Remedy Component and Scope
(in Lbs)
800000
700000
600000
500000
400000
300000
200000
100000
0
Site Grading
Cover System
Vapor Mitigation System
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
SOx All Components = 733811.1 lbs

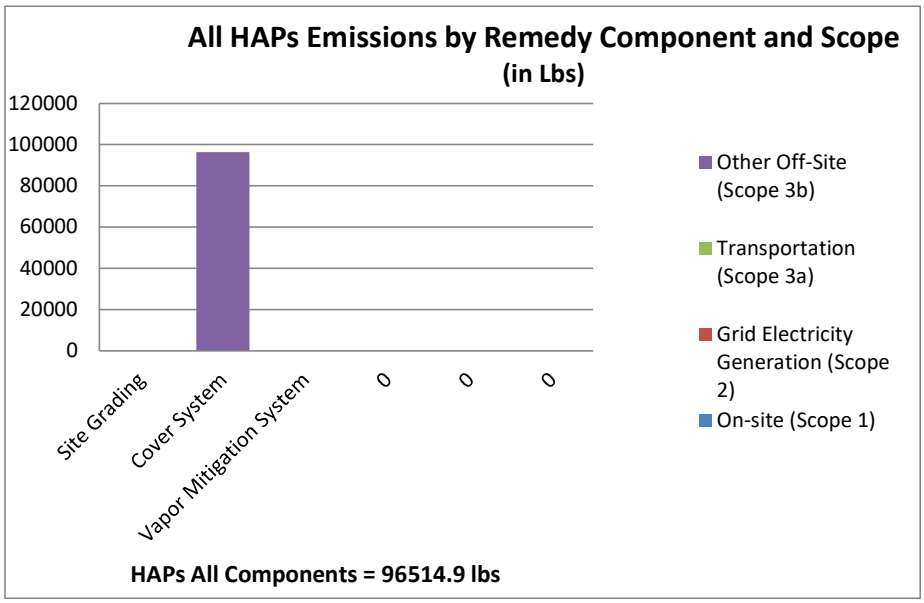

All SOx Emissions by Remedy Component
Site Grading = 0%
Cover System = 100%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
SOx All Components = 733811.1 lbs

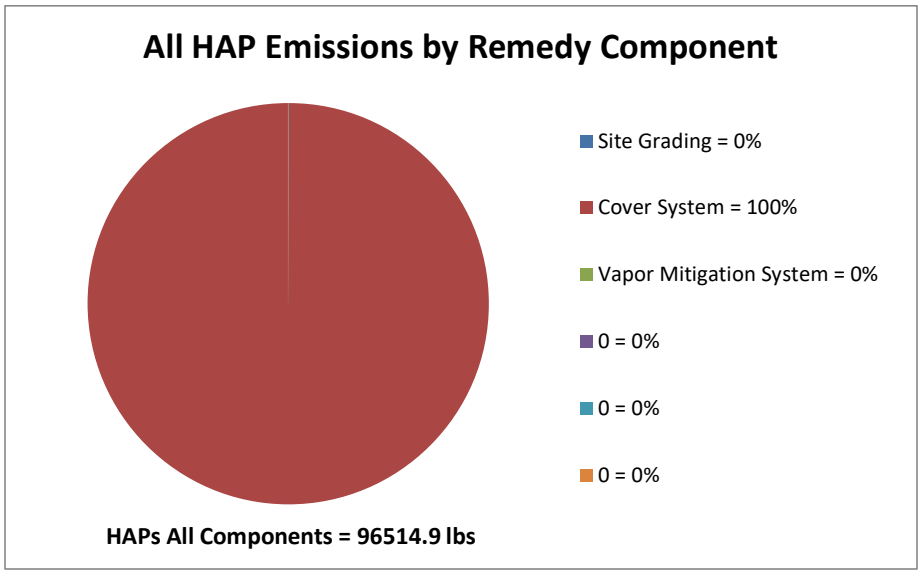

All SOx Emissions by Scope
On-site (Scope 1) = 0%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 100%
SOx All Scopes = 733811.1 lbs

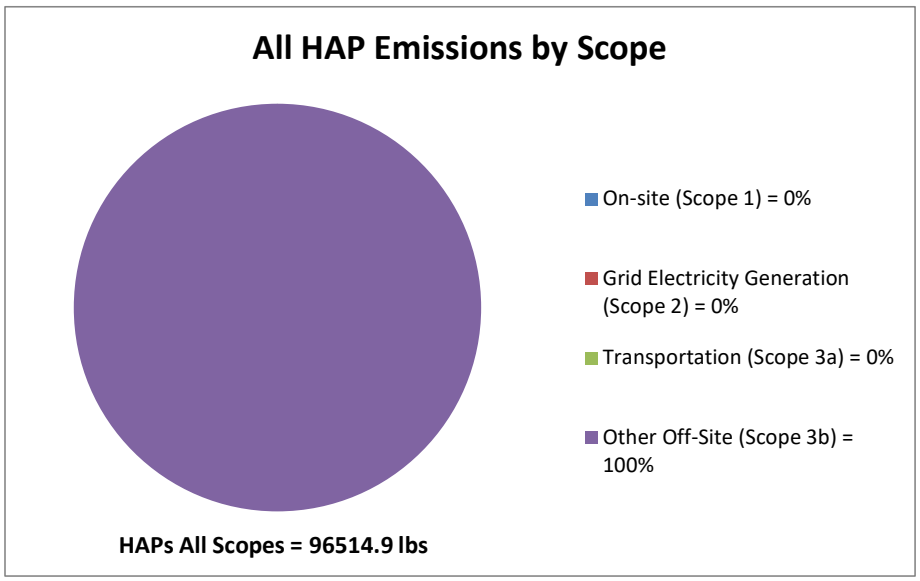

All PM Emissions by Remedy Component and Scope
(in Lbs)
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Site Grading
Cover System
Vapor Mitigation...
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
PM All Components = 77350.5 lbs


All PM Emissions by Remedy Component
Site Grading = 0.4%
Cover System = 99.6%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
PM All Components = 77350.5 lbs


All PM Emissions by Scope
On-site (Scope 1) = 0.4%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 99.6%
PM All Scopes = 77350.5 lbs


All HAPs Emissions by Remedy Component and Scope
(in Lbs)
120000
100000
80000
60000
40000
20000
0
Site Grading
Cover System
Vapor Mitigation System
0
0
0
Other Off-Site (Scope 3b)
Transportation (Scope 3a)
Grid Electricity Generation (Scope 2)
On-site (Scope 1)
HAPs All Components = 96514.9 lbs


All HAP Emissions by Remedy Component
Site Grading = 0%
Cover System = 100%
Vapor Mitigation System = 0%
0 = 0%
0 = 0%
0 = 0%
HAPs All Components = 96514.9 lbs


All HAP Emissions by Scope
On-site (Scope 1) = 0%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 0%
Other Off-Site (Scope 3b) = 100%
HAPs All Scopes = 96514.9 lbs

Site Grading - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**4,345**	**695,171**	**3,157**	**4**	**281**	**3,442**	**1**
Grid Electricity Generation (Scope 2)	**1.192**	**193**	**0**	**1**	**0**	**1**	**0**
Transportation (Scope 3a)	**16**	**2,553**	**5**	**0**	**0**	**5**	**1**
Other Off-Site (Scope 3b)	**536**	**94,805**	**160**	**195**	**53**	**409**	**35**
Remedy Totals	**4,899**	**792,722**	**3,322**	**200**	**335**	**3,857**	**37**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file: calculations_UrbanVillages_DEC2023.xlsx

Cover System - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**610**	**98,592**	**745**	**24**	**15**	**783**	**0**
Grid Electricity Generation (Scope 2)	**2**	**92**	**0**	**0**	**0**	**1**	**0**
Transportation (Scope 3a)	**62**	**9,906**	**43**	**1**	**1**	**45**	**2**
Other Off-Site (Scope 3b)	**3,713,635**	**77,743,311**	**247,136**	**733,514**	**76,992**	**1,057,642**	**96,473**
Remedy Totals	**3,714,308**	**77,851,900**	**247,924**	**733,540**	**77,009**	**1,058,472**	**96,475**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file: calculations_UrbanVillages_DEC2023.xlsx

Vapor Mitigation System - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**59**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**120**	**6,105**	**26**	**25**	**1**	**53**	**1**
Transportation (Scope 3a)	**23**	**3,764**	**18**	**1**	**1**	**19**	**1**
Other Off-Site (Scope 3b)	**80**	**6,119**	**20**	**45**	**5**	**70**	**2**
Remedy Totals	**283**	**15,988**	**64**	**71**	**7**	**142**	**4**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file: calculations_UrbanVillages_DEC2023.xlsx

All - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**5,015**	**793,763**	**3,902**	**28**	**296**	**4,226**	**1**
Grid Electricity Generation (Scope 2)	**123.175**	**6,390**	**27**	**27**	**1**	**55**	**1**
Transportation (Scope 3a)	**101**	**16,222**	**65**	**2**	**2**	**69**	**3**
Other Off-Site (Scope 3b)	**3,714,251**	**77,843,595**	**247,313**	**733,752**	**77,050**	**1,058,116**	**96,509**
Remedy Totals	**3,719,490**	**78,659,971**	**251,307**	**733,808**	**77,350**	**1,062,466**	**96,515**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file: calculations_UrbanVillages_DEC2023.xlsx

Appendix H

Health and Safety Plan

Health and Safety Plan
for
Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP Site

100 Buckley Road
Town of Salina, Onondaga County, New York

BCP Site No. C734154

Prepared by:

C&S Engineers, Inc.
499 Col Eileen Collins Blvd.
Syracuse, New York 13212

April 2022
Revised July 27, 2022
Revised July 22, 2024
Revised May 28, 2025
Revised July 27, 2026

EMERGENCY PHONE NUMBERS

Emergency Medical Service.....911

Police: City of Syracuse Police Department 911

Hospital: St. Joseph's Hospital .....(315) 448-5111

Fire: Salina Consolidated Fire District.....911

National Response Center.....(800) 424-8802

Poison Control Center .....(800) 222-1222

Center for Disease Control .....(800) 311-3435

NYSDEC Region 7 (Syracuse, New York) .....(315) 426-7551

C&S Engineers .....(315) 455-2000

Nick Paro (Town of Salina) .....(315) 457-6661

Yocasta DeJesus (USEPA Project Officer) .....(212) 637-4340

TABLE OF CONTENTS

Page

Emergency Phone Numbers i
Section 1 – General Information 4
1.1 Responsibilities 4
1.2 Applicable Standards and Regulations References 5
Section 2 – Health And Safety Personnel 6
2.1 Project Manager (PM) 6
2.2 Health and Safety Manager 6
2.3 Health and Safety Officer (HSO) 6
2.4 Emergency Coordinator 7
2.5 Site Workers 7
Section 3 – Site Hazards Evaluation 8
3.1 Site Location and General History 8
3.2 Site History and Suspect Recognized Environmental Conditions 8
3.3 Chemical Hazards 9
3.3.1 Nature of Chemical Hazards 9
3.3.2 Common Routes of Exposure 10
3.4 Physical Hazards 11
3.5 Environmental Hazards 15
Section 4 – Training 16
4.1 Site-Specific Training 16
4.2 Task-Specific Training 16
4.3 Safety Briefings 16
4.4 Daily Tailgate Safety Meeting 16
Section 5 – Communications 17
5.1 Communications 17
Section 6 – Personal Protective Equipment 18
6.1 General 18
6.2 Personal Protective Equipment – Site Specific 19
Section 7 – Monitoring Procedures 20
7.1 Monitoring During Site Operations 20
7.1.1 Surface Soil Operation 20
7.1.2 Drilling / Test Pit Operations (Monitoring Well Installation and Subsurface Borings) 20
7.1.3 Soil Excavation and Trenching Operation 20
7.1.4 Community Air Monitoring 20
7.1.5 Special Requirements 20

7.2 Action Levels 21
7.3 Personal Monitoring Procedures 21
7.4 Reporting 21
Section 8 – Safety Considerations For Site Operations 22
8.1 General 22
8.2 Field Operations 23
8.3 General Asbestos Safety 23
Section 9 – Decontamination Procedures 24
9.1 General Decontamination 24
9.2 General Avoidance 24
9.3 Reducing Contamination 24
9.4 Equipment Decontamination 25
Section 10 – Disposal Procedures 26
Section 11 - Emergency Response Procedures 27
11.1 Emergency Coordinator 27
11.2 Evacuation 27
11.3 Potential or Actual Fire or Explosion 27
11.4 Environmental Incident (spread or release of contamination) 27
11.5 Personnel Injury 28
11.6 Personnel Exposure 28
11.7 Adverse Weather Conditions 28
11.8 Incident Investigation and Reporting 28
Section 12 - Authorizations 29

FIGURES

Figure 1 Site Location Map
Figure 2 Site Layout

APPENDICES

Appendix A – Map and Directions to Hospital
Appendix B – Guidance on Incident Investigation and Reporting

SECTION 1 – GENERAL INFORMATION

This Health and Safety Plan (HASP) addresses health and safety considerations for the activities that personnel employed by C&S Engineers, Inc., may be engaged in during site investigation and remedial activities at the Former Will & Baumer Candle Co., Inc. site located in Salina, New York (Site). Figure 1 shows the approximate location of the Site. This HASP will be implemented by the Health and Safety Officer (HSO) during site work. All personnel engaged in site investigation, soil excavation and handling, remediation, and other activities associated with the implementation of the site investigation and remedy are required to maintain current HAZWOPER training, including initial 40-hour training, on-the-job training, and consistent annual 8-hour refresher training, as per the requirements of 29 CFR 1910.120.

Compliance with this HASP is required of C&S personnel who enter this Site. The content of the HASP may change or undergo revision based upon additional information made available to the health, safety, and training (H&S) committee, monitoring results or changes in the technical scope of work. Any changes proposed must be reviewed by the H&S committee.

1.1 Responsibilities

Project Manager.....	Nevin Bradford Phone: (315) 703-4284 Cell: (315) 529-0482
Health and Safety Manager.....	Michael Sherlock Phone: (315) 703-4210 Cell: (315) 420-3455
Site Health and Safety Officer.....	Tim Wawro Phone: (315) 877-9112 Cell: (315) 415-0010
Emergency Coordinator.....	Vittorio Pascarella Phone: (315) 877-9112 Cell: (315) 256-6817

1.2 Applicable Standards and Regulations References

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. Where a conflict or overlap among regulations and/or these specifications exist, the most stringent requirements shall apply. The Hazardous Material Engineer will determine which requirements are most stringent.

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

a. ANSI Z89.1, Personnel Protective Equipment-Protective Headwear for Industrial Workers-Requirements (Latest Revision)

b. ANSI Z87.1, Occupational and Educational Personal Eye and Face Protection Devices

c. *ANSI Z9.2,* Fundamentals Governing the Design and Operation of Local Exhaust Systems

d. *ANSI Z88.2-80,* Practices for Respiratory Protection

2. CODE OF FEDERAL REGULATIONS (CFR)

a. 29 CFR Subpart D Walking-Working Surfaces

b. 29 CFR 1910 Occupational Safety and Health Standards-All Sections

c. 29 CFR 1926 Safety and Health Regulations for Construction-All Sections

d. 40 CFR 50.6 National Primary and Secondary Ambient Air Quality Standards for Particulate Matter

e. 40 CFR 61 National Emissions Standards for Hazardous Air Pollutants (NESHAPS)-Subpart A-General Provisions

f. 49 CFR 172 Hazardous Material Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements

3. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH)

a. Publication Number 87-108 Respiratory Decision Logic

b. NIOSH/OSHA Booklet 3142 Lead in Construction

c. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH Publication 85-115)

4. U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

a. PUB 3126 Working with Lead in the Construction Industry

b. 29 CFR 1910, Subpart I, Appendix B-Non-Mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection

SECTION 2 – HEALTH AND SAFETY PERSONNEL

The following information briefly describes the health and safety designations and general responsibilities for this Site.

2.1 Project Manager (PM)

The PM is responsible for the overall project including the implementation of the HASP. Specifically, this includes allocating adequate manpower, equipment, and time resources to conduct Site activities safely.

2.2 Health and Safety Manager

- Has the overall responsibility for coordinating and reporting health and safety activities and the health and safety of Site Workers.
- Must have completed, at a minimum, the OSHA 30-Hour Construction Safety Training, and either the 24-Hour training course for the Occasional Hazardous Waste Site Worker or the 40-Hour training course for the Hazardous Waste Operations Worker that meets OHSA 29 CFR 1910.
- Must have completed the 8-Hour Site supervisor/manager's course for supervisors and managers having responsibilities for hazardous waste Site operations and management.
- Directs and coordinates health and safety monitoring activities.
- Ensures that field teams utilize proper personal protective equipment (PPE).
- Conducts initial on-site specific training prior to Site Workers commencing work.
- Conducts and documents daily and periodic safety briefings.
- Ensures that field team members comply with this HASP.
- Immediately notifies the Project Manager of all accident/incidents.
- Determines upgrading or downgrading of PPE based on Site conditions and/or real time monitoring results.
- Ensures that monitoring instruments are calibrated daily or as the manufacturer's instructions determine.
- Provides daily summaries of field operations and progress to the Project Manager.
- Submits and maintains all documentation required in this HASP and any other pertinent health and safety documentation.

2.3 Health and Safety Officer (HSO)

- Must be designated by the Health and Safety Manager and at a minimum, have the OSHA 10-Hour Construction Safety Training.
- Must schedule and attend a Pre-Construction Safety Meeting with the Health and Safety Manager to discuss the Subcontractor Safety Requirements and must attend the Weekly Subcontractor Coordination Meeting.

- Responsible for ensuring subcontractors and their lower tier contractors comply with project safety requirements.
- Must make frequent and regular inspections of their work areas and activities and ensure hazards that are under their control are corrected immediately and all other hazards are reported to the Project Manager and Health and Safety Manager.
- Must report all work related injuries, regardless of severity, to the Project Manager and the Health and Safety Manager within 24 hours after they occur.

2.4 Emergency Coordinator

- The Emergency Coordinator or his on-site designee will, in coordination with The Town of Salina, implement the emergency response procedures outlined in Section 12 whenever conditions at the Site warrant such action.
- The Emergency Coordinator or his on-site designee will be responsible for assuring the evacuation, emergency treatment, emergency transport of C&S personnel as necessary, and notification of emergency response units (refer to phone listing in the beginning of this HASP) and the appropriate management staff.

2.5 Site Workers

- Report any unsafe or potentially hazardous conditions to the Health and Safety Manager.
- Maintain knowledge of the information, instructions, and emergency response actions contained in the HASP.
- Comply with rules, regulations, and procedures as set forth in this HASP, including any revisions that are instituted.
- Prevent unauthorized personnel from entering work Site.

SECTION 3 – SITE HAZARDS EVALUATION

3.1 Site Location and General History

The Site is comprised of a single tax parcel of 11.68 acres in total area. The property is located at 100 Buckley Road, in the southeastern portion of the Town of Salina, immediately north of its border with the City of Syracuse, in central Onondaga County, New York. Interstate Route 81 is located immediately east of the Site, and Onondaga Lake is located approximately 750 feet southwest of the Site. The site is bounded to the north by medical offices, to the south by the convergence of several roadways (Buckley Road, Park Street, Old Liverpool Road, and Onondaga Lake Parkway), followed by Onondaga Lake, east by Interstate Route 81 and its Exit 22/23A/23B interchange, and northwest by Buckley Road, followed by single-family residential parcels. Properties surrounding the Site are a mix of residential and commercial in nature.

The Site now contains ten former industrial buildings associated with Will & Baumer Candle Co., Inc. One building was demolished by the current owner in 2023. No further demolitions are planned at this time. The structures are primarily located in the western two-thirds of the parcel, while the eastern portion, which once housed rail lines and storage tanks, is now mostly open space. Currently, the southern-most building (referred to as Building 1 and depicted on Figure 2) has been completely renovated into 20 residential apartments and is currently occupied by tenants. Building 2, which adjoins the north side of Building 1, is nearing completion of renovations and is ready for occupancy pending change-of-use approval. This building will contain 33 apartments and an underground parking structure when complete. The northern-most building (referred to as Building 5 and depicted on Figure 2) has been completely renovated into an indoor sports complex. The former boiler house (Building 7) is expected to be converted into a restaurant and brewery, with construction began in late Spring 2026. The other buildings are planned to be renovated sequentially in future phases, likely after completion of site remediation and issuance of the Certificate of Completion. A Site Control Plan is in place to restrict access to areas under construction and which require remediation by property occupants and the general public. The Site layout is shown on Figure 2.

3.2 Site History and Suspect Recognized Environmental Conditions

Available historic information indicates that the Site was used for industrial purposes by the Will & Baumer Candle Co., Inc. (Will & Baumer), and/or its predecessors and successors, from at least 1911 (and possibly as early as 1904) until 2010. Will & Baumer manufactured beeswax candles at the Site. On-site historic operations included offices, manufacturing spaces, a laboratory, press and pan rooms, multiple sheds, a digester house, a still house, a store room, a machine shop and maintenance building, a bleach house, a bleach yard, an oil / boiler house, and packaging and decorating areas. Multiple storage tanks containing fuel oil, gasoline, grease and oil, and acid were used on the Site throughout its period of operation. The majority of the tanks were present on the southeastern portion of the Site. Railroad sidings and spurs were also present on the eastern and southern portions of the site. In addition, a refinery building was located adjacent to

the south in at least 1911.

Facility operations involved the generation of regulated hazardous wastes, with documented generation from at least 1982 through at least 2010. As the nature of operations remained generally consistent throughout Will & Baumer's presence at the site (dating to the early 1900s), it is suspected that similar wastes were also generated prior to 1982. Wastes generated include spent industrial solvents (such as those used in cleaning metal components), ignitable wastes, corrosive wastes, and heavy metal-containing wastes.

Past investigations indicate that the upper approximately five feet of soil across much of the eastern and southeastern portion of the site consists of historic fill material. The historic fill material contains assorted materials, including concrete, brick, coal debris/dust, ash, slag, metal shavings, railroad ties, and plastic bottles. The underlying native soils consist of a mixture of silts and clays. Groundwater is present at depths ranging from approximately 0.4 to 7.2 feet below grade.

3.3 Chemical Hazards

3.3.1 Nature of Chemical Hazards

Various organic and inorganic contaminants are present in soil, including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), various heavy metals, and pesticides. The majority of these contaminants exist within the historic fill material or where it has been deposited.

Various organic contaminants are present at low concentrations in groundwater, including VOCs, and, potentially SVOCs, but it was concluded that "these detections may not be representative of actual groundwater conditions but rather particulate matter within the sample".

The specific contaminants currently known to exist in each media are as follows:

Media	Contaminant Class	Identified Compounds
Surface Soil	PCBs	Aroclor 1254 Aroclor 1260 Aroclor 1268
	SVOCs	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-c,d)pyrene
	Metals	Arsenic Nickel

Media	Contaminant Class	Identified Compounds
		Lead Zinc
	Pesticides	4,4'-DDE 4,4'-DDT
Fill/Soil	SVOCs	Acenaphthene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Dibenzofuran Fluoranthene Fluorene Indeno(1,2,3-c,d)pyrene Naphthalene Phenanthrene Pyrene
Fill/Soil	Metals	Arsenic Barium Cadmium Copper Lead Nickel Mercury Selenium Zinc
Groundwater	VOCs	Acetone 2-Butanone Vinyl Chloride
	SVOCs*	Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(k)fluoranthene Chrysene Indeno(1,2,3-c,d)pyrene

*Presence of these compounds in groundwater may have been associated with high particulate content (i.e., turbidity) in groundwater samples at time of sampling.

3.3.2 Common Routes of Exposure

The contaminants at the Site may enter the human body in a variety of ways. Based on the nature of site contaminants, the chemical routes of exposure anticipated from the remedial activities at this site include:

Route	Mechanism	Control
Absorption	Dermal (skin) contact with impacted soil on-site resulting in absorption of chemicals of concern through the skin and into the blood stream.	Proper use of PPE will minimize risks of exposure at the site.
Ingestion	Chemicals / materials of concern can come in direct contact with the mouth from soil or other contaminated areas (PPE, skin, tools, etc.) and enter the bloodstream through the stomach lining.	Proper care in handling PPE and tools, refraining from eating and drinking at the Site, and frequent hand washing with soap and water will minimize risks of exposure.
Inhalation	Volatile vapors and/or contaminants attached to dust and particulates can be entrained by wind and become airborne across the site and be subsequently inhaled through the nose and / or mouth. This exposure route is the most likely way for worker exposure to occur.	Conduct monitoring of air quality for VOCs in worker breathing zones. Employ methods that minimize the creation of dust and utilize dust suppression techniques to minimize dust and particulates. Respirators with appropriate filtration and organic adsorption cartridges should be available to on-site workers in case volatile compounds become a nuisance or health hazard.

3.4 Physical Hazards

Based upon the anticipated field activities, the following potential physical hazardous conditions may exist:

Category	Mechanism	Control
Mechanical Equipment	The use of typical mechanical equipment such as drill rigs and sampling vehicles can create a potential for crushing and pinching hazards due to movement and positioning of the equipment, movement of lever arms and hydraulics, and entanglement of clothing and appendages in exposed drives and tracks. Mechanical equipment can also create a potential for impact of steel tools, masts, and cables should equipment rigging fail, or other structural failures occur during hydraulic equipment operation.	Heavy equipment work must be conducted only by trained, experienced personnel. If possible, personnel must remain outside the turning radius of large, moving equipment. At a minimum, personnel must maintain visual contact with the equipment operator. When not operational, equipment must be set and locked so that it cannot be activated, released, dropped, etc. The mechanical equipment stated above represents typical equipment that is ordinarily used during this scope of work but is not meant to be an all-inclusive list. Similar precautions should be used around other mechanical equipment deployed to the Site that is not listed above.
Excavations and Trenches	The use of excavation/trenching such as removal of overburden soils, installation of utilities, and site grading operations can cause potential for suffocation, crushing, or other injury from falling material. Advancement of excavation and trenches can also create possible damage/failure of any installed underground utility services and create hazards. Other hazards created can included tripping, slipping, or falling. Entering an excavation or trench could have the possibility of an explosive, flammable, toxic, or oxygen-deficient atmosphere within the excavation or trench.	Ensure compliance with OSHA's construction standard for excavations (29 CFR 1926 Subpart P). Designate a Competent Person responsible for selecting and implementing the appropriate protective system(s), assuring appropriate means of access and egress for excavations greater than four (4) feet in depth, and for ensuring that potential atmospheric and physical hazards associated with any excavation / trenching activities are completed in accordance with Subpart P and other applicable OSHA Standards.
Noise	Work around large equipment often creates excessive noise. Noise can cause workers to be startled, annoyed, and/or distracted; as well as causing pain, physical damage to the ear, and temporary and/or permanent hearing loss; and can interfere with communication.	If workers are subjected to noise exceeding an 8-hour time-weighted average sound level of 85 dBA, hearing protection will be required with an appropriate noise reduction rating to comply with 29 CFR 1910.95 and to reduce noise levels below levels of concern.
Slips / Trips / Falls	Personnel may encounter slip, trip, and fall hazards associated with excavations, manways, and construction debris and materials. Precautionary measures should be taken by identifying and removing slip, trip, and fall hazards prior to commencing work.	In the event slip, trip, and fall hazards cannot be removed or minimized, site workers will be shown the location of the physical hazard and be asked to avoid it during work activities.

Category	Mechanism	Control
Fire / Explosion	The potential for fire and/or explosion emergencies is always present on the Site.	Field vehicles will be equipped with a fire extinguisher. Employees, contractors and workers must be trained in the proper use of fire suppression equipment. However, large fires that cannot be controlled with a fire extinguisher shall be handled by professionals. The proper authorities shall be notified in these instances, as well as the HSO and Health and Safety Manager.
Cold Exposure	Persons working in the outdoors in temperatures at or below freezing may be subject to frostbite. Extreme cold for a short time may cause injury to exposed body surfaces or result in a profound generalized cooling which can cause death. Areas of the body such as fingers, toes, and ears, are the most susceptible to cold stress. Ambient air temperature and wind velocity are two factors which influence the development of a cold weather injury. Local injury resulting from exposure to cold temperatures is known as "frostbite." There are several degrees of damage in which frostbite of the extremities can be categorized, as follows: ○ Frost nip or incipient frostbite is characterized by sudden bleaching or whitening of the skin. ○ Superficial frostbite occurs when the skin has a waxy or white appearance and is firm to the touch, but tissue beneath is resilient. ○ Deep frostbite is characterized by tissues that are cold, pale, and solid; this is an extremely serious injury.	Wear several layers of dry clothes so that you can vary the amount of clothing to match the conditions. If there is wind, wear a windbreaker, since wind increases the effects of cold air and in turn lowers your body's core temperature even faster. Don't get overheated. Sweat can dampen clothing and in turn lead to over-cooling. Keep hands, feet, ears, and face warm. These are the areas of the body where frostbite tends to strike first. Heart disease and the use of sedatives or excessive alcohol will make you more susceptible to cold stress. If you feel chilly or sleepy, or have pain in your extremities, go to a warm shelter to recover.

Category	Mechanism	Control
Heat Exposure / Stress	Heat stress can result from a number of contributing factors, including environmental conditions, clothing, and workload as well as the physical condition of the individual. Since heat stress is one of the most common injuries / symptoms associated with outdoor work conducted with direct solar load, and, in particular, because wearing PPE can increase the risk of developing heat stress, workers must be capable of recognizing the signs and symptoms of heat-related illnesses. Signs and symptoms of heat-related illnesses which all on-site personnel should be aware, include the following: ○ Heat rash may result from continuous exposure to heat or humid air. ○ Heat cramps are caused by heavy sweating and may include muscle spasms and pain in the hands, feet, and abdomen. ○ Heat exhaustion is indicated by pale, cool, and moist skin; heavy sweating; dizziness; nausea; and fainting. ○ Heat stroke is indicated by red, hot, and unusually dry skin; lack of or reduced perspiration; nausea; dizziness and confusion; rapid pulse; and coma. Immediate action must be taken to cool the body before serious injury or death occurs.	The following will steps will be taken to limit heat exposure: adjust schedules, take breaks, limit heavy work in protective clothing or in a hot environment may require more time resting than working. Schedule heavy work in the coolest part of the day. Have shaded rest shelters with chairs or benches. Drink Fluids. Sweating cools the body, but it also robs the body of fluid. Drink enough fluids to replace what you lose. You may not feel thirsty until you've become dehydrated. Drink regularly throughout the day. Don't wait until you're thirsty. Monitor for signs of potential heat exposure and stress through use of the "buddy system', with frequent communication between site personnel. Take scheduled breaks and hydrate frequently throughout the day. Maintain an adequate supply of cold water and electrolyte containing drinks in support zone of site. In the event that personnel are observed to exhibit dizziness, disorientation, heat rash, slurred speech, dry mouth, heat cramps, or other symptoms of heat stress, discontinue work immediately and move affected person(s) to a location that is free from direct sunlight and provide fluids (preferably "Gatorade" or similar product that will replenish electrolytes). Monitor condition during to evaluate whether there is notable improvement in their condition.
Utilities	Overhead and underground utilities may exist within the Work Area, which may expose workers to electrocution hazards, explosive hazards, and volatile vapors.	Dig Safely New York shall be contacted a minimum of three business days prior to initiating the field activities, to arrange for the identification and markout of buried utilities at the site. The contact number for Dig Safely New York is 1-800-962-7962. In the event of inadvertent damage to buried utilities, all work shall cease, and the situation shall be evaluated by the HSO.

3.5 Environmental Hazards

Based upon the anticipated field activities, the following potential environmental hazardous conditions may exist:

Category	Hazard	Control
Biological	Ticks, bees/wasps, mosquitos, spiders, snakes, rabid animals	There are no known species of poisonous spiders or snakes common to the area. Minimize potential exposure to by wearing wear long pants and safety shoes. Change clothing and carefully examine for evidence of insects and ticks upon undressing, immediately following return from the site. Avoid contact with any animals, either wild or domestic, that may be encountered while conducting the field activities, and notify the local office of the New York State Department of Health (NYSDOH) in the event that animals are observed to elicit strange behavior. In the event of contact with an animal that is behaving in a strange manner, the NYSDOH should be contacted immediately.
Biological	Poison Ivy, Poison Oak	Familiarize yourself with the characteristics and appearance of poison ivy and poison oak. Be cognizant of vegetation while conducting work activities. Minimize potential exposure to by wearing wear long pants and safety shoes. Change clothing immediately following return from the site.
Weather	Wet surfaces, lighting, high winds (falling objects, contaminated dust), hail, excessive heat, extreme cold, snow and ice.	Remain cognizant of weather conditions, forecasts, and changing weather conditions. Exercise extra caution during wet and inclement site conditions to minimize risk of slips and falls. Avoid work during periods of high winds to reduce risk of injury from falling objects and airborne contaminant migration. Cease work and monitor conditions in the event that lightning is observed or suspected in the area, or in the event that other weather conditions pose a health or safety hazard.

SECTION 4 – TRAINING

4.1 Site-Specific Training

Training will be provided that specifically addresses the activities, procedures, monitoring, and equipment for the Site operations prior to going on site. Training will include familiarization with Site and facility layout, known and potential hazards, and emergency services at the Site, and details all provisions contained within this HASP. This training will also allow Site Workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity.

4.2 Task-Specific Training

For projects involving asbestos sampling, personnel will be trained to collect bulk asbestos samples using the requirements set forth in 40 CFR Part 763.92(a) (1) and (2) and 40 CFR Part. 763, Subpart. E, App. C. The training incorporates many sections of 40 CFR Part 763 but should focus on the sampling method listed in 40 CFR Part 763.86. The training includes inspection planning, bulk sampling, personal protection, and reporting. Personnel must demonstrate proficiency by identifying areas where asbestos may be found and properly collecting a bulk sample using proper methodology.

4.3 Safety Briefings

C&S project personnel will be given briefings by the HSO on a daily or as needed basis to further assist Site workers in conducting their activities safely. Pertinent information will be provided when new operations are to be conducted. Changes in work practices must be implemented due to new information made available, or if Site or environmental conditions change. Briefings will also be given to facilitate conformance with prescribed safety practices. When conformance with these practices is not occurring or if deficiencies are identified during safety audits, the project manager will be notified.

4.4 Daily Tailgate Safety Meeting

The HSO or the HSO designee will be responsible for conducting a daily tailgate safety meeting prior to start of any work activities. The contractor and workers will be responsible for attending daily tailgate safety meetings, as well as providing any additional insight into any possible hazards which might be anticipated or encountered throughout the day on the Site. The meeting will discuss any measures which will be implemented throughout the day to mitigate any hazards. The meetings are designed to create awareness of any hazards and their associated mitigation measures at the Site. If conditions at the Site change and new hazards are determined to be present, work will be stopped and an additional safety meeting will be conducted. The daily tailgate meetings discussions will be logged, as well as all who attended.

SECTION 5 – COMMUNICATIONS

5.1 Communications

A phone will be located on Site to be utilized by personnel conducting investigation. Cell phones will be the primary means of communicating with emergency support services/facilities.

SECTION 6 – PERSONAL PROTECTIVE EQUIPMENT

6.1 General

The level of protection to be worn by field personnel will be defined and controlled by the HSO. Depending upon the type and levels of material present or anticipated at the site, varying degrees of protective equipment will be needed. If the possible hazards are unknown, a reasonable level of protection will be taken until sampling and monitoring results can ascertain potential risks. The levels of protection listed below are based on USEPA Guidelines. A list of the appropriate clothing for each level is also provided.

Level A protection must be worn when a reasonable determination has been made that the highest available level of respiratory, skin, eye, and mucous membrane protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise from wearing Level A protection should also enter into the decision-making process. Level A protection includes:

- Open circuit, pressure-demand self-contained breathing apparatus (SCBA)
- Totally encapsulated chemical resistant suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level B protection must be used when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (e.g., the back of the neck) is unlikely. Level B protection includes:

- Open circuit, pressure-demand SCBA or pressure airline with escape air bottle
- Chemical protective clothing: Overalls and long sleeved jacket; disposal chemical resistant coveralls; coveralls; one or two piece chemical splash suit with hood
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level C must be used when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by air purifying respirators; and hazardous materials exposure to the few unprotected areas of the body (e.g. the back of the neck) is unlikely. Level C protection includes:

- Full or half face air-purifying respirator
- Chemical protective clothing: Overalls and long-sleeve jacket; disposable chemical resistant coveralls; coveralls; one or two piece chemical splash suit
- Gloves, inner (surgical type)

- Gloves, outer, chemical protective
- Boots, chemical protective

Level D is the basic work uniform. It cannot be worn on any site where respiratory or skin hazards exist. Level D protection includes:

- Safety boots/shoes
- Safety glasses
- Hard hat with optional face shield

Note that the use of SCBA and airline equipment is contingent upon the user receiving special training in the proper use and maintenance of such equipment.

6.2 Personal Protective Equipment – Site Specific

Level D with some modification will be required when working in the work zone on this Site. In addition to the basic work uniform specified by Level D protection, nitrile gloves will be required when contact with soil or groundwater is likely. Hearing protection will be worn when power equipment is used to perform subsurface investigation work. An upgrade to a higher level (Level C) of protection may occur if determined necessary by the HSO.

SECTION 7 – MONITORING PROCEDURES

7.1 Monitoring During Site Operations

All Site environmental monitoring should be accompanied by periodic meteorological monitoring of appropriate climatic conditions.

7.1.1 Surface Soil Operation

Monitoring will be performed by the HSO or field personnel during the conduct of work. A photoionization detector (PID) equipped with a 10.6 eV lamp will be utilized to monitor for the presence of volatile organic vapors within the breathing zone, the surface soil holes, and subsurface samples upon their retrieval. The PID will be field checked for calibration accuracy three times per day (morning, lunch, and end of day.

7.1.2 Drilling / Test Pit Operations (Monitoring Well Installation and Subsurface Borings)

Monitoring will be performed by the HSO or drilling observer during the conduct of work. A PID equipped with a 10.6 eV lamp will be utilized to monitor for the presence of volatile organic vapors within the breathing zone, the borehole, and subsurface samples upon their retrieval. Drill cuttings and excavation spoils will also be monitored by use of the PID. The PID will be field checked for calibration accuracy three times per day (morning, lunch, and end of day. If subsurface conditions warrant, a combustible gas indicator (CGI) with oxygen alarm may also be used to monitor the borehole for the presence of combustible gases. Similar monitoring of fluids produced during well development will also be conducted.

7.1.3 Soil Excavation and Trenching Operation

Monitoring will be performed by the HSO or remedial observer during the conduct of work. A PID equipped with a 10.6 eV lamp will be utilized to monitor for the presence of volatile organic vapors within the breathing zone, the excavation or trench, and any subsurface samples upon their retrieval. Excavation and trenching spoils will also be monitored by use of the PID. The PID will be field checked for calibration accuracy three times per day (morning, lunch, and end of day. If subsurface conditions warrant, a CGI with oxygen alarm may also be used to monitor the borehole for the presence of combustible gases.

7.1.4 Community Air Monitoring

A Community Air Monitoring Program will be implemented during all intrusive activities to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The CAMP is not intended for use in establishing action levels for worker

respiratory protection. The community air monitoring program will be implemented in accordance with the Community Air Monitoring Plan (CAMP) located in Appendix K of the Remedial Action Work Plan.

7.1.5 Special Requirements

The Community Air Monitoring Program will be modified when intrusive work is to be conducted within 20 feet of an occupied structure. These conditions are detailed in the CAMP.

7.2 Action Levels

Action levels established herein shall apply to on-site remedial workers. Action levels associated with protection of the remaining on-site personnel and the surrounding community are established in the CAMP.

If readings on the PID exceed 10 ppm for more than fifteen minutes consecutively, then personal protective equipment should be upgraded to Level C. The air purifying respirator used with Level C protective equipment must be equipped with organic vapor cartridges. If readings on the explosive gas meter are within a range of 10%-25% of the lower exposure limit (LEL) then continuous monitoring will be implemented. Readings above 25% of the LEL indicate the potential for an explosive condition. Sources of ignition should be removed and the Site should be evacuated.

7.3 Personal Monitoring Procedures

Personal monitoring shall be performed as a contingency measure in the event that VOC concentrations are consistently above the 10 ppm action level as detected by the PID. If the concentration of VOCs is above this action level, then amendments to the HASP must be made before work can continue at the Site.

7.4 Reporting

Daily CAMP reports will be provided to the NYSDEC and the NYSDOH Project Managers for review. Daily CAMP reports will provide a description of the work completed that day, a description of any exceedances of the CAMP action levels and any mitigation measures employed, a description of the general weather conditions, and each report will include a site figure depicting work zones, wind direction, location of CAMP monitoring stations, and the VOC and particulate data. Any exceedances of CAMP Action Levels and the corrective measures taken will be communicated to the NYSDEC and the NYSDOH within one business day.

SECTION 8 – SAFETY CONSIDERATIONS FOR SITE OPERATIONS

8.1 General

Standard safe work practices that will be followed include:

- Do not climb over/under drums, or other obstacles.
- Do not enter the work zone alone.
- Practice contamination avoidance, on and off-site.
- Plan activities ahead of time, use caution when conducting concurrently running activities.
- No eating, drinking, chewing or smoking is permitted in work zones.
- Due to the unknown nature of waste placement at the Site, extreme caution should be practiced during excavation activities.
- Apply immediate first aid to any and all cuts, scratches, abrasions, etc.
- Be alert to your own physical condition. Watch your buddy for signs of fatigue, exposure, etc.
- A work/rest regimen will be initiated when ambient temperatures and protective clothing create a potential heat or cold stress situation.
- No work will be conducted without adequate natural light or without appropriate supervision.
- Task safety briefings will be held prior to onset of task work.
- Ignition of flammable liquids within or through improvised heating devices (barrels, etc.) or space heaters is forbidden.
- Entry into areas of spaces where toxic or explosive concentrations of gases or dust may exist without proper equipment is prohibited.
- Any injury or unusual health effect must be reported to the Site health and safety officer.
- Prevent splashing or spilling of potentially contaminated materials.
- Use of contact lenses is prohibited while on site.
- Beards and other facial hair that would impair the effectiveness of respiratory protection are prohibited if respiratory protection is necessary.
- Field crew members should be familiar with the physical characteristics of investigations, including:
    - Wind direction in relation to potential sources
    - Accessibility to co-workers, equipment, and vehicles
    - Communication
    - Hot zones (areas of known or suspected contamination)
    - Site access
    - Nearest water sources
- The number of personnel and equipment in potentially contaminated areas should be minimized consistent with site operations.

8.2 Field Operations

The HSO or designee will be present on-site during all intrusive work, e.g., drilling operations, excavations, trenching, and will provide monitoring to oversee that appropriate levels of protection and safety procedures are utilized by C&S Engineers, Inc., personnel. The use of salamanders or other equipment with an open flame is prohibited and the use of protective clothing, especially hard hats and boots, will be required during drilling or other heavy equipment operations.

8.3 General Asbestos Safety

Asbestos exposure is primarily an inhalation hazard. OSHA compliant respiratory protection should be worn if there is risk of asbestos becoming airborne. Personal Protective Equipment including protective clothing (suits/gloves, etc.) may be necessary to avoid contaminating the worker and/or the site.

Procedural Precautions - The sampler should be aware that disruption of asbestos-containing materials can create the potential for cross contamination when conducting bulk asbestos sampling.

The Sampler should take the following precautions to avoid cross contamination as well as disruption of material while sampling:

- The sampling tool must be cleaned with amended water after every sample is collected, or a different clean tool must be used.
- The sampler must avoid touching the material being sampled (utilize gloves).
- The area being sampled must be sufficiently wet before collecting the sample.
- The space left after sampling must be sealed with repair/patch material to reduce the chance of airborne exposure.

The object or material sampled should be minimally disturbed during the sampling process.

SECTION 9 – DECONTAMINATION PROCEDURES

9.1 General Decontamination

Decontamination involves physically removing contaminants and/or converting them chemically into innocuous substances. Only general guidance can be given on methods and techniques for decontamination. Decontamination procedures are designed to:

- Remove contaminant(s).
- Avoid spreading the contamination from the work zone.
- Avoid exposing unprotected personnel outside of the work zone to contaminants.

9.2 General Avoidance

Contamination avoidance is the first and best method for preventing spread of contamination from a hazardous site. Each person involved in site operations must practice the basic methods of contamination avoidance listed below. Additional precautions may be required in the HASP.

- Know the limitations of all protective equipment being used.
- Do not enter a contaminated area unless it is necessary to carry out a specific objective.
- When in a contaminated area, avoid touching anything unnecessarily.
- Walk around pools of liquids, discolored areas, or any area that shows evidence of possible contamination.
- Walk upwind of contamination, if possible.
- Do not sit or lean against anything in a contaminated area. If you must kneel (e.g., to take samples), use a plastic ground sheet.
- If at all possible, do not set sampling equipment directly on contaminated areas. Place equipment on a protective cover such as a ground cloth.
- Use the proper tools necessary to safely conduct the work.

9.3 Reducing Contamination

Specific methods that may reduce the chance of contamination are:

- Use of remote sampling techniques.
- Opening containers by non-manual means.
- Bagging monitoring instruments.
- Use of drum grapplers.
- Watering down dusty areas.

9.4 Equipment Decontamination

Equipment which will need to be decontaminated includes tools, monitoring equipment, and personal protective equipment. Items to be decontaminated will be brushed off, rinsed, and dropped into a plastic container supplied for that purpose. They will then be washed with a detergent solution and rinsed with clean water. Monitoring instruments may be wrapped in plastic bags prior to entering the field in order to reduce the potential for contamination. Instrumentation that is contaminated during field operations will be carefully wiped down. Heavy equipment, if utilized for operations where it may be contaminated, will have prescribed decontamination procedures to prevent contaminant materials from potentially leaving the Site. On-site contractors, such as drillers or backhoe operators, will be responsible for decontaminating all construction equipment prior to demobilization.

SECTION 10 – DISPOSAL PROCEDURES

All discarded materials, waste materials, or other objects shall be handled in such a way as to reduce or eliminate the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated materials, e.g., clothing, gloves, etc., will be bagged or drummed as necessary and segregated for proper disposal. All contaminated waste materials shall be disposed of as required by the provisions included in the contract and consistent with regulatory provisions. All non-contaminated materials shall be collected and bagged for appropriate disposal.

Investigation Derived Waste (IDW) will be managed and characterized. Characterization of IDW may require toxicity characteristic leaching procedure (TCLP) sampling and analysis consistent with the work plan for the Site and DER-10 Technical Guidance for Site Investigation and Remediation dated May 2010.

SECTION 11 - EMERGENCY RESPONSE PROCEDURES

As a result of the hazards at the Site, and the conditions under which operations are conducted, there is the possibility of emergency situations. This section establishes procedures for the implementation of an emergency plan.

11.1 Emergency Coordinator

Emergency Coordinator:..... Hayden Haas.....Work Phone: (315) 703-4158

The Emergency Coordinator or his on-site designee will, in coordination with the Authority / Agency having Jurisdiction, implement the emergency response procedures whenever conditions at the Site warrant such action. The Emergency Coordinator or his on-site designee will be responsible for assuring the evacuation, emergency treatment, emergency transport of C&S personnel as necessary, and notification of emergency response units (**refer to phone listing** in the beginning of this HASP) and the appropriate management staff.

11.2 Evacuation

In the event of an emergency situation, such as fire, explosion, significant release of toxic gases, etc., all personnel will evacuate and assemble in a designated assembly area. The Emergency Coordinator or his on-site designee will have authority to contact outside services as required. Under no circumstances will incoming personnel or visitors be allowed to proceed into the area once the emergency signal has been given. The Emergency Coordinator or his on-site designee must see that access for emergency equipment is provided and that all ignition sources have been shut down once the emergency situation is established. Once the safety of all personnel is established, the Fire Department and other emergency response groups will be notified by telephone of the emergency.

11.3 Potential or Actual Fire or Explosion

Immediately evacuate the Site and notify local fire and police departments, and other appropriate emergency response groups, if LEL values are above 25% in the work zone or if an actual fire or explosion has taken place.

11.4 Environmental Incident (spread or release of contamination)

Control or stop the spread of contamination if possible. Notify the Emergency Coordinator and the Project Manager. Other appropriate response groups will be notified as appropriate.

11.5 Personnel Injury

Emergency first aid shall be applied on-site as necessary. Then, decontaminate (en route if necessary) and transport the individual to nearest medical facility if needed. The ambulance/rescue squad shall be contacted for transport as necessary in an emergency. A map of directions to the nearest hospital is shown in Appendix A.

11.6 Personnel Exposure

- *Skin Contact*: Use copious amounts of soap and water. Wash/rinse affected area thoroughly, and then provide appropriate medical attention. Eyes should be thoroughly rinsed with water for at least 15 minutes.
- *Inhalation*: Move to fresh air and/or, if necessary, decontaminate and transport to emergency medical facility.
- *Ingestion*: Decontaminate and transport to emergency medical facility.
- *Puncture Wound/Laceration*: Decontaminate, if possible, and transport to emergency medical facility.

11.7 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work can continue without sacrificing the health and safety of field workers.

11.8 Incident Investigation and Reporting

In the event of an incident, procedures discussed in the Medical Emergency/Incident Response Protocol, presented in Appendix B of this HASP, shall be followed.

SECTION 12 - AUTHORIZATIONS

Personnel authorized to enter the Site while operations are being conducted must be approved by the HSO. Authorization will involve completion of appropriate training courses, medical examination requirements, and review and sign-off of this HASP. No C&S personnel should enter the work zone alone. Each site visitor should check in with the HSO or Project Manager prior to entering the work zones.

FIGURE 1

SITE LOCATION MAP

FIGURE 2

SITE LAYOUT

Appendix A

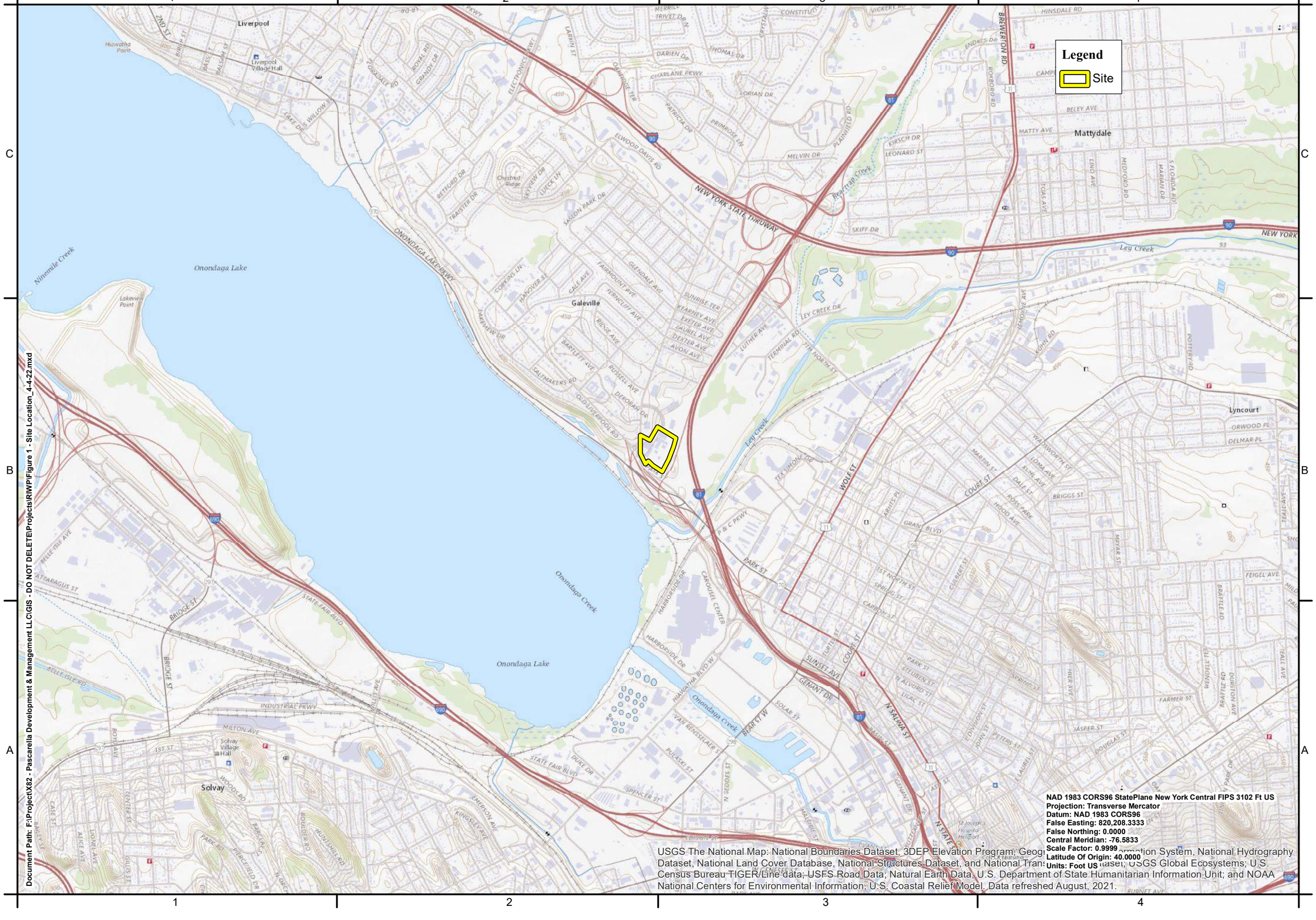
MAP AND DIRECTIONS TO HOSPITAL

Appendix B

GUIDANCE ON INCIDENT INVESTIGATION AND REPORTING

FIGURE 1

SITE LOCATION MAP



Document Path: F:\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\RIWP\Figure 1 - Site Location_4-4-22.mxd

NAD 1983 CORS96 StatePlane New York Central FIPS 3102 Ft US
Projection: Transverse Mercator
Datum: NAD 1983 CORS96
False Easting: 820,208.3333
False Northing: 0.0000
Central Meridian: -76.5833
Scale Factor: 0.9999
Latitude Of Origin: 40.0000
Units: Foot US

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geog[illegible]rmation System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Trans[illegible]taset, USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed August, 2021.

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 2,000 Feet

1 inch = 2,000 feet

Remedial Investigation Work Plan for Former Will & Baumer Candle Co., Inc. 100 Buckley Road, Liverpool, New York

PROJECT NO:	X82.001.002
DATE:	July 2022
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	JTB
CHECKED BY:	HNB

Modified: 7/27/2022 @ 8:18:18 AM

SITE LOCATION MAP

Figure 1

FIGURE 2

SITE LAYOUT

Document Path: F:\Project\X82 - Pascarella Development & Management LLC\GIS - DO NOT DELETE\Projects\RIWP\Figure 2 - Site Layout_4-4-22.mxd

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 30 60 120 Feet

1 inch = 120 feet

Remedial Investigation Work Plan
for
Former Will & Baumer Candle Co., Inc.
100 Buckley Road, Liverpool, New York

PROJECT NO:	X55.001.002
DATE:	July 2022
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	JTB
CHECKED BY:	HNB

Modified: 7/27/2022 @ 8:19:00 AM

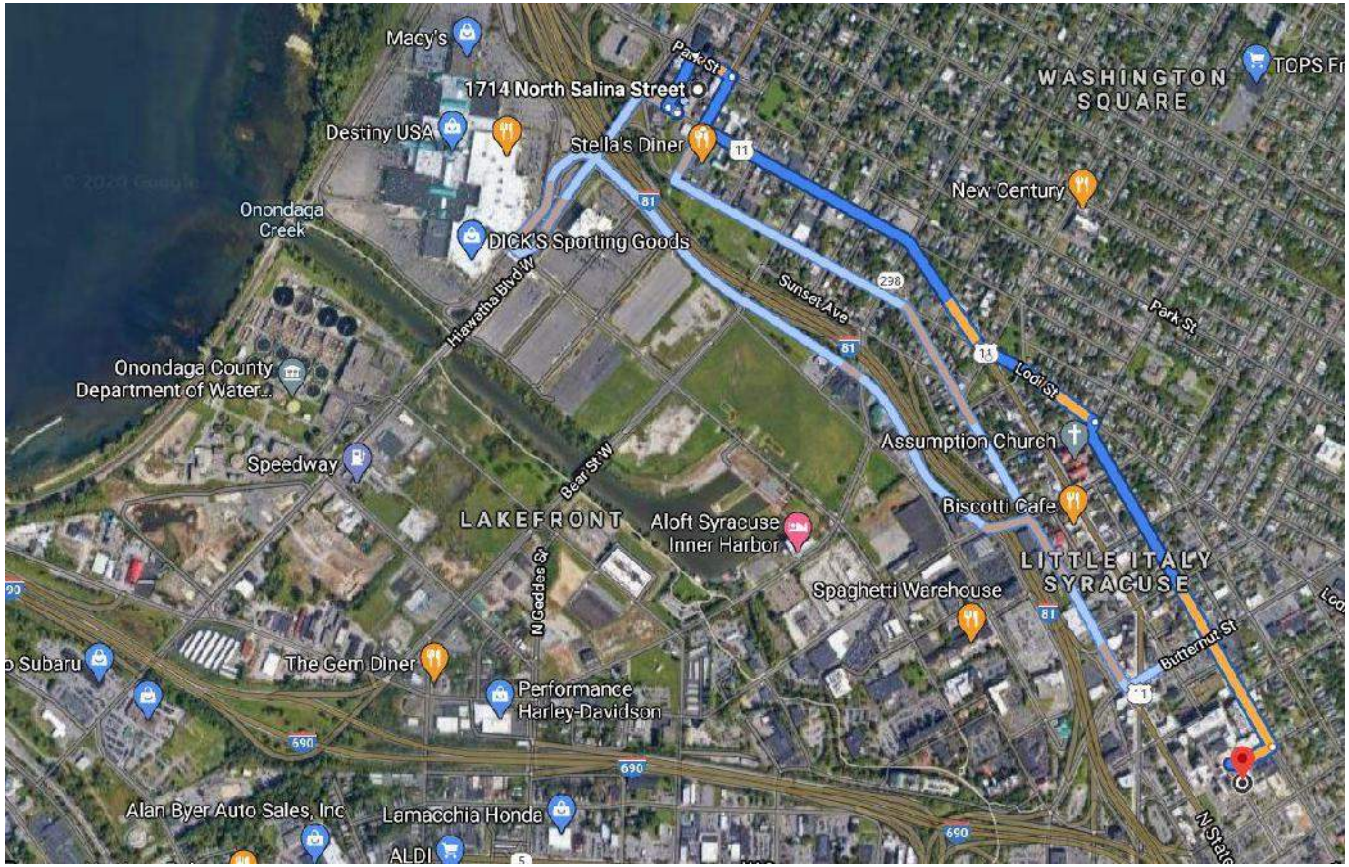
SITE LAYOUT MAP

Figure 2

Appendix A

MAP AND DIRECTIONS TO HOSPITAL

Attachment A – Map and Directions to St. Joseph's Hospital



Route:

Take North Salina Street southeast for 0.6 miles

Turn left onto Lodi Street and continue for 0.2 miles

Turn right onto North Townsend Street and continue for 0.6 miles

Turn right onto Union Avenue and arrive at St. Joseph's Hospital

Appendix B

GUIDANCE ON INCIDENT INVESTIGATION AND REPORTING

Medical Emergency / Incident Response Protocol

Prepared by:

C&S Engineers, Inc.
499 Col Eileen Collins Blvd.
Syracuse, New York 13212

SECTION 1 – PURPOSE

From time to time employees of C&S Engineers, Inc. will sustain an injury while working on the job. While every effort is being made to prevent this, in the event of an injury or illness on the job, the following procedures will be implemented. This format may also be utilized in the event of a property damage incident.

SECTION 2 – SCOPE

This guideline applies to all C&S Engineers, Inc. job sites and employees.

SECTION 3 – GUIDELINES

3.1 First Response Procedures

Upon notification or awareness of an incident/accident with injuries or illness the Emergency Coordinator or his On-Site Designee will:

1. Ensure that the injured employee is receiving immediate first aid and medical care.
2. Notify Emergency Services (911) if injuries are severe.
3. Stabilize the work area; ensure that no one else can be injured.
4. Notify the Project Manager at the earliest possible convenience**.**
5. Notify the Owner/Client at the earliest possible convenience.

To assist the Health and Safety Manager in the root cause analysis, the Emergency Coordinator or his On-Site Designee will also make an attempt to:

1. Obtain the names and phone numbers of witnesses.
2. Preserve the accident scene if possible for analysis.

3.2 Injury Management

1. If the patient is stable with non-life threatening injuries, the foreman will ensure the employee is transported to the emergency medical facility listed in Section 1 of the HASP. Directions to the nearest emergency medical facility are located in **Attachment A** of the HASP.

At no time will an injured employee drive themselves to medical care.

2. If the patient has serious or life threatening injuries, the emergency coordinator or his on- site designee will notify the emergency services for the area for treatment and transport to a hospital or emergency room. Serious injuries can be considered but not limited to head injuries, loss of consciousness, severe laceration or amputation, fractured bones, burns and eye injuries.

3. Following the treatment and care of the injured employee, the emergency coordinator or his on-site designee and the project manager will initiate the completion of the first injury report. The Health & Safety Manager will assist.

3.3 Project Manager

1. Upon notification of a personal injury or illness on the job site, will notify C&S Engineers, Inc, President and Corporate Legal and C&S Companies Health and Safety Manager.
2. Will report to the worksite to initiate the first injury report.
3. Will report to the treatment facility to check on the well being of the injured employee.
4. The project manager will ensure that the treatment facility is aware that this is a workers compensation case.
5. Will assist the Health and Safety Manager in the analysis of the incident.

3.4 Health & Safety Manager

1. Upon notification of the personal injury will determined if it is necessary to report to the treatment facility or the accident site, depending on the nature of the injuries and the circumstances of the accident.
2. Will report to the worksite to begin a root cause analysis investigation of the accident.
3. The investigation may include interview of witnesses, field crew , and project manager, the photographing of the scene, reconstruction of the accident scene, using test instruments and taking measurements. The Health and Safety Manager may draw diagrams from the information learned.
4. The Health and Safety Manager will work with the owner/client as necessary to investigate the accident.
5. The Health & Safety manager will ensure that the site is safe to resume work.
6. The Health & Safety Manager shall initiate the New York State Compensation form requirements (C-2) and forward a copy of the C-2 to the C & S Engineers, Inc. controller for transmittal to the Compensation Carrier within 8 hrs of notification of the incident or by the end of the next business day.
7. The Health and Safety manager, upon completion of the investigation, will provide the
8. Project Manager with a written investigative report (copy to the President)
9. The accident will be reviewed at the next Project Managers meeting with the intent to prevent further or similar events on other projects.
10. The Health & Safety Manager will assess the incident to determine OSHA record ability and make record if necessary on the OSHA 300 form, within five working days.

SECTION 4 - INCIDENT RESPONSE

4.1 Purpose

To prevent the occurrence of accidents on C&S Engineers, Inc., work sites and to establish a procedure for investigation and reporting of incidents occurring in, or related to C&S work activities.

4.2 Scope

Applies to all incidents related to C&S Engineers, Inc. work activities.

4.3 Definitions

Accident - An undesired event resulting in personal injury and/or property damage, and/or equipment failure.

Fatality - An injury or illness resulting in death of the individual.

Incident - Any occurrence which results in, or could potentially result in, the need for medical care or property damage. Such incidents shall include lost time accidents or illness, medical treatment cases, unplanned exposure to toxic materials or any other significant occurrence resulting in property damage or in "near misses."

Incidence Rate - the number of injuries, illnesses, or lost workdays related to a common exposure base of 100 full-time workers. The rate is calculated as:

N/EH x 200,000

N = number of injuries and illnesses or lost workday cases; EH = total hours worked by all associates during calendar year. 200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

Injury - An injury such as a cut, fracture, sprain, amputation, etc. which results from a work accident or from a single instantaneous event in the work environment.

Lost Workday Case - A lost workday case occurs when an injured or ill employee experiences days away from work beginning with the next scheduled work day. Lost workday cases do not occur unless the employee is effected beyond the day of injury or onset of illness.

Recordable Illness - An illness that results from the course of employment and must be entered on the OSHA 300 Log and Summary of Occupational Injuries and Illnesses. These illnesses require medical treatment and evaluation of work related injury. For example, dermatitis, bronchitis, irritation of eyes, nose, and throat can result from work and non-work related incidents.

Recordable Injury - An injury that results from the course of employment and must be entered on the OSHA 300 Log and Summary of Occupational Injuries and Illnesses. These injuries require medical treatment; may involve loss of consciousness; may result in restriction of work or motion or transfer to another job; or result in a fatality.

Near Miss - An incident which, if occurring at a different time or in a different personnel or equipment configuration, would have resulted in an incident.

4.4 Responsibilities

Employees - It shall be the responsibility of all C&S Engineers, Inc. employees to report all incidents as soon as possible to the HSC, regardless of the severity.

Human Resources - has overall responsibility for maintaining accident/ incident reporting and investigations according to current regulations and recording injuries/ illness on the OSHA 300 log, and posting the OSHA 300 log.

Emergency Coordinator - It is the responsibility of the Emergency Coordinator to investigate and prepare an appropriate report of all accidents, illnesses, and incidents occurring on or related to C&S Engineers, Inc. work. The Emergency Coordinator shall complete Attachment A within 24 hours of the incident occurrence.

Health and Safety Manager (HSM) - It is the responsibility of the HSM to investigate and prepare an appropriate report of all lost time injuries and illnesses and significant incidents occurring on or related to C&S Companies. The HSM shall maintain the OSHA 300 form.

Project Managers (PM) - It shall be the PM's responsibility to promptly correct any deficiencies in personnel, training, actions, or any site or equipment deficiencies that were determined to cause or contribute to the incident investigated.

SECTION 5 – GUIDELINES

5.1 Incident Investigation

The Project Manager will immediately investigate the circumstances surrounding the incident and will make recommendations to prevent recurrence. The HSM shall be immediately notified by telephone if a serious accident/ incident occurs. The incident shall be evaluated to determine whether it is OSHA recordable. If the incident is determined to be OSHA 300 recordable, it shall be entered on the OSHA 300 form.

The Project Manager with assistance from the HSM must submit to the office an incident report form pertaining to any incident resulting in injury or property damage.

5.2 Incident Report

The completed incident report must be completed by the Project Manager within 12 hours of the incident and distributed to the HSM, and Human Resources. This form shall be maintained by Human Resources for at least five years for all OSHA recordable cases. This form serves as an equivalent to the OSHA 101 form.

5.3 Incident Follow-up Report

The Incident Follow-Up Report (Attachment B) shall be distributed with the Incident Report within one week of the incident. Delay in filing this report shall be explained in a brief memorandum.

5.4 Reporting of Fatalities or Multiple Hospitalization Accidents

Fatalities or accidents resulting in the hospitalization of three or more employees must be reported to OSHA verbally or in writing within 8 hours. The report must contain 1) circumstances surrounding the accident(s), 2) the number of fatalities, and 3) the extent of any injuries.

5.5 OSHA 300A Summary Form

Recordable cases must be entered on the log within six workdays of receipt of the information that a recordable case has occurred. The OSHA log must be kept updated to within 45 calendar days.

OSHA 300 forms must be updated during the 5 year retention period, if there is a change in the extent or outcome of an injury or illness which affects an entry on a log. If a change is necessary, the original entry should be lined out and a corrected entry made on that log. New entries should be made for previously unrecorded cases that are discovered or for cases that initially weren't recorded but were found to be recordable after the end of the year. Log totals should also be modified to reflect these changes.

5.6 Posting

The log must be summarized at the end of the calendar year and the summary must be posted from February 1 through May 31.

5.7 OSHA 300A

Facilities selected by the Bureau of Labor Statistics (BLS) to participate in surveys of occupational injuries and illnesses will receive the OSHA 300A. The data from the annual summary on the OSHA 300 log should be transferred to the OSHA 300A, other requested information provided and the form returned as instructed by the BLS.

5.8 Access to OSHA Records

All OSHA records (accident reporting forms and OSHA 300 logs) should be available for inspection and copying by authorized Federal and State government officials.

Employees, former employees, and their representatives must be given access for inspection and copying to only the log, OSHA No. 300, for the establishment in which the employee currently works or formerly worked.

SECTION 6 – REFERENCES

29 CFR Part 1904

7.0 ATTACHMENTS

Attachment A - Incident Investigation Form
Attachment B - Incident Follow-Up Report
Attachment C - Establishing Recordability

ATTACHMENT A

INCIDENT INVESTIGATION FORM

Accident investigation should include:

Location: _____

Time of Day: _____

Accident Type: _____

Victim: _____

Nature of Injury: _____

Released Injury: _____

Hazardous Material: _____

Unsafe Acts: _____

Unsafe Conditions: _____

Policies, Decisions: _____

_____

Personal Factors: _____

_____

Environmental Factors: _____

_____

_____

ATTACHMENT B

INCIDENT FOLLOW-UP REPORT

Date _____

Foreman: _____

Date of Incident: _____

Site: _____

Brief description of incident: _____

_____

_____

_____

_____

Outcome of incident: _____

_____

_____

_____

Physician's recommendations: _____

_____

_____

_____

Date the injured returned to work: _____

Project Manager Signature: _____

Date: _____

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

ATTACHMENT C

ATTACHMENT ESTABLISHING RECORDABILITY

1. Deciding whether to record a case and how to classify the case.

   Determine whether a fatality, injury or illness is recordable.

   A fatality is recordable if:

   - Results from employment

   An injury is recordable if:

   - Results from employment and
   - It requires medical treatment beyond first aid or
   - Results in restricted work activity or job transfer, or
   - Results in lost work day or
   - Results in loss of consciousness

   An illness is recordable if:

   - It results from employment

2. Definition of "Resulting from Employment"

   Resulting from employment is when the injury or illness results from an event or exposure in the work environment. The work environment is primarily composed of: 1) The employer's premises, and 2) other locations where associates are engaged in work- related activities or are present as a condition of their employment.

   The employer's premises include company rest rooms, hallways, cafeterias, sidewalks and parking lots. Injuries occurring in these places are generally considered work related.

   The employer's premises EXCLUDES employer controlled ball fields, tennis courts, golf courses, parks, swimming pools, gyms, and other similar recreational facilities, used by associates on a voluntary basis for their own benefit, primarily during off work hours.

   Ordinary and customary commute, is not generally considered work related.

   Employees injured or taken ill while engaged in consuming food, as part of a normal break or activity is not considered work related. Employees injured or taken ill as the result of smoking, consuming illegal drugs, alcohol or applying make up are generally not considered work related. Employee injured by un authorized horseplay is generally not considered work related, however, an employee injured as a result of a fight or other

workplace violence act, may be considered work related. Associates who travel on company business are considered to be engaged in work related activities all the time they spend in the interest of the company. This includes travel to and from customer contacts, and entertaining or being entertained for purpose of promoting or discussing business. Incidents occurring during normal living activities (eating, sleeping, recreation) or if the associate deviates from a reasonably direct route of travel are not considered OSHA recordable.

3. Distinction between Medical Treatment and First Aid.

First aid:

Any one-time treatment, and any follow up visit for the purpose of observation, of minor scratches, cuts, burns, splinters, etc., which do not ordinarily require medical care. Such one time treatment, and follow up visit for the purpose of observation, is considered first aid even though provided by a physician or registered professional personnel.

Medical Treatment (recordable):

a) Must be treated only by a physician or licensed medical personnel.
b) Impairs bodily function (i.e. normal use of senses, limbs, etc.).
c) Results in damage to physical structure of a non-superficial nature (fractures).
d) Involves complications requiring follow up medical treatment.

Appendix I

Quality Assurance Project Plan

Quality Assurance Project Plan
for
Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP Site

100 Buckley Road
Town of Salina, Onondaga County, New York

BCP Site No. C734154

Prepared by:

C&S Engineers, Inc.
499 Col Eileen Collins Blvd.
Syracuse, New York 13212

April 2022
Revised July 27, 2022
Revised May 30, 2025
Revised March 3, 2026

TABLE OF CONTENTS

Page

SECTION 1 – INTRODUCTION 1
SECTION 2 – QUALITY CONTROL OBJECTIVES 2
2.1 Data Quality Objectives 2
2.2 Sampling Procedures 3
2.3 Laboratory Certification and Coordination 4
2.4 Analytical Methodologies 4
2.5 Analytical Quality Control 5
2.6 Data Usability Summary Report 5
SECTION 3 – FIELD SAMPLING PLAN 7
3.1 Sampling Procedures 7
3.1.1 Preparation for Sampling 7
3.1.2 General Field Sampling Equipment 8
3.2 Sample Collection Techniques 9
3.2.1 Surface Soil Sampling 9
3.2.2 Subsurface Soil Sampling – Direct Push Drilling 9
3.2.3 Subsurface Soil Sampling – Hollow Stem Auger 10
3.2.4 Subsurface Soil Sample Screening and Collection 11
3.2.5 Groundwater Monitoring Well Construction / Completion 11
3.2.6 Groundwater Sample Collection 13
3.2.7 Soil and Sub-Slab Vapor Sample Collection 15
3.3 General Decontamination 16
3.3.1 Special Considerations When Sampling for PFAS 18
SECTION 4 – SAMPLE MANAGEMENT PLAN 19
4.1 Sample Management 19
4.2 Sample Handling 19

ATTACHMENTS

Attachment A – Supporting Documentation for PFAS Analysis

SECTION 1 – INTRODUCTION

C&S' Quality Control (QC) Program is a vital part of its approach to remedial investigations and remedial action. Through our thorough QC program, our firm is able to provide accurate and dependable data. QC also provides safe working conditions for field staff.

The QC program contains procedures, which provide for collected data to be properly evaluated, and which document that quality control procedures have been followed in the collection of samples. The QC program represents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling practices.

Procedures used in the firm's QC program are consistent with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QC program has been organized into the following areas:

- QC Objectives
- Field Sampling Techniques
    - Procedures
    - Preparation
    - Measurement
    - Decontamination
- Sample Management

SECTION 2 – QUALITY CONTROL OBJECTIVES

2.1 Data Quality Objectives

Data Quality Objectives (DQOs) are statements which describe the desired quality of data necessary to meet the objectives of the sampling program. The DQOs for the site sampling program were formulated during the scoping effort and developed as part of this Plan. The general steps followed in preparation of the DQOs were as follows:

- Identification of the media to be sampled – Identifies the media being investigated (e.g., ground water, surface soil).

- Identification of the data uses – Identifies the intended use of the data according to the following:
    - Site Characterization – Data are used to determine the composition, nature, and extent of contamination.
    - Risk Assessment – Data are used to evaluate the actual or potential risks posed by contaminants determined to be present on-site. Particular attention is given to sampling at locations where human exposure is possible.
    - Health and Safety Plan (HASP) – Data are used to establish the level of protection needed for on-site workers during site characterization activities.
    - Monitoring – Data are used during the monitoring of the remedial action to access the effectiveness of such action.
    - PRP Enforcement – Data are used to help establish potentially responsible parties (PRP's).
    - Evaluation of Alternatives – Data are used to evaluate various proposed remedial technologies and assist in proper design of alternatives.

- Identification of the data types – Identifies what types of analyses are to be performed.

- Sample Collected – Describes the sample types to be collected.
    - Environmental – Refers to a specific media sampled such as water, soil, air, or biological.
    - Source – Refers to sampling an actual contamination source.
    - Grab – A discrete sample representative of a specific location.
    - Composite – A sample that represents a mixture of a number of grab samples that represents the average properties over the extent of areas sampled.
    - Biased – Sampling that focuses on a specific area of expected contamination or uncontaminated area (background).

- Identification of the data quality needs – Identifies the analytical options available to support data collection activities and are identified as follows:
    - Level I: Field Screening – Portable type instruments which provide real-time data.

- Level II: Field Analysis – Portable analytical instruments in an on-site lab or transported to the site.
- Level III: Standard Analytical Protocols – Standard analytical protocols or without the NYSDEC Analytical Services Protocol (ASP) (2000) deliverables / reportables documentation.
- Level IV: NYSDEC ASP Reportables / Deliverables – Rigorous QA / QC protocols and reportables / deliverables documentation; NYSDEC ASP (2000) Category B deliverables.
- Level V: Non-Standard – Methods which have been modified to meet specific site study or remediation needs or by use of some other specialized analytical methods that cannot be obtained through standard or typical avenues of analytical support.

- Identification of Data Quality Factors – Describes factors which influence the quality or quantity of data to be collected. Primary contaminants and associated levels of concern are identified concerning ARARs or potential risks. The required detection limit are also given or referenced.

- Identification of QA / QC Samples – Specifies additional samples to be collected to support Quality Assurance / Quality Control (QA / QC) procedures. Additional samples to be collected could include:
  - Matrix Spike / Matrix Spike Duplicates – Matrix spike and matrix spike duplicate samples are collected as a duplicate sample to which the analytical laboratory will add known amounts of target analytes. These QA / QC samples are intended to assess the extraction procedure used by the laboratory.
  - Blind Duplicates – Blind duplicates are a duplicate of another sample submitted for analysis. The location of the sample is recorded in the field book and not disclosed on the chain of custody. These QA / QC samples are intended to assess the repeatability of analysis by the laboratory.
  - Equipment Blanks – Equipment blanks are samples which are obtained by running analyte-free water through the sample collection equipment in a way that is identical to the sample collection procedures. Equipment blanks may be used during QA / QC procedures to evaluate if sampling equipment has contributed contaminants to the samples.
  - Trip Blanks – Trip blanks are samples which are prepared prior to the sampling event in the same type of sample container and are kept with the collected samples throughout the sampling event unit analysis. Trip blank vials are not opened in the field and are analyzed for volatile organics only.

2.2 Sampling Procedures

All sampling objectives, locations, and procedures have been included in respective Work Plans and are further described in Section 3. Items including Field Measurement Techniques, General Field Decontamination, and Sample Management have also been included in Sections 3 and 4.

2.3 Laboratory Certification and Coordination

The Environmental Laboratory Approval Program (ELAP) certification is an accreditation issued by the New York State Department of Health (NYSDOH). Such laboratories have demonstrated that they consistently ensure the accuracy and reliability of samples analyzed. All chemical analyses for samples from the site will be completed by an ELAP laboratory capable of performing project specific analyses as indicated in this QA / QC plan. The project QA / QC Officer will also be responsible for all project related laboratory coordination.

Supporting documentation related to per- and polyfluoroalkyl substances (PFAS) analysis, such as standard operating procedures (SOPs), analyte lists, and method detection limits (MDLs) are provided in **Attachment A**.

2.4 Analytical Methodologies

Sampling and analysis will be performed for the Target Compound List (TCL) parameters including volatiles. The specific analyses will be conducted according to the following NYSDEC ASP 2000 methodologies:

Parameter Group	Analysis Method
Volatile Organic Compounds	8260C or TO-15-SIM* for air + TICs
Semi-volatile Organic Compounds	8270D and 8270D-SIM + TICs
Polychlorinated Biphenyls	8082A
Pesticides	8081B
Herbicides	8151A
Metals / Inorganics	6010D, 7471B, 9010C/9012B, 7196A
PFOA/PFOS	1633

*Indoor and ambient air samples will be analyzed by EPA Compendium Method TO-15 with Select Ion Monitoring (SIM) for the following compounds: trichloroethene, cis-1,2-dichloroethene, 1,1-dichloroethene, carbon tetrachloride, and vinyl chloride. All other compounds will be analyzed by EPA Compendium Method TO-15.

Samples will be analyzed by Pace Analytical Inc. (Pace) and the data will be presented in Category B reportables / deliverables format. Pace maintains accreditation for the project-related analyses under NYSDOH ELAP Number 11148.

Laboratory reporting limits must be sufficient to assess compliance with applicable standards, criteria, and guidance values (SCGs). For 1,4-dioxane in groundwater, the reporting limit must not exceed 0.35 micrograms per liter (ug/L). For per- and polyfluoroalkyl substances (PFAS), the necessary reporting limits are defined in Attachment A, as noted. For soil vapor and sub-slab vapor, reporting limits must not exceed 1 microgram per cubic meter (ug/m^3). For ambient air, reporting limits must not exceed 1 ug/m^3, except they must not exceed 0.2 ug/m^3 for trichloroethene; cis-1,2-dichloroethene; 1,1-dichloroethene; carbon tetrachloride; and vinyl chloride.

2.5 Analytical Quality Control

Analytical quality control for this Project will be consistent with the methodology and quality assurance/quality control requirements in the NYSDEC ASP 2000.

The tables on the following page detail sample volumes, containers, preservation, and holding time for typical analytes.

2.6 Data Usability Summary Report

A Data Usability Summary Report (DUSR) will be prepared by Data Validation Services consistent with NYSDECs Guidance for the Development of Quality Assurance Plans and Data Usability Summary Reports as given in DER-10. The main objective of the DUSR is to determine whether the data presented meets the project specific needs for data quality and data use.

Table 2-1
Soil Sample Collection Requirements

Matrix	Analytical Group	Sample Volume	Containers	Preservation Requirements	Maximum Holding Time
Soil	VOCs	5-15 grams	40 mL VOA vial	MeOH Cool to 4°C	14 Days
		(2) 5 grams	40 mL VOA vial	Water Cool to 4°C	48 Hours (Freeze) 14 Days (Analysis)
	SVOCs	4 oz.	4-ounce amber glass, Teflon-lined	Cool to 4°C	14 Days (Extraction)
	PCBs	4 oz	4-ounce amber glass, Teflon-lined	Cool to 4°C	365 Days (Extraction)
	Pesticides	4 oz	4-ounce amber glass, Teflon-lined	Cool to 4°C	14 Days (Extraction)
	Herbicides	4 oz	4-ounce amber glass, Teflon-lined	Cool to 4°C	14 Days (Extraction)
	Metals, including Hg	4 oz.	4-ounce amber glass	Cool to 4°C	180 Days (28 Days for Hg)
	Hexavalent Chromium	4 oz.	4-ounce amber glass	Cool to 4°C	30 Days
	Cyanide	4 oz.	4-ounce amber glass	Cool to 4°C	14 Days
	1,4-Dioxane	4 oz.	4-ounce amber glass, Teflon-lined	Cool to 4°C	14 Days (Extraction)
	PFAS	8 oz.	8-ounce plastic	Cool to 4°C	90 Days (Extraction)

Table 2-2
Water Sample Collection Requirements

Matrix	Analytical Group	Sample Volume	Containers	Preservation Requirements	Maximum Holding Time
Groundwater	VOCs	(3) 40 mL	40 mL VOA vial	HCl, pH < 2 Cool to 4°C	14 Days
	SVOCs	(2) 250 mL	250 mL amber glass, Teflon-lined	Cool to 4°C	7 Days (Extraction)
	PCBs	(2) 125 mL	125 mL amber glass, Teflon-lined	Cool to 4°C	365 Days (Extraction)
	Pesticides	(2) 125 mL	125 mL amber glass, Teflon-lined	Cool to 4°C	7 Days (Extraction)
	Herbicides	(2) 1000 mL	1000 mL amber glass, Teflon-lined	Cool to 4°C	7 Days (Extraction)
	Total / Dissolved Metals, including Hg	(2) 250 mL	250 mL plastic	HNO3, pH<2 Cool to 4°C	180 Days (28 Days for Hg)
	Hexavalent Chromium	500 mL	500 mL plastic	Cool to 4°C	24 Hours
	Cyanide	250 mL	250 mL plastic	NaOH, pH>12 Cool to 4°C	14 Days
	1,4-Dioxane	(2) 250 mL	250 mL amber glass, Teflon-lined	Cool to 4°C	7 Days (Extraction)
	PFAS	(2) 250 mL	250 mL plastic	Cool to 4°C	28 Days (Extraction)

SECTION 3 – FIELD SAMPLING PLAN

3.1 Sampling Procedures

The following sections provide procedures for collecting a variety of samples, not all of which will be needed at this site.

3.1.1 Preparation for Sampling

The sample collection technique is of prime importance to assure the integrity of the collected sample. The following techniques include provisions so that:

- A representative sample is obtained;
- Contamination of the sample is minimized;
- The sample is properly preserved; and
- An acceptable Chain-of-Custody record is maintained.

The QA / QC Sampling Component of the Plan includes:

- Incorporation of accepted sampling techniques referenced in the sampling plan;
- Procedures for documenting any field actions contrary to the QA / QC Plan;
- Documentation of all preliminary activities such as equipment check-out, calibrations, and container storage and preparation;
- Documentation of field measurement quality control data (quality control procedures for such measurements shall be equivalent to corresponding QC procedures);
- Documentation of field activities;
- Documentation of post-field activities including sample shipment and receipt, field team debriefing, and equipment check-in;
- Generation of quality control samples including duplicate samples, equipment blanks, and trip blanks;
- The use of these samples in the context of data evaluation with details of the methods employed (including statistical methods) and of the criteria upon which the information generated will be judged; and
- The number of QA / QC samples generally required are shown in the following table. When there is a disagreement with QA / QC sample numbers and types, between this document and a Work Plan, the Work Plan shall prevail.

Table 3-1
QA / QC Samples

Sample Type	Analysis	Number	Note
MS / MSD	Full Suite	Every sample batch, or minimum of 5% (1 per 20)	Two additional samples at a given location
Blind Duplicate	Full Suite	Every sample batch, or minimum of 5% (1 per 20)	An additional sample at a given location
Trip Blank (Groundwater Only)	VOC	One per day or 5% (1 per 20), whichever is more frequent	Vials of clean water provided by laboratory. Packed with collected samples.
Equipment Blank (Groundwater Only)	PFAS	One per day or 5% (1 per 20), or whichever is more frequent	Clean water passed through / over decontaminated sample collection equipment / tubing.

The personnel responsible for collection of groundwater, soil, air, miscellaneous media, and petroleum spill remediation / verification samples will be familiar with standard sampling procedures and follow the appropriate protocol. Field records will be maintained in bound notebooks with numbered pages to document daily instrument calibration, locations sampled, field observations, and weather conditions. Each page will be dated and signed by the sampler. Each notebook will be numbered and a log of notebooks will be maintained by the project manager.

Prior to sampling, all equipment must be procured and accommodations for sample container delivery, and sample shipment must be made. The following is a list of general equipment that would be on hand for sampling events. Special equipment for each sampling event is presented in the section describing that specific sampling event.

3.1.2 General Field Sampling Equipment

- Field Data Sheets
- Chain-of-Custody forms
- Engineers tape and folding ruler with 0.01-foot intervals
- Field Record Sheets
- Latex gloves
- Face-safety shield
- Tyvek coveralls
- Respirators
- Photoionization detector
- Bio-degradable phosphate free detergent
- Coolers and ice (no blue ice)
- Drums
- Sample bottles
- Aluminum foil
- Duct and filament tape
- Tap water
- Distilled water
- Laboratory grade methanol and hexane
- Wash buckets
- Decontamination towels / cloths
- Large disposal containers
- Large plastic sheets

3.2 Sample Collection Techniques

3.2.1 Surface Soil Sampling

Surface soil samples will be collected at the locations and depths indicated in the Work Plan. When sampling is conducted in areas where a vegetative turf has been established, a pre-cleaned trowel or shovel will be used to remove the turf so that it may be replaced at the conclusion of sampling. Samples will then be collected using a pre-cleaned, stainless steel spoon. When the sample is obtained, it will be deposited into a pre-cleaned stainless steel bowl or plastic pail for mixing prior to filling the sample containers. The soil will be mixed thoroughly until the material is homogenized. At that point, the soil will be placed into the laboratory provided containers.

Once removed from the ground the soil will immediately be observed for soil characteristics, including general soil type (sand, silt, clay), moisture, and evidence of impairment ((e.g. petroleum or chemical odors, staining, volatile organic vapors as measured by a photoionization detector (PID)). The PID will be calibrated daily (and more often as required by the manufacturer's data) prior to use in the field, using calibration test gases.

When PFAS sampling / testing is required, no sampling equipment components or sample containers should come into contact with aluminum foil, LDPE, glass, or Teflon tape. Acceptable equipment includes stainless steel spoons and bowl, HDPE containers, and steel shovels or augers that are not coated.

3.2.2 Subsurface Soil Sampling – Direct Push Drilling

Generally, soil borings will be advanced with a Geoprobe direct push sampling system. The use of direct push technology allows for rapid sampling, observation, and characterization of relatively shallow overburden soils. The Geoprobe utilizes a four to five-foot Macrocore barrel / sampler, with disposable acetate sleeves. Soil cores will be retrieved in four or five-foot sections, and can be easily cut from the acetate sleeves for observation and sampling. The Macrocore barrels will be decontaminated between boring locations using an alconox and water solution.

Prior to initiating drilling activities, the Macrocore barrels, drive rods, and pertinent equipment, will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.

Test borings will be advanced with 2-inch (or larger) inside diameter (ID) direct push Macrocore through overburden soils. Drilling fluids, other than potable water will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

Investigation derived soils will be returned to the hole in which they originate after samples have

been taken. If excess soils remain, the soils will be placed in a designated spoils pile. The spoils pile will be placed on clean plastic and covered with clean plastic. The plastic will be secured to prevent soil erosion. The spoils pile will remain onsite until remedial efforts commence. At that time, the soils will be either disposed of in accordance with NYSDEC DER-10 guidelines or used as fill onsite underneath the clean cover system.

3.2.3 Subsurface Soil Sampling – Hollow Stem Auger

The drilling and installation of monitoring wells will be performed using a rotary drill rig which will have sufficient capacity to perform 4 1/4-inch ID hollow-stem auger drilling in the overburden, retrieve Macrocore or split-spoon samples. Equipment sizes and diameters may vary based on project-specific criteria. Any investigative derived waste generated during the advancement of soil borings and monitoring well installations will be containerized and characterized for proper disposal.

Prior to initiating drilling activities, the augers, sampler drive rods, split spoons, and other pertinent equipment will be steam cleaned or washed with an alconox and water solution. This cleaning procedure will also be used between each boring. Steam cleaning activities will be performed in a designated on-site decontamination area. During and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used.

Test borings will be advanced with 4 1/4-inch ID hollow stem augers through overburden, driven by truck-, track-, or trailer-mounted drilling equipment. Alternative methods of drilling or equipment may be allowed or requested for project specific criteria, but must be approved by the NYSDEC. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

Hollow stem auger advanced groundwater-monitoring wells typically utilize minimum 2-inch threaded flush joint PVC pipe with 0.010-in. slotted screen or pre-packed well screens. PVC piping used for risers and screens will conform to the requirements of ASTM-D 1785 Schedule 40 pipe. All materials used to construct the wells will be NSF / ASTM approved. Solvent PVC glue shall not be used at any time in the construction of the wells. The bottom of the screen shall be sealed with a treated wood cap or plastic plug. No lead shot or lead wool is to be employed in sealing the bottom of the well or for sealant at any point in the well.

Investigation derived soils will be returned to the hole from which they originated, after samples have been taken. If excess soils remain, the soils will be placed in a designated spoils pile. The spoils pile will be placed on clean plastic and covered with clean plastic. The plastic will be secured to prevent soil erosion. The spoils pile will remain onsite until remedial efforts commence. At that time, the soils will be either disposed of consistent with NYSDEC DER-10 guidelines or used as fill onsite underneath the clean cover system (if permitted by the Remedial Action Work Plan).

3.2.4 Subsurface Soil Sample Screening and Collection

When acetate sleeves or split spoons are removed from borings, the soil will immediately be observed for soil characteristics, including general soil type (sand, silt, clay), moisture, confining layers, and evidence of impairment (e.g. petroleum or chemical odors, staining, volatile organic vapors as measured by a PID – ex-situ and headspace). Generally, sample selection is based on evidence of impairment, depth, spatial distribution, or for delineation purposes. Normally, sample locations will not be known until the end of each day in the field. Therefore, samples for potential analysis will be placed in new Ziploc bags and placed on ice until they are placed into laboratory provided glassware.

When PFAS sampling / testing is required, no sampling equipment components or sample containers should come into contact with aluminum foil, LDPE, glass, or Teflon tape. Acceptable equipment includes stainless steel spoons and bowl, HDPE containers, and steel tools that are not coated.

3.2.5 Groundwater Monitoring Well Construction / Completion

Artificial Sand Pack
When utilized, granular backfill will be chemically and texturally clean, inert, siliceous, and of appropriate grain size for the screen slot size and the host environment. The sand pack will be installed using a tremie pipe, when possible (i.e., a tremie pipe may not fit into smaller, 2-inch diameter boreholes). When utilized, the well screen and casing will be installed, and the sand pack placed around the screen and casing to a depth extending at least 2 feet above the top of the screen. A pre-packed well screen may be used if pre-approved by the NYSDEC.

Bentonite Seal
A minimum 2-foot thick seal will be placed directly on top of the sand pack, and care will be taken to avoid bridging. In the event that Site geology does not allow for a 2-foot seal (e.g., only 1-foot of space remains between the top of the sand pack and ground surface), the remaining space in the annulus will be filled with bentonite.

Grout Mixture
Upon completion of the bentonite seal, the well may be grouted with a 30% solids pure bentonite grout, a non-shrinking cement grout, a cement / bentonite grout mix, or a bentonite / soil mix as indicated in the Work Plan. The grout will be placed from the top of the bentonite seal to the ground surface.

Surface Protection
At all times during the progress of the work, precautions shall be used to prevent tampering with or the entrance of foreign material into the well. Upon completion of the well, a suitable cap shall be installed to prevent material from entering the well. Where permanent wells are to be installed, the well riser shall be protected by a flush mounted road box set into a concrete pad or locking well cap for stick-up wells. A concrete pad, sloped away from the well, shall be constructed around

the flush mount road box or stick-up casing at ground level.

Any well that is to be temporarily removed from service or left incomplete due to delay in construction shall be capped with a watertight cap.

Surveying
Coordinates and elevations will be established for each monitoring well and sampling location. Elevations to the closest 0.01 foot shall be used for the survey. Well elevations will be measured from the top of well riser. These elevations shall be referenced to a regional, local, or project-specific datum. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site.

Well Development
After completion of the well, but not sooner than 48 hours after grouting is completed, development will be accomplished using pumping, bailing, and / or surge blocking. No dispersing agents, acids, disinfectants, or other additives will be used during development or introduced into the well at any other time. During development, water will be removed throughout the entire water column by periodically lowering and raising the pump intake (or bailer stopping point).

Water elevations will be taken on all wells prior to development, purging, and sampling. All measurements will be taken within a 24-hour period to obtain consistent elevations and recorded on well data sheets. The procedure for measuring water levels in the monitoring wells is:

- Unlock and remove well cap;
- Test the atmosphere of the well with the calibrated PID. If the gases from the well have caused the air in the breathing zone to read greater than 5 ppm, stop work and refer to the HASP
- Measure water level to nearest 0.01 foot with a water level indicator (electronic).
- Water level indicators will be decontaminated before moving to next well. The tape and cable are decontaminated by washing in a bucket of distilled water-biodegradable phosphate free-detergent solution, followed by a rinse with distilled water.

Investigation derived liquids (e.g. well and decon water) will be drummed and treated as non-hazardous waste pending the results of chemical analysis. Investigation derived liquid waste including well development, well purging water, and decontamination liquids will be containerized and staged onsite in a designated secure area. The containers will be affixed with appropriate labels and remain onsite until remedial work begins. The materials will be treated / disposed consistent with applicable regulations.

The development process will continue until removal of a minimum of 110% of the water lost during drilling, three well volumes; whichever is greater (or as specified in the Work Plan), and when water quality monitoring demonstrates stabilization of the effluent. The water quality meter will be calibrated prior to each sampling event (and more often as required by the manufacturer's

data), using calibration fluids. Stabilization criteria is shown in the table below. In the event that limited recharge does not allow for the recovery of all drilling water lost in the well or three well volumes, the well will be allowed to stabilize to conditions deemed representative of groundwater conditions. Stabilization periods will vary by project but will be confirmed with the NYSDEC prior to sampling.

A flow-through cell will be utilized to facilitate the recording of real-time effluent water quality data. Water quality values will be recorded numerous times throughout well development and purging, at a frequency of no more than one well volume between recordings.

Table 3-2
Well Development Stabilization Criteria

Parameter	Units	Stabilization Criteria
pH	Standard Units (s.u.)	±0.1
Specific Electric Conductance	mS/cm	3%
Temperature	°C / °F	3%
Turbidity	NTU	10% or <10 NTU
Oxidation Reduction Potential (ORP)	mV	±10
Dissolved Oxygen (DO)	mg/L	10% or <0.5 mg/L

3.2.6 Groundwater Sample Collection

Groundwater samples will be collected using a dedicated low flow pump. When analysis is limited to VOCs, samples may be collected with disposable or stainless steel bailers. When PFAS sampling / testing is required, only the following equipment will be permitted:

- Stainless steel inertia pump with HDPE tubing
- Peristaltic pump with HDPE and silicone tubing
- Stainless steel bailer with stainless steel ball
- Bladder pump (identified as PFAS-free) with HDPE tubing

All sampling equipment will be properly decontaminated in the field (see Section 3.4). The following equipment will be available for sampling of monitoring wells in addition to the general sampling equipment list:

- Well Data Sheets
- Pump
- Electronic water level indicator
- Water Quality Meter
- Acid resistant gloves

The following activities will be completed before going into the field every day before the start of sampling:

1. Fill out appropriate section on Well Data Sheet for the wells to be sampled;

2. Obtain the sampling schedule for each well to be sampled;
3. Calibrate the PID with the calibration gas;
4. Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
5. Each well to be sampled will have designated coolers containing the pre-labeled, certified clean, sample bottles. The groundwater samples will be placed in the cooler labeled for the well from which they were taken. The bottle shall be labeled with large distinguishable letters, so that the groundwater samples will be placed in the proper cooler; and
6. Select the appropriate sample bottles for the day's sampling. The bottles shall be pre-marked with a sample parameter and preservatives. Reusable glass bottles will have been cleaned and prepared at the laboratory. The bottles for the various parameters to be analyzed from each well location will then be placed in a cooler.

The following steps describe the sample collection of groundwater:

1. Unlock and remove the well cap;
2. When VOCs are a contaminant of concern, test the air at the wellhead with the calibrated PID. If the gases from the well have caused the air in the breathing zone to read greater than 5 ppm, stop work and refer to the HASP. Record the reading on the Well Data Sheet;
3. In order to obtain a representative sample of the formation water, the well must be purged of the static water within the well. Prior to purging, the static water level within the well must be measured and the measurement recorded on the Well Data Sheet. To determine the amount of water necessary to purge, find the liquid column height in the well to determine the total volume (three liquid column borehole volumes) of liquid to be purged;
4. Purge the well; lower pump slowly into the well until it is below the water surface. In accordance with the Work Plan, purge waters will be containerized for disposal during remedial activities.
5. Record the amount of water purged in the field logbook and on the Well Data Sheet.
6. If the static water level drops below 25 percent of the initial static water level, allow for full recovery (measure the water level) and then sample. If recovery takes more than twenty minutes, proceed to next well but return to sample within 24 hours.
7. Fill the appropriate sample bottles according to the sampling schedule for each well. While filling the sample bottles, record the well number, type, volume of container, and the preservatives used on the Ground Water Sampling Analyses form.
8. The preservatives for the various sampling parameters were previously added to the clean sample bottles by the laboratory. Some parameters may require additional special handling.
9. Volatile organics analyses sample vials must be free of air bubbles. When a bubble-free sample has been obtained, it must be immediately chilled.
10. Collect the matrix spike duplicates, duplicates, field blanks, and trip blanks, as applicable. Take samples according to sampling schedule presented in the Work Plan.
11. Record all pertinent information in field logbook and on the Well Data Sheet (include color, odor, sediment content of sample, etc.). Any situations at the site that have the potential to interfere with the analytical results should also be recorded here.

12. Lock well, inspect well site, and note any maintenance required.
13. Dispose of potentially contaminated materials in designated container.

3.2.7 Soil and Sub-Slab Vapor Sample Collection

Indoor Air Sampling

Indoor air samples will be collected using a Summa™ canister (6-Liter capacity) equipped with a critical orifice flow regulation device sized to allow an air sample to be collected over a 24-hour sampling period. Care is taken to deploy the canisters away from the direct influence of any forced air emanating from air conditioning units, central air conditioning vents, furnaces or heaters. The indoor air sampling procedure is as follows:

- Building spaces are examined to determine a location for deploying the sample. The canister is deployed in areas not subject to disturbances and which will not interfere with the occupant's normal activities.
- Building occupants are requested to keep out of the sampling area during the sampling event.
- Air sample canisters are labeled with a unique sample designation number. The sample number and location is recorded in the field log book.
- The canister vacuum is measured using an integrated vacuum gauge immediately prior to canister deployment, and recorded in the field log book. The critical orifice flow controller is installed, as supplied by the laboratory, on the canister, the canister is opened fully at the beginning of sample collection period, and the start time is recorded.
- The canister valve is closed fully at the end of the sample period by disconnecting the regulator from the canister (after 24-hours) and the end time recorded. Any evidence of canister disturbance during the sample collection will be recorded.
- The canister vacuum is measured and recorded immediately after canister retrieval at the end of the sample period. Once the vacuum is measured, the canisters are returned to their sampling boxes for safe storage and shipping. Field data is verified as correctly entered into field books prior to shipment; and canisters are shipped to the laboratory under a chain-of-custody.

Soil Vapor / Sub-Slab Soil Gas Sampling

Soil vapor implants and sub-slab sampling points are installed to collect soil gas immediately from exterior locations around the site periphery and from below the existing slabs, respectively. Soil vapor and sub-slab gas samples are collected using a 6-Liter Summa™ canister fitted with a flow orifice pre-calibrated to collect a sample over a 24-hour period. Once the 24-hour sampling period has been completed, the canister is boxed and shipped to the laboratory for analysis. A brief summary of the sampling protocol is provided below. The sub-slab vapor points are installed by first advancing a small diameter hole (approximately 3/8-inches in diameter) through the floor slab to determine thickness. The holes are drilled via a hammer drill or concrete core. The hole extends through the slab and terminates at the interface with underlying material (i.e. gravel base or soil). A sample point consisting of a length of tubing is placed into the boring. The cored slab

annulus is filled with clay placed around the sub-slab vapor point. The bottom of the sub-slab vapor point extends to the bottom of slab. Prior to sub-slab soil gas sample collection, the monitoring point and above grade tubing is purged at a rate not exceeding 200 ml/min. The total volume purged prior to sample collection equals three volumes of air in the open space of tubing and the sample point. At the end of the sampling event, a pressure gauge reading is recorded. The 1-Liter canister with a calibrated 24-hour orifice is connected to the tubing. The following summarizes the above:

- The sub-slab sampling point construction is temporary, with the sampling points securely mounted through the concrete slab and grouted in place using pottery clay.
- Prior to sub-slab soil gas sample collection, the monitoring point and above grade tubing is purged at a rate not exceeding 200 ml/min.
- Samples are collected over a 24-hour period at a flow rate not greater than 200 mL/min.
- Helium is used as a field tracer during sampling. The Helium is introduced into a dome next to the above grade sampling train and Summa™ canister to a minimum concentration of 50% helium. Many PIDs and helium gauges draw air at a greater rate than 100 ml/min and as such, shall not be connected directly to the sub slab vapor sampling point or tubing. The tubing will be placed extending through the shroud. The tubing will be purged at a rate not exceeding 200 ml/min. The purged air will be inserted directly into an empty tedlar bag. The helium is read from the tedlar bag using a helium meter that is capable to read down to 1-2%. Sub-slab vapor must be confirmed to contain less than 10% of the shroud concentration prior to proceeding with sampling.
- Field documentation is maintained in a field notebook and on field data forms.

Ambient Air Sampling

Ambient air samples are collected in the same manner as the indoor air samples. The sampling device will be located upwind of the structure and will be placed approximately three to five feet off the ground for sample collection purposes. The outdoor air samples will be collected using a Summa canister equipped with a laboratory calibrated regulator over a 24-hour period.

3.3 General Decontamination

The following procedures will be performed for the decontamination of exploration equipment, sampling equipment, and personnel after each drilling/sampling event:

Drill rig, backhoe, and excavator - The drill rig, direct-push rig, backhoe, and/or excavator will be cleaned prior to their entrance and exit of the site. Greases and oils will not be used on any down hole equipment during drilling or exploration activities.

Exploration equipment - To avoid cross contamination, use of a PID meter and cleaning between each sampling site will be employed on backhoe arms, buckets, hollow stem augers, casing drill rods, down-hole tools, and appurtenant equipment.

Split spoon sampler - The split spoon sampler will be scrubbed, cleaned, and put through a series of rinses between each sampling event. A number of split spoon samplers will be used so that one can be utilized for sampling while the others are being cleaned.

Reusable equipment - The following steps will be employed to decontaminate reusable equipment:

- Rinse equipment of soil or foreign material with potable water;
- Immerse and scrub equipment with bio-degradable phosphate-free detergent and potable water;
- Immerse and scrub in a potable water rinse without detergent;
- Immerse and scrub in deionized/distilled water;
- Saturate by spraying or immersion in laboratory-grade hexane;
- Air dry and wrap cleaned equipment in foil to carry to next monitoring site to prevent contamination of equipment during transfer; and
- The decontamination wash and rinse water will not be considered hazardous unless visual inspection or monitoring by the PID and other equipment indicate that contaminants may be present. The rinse waters can be discharged on-site if they are not contaminated. If contaminants are expected to be present, the rinsate waters should be placed in 55-gallon drums and stored on-site.

Disposable equipment - The following steps will be employed to decontaminate disposable equipment:

- Rinse with potable water;
- Remove all standing liquid from the piece of equipment;
- Dispose of the equipment in a dedicated container for contaminated solids; and
- Dispose of rinse water in 55-gallon drums if contaminants are found to be present.

Sample containers - Upon filling and capping sample bottles, the outside of the bottle will be wiped off with a clean paper towel. These towels will be disposed of in a dedicated container for contaminated solids.

Personnel decontamination - The following procedures will be used to decontaminate sampling personnel.

- After each sampling event chemical resistant gloves will be disposed of in a dedicated container for contaminated solids;
- At the end of each sampling day, Tyvek™ coveralls will be disposed of in a dedicated container for contaminated solids;
- Boots will be rinsed off with water to remove mud, clay, or any other contaminants; and
- Personnel will be required to follow procedures outlined in the HASP.

3.3.1 Special Considerations When Sampling for PFAS

- Clothing that contains PTFE material, including Gore-Tex or that have been water-proofed with PFAS materials should be avoided. All clothing worn by sampling personnel should first be laundered multiple times. Acceptable rain gear includes PVC, polyurethane, or rubber. If such materials are required because site conditions warrant additional protection for samplers, their use will be documented in the field notes.
- Decontamination water shall be verified in advance to be PFAS-free through laboratory analysis or certification. Previous results of non-detect for PFAS are acceptable.

All decontamination waters will be containerized and staged onsite in a designated secure area. The containers will be affixed with appropriate labels and remain onsite until remedial work begins.

SECTION 4 – SAMPLE MANAGEMENT PLAN

4.1 Sample Management

This Sample Management Plan provides procedures to document and track samples and results obtained during this work effort. A series of pre-printed forms with the appropriate information serves as a vehicle for documentation and tracking.

In order to accomplish this task, the documentation materials will include sample labels, sample characterization and Chain-of-Custody sheets, daily field reports, and a sample log.

Sample Label - A sample label will be completed for each sample obtained and will be affixed to the sample container. The label is configured in a way to address various types of mediums. Information on the label includes, at a minimum, client name, location, sample description, sample number, date, time, grab sample, composite sample, notes, and sampler's name.

Sample Characterization & Chain-of-Custody Sheet - All pertinent field information will be entered onto the sample characterization and chain-of-custody sheets including client name, sample ID, sample description, location of sample, sampling method, number of containers, container type, analysis required, and preservation. The monitoring well form has space allotted for entering information regarding the well including depth to water, well volume, sample pH, temperature, color, etc. The Chain-of-Custody section of the form will document the sample's pathway of sample shipment which will include names of persons delivering/receiving, dates, and times. The reverse side of this form will be used by the laboratory to document analysis performed on the sample. Copies of the completed forms will be retained by the Engineer and the analytical laboratory. The original sample characterization and Chain-of-Custody sheets will be submitted in applicable reports along with the laboratory results.

Daily Field Reports - Daily activities will be recorded on the Inspection Report form. The purpose of this form will be to summarize the work performed on the site each day. The completed forms will be submitted to the Project Manager on a daily basis for short term site activity and on a weekly basis for site activities of a longer duration.

Sample Log - The sample log will be utilized to track each individual sample obtained at the site. The upper portion, "Field Identification" will be completed the day the sample is taken. The form will accompany the sample characterization and Chain-of-Custody form to the laboratory. Personnel at the laboratory will complete the middle section of this form and return it to the Engineer, who will use the document to track incoming results. The bottom of the sheet has space allocated to enter "Recommended Actions" based on laboratory results.

4.2 Sample Handling

Each collected sample will be dispensed into the appropriate sample containers for the type of

analysis to be performed. Sampling staff will wear nitrile gloves at all times when handling samples. Appropriate sample preservatives will be added to the sample containers by the contracted analytical laboratory prior to the delivery into the field, except in cases where the sample preservative must be added after sample collection. All samples that require cool storage will be immediately placed in coolers with appropriate packaging materials so as to protect the breakage of sample containers during shipment. The sample coolers will be filled with cubed ice (no "Blue Ice") prior to leaving the sample collection location. In the instance that a local analytical laboratory is contracted, the samples will be hand delivered to the laboratory each sampling day. The chain-of-custody forms will be signed by the laboratory personnel picking up the samples and placed within the coolers. In the instance that an analytical laboratory is contracted which is not based locally and a common carrier is used for sample shipment, the chain-of-custody forms will be signed by the sampler and the carrier personnel and placed inside of the coolers. Careful packaging techniques will be used to prevent sample containers from breakage during shipment. Materials such as cardboard, foam wrap, or Styrofoam may be used as packaging materials. All samples will be delivered to the contracted analytical laboratory on the day they were collected and will be received by the laboratory within 24 hours of sample collection. The samples will be collected with sufficient time allowed at the end of the day for the analytical laboratory to properly process the sample chain-of-custody form.

Attachment A

SUPPORTING DOCUMENTATION FOR PFAS ANALYSIS

NEW YORK STATE OF OPPORTUNITY.
Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

April 2023

Table of Contents

Objective 1
Applicability 1
Field Sampling Procedures 1
Analysis and Reporting 2
Routine Analysis 2
Additional Analysis 2
Data Assessment and Application to Site Cleanup 3
Water Sample Results 3
Soil Sample Results 3
Testing for Imported Soil 4
Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS 5
Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids 6
Appendix C - Sampling Protocols for PFAS in Monitoring Wells 8
Appendix D - Sampling Protocols for PFAS in Surface Water 10
Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells 12
Appendix F - Sampling Protocols for PFAS in Fish 14
Appendix G - PFAS Analyte List 22
Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids 24

ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Data Assessment and Application to Site Cleanup Page 3	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	3/28/2023
Water Sample Results Page 3	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below.	NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These guidance values also include criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt).Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.	3/28/2023
Soil Sample Results Page 3	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values:	NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:	3/28/2023
Protection of Groundwater Page 3	PFOA (ppb) 1.1 PFOS (ppb) 3.7	PFOA (ppb) 0.8 PFOS (ppb) 1.0	3/28/2023

Citation and Page Number	Current Text	Corrected Text	Date
Footnote 2 Page 3	The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	3/28/2023
Testing for Imported Soil Page 4	If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.	If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.	3/28/2023
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021
Water Sample Results Page 9	"In addition, further assessment of water may be warranted if either of the following screening levels are met: a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L"	Deleted	6/15/2021

Citation and Page Number	Current Text	Corrected Text	Date
Routine Analysis, Page XX	Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP)… criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids).	Deleted	5/31/2022
Analysis and Reporting, Page XX	As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.	Deleted	5/31/2022
Routine Analysis, Page XX	LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media.	EPA Method 1633 is the procedure to use for environmental samples.	
Soil Sample Results, Page XX	Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6	
Appendix A	"Include in the text… LC-MS/MS for PFAS using methodologies based on EPA Method 537.1"	"Include in the text ….EPA Method 1633"	
Appendix A	"Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101"	Deleted	
Appendix B	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	

Citation and Page Number	Current Text	Corrected Text	Date
Appendix C	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix D	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix G		Updated to include all forty PFAS analytes in EPA Method 533	
Appendix H		Deleted	
Appendix I	Appendix I	Appendix H	
Appendix H	"These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report."	"These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER)."	
Appendix H	"The holding time is 14 days…"	"The holding time is 28 days…"	
Appendix H, Initial Calibration	"The initial calibration should contain a minimum of five standards for linear fit…"	"The initial calibration should contain a minimum of six standards for linear fit…"	
Appendix H, Initial Calibration	Linear fit calibration curves should have an R^2 value greater than 0.990.	Deleted	
Appendix H, Initial Calibration Verification	Initial Calibration Verification Section	Deleted	
Appendix H	secondary Ion Monitoring Section	Deleted	
Appendix H	Branched and Linear Isomers Section	Deleted	

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third-party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix G) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist. Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These human health criteria should also be applied to surface water that is used as a water supply. This guidance also includes criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt). Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	0.8	1.0

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These

[2] The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by EPA Method 1633
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
-
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the current SOP developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8). This SOP should be followed when collecting fish for contaminant analysis. Note, however, that the Bureau of Ecosystem Health will not be supplying bags or tags. All supplies are the responsibility of the collector

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

   1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

   2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

   3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

   1. Project and Site Name.

   2. DEC Region.

   3. All personnel (and affiliation) involved in the collection.

   4. Method of collection (gill net, hook and line, etc.)

   5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

   1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

   2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

   3. Date collected.

   4. Sample location (waterway and nearest prominent identifiable landmark).

   5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate “Age” column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish’s tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

No materials containing Teflon.
No Post-it notes.
No ice packs; only water ice or dry ice.
Any gloves worn must be powder free nitrile.
No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
Wash hands after handling any food containers or packages as these may contain PFCs.
Keep pre-wrapped food containers and wrappers isolated from fish handling.
Wear clothing washed at least six times since purchase.
Wear clothing washed without fabric softener.
Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: □Electrofishing □Gill netting □Trap netting □Trawling □Seining □Angling □Other _____

Preservation Method: □Freezing □Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20_____.

_____ _____
Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Group	Chemical Name	Abbreviation	CAS Number
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER). Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 28 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of six standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

Appendix J

Stormwater Pollution Prevention Plan

STORM WATER POLLUTION PREVENTION PLAN

for the

PROPOSED URBAN VILLAGES MULTIFAMILY DEVELOPMENT

at

100 Buckley Road
Liverpool, New York 13088

TOWN OF Salina
ONONDAGA COUNTY, NEW YORK

Prepared For:

URBan Villages PFA LLC
925 Seventh North Street
Liverpool, New York 13088

Prepared By:

Calocerinos Engineering, PLLC
PO Box 2187
Syracuse, New York 13090

June 10, 2022
Revised March 2025

STORM WATER POLLUTION PREVENTION PLAN

for the

PROPOSED URBAN VILLAGES MULTIFAMILY DEVELOPMENT

at

100 Buckley Road
Liverpool, New York 13088

TOWN OF Salina
ONONDAGA COUNTY, NEW YORK

Steven Calocerinos, P.E.
NYS P.E. Lic. No. 076781

Calocerinos Engineering, PLLC
PO Box 2187
Syracuse, New York 13090

June 10, 2022
Revised March 2025

TABLE OF CONTENTS

1.0 Introduction

2.0 Permitting Requirements

3.0 Storm Water Pollution Prevention Plan

- 3.1 Site Description
- 3.2 Controls
  - A. Stabilization Practices
    1. Seeding
    2. Mulching
    3. Stabilized Construction Entrance
  - B. Structural Practices
    1. Silt Fence
    2. Check Dam
    3. Rock Outlet Protection
    4. Dewatering
    5. Concrete Washout Area
- 3.3 Storm Water Management
- 3.4 Other Requirements
- 3.5 Inspections
- 3.6 Maintenance
  - A. During Construction
  - B. Long Term / Post-Construction
- 3.7 Contractors

APPENDICES

Appendix A	Site Maps
Appendix B	Stormwater Report & Calculations
Appendix C	Erosion & Sediment Control Plan and Details
Appendix D	Contractor's Certification Statement
Appendix E	Inspection Checklists
Appendix F	GP-0-25-001 Forms
Appendix G	SHPO Correspondence

1.0 INTRODUCTION

This plan outlines the manner in which to reduce the potential of storm water runoff pollution during construction activities, and assigns responsibilities to ensure that the contractor and his subcontractors implement the requirements of the Storm Water Pollution Prevention Plan (SWPPP). In addition, this plan addresses the need for any post-construction facilities necessary to reduce stormwater runoff and pollutants that would otherwise negatively impact downstream receiving water. This SWPPP was developed based on the requirements as set forth in the Town of Salina General Ordinance, as well as the New York State Stormwater Management Design Manual (SMDM).

2.0 PERMITTING REQUIREMENTS

Because this project results in a disturbance of more than 1 acre, it is subject to the New York State Department of Environmental Conservation SPDES General Permit for Construction Activities, GP-0-25-001. Additionally, this project is also subject to the stormwater design requirements of the Town of Salina.

3.0 STORM WATER POLLUTION PREVENTION PLAN

This Storm Water Pollution Prevention Plan (SWPPP) was developed to set operating guidelines during construction activities. A copy of this SWPPP shall be retained at the construction site throughout the duration of this project.

The Contractor shall meet all conditions of this SWPPP and all conditions within the Building Code of the Town of Salina.

During the course of the project and upon approval by the owner and Town of Salina, the contractor shall amend the plan whenever there is a change in construction, operation, or maintenance, which may have an effect on the potential for the discharge of pollutants. In addition, if a new subcontractor is utilized at the site who will implement tasks included in the plan, the SWPPP shall be amended.

3.1 Site Description

a. This project generally consists of the re-development of an abandoned industrial property consisting of multiple (approximately 8) buildings of varying construction type and size, asphalt paving, C&D debris piles, and overgrown areas of brush. Over the course of 2 to 4 phases, the site will be redeveloped into a multi-family residential development with possible supporting commercial and/or retail uses. It is expected that of the approximately 8 existing buildings, 7 will be repurposed, 1 will be demolished, and 2 to 3 new structures will be constructed.

b. The property is located at 100 Buckley Road, in the Town of Salina, at the southern-most point of Buckley Road, at the northeasterly corner of the intersection of Buckley Road, Park Street, Old Liverpool Road, Onondaga Lake Parkway and the northbound off-ramp and southbound on-ramp to Interstate 81. The site is further identified as tax parcels 086.-01-15.2 in the Town of Salina, and 001.2-02-23.0 in the City of Syracuse.

b. The total parcel area is approximately 13 acres. Including work within the roadway rights-of-way, the project area that will actively be worked in and disturbed is approximately 12 acres. Within the disturbed area, approximately 2.76 acres of new impervious surfaces will be constructed consisting of asphalt paved areas, paver patios, concrete sidewalks and building rooftop. Total post-construction impervious area within the disturbed area will be 8.73 acres, with approximately 2.76 acres being newly constructed impervious area.

c. The post-developed site will consist of approximately 9 buildings totaling approximately 154,800 sf, paving and hard surfaces totaling approximately 225,380 sf, and associated stormwater management and landscaped areas.

d. A location plan, soil erosion and sediment control plan, and soil erosion and sediment control details have been included in the Appendices. The location plan shows the development location and the soil erosion and sediment control details have been included to identify controls to be utilized on this project.

e. The storm water runoff from this project generally flows southeasterly to the westerly side of the I-81 southbound off-ramp to Hiawatha Blvd, ultimately discharging through NYSDOT conveyances to Ley Creek and ultimately Onondaga

Lake. Review of the existing topography reveals that this drainage area, after development, will discharge across the same general area and therefore the overall drainage patterns have not been significantly altered.

f. Increases in storm water runoff are anticipated as the degree of impervious cover of the drainage area is increased. To mitigate increases in stormwater runoff, wet extended detention, bioretention areas, dry swales, and landscaping will be incorporated into the project. A stormwater report and calculations have been provided in Appendix B.

g. The project is located in Zones 'AE' and 'X' according to FEMA floodplain mapping. The 1% annual chance (100-year) flood elevation has been approximated as 371.00'. As required by the Town of Salina ordinance, a floodplain development application will be required for this project.

h. This Storm Water Pollution Prevention Plan will minimize the potential for storm water pollution during construction activities for the site infrastructure. Post-construction stormwater management practices have been incorporated into the project to regulate the peak stormwater discharges at or below existing levels for the 1-yr, 2-yr, 10-yr and 100-yr storm events in accordance with NYSDEC standards. Additionally, water quality volume and runoff reduction volume requirements have been met through the use of suitable practices. The stormwater management practices incorporated is discussed in greater detail in Appendix B.

3.2 Controls - The Contractor shall be required to construct and maintain the following controls in accordance with this document and the associated Contract Documents for this project.

A. Stabilization Practices

1. Seeding

- Immediately after completion of final grading operations, topsoil shall be placed where it is required and all areas disturbed from grading operations shall be seeded in an effort to stabilize exposed areas.

2. Mulching

- Directly after seeding, all disturbed areas shall be mulched to prevent surface compaction, reduce runoff and erosion, control weeds and help establish plant cover.
- Mulch shall consist of either a hydraulic mulch, or straw.

3. Stabilized Construction Entrance

- A stabilized construction entrance will be constructed where construction traffic will be entering or leaving the construction site to or from a street, alley, sidewalk or parking area. The purpose of the stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public streets.
- For this project, a construction entrance will be created out of a portion of the existing gravel parking and turnaround area at the rear of the existing buildings. A mountable berm will be constructed across the stabilized construction entrance to prevent any sediment from disturbed areas leaving the site through the stabilized entrance.

B. Structural Practices

1. Silt Fence

- Silt fence shall be installed to intercept sediment laden runoff from small drainage areas of disturbed soil. Areas below gradient of the silt fence shall be undisturbed or permanently stabilized.
- Maintenance shall be performed as needed. Accumulated sediment shall be removed, and damaged or degraded silt fence shall be replaced when bulges develop in the silt fence.

2. Check Dam

- Check Dams have been employed to interrupt concentrated flow within drainage channels and reduce erosive velocities. Check Dams are placed within drainage channels such that the crest of the downstream check dam is at the same elevation as the toe of the next upstream check dam.
- Both temporary and permanent check dams are to be utilized on this project. Temporary check dams are generally intended to minimize erosive velocities during construction while vegetative growth is established. Permanent check dams minimize erosive velocities during construction and remain in place after establishment of vegetation to reduce flow velocities after construction, extend times of concentration, and promote infiltration.

3. Rock Outlet Protection

- Rock Outlet Protection consists of stone lining at storm sewer outfalls into open drainage channels. The outlet protection is intended to reduce and distribute flow energy of concentrated flows to levels that will not cause erosion within the receiving channel at the pipe outlet.
- Rock Outlet Protection requires minimal long-term maintenance. Maintenance activities consist of regular visual inspections for evidence of erosion and/or lining displacement, removal of any deposited sediment, and replacement of any displaced stone.

4. Dewatering

- All dewatering conducted to accommodate utility or foundation installation shall be accomplished by means of a sump pit or through the use of a trash pump.
- When a trash pump is used, all discharge water shall either be conveyed to a portable holding tank, or passed through a

sediment capture device such as a "DirtBag" by ACF Environmental, Inc.

- No dewatering effluent shall be discharged directly to the storm sewer system without prior Town approval.

5. Concrete Washout Area

- Construction activities involving the erection of concrete structures (walls, foundations, slabs, etc.) often result in the deposition of concrete waste or concrete wash-off within the project site and adjacent travel routes by construction vehicles. In order to minimize the possibility of concrete deposition off-site, a concrete washout area shall be incorporated into the project.
- A concrete washout area shall be constructed as shown on the plans. The washout area shall consist of an area with a straw bale perimeter and be lined with an impermeable liner to prevent the movement of water from the interior.
- The intent of the washout area is to provide a location for the rinsing of concrete delivery truck chutes, and tools used in the construction of concrete features. The washout area will allow the concrete containing wash water to solidify prior to removal. Solids removed from the wash area may be used as fill on-site where determined to be suitable by the Owner's representative, otherwise washwater and/or waste materials from the wash area shall be disposed of off-site in a legal manner.

3.3 Storm Water Management

The best approach to storm water management for construction activities is through the use of a project specific designed Storm Water Pollution Prevention Plan (SWPPP). The development of the SWPPP is to prevent erosion and pollutants from the construction materials mixing with storm water runoff and being discharged from the project site.

Specific requirements for management of storm water and maintaining water quality include, but are not limited to:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural condition;
2. There shall be no suspended, colloidal, and settleable solids that will cause deposition or impair the waters for their best usages, and;
3. There shall be no residue from oil and floating substances, visible oil film, globules or grease.

The following steps will help ensure proper handling of construction wastes:

1. The Contractor shall designate a waste collection area on site;
2. An adequate number of containers with lids or covers shall be placed in the collection areas;
3. When required, containers shall be located in a covered area;
4. Waste collection shall be coordinated when containers are full. If a container does overflow, cleanup shall be performed immediately.

The following steps will help ensure proper handling of hazardous construction products and materials:

1. Check with local waste management authorities to determine what the requirements are for disposing of hazardous materials;
2. Use all of a product before disposing of the container;
3. Do not remove the original product label from the container as it contains important information;
4. Surplus products shall not be mixed together prior to disposal unless specifically recommended by the manufacturer;
5. The manufacturer's recommended disposal methods, printed on the label, shall be followed;
6. Contaminated soils may be encountered onsite during earthmoving activities or during the cleanup of a spill or leak of hazardous product. A sample of the contaminated material will require laboratory analysis. Disposal methods

will be determined following a review of the analysis results. The excavated material shall be stored in a roll-off dumpster. The roll-off shall be covered to prevent precipitation from entering it;

7. Residual concrete remaining in concrete mixing trucks may be emptied or washed onsite. Excess concrete and wash water shall be disposed of in a manner that prevents contact between these materials and storm water which will be discharged from the site. A concrete washout area shall be constructed onsite to contain these materials until they harden, at which time they may be incorporated into the fill on site, or disposed of off-site. Excess concrete, or concrete that does not meet the project specifications, shall be handled in a similar manner.

On a construction site, the material storage area can become a major source of risk due to possible mishandling of materials or accidental spills. The following steps will ensure proper material management:

1. Pesticides will be handled as infrequently as possible. All applicable Federal, State and Local regulations shall be observed when using, handling, or disposing of these materials;
2. Oil, gasoline, and lubricants shall be handles carefully to minimize their exposure to stormwater;
3. Equipment shall be available to contain and cleanup petroleum spills in fuel storage areas, and shall on board maintenance and fueling vehicles;
4. Petroleum products shall be stored in covered areas. Dikes shall be constructed around fuel vehicle storage areas to contain spills;
5. The application of fertilizers shall be limited to the area specified, and the minimum recommended application rate;
6. Soil erosion and sediment control practices will reduce the amount of fertilizers that can leave the site in runoff;
7. Use of detergents on site shall be limited to only that which is essential to perform the work. Wash water containing detergents shall not be discharged to the storm sewer system;

8. Equipment shall be available to contain and cleanup hazardous materials in the areas where these materials are stored or used. Spills shall be cleaned up immediately. Materials shall be stored in a dry, covered area;
9. Store and handle material to prevent spills. Keep materials in tightly sealed containers in a well ventilated area;
10. All containers shall be clearly labeled;
11. Exposure to contact with stormwater shall be reduced if there is a spill;
12. Cleanup procedures shall be clearly posted;
13. Personnel responsible for responding to a spill of toxic or hazardous materials shall be identified and properly trained, or a private firm that specializes in spill cleanup shall be identified.

3.4 Other Requirements

1. Any discharges other than storm water must be in compliance with an appropriate SPDES permit.
2. All construction activities shall be in compliance with all federal, state and local laws as required.
3. The contractor shall be responsible to insure that the plan has been approved by local officials or any authorized agency.

3.5 Inspections

Inspections are important for visually evaluating potential storm water runoff pollution sources at the facility. All projects shall be inspected periodically to ensure contaminants are not present in the storm water exiting a project site.

During construction or grading activities, the Owner or Owners' representative shall be on-site at all times, and shall document the effectiveness of all erosion & sediment control practices. Inspections and reports shall be completed twice every seven (7) calendar days, with a minimum of two days between inspections. Additional inspection requirements during temporary or permanent construction activity shutdown are included in Part IV of the NYSDEC SPDES General Permit for Construction Activities, GP-0-25-001.

3.6 Maintenance

A. During Construction

The contractor is required to inspect and maintain all soil erosion and sediment controls throughout the duration of the project and until final stabilization of the site. "Final Stabilization" means that all soil disturbing activities at the site have been completed, and that a uniform, perennial vegetative cover with a density of 80% or better has been obtained.

Maintenance shall include, but not be limited to, repair or replacement of any existing controls, removal of sediment and any other measures deemed necessary which would reduce soil erosion and sediment runoff. Refer to Section 3.2 for maintenance of individual controls. Inspection checklists for this project have been included in Appendix E.

B. Long Term / Post-Construction

After construction of any permanent storm water management facilities has been completed, a long-term maintenance plan is required to ensure the effectiveness of the facilities in storm water runoff quantity and quality management. Long-term maintenance for this project shall include the following:

- Semi-annual inspection and removal of accumulated sediment and / or debris from within drainage swales and open detention / retention areas;
- Semi-annual repair of any erosion of graded / turfed areas. Repair by topsoiling and seeding shall generally occur in early spring (May) and late summer (September-October);
- Semi-annual inspection and cleanout of the infiltration basin outlet structure and outlet structure sump;
- Semi-annual inspection of the permanent check dams and rock outlet protection;

A long-term inspection checklist has been included in Appendix E.

3.7 Contractors

The general site contractor, and all other contractors which will perform activities with potential to result in soil and vegetative disturbances on site, must sign a SWPPP certification form before undertaking any construction activity at the. The contractor is responsible for any and all subcontractors working on the SWPPP. A copy of the Contractor's Certification Statement has been included in Appendix D.

(This Page Intentionally Left Blank)

APPENDIX A

SITE MAPS

- Fig. 1 - USGS Location Map
- Fig. 2a & 2b - USDA / NRCS Soils Map
- Fig. 3 - NYSDEC InfoMap
- Fig. 4a & 4b - FEMA Panel Map

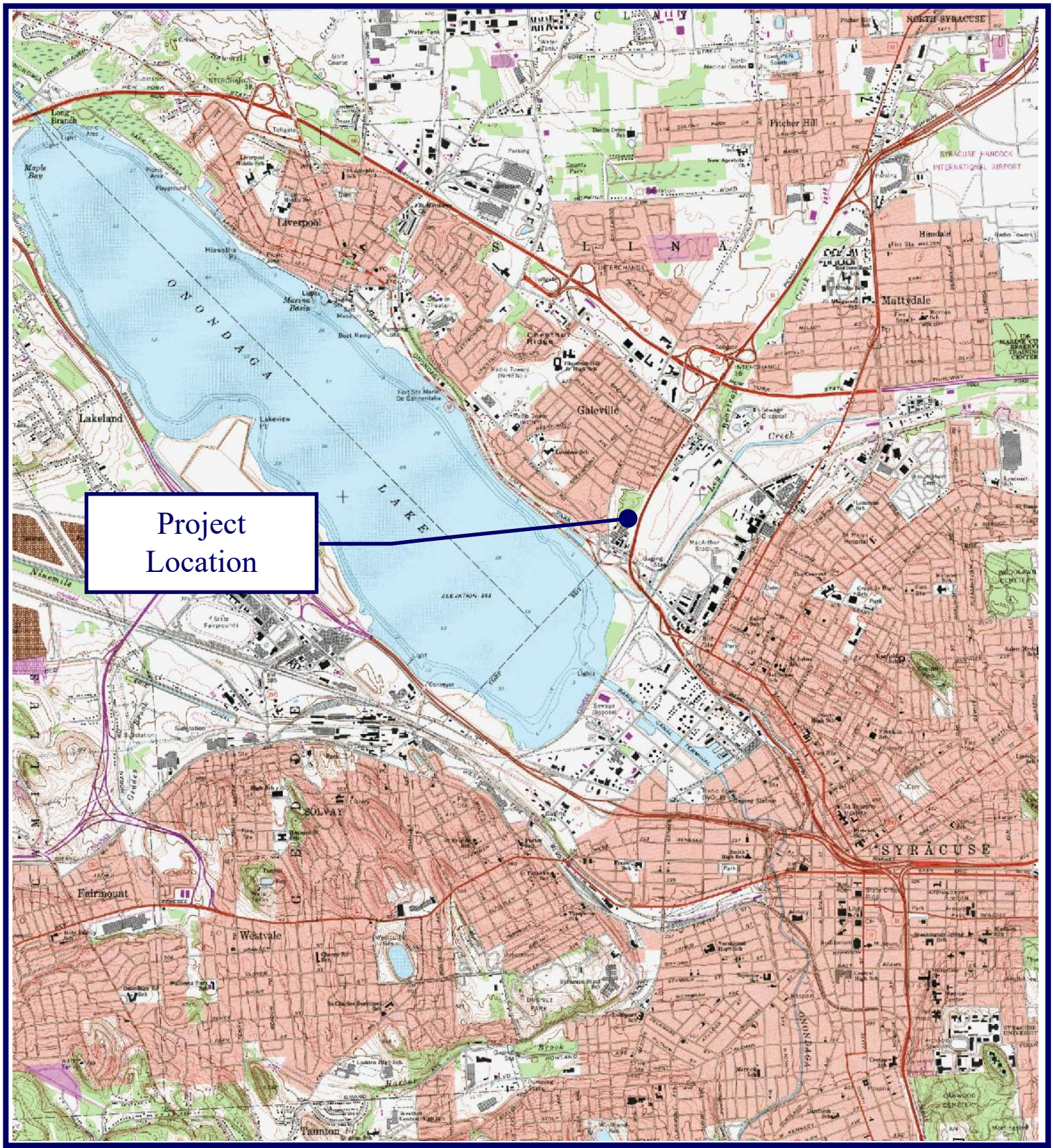


Figure 1 - USGS Topographic Map

Portion Syracuse West USGS Quadrangle Map

URBan Villages
100 Buckley Road
Liverpool, New York 13088

Onondaga County

New York State

Scale: Not to Scale

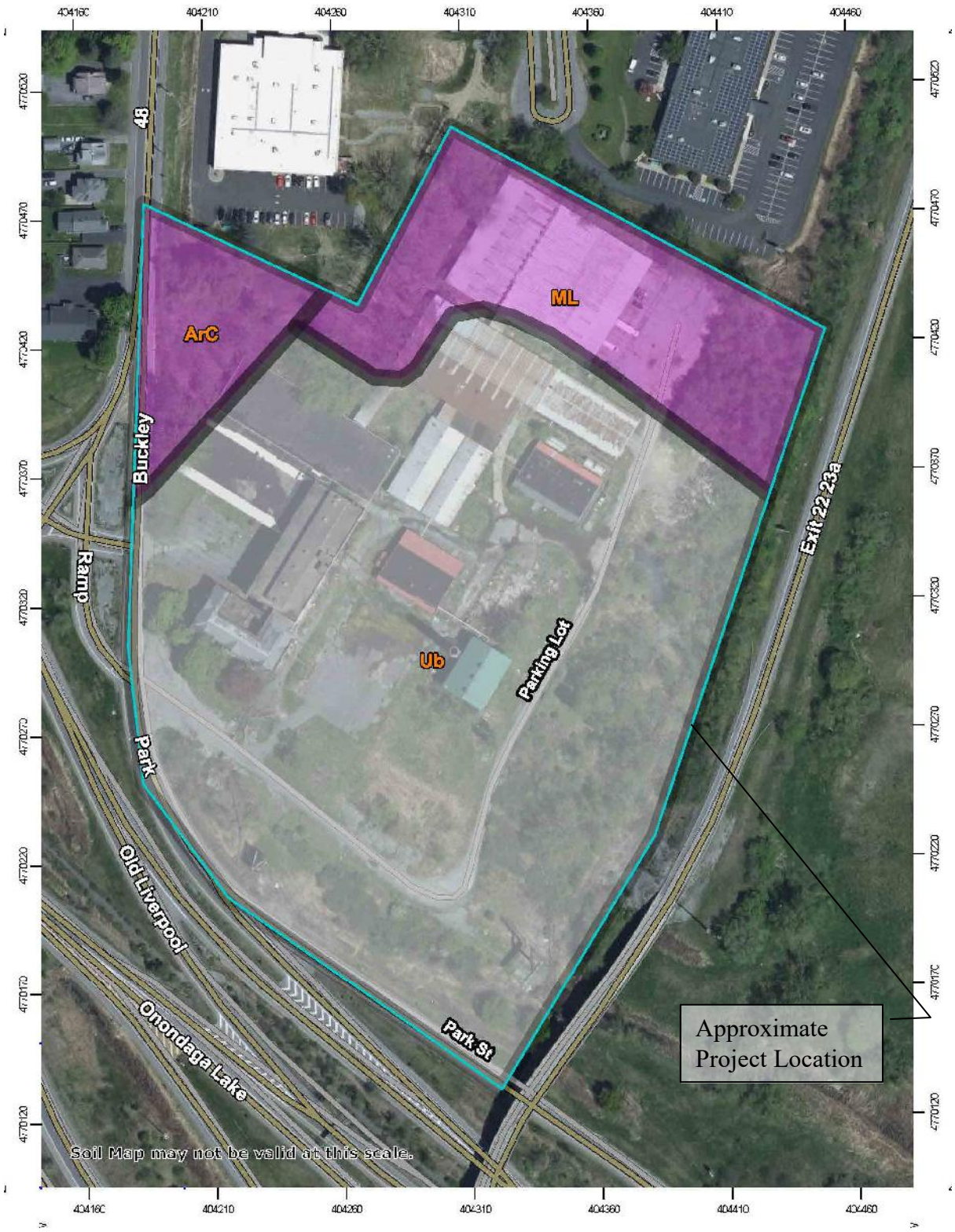


Figure 2a – USDA-NRCS Soils Map

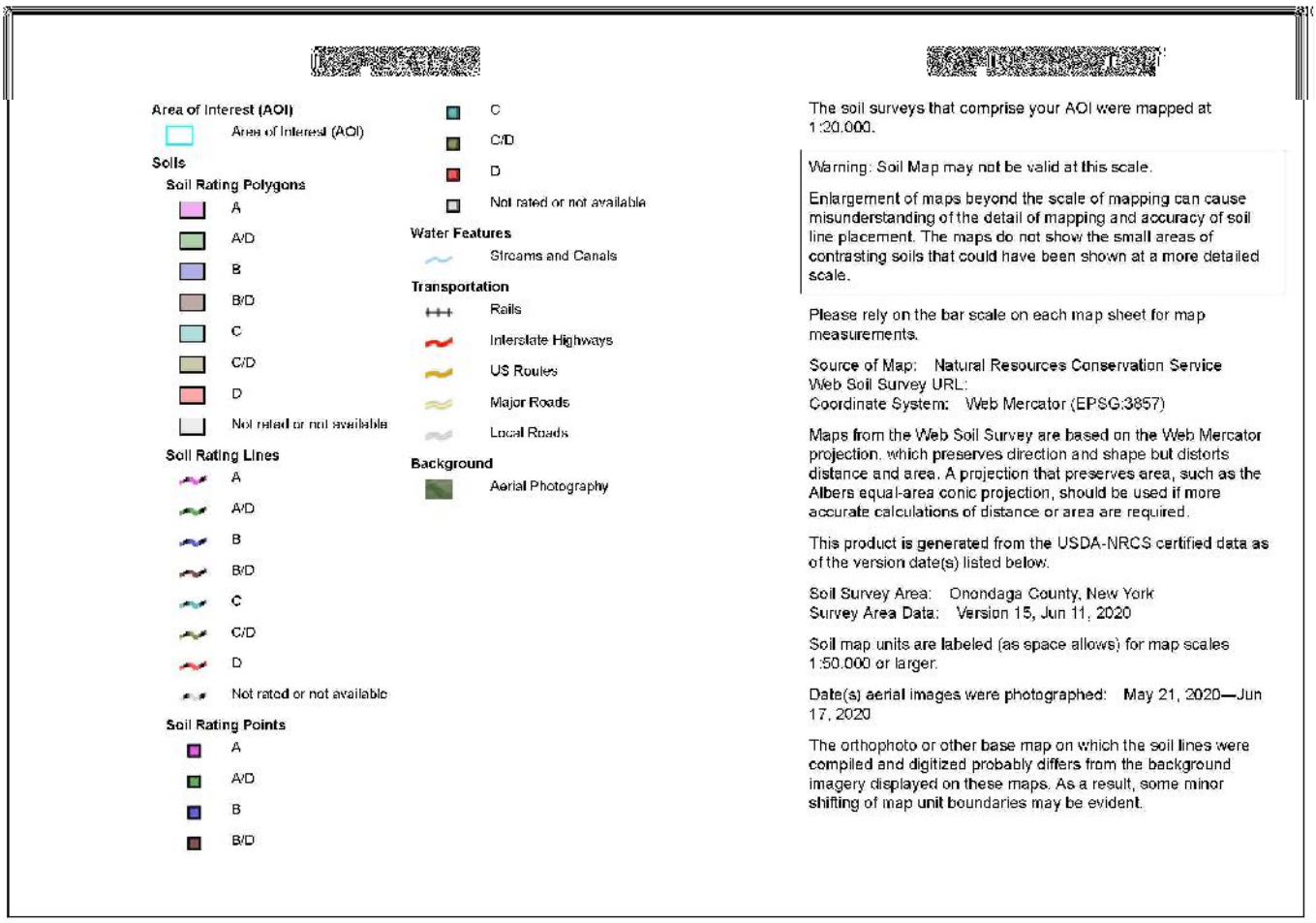
Source: USDA/NRCS Web Soil Survey

URBan Villages
100 Buckley Road
Liverpool, NY 13088

Onondaga County

New York State

Scale: Not to Scale



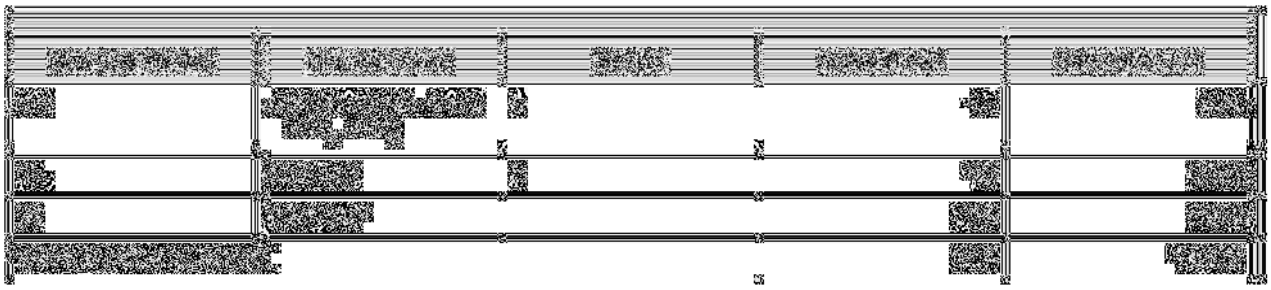


Figure 2b – USDA-NRCS Soils Map

Source: USDA/NRCS Web Soil Survey

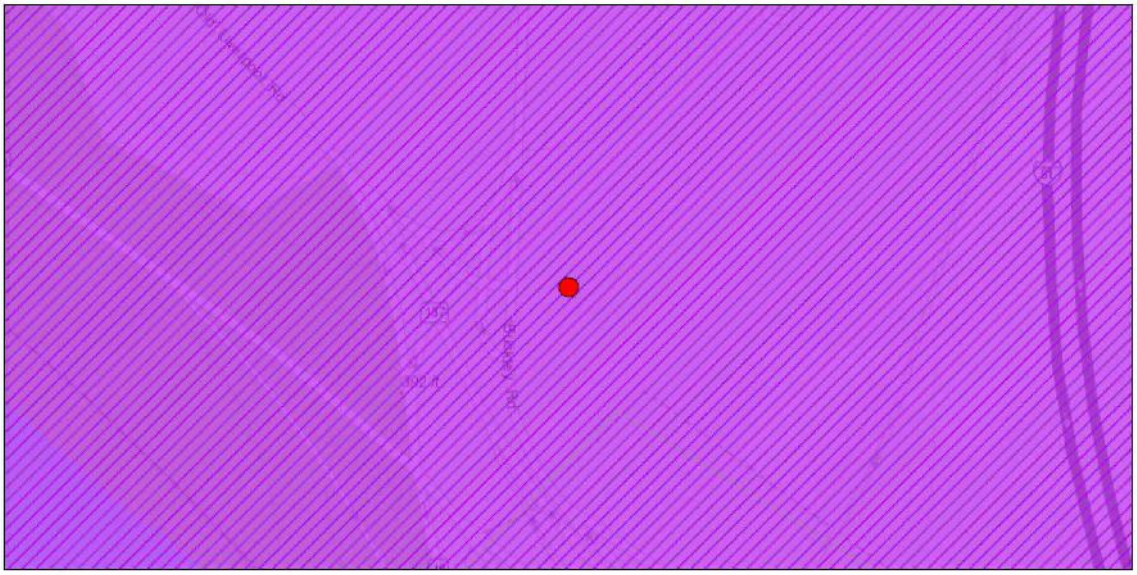
URBan Villages
100 Buckley Road
Liverpool, NY 13088

Onondaga County

New York State

Scale: Not to Scale

Stormwater Interactive Map



The coordinates of the point you clicked on are:

UTM 18	Easting:	404213.047	Northing:	4770347.419
Longitude/Latitude	Longitude:	-76.177	Latitude:	43.080

[redacted]

DEC Administrative Boundaries

Region 7:
(Central New York) Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga and Tompkins counties. For more information visit http://www.dec.ny.gov/about/615.html.

Watershed Improvement Strategy

[redacted]

Figure 3 – NYSDEC InfoMap

Source: NYSDEC

N

URBan Villages
100 Buckley Road
Liverpool, NY 13088

Onondaga County

New York State

Scale: Not to Scale

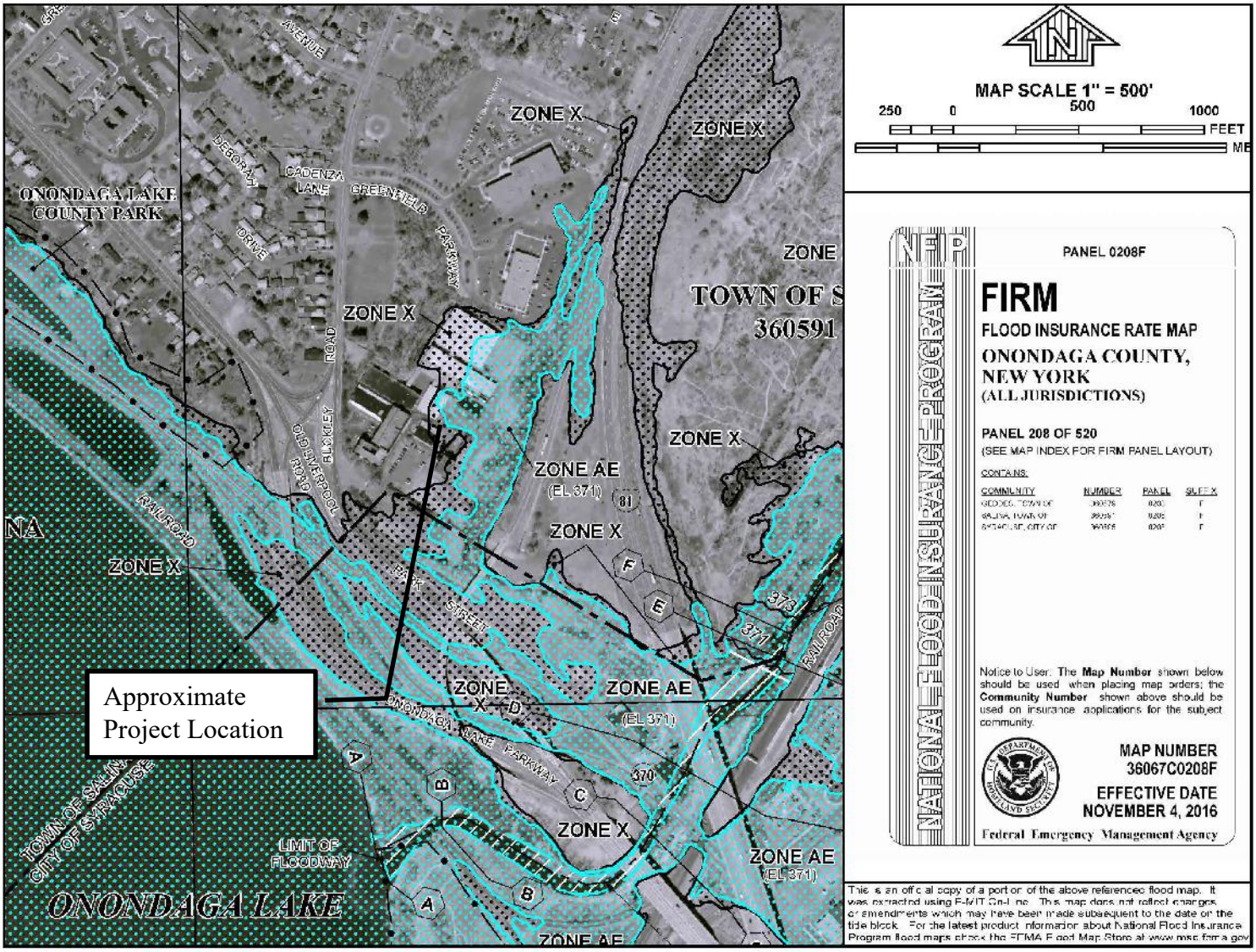


Figure 4a – FEMA Map

Source: FEMA Map Service Center
Panel 36067C0182F
November 4, 2016

URBan Villages
100 Buckley Road
Liverpool, NY 13088

Onondaga County

New York State

Scale: Not to Scale

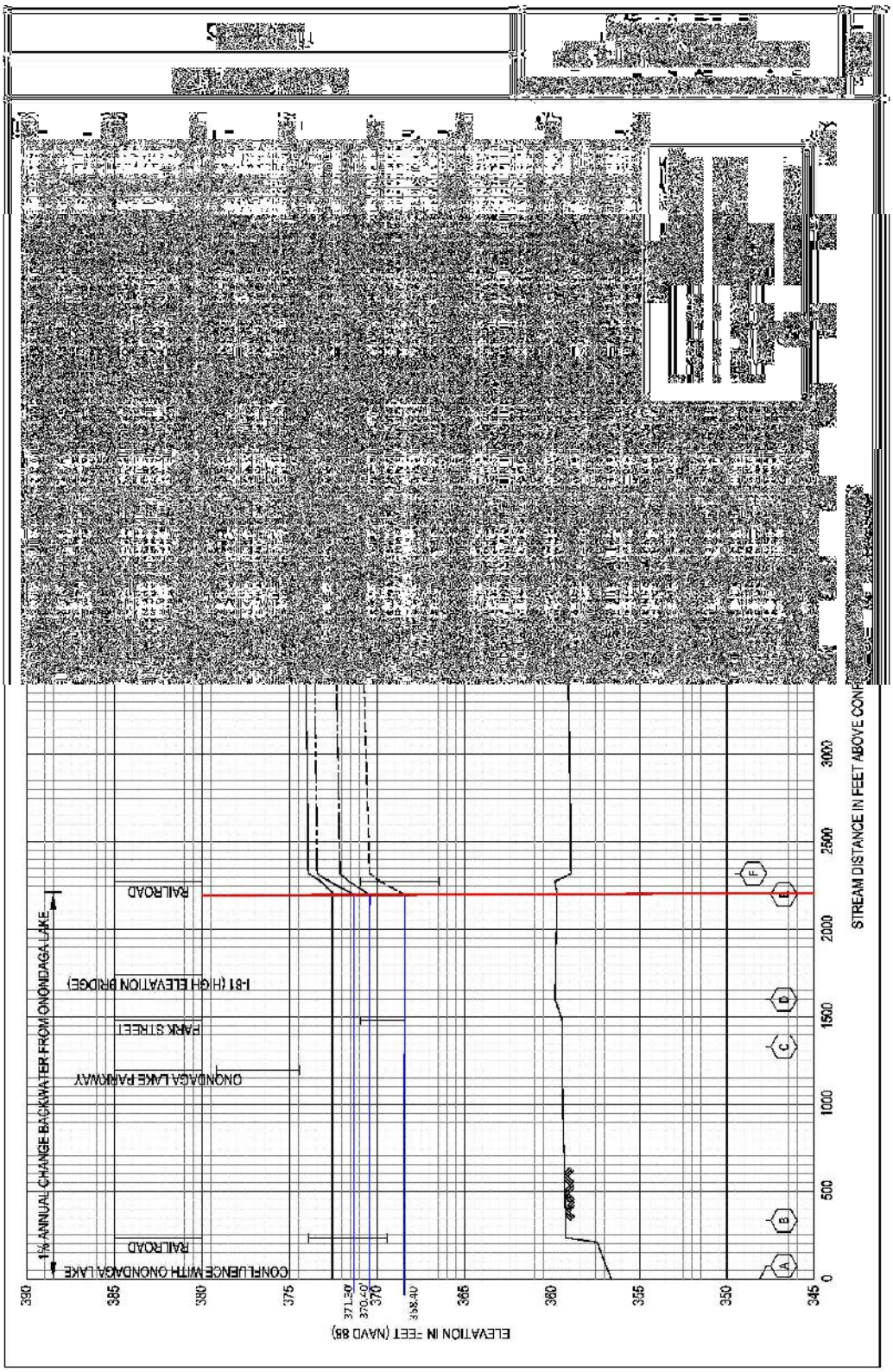


Figure 4b – FEMA Map

Source: FEMA Map Service Center
Panel 36067C0182F
November 4, 2016

URBan Villages
100 Buckley Road
Liverpool, NY 13088

Onondaga County

New York State

Scale: Not to Scale

APPENDIX B

STORMWATER REPORT AND CALCULATIONS

Stormwater Report

for a

Proposed
URBan Villages
Multi-Family Development

at

100 Buckley Road
Liverpool, New York 13088

Table of Contents

Section 1: Overview.....1

Section 2: Basis of Analysis.....1

Section 3: **Hydrologic Analysis**

Existing Watershed Characteristics.....3

Proposed Watershed Characteristics.....4

Section 4: Conclusions.....7

Appendices

Appendix B-1: Stormwater Maps
Appendix B-2: Stormwater Management Calculations

Section 1: Overview

The proposed URBan Villages site is a proposed redevelopment site located at 100 Buckley Road, Liverpool, NY. The site is located at the southern-most point of Buckley Road, at the northeasterly corner of the intersection of Buckley Road, Park Street, Old Liverpool Road, Onondaga Lake Parkway and the northbound off-ramp and southbound on-ramp to Interstate 81. The site is currently an abandoned industrial property consisting of multiple (approximately 8) buildings of varying construction type and size, asphalt paving, C&D debris piles, and overgrown areas of brush. Over the course of 2 to 4 phases, the site will be redeveloped into a multi-family residential development with possible supporting commercial and/or retail uses. The intent of this stormwater report is as a component of the stormwater pollution prevention plan (SWPPP) for the project, and to ensure that the project has been designed to mitigate water quality and quantity impacts in accordance with local and state stormwater regulations, as well as to ensure that construction of the proposed project can be completed with no negative impact to adjacent or downstream properties and drainage facilities.

Section 2: Basis of Analysis

The analysis of storm water runoff from the project site was undertaken using methods described in the United States Soil Conservation Service Technical Release Number 55 (TR-55) Urban Hydrology for Small Watersheds.

Input information for TR-55 involves the determination of a number of hydrologic factors. These include:

- Drainage Areas
- Runoff Curve Numbers (CN's)
- Times of Concentration (Tc's)
- Precipitation Information
- Soils and Land Use Information

Soils are classified into hydrologic soil groups to indicate the infiltration rates and runoff potential after prolonged wetting. The hydrologic soil groups are:

A	Low runoff potential
B	Moderately low runoff potential
C	Moderately high runoff potential
D	High runoff potential

Soils which have been identified within the project limits consist of made land (ML), urban land (Ub), and Arkport very fine sandy loam (ArC), soils. The indicated soils are assigned a - hydrologic soil group (HSG) classification 'A' for Arkport and made land soils. For purposes of this analysis, and based upon observed subsurface soil conditions in numerous excavations on site as part of subsurface explorations, the Ub soils have also been assigned an HSG 'A' classification as these areas consist predominantly of free-draining sand and sandy-gravels.

The infiltration rate is the rate at which water enters the soil at the soil surface. Generally, development reduces infiltration and decreases the Time of Concentration, which results in higher peak rates of runoff. The volume of runoff is determined by the amount of precipitation and the infiltration characteristics related to soil type, type of vegetal cover (lawns, meadow, woods, etc.), impervious surfaces (roads, roofs, etc.), and surface retention. The volume of rainfall that falls on a specific watershed does not change as a result of development. However its flow characteristics are altered upon reaching the land surface. Development will generally result in more impervious area and thus increases the surface water component and decreases the ground water component. The runoff Curve Number (CN) is a composite number assigned to a combination of soil types and land uses. The CN is affected by the infiltration rate of the soil, vegetation, and the amount of impervious area located within the drainage area. High CN's typical of a commercial setting, model high volumes of runoff while low CN's typical of wooded, well-drained soils model low volumes of runoff. The runoff curve numbers used in our computer models reflect conditions as determined using field observations.

Before runoff can reach the point of study it must follow a variety of flow paths including roofs, lawns, pavements/roads, culverts, and open channels. The longest amount of time it takes for precipitation that becomes overland runoff to travel to the point of study is termed the Time of Concentration (Tc). The time of concentration is determined by the slope, length and surface roughness of the flow path. The Tc has a significant effect on peak flows. Reducing the Tc increases peak discharge rates. The Tc for a flat wooded area will be longer than that of a flat commercial development for equal travel distances and slopes. The size of

the drainage area also influences peak discharge rates. A larger drainage area will contribute more flow to a given point of study.

Peak rates of flow are also affected by the antecedent moisture condition (AMC) of the soil and by the distribution of rainfall within a given storm. The Type II rainfall distribution was used in these analyses. This distribution is characteristic of rainfall expected in the central New York region.

The antecedent moisture condition of soil is broken down into three categories referred to as 1, 2 and 3. AMC 1 is characteristic of soil in a growing season that has received less than 1.4 inches of rainfall within the past five-day period. AMC 2 is characteristic of soils that have received between 1.4 and 2.1 inches of rainfall, and AMC 3 is characteristic of soils that have received more than 2.1 inches of rainfall, within the past five-day period. An AMC 2 was used in the analysis of runoff from this site.

Ultimately, peak rates of flow or discharge are based on the above parameters as well as the total drainage area within the watershed and the location and extent of development within the watershed.

Section 3: Hydrologic Analysis

3.1 Existing Watershed Characteristics

The existing-conditions site consists of an existing industrial buildings, asphalt paved parking, scrub-brush, and areas of C&D debris. Under existing conditions, and for purposes of analysis, the site is approximately 14.3 acres in size, generally from the edge of pavement of Buckley Road and Park Street to the west and south respectively, and to the property boundaries to the north and east. The site drains to the east, to an existing ditch at the base of the I-81 southbound off-ramp to Hiawatha Blvd. The point of analysis chosen is the location of an existing drainage pipe near the southeasterly corner of the property, near the base of an existing billboard. This ditch drains to an unnamed tributary of Ley Creek, and eventually Onondaga Lake.

As a result of the hydrologic analysis of existing conditions, the existing peak rates of runoff for the various storms are summarized in the following table:

	Storm Event, Yr			
Existing Peak Discharge Rate, CFS	**1-yr**	**2-yr**	**10-yr**	**100-yr**
"10L" (Discharge Along Northerly Property Line)	0.01 cfs	0.04 cfs	0.3 cfs	1.6 cfs
"8L" (Site Discharge to existing East Ditch)	0.92 cfs	2.64 cfs	7.22 cfs	24.04 cfs
"11L" (Discharge to Park Street Ditch)	0.00 cfs	0.00 cfs	0.02 cfs	1.48 cfs

3.2 Proposed Watershed Characteristics

The post-developed (proposed) conditions site consists primarily of building roof surface, paved driveway and lawn areas. For purposes of analysis, the post-developed drainage area (boundary) has remained unchanged compared to that of the pre-developed condition. Overall, the project results in a net increase in impervious area of approximately 2.73 acres, consisting of a net increase of approximately 0.21 acres of rooftop and 2.52 acres of paved surfaces. Surface runoff generally follows the same patterns as existing conditions. Peak discharges and runoff volumes have been attenuated by the implementation of an extended detention wet pond interconnected with two (2) subsurface storage areas with exfiltration capacity, as well as practices intended to provide runoff additional reduction capacity, including dry swales with permanent check dams, permeable shoulders, and tree planting / tree pits. The subsurface storage areas will accept direct runoff from the proposed storm sewer systems and will provide pre-treatment chambers and 18-inch diameter HDPE storage

chambers. In total, between pipe volume and stone void volume, the subsurface storage system provides approximately 41,200 cf of storage volume.

Additionally of significance is the fact that a portion of the site is located within the 100-year floodplain. The 100-year flood elevation for the site has been determined to be approximately 371.00'. As a result, the design of the outfall system for the proposed wet pond will incorporate a check valve to restrict the reverse flow of floodwaters into the site. The embankment along the easterly property boundary will further be raised to be above the 100-year floodplain elevation, as well as above the 100-year elevation of the on-site stormwater management facilities. For purposes of hydrologic modeling, each modeled storm event has assumed a tailwater elevation condition equal to that established by FEMA for Ley Creek and Onondaga Lake in the vicinity of the project.

Because tailwater effects will potentially impact the operation of the stormwater management facilities on site, the hydrologic model has been developed assuming dynamic routing principles, with the 10-year and 100-year flood elevations built in as a tailwater elevation. Due to the size of the watershed tributary to Onondaga Lake, and the corresponding time of concentration, it was assumed that an observed peak elevation would occur at approximately 16.0 hours into a storm event. In reality, this timing will likely occur later than 16 hours, but 16 hours was used as a conservative estimate.

As a result, the proposed peak rates of runoff (for the portion of the site discharging directly to the Ley Creek tributary) , as well as to the northerly property boundary and directly to the Park Street ditch, are summarized in the following table:

	Storm Event, Yr			
Proposed Peak Discharge Rate, CFS	**1-yr**	**2-yr**	**10-yr**	**100-yr**
"ES-6" (Comparable to Existing Conditions "8L")	0.34 cfs	0.48 cfs	1.32 cfs	7.83 cfs
"1L" (Comparable to Existing Conditions "10L")	0.01 cfs	0.04 cfs	0.3 cfs	1.6 cfs
"15L" (Comparable to Existing Conditions "11L")	0.00 cfs	0.00 cfs	0.01cfs	0.45 cfs

Bioretention provides stormwater attenuation as well as water quality volume and runoff reduction along the southerly boundary of the site. Additional runoff reduction has been incorporated in the tree planters / tree pits. Runoff reduction is the re-introduction of a portion of the increased surface runoff from development back into the soil. Design data sheets for the runoff reduction volume credit associated with the dry swales are included in Appendix B-2.

The water quality volume, $WQ_v = RRv = \frac{P * R_v * A}{12}$

P = 1-yr rainfall amount, in., = 2.0"

$R_v = 0.05 + 0.009 * I$, where I is the percent impervious cover

= 0.554 (based on contributing non-building cover)

A = contributing drainage area, ac = 9.332 ac

$WQv = RR_v$ = 0.855 ac-ft (37,262.7 cf)

Two post-developed drainage areas are not tributary to the stormwater management facilities, and the impervious cover of these areas was not altered, therefore they were excluded from this calculation, as was rooftop imperviousness as this area did not

significantly change due to the "redevelopment" nature of the project. The WQv provided within the permanent pool of the main detention basin and secondary detention basin (closest to Park Street billboard) is 0.432 ac-ft, and the extended detention volume provided (which is restricted by a 3-inch orifice) is 0.581 ac-ft, for a total WQv provided of 1.013 ac-ft.

For practical purposes, all building rooftop impervious areas were excluded from imperviousness calculation, and only all proposed paving (patios, roads, sidewalks, etc.) were considered. From review of the hydrologic model, the proposed conditions site 1-year runoff volume is approximately 0.574 ac-ft. This runoff volume is referred to as the Channel Protection Volume, Cpv and is required to provide a slow, controlled release of the 1-yr storm event to ensure the integrity of downstream facilities. This volume is provided within the extended detention volume of the two main detention basins, which is 0.551 ac-ft.

Typically, the runoff reduction volume required for new developments is equivalent to the water quality volume requirements, however, sites with restrictive or prohibitive features which limit the ability to effectively retain runoff have the option to meet minimum runoff reduction criteria, RRv_{min}, provided that the limitations cannot reasonably be overcome.

The minimum RRv for this site is thus calculated as (based upon contributing non-rooftop imperviousness as described above):

$$RRv_{min} = \frac{P * R_v * A_{ic} * S}{12} ;$$

P = 2.00"

R_v = 0.95 (as I = 100%)

A_{ic} = area of impervious cover, ac, = 5.174 ac

S = reduction factor by hydrologic soil group

= **0.55**, 0.40, 0.30 and 0.20 for

HSG **A**, B, C and D, respectively

The minimum RR_v calculated for this project based on the impervious area to be constructed within each soil type is 0.45 ac-ft or 19,626 cf based. The runoff reduction volume provided through the various facilities within the project are as follows:

Building 5 subsurface storage, stone void volume below system invert	= 2,912 cf
Building 8 subsurface storage, stone void volume below system invert	= 2,150 cf
Dry Swale South of Future Proposed Buildings 9 & 10	= 1,821 cf
Tree Planters (sized as stormwater planters w/ 6" ponding depth)	
Drainage catchment 3	= 33,225 cf
Drainage catchment 5	= 12,237 cf
Drainage catchment 4	= 4,882 cf
Total Volume Provided	= 57,227 cf

Section 4: Conclusions:

Based upon the project site design and incorporated stormwater management features, it is our opinion that the project will meet the stormwater management goals of both the NYSDEC and Town of Salina. Site features have been included to provide both quality and quantity mitigation to the maximum extent practical, and have been shown to provide a reduction of peak runoff rates from existing conditions.

APPENDIX B-1

STORMWATER MANAGEMENT MAPS

-Existing & Proposed Site Conditions Maps

Buildings (Impervious)

Pasture/Grass/Range, Fair Condition

Woods, Fair Condition

Brush, Brush/Weeds/Grass - Fair Condition

Non-Building Impervious Surfaces

Pasture/Grass/Range - Good Condition

Open Water

Hydrologic Soils Group Boundary

ML Soil Type

Drainage Area Boundary

Property Line

Time of Concentration (Tc) Route

EXISTING CONDITIONS
DRAINAGE AREA MAP

A1 EXISTING CONDTIONS PLAN
SCALE: 1" = 60-0"

0 60 120

Calocerinos Engineering
P.O. Box 2187
Syracuse, New York 13
Phone: (315)214-586
Fax: (315)214-5904

STATE OF NEW YORK
STEVEN CALOCERINOS
076781
LICENSED PROFESSIONAL ENGINEER

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 1
Tax Parcel ID #086.-C

For:

Urban Villages PFA, L
925 Seventh North St
Liverpool, New York 1

Town of Salina,
Onondaga County, Ne

MARK	DATE	DESCRIPTION
1	08.31.24	REVIEW COMMEN

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS,
CHECKED BY:	S. CALOCERINOS,

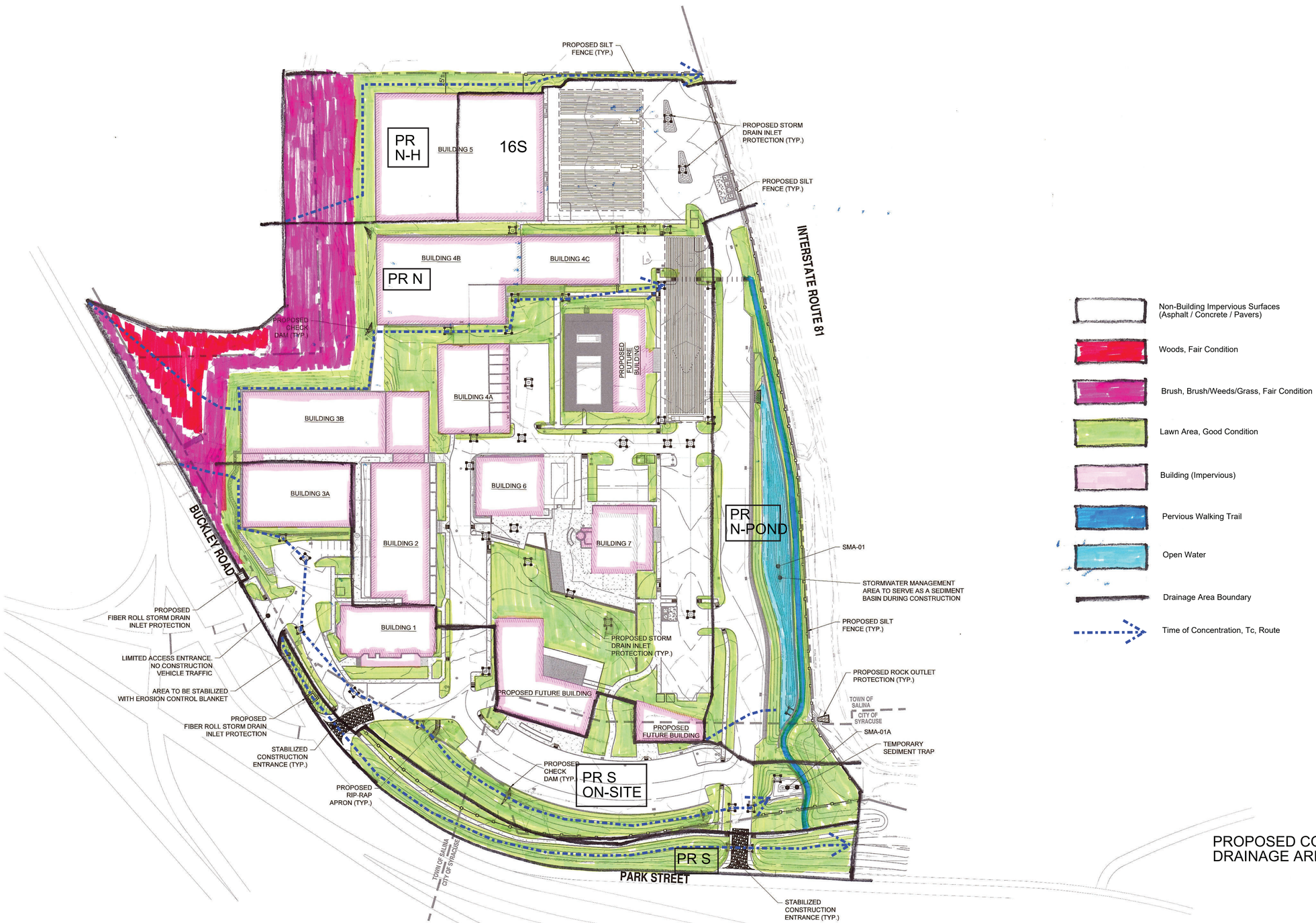
NO ALTERATION PERMITTED HERON
PROVIDED UNDER SECTION 7209 SUB
OF THE NEW YORK STATE EDUCAT

CIVIL

EXISTING CONDITIONS PLAN

V-101

Co



PROPOSED CONDITIONS
DRAINAGE AREA MAP

A1 EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 60-0"

0 60 120

Calocerinos Engineering
P.O. Box 2187
Syracuse, New York 13
Phone: (315)214-586
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · LICENSED · 076781 · PROFESSIONAL ENGINEER

URBAN VILLAGES
100 Buckley Road
Liverpool, New York
Tax Parcel ID #086.-(

For:

Urban Villages PFA, I
925 Seventh North St
Liverpool, New York

Town of Salina,
Onondaga County, N

MARK	DATE	DESCRIPTION
1	08.31.24	REVIEW COMMEN

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS
CHECKED BY:	S. CALOCERINOS

NO ALTERATION PERMITTED HERON
PROVIDED UNDER SECTION 7209 SU
OF THE NEW YORK STATE EDUCA

CIVIL

EROSION AND SEDIMEN CONTROL PLA

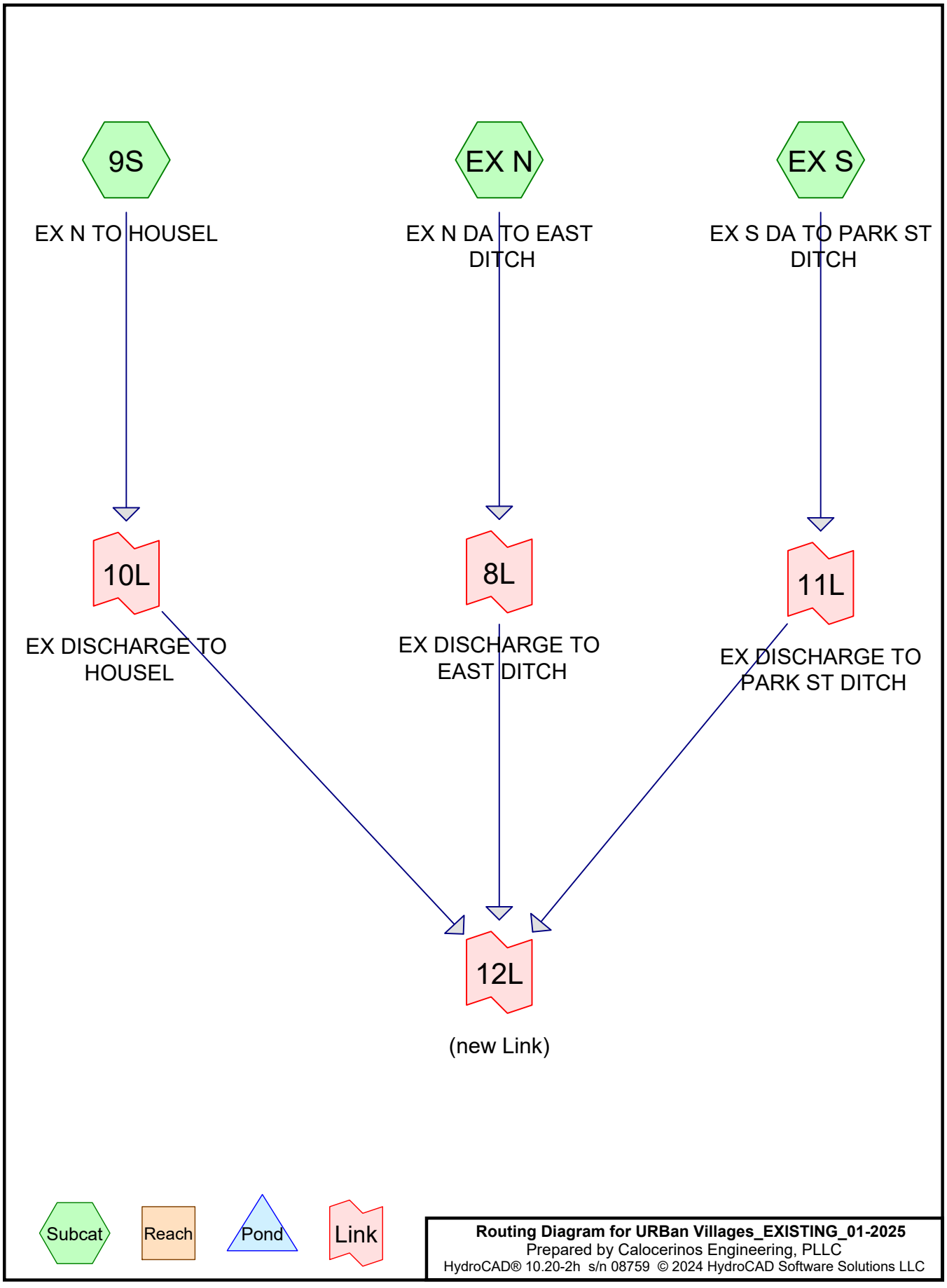
C-108

Co

APPENDIX B-2

STORMWATER MANAGEMENT CALCULATIONS

- Existing and Proposed Site Conditions Hydrologic Model
- WQ_v and RR_v Calculations


9S
EX N TO HOUSEL
EX N
EX N DA TO EAST DITCH
EX S
EX S DA TO PARK ST DITCH
10L
EX DISCHARGE TO HOUSEL
8L
EX DISCHARGE TO EAST DITCH
11L
EX DISCHARGE TO PARK ST DITCH
12L
(new Link)
Subcat
Reach
Pond
Link
Routing Diagram for URBan Villages_EXISTING_01-2025
Prepared by Calocerinos Engineering, PLLC
HydroCAD® 10.20-2h s/n 08759 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	Type II 24-hr		Default	24.00	1	2.00	2
2	2-yr	Type II 24-hr		Default	24.00	1	2.50	2
3	10-yr	Type II 24-hr		Default	24.00	1	3.40	2
4	100-yr	Type II 24-hr		Default	24.00	1	5.80	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.150	35	Brush, Fair, HSG A (9S, EX N, EX S)
2.720	49	Pasture/grassland/range, Fair, HSG A (EX N, EX S)
0.380	39	Pasture/grassland/range, Good, HSG A (EX N, EX S)
2.550	98	Paved parking, HSG A (EX N, EX S)
3.420	98	Roofs, HSG A (9S, EX N)
0.130	98	Water Surface, HSG A (EX N)
0.270	36	Woods, Fair, HSG A (EX N)
14.620	**64**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
14.620	HSG A	9S, EX N, EX S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
14.620		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
5.150	0.000	0.000	0.000	0.000	5.150	Brush, Fair	9S, EXN, EXS
2.720	0.000	0.000	0.000	0.000	2.720	Pasture/grassland/range, Fair	EXN, EXS
0.380	0.000	0.000	0.000	0.000	0.380	Pasture/grassland/range, Good	EXN, EXS
2.550	0.000	0.000	0.000	0.000	2.550	Paved parking	EXN, EXS
3.420	0.000	0.000	0.000	0.000	3.420	Roofs	9S, EXN
0.130	0.000	0.000	0.000	0.000	0.130	Water Surface	EXN
0.270	0.000	0.000	0.000	0.000	0.270	Woods, Fair	EXN
14.620	**0.000**	**0.000**	**0.000**	**0.000**	**14.620**	**TOTAL AREA**	

Time span=2.00-36.00 hrs, dt=0.05 hrs, 681 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 9S: EX N TO HOUSEL Runoff Area=1.010 ac 37.62% Impervious Runoff Depth=0.05"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.01 cfs 0.004 af

Subcatchment EX N: EX N DA TO EAST Runoff Area=11.500 ac 46.52% Impervious Runoff Depth=0.19"
Flow Length=1,245' Tc=30.0 min CN=68 Runoff=0.92 cfs 0.186 af

Subcatchment EX S: EX S DA TO PARK ST Runoff Area=2.110 ac 17.54% Impervious Runoff Depth=0.00"
Flow Length=775' Tc=14.5 min CN=46 Runoff=0.00 cfs 0.000 af

Link 8L: EX DISCHARGE TO EAST DITCH Inflow=0.92 cfs 0.186 af
Primary=0.92 cfs 0.186 af

Link 10L: EX DISCHARGE TO HOUSEL Inflow=0.01 cfs 0.004 af
Primary=0.01 cfs 0.004 af

Link 11L: EX DISCHARGE TO PARK ST DITCH Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link 12L: (new Link) Inflow=0.92 cfs 0.191 af
Primary=0.92 cfs 0.191 af

Total Runoff Area = 14.620 ac Runoff Volume = 0.191 af Average Runoff Depth = 0.16"
58.28% Pervious = 8.520 ac 41.72% Impervious = 6.100 ac

Summary for Subcatchment 9S: EX N TO HOUSEL

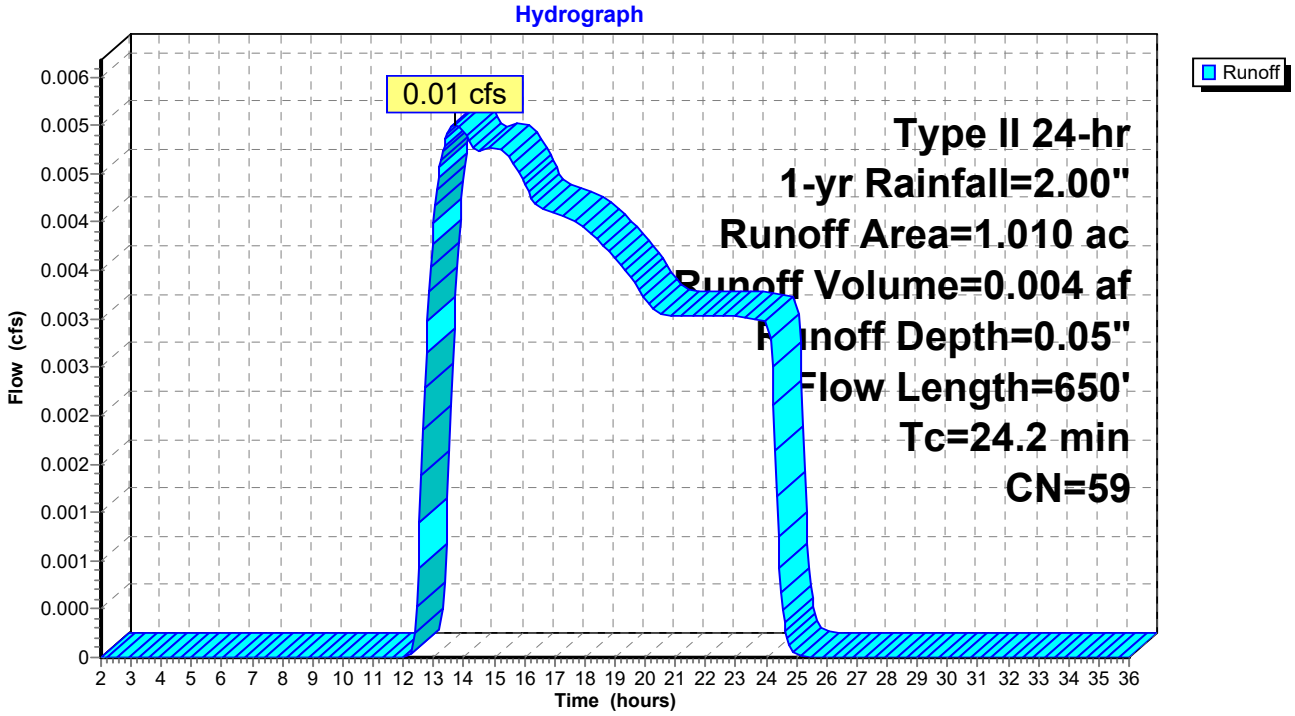
Runoff = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af, Depth= 0.05"
Routed to Link 10L : EX DISCHARGE TO HOUSEL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.380	98	Roofs, HSG A
0.630	35	Brush, Fair, HSG A
1.010	59	Weighted Average
0.630		62.38% Pervious Area
0.380		37.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment 9S: EX N TO HOUSEL



Summary for Subcatchment EX N: EX N DA TO EAST DITCH

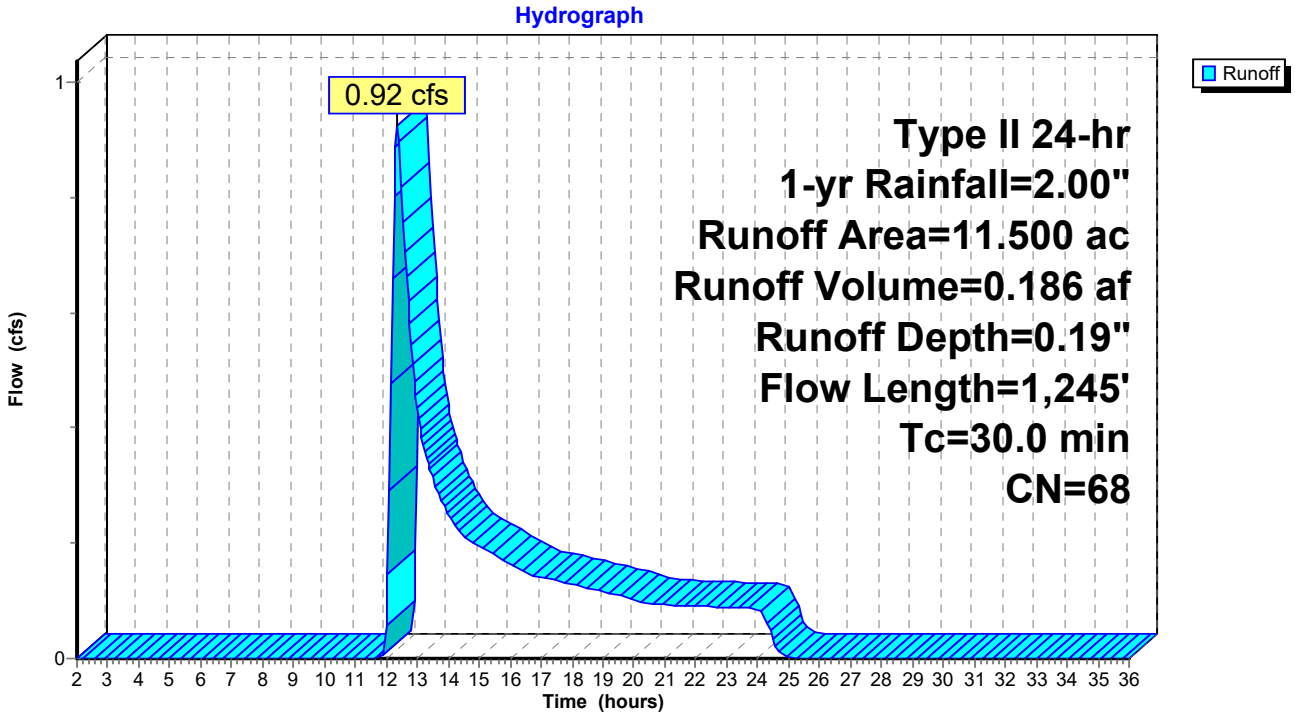
Runoff = 0.92 cfs @ 12.37 hrs, Volume= 0.186 af, Depth= 0.19"
Routed to Link 8L : EX DISCHARGE TO EAST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
2.910	35	Brush, Fair, HSG A
2.180	98	Paved parking, HSG A
3.040	98	Roofs, HSG A
0.130	98	Water Surface, HSG A
0.270	36	Woods, Fair, HSG A
0.270	39	Pasture/grassland/range, Good, HSG A
2.700	49	Pasture/grassland/range, Fair, HSG A
11.500	68	Weighted Average
6.150		53.48% Pervious Area
5.350		46.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.8	125	0.0260	2.60		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
0.5	50	0.0120	1.76		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
1.4	150	0.0100	1.84	0.92	**Channel Flow, CF-1** Area= 0.5 sf Perim= 2.2' r= 0.23' n= 0.030 Short grass
0.4	70	0.0200	3.20	0.96	**Channel Flow, CF-2** Area= 0.3 sf Perim= 2.5' r= 0.12' n= 0.016 Asphalt, rough
5.0	750		2.50		**Direct Entry, PF-1**
30.0	1,245	Total			

Subcatchment EX N: EX N DA TO EAST DITCH



Summary for Subcatchment EX S: EX S DA TO PARK ST DITCH

Existing drainage area to Park St Ditch

[45] Hint: Runoff=Zero

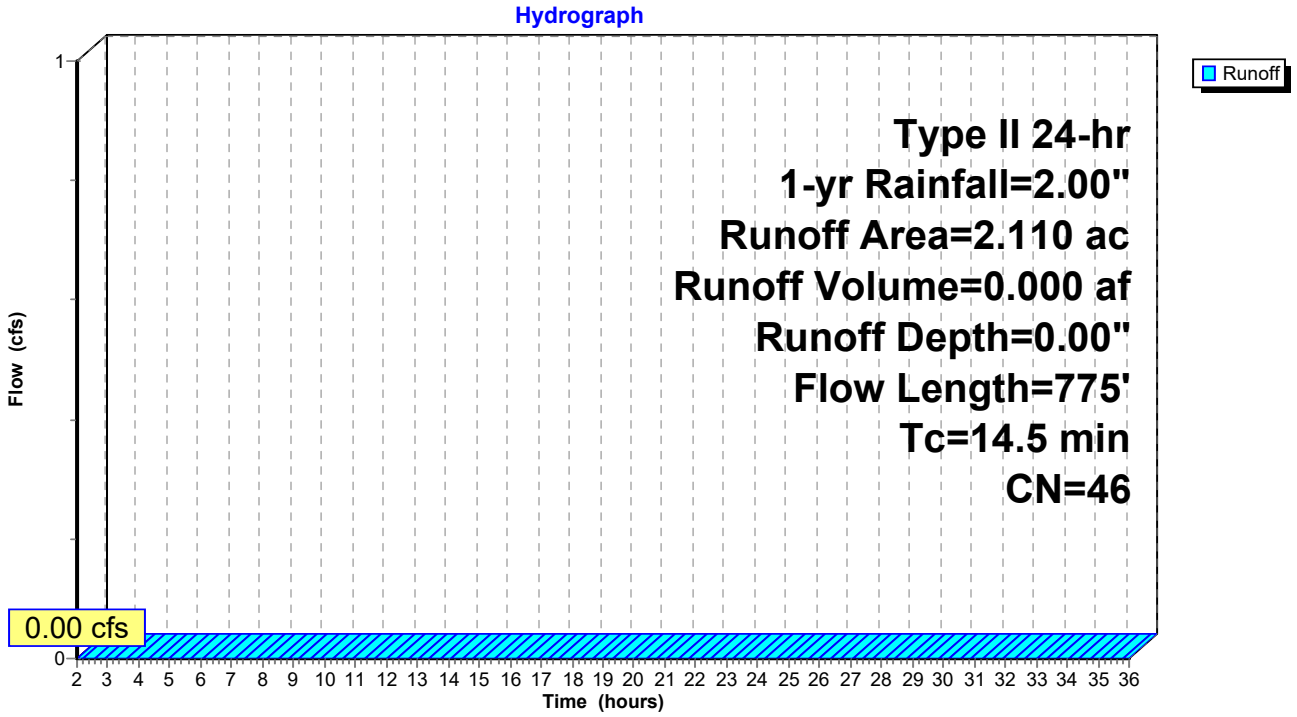
Runoff = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 11L : EX DISCHARGE TO PARK ST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
1.610	35	Brush, Fair, HSG A
0.370	98	Paved parking, HSG A
0.020	49	Pasture/grassland/range, Fair, HSG A
0.110	39	Pasture/grassland/range, Good, HSG A
2.110	46	Weighted Average
1.740		82.46% Pervious Area
0.370		17.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	60	0.0200	0.15		**Sheet Flow, SF** Range n= 0.130 P2= 2.50"
0.6	105	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.2	40	0.0500	3.60		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
7.1	570	0.0050	1.33	1.60	**Channel Flow, CF** Area= 1.2 sf Perim= 5.1' r= 0.24' n= 0.030 High grass
14.5	775	Total			

Subcatchment EX S: EX S DA TO PARK ST DITCH

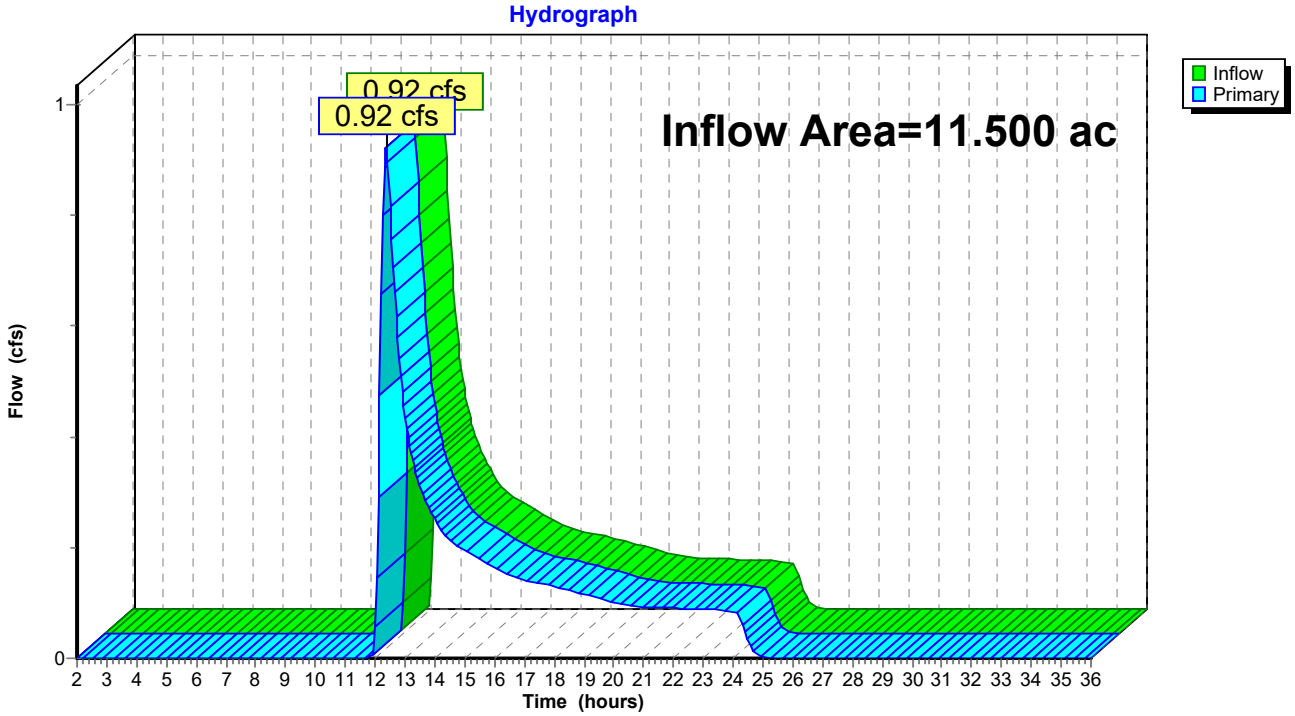


Summary for Link 8L: EX DISCHARGE TO EAST DITCH

Inflow Area = 11.500 ac, 46.52% Impervious, Inflow Depth = 0.19" for 1-yr event
Inflow = 0.92 cfs @ 12.37 hrs, Volume= 0.186 af
Primary = 0.92 cfs @ 12.37 hrs, Volume= 0.186 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 8L: EX DISCHARGE TO EAST DITCH

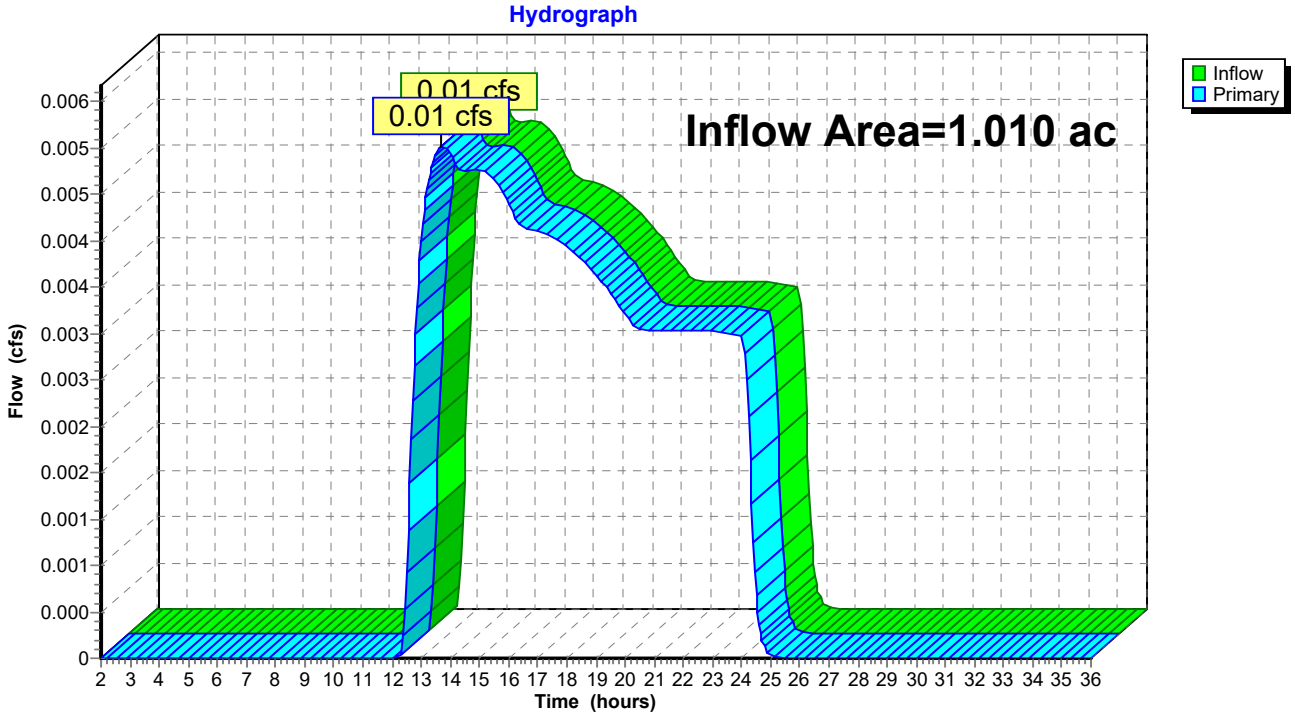


Summary for Link 10L: EX DISCHARGE TO HOUSEL

Inflow Area = 1.010 ac, 37.62% Impervious, Inflow Depth = 0.05" for 1-yr event
Inflow = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af
Primary = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 10L: EX DISCHARGE TO HOUSEL

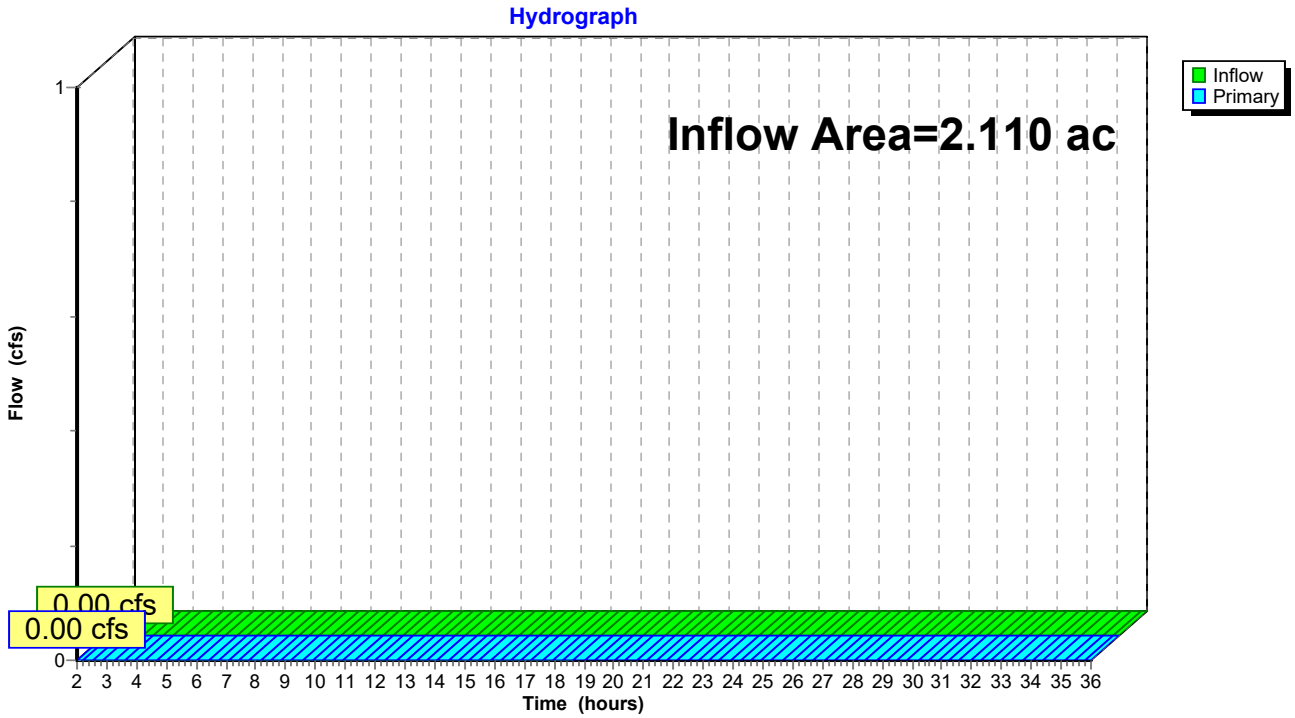


Summary for Link 11L: EX DISCHARGE TO PARK ST DITCH

Inflow Area = 2.110 ac, 17.54% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 2.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 11L: EX DISCHARGE TO PARK ST DITCH

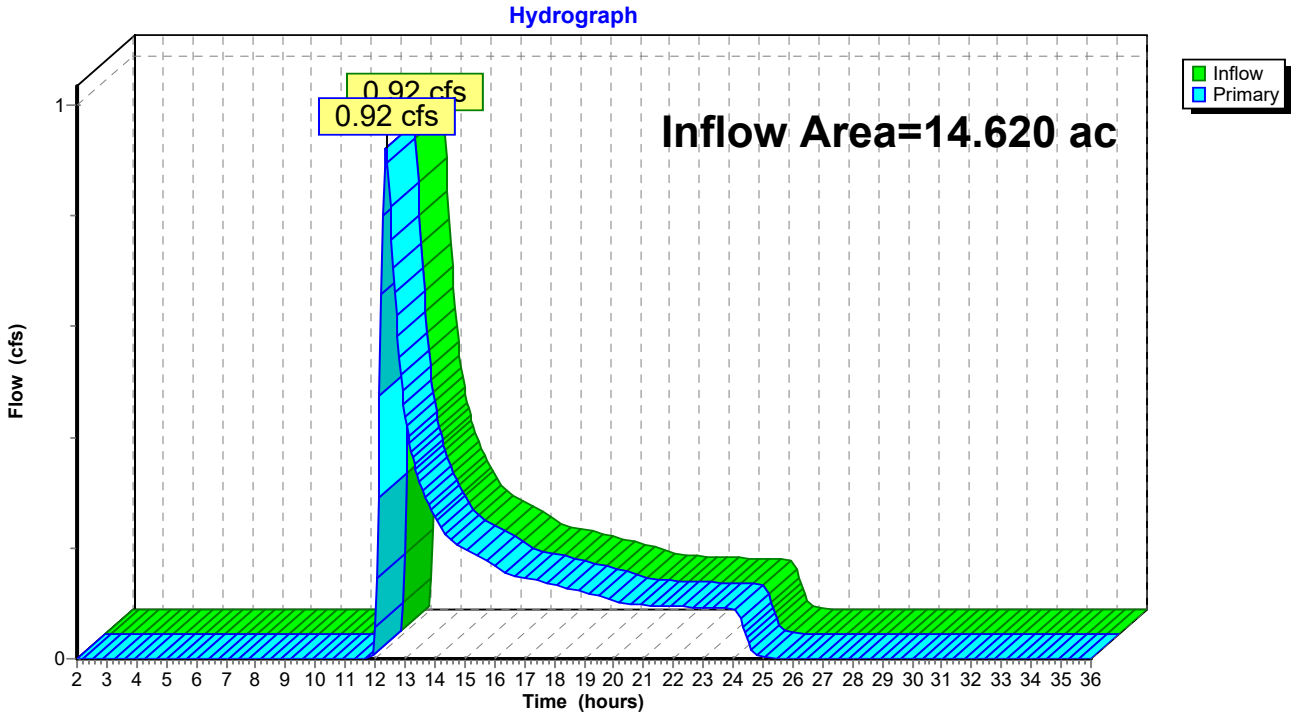


Summary for Link 12L: (new Link)

Inflow Area = 14.620 ac, 41.72% Impervious, Inflow Depth = 0.16" for 1-yr event
Inflow = 0.92 cfs @ 12.37 hrs, Volume= 0.191 af
Primary = 0.92 cfs @ 12.37 hrs, Volume= 0.191 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 12L: (new Link)



Time span=2.00-36.00 hrs, dt=0.05 hrs, 681 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 9S: EX N TO HOUSEL Runoff Area=1.010 ac 37.62% Impervious Runoff Depth=0.15"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.04 cfs 0.013 af

Subcatchment EX N: EX N DA TO EAST Runoff Area=11.500 ac 46.52% Impervious Runoff Depth=0.39"
Flow Length=1,245' Tc=30.0 min CN=68 Runoff=2.64 cfs 0.372 af

Subcatchment EX S: EX S DA TO PARK ST Runoff Area=2.110 ac 17.54% Impervious Runoff Depth=0.00"
Flow Length=775' Tc=14.5 min CN=46 Runoff=0.00 cfs 0.000 af

Link 8L: EX DISCHARGE TO EAST DITCH Inflow=2.64 cfs 0.372 af
Primary=2.64 cfs 0.372 af

Link 10L: EX DISCHARGE TO HOUSEL Inflow=0.04 cfs 0.013 af
Primary=0.04 cfs 0.013 af

Link 11L: EX DISCHARGE TO PARK ST DITCH Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link 12L: (new Link) Inflow=2.68 cfs 0.385 af
Primary=2.68 cfs 0.385 af

Total Runoff Area = 14.620 ac Runoff Volume = 0.385 af Average Runoff Depth = 0.32"
58.28% Pervious = 8.520 ac 41.72% Impervious = 6.100 ac

Summary for Subcatchment 9S: EX N TO HOUSEL

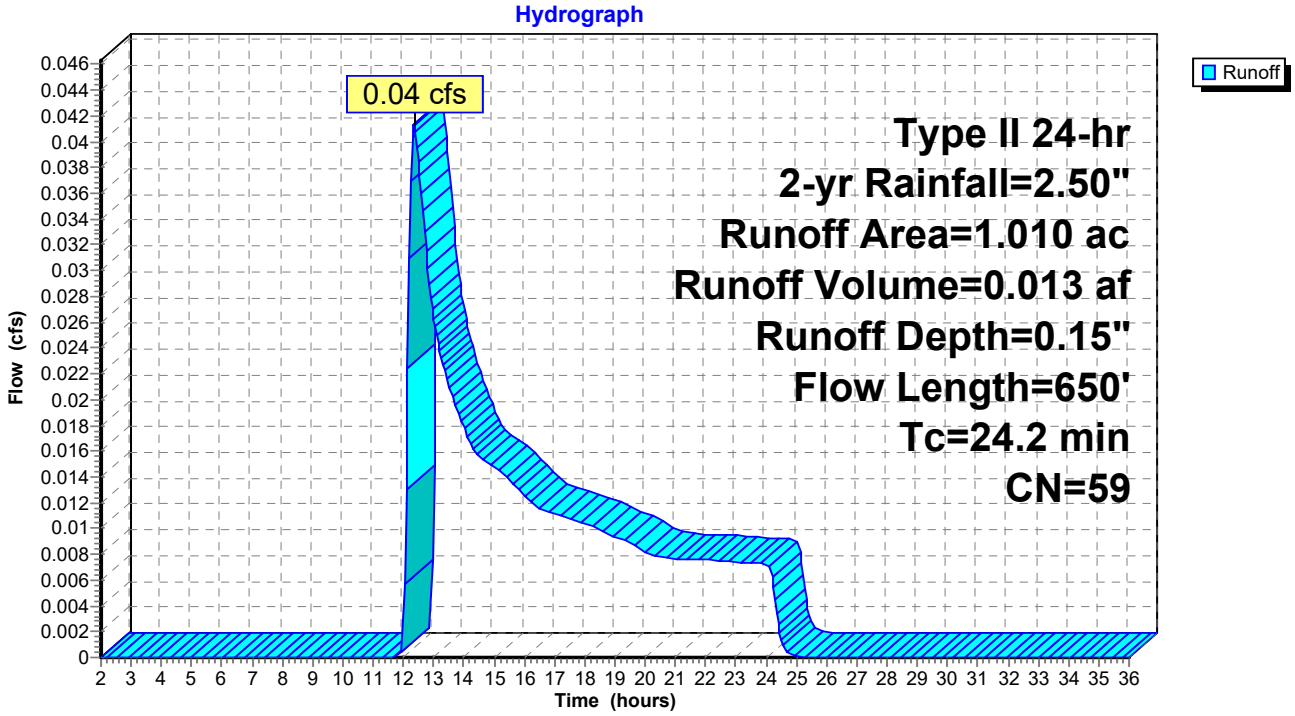
Runoff = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af, Depth= 0.15"
Routed to Link 10L : EX DISCHARGE TO HOUSEL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.380	98	Roofs, HSG A
0.630	35	Brush, Fair, HSG A
1.010	59	Weighted Average
0.630		62.38% Pervious Area
0.380		37.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment 9S: EX N TO HOUSEL



Summary for Subcatchment EX N: EX N DA TO EAST DITCH

[47] Hint: Peak is 286% of capacity of segment #4
[47] Hint: Peak is 276% of capacity of segment #5

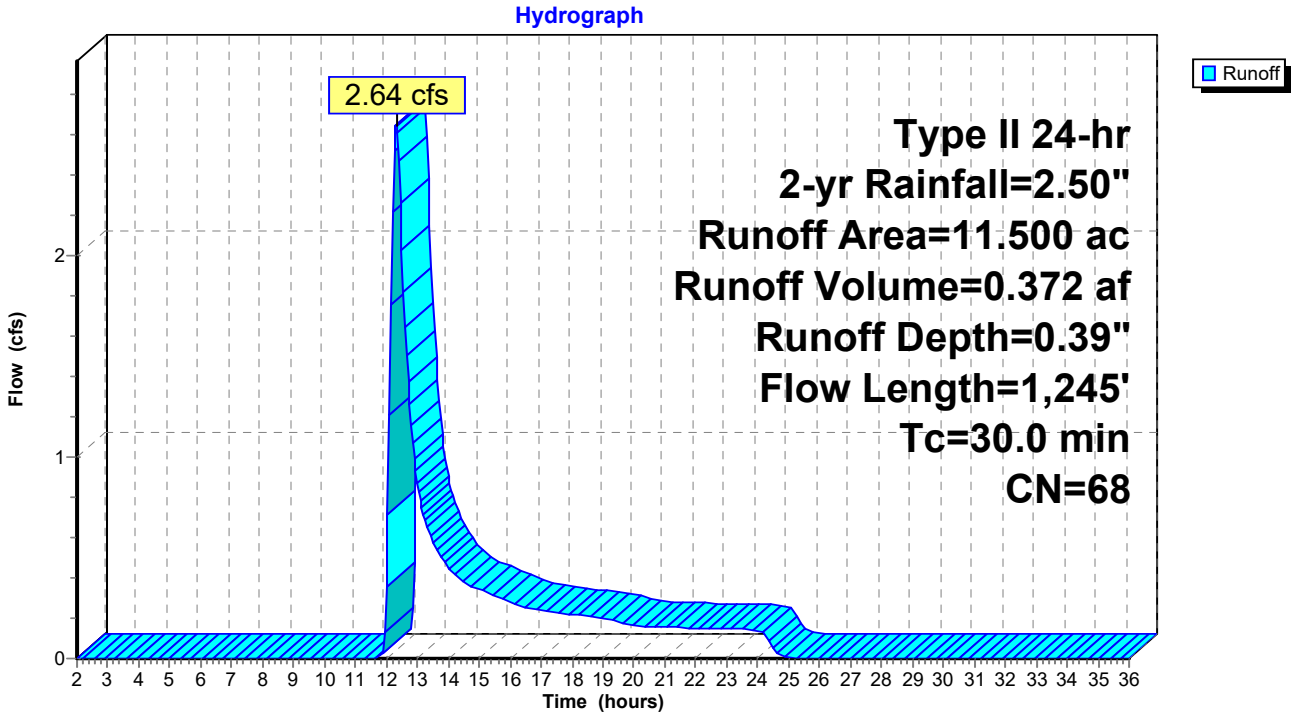
Runoff = 2.64 cfs @ 12.32 hrs, Volume= 0.372 af, Depth= 0.39"
Routed to Link 8L : EX DISCHARGE TO EAST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
2.910	35	Brush, Fair, HSG A
2.180	98	Paved parking, HSG A
3.040	98	Roofs, HSG A
0.130	98	Water Surface, HSG A
0.270	36	Woods, Fair, HSG A
0.270	39	Pasture/grassland/range, Good, HSG A
2.700	49	Pasture/grassland/range, Fair, HSG A
11.500	68	Weighted Average
6.150		53.48% Pervious Area
5.350		46.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.8	125	0.0260	2.60		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
0.5	50	0.0120	1.76		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
1.4	150	0.0100	1.84	0.92	**Channel Flow, CF-1** Area= 0.5 sf Perim= 2.2' r= 0.23' n= 0.030 Short grass
0.4	70	0.0200	3.20	0.96	**Channel Flow, CF-2** Area= 0.3 sf Perim= 2.5' r= 0.12' n= 0.016 Asphalt, rough
5.0	750		2.50		**Direct Entry, PF-1**
30.0	1,245	Total			

Subcatchment EX N: EX N DA TO EAST DITCH



Summary for Subcatchment EX S: EX S DA TO PARK ST DITCH

Existing drainage area to Park St Ditch

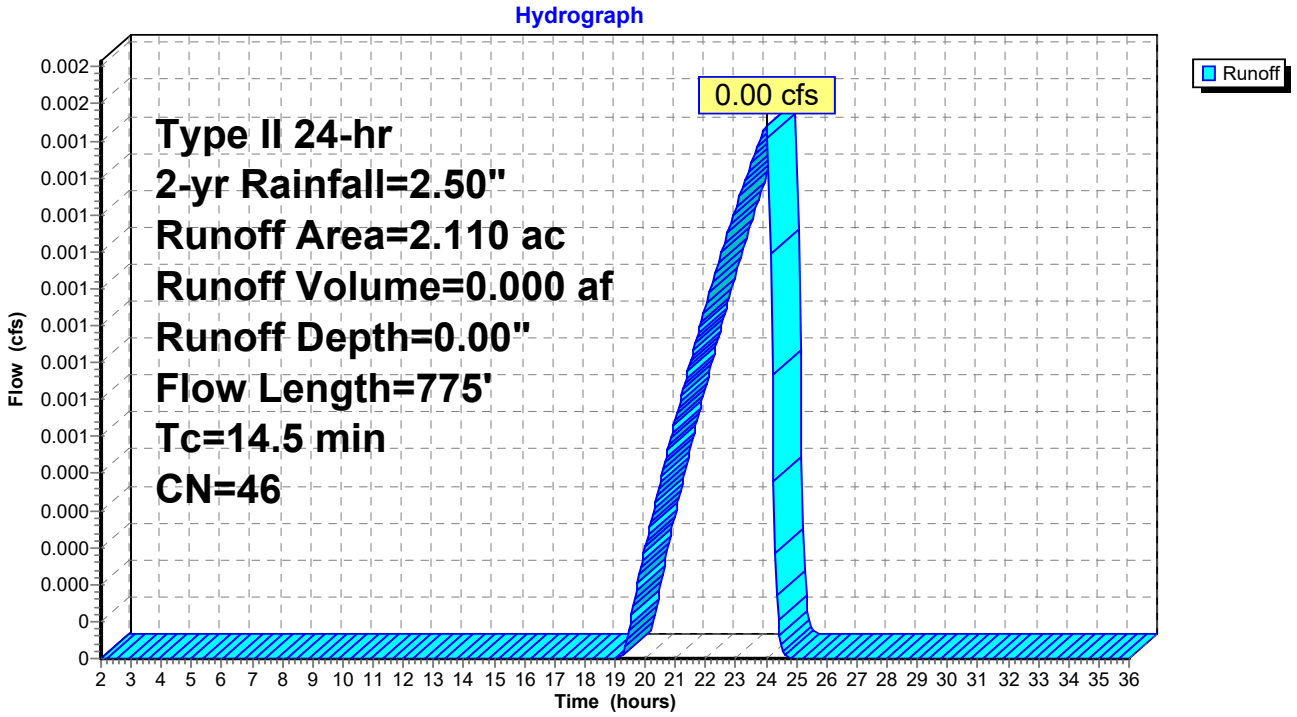
Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 11L : EX DISCHARGE TO PARK ST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
1.610	35	Brush, Fair, HSG A
0.370	98	Paved parking, HSG A
0.020	49	Pasture/grassland/range, Fair, HSG A
0.110	39	Pasture/grassland/range, Good, HSG A
2.110	46	Weighted Average
1.740		82.46% Pervious Area
0.370		17.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	60	0.0200	0.15		**Sheet Flow, SF** Range n= 0.130 P2= 2.50"
0.6	105	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.2	40	0.0500	3.60		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
7.1	570	0.0050	1.33	1.60	**Channel Flow, CF** Area= 1.2 sf Perim= 5.1' r= 0.24' n= 0.030 High grass
14.5	775	Total			

Subcatchment EX S: EX S DA TO PARK ST DITCH

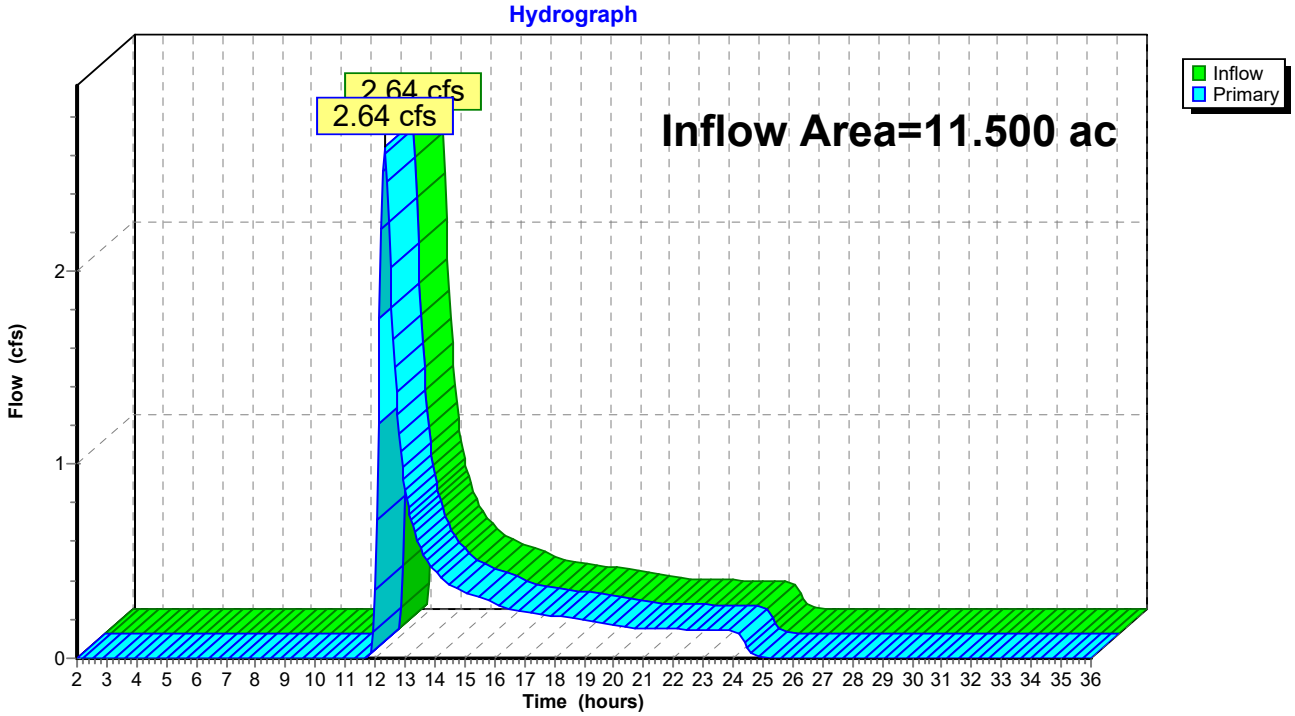


Summary for Link 8L: EX DISCHARGE TO EAST DITCH

Inflow Area = 11.500 ac, 46.52% Impervious, Inflow Depth = 0.39" for 2-yr event
Inflow = 2.64 cfs @ 12.32 hrs, Volume= 0.372 af
Primary = 2.64 cfs @ 12.32 hrs, Volume= 0.372 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 8L: EX DISCHARGE TO EAST DITCH

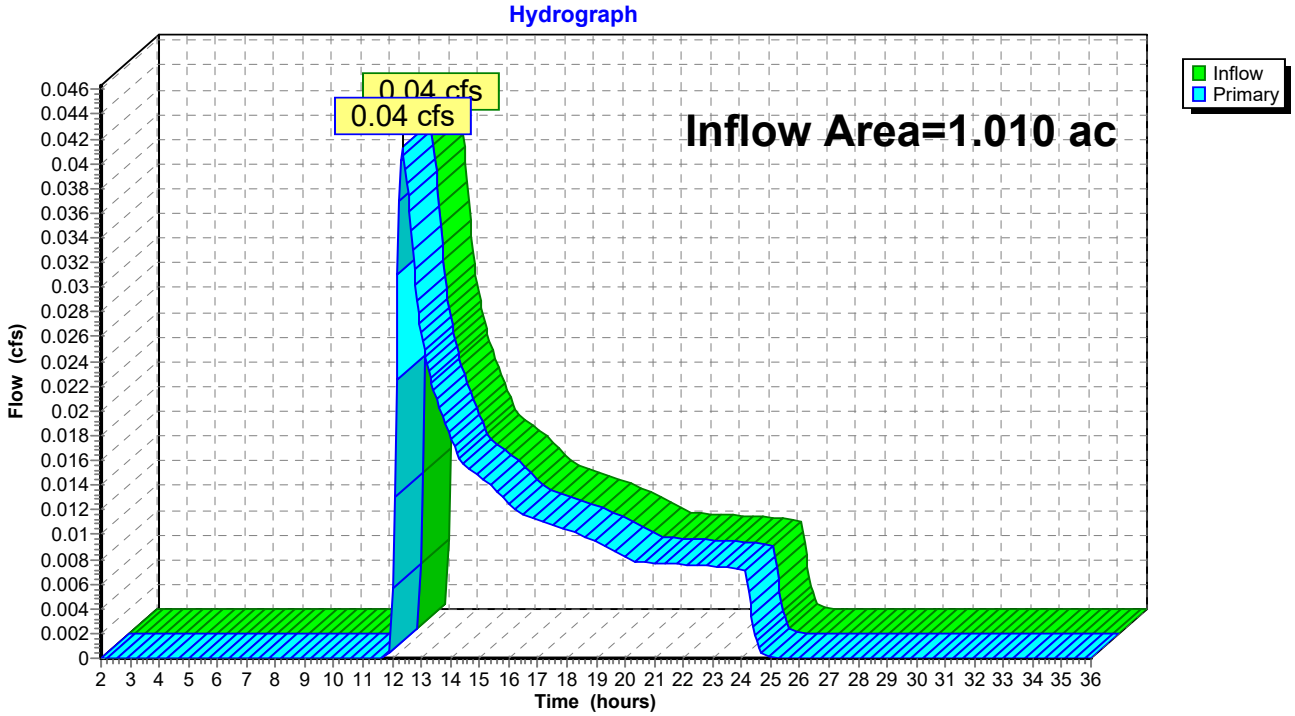


Summary for Link 10L: EX DISCHARGE TO HOUSEL

Inflow Area = 1.010 ac, 37.62% Impervious, Inflow Depth = 0.15" for 2-yr event
Inflow = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af
Primary = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 10L: EX DISCHARGE TO HOUSEL

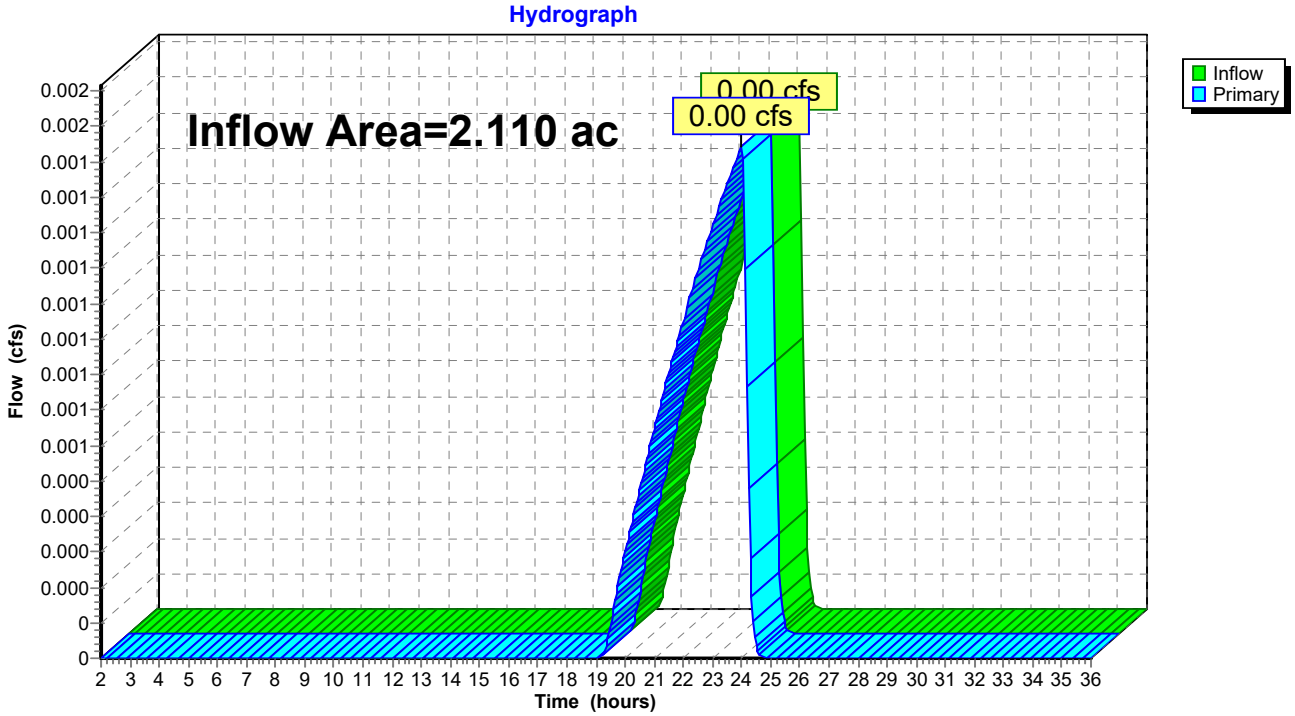


Summary for Link 11L: EX DISCHARGE TO PARK ST DITCH

Inflow Area = 2.110 ac, 17.54% Impervious, Inflow Depth = 0.00" for 2-yr event
Inflow = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.01 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 11L: EX DISCHARGE TO PARK ST DITCH

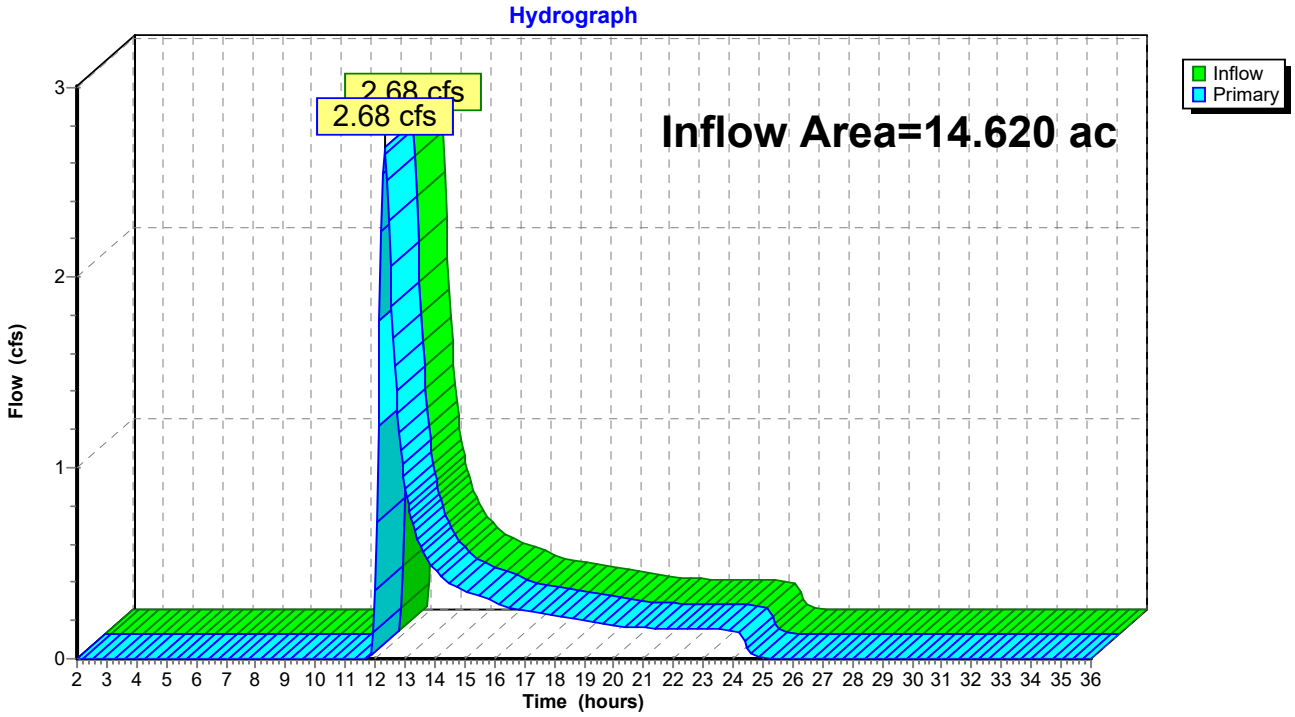


Summary for Link 12L: (new Link)

Inflow Area = 14.620 ac, 41.72% Impervious, Inflow Depth = 0.32" for 2-yr event
Inflow = 2.68 cfs @ 12.32 hrs, Volume= 0.385 af
Primary = 2.68 cfs @ 12.32 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 12L: (new Link)



Time span=2.00-36.00 hrs, dt=0.05 hrs, 681 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 9S: EX N TO HOUSEL Runoff Area=1.010 ac 37.62% Impervious Runoff Depth=0.45"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.28 cfs 0.038 af

Subcatchment EX N: EX N DA TO EAST Runoff Area=11.500 ac 46.52% Impervious Runoff Depth=0.84"
Flow Length=1,245' Tc=30.0 min CN=68 Runoff=7.22 cfs 0.809 af

Subcatchment EX S: EX S DA TO PARK ST Runoff Area=2.110 ac 17.54% Impervious Runoff Depth=0.09"
Flow Length=775' Tc=14.5 min CN=46 Runoff=0.02 cfs 0.015 af

Link 8L: EX DISCHARGE TO EAST DITCH Inflow=7.22 cfs 0.809 af
Primary=7.22 cfs 0.809 af

Link 10L: EX DISCHARGE TO HOUSEL Inflow=0.28 cfs 0.038 af
Primary=0.28 cfs 0.038 af

Link 11L: EX DISCHARGE TO PARK ST DITCH Inflow=0.02 cfs 0.015 af
Primary=0.02 cfs 0.015 af

Link 12L: (new Link) Inflow=7.50 cfs 0.862 af
Primary=7.50 cfs 0.862 af

Total Runoff Area = 14.620 ac Runoff Volume = 0.862 af Average Runoff Depth = 0.71"
58.28% Pervious = 8.520 ac 41.72% Impervious = 6.100 ac

Summary for Subcatchment 9S: EX N TO HOUSEL

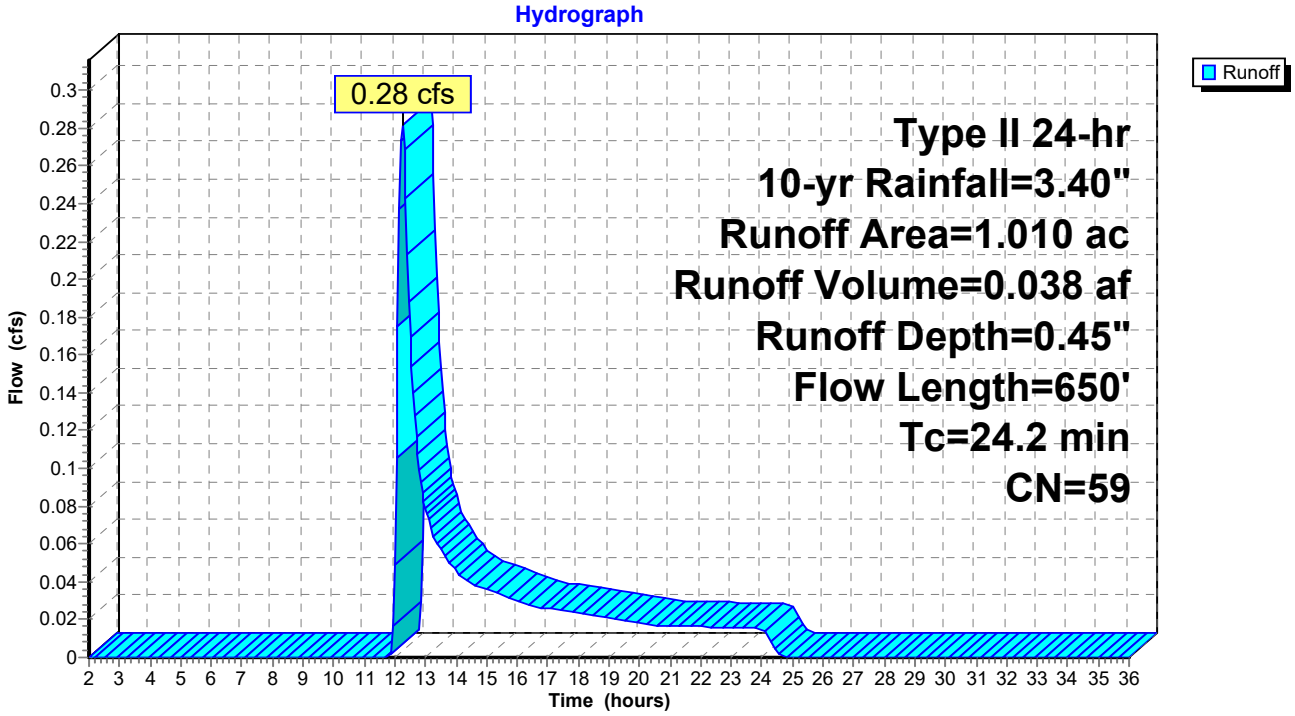
Runoff = 0.28 cfs @ 12.24 hrs, Volume= 0.038 af, Depth= 0.45"
Routed to Link 10L : EX DISCHARGE TO HOUSEL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.380	98	Roofs, HSG A
0.630	35	Brush, Fair, HSG A
1.010	59	Weighted Average
0.630		62.38% Pervious Area
0.380		37.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment 9S: EX N TO HOUSEL



Summary for Subcatchment EX N: EX N DA TO EAST DITCH

[47] Hint: Peak is 783% of capacity of segment #4
[47] Hint: Peak is 753% of capacity of segment #5

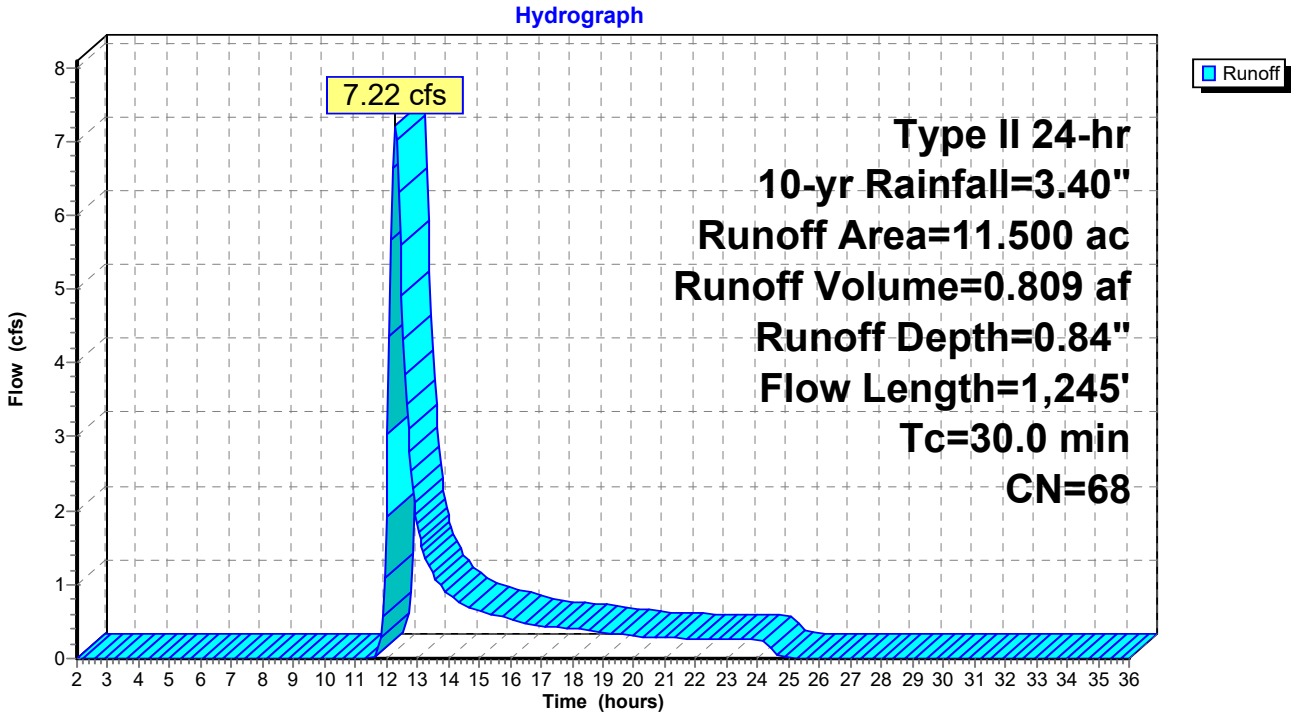
Runoff = 7.22 cfs @ 12.28 hrs, Volume= 0.809 af, Depth= 0.84"
Routed to Link 8L : EX DISCHARGE TO EAST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
2.910	35	Brush, Fair, HSG A
2.180	98	Paved parking, HSG A
3.040	98	Roofs, HSG A
0.130	98	Water Surface, HSG A
0.270	36	Woods, Fair, HSG A
0.270	39	Pasture/grassland/range, Good, HSG A
2.700	49	Pasture/grassland/range, Fair, HSG A
11.500	68	Weighted Average
6.150		53.48% Pervious Area
5.350		46.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.8	125	0.0260	2.60		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
0.5	50	0.0120	1.76		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
1.4	150	0.0100	1.84	0.92	**Channel Flow, CF-1** Area= 0.5 sf Perim= 2.2' r= 0.23' n= 0.030 Short grass
0.4	70	0.0200	3.20	0.96	**Channel Flow, CF-2** Area= 0.3 sf Perim= 2.5' r= 0.12' n= 0.016 Asphalt, rough
5.0	750		2.50		**Direct Entry, PF-1**
30.0	1,245	Total			

Subcatchment EX N: EX N DA TO EAST DITCH



Summary for Subcatchment EX S: EX S DA TO PARK ST DITCH

Existing drainage area to Park St Ditch

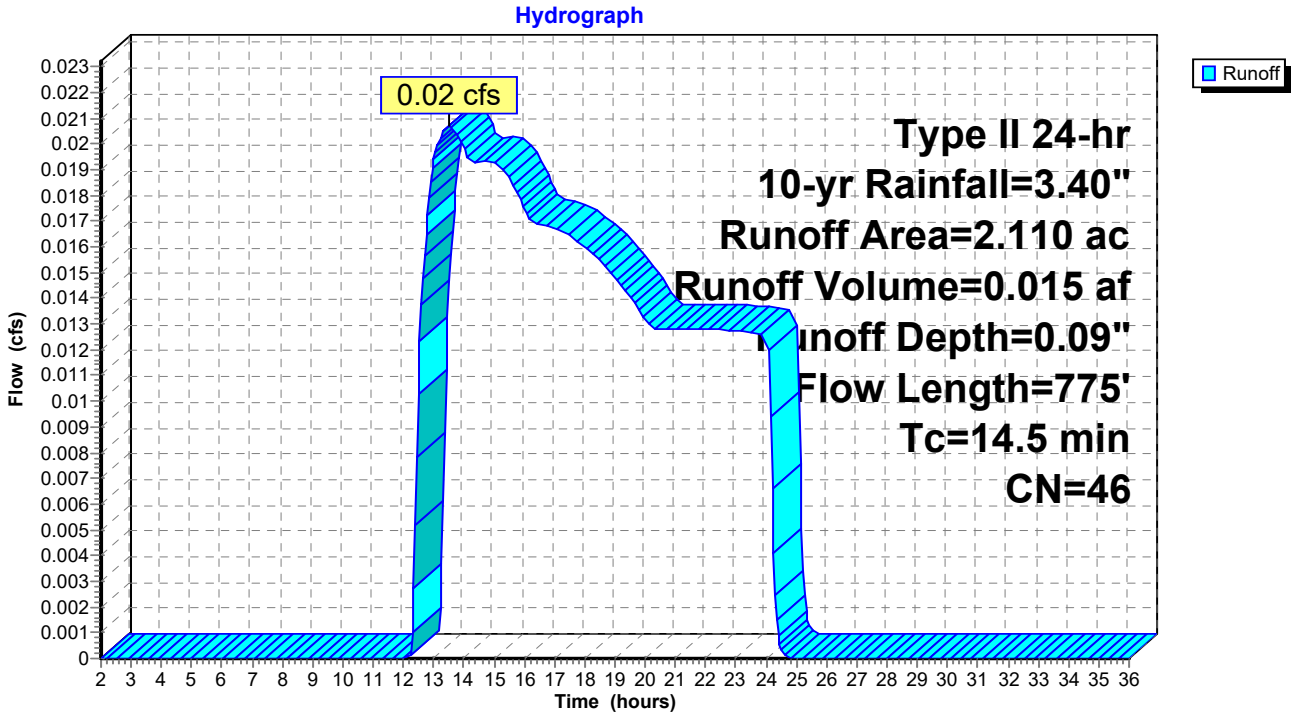
Runoff = 0.02 cfs @ 13.50 hrs, Volume= 0.015 af, Depth= 0.09"
Routed to Link 11L : EX DISCHARGE TO PARK ST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
1.610	35	Brush, Fair, HSG A
0.370	98	Paved parking, HSG A
0.020	49	Pasture/grassland/range, Fair, HSG A
0.110	39	Pasture/grassland/range, Good, HSG A
2.110	46	Weighted Average
1.740		82.46% Pervious Area
0.370		17.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	60	0.0200	0.15		**Sheet Flow, SF** Range n= 0.130 P2= 2.50"
0.6	105	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.2	40	0.0500	3.60		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
7.1	570	0.0050	1.33	1.60	**Channel Flow, CF** Area= 1.2 sf Perim= 5.1' r= 0.24' n= 0.030 High grass
14.5	775	Total			

Subcatchment EX S: EX S DA TO PARK ST DITCH

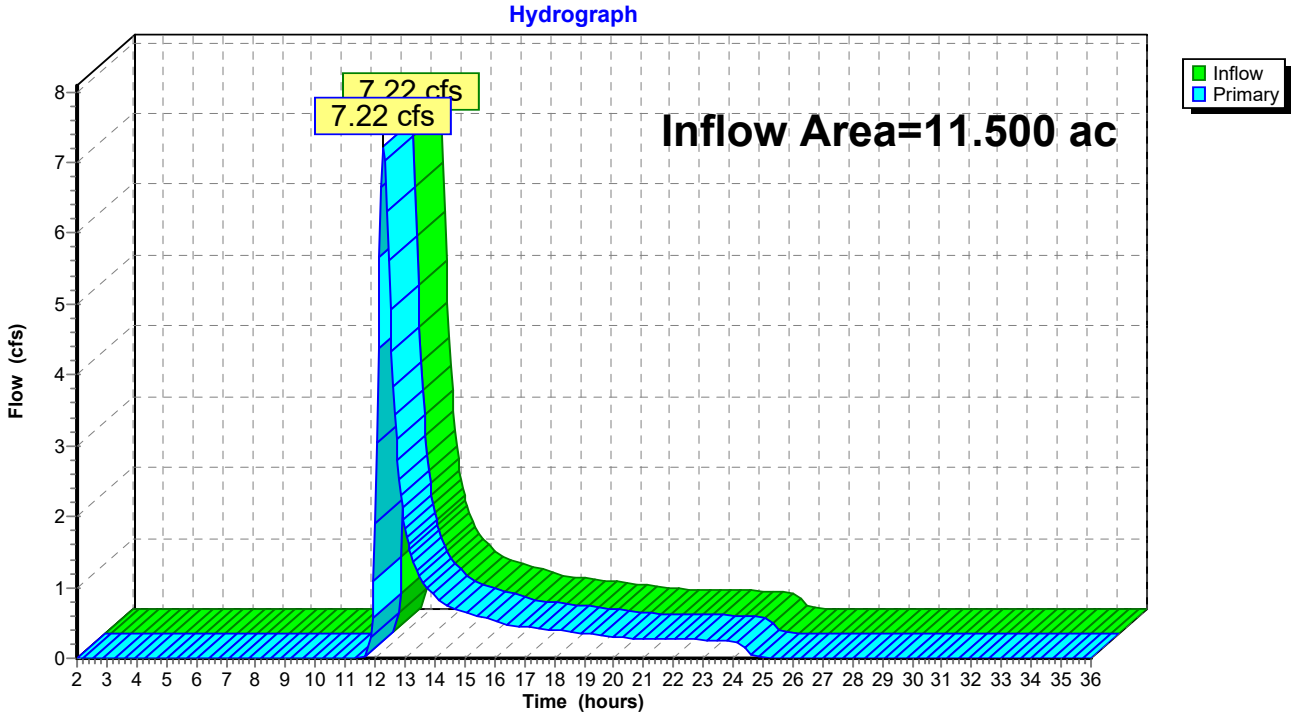


Summary for Link 8L: EX DISCHARGE TO EAST DITCH

Inflow Area = 11.500 ac, 46.52% Impervious, Inflow Depth = 0.84" for 10-yr event
Inflow = 7.22 cfs @ 12.28 hrs, Volume= 0.809 af
Primary = 7.22 cfs @ 12.28 hrs, Volume= 0.809 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 8L: EX DISCHARGE TO EAST DITCH

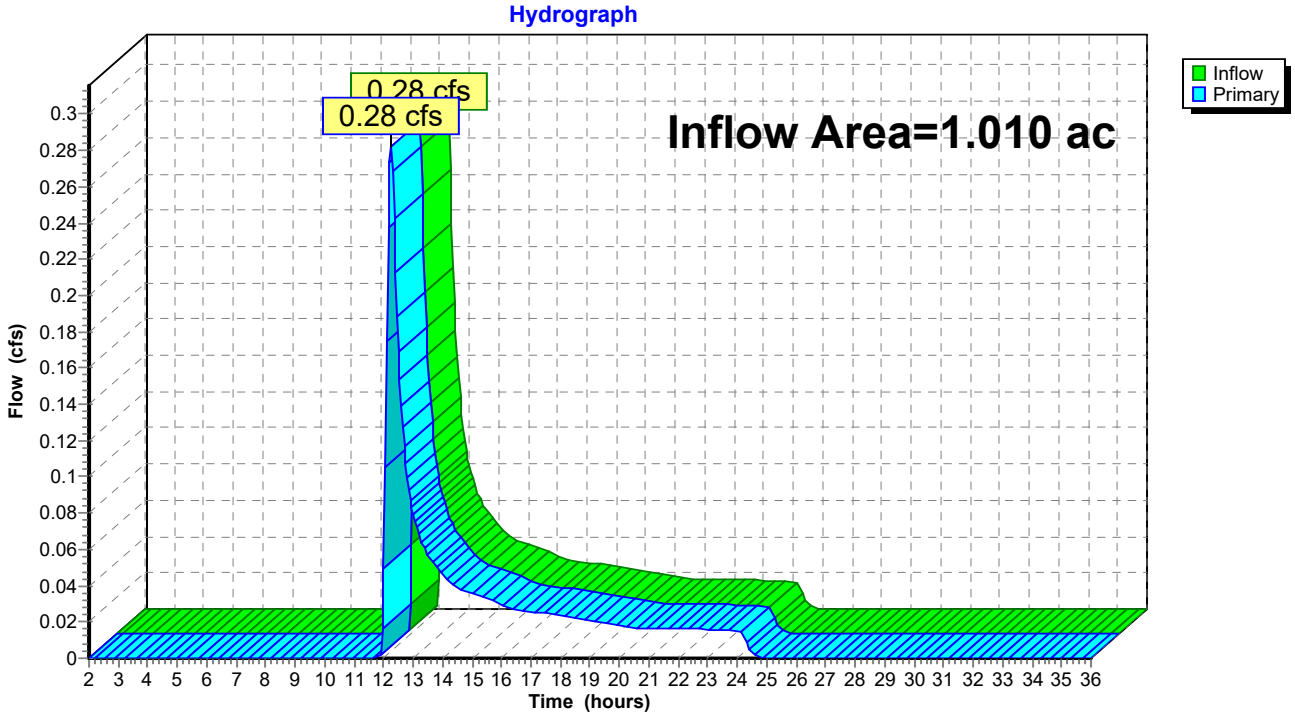


Summary for Link 10L: EX DISCHARGE TO HOUSEL

Inflow Area = 1.010 ac, 37.62% Impervious, Inflow Depth = 0.45" for 10-yr event
Inflow = 0.28 cfs @ 12.24 hrs, Volume= 0.038 af
Primary = 0.28 cfs @ 12.24 hrs, Volume= 0.038 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 10L: EX DISCHARGE TO HOUSEL

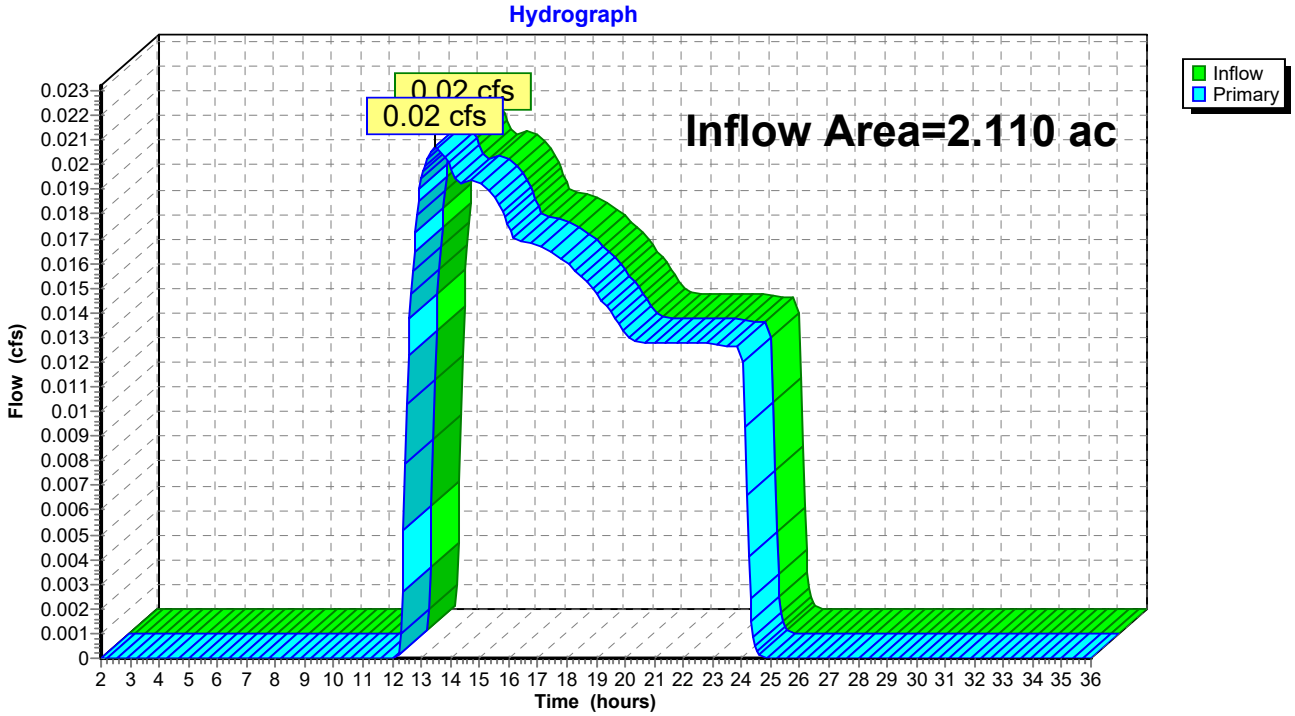


Summary for Link 11L: EX DISCHARGE TO PARK ST DITCH

Inflow Area = 2.110 ac, 17.54% Impervious, Inflow Depth = 0.09" for 10-yr event
Inflow = 0.02 cfs @ 13.50 hrs, Volume= 0.015 af
Primary = 0.02 cfs @ 13.50 hrs, Volume= 0.015 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 11L: EX DISCHARGE TO PARK ST DITCH

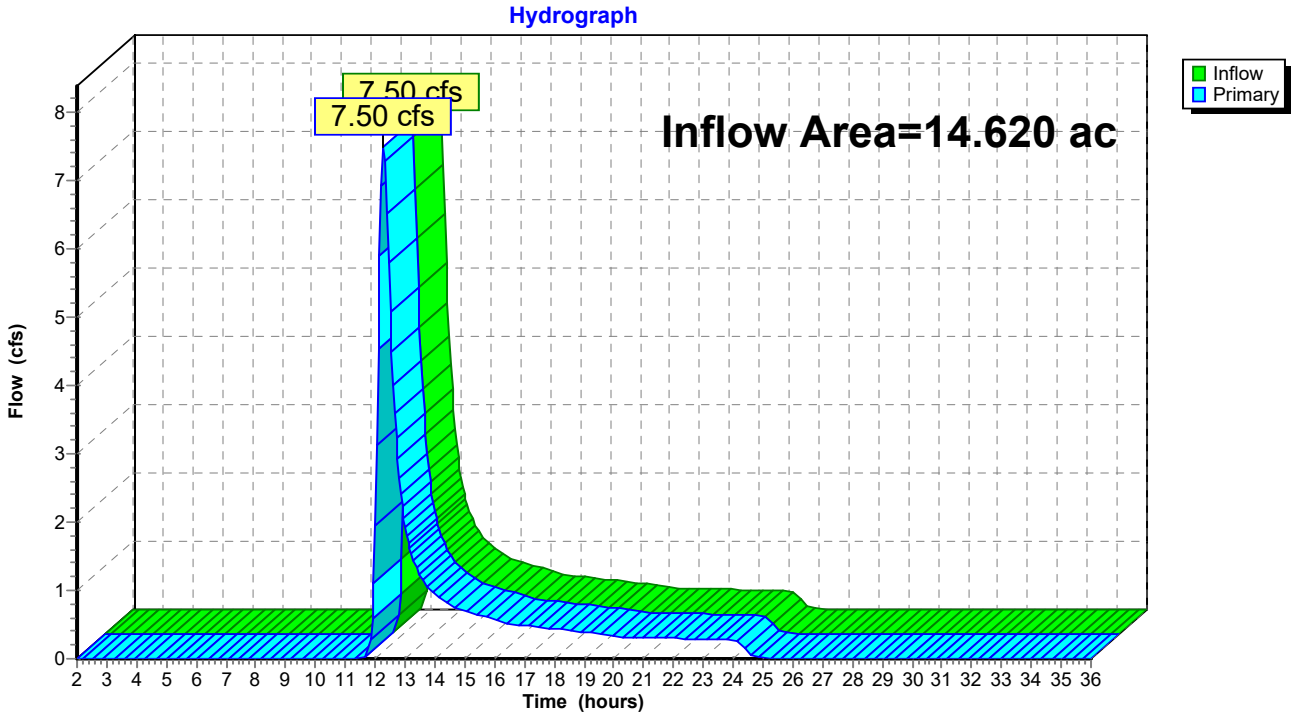


Summary for Link 12L: (new Link)

Inflow Area = 14.620 ac, 41.72% Impervious, Inflow Depth = 0.71" for 10-yr event
Inflow = 7.50 cfs @ 12.28 hrs, Volume= 0.862 af
Primary = 7.50 cfs @ 12.28 hrs, Volume= 0.862 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 12L: (new Link)



Time span=2.00-36.00 hrs, dt=0.05 hrs, 681 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 9S: EX N TO HOUSEL Runoff Area=1.010 ac 37.62% Impervious Runoff Depth=1.71"
Flow Length=650' Tc=24.2 min CN=59 Runoff=1.57 cfs 0.144 af

Subcatchment EX N: EX N DA TO EAST Runoff Area=11.500 ac 46.52% Impervious Runoff Depth=2.47"
Flow Length=1,245' Tc=30.0 min CN=68 Runoff=24.04 cfs 2.365 af

Subcatchment EX S: EX S DA TO PARK ST Runoff Area=2.110 ac 17.54% Impervious Runoff Depth=0.78"
Flow Length=775' Tc=14.5 min CN=46 Runoff=1.48 cfs 0.138 af

Link 8L: EX DISCHARGE TO EAST DITCH Inflow=24.04 cfs 2.365 af
Primary=24.04 cfs 2.365 af

Link 10L: EX DISCHARGE TO HOUSEL Inflow=1.57 cfs 0.144 af
Primary=1.57 cfs 0.144 af

Link 11L: EX DISCHARGE TO PARK ST DITCH Inflow=1.48 cfs 0.138 af
Primary=1.48 cfs 0.138 af

Link 12L: (new Link) Inflow=26.40 cfs 2.647 af
Primary=26.40 cfs 2.647 af

Total Runoff Area = 14.620 ac Runoff Volume = 2.647 af Average Runoff Depth = 2.17"
58.28% Pervious = 8.520 ac 41.72% Impervious = 6.100 ac

Summary for Subcatchment 9S: EX N TO HOUSEL

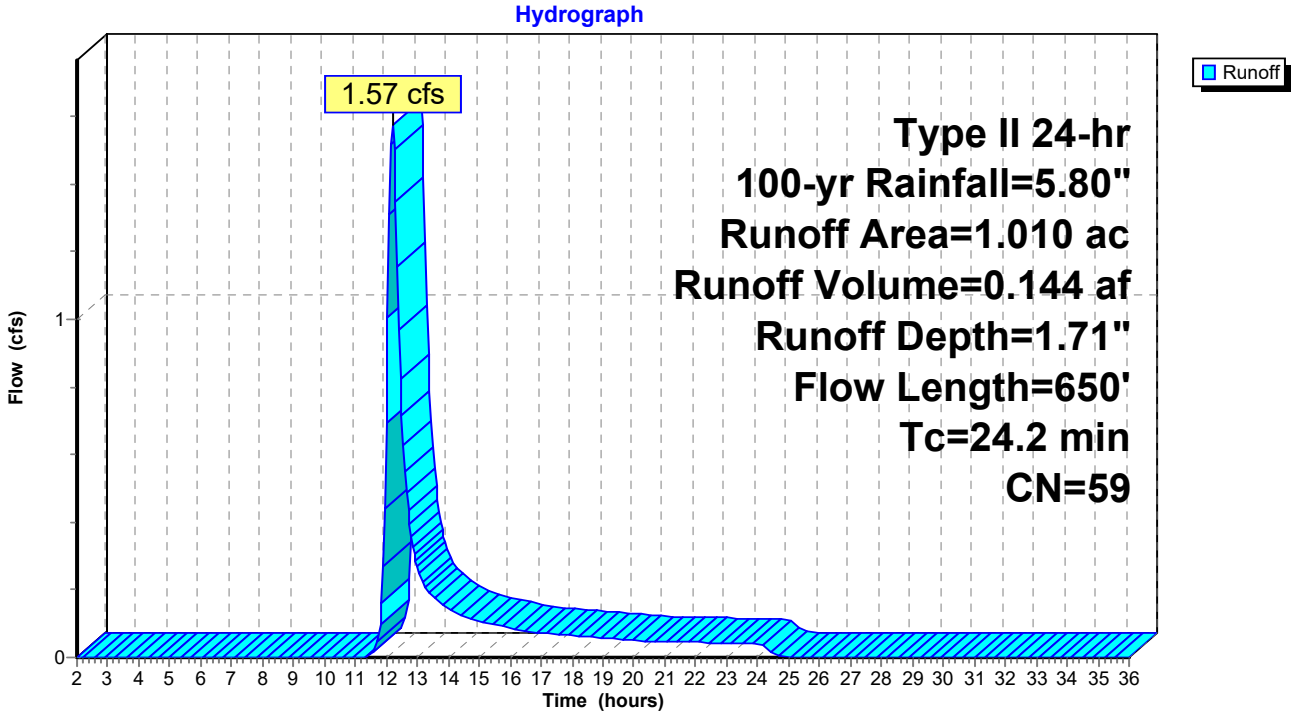
Runoff = 1.57 cfs @ 12.20 hrs, Volume= 0.144 af, Depth= 1.71"
Routed to Link 10L : EX DISCHARGE TO HOUSEL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.380	98	Roofs, HSG A
0.630	35	Brush, Fair, HSG A
1.010	59	Weighted Average
0.630		62.38% Pervious Area
0.380		37.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment 9S: EX N TO HOUSEL



Summary for Subcatchment EX N: EX N DA TO EAST DITCH

[47] Hint: Peak is 2606% of capacity of segment #4
[47] Hint: Peak is 2508% of capacity of segment #5

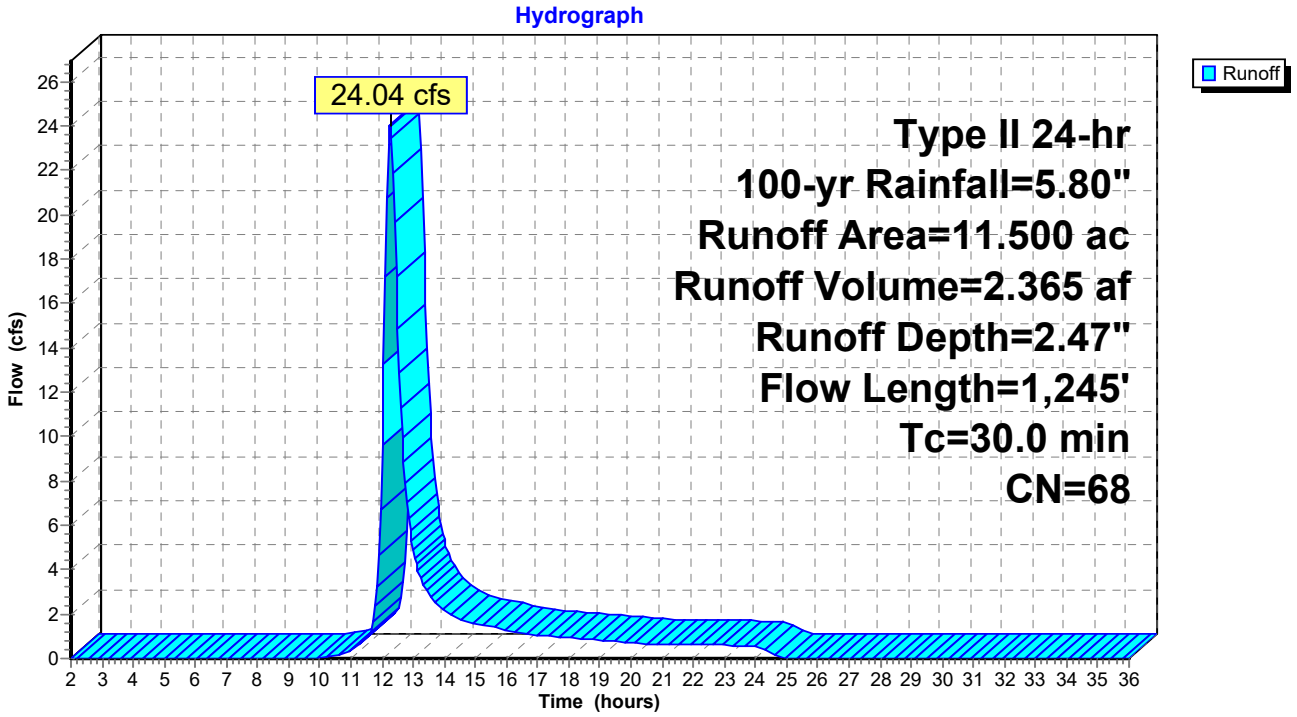
Runoff = 24.04 cfs @ 12.26 hrs, Volume= 2.365 af, Depth= 2.47"
Routed to Link 8L : EX DISCHARGE TO EAST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
2.910	35	Brush, Fair, HSG A
2.180	98	Paved parking, HSG A
3.040	98	Roofs, HSG A
0.130	98	Water Surface, HSG A
0.270	36	Woods, Fair, HSG A
0.270	39	Pasture/grassland/range, Good, HSG A
2.700	49	Pasture/grassland/range, Fair, HSG A
11.500	68	Weighted Average
6.150		53.48% Pervious Area
5.350		46.52% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.9	100	0.0260	0.08		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.8	125	0.0260	2.60		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
0.5	50	0.0120	1.76		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
1.4	150	0.0100	1.84	0.92	**Channel Flow, CF-1** Area= 0.5 sf Perim= 2.2' r= 0.23' n= 0.030 Short grass
0.4	70	0.0200	3.20	0.96	**Channel Flow, CF-2** Area= 0.3 sf Perim= 2.5' r= 0.12' n= 0.016 Asphalt, rough
5.0	750		2.50		**Direct Entry, PF-1**
30.0	1,245	Total			

Subcatchment EX N: EX N DA TO EAST DITCH



Summary for Subcatchment EX S: EX S DA TO PARK ST DITCH

Existing drainage area to Park St Ditch

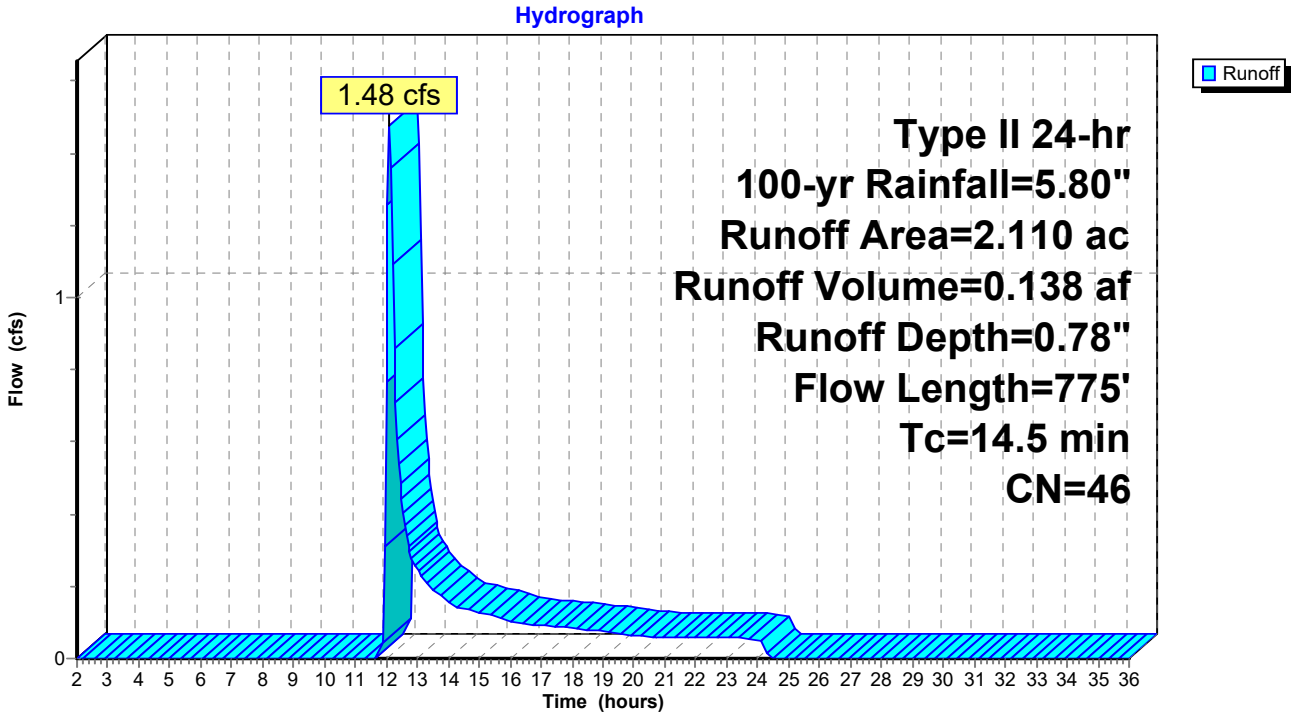
Runoff = 1.48 cfs @ 12.11 hrs, Volume= 0.138 af, Depth= 0.78"
Routed to Link 11L : EX DISCHARGE TO PARK ST DITCH

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
1.610	35	Brush, Fair, HSG A
0.370	98	Paved parking, HSG A
0.020	49	Pasture/grassland/range, Fair, HSG A
0.110	39	Pasture/grassland/range, Good, HSG A
2.110	46	Weighted Average
1.740		82.46% Pervious Area
0.370		17.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	60	0.0200	0.15		**Sheet Flow, SF** Range n= 0.130 P2= 2.50"
0.6	105	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.2	40	0.0500	3.60		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
7.1	570	0.0050	1.33	1.60	**Channel Flow, CF** Area= 1.2 sf Perim= 5.1' r= 0.24' n= 0.030 High grass
14.5	775	Total			

Subcatchment EX S: EX S DA TO PARK ST DITCH

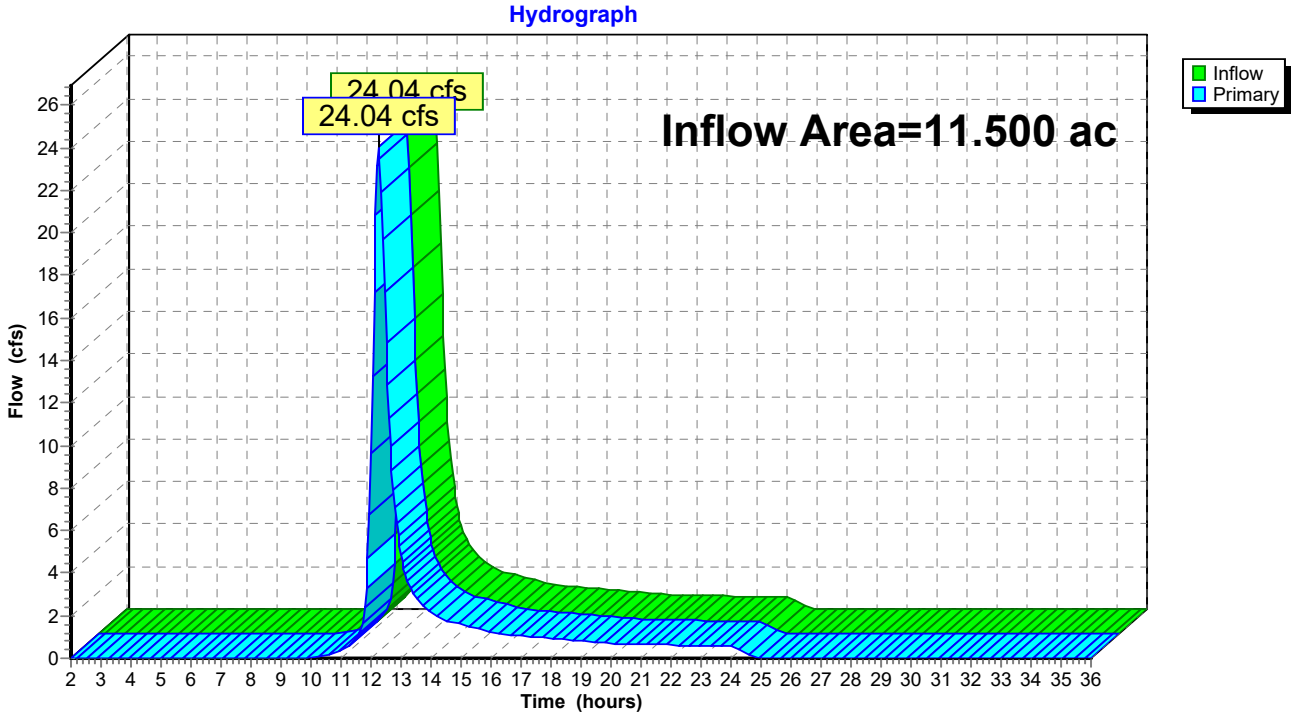


Summary for Link 8L: EX DISCHARGE TO EAST DITCH

Inflow Area = 11.500 ac, 46.52% Impervious, Inflow Depth = 2.47" for 100-yr event
Inflow = 24.04 cfs @ 12.26 hrs, Volume= 2.365 af
Primary = 24.04 cfs @ 12.26 hrs, Volume= 2.365 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 8L: EX DISCHARGE TO EAST DITCH

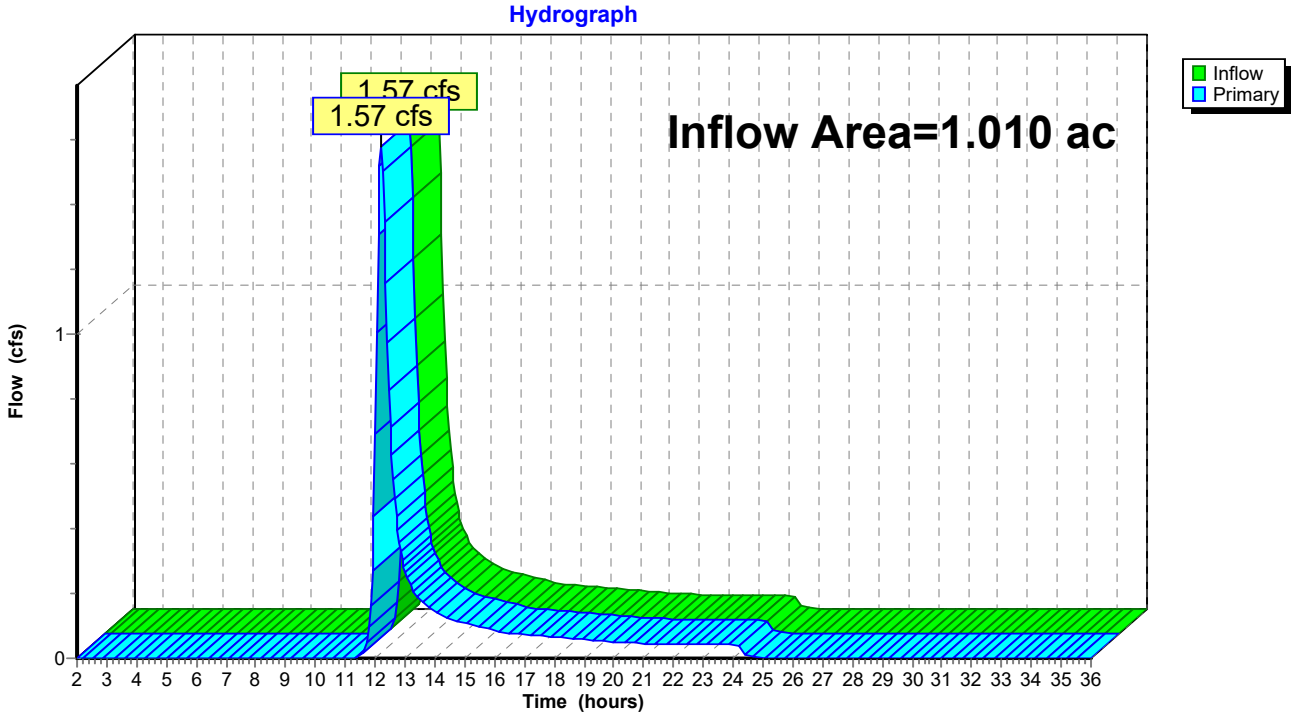


Summary for Link 10L: EX DISCHARGE TO HOUSEL

Inflow Area = 1.010 ac, 37.62% Impervious, Inflow Depth = 1.71" for 100-yr event
Inflow = 1.57 cfs @ 12.20 hrs, Volume= 0.144 af
Primary = 1.57 cfs @ 12.20 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 10L: EX DISCHARGE TO HOUSEL

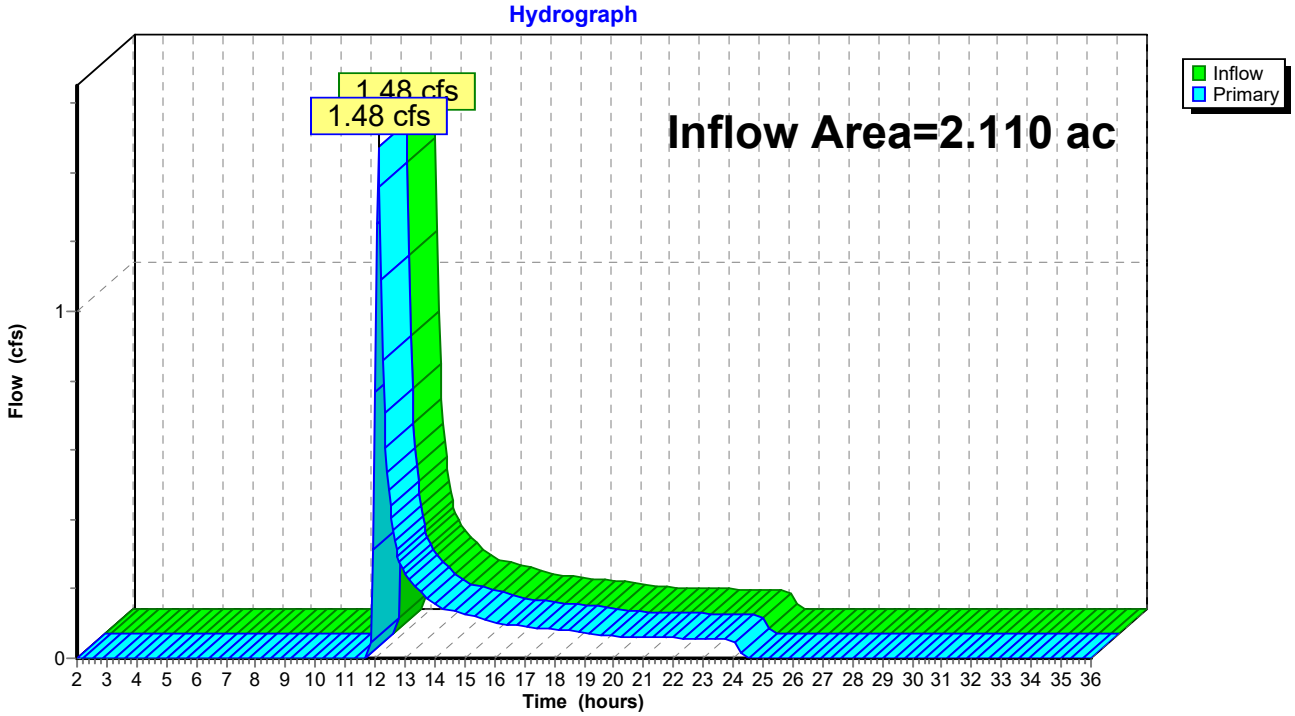


Summary for Link 11L: EX DISCHARGE TO PARK ST DITCH

Inflow Area = 2.110 ac, 17.54% Impervious, Inflow Depth = 0.78" for 100-yr event
Inflow = 1.48 cfs @ 12.11 hrs, Volume= 0.138 af
Primary = 1.48 cfs @ 12.11 hrs, Volume= 0.138 af, Atten= 0%, Lag= 0.0 min
Routed to Link 12L : (new Link)

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 11L: EX DISCHARGE TO PARK ST DITCH

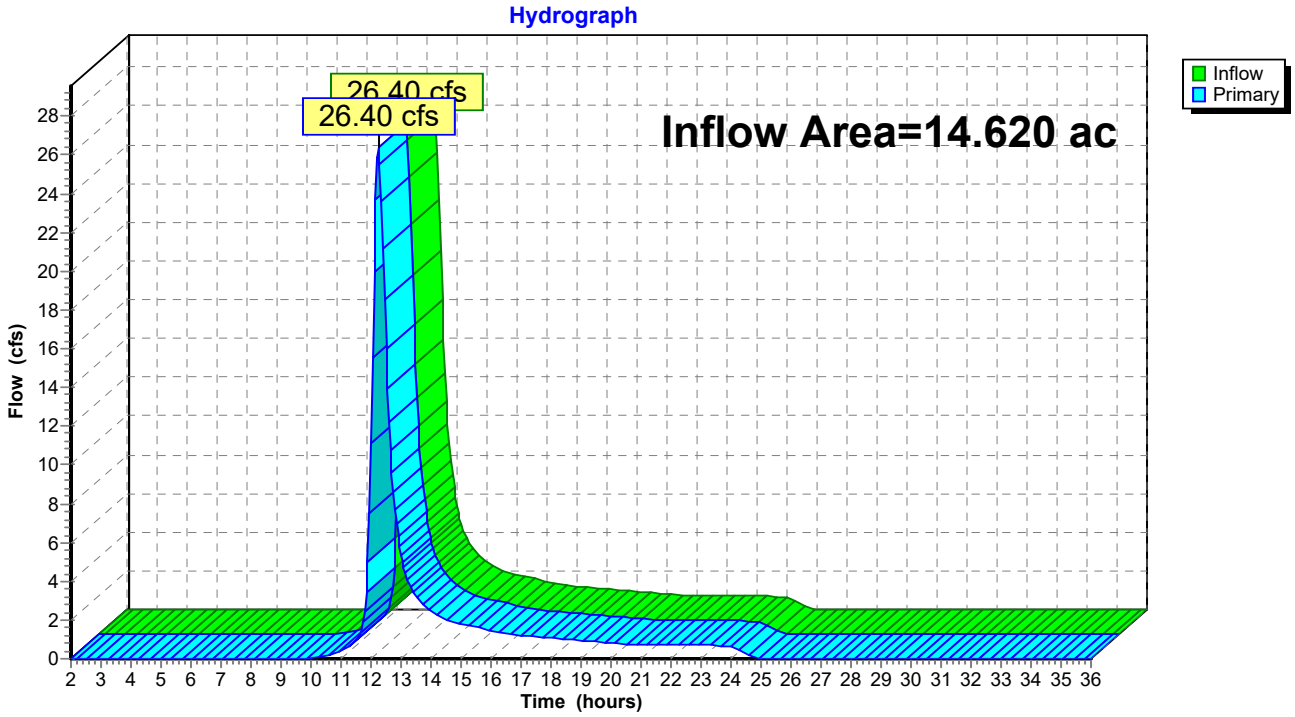


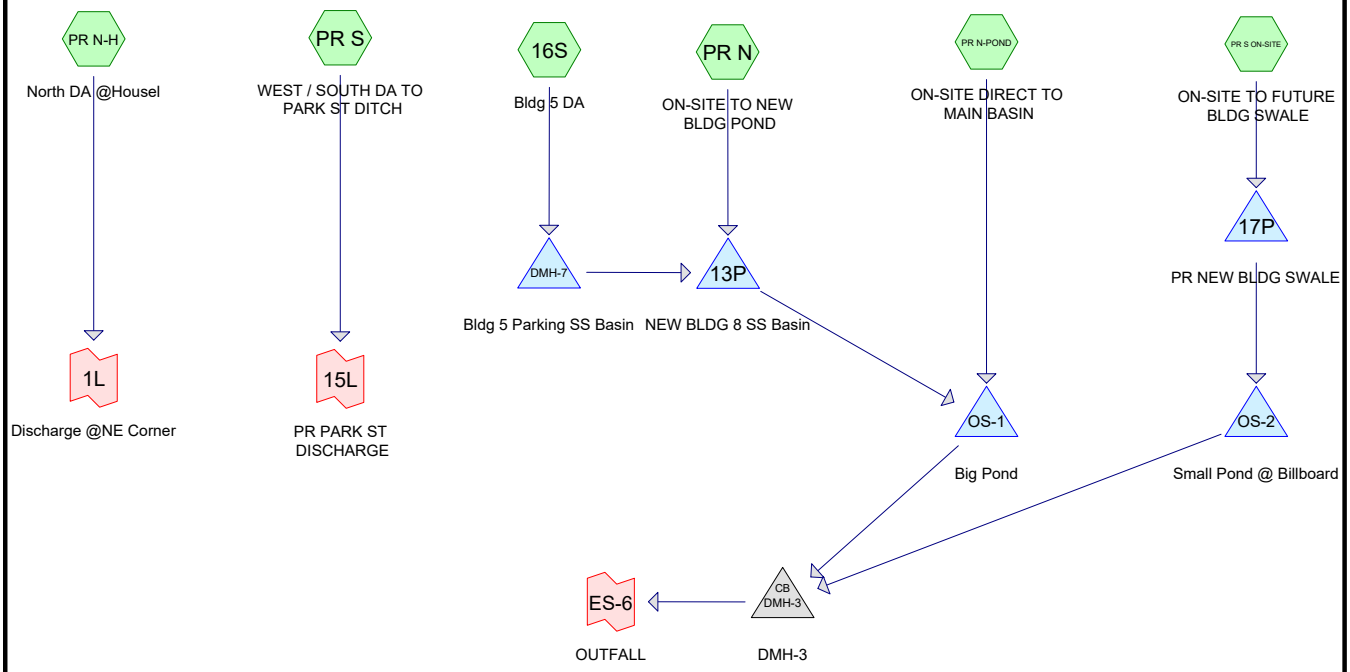
Summary for Link 12L: (new Link)

Inflow Area = 14.620 ac, 41.72% Impervious, Inflow Depth = 2.17" for 100-yr event
Inflow = 26.40 cfs @ 12.24 hrs, Volume= 2.647 af
Primary = 26.40 cfs @ 12.24 hrs, Volume= 2.647 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 2.00-36.00 hrs, dt= 0.05 hrs

Link 12L: (new Link)





Subcat Reach Pond Link

Routing Diagram for URBan Villages_PROPOSED-01_01-2024_Storm Chambers_Lane 18-inch HDPE_REV 01-2025

Prepared by Calocerinos Engineering, PLLC

HydroCAD® 10.20-2h s/n 08759 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	Type II 24-hr		Default	24.00	1	2.00	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.255	39	>75% Grass cover, Good, HSG A (PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE)
1.052	35	Brush, Fair, HSG A (PR N, PR N-H, PR S ON-SITE)
0.071	76	Gravel roads, HSG A (PR N-POND)
5.082	98	Paved parking, HSG A (16S, PR N, PR N-POND, PR S ON-SITE)
0.092	98	Paved roads w/curbs & sewers, HSG A (PR S)
3.554	98	Roofs, HSG A (16S, PR N, PR N-H, PR S ON-SITE)
0.244	98	Water Surface, HSG A (PR N-POND, PR S ON-SITE)
0.270	36	Woods, Fair, HSG A (PR N)
14.620	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
14.620	HSG A	16S, PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
14.620		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
4.255	0.000	0.000	0.000	0.000	4.255	>75% Grass cover, Good	PRN, PRN-H, PRN-POND, PRS, PRS ON-SITE
1.052	0.000	0.000	0.000	0.000	1.052	Brush, Fair	PRN, PRN-H, PRS ON-SITE
0.071	0.000	0.000	0.000	0.000	0.071	Gravel roads	PRN-POND
5.082	0.000	0.000	0.000	0.000	5.082	Paved parking	16S, PRN, PRN-POND, PRS ON-SITE
0.092	0.000	0.000	0.000	0.000	0.092	Paved roads w/curbs & sewers	PRS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.554	0.000	0.000	0.000	0.000	3.554	Roofs	16S, PRN, PRN-H, PRS ON-SITE
0.244	0.000	0.000	0.000	0.000	0.244	Water Surface	PRN-POND, PRS ON-SITE
0.270	0.000	0.000	0.000	0.000	0.270	Woods, Fair	PRN
14.620	**0.000**	**0.000**	**0.000**	**0.000**	**14.620**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	13P	368.30	368.00	60.0	0.0050	0.011	0.0	18.0	0.0
2	17P	368.72	368.50	73.0	0.0030	0.011	0.0	24.0	0.0
3	DMH-3	367.74	367.70	14.0	0.0029	0.011	0.0	48.0	0.0
4	DMH-7	368.55	368.33	55.0	0.0040	0.011	0.0	18.0	0.0
5	OS-1	367.91	367.84	22.0	0.0032	0.011	0.0	48.0	0.0
6	OS-2	368.40	368.16	81.0	0.0030	0.011	0.0	24.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 16S: Bldg 5 DA Runoff Area=1.270 ac 100.00% Impervious Runoff Depth=1.77"
Flow Length=230' Tc=10.0 min CN=98 Runoff=3.07 cfs 0.188 af

Subcatchment PR N: ON-SITE TO NEW Runoff Area=7.111 ac 65.93% Impervious Runoff Depth=0.45"
Flow Length=875' Tc=30.0 min CN=77 Runoff=2.28 cfs 0.266 af

Subcatchment PR N-H: North DA @Housel Runoff Area=1.040 ac 36.54% Impervious Runoff Depth=0.05"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.01 cfs 0.004 af

Subcatchment PR N-POND: ON-SITE Runoff Area=1.569 ac 51.63% Impervious Runoff Depth=0.27"
Flow Length=105' Tc=10.0 min CN=71 Runoff=0.45 cfs 0.035 af

Subcatchment PR S: WEST / SOUTH DA TO Runoff Area=0.703 ac 13.09% Impervious Runoff Depth=0.00"
Flow Length=825' Tc=20.3 min CN=47 Runoff=0.00 cfs 0.000 af

Subcatchment PR S ON-SITE: ON-SITE TO Runoff Area=2.927 ac 59.17% Impervious Runoff Depth=0.35"
Flow Length=990' Tc=44.5 min CN=74 Runoff=0.49 cfs 0.085 af

Pond 13P: NEW BLDG 8 SS Basin Peak Elev=368.67' Storage=3,939 cf Inflow=2.70 cfs 0.384 af
Discarded=0.00 cfs 0.000 af Primary=1.70 cfs 0.334 af Outflow=1.70 cfs 0.334 af

Pond 17P: PR NEW BLDG SWALE Peak Elev=369.36' Storage=154 cf Inflow=0.49 cfs 0.085 af
24.0" Round Culvert n=0.011 L=73.0' S=0.0030 '/' Outflow=0.45 cfs 0.085 af

Pond DMH-3: DMH-3 Peak Elev=367.98' Inflow=0.34 cfs 0.430 af
48.0" Round Culvert n=0.011 L=14.0' S=0.0029 '/' Outflow=0.34 cfs 0.430 af

Pond DMH-7: Bldg 5 Parking SS Basin Peak Elev=368.88' Storage=4,984 cf Inflow=3.07 cfs 0.188 af
Discarded=0.00 cfs 0.000 af Primary=0.43 cfs 0.119 af Outflow=0.43 cfs 0.119 af

Pond OS-1: Big Pond Peak Elev=368.67' Storage=25,361 cf Inflow=1.78 cfs 0.368 af
Outflow=0.17 cfs 0.344 af

Pond OS-2: Small Pond @ Billboard Peak Elev=369.36' Storage=1,152 cf Inflow=0.45 cfs 0.085 af
Outflow=0.20 cfs 0.085 af

Link 1L: Discharge @NE Corner Inflow=0.01 cfs 0.004 af
Primary=0.01 cfs 0.004 af

Link 15L: PR PARK ST DISCHARGE Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link ES-6: OUTFALL before 48.00 hrs Inflow=0.34 cfs 0.430 af
Primary=0.34 cfs 0.430 af Secondary=0.02 cfs 0.000 af

Total Runoff Area = 14.620 ac Runoff Volume = 0.578 af Average Runoff Depth = 0.47"
38.63% Pervious = 5.648 ac 61.37% Impervious = 8.972 ac

Summary for Subcatchment 16S: Bldg 5 DA

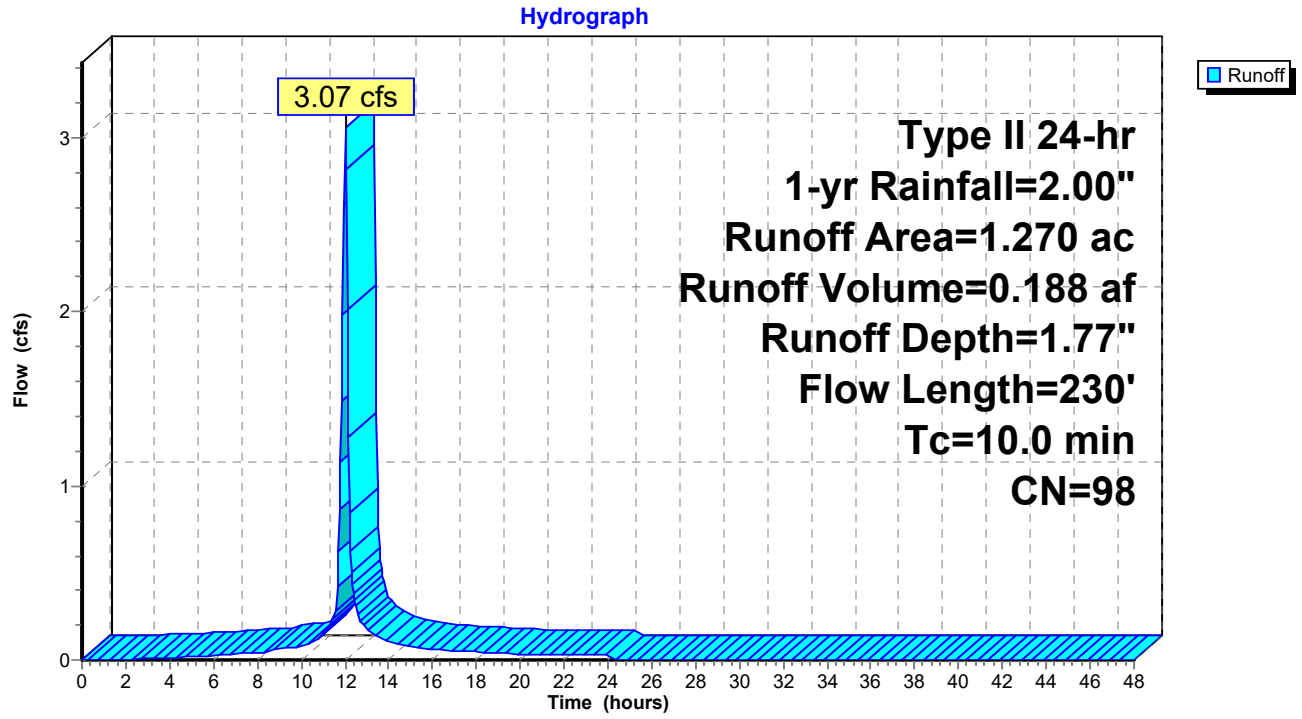
Runoff = 3.07 cfs @ 12.01 hrs, Volume= 0.188 af, Depth= 1.77"
Routed to Pond DMH-7 : Bldg 5 Parking SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.400	98	Roofs, HSG A
0.870	98	Paved parking, HSG A
1.270	98	Weighted Average
1.270		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	60	0.3300	3.37		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 2.50"
0.1	50	0.3300	11.66		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.7	120	0.0200	2.87		**Shallow Concentrated Flow, SCF-2** Paved Kv= 20.3 fps
1.1	230	Total, Increased to minimum Tc = 10.0 min			

Subcatchment 16S: Bldg 5 DA



Summary for Subcatchment PR N: ON-SITE TO NEW BLDG POND

[47] Hint: Peak is 181% of capacity of segment #4

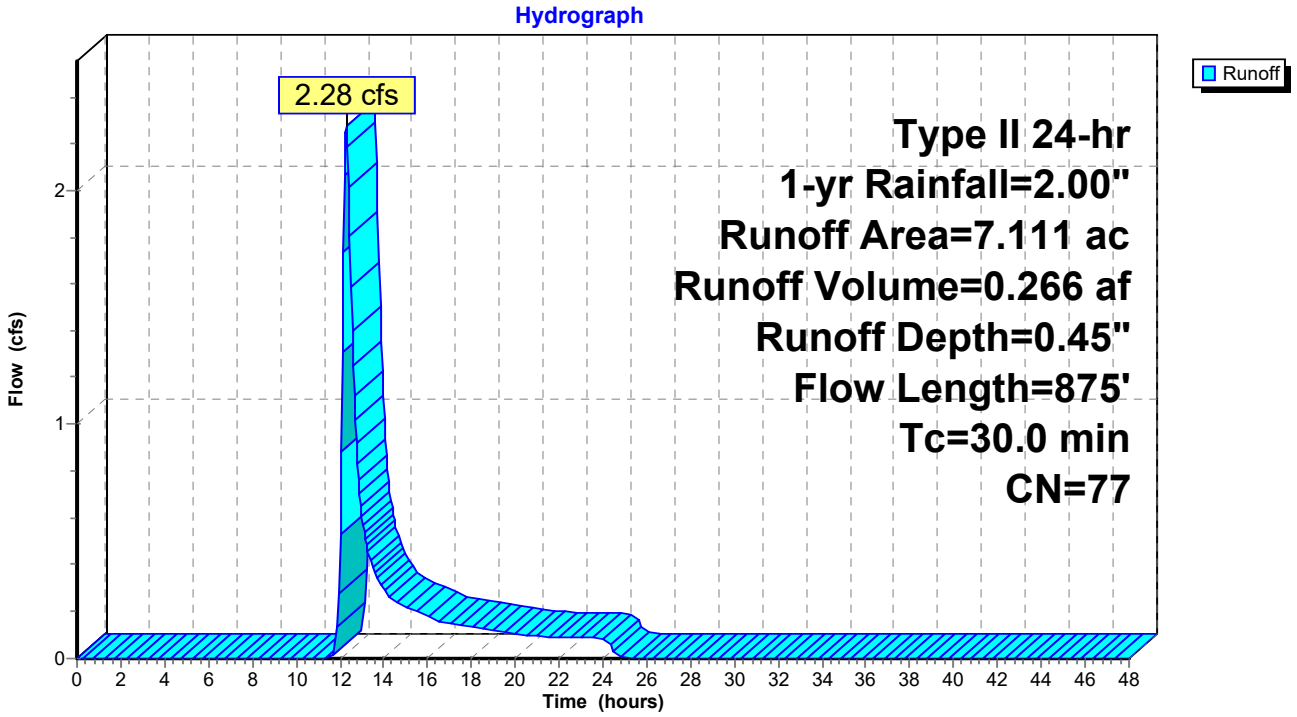
Runoff = 2.28 cfs @ 12.29 hrs, Volume= 0.266 af, Depth= 0.45"
Routed to Pond 13P : NEW BLDG 8 SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.270	36	Woods, Fair, HSG A
2.326	98	Roofs, HSG A
0.596	35	Brush, Fair, HSG A
1.557	39	>75% Grass cover, Good, HSG A
2.362	98	Paved parking, HSG A
7.111	77	Weighted Average
2.423		34.07% Pervious Area
4.688		65.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	100	0.0200	0.07		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.7	100	0.0200	2.28		**Shallow Concentrated Flow, SCF-1** Unpaved Kv= 16.1 fps
0.1	35	0.1200	5.58		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	250	0.0100	1.80	1.26	**Channel Flow, CF** Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Riprap, 1-inch
2.6	390		2.50		**Direct Entry, PIPE FLOW**
30.0	875	Total			

Subcatchment PR N: ON-SITE TO NEW BLDG POND



Summary for Subcatchment PR N-H: North DA @Housel

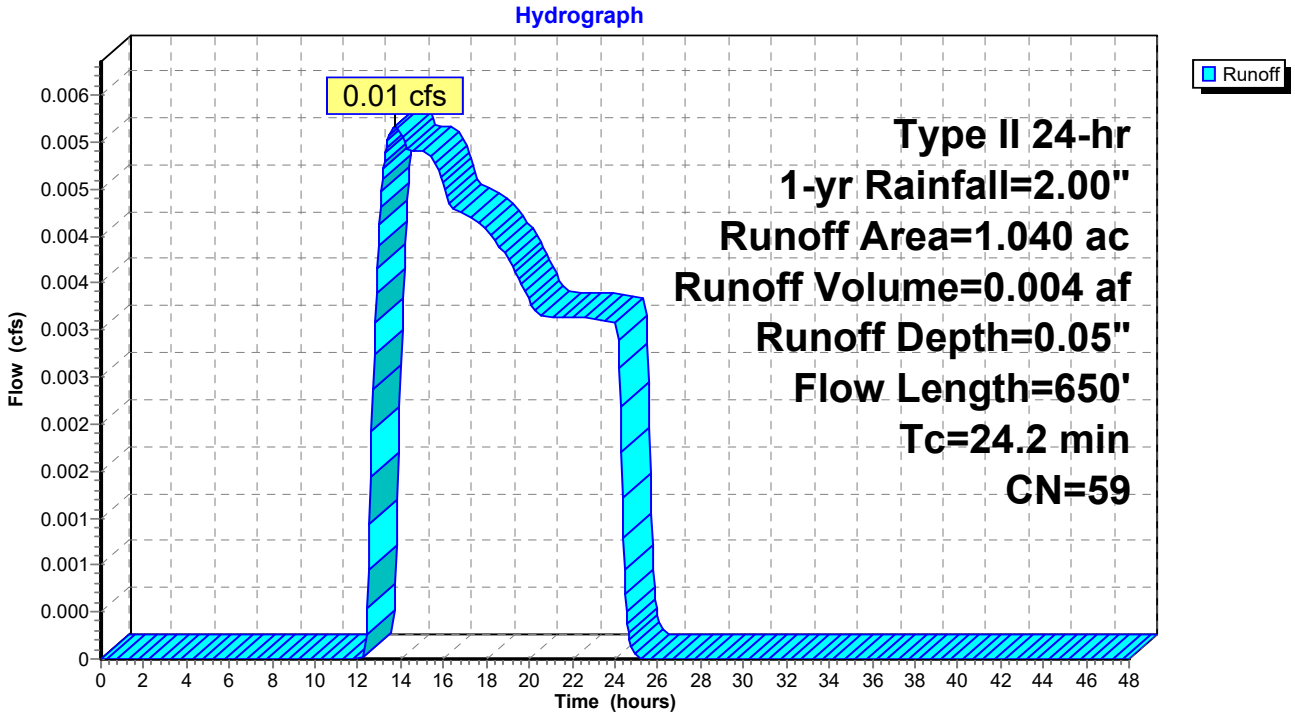
Runoff = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af, Depth= 0.05"
Routed to Link 1L : Discharge @NE Corner

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.280	39	>75% Grass cover, Good, HSG A
0.380	35	Brush, Fair, HSG A
0.380	98	Roofs, HSG A
1.040	59	Weighted Average
0.660		63.46% Pervious Area
0.380		36.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment PR N-H: North DA @Housel



Summary for Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN

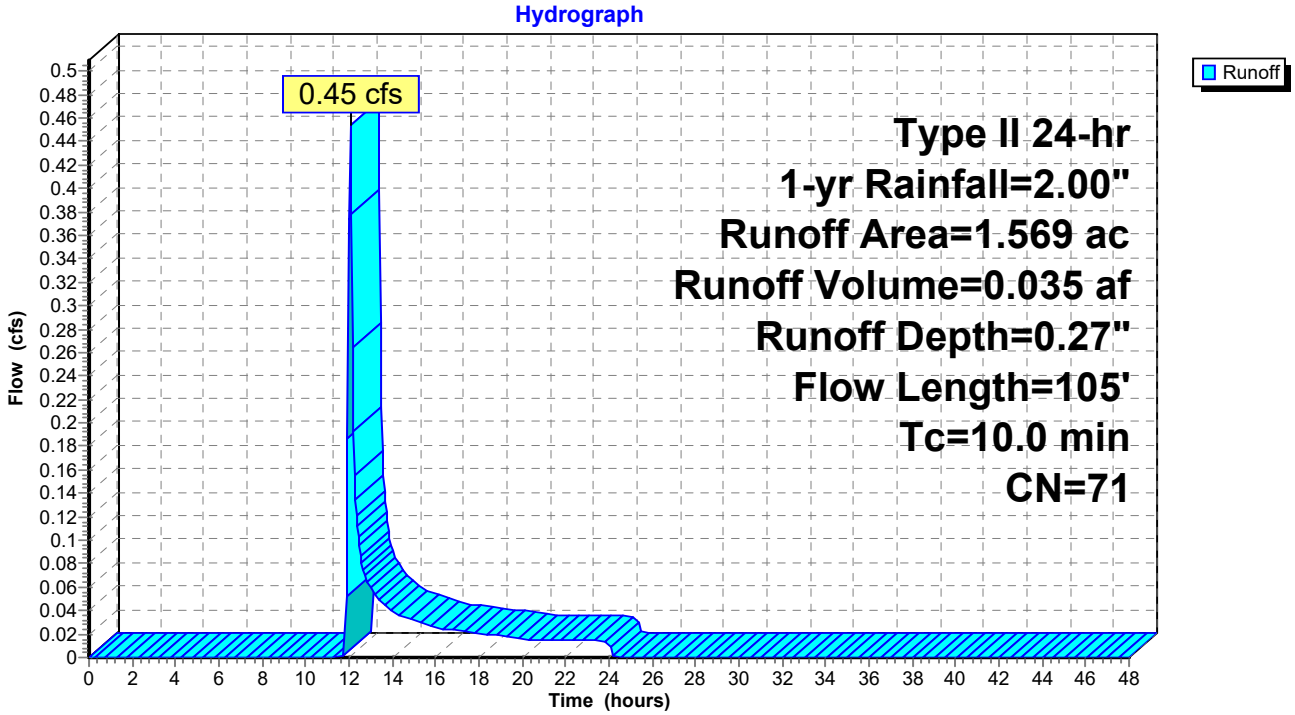
Runoff = 0.45 cfs @ 12.05 hrs, Volume= 0.035 af, Depth= 0.27"
Routed to Pond OS-1 : Big Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.071	76	Gravel roads, HSG A
0.587	98	Paved parking, HSG A
0.223	98	Water Surface, HSG A
0.688	39	>75% Grass cover, Good, HSG A
1.569	71	Weighted Average
0.759		48.37% Pervious Area
0.810		51.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	45	0.0200	0.09		**Sheet Flow, SF** Grass: Dense n= 0.240 P2= 2.50"
0.2	40	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.0	20	0.2500	8.05		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
8.7	105	Total, Increased to minimum Tc = 10.0 min			

Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN



Summary for Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH

[45] Hint: Runoff=Zero

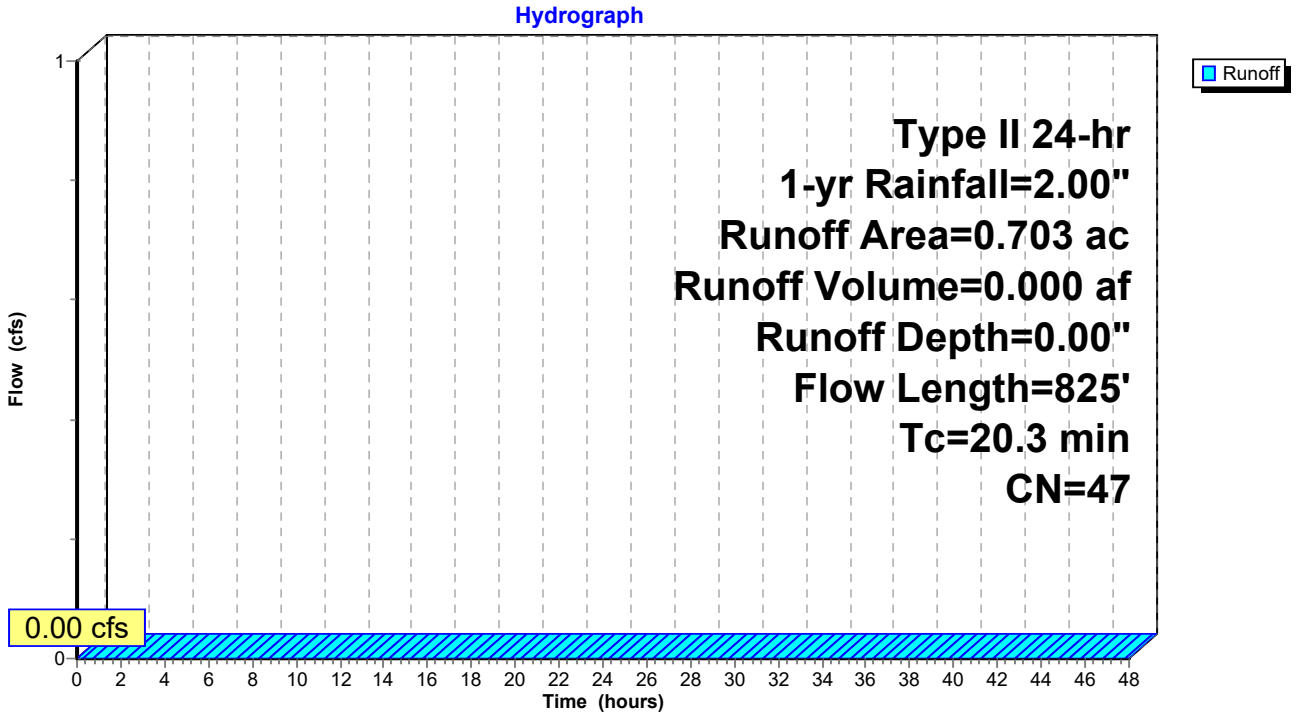
Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Link 15L : PR PARK ST DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.092	98	Paved roads w/curbs & sewers, HSG A
0.611	39	>75% Grass cover, Good, HSG A
0.703	47	Weighted Average
0.611		86.91% Pervious Area
0.092		13.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	80	0.0250	0.11		**Sheet Flow, SF**
					Grass: Dense n= 0.240 P2= 2.50"
0.8	125		2.50		**Direct Entry, PIPE FLOW-1**
5.8	440	0.0050	1.27	0.89	**Channel Flow, CF-1**
					Area= 0.7 sf Perim= 3.2' r= 0.22'
					n= 0.030 High grass
0.4	60		2.50		**Direct Entry, PIPE FLOW-2**
0.9	120	0.0050	2.14	6.41	**Channel Flow, CF-2**
					Area= 3.0 sf Perim= 6.3' r= 0.48'
					n= 0.030 High grass
20.3	825	Total			

Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH



Summary for Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE

[47] Hint: Peak is 234% of capacity of segment #5

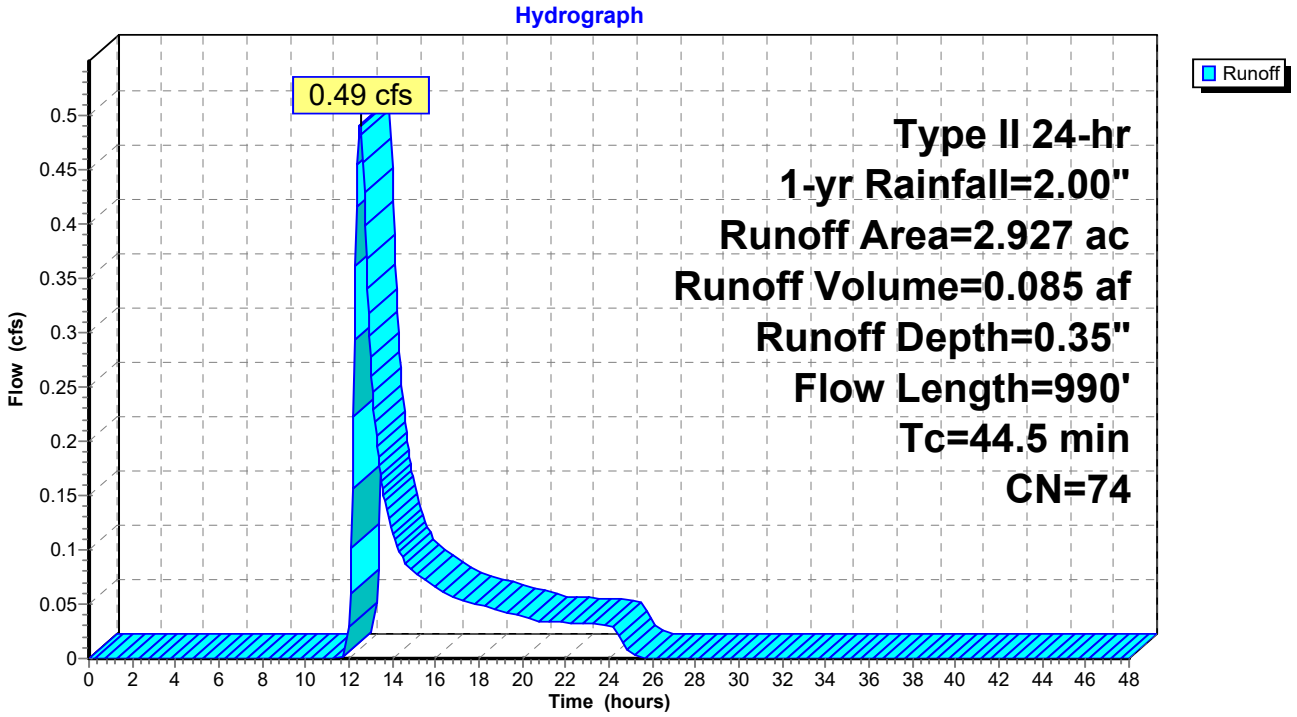
Runoff = 0.49 cfs @ 12.52 hrs, Volume= 0.085 af, Depth= 0.35"
Routed to Pond 17P : PR NEW BLDG SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 1-yr Rainfall=2.00"

Area (ac)	CN	Description
0.448	98	Roofs, HSG A
1.119	39	>75% Grass cover, Good, HSG A
0.021	98	Water Surface, HSG A
0.076	35	Brush, Fair, HSG A
1.263	98	Paved parking, HSG A
2.927	74	Weighted Average
1.195		40.83% Pervious Area
1.732		59.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	60	0.0625	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.1	20	0.0200	2.28		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
1.1	110	0.0100	1.61		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	340		2.50		**Direct Entry, PIPE FLOW-1**
30.3	380	0.0075	0.21	0.21	**Channel Flow, CF-1** Area= 1.0 sf Perim= 4.1' r= 0.24' n= 0.240 Sheet flow over Dense Grass
0.5	80		2.50		**Direct Entry, PIPE FLOW-2**
44.5	990	Total			

Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE



Summary for Pond 13P: NEW BLDG 8 SS Basin

[92] Warning: Device #1 is above defined storage

Inflow Area = 8.381 ac, 71.09% Impervious, Inflow Depth > 0.55" for 1-yr event
Inflow = 2.70 cfs @ 12.29 hrs, Volume= 0.384 af
Outflow = 1.70 cfs @ 12.59 hrs, Volume= 0.334 af, Atten= 37%, Lag= 18.0 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 1.70 cfs @ 12.59 hrs, Volume= 0.334 af
Routed to Pond OS-1 : Big Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 368.67' @ 19.51 hrs Surf.Area= 10,776 sf Storage= 3,939 cf

Plug-Flow detention time= 226.0 min calculated for 0.334 af (87% of inflow)
Center-of-Mass det. time= 143.6 min (1,085.1 - 941.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	367.80'	11,162 cf	**48.17'W x 223.70'L x 3.30'H Field A** 35,544 cf Overall - 7,640 cf Embedded = 27,904 cf x 40.0% Voids
#2A	368.30'	6,274 cf	**Lane HDPE 18"** x 176 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 176 Chambers in 16 Rows 46.27' Header x 1.76 sf x 1 = 81.4 cf Inside
		17,436 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	372.50'	**Custom Weir/Orifice, Cv= 3.33 (C= 4.16)** Head (feet) 0.00 0.50 1.00 Width (feet) 24.00 24.00 200.00
#2	Primary	368.30'	**18.0" Round Culvert X 5.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.30' / 368.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#3	Discarded	367.80'	**1.000 in/hr Exfiltration over Surface area above 367.80'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 10,776 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=367.80' (Free Discharge)
└**3=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=1.69 cfs @ 12.59 hrs HW=368.58' TW=368.16' (Dynamic Tailwater)
├**1=Custom Weir/Orifice** (Controls 0.00 cfs)
└**2=Culvert** (Barrel Controls 1.69 cfs @ 2.25 fps)

Pond 13P: NEW BLDG 8 SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

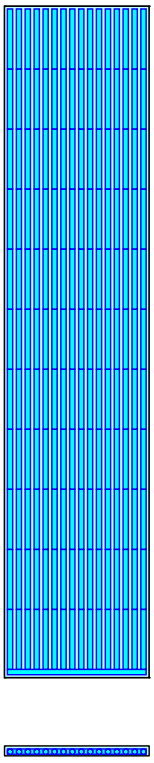
11 Chambers/Row x 20.00' Long +1.80' Header x 1 = 221.80' Row Length +11.4" End Stone x 2 = 223.70' Base Length
16 Rows x 21.6" Wide + 14.0" Spacing x 15 + 11.4" Side Stone x 2 = 48.17' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

176 Chambers x 35.2 cf + 46.27' Header x 1.76 sf = 6,274.1 cf Chamber Storage
176 Chambers x 42.8 cf + 46.27' Header x 2.14 sf = 7,640.0 cf Displacement

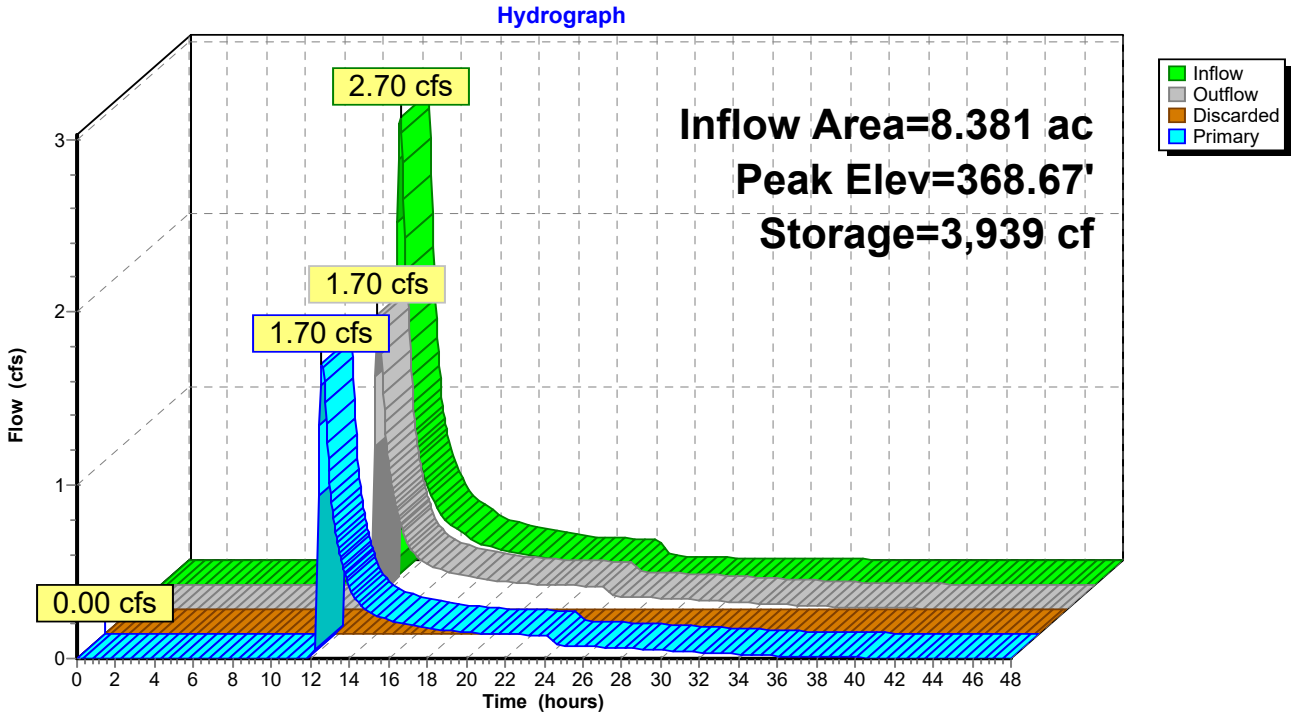
35,543.8 cf Field - 7,640.0 cf Chambers = 27,903.8 cf Stone x 40.0% Voids = 11,161.5 cf Stone Storage

Chamber Storage + Stone Storage = 17,435.7 cf = 0.400 af
Overall Storage Efficiency = 49.1%
Overall System Size = 223.70' x 48.17' x 3.30'

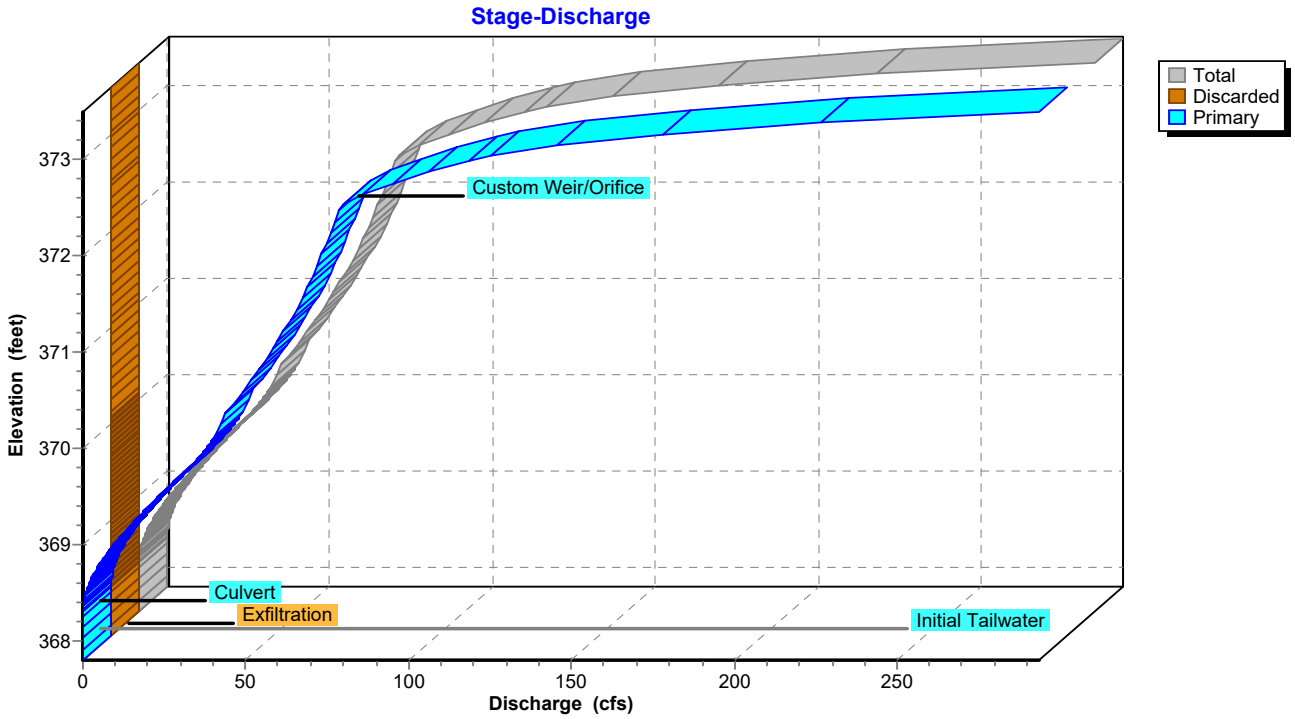
176 Chambers @ $ 0.00 /ea = $ 0.00
1,316.4 cy Field Excavation @ $ 2.50 /cy = $ 3,291.09
1,033.5 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 3,291.09



Pond 13P: NEW BLDG 8 SS Basin



Pond 13P: NEW BLDG 8 SS Basin



Summary for Pond 17P: PR NEW BLDG SWALE

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 0.35" for 1-yr event
Inflow = 0.49 cfs @ 12.52 hrs, Volume= 0.085 af
Outflow = 0.45 cfs @ 12.49 hrs, Volume= 0.085 af, Atten= 8%, Lag= 0.0 min
Primary = 0.45 cfs @ 12.49 hrs, Volume= 0.085 af
Routed to Pond OS-2 : Small Pond @ Billboard

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.36' @ 13.29 hrs Surf.Area= 661 sf Storage= 154 cf

Plug-Flow detention time= 4.6 min calculated for 0.085 af (100% of inflow)
Center-of-Mass det. time= 4.6 min (937.9 - 933.3)

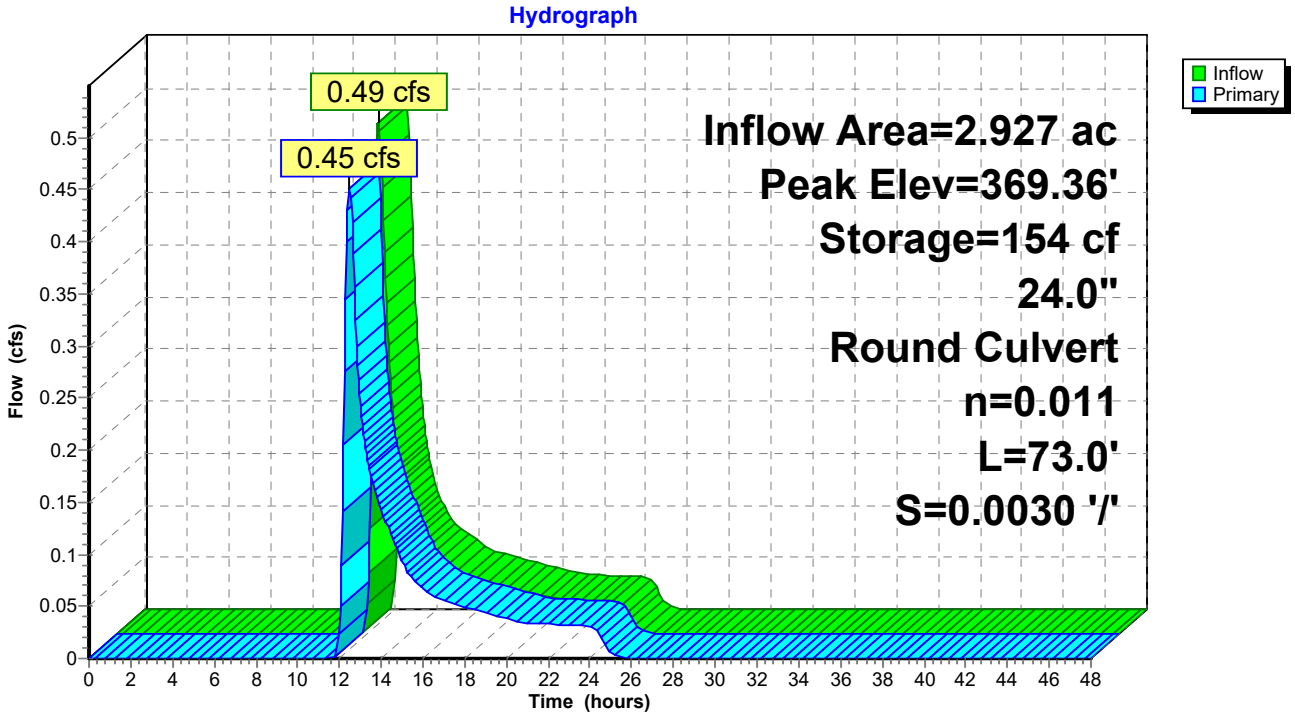
Volume	Invert	Avail.Storage	Storage Description
#1	368.71'	27,959 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.71	0	0	0
369.00	106	15	15
370.00	1,642	874	889
371.00	5,566	3,604	4,493
372.00	10,031	7,799	12,292
373.00	21,303	15,667	27,959

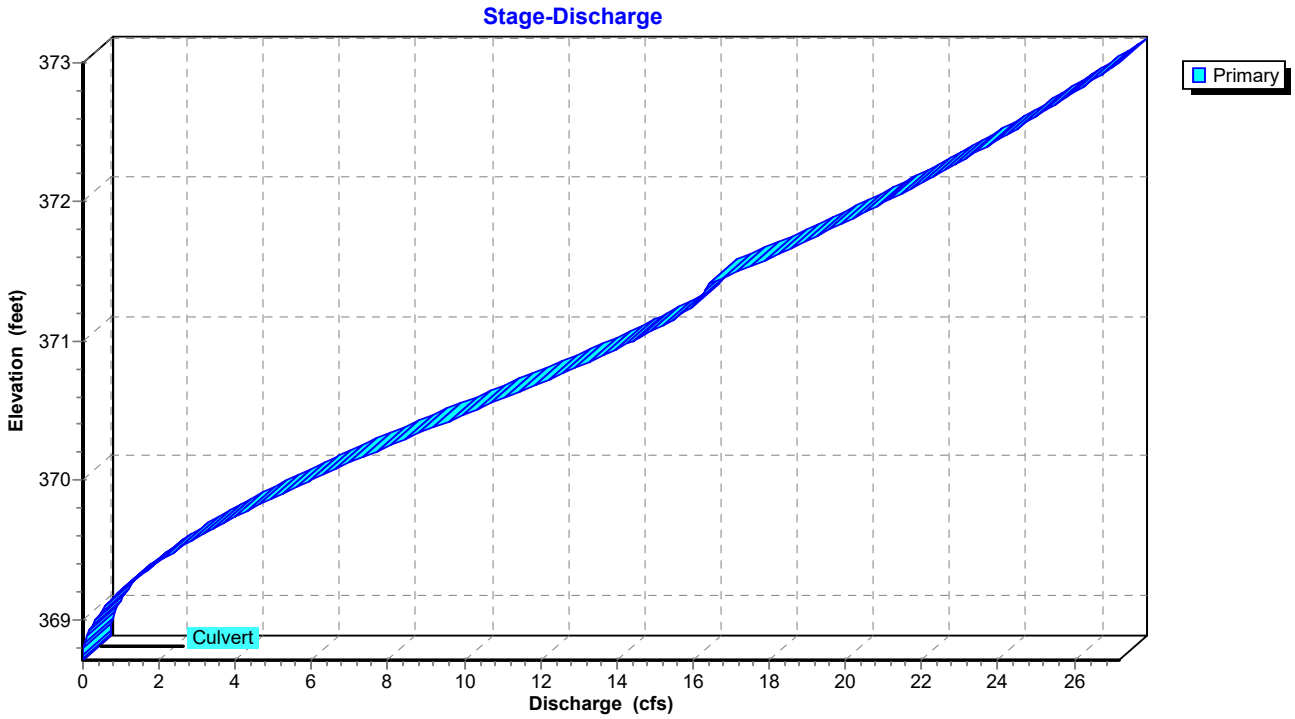
Device	Routing	Invert	Outlet Devices
#1	Primary	368.72'	**24.0" Round Culvert** L= 73.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 368.72' / 368.50' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=0.35 cfs @ 12.49 hrs HW=369.10' TW=368.99' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.35 cfs @ 1.29 fps)

Pond 17P: PR NEW BLDG SWALE



Pond 17P: PR NEW BLDG SWALE



Summary for Pond DMH-3: DMH-3

[57] Hint: Peaked at 367.98' (Flood elevation advised)

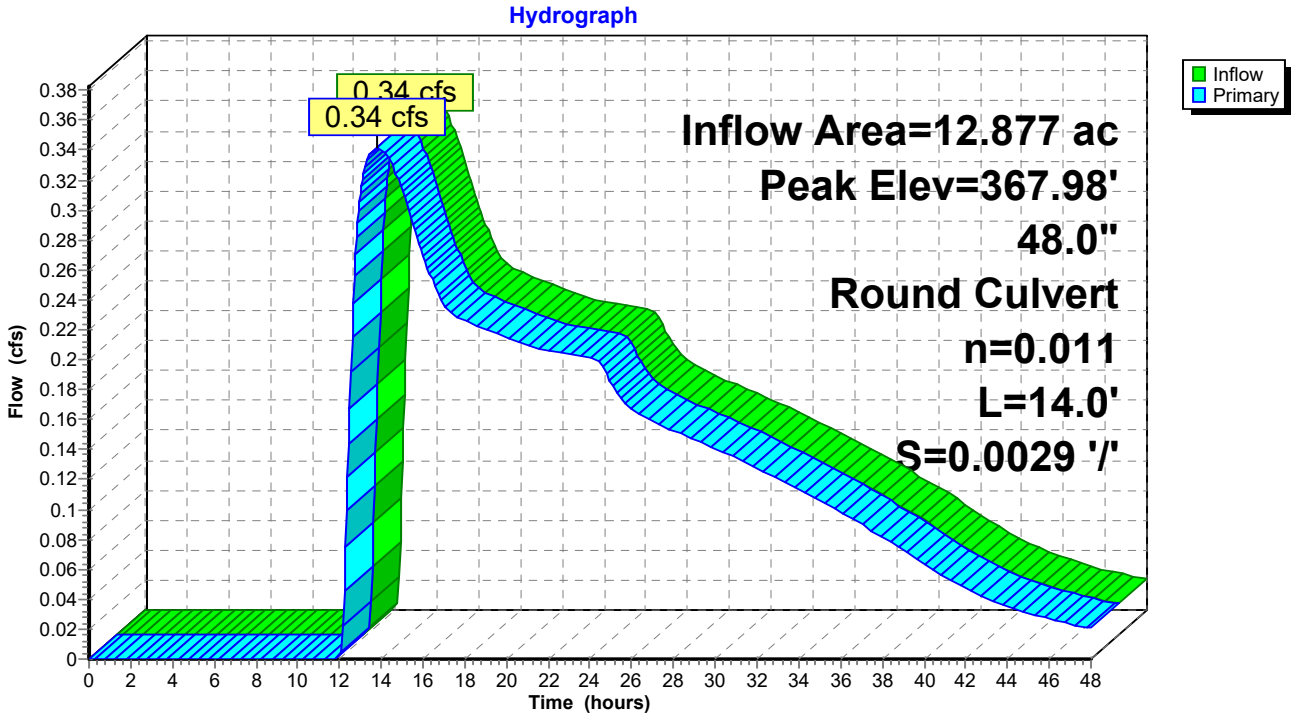
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 0.40" for 1-yr event
Inflow = 0.34 cfs @ 13.81 hrs, Volume= 0.430 af
Outflow = 0.34 cfs @ 13.81 hrs, Volume= 0.430 af, Atten= 0%, Lag= 0.0 min
Primary = 0.34 cfs @ 13.81 hrs, Volume= 0.430 af
Routed to Link ES-6 : OUTFALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 367.98' @ 13.81 hrs

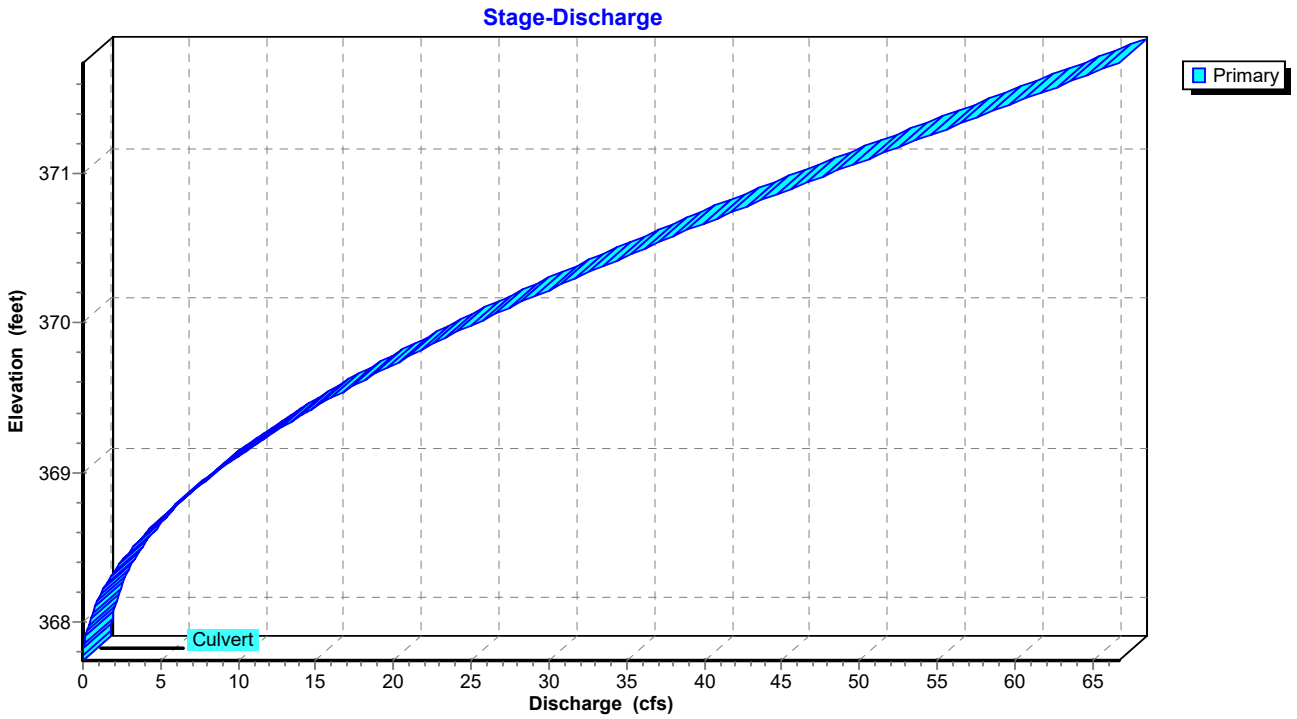
Device	Routing	Invert	Outlet Devices
#1	Primary	367.74'	**48.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.74' / 367.70' S= 0.0029 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=0.34 cfs @ 13.81 hrs HW=367.98' TW=367.36' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.34 cfs @ 1.66 fps)

Pond DMH-3: DMH-3



Pond DMH-3: DMH-3



Summary for Pond DMH-7: Bldg 5 Parking SS Basin

Inflow Area = 1.270 ac,100.00% Impervious, Inflow Depth = 1.77" for 1-yr event
Inflow = 3.07 cfs @ 12.01 hrs, Volume= 0.188 af
Outflow = 0.43 cfs @ 12.36 hrs, Volume= 0.119 af, Atten= 86%, Lag= 21.1 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.43 cfs @ 12.36 hrs, Volume= 0.119 af
Routed to Pond 13P : NEW BLDG 8 SS Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 368.88' @ 12.36 hrs Surf.Area= 14,527 sf Storage= 4,984 cf

Plug-Flow detention time= 361.2 min calculated for 0.119 af (63% of inflow)
Center-of-Mass det. time= 258.3 min (1,025.8 - 767.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	368.05'	15,020 cf	**140.09'W x 103.70'L x 3.30'H Field A** 47,915 cf Overall - 10,365 cf Embedded = 37,550 cf x 40.0% Voids
#2A	368.55'	8,512 cf	**Lane HDPE 18"** x 235 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 235 Chambers in 47 Rows 138.19' Header x 1.76 sf x 1 = 243.1 cf Inside
		23,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	368.05'	**1.000 in/hr Exfiltration over Surface area above 368.05'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 14,527 sf
#2	Primary	368.55'	**18.0" Round Culvert** L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.55' / 368.33' S= 0.0040 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=368.05' (Free Discharge)
1=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=0.43 cfs @ 12.36 hrs HW=368.88' TW=368.45' (Dynamic Tailwater)
2=Culvert (Barrel Controls 0.43 cfs @ 2.24 fps)

Pond DMH-7: Bldg 5 Parking SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

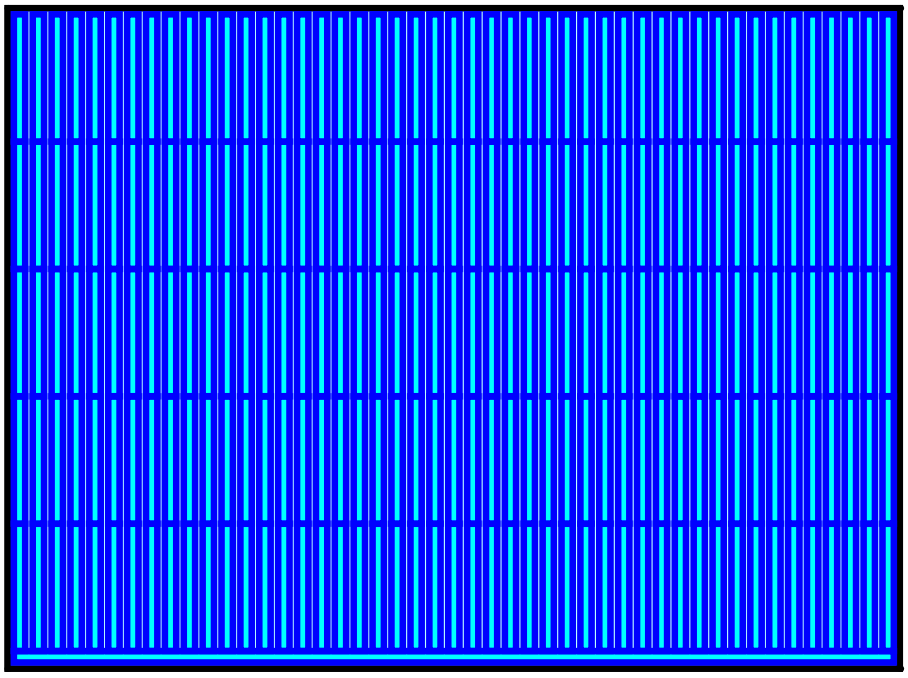
5 Chambers/Row x 20.00' Long +1.80' Header x 1 = 101.80' Row Length +11.4" End Stone x 2 = 103.70' Base Length
47 Rows x 21.6" Wide + 14.0" Spacing x 46 + 11.4" Side Stone x 2 = 140.09' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

235 Chambers x 35.2 cf + 138.19' Header x 1.76 sf = 8,511.8 cf Chamber Storage
235 Chambers x 42.8 cf + 138.19' Header x 2.14 sf = 10,364.9 cf Displacement

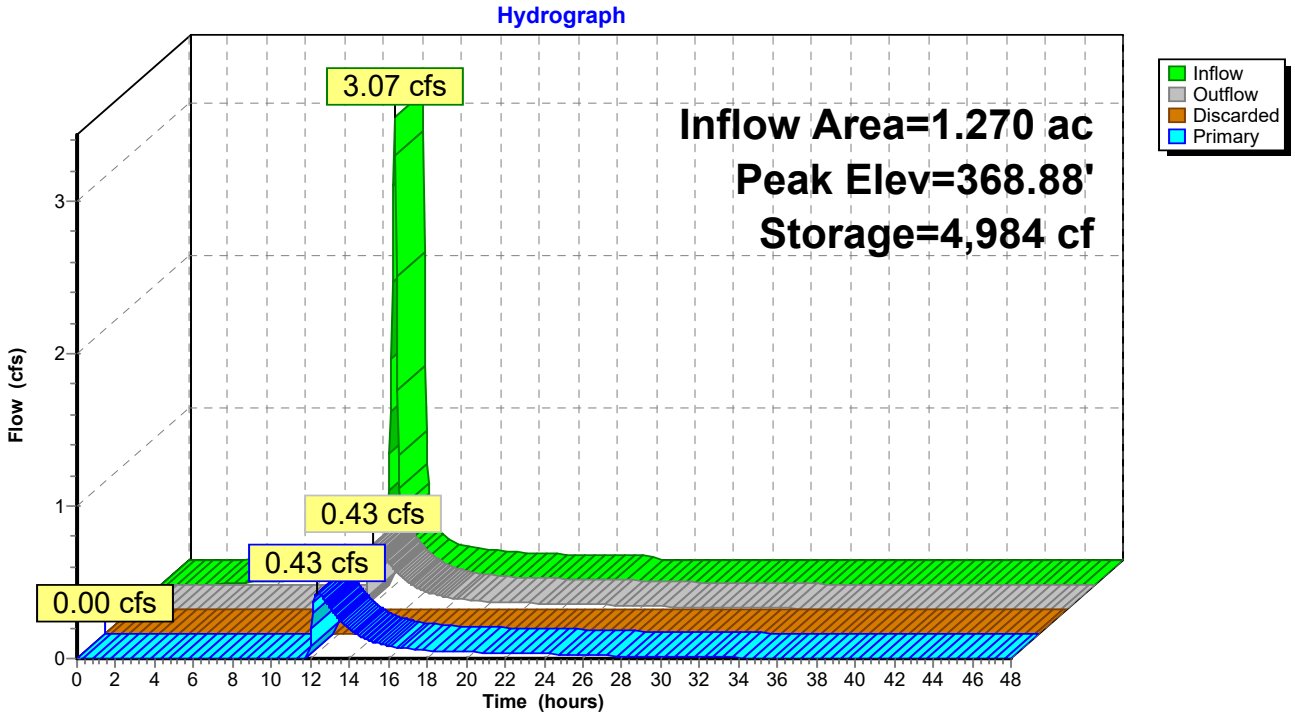
47,914.6 cf Field - 10,364.9 cf Chambers = 37,549.8 cf Stone x 40.0% Voids = 15,019.9 cf Stone Storage

Chamber Storage + Stone Storage = 23,531.7 cf = 0.540 af
Overall Storage Efficiency = 49.1%
Overall System Size = 103.70' x 140.09' x 3.30'

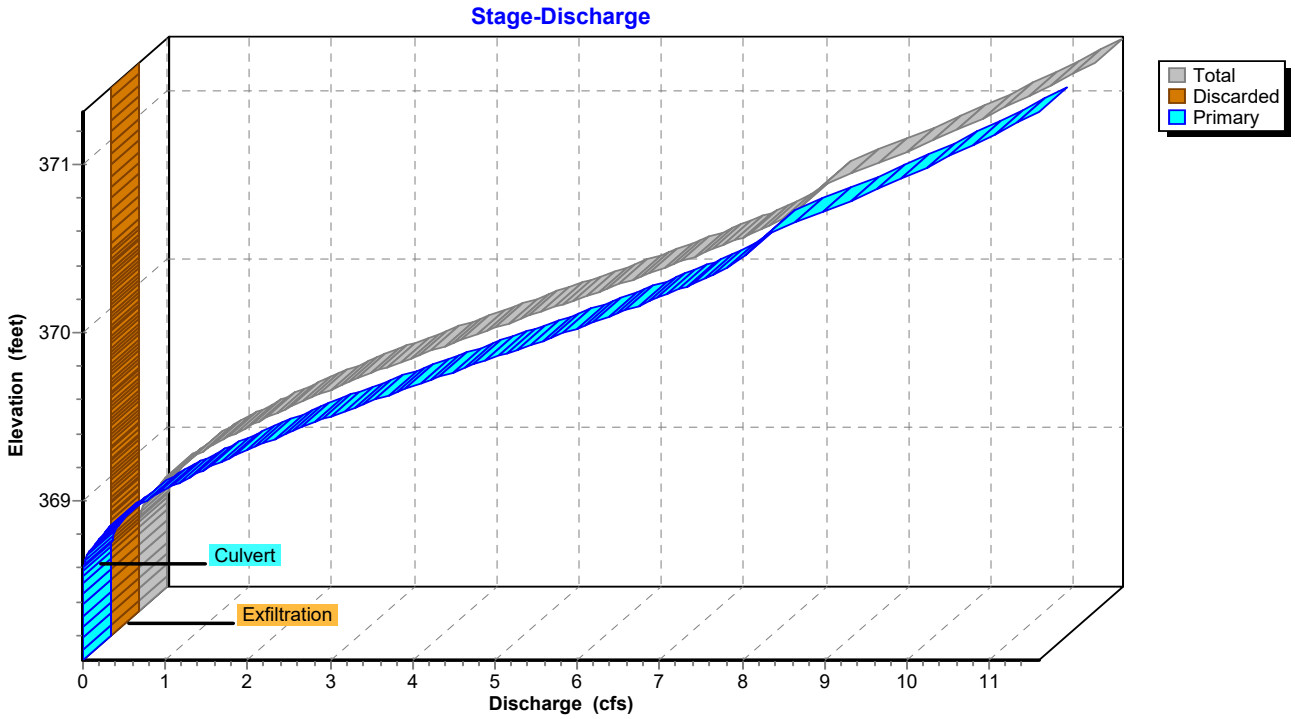
235 Chambers @ $ 0.00 /ea = $ 0.00
1,774.6 cy Field Excavation @ $ 2.50 /cy = $ 4,436.54
1,390.7 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 4,436.54



Pond DMH-7: Bldg 5 Parking SS Basin



Pond DMH-7: Bldg 5 Parking SS Basin



Summary for Pond OS-1: Big Pond

Inflow Area = 9.950 ac, 68.02% Impervious, Inflow Depth > 0.44" for 1-yr event
Inflow = 1.78 cfs @ 12.58 hrs, Volume= 0.368 af
Outflow = 0.17 cfs @ 19.50 hrs, Volume= 0.344 af, Atten= 90%, Lag= 414.7 min
Primary = 0.17 cfs @ 19.50 hrs, Volume= 0.344 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.00' Surf.Area= 10,025 sf Storage= 18,221 cf
Peak Elev= 368.67' @ 19.50 hrs Surf.Area= 11,332 sf Storage= 25,361 cf (7,140 cf above start)

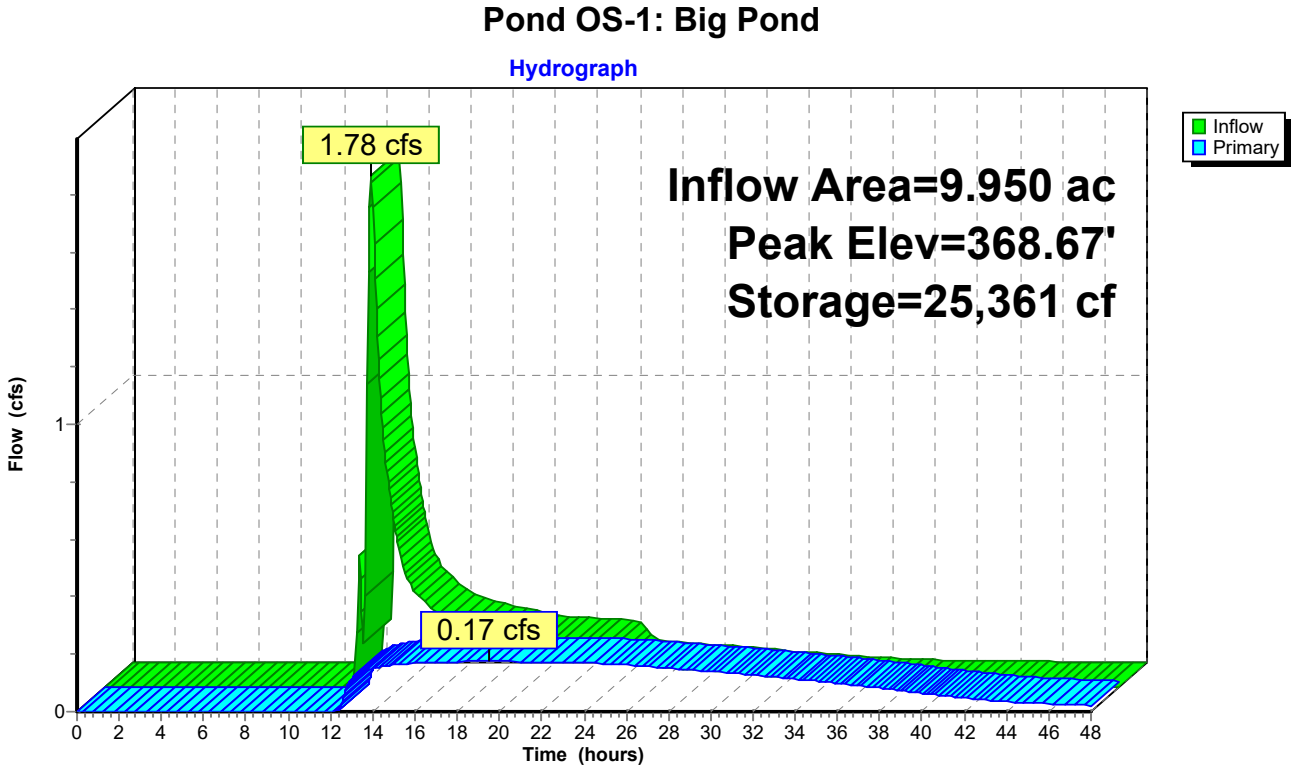
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 501.1 min (1,570.6 - 1,069.5)

Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	124,961 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

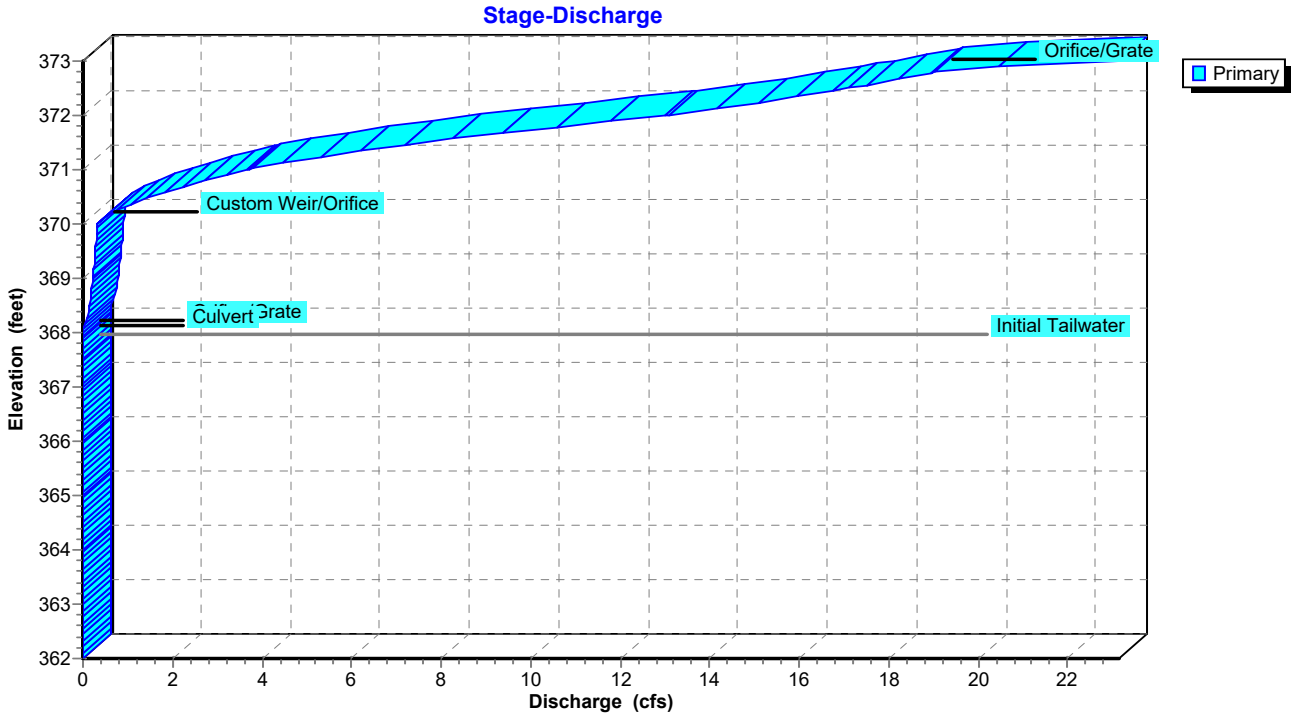
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	239	0	0
363.00	738	489	489
364.00	1,448	1,093	1,582
365.00	2,304	1,876	3,458
366.00	3,561	2,933	6,390
367.00	5,124	4,343	10,733
367.50	5,887	2,753	13,485
367.51	9,000	74	13,560
368.00	10,025	4,661	18,221
369.00	11,979	11,002	29,223
370.00	13,997	12,988	42,211
371.00	16,112	15,055	57,265
372.00	20,006	18,059	75,324
372.50	41,916	15,481	90,805
373.00	94,708	34,156	124,961

Device	Routing	Invert	Outlet Devices
#1	Device 4	368.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.80'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 in 24.0" x 36.0" Grate (100% open area) Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	367.91'	**48.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.91' / 367.84' S= 0.0032 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=0.17 cfs @ 19.50 hrs HW=368.67' TW=367.94' (Dynamic Tailwater)
└─**4=Culvert** (Passes 0.17 cfs of 3.33 cfs potential flow)
  └─**1=Orifice/Grate** (Orifice Controls 0.17 cfs @ 3.55 fps)
  └─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Custom Weir/Orifice** (Controls 0.00 cfs)



Pond OS-1: Big Pond



Summary for Pond OS-2: Small Pond @ Billboard

[80] Warning: Exceeded Pond 17P by 0.01' @ 12.80 hrs (0.16 cfs 0.004 af)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 0.35" for 1-yr event
Inflow = 0.45 cfs @ 12.49 hrs, Volume= 0.085 af
Outflow = 0.20 cfs @ 13.25 hrs, Volume= 0.085 af, Atten= 55%, Lag= 45.5 min
Primary = 0.20 cfs @ 13.25 hrs, Volume= 0.085 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.50' Surf.Area= 692 sf Storage= 479 cf
Peak Elev= 369.36' @ 13.25 hrs Surf.Area= 884 sf Storage= 1,152 cf (673 cf above start)

Plug-Flow detention time= 142.2 min calculated for 0.074 af (87% of inflow)
Center-of-Mass det. time= 47.5 min (985.4 - 937.9)

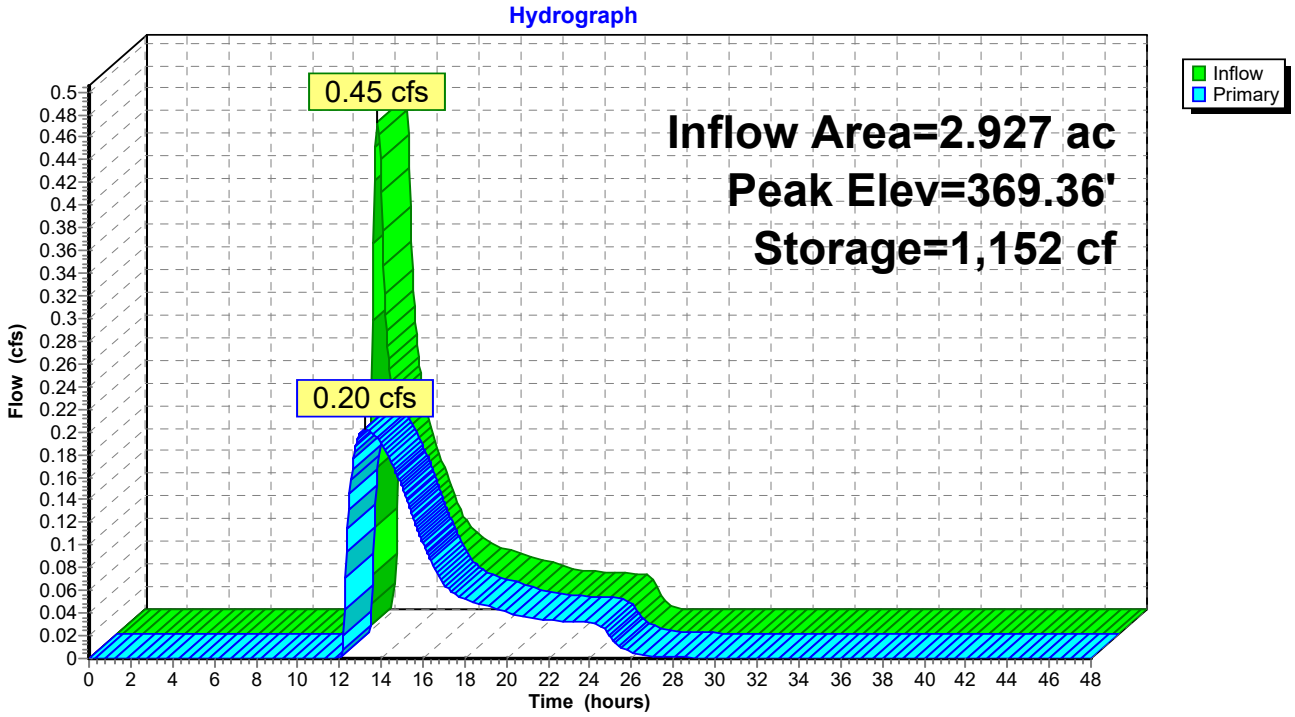
Volume	Invert	Avail.Storage	Storage Description
#1	366.00'	8,328 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
366.00	2	0	0
367.00	62	32	32
368.00	198	130	162
368.01	585	4	166
369.00	801	686	852
370.00	1,035	918	1,770
371.00	1,913	1,474	3,244
372.00	2,407	2,160	5,404
373.00	3,442	2,925	8,328

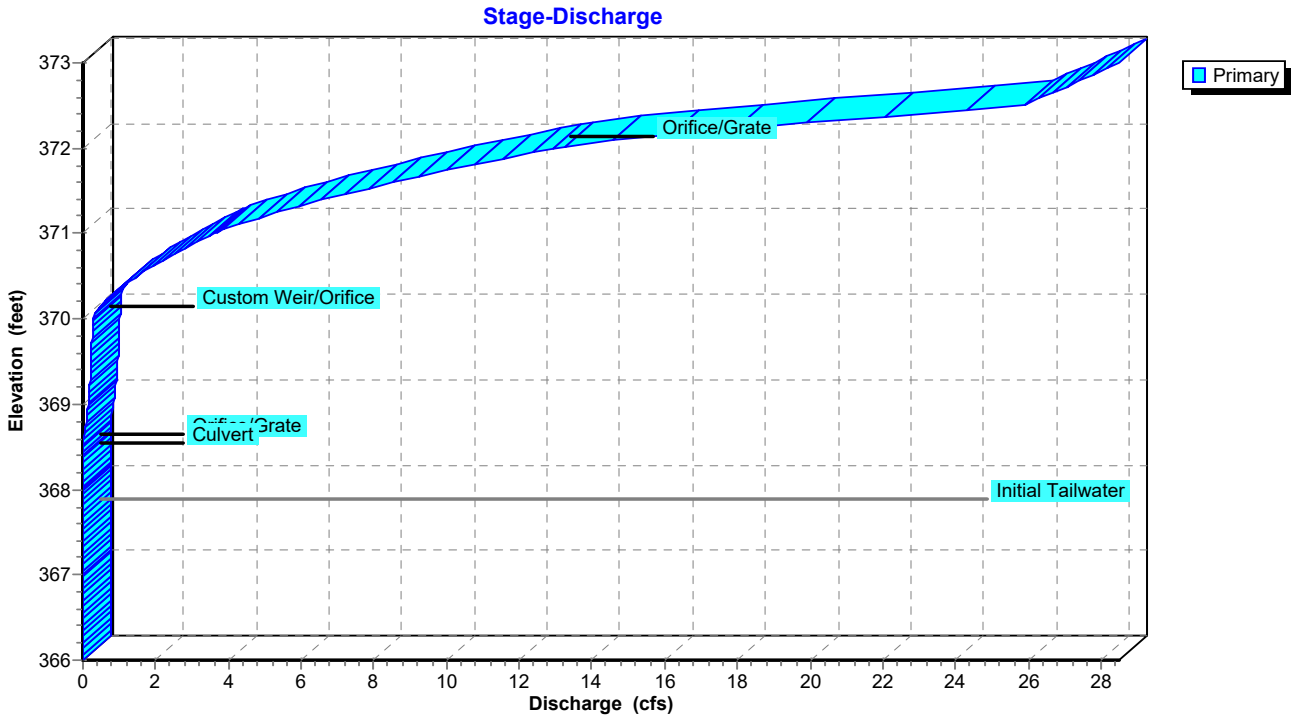
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.50'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	368.40'	**24.0" Round Culvert** L= 81.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.40' / 368.16' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=0.20 cfs @ 13.25 hrs HW=369.36' TW=367.98' (Dynamic Tailwater)
└**4=Culvert** (Passes 0.20 cfs of 3.56 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.20 cfs @ 4.12 fps)
  ├**2=Orifice/Grate** (Controls 0.00 cfs)
  └**3=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond OS-2: Small Pond @ Billboard



Pond OS-2: Small Pond @ Billboard

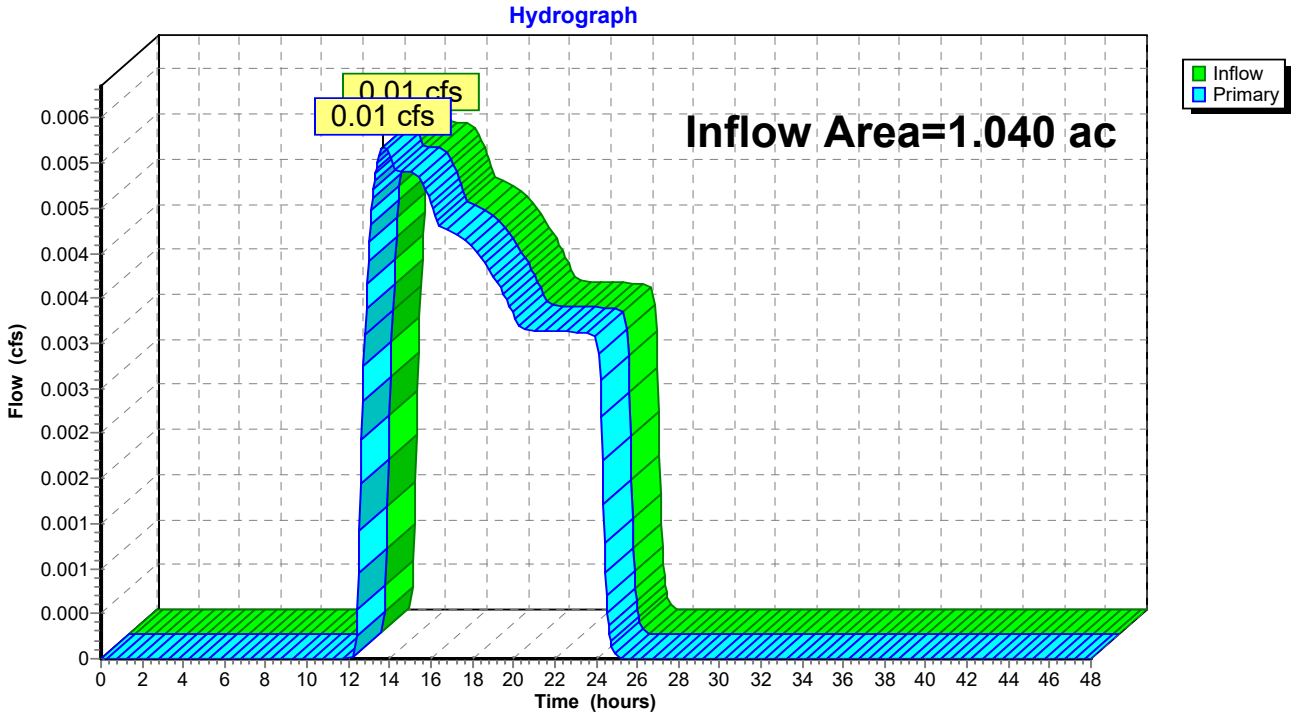


Summary for Link 1L: Discharge @NE Corner

Inflow Area = 1.040 ac, 36.54% Impervious, Inflow Depth = 0.05" for 1-yr event
Inflow = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af
Primary = 0.01 cfs @ 13.71 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Discharge @NE Corner

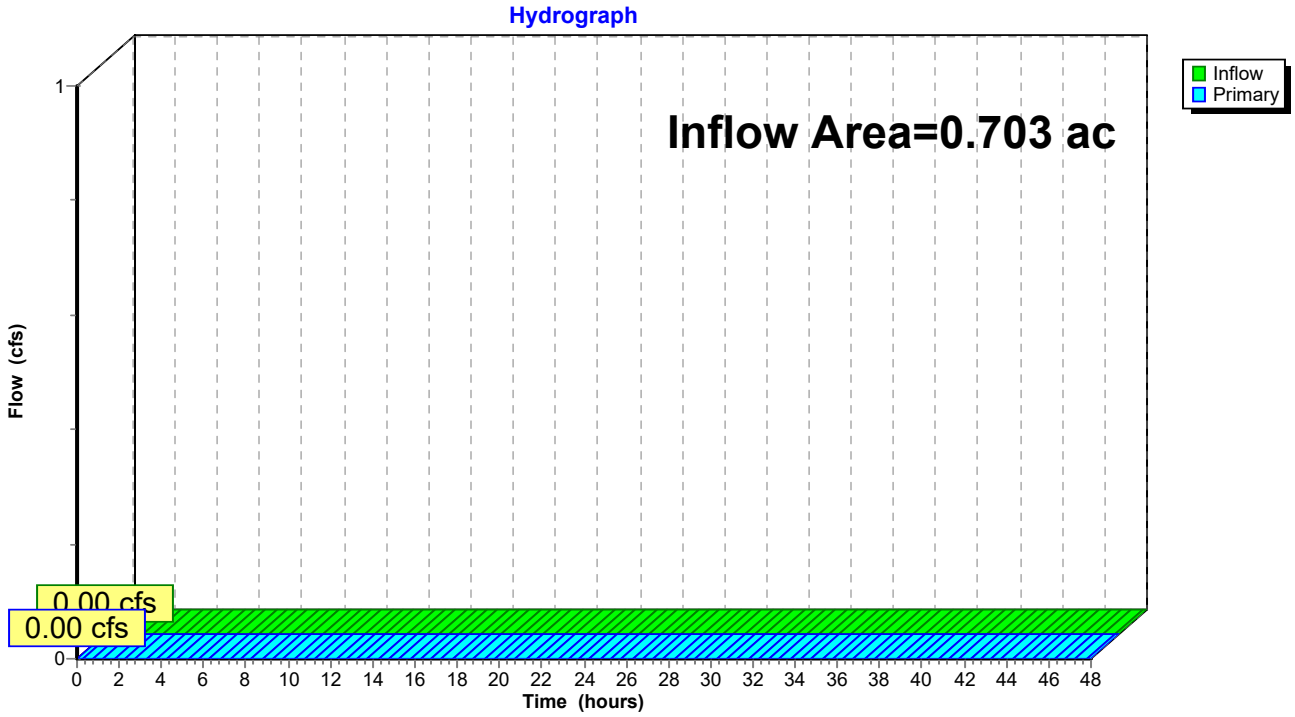


Summary for Link 15L: PR PARK ST DISCHARGE

Inflow Area = 0.703 ac, 13.09% Impervious, Inflow Depth = 0.00" for 1-yr event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 15L: PR PARK ST DISCHARGE



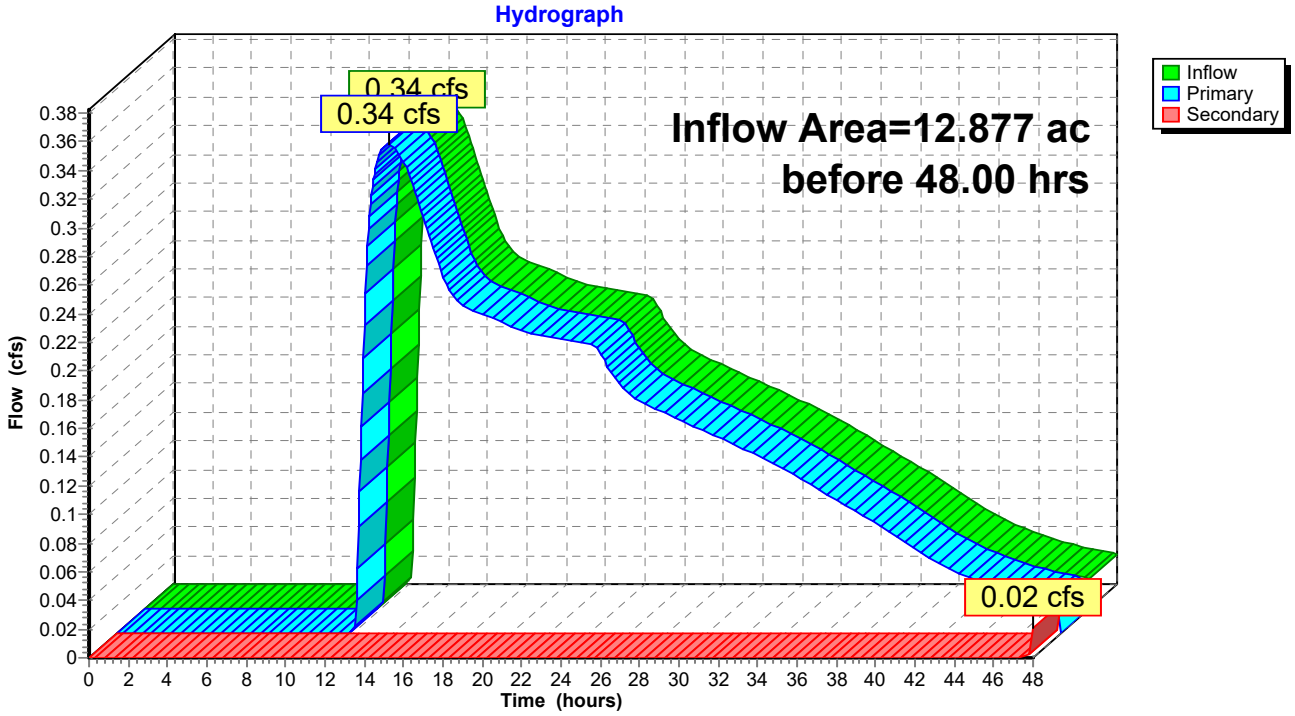
Summary for Link ES-6: OUTFALL

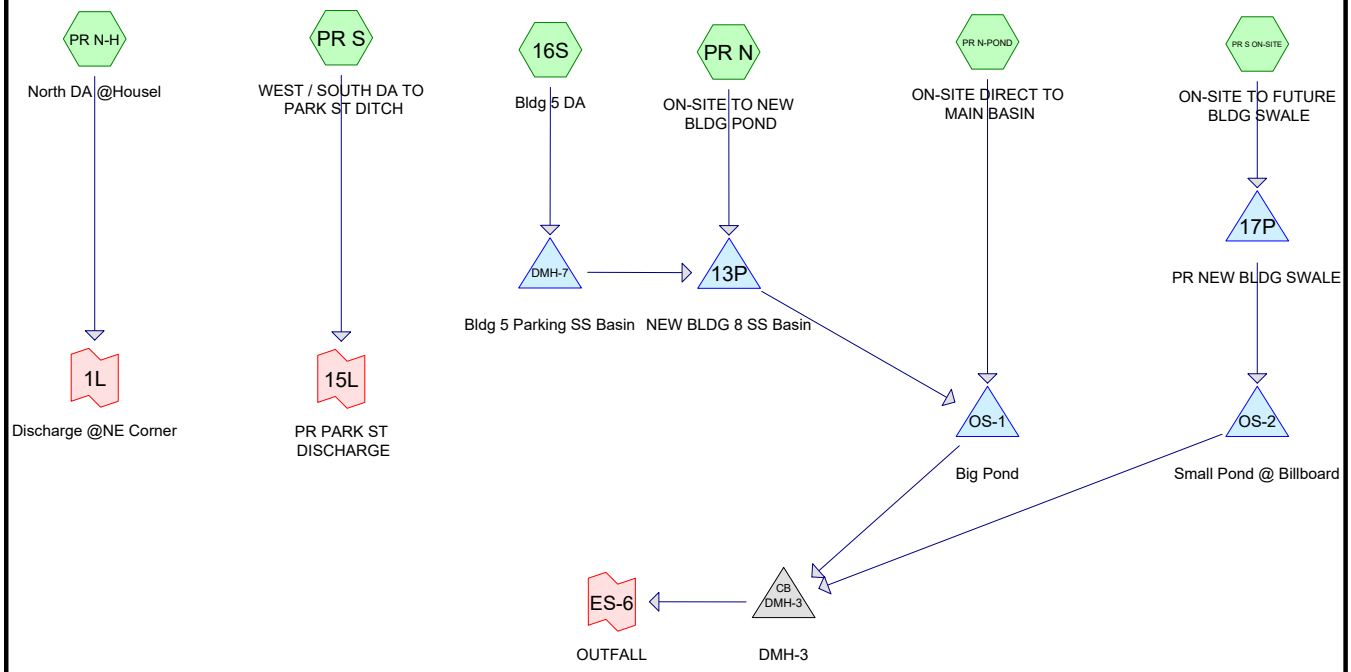
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 0.40" for 1-yr event
Inflow = 0.34 cfs @ 13.81 hrs, Volume= 0.430 af
Primary = 0.34 cfs @ 13.81 hrs, Volume= 0.430 af, Atten= 0%, Lag= 0.0 min
Secondary = 0.02 cfs @ 48.00 hrs, Volume= 0.000 af

Primary outflow = Inflow before 48.00 hrs, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

High tide Elevation = 367.50' at 16.00 hrs
Low tide Elevation = 367.00' at 22.21 hrs

Link ES-6: OUTFALL





Subcat Reach Pond Link

Routing Diagram for URBan Villages_PROPOSED-02_01-2024_Storm Chambers_Lane 18-inch HDPE_REV 01-2025

Prepared by Calocerinos Engineering, PLLC

HydroCAD® 10.20-2h s/n 08759 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type II 24-hr		Default	24.00	1	2.50	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.255	39	>75% Grass cover, Good, HSG A (PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE)
1.052	35	Brush, Fair, HSG A (PR N, PR N-H, PR S ON-SITE)
0.071	76	Gravel roads, HSG A (PR N-POND)
5.082	98	Paved parking, HSG A (16S, PR N, PR N-POND, PR S ON-SITE)
0.092	98	Paved roads w/curbs & sewers, HSG A (PR S)
3.554	98	Roofs, HSG A (16S, PR N, PR N-H, PR S ON-SITE)
0.244	98	Water Surface, HSG A (PR N-POND, PR S ON-SITE)
0.270	36	Woods, Fair, HSG A (PR N)
14.620	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
14.620	HSG A	16S, PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
14.620		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
4.255	0.000	0.000	0.000	0.000	4.255	>75% Grass cover, Good	PRN, PRN-H, PRN-POND, PRS, PRS ON-SITE
1.052	0.000	0.000	0.000	0.000	1.052	Brush, Fair	PRN, PRN-H, PRS ON-SITE
0.071	0.000	0.000	0.000	0.000	0.071	Gravel roads	PRN-POND
5.082	0.000	0.000	0.000	0.000	5.082	Paved parking	16S, PRN, PRN-POND, PRS ON-SITE
0.092	0.000	0.000	0.000	0.000	0.092	Paved roads w/curbs & sewers	PRS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.554	0.000	0.000	0.000	0.000	3.554	Roofs	16S, PRN, PRN-H, PRS ON-SITE
0.244	0.000	0.000	0.000	0.000	0.244	Water Surface	PRN-POND, PRS ON-SITE
0.270	0.000	0.000	0.000	0.000	0.270	Woods, Fair	PRN
14.620	**0.000**	**0.000**	**0.000**	**0.000**	**14.620**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	13P	368.30	368.00	60.0	0.0050	0.011	0.0	18.0	0.0
2	17P	368.72	368.50	73.0	0.0030	0.011	0.0	24.0	0.0
3	DMH-3	367.74	367.70	14.0	0.0029	0.011	0.0	48.0	0.0
4	DMH-7	368.55	368.33	55.0	0.0040	0.011	0.0	18.0	0.0
5	OS-1	367.91	367.84	22.0	0.0032	0.011	0.0	48.0	0.0
6	OS-2	368.40	368.16	81.0	0.0030	0.011	0.0	24.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 16S: Bldg 5 DA Runoff Area=1.270 ac 100.00% Impervious Runoff Depth=2.27"
Flow Length=230' Tc=10.0 min CN=98 Runoff=3.87 cfs 0.240 af

Subcatchment PR N: ON-SITE TO NEW Runoff Area=7.111 ac 65.93% Impervious Runoff Depth=0.74"
Flow Length=875' Tc=30.0 min CN=77 Runoff=4.15 cfs 0.439 af

Subcatchment PR N-H: North DA @Housel Runoff Area=1.040 ac 36.54% Impervious Runoff Depth=0.15"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.04 cfs 0.013 af

Subcatchment PR N-POND: ON-SITE Runoff Area=1.569 ac 51.63% Impervious Runoff Depth=0.49"
Flow Length=105' Tc=10.0 min CN=71 Runoff=1.02 cfs 0.064 af

Subcatchment PR S: WEST / SOUTH DA TO Runoff Area=0.703 ac 13.09% Impervious Runoff Depth=0.01"
Flow Length=825' Tc=20.3 min CN=47 Runoff=0.00 cfs 0.000 af

Subcatchment PR S ON-SITE: ON-SITE TO Runoff Area=2.927 ac 59.17% Impervious Runoff Depth=0.61"
Flow Length=990' Tc=44.5 min CN=74 Runoff=0.99 cfs 0.148 af

Pond 13P: NEW BLDG 8 SS Basin Peak Elev=369.02' Storage=6,344 cf Inflow=4.95 cfs 0.607 af
Discarded=0.00 cfs 0.000 af Primary=3.99 cfs 0.551 af Outflow=3.99 cfs 0.551 af

Pond 17P: PR NEW BLDG SWALE Peak Elev=369.94' Storage=798 cf Inflow=0.99 cfs 0.148 af
24.0" Round Culvert n=0.011 L=73.0' S=0.0030 '/' Outflow=0.77 cfs 0.148 af

Pond DMH-3: DMH-3 Peak Elev=368.41' Inflow=0.48 cfs 0.677 af
48.0" Round Culvert n=0.011 L=14.0' S=0.0029 '/' Outflow=0.48 cfs 0.677 af

Pond DMH-7: Bldg 5 Parking SS Basin Peak Elev=369.02' Storage=6,207 cf Inflow=3.87 cfs 0.240 af
Discarded=0.00 cfs 0.000 af Primary=0.80 cfs 0.168 af Outflow=0.80 cfs 0.168 af

Pond OS-1: Big Pond Peak Elev=369.02' Storage=29,471 cf Inflow=4.18 cfs 0.615 af
Outflow=0.22 cfs 0.529 af

Pond OS-2: Small Pond @ Billboard Peak Elev=369.94' Storage=1,710 cf Inflow=0.77 cfs 0.148 af
Outflow=0.27 cfs 0.148 af

Link 1L: Discharge @NE Corner Inflow=0.04 cfs 0.013 af
Primary=0.04 cfs 0.013 af

Link 15L: PR PARK ST DISCHARGE Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link ES-6: OUTFALL before 48.00 hrs Inflow=0.48 cfs 0.677 af
Primary=0.48 cfs 0.677 af Secondary=0.12 cfs 0.000 af

Total Runoff Area = 14.620 ac Runoff Volume = 0.905 af Average Runoff Depth = 0.74"
38.63% Pervious = 5.648 ac 61.37% Impervious = 8.972 ac

Summary for Subcatchment 16S: Bldg 5 DA

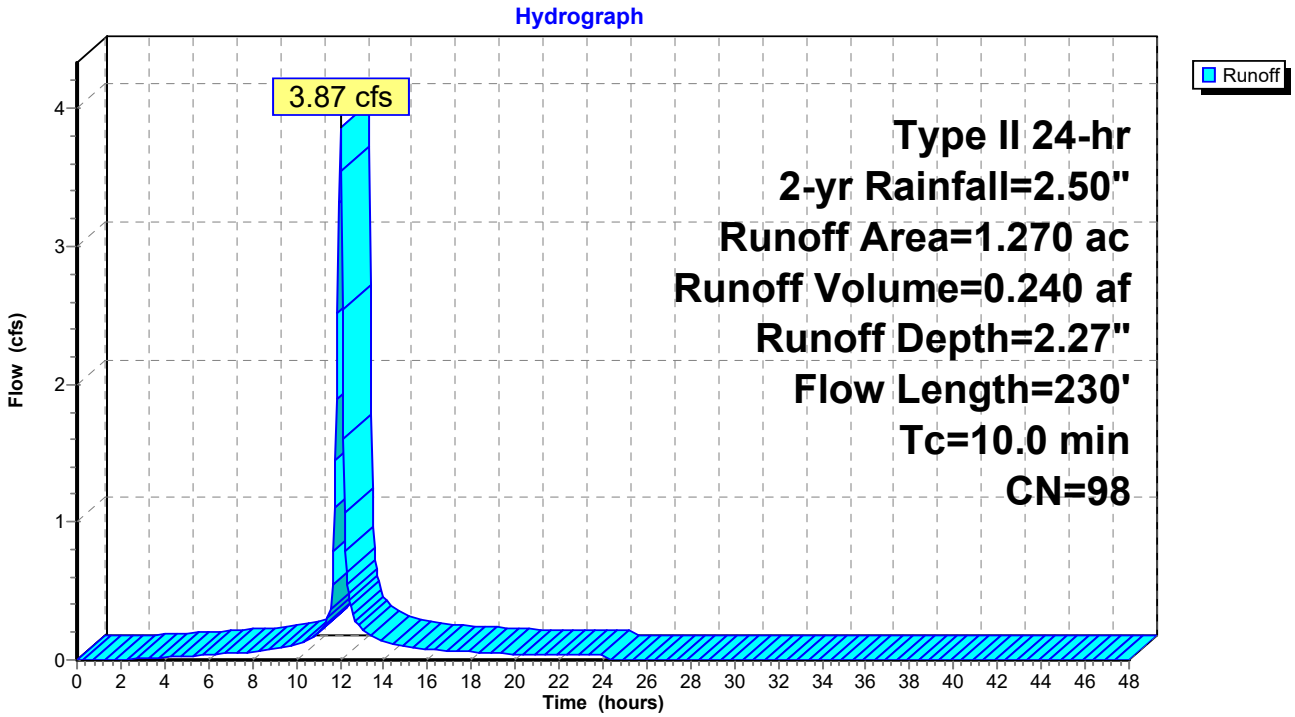
Runoff = 3.87 cfs @ 12.01 hrs, Volume= 0.240 af, Depth= 2.27"
Routed to Pond DMH-7 : Bldg 5 Parking SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.400	98	Roofs, HSG A
0.870	98	Paved parking, HSG A
1.270	98	Weighted Average
1.270		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	60	0.3300	3.37		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 2.50"
0.1	50	0.3300	11.66		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.7	120	0.0200	2.87		**Shallow Concentrated Flow, SCF-2** Paved Kv= 20.3 fps
1.1	230	Total, Increased to minimum Tc = 10.0 min			

Subcatchment 16S: Bldg 5 DA



Summary for Subcatchment PR N: ON-SITE TO NEW BLDG POND

[47] Hint: Peak is 330% of capacity of segment #4

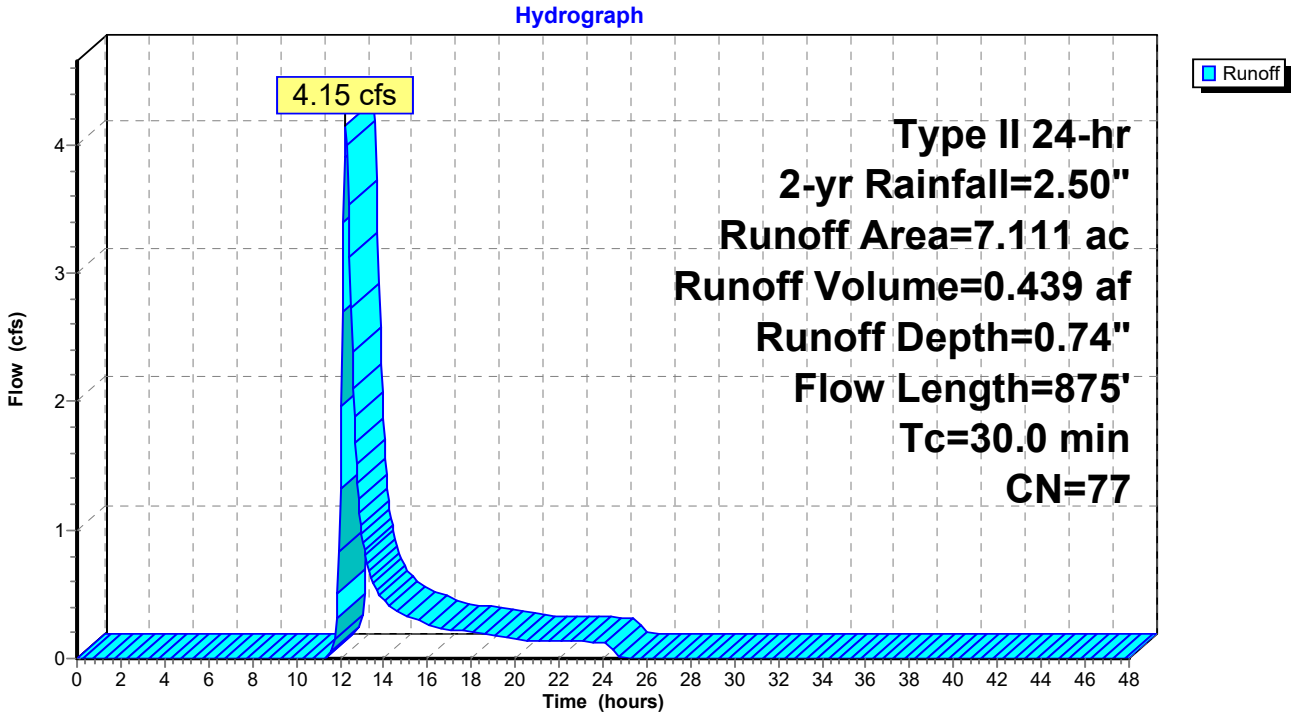
Runoff = 4.15 cfs @ 12.27 hrs, Volume= 0.439 af, Depth= 0.74"
Routed to Pond 13P : NEW BLDG 8 SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.270	36	Woods, Fair, HSG A
2.326	98	Roofs, HSG A
0.596	35	Brush, Fair, HSG A
1.557	39	>75% Grass cover, Good, HSG A
2.362	98	Paved parking, HSG A
7.111	77	Weighted Average
2.423		34.07% Pervious Area
4.688		65.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	100	0.0200	0.07		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.7	100	0.0200	2.28		**Shallow Concentrated Flow, SCF-1** Unpaved Kv= 16.1 fps
0.1	35	0.1200	5.58		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	250	0.0100	1.80	1.26	**Channel Flow, CF** Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Riprap, 1-inch
2.6	390		2.50		**Direct Entry, PIPE FLOW**
30.0	875	Total			

Subcatchment PR N: ON-SITE TO NEW BLDG POND



Summary for Subcatchment PR N-H: North DA @Housel

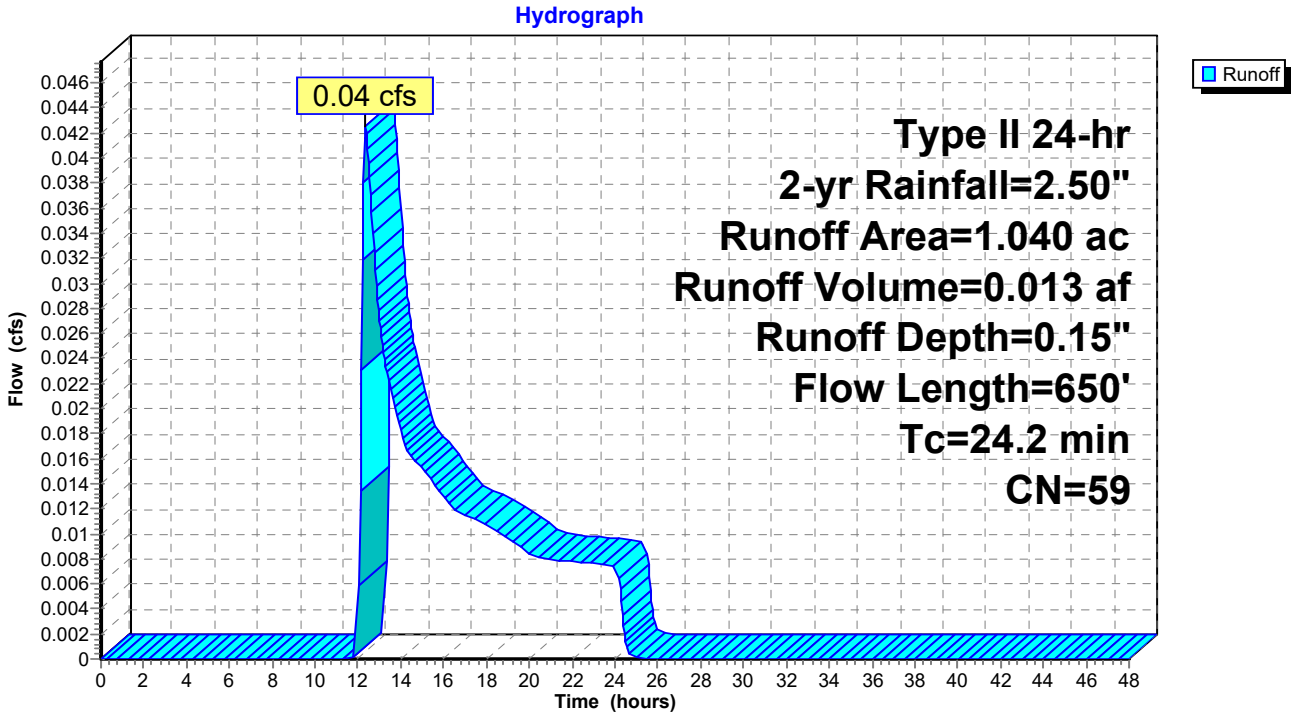
Runoff = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af, Depth= 0.15"
Routed to Link 1L : Discharge @NE Corner

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.280	39	>75% Grass cover, Good, HSG A
0.380	35	Brush, Fair, HSG A
0.380	98	Roofs, HSG A
1.040	59	Weighted Average
0.660		63.46% Pervious Area
0.380		36.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment PR N-H: North DA @Housel



Summary for Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN

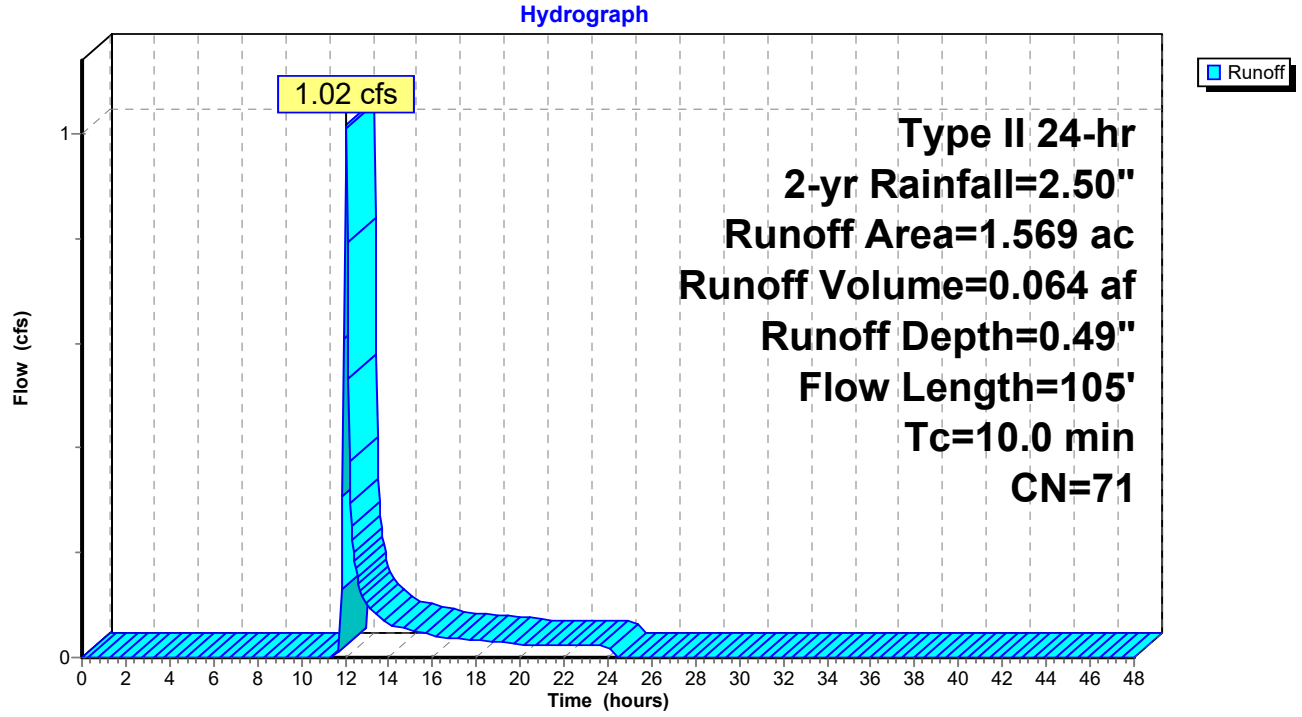
Runoff = 1.02 cfs @ 12.04 hrs, Volume= 0.064 af, Depth= 0.49"
Routed to Pond OS-1 : Big Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.071	76	Gravel roads, HSG A
0.587	98	Paved parking, HSG A
0.223	98	Water Surface, HSG A
0.688	39	>75% Grass cover, Good, HSG A
1.569	71	Weighted Average
0.759		48.37% Pervious Area
0.810		51.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	45	0.0200	0.09		**Sheet Flow, SF** Grass: Dense n= 0.240 P2= 2.50"
0.2	40	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.0	20	0.2500	8.05		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
8.7	105	Total, Increased to minimum Tc = 10.0 min			

Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN



Summary for Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH

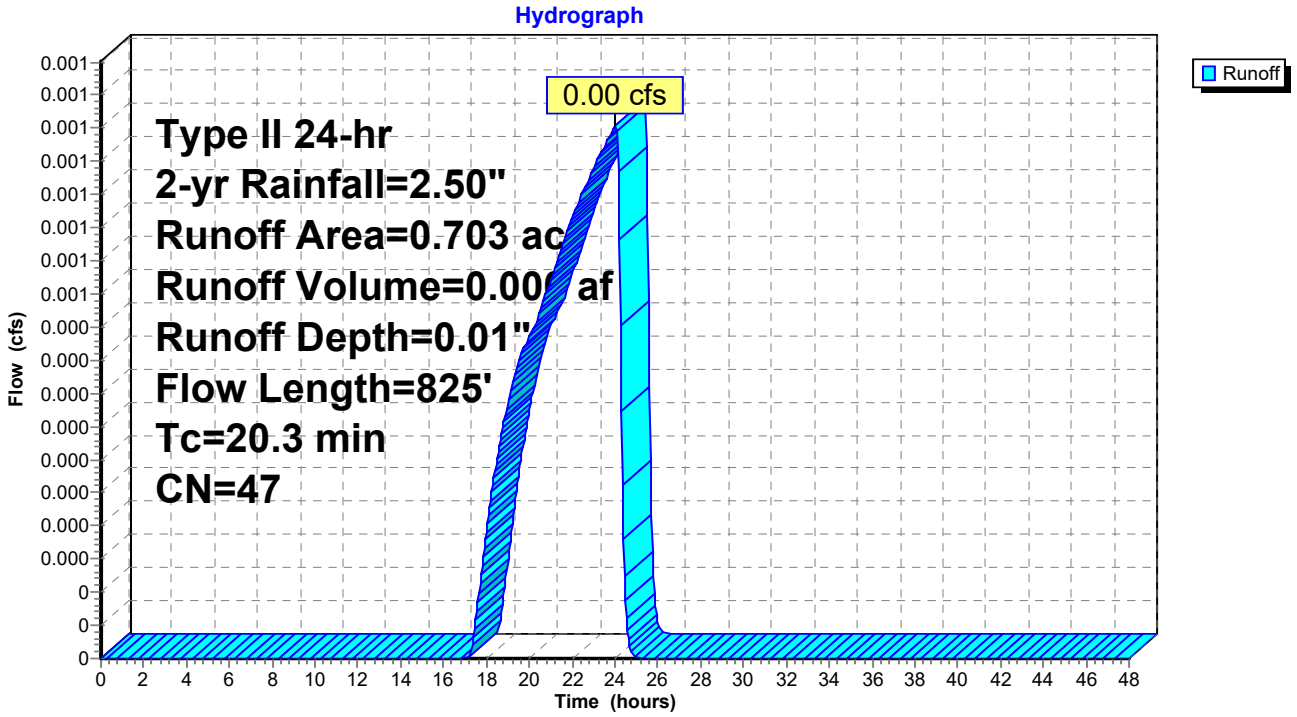
Runoff = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Depth= 0.01"
Routed to Link 15L : PR PARK ST DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.092	98	Paved roads w/curbs & sewers, HSG A
0.611	39	>75% Grass cover, Good, HSG A
0.703	47	Weighted Average
0.611		86.91% Pervious Area
0.092		13.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	80	0.0250	0.11		**Sheet Flow, SF**
					Grass: Dense n= 0.240 P2= 2.50"
0.8	125		2.50		**Direct Entry, PIPE FLOW-1**
5.8	440	0.0050	1.27	0.89	**Channel Flow, CF-1**
					Area= 0.7 sf Perim= 3.2' r= 0.22'
					n= 0.030 High grass
0.4	60		2.50		**Direct Entry, PIPE FLOW-2**
0.9	120	0.0050	2.14	6.41	**Channel Flow, CF-2**
					Area= 3.0 sf Perim= 6.3' r= 0.48'
					n= 0.030 High grass
20.3	825	Total			

Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH



Summary for Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE

[47] Hint: Peak is 473% of capacity of segment #5

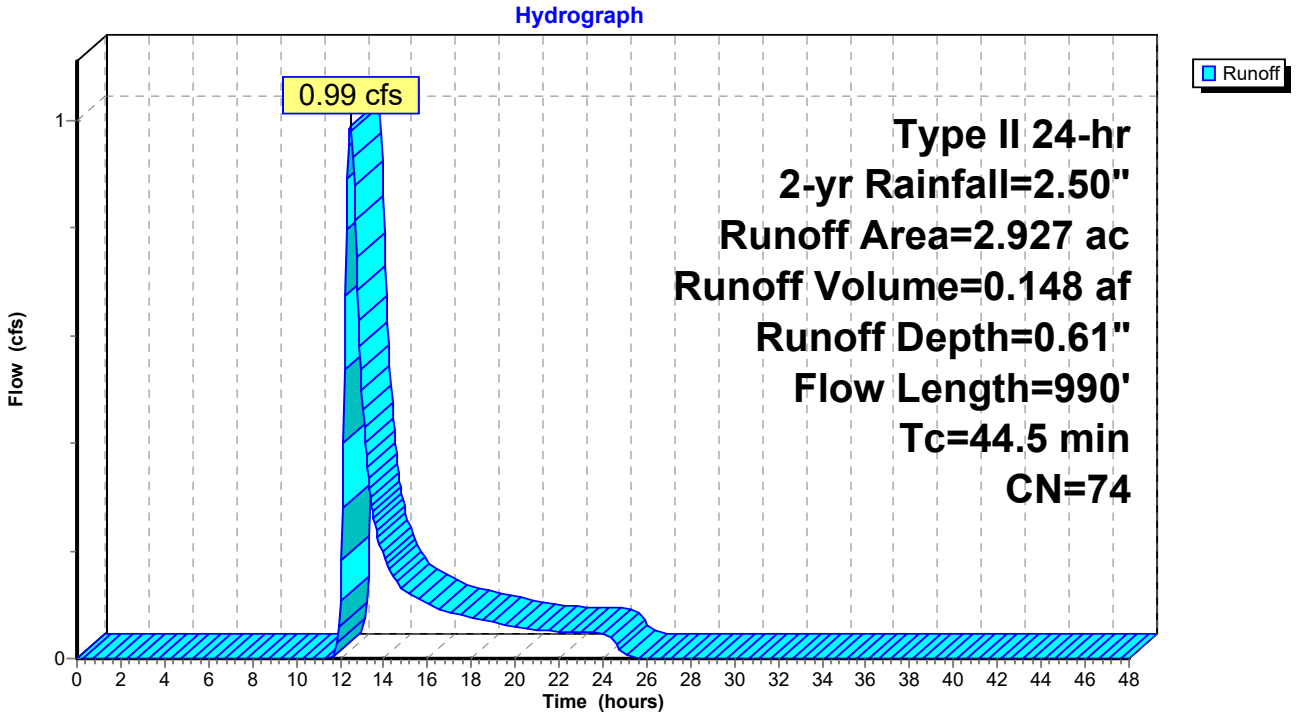
Runoff = 0.99 cfs @ 12.49 hrs, Volume= 0.148 af, Depth= 0.61"
Routed to Pond 17P : PR NEW BLDG SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-yr Rainfall=2.50"

Area (ac)	CN	Description
0.448	98	Roofs, HSG A
1.119	39	>75% Grass cover, Good, HSG A
0.021	98	Water Surface, HSG A
0.076	35	Brush, Fair, HSG A
1.263	98	Paved parking, HSG A
2.927	74	Weighted Average
1.195		40.83% Pervious Area
1.732		59.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	60	0.0625	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.1	20	0.0200	2.28		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
1.1	110	0.0100	1.61		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	340		2.50		**Direct Entry, PIPE FLOW-1**
30.3	380	0.0075	0.21	0.21	**Channel Flow, CF-1** Area= 1.0 sf Perim= 4.1' r= 0.24' n= 0.240 Sheet flow over Dense Grass
0.5	80		2.50		**Direct Entry, PIPE FLOW-2**
44.5	990	Total			

Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE



Summary for Pond 13P: NEW BLDG 8 SS Basin

[92] Warning: Device #1 is above defined storage

Inflow Area = 8.381 ac, 71.09% Impervious, Inflow Depth > 0.87" for 2-yr event
Inflow = 4.95 cfs @ 12.27 hrs, Volume= 0.607 af
Outflow = 3.99 cfs @ 12.43 hrs, Volume= 0.551 af, Atten= 19%, Lag= 9.6 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 3.99 cfs @ 12.43 hrs, Volume= 0.551 af
Routed to Pond OS-1 : Big Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.02' @ 19.93 hrs Surf.Area= 10,776 sf Storage= 6,344 cf

Plug-Flow detention time= 338.3 min calculated for 0.551 af (91% of inflow)
Center-of-Mass det. time= 235.1 min (1,238.0 - 1,002.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	367.80'	11,162 cf	**48.17'W x 223.70'L x 3.30'H Field A** 35,544 cf Overall - 7,640 cf Embedded = 27,904 cf x 40.0% Voids
#2A	368.30'	6,274 cf	**Lane HDPE 18"** x 176 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 176 Chambers in 16 Rows 46.27' Header x 1.76 sf x 1 = 81.4 cf Inside
		17,436 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	372.50'	**Custom Weir/Orifice, Cv= 3.33 (C= 4.16)** Head (feet) 0.00 0.50 1.00 Width (feet) 24.00 24.00 200.00
#2	Primary	368.30'	**18.0" Round Culvert X 5.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.30' / 368.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#3	Discarded	367.80'	**1.000 in/hr Exfiltration over Surface area above 367.80'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 10,776 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=367.80' (Free Discharge)
└**3=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=3.93 cfs @ 12.43 hrs HW=368.73' TW=368.33' (Dynamic Tailwater)
├**1=Custom Weir/Orifice** (Controls 0.00 cfs)
└**2=Culvert** (Outlet Controls 3.93 cfs @ 2.77 fps)

Pond 13P: NEW BLDG 8 SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

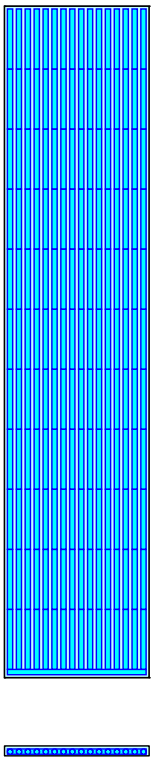
11 Chambers/Row x 20.00' Long +1.80' Header x 1 = 221.80' Row Length +11.4" End Stone x 2 = 223.70' Base Length
16 Rows x 21.6" Wide + 14.0" Spacing x 15 + 11.4" Side Stone x 2 = 48.17' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

176 Chambers x 35.2 cf + 46.27' Header x 1.76 sf = 6,274.1 cf Chamber Storage
176 Chambers x 42.8 cf + 46.27' Header x 2.14 sf = 7,640.0 cf Displacement

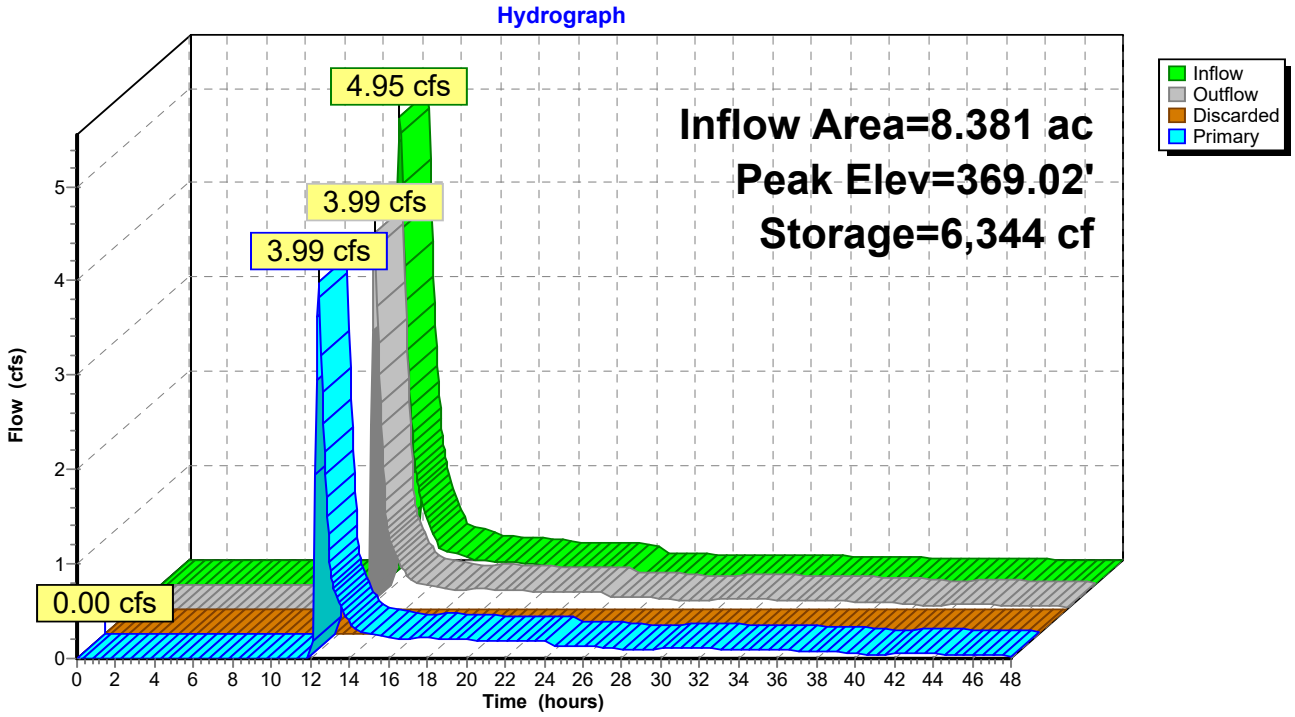
35,543.8 cf Field - 7,640.0 cf Chambers = 27,903.8 cf Stone x 40.0% Voids = 11,161.5 cf Stone Storage

Chamber Storage + Stone Storage = 17,435.7 cf = 0.400 af
Overall Storage Efficiency = 49.1%
Overall System Size = 223.70' x 48.17' x 3.30'

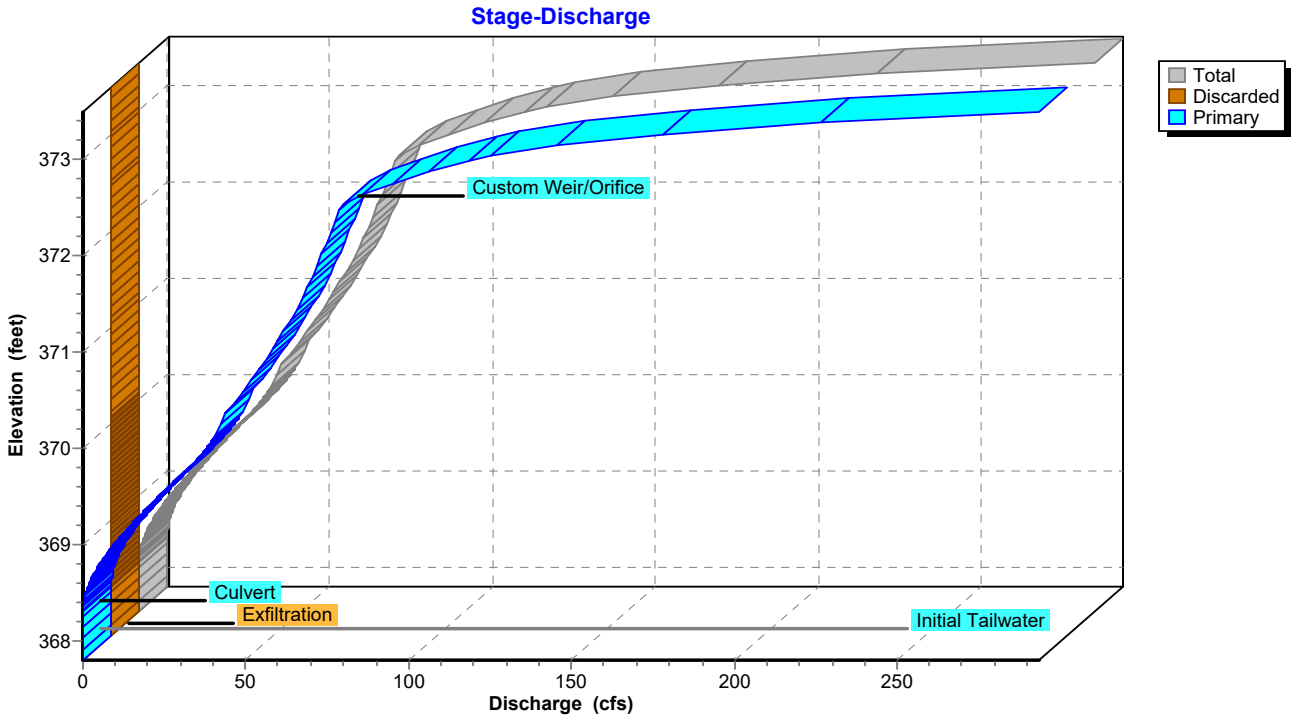
176 Chambers @ $ 0.00 /ea = $ 0.00
1,316.4 cy Field Excavation @ $ 2.50 /cy = $ 3,291.09
1,033.5 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 3,291.09



Pond 13P: NEW BLDG 8 SS Basin



Pond 13P: NEW BLDG 8 SS Basin



Summary for Pond 17P: PR NEW BLDG SWALE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=27)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 0.61" for 2-yr event
Inflow = 0.99 cfs @ 12.49 hrs, Volume= 0.148 af
Outflow = 0.77 cfs @ 12.39 hrs, Volume= 0.148 af, Atten= 22%, Lag= 0.0 min
Primary = 0.77 cfs @ 12.39 hrs, Volume= 0.148 af
Routed to Pond OS-2 : Small Pond @ Billboard

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.94' @ 13.54 hrs Surf.Area= 1,554 sf Storage= 798 cf

Plug-Flow detention time= 22.6 min calculated for 0.148 af (100% of inflow)
Center-of-Mass det. time= 21.9 min (934.0 - 912.1)

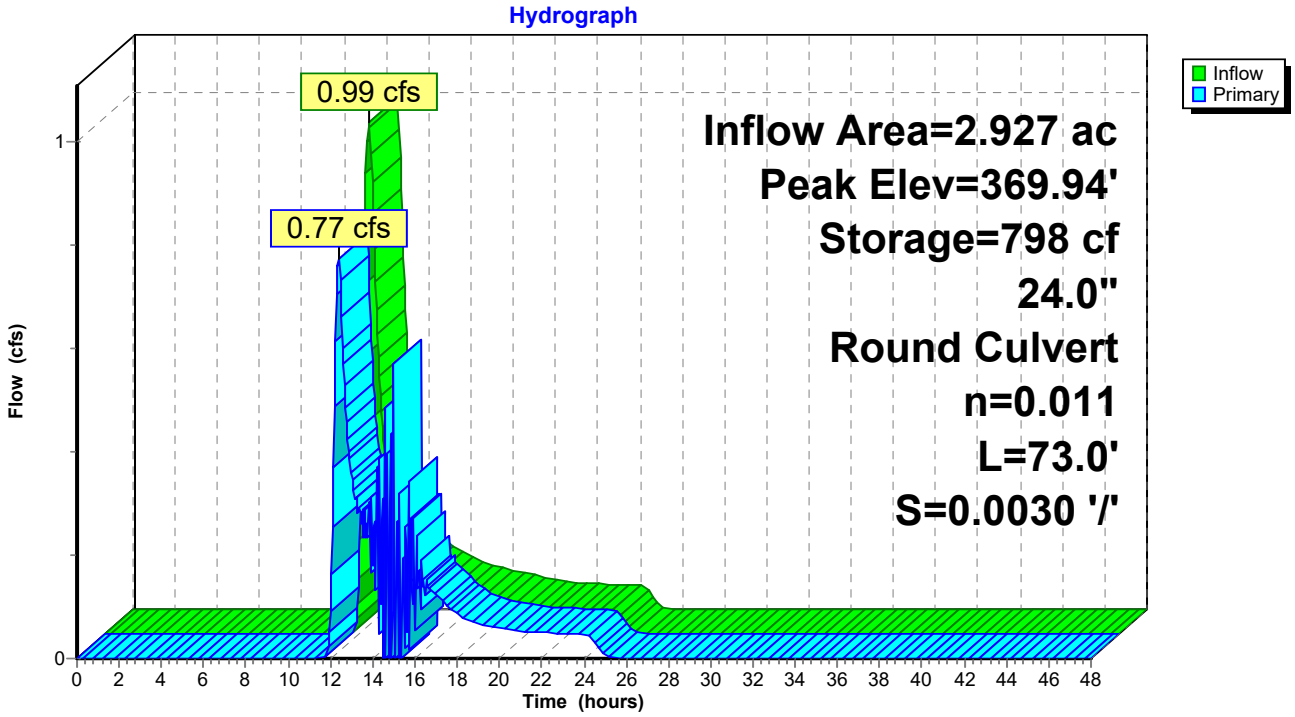
Volume	Invert	Avail.Storage	Storage Description
#1	368.71'	27,959 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.71	0	0	0
369.00	106	15	15
370.00	1,642	874	889
371.00	5,566	3,604	4,493
372.00	10,031	7,799	12,292
373.00	21,303	15,667	27,959

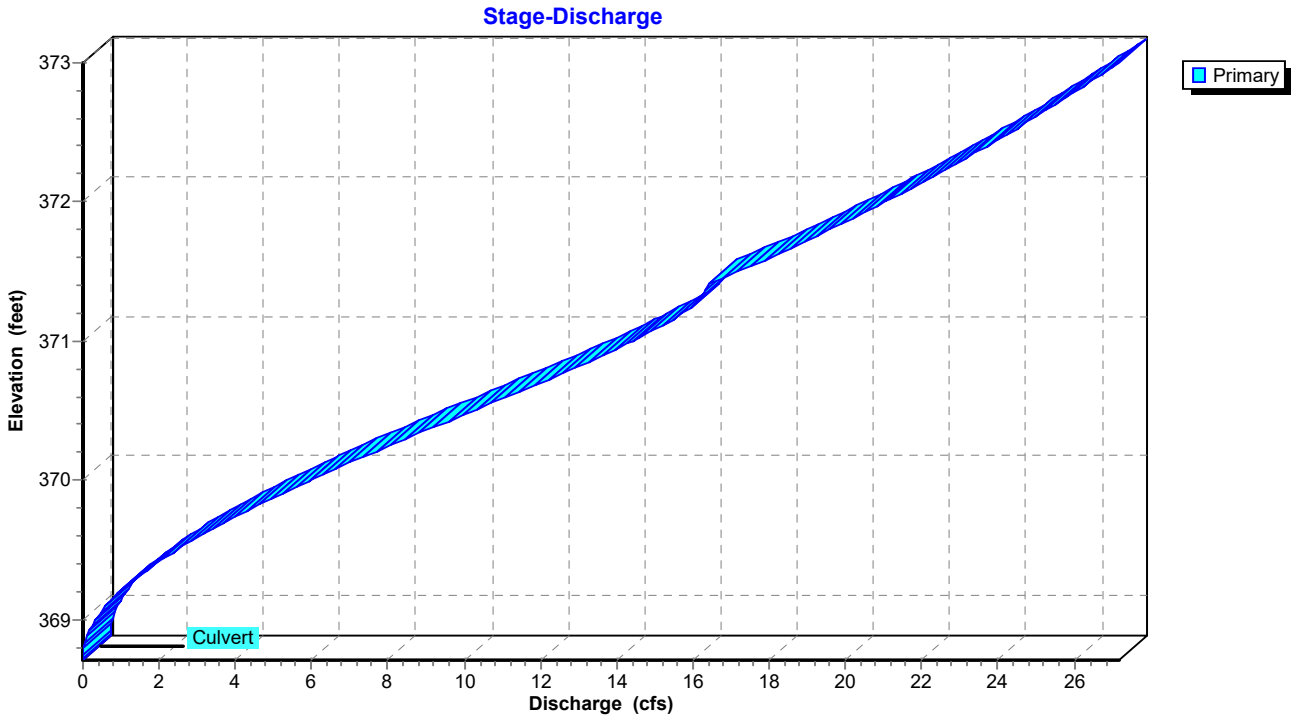
Device	Routing	Invert	Outlet Devices
#1	Primary	368.72'	**24.0" Round Culvert** L= 73.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 368.72' / 368.50' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=0.34 cfs @ 12.39 hrs HW=369.25' TW=369.22' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.34 cfs @ 0.77 fps)

Pond 17P: PR NEW BLDG SWALE



Pond 17P: PR NEW BLDG SWALE



Summary for Pond DMH-3: DMH-3

[57] Hint: Peaked at 368.41' (Flood elevation advised)
[80] Warning: Exceeded Pond OS-1 by 0.38' @ 3.20 hrs (0.12 cfs 0.028 af)

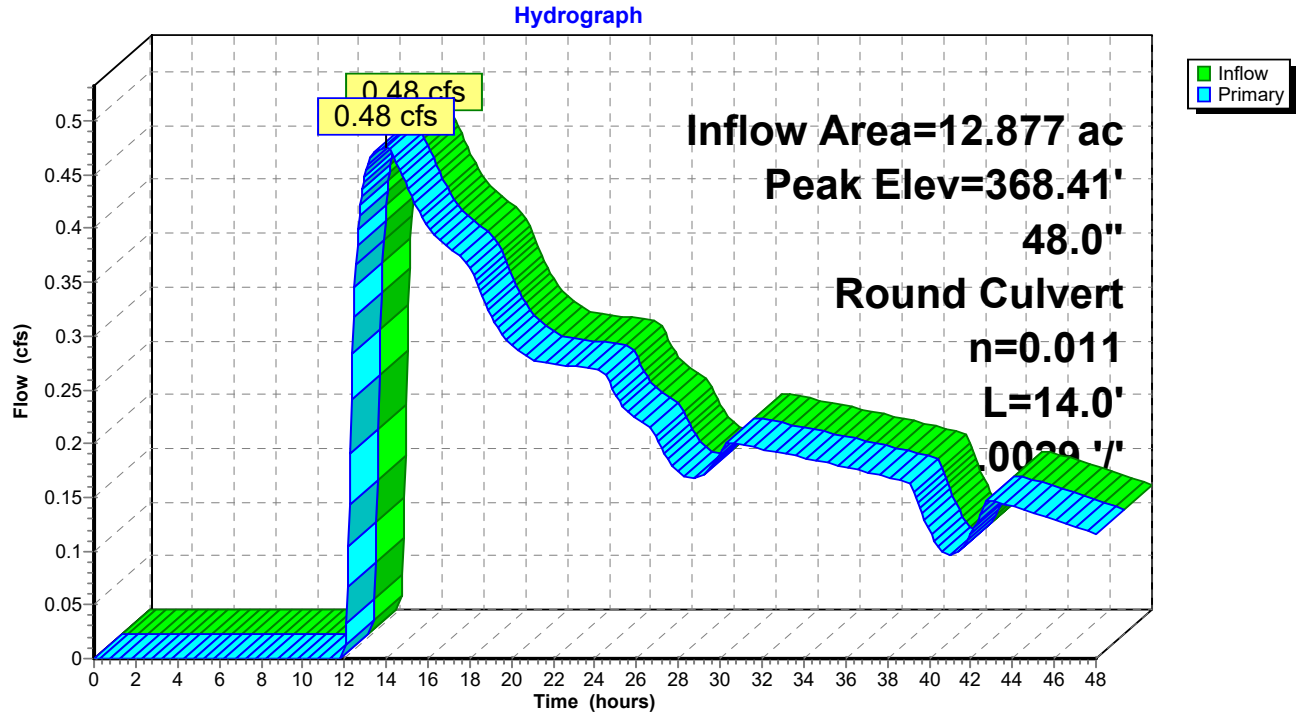
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 0.63" for 2-yr event
Inflow = 0.48 cfs @ 13.98 hrs, Volume= 0.677 af
Outflow = 0.48 cfs @ 13.98 hrs, Volume= 0.677 af, Atten= 0%, Lag= 0.0 min
Primary = 0.48 cfs @ 13.98 hrs, Volume= 0.677 af
Routed to Link ES-6 : OUTFALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 368.41' @ 16.05 hrs

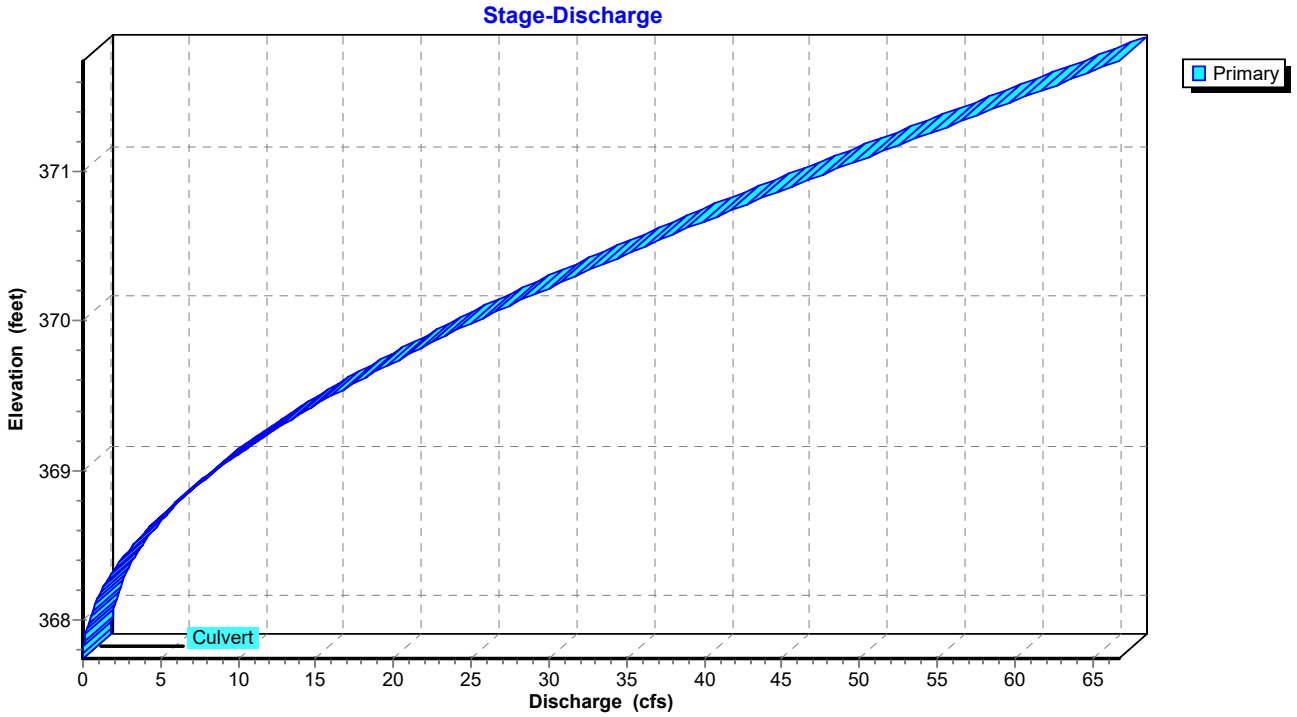
Device	Routing	Invert	Outlet Devices
#1	Primary	367.74'	**48.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.74' / 367.70' S= 0.0029 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=0.40 cfs @ 13.98 hrs HW=368.10' TW=368.07' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.40 cfs @ 1.08 fps)

Pond DMH-3: DMH-3



Pond DMH-3: DMH-3



Summary for Pond DMH-7: Bldg 5 Parking SS Basin

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 1.270 ac,100.00% Impervious, Inflow Depth = 2.27" for 2-yr event
Inflow = 3.87 cfs @ 12.01 hrs, Volume= 0.240 af
Outflow = 0.80 cfs @ 12.25 hrs, Volume= 0.168 af, Atten= 79%, Lag= 14.9 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.80 cfs @ 12.25 hrs, Volume= 0.168 af
Routed to Pond 13P : NEW BLDG 8 SS Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.02' @ 20.02 hrs Surf.Area= 14,527 sf Storage= 6,207 cf

Plug-Flow detention time= 638.0 min calculated for 0.168 af (70% of inflow)
Center-of-Mass det. time= 544.0 min (1,305.8 - 761.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	368.05'	15,020 cf	**140.09'W x 103.70'L x 3.30'H Field A** 47,915 cf Overall - 10,365 cf Embedded = 37,550 cf x 40.0% Voids
#2A	368.55'	8,512 cf	**Lane HDPE 18"** x 235 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 235 Chambers in 47 Rows 138.19' Header x 1.76 sf x 1 = 243.1 cf Inside
		23,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	368.05'	**1.000 in/hr Exfiltration over Surface area above 368.05'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 14,527 sf
#2	Primary	368.55'	**18.0" Round Culvert** L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.55' / 368.33' S= 0.0040 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=368.05' (Free Discharge)
1=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=0.80 cfs @ 12.25 hrs HW=369.01' TW=368.61' (Dynamic Tailwater)
2=Culvert (Barrel Controls 0.80 cfs @ 2.63 fps)

Pond DMH-7: Bldg 5 Parking SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

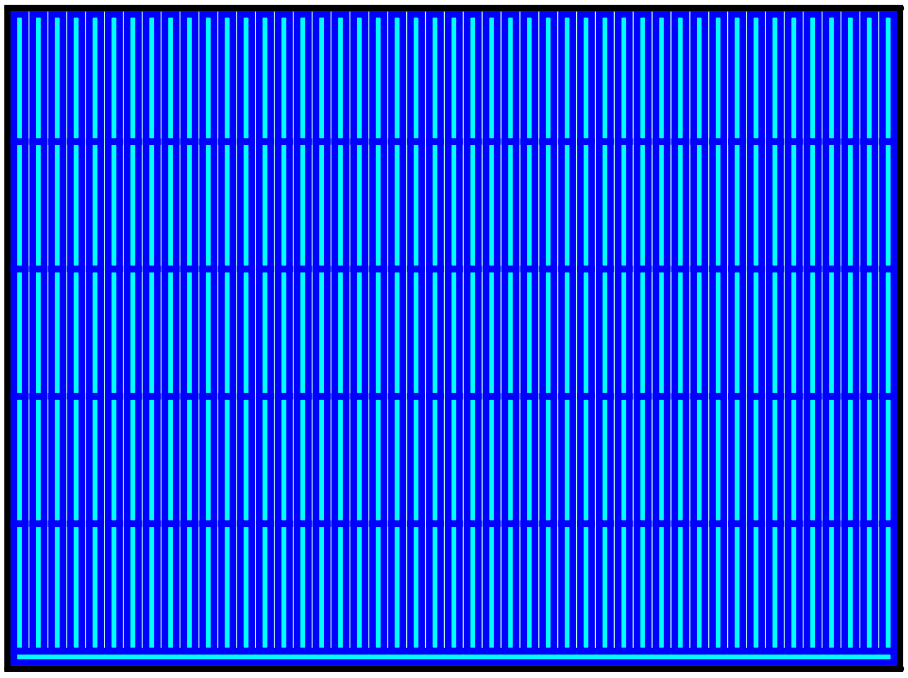
5 Chambers/Row x 20.00' Long +1.80' Header x 1 = 101.80' Row Length +11.4" End Stone x 2 = 103.70' Base Length
47 Rows x 21.6" Wide + 14.0" Spacing x 46 + 11.4" Side Stone x 2 = 140.09' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

235 Chambers x 35.2 cf + 138.19' Header x 1.76 sf = 8,511.8 cf Chamber Storage
235 Chambers x 42.8 cf + 138.19' Header x 2.14 sf = 10,364.9 cf Displacement

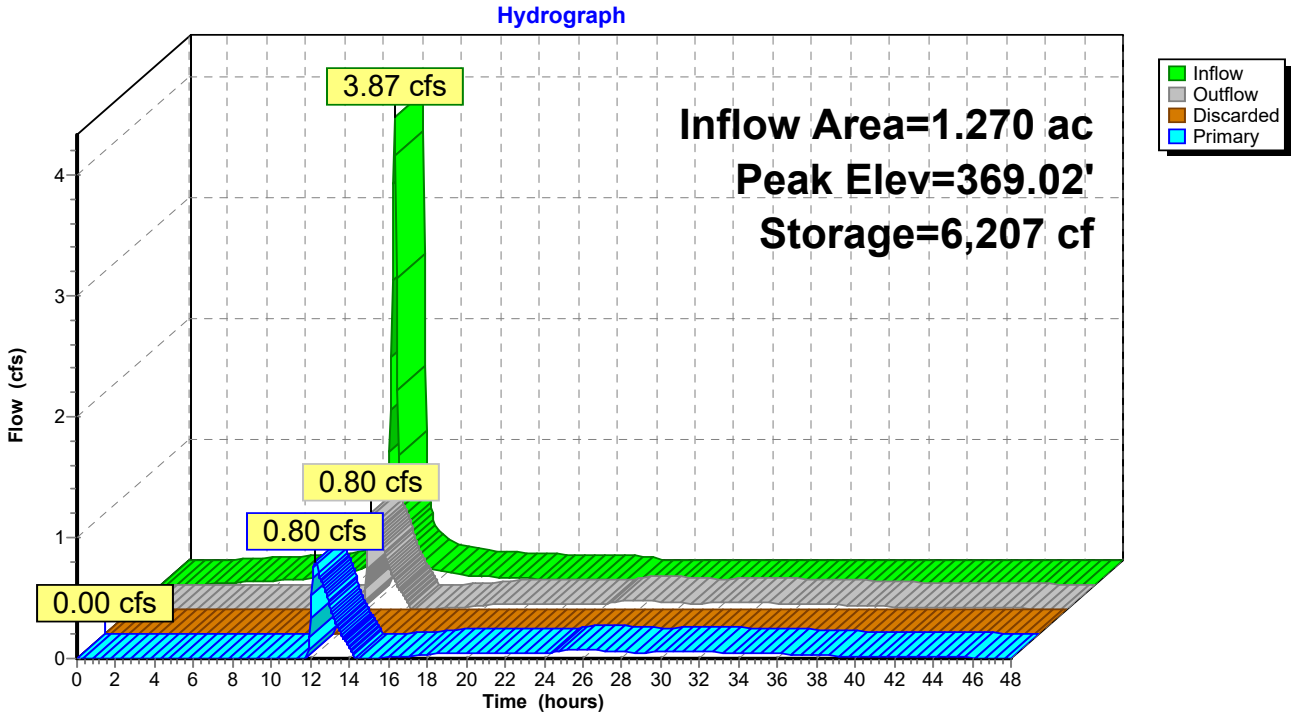
47,914.6 cf Field - 10,364.9 cf Chambers = 37,549.8 cf Stone x 40.0% Voids = 15,019.9 cf Stone Storage

Chamber Storage + Stone Storage = 23,531.7 cf = 0.540 af
Overall Storage Efficiency = 49.1%
Overall System Size = 103.70' x 140.09' x 3.30'

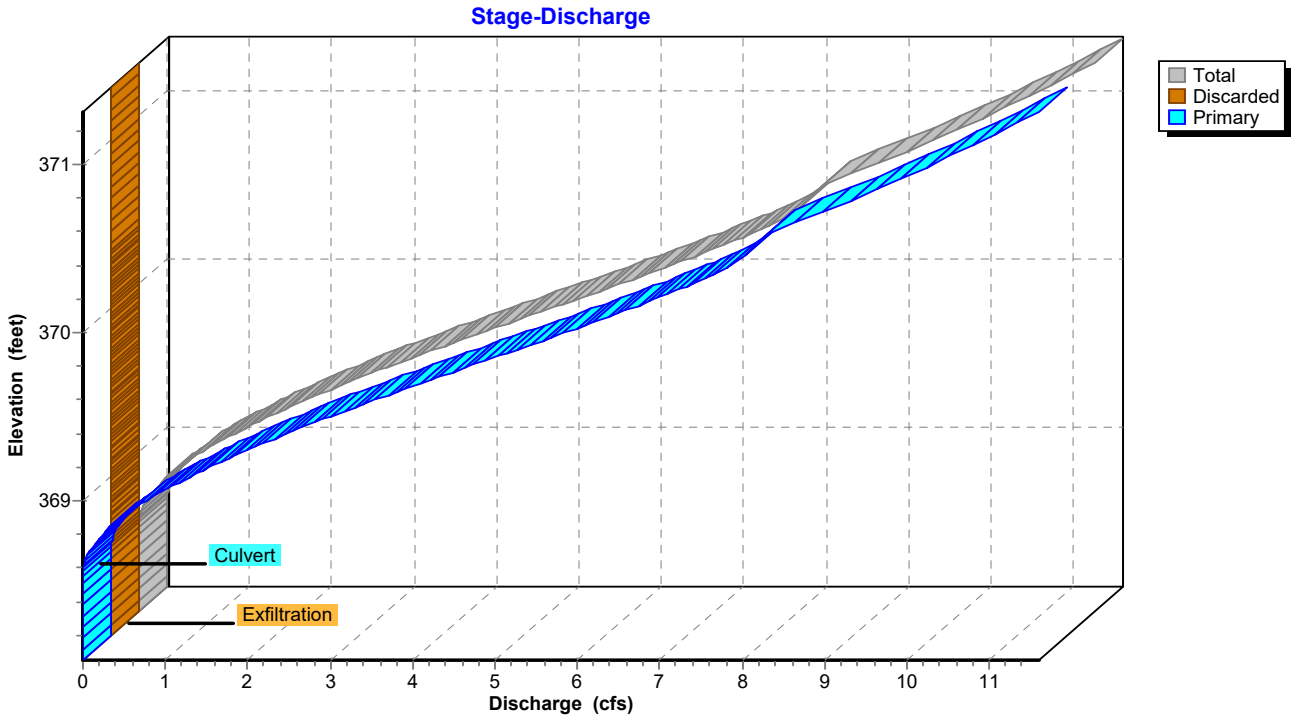
235 Chambers @ $ 0.00 /ea = $ 0.00
1,774.6 cy Field Excavation @ $ 2.50 /cy = $ 4,436.54
1,390.7 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 4,436.54



Pond DMH-7: Bldg 5 Parking SS Basin



Pond DMH-7: Bldg 5 Parking SS Basin



Summary for Pond OS-1: Big Pond

Inflow Area = 9.950 ac, 68.02% Impervious, Inflow Depth > 0.74" for 2-yr event
Inflow = 4.18 cfs @ 12.43 hrs, Volume= 0.615 af
Outflow = 0.22 cfs @ 19.89 hrs, Volume= 0.529 af, Atten= 95%, Lag= 447.6 min
Primary = 0.22 cfs @ 19.89 hrs, Volume= 0.529 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.00' Surf.Area= 10,025 sf Storage= 18,221 cf
Peak Elev= 369.02' @ 19.89 hrs Surf.Area= 12,021 sf Storage= 29,471 cf (11,250 cf above start)

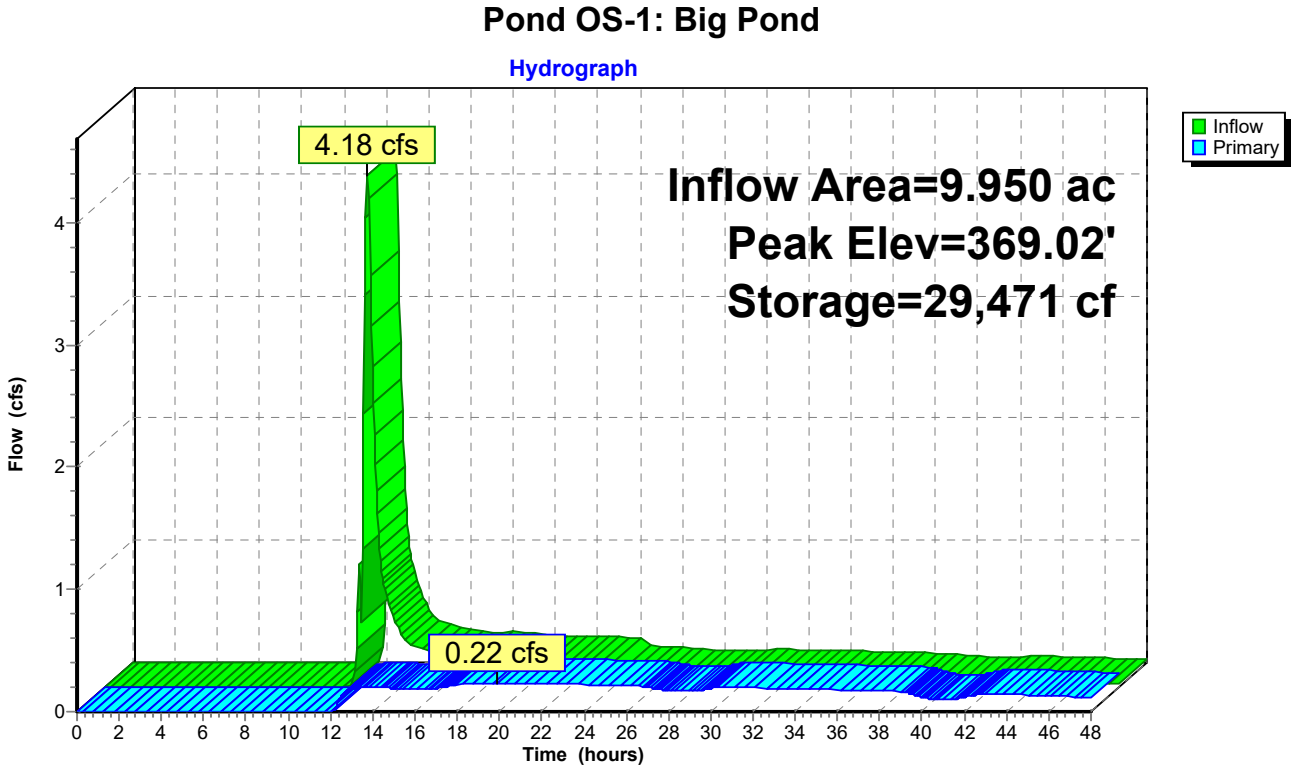
Plug-Flow detention time= 1,829.6 min calculated for 0.110 af (18% of inflow)
Center-of-Mass det. time= 513.3 min (1,715.3 - 1,202.0)

Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	124,961 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

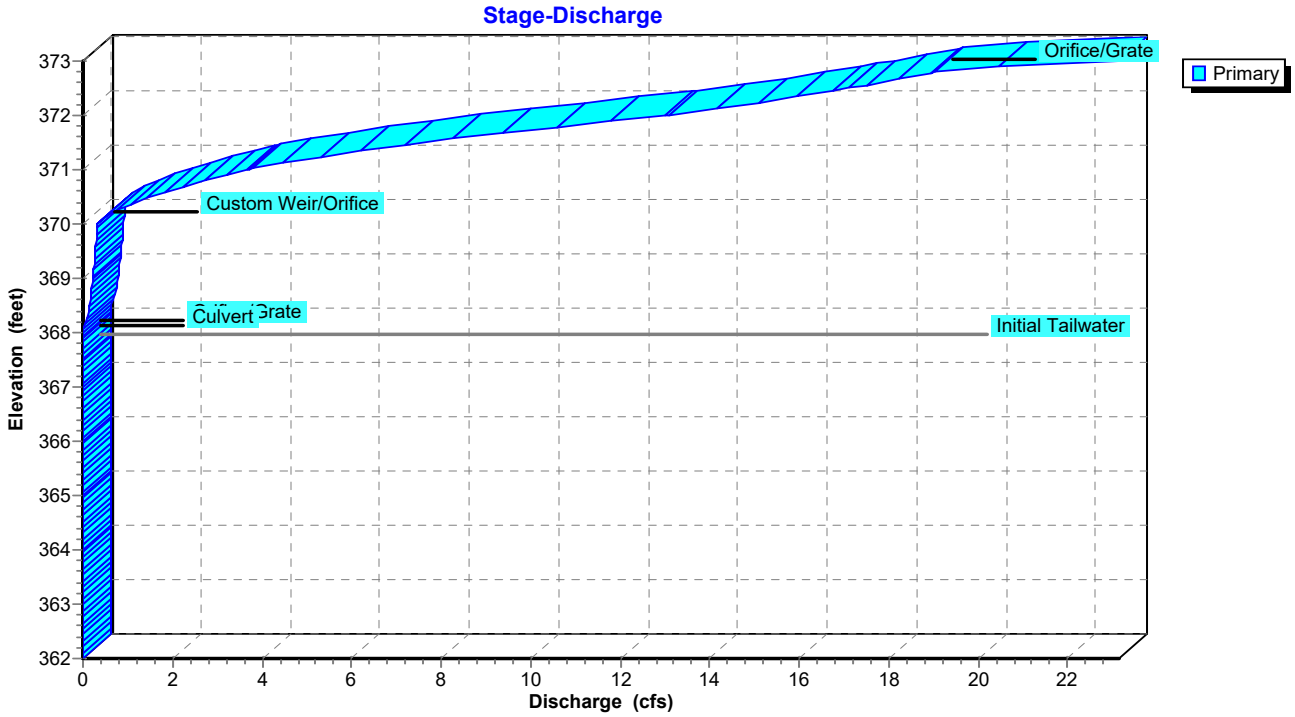
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	239	0	0
363.00	738	489	489
364.00	1,448	1,093	1,582
365.00	2,304	1,876	3,458
366.00	3,561	2,933	6,390
367.00	5,124	4,343	10,733
367.50	5,887	2,753	13,485
367.51	9,000	74	13,560
368.00	10,025	4,661	18,221
369.00	11,979	11,002	29,223
370.00	13,997	12,988	42,211
371.00	16,112	15,055	57,265
372.00	20,006	18,059	75,324
372.50	41,916	15,481	90,805
373.00	94,708	34,156	124,961

Device	Routing	Invert	Outlet Devices
#1	Device 4	368.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.80'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 in 24.0" x 36.0" Grate (100% open area) Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	367.91'	**48.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.91' / 367.84' S= 0.0032 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=0.22 cfs @ 19.89 hrs HW=369.02' TW=367.97' (Dynamic Tailwater)
└─**4=Culvert** (Passes 0.22 cfs of 6.89 cfs potential flow)
  └─**1=Orifice/Grate** (Orifice Controls 0.22 cfs @ 4.56 fps)
  └─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Custom Weir/Orifice** (Controls 0.00 cfs)



Pond OS-1: Big Pond



Summary for Pond OS-2: Small Pond @ Billboard

[80] Warning: Exceeded Pond 17P by 0.05' @ 12.55 hrs (0.96 cfs 0.088 af)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 0.61" for 2-yr event
Inflow = 0.77 cfs @ 12.39 hrs, Volume= 0.148 af
Outflow = 0.27 cfs @ 13.49 hrs, Volume= 0.148 af, Atten= 65%, Lag= 66.3 min
Primary = 0.27 cfs @ 13.49 hrs, Volume= 0.148 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.50' Surf.Area= 692 sf Storage= 479 cf
Peak Elev= 369.94' @ 13.49 hrs Surf.Area= 1,021 sf Storage= 1,710 cf (1,232 cf above start)

Plug-Flow detention time= 116.0 min calculated for 0.137 af (93% of inflow)
Center-of-Mass det. time= 58.7 min (992.8 - 934.0)

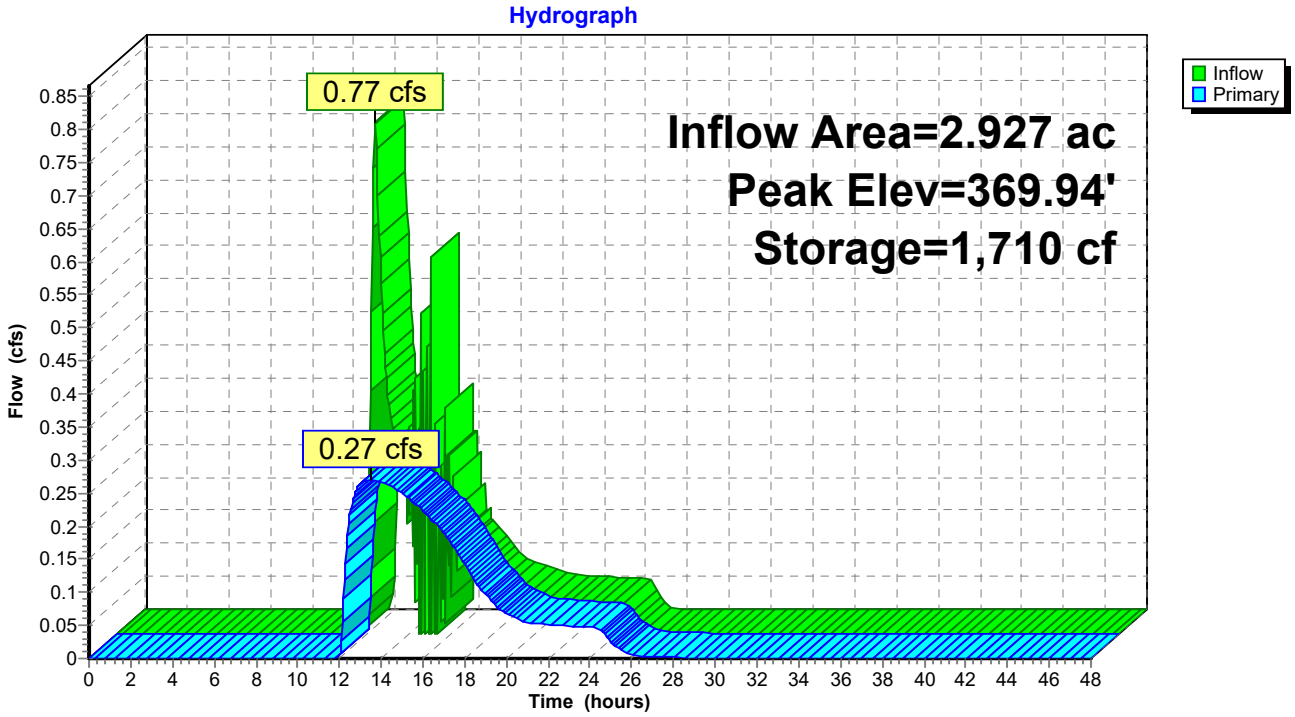
Volume	Invert	Avail.Storage	Storage Description
#1	366.00'	8,328 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
366.00	2	0	0
367.00	62	32	32
368.00	198	130	162
368.01	585	4	166
369.00	801	686	852
370.00	1,035	918	1,770
371.00	1,913	1,474	3,244
372.00	2,407	2,160	5,404
373.00	3,442	2,925	8,328

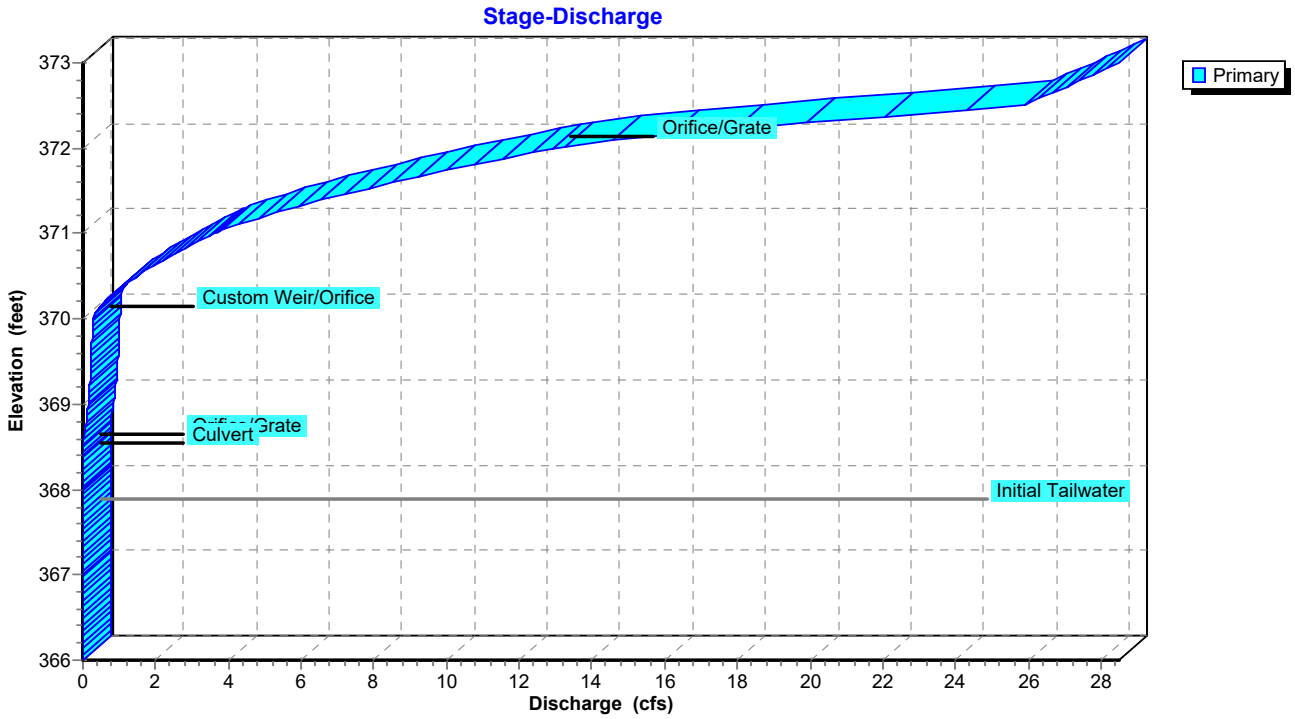
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.50'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	368.40'	**24.0" Round Culvert** L= 81.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.40' / 368.16' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=0.27 cfs @ 13.49 hrs HW=369.94' TW=368.03' (Dynamic Tailwater)
└─**4=Culvert** (Passes 0.27 cfs of 8.16 cfs potential flow)
  ├─**1=Orifice/Grate** (Orifice Controls 0.27 cfs @ 5.53 fps)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond OS-2: Small Pond @ Billboard



Pond OS-2: Small Pond @ Billboard

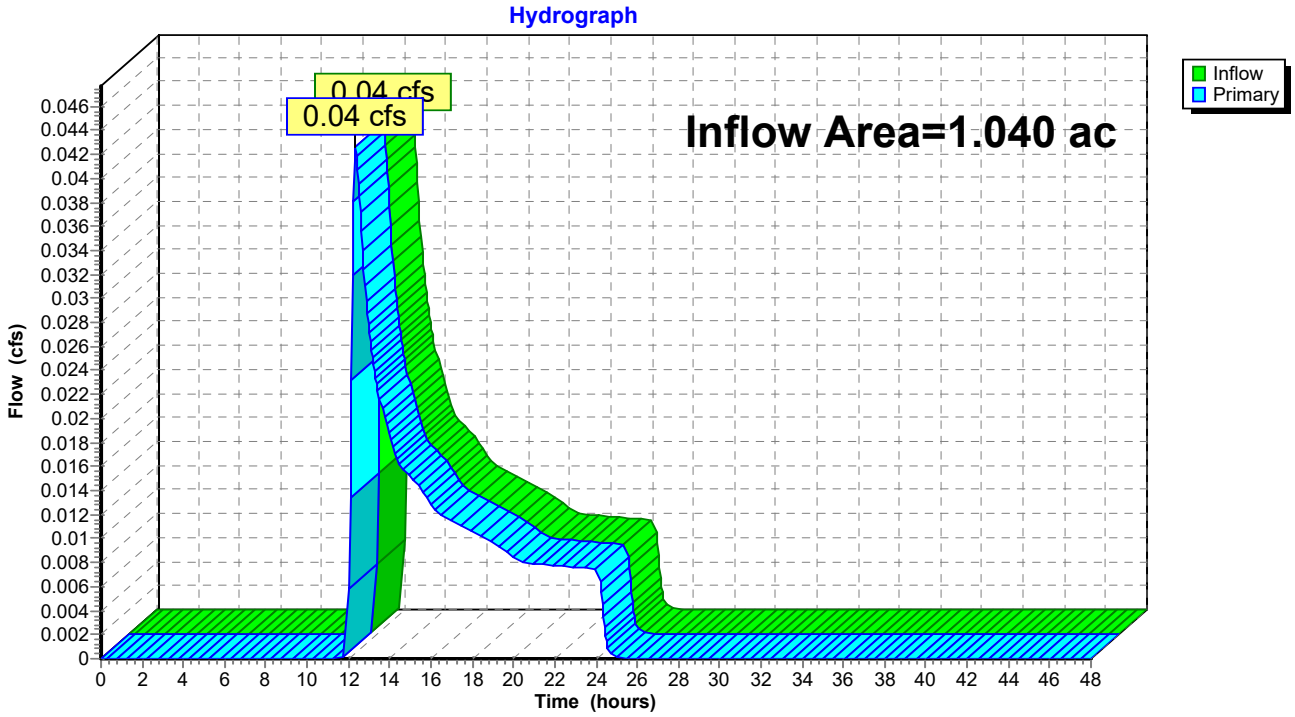


Summary for Link 1L: Discharge @NE Corner

Inflow Area = 1.040 ac, 36.54% Impervious, Inflow Depth = 0.15" for 2-yr event
Inflow = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af
Primary = 0.04 cfs @ 12.36 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Discharge @NE Corner

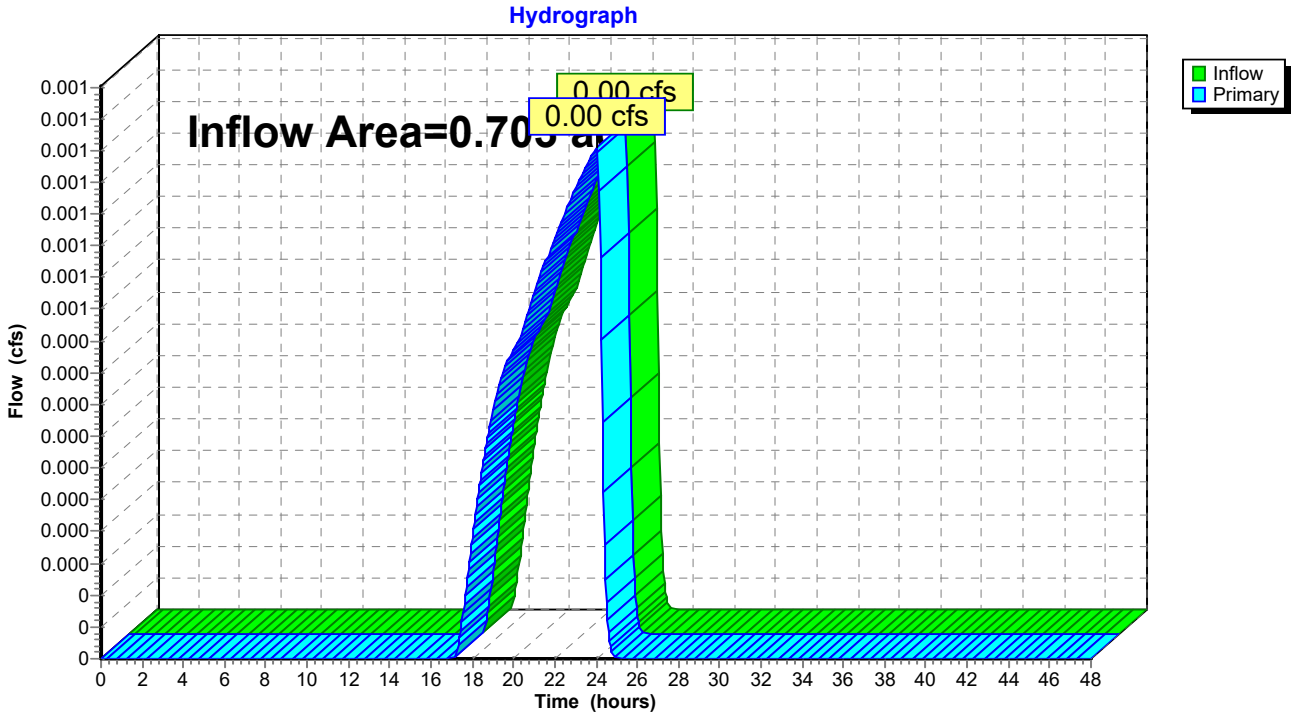


Summary for Link 15L: PR PARK ST DISCHARGE

Inflow Area = 0.703 ac, 13.09% Impervious, Inflow Depth = 0.01" for 2-yr event
Inflow = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.03 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 15L: PR PARK ST DISCHARGE



Summary for Link ES-6: OUTFALL

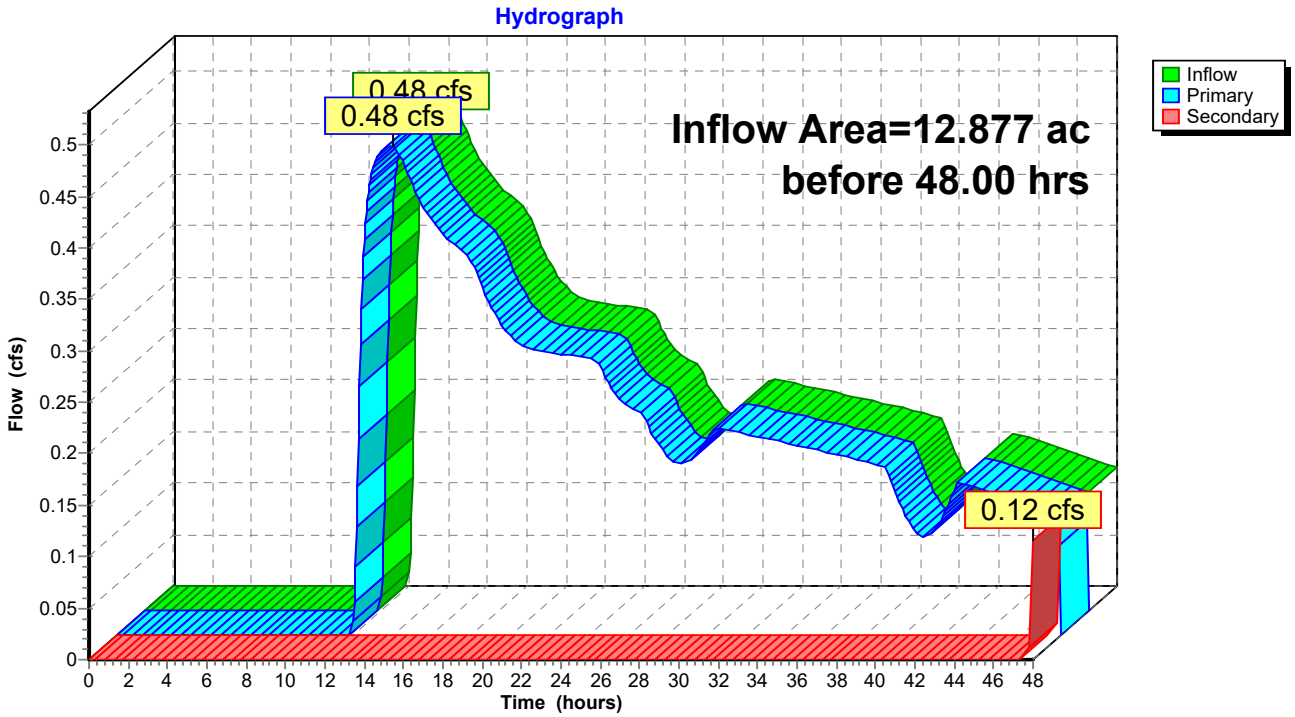
[80] Warning: Exceeded Pond DMH-3 by 0.06' @ 0.75 hrs (0.02 cfs 0.283 af)

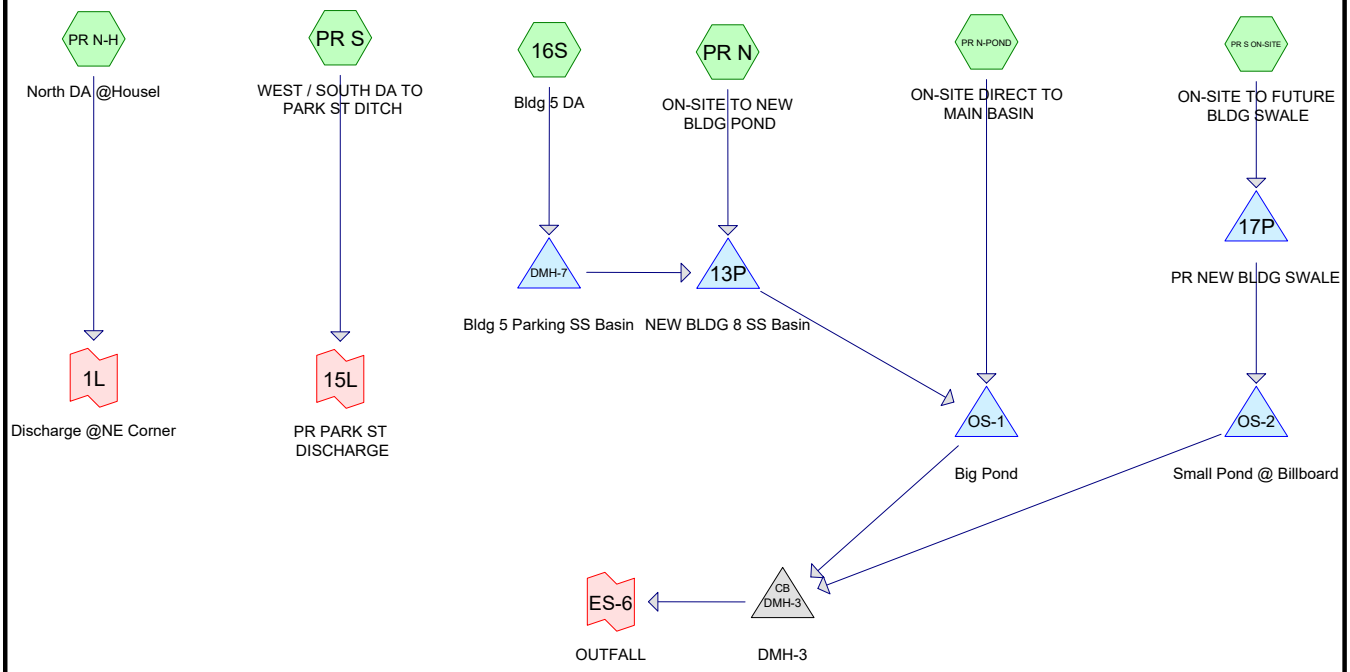
Inflow Area =	12.877 ac,	66.01% Impervious,	Inflow Depth >	0.63" for 2-yr event
Inflow =	0.48 cfs @	13.98 hrs,	Volume=	0.677 af
Primary =	0.48 cfs @	13.98 hrs,	Volume=	0.677 af, Atten= 0%, Lag= 0.0 min
Secondary =	0.12 cfs @	48.00 hrs,	Volume=	0.000 af

Primary outflow = Inflow before 48.00 hrs, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

High tide Elevation = 368.40' at 16.00 hrs
Low tide Elevation = 367.00' at 22.21 hrs

Link ES-6: OUTFALL





Subcat Reach Pond Link

Routing Diagram for URBan Villages_PROPOSED-10_01-2024_Storm Chambers_Lane 18-inch HDPE_REV 01-2025

Prepared by Calocerinos Engineering, PLLC

HydroCAD® 10.20-2h s/n 08759 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	10-yr	Type II 24-hr		Default	24.00	1	3.40	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.255	39	>75% Grass cover, Good, HSG A (PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE)
1.052	35	Brush, Fair, HSG A (PR N, PR N-H, PR S ON-SITE)
0.071	76	Gravel roads, HSG A (PR N-POND)
5.082	98	Paved parking, HSG A (16S, PR N, PR N-POND, PR S ON-SITE)
0.092	98	Paved roads w/curbs & sewers, HSG A (PR S)
3.554	98	Roofs, HSG A (16S, PR N, PR N-H, PR S ON-SITE)
0.244	98	Water Surface, HSG A (PR N-POND, PR S ON-SITE)
0.270	36	Woods, Fair, HSG A (PR N)
14.620	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
14.620	HSG A	16S, PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
14.620		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
4.255	0.000	0.000	0.000	0.000	4.255	>75% Grass cover, Good	PRN, PRN-H, PRN-POND, PRS, PRS ON-SITE
1.052	0.000	0.000	0.000	0.000	1.052	Brush, Fair	PRN, PRN-H, PRS ON-SITE
0.071	0.000	0.000	0.000	0.000	0.071	Gravel roads	PRN-POND
5.082	0.000	0.000	0.000	0.000	5.082	Paved parking	16S, PRN, PRN-POND, PRS ON-SITE
0.092	0.000	0.000	0.000	0.000	0.092	Paved roads w/curbs & sewers	PRS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.554	0.000	0.000	0.000	0.000	3.554	Roofs	16S, PRN, PRN-H, PRS ON-SITE
0.244	0.000	0.000	0.000	0.000	0.244	Water Surface	PRN-POND, PRS ON-SITE
0.270	0.000	0.000	0.000	0.000	0.270	Woods, Fair	PRN
14.620	**0.000**	**0.000**	**0.000**	**0.000**	**14.620**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	13P	368.30	368.00	60.0	0.0050	0.011	0.0	18.0	0.0
2	17P	368.72	368.50	73.0	0.0030	0.011	0.0	24.0	0.0
3	DMH-3	367.74	367.70	14.0	0.0029	0.011	0.0	48.0	0.0
4	DMH-7	368.55	368.33	55.0	0.0040	0.011	0.0	18.0	0.0
5	OS-1	367.91	367.84	22.0	0.0032	0.011	0.0	48.0	0.0
6	OS-2	368.40	368.16	81.0	0.0030	0.011	0.0	24.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 16S: Bldg 5 DA Runoff Area=1.270 ac 100.00% Impervious Runoff Depth=3.17"
Flow Length=230' Tc=10.0 min CN=98 Runoff=5.31 cfs 0.335 af

Subcatchment PR N: ON-SITE TO NEW Runoff Area=7.111 ac 65.93% Impervious Runoff Depth=1.36"
Flow Length=875' Tc=30.0 min CN=77 Runoff=8.10 cfs 0.804 af

Subcatchment PR N-H: North DA @Housel Runoff Area=1.040 ac 36.54% Impervious Runoff Depth=0.45"
Flow Length=650' Tc=24.2 min CN=59 Runoff=0.29 cfs 0.039 af

Subcatchment PR N-POND: ON-SITE Runoff Area=1.569 ac 51.63% Impervious Runoff Depth=1.00"
Flow Length=105' Tc=10.0 min CN=71 Runoff=2.29 cfs 0.131 af

Subcatchment PR S: WEST / SOUTH DA TO Runoff Area=0.703 ac 13.09% Impervious Runoff Depth=0.11"
Flow Length=825' Tc=20.3 min CN=47 Runoff=0.01 cfs 0.006 af

Subcatchment PR S ON-SITE: ON-SITE TO Runoff Area=2.927 ac 59.17% Impervious Runoff Depth=1.17"
Flow Length=990' Tc=44.5 min CN=74 Runoff=2.12 cfs 0.286 af

Pond 13P: NEW BLDG 8 SS Basin Peak Elev=369.74' Storage=11,416 cf Inflow=9.53 cfs 1.011 af
Discarded=0.00 cfs 0.000 af Primary=8.17 cfs 0.878 af Outflow=8.17 cfs 0.878 af

Pond 17P: PR NEW BLDG SWALE Peak Elev=370.38' Storage=1,812 cf Inflow=2.12 cfs 0.286 af
24.0" Round Culvert n=0.011 L=73.0' S=0.0030 '/' Outflow=1.91 cfs 0.286 af

Pond DMH-3: DMH-3 Peak Elev=368.41' Inflow=1.32 cfs 1.057 af
48.0" Round Culvert n=0.011 L=14.0' S=0.0029 '/' Outflow=1.32 cfs 1.057 af

Pond DMH-7: Bldg 5 Parking SS Basin Peak Elev=369.59' Storage=11,654 cf Inflow=5.31 cfs 0.335 af
Discarded=0.00 cfs 0.000 af Primary=1.56 cfs 0.207 af Outflow=1.56 cfs 0.207 af

Pond OS-1: Big Pond Peak Elev=369.74' Storage=38,646 cf Inflow=8.68 cfs 1.008 af
Outflow=0.30 cfs 0.771 af

Pond OS-2: Small Pond @ Billboard Peak Elev=370.38' Storage=2,223 cf Inflow=1.91 cfs 0.286 af
Outflow=1.07 cfs 0.286 af

Link 1L: Discharge @NE Corner Inflow=0.29 cfs 0.039 af
Primary=0.29 cfs 0.039 af

Link 15L: PR PARK ST DISCHARGE Inflow=0.01 cfs 0.006 af
Primary=0.01 cfs 0.006 af

Link ES-6: OUTFALL before 48.00 hrs Inflow=1.32 cfs 1.057 af
Primary=1.32 cfs 1.056 af Secondary=0.21 cfs 0.001 af

Total Runoff Area = 14.620 ac Runoff Volume = 1.601 af Average Runoff Depth = 1.31"
38.63% Pervious = 5.648 ac 61.37% Impervious = 8.972 ac

Summary for Subcatchment 16S: Bldg 5 DA

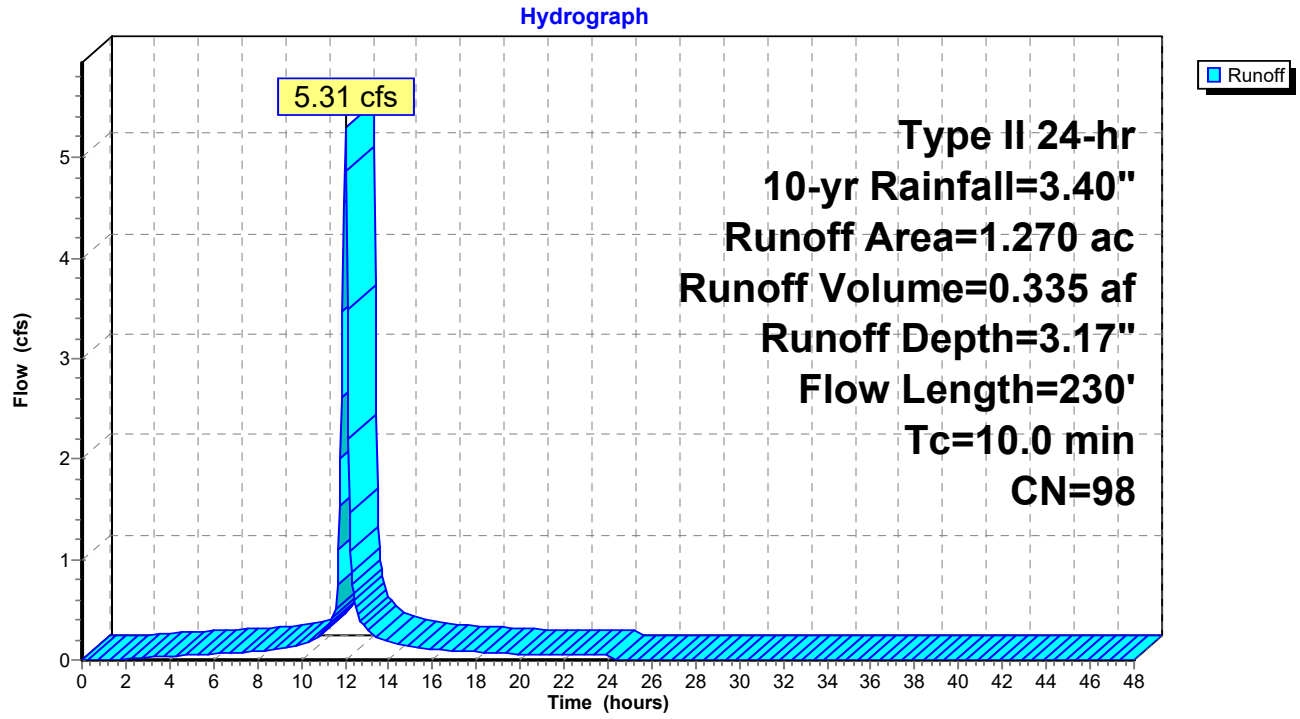
Runoff = 5.31 cfs @ 12.01 hrs, Volume= 0.335 af, Depth= 3.17"
Routed to Pond DMH-7 : Bldg 5 Parking SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.400	98	Roofs, HSG A
0.870	98	Paved parking, HSG A
1.270	98	Weighted Average
1.270		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	60	0.3300	3.37		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 2.50"
0.1	50	0.3300	11.66		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.7	120	0.0200	2.87		**Shallow Concentrated Flow, SCF-2** Paved Kv= 20.3 fps
1.1	230	Total, Increased to minimum Tc = 10.0 min			

Subcatchment 16S: Bldg 5 DA



Summary for Subcatchment PR N: ON-SITE TO NEW BLDG POND

[47] Hint: Peak is 643% of capacity of segment #4

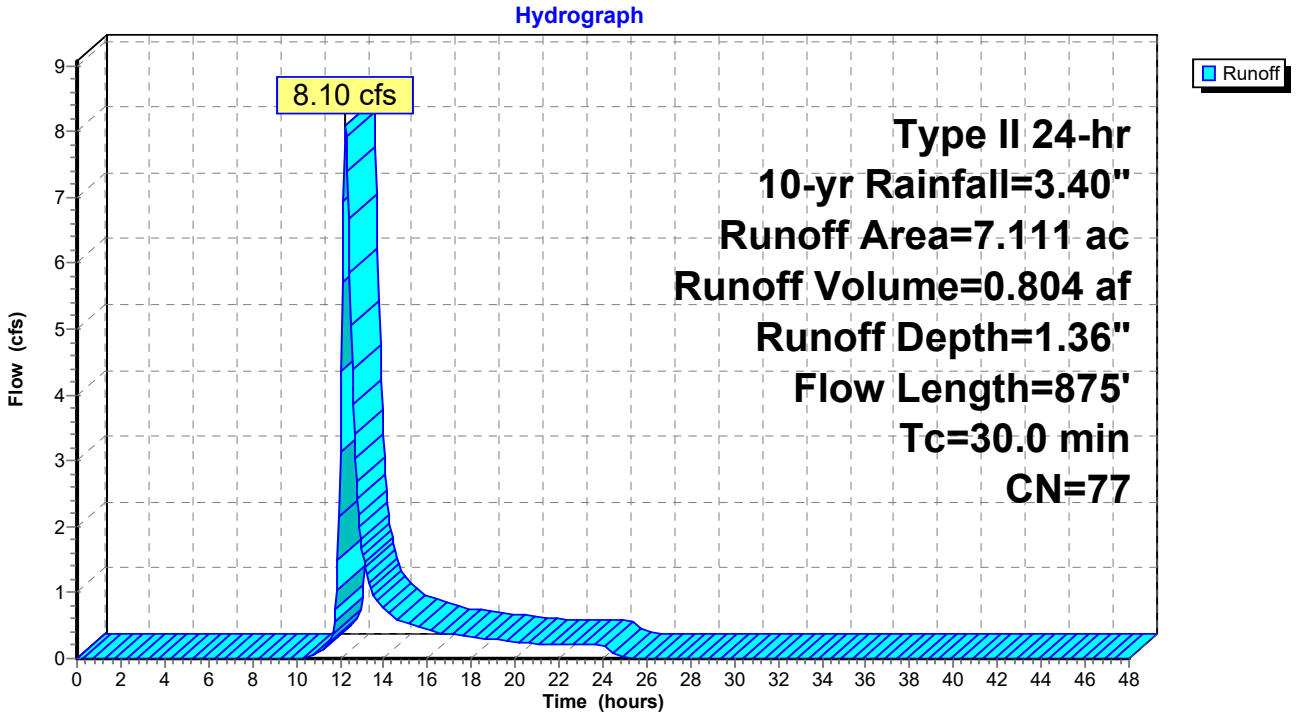
Runoff = 8.10 cfs @ 12.26 hrs, Volume= 0.804 af, Depth= 1.36"
Routed to Pond 13P : NEW BLDG 8 SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.270	36	Woods, Fair, HSG A
2.326	98	Roofs, HSG A
0.596	35	Brush, Fair, HSG A
1.557	39	>75% Grass cover, Good, HSG A
2.362	98	Paved parking, HSG A
7.111	77	Weighted Average
2.423		34.07% Pervious Area
4.688		65.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	100	0.0200	0.07		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.7	100	0.0200	2.28		**Shallow Concentrated Flow, SCF-1** Unpaved Kv= 16.1 fps
0.1	35	0.1200	5.58		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	250	0.0100	1.80	1.26	**Channel Flow, CF** Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Riprap, 1-inch
2.6	390		2.50		**Direct Entry, PIPE FLOW**
30.0	875	Total			

Subcatchment PR N: ON-SITE TO NEW BLDG POND



Summary for Subcatchment PR N-H: North DA @Housel

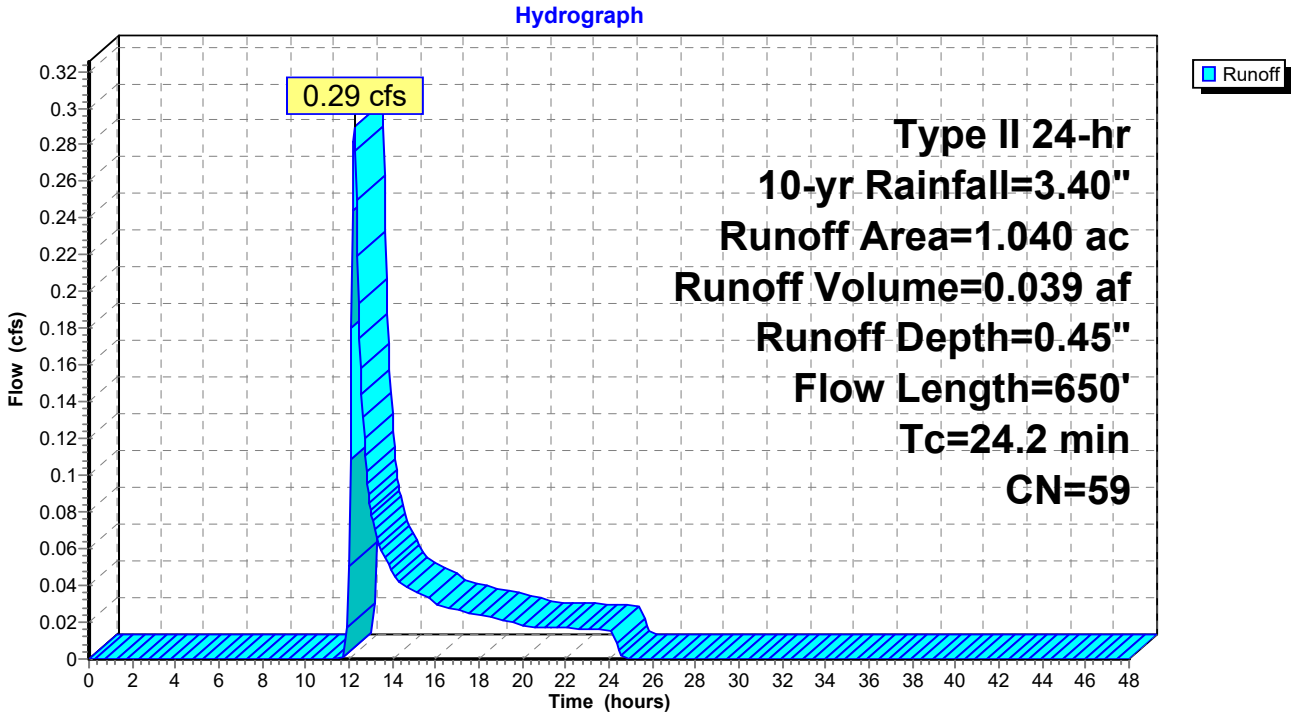
Runoff = 0.29 cfs @ 12.24 hrs, Volume= 0.039 af, Depth= 0.45"
Routed to Link 1L : Discharge @NE Corner

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.280	39	>75% Grass cover, Good, HSG A
0.380	35	Brush, Fair, HSG A
0.380	98	Roofs, HSG A
1.040	59	Weighted Average
0.660		63.46% Pervious Area
0.380		36.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment PR N-H: North DA @Housel



Summary for Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN

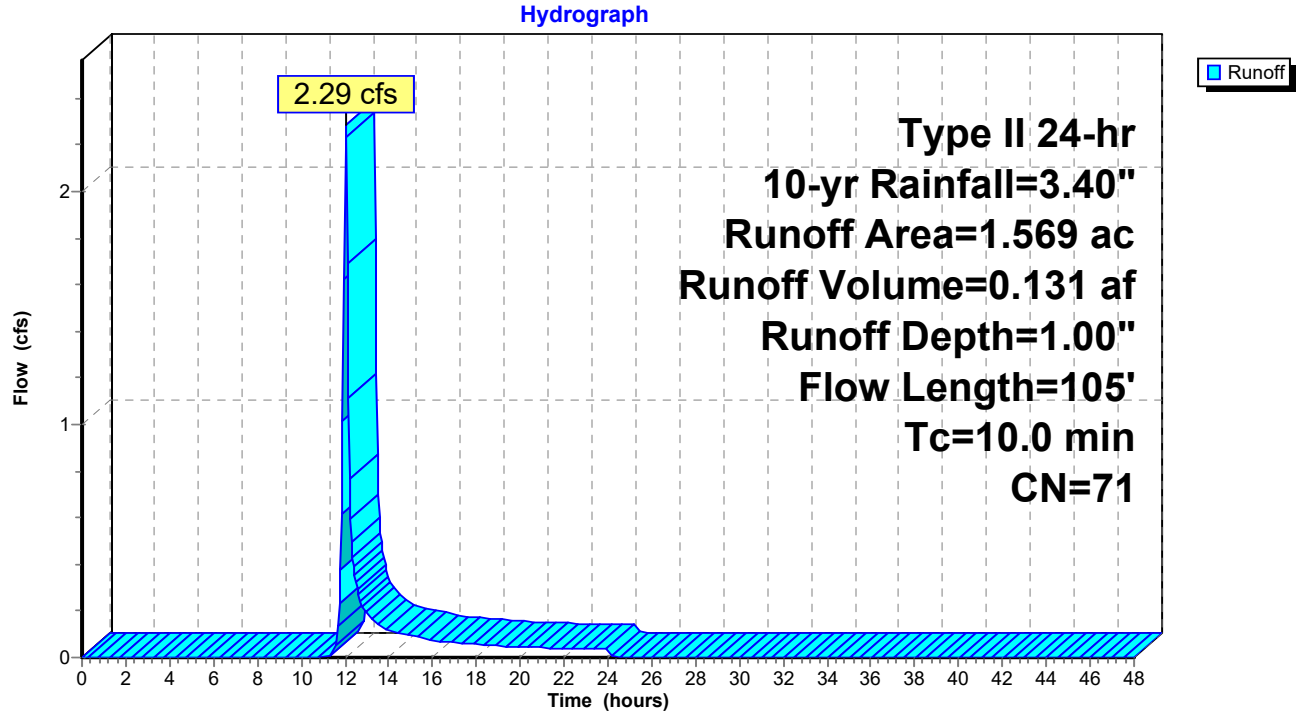
Runoff = 2.29 cfs @ 12.03 hrs, Volume= 0.131 af, Depth= 1.00"
Routed to Pond OS-1 : Big Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.071	76	Gravel roads, HSG A
0.587	98	Paved parking, HSG A
0.223	98	Water Surface, HSG A
0.688	39	>75% Grass cover, Good, HSG A
1.569	71	Weighted Average
0.759		48.37% Pervious Area
0.810		51.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	45	0.0200	0.09		**Sheet Flow, SF** Grass: Dense n= 0.240 P2= 2.50"
0.2	40	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.0	20	0.2500	8.05		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
8.7	105	Total, Increased to minimum Tc = 10.0 min			

Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN



Summary for Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH

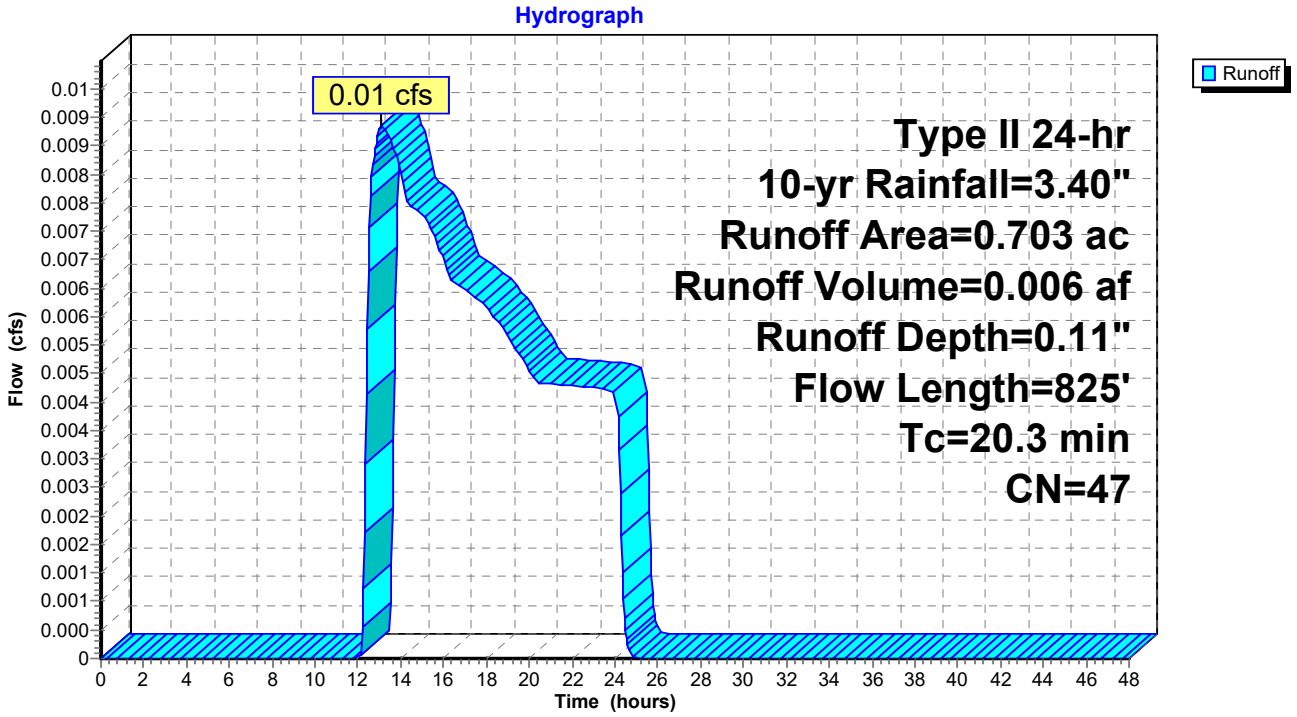
Runoff = 0.01 cfs @ 13.10 hrs, Volume= 0.006 af, Depth= 0.11"
Routed to Link 15L : PR PARK ST DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.092	98	Paved roads w/curbs & sewers, HSG A
0.611	39	>75% Grass cover, Good, HSG A
0.703	47	Weighted Average
0.611		86.91% Pervious Area
0.092		13.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	80	0.0250	0.11		**Sheet Flow, SF**
					Grass: Dense n= 0.240 P2= 2.50"
0.8	125		2.50		**Direct Entry, PIPE FLOW-1**
5.8	440	0.0050	1.27	0.89	**Channel Flow, CF-1**
					Area= 0.7 sf Perim= 3.2' r= 0.22'
					n= 0.030 High grass
0.4	60		2.50		**Direct Entry, PIPE FLOW-2**
0.9	120	0.0050	2.14	6.41	**Channel Flow, CF-2**
					Area= 3.0 sf Perim= 6.3' r= 0.48'
					n= 0.030 High grass
20.3	825	Total			

Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH



Summary for Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE

[47] Hint: Peak is 1012% of capacity of segment #5

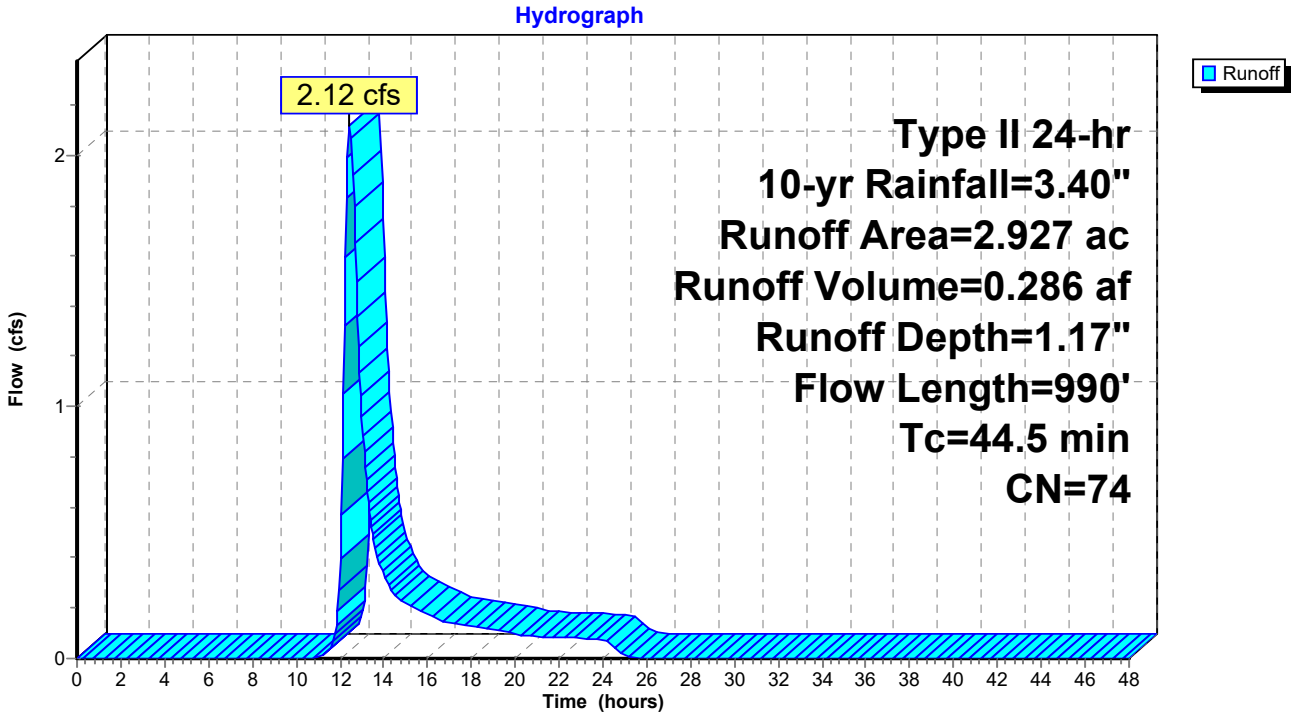
Runoff = 2.12 cfs @ 12.45 hrs, Volume= 0.286 af, Depth= 1.17"
Routed to Pond 17P : PR NEW BLDG SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-yr Rainfall=3.40"

Area (ac)	CN	Description
0.448	98	Roofs, HSG A
1.119	39	>75% Grass cover, Good, HSG A
0.021	98	Water Surface, HSG A
0.076	35	Brush, Fair, HSG A
1.263	98	Paved parking, HSG A
2.927	74	Weighted Average
1.195		40.83% Pervious Area
1.732		59.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	60	0.0625	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.1	20	0.0200	2.28		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
1.1	110	0.0100	1.61		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	340		2.50		**Direct Entry, PIPE FLOW-1**
30.3	380	0.0075	0.21	0.21	**Channel Flow, CF-1** Area= 1.0 sf Perim= 4.1' r= 0.24' n= 0.240 Sheet flow over Dense Grass
0.5	80		2.50		**Direct Entry, PIPE FLOW-2**
44.5	990	Total			

Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE



Summary for Pond 13P: NEW BLDG 8 SS Basin

[92] Warning: Device #1 is above defined storage
[80] Warning: Exceeded Pond DMH-7 by 0.28' @ 16.50 hrs (3.00 cfs 2.763 af)

Inflow Area = 8.381 ac, 71.09% Impervious, Inflow Depth > 1.45" for 10-yr event
Inflow = 9.53 cfs @ 12.24 hrs, Volume= 1.011 af
Outflow = 8.17 cfs @ 12.29 hrs, Volume= 0.878 af, Atten= 14%, Lag= 3.1 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 8.17 cfs @ 12.29 hrs, Volume= 0.878 af
Routed to Pond OS-1 : Big Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.74' @ 19.84 hrs Surf.Area= 10,776 sf Storage= 11,416 cf

Plug-Flow detention time= 418.5 min calculated for 0.878 af (87% of inflow)
Center-of-Mass det. time= 237.3 min (1,281.3 - 1,044.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	367.80'	11,162 cf	**48.17'W x 223.70'L x 3.30'H Field A** 35,544 cf Overall - 7,640 cf Embedded = 27,904 cf x 40.0% Voids
#2A	368.30'	6,274 cf	**Lane HDPE 18"** x 176 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 176 Chambers in 16 Rows 46.27' Header x 1.76 sf x 1 = 81.4 cf Inside
		17,436 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	372.50'	**Custom Weir/Orifice, Cv= 3.33 (C= 4.16)** Head (feet) 0.00 0.50 1.00 Width (feet) 24.00 24.00 200.00
#2	Primary	368.30'	**18.0" Round Culvert X 5.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.30' / 368.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#3	Discarded	367.80'	**1.000 in/hr Exfiltration over Surface area above 367.80'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 10,776 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=367.80' (Free Discharge)
└**3=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=6.82 cfs @ 12.29 hrs HW=368.96' TW=368.66' (Dynamic Tailwater)
├**1=Custom Weir/Orifice** (Controls 0.00 cfs)
└**2=Culvert** (Outlet Controls 6.82 cfs @ 2.69 fps)

Pond 13P: NEW BLDG 8 SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

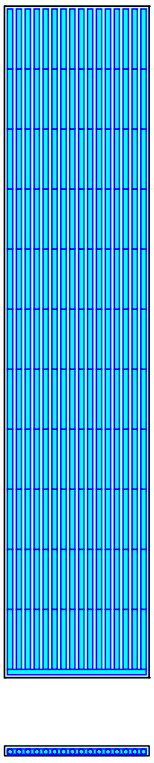
11 Chambers/Row x 20.00' Long +1.80' Header x 1 = 221.80' Row Length +11.4" End Stone x 2 = 223.70' Base Length
16 Rows x 21.6" Wide + 14.0" Spacing x 15 + 11.4" Side Stone x 2 = 48.17' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

176 Chambers x 35.2 cf + 46.27' Header x 1.76 sf = 6,274.1 cf Chamber Storage
176 Chambers x 42.8 cf + 46.27' Header x 2.14 sf = 7,640.0 cf Displacement

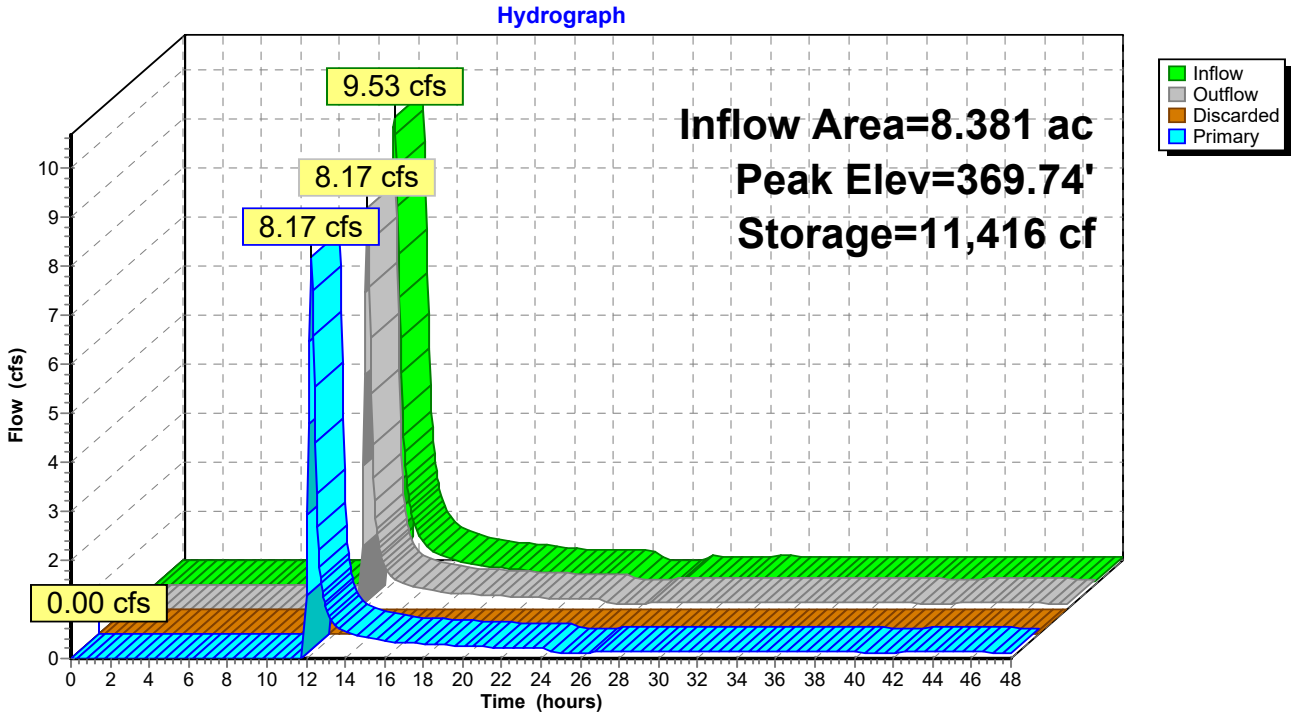
35,543.8 cf Field - 7,640.0 cf Chambers = 27,903.8 cf Stone x 40.0% Voids = 11,161.5 cf Stone Storage

Chamber Storage + Stone Storage = 17,435.7 cf = 0.400 af
Overall Storage Efficiency = 49.1%
Overall System Size = 223.70' x 48.17' x 3.30'

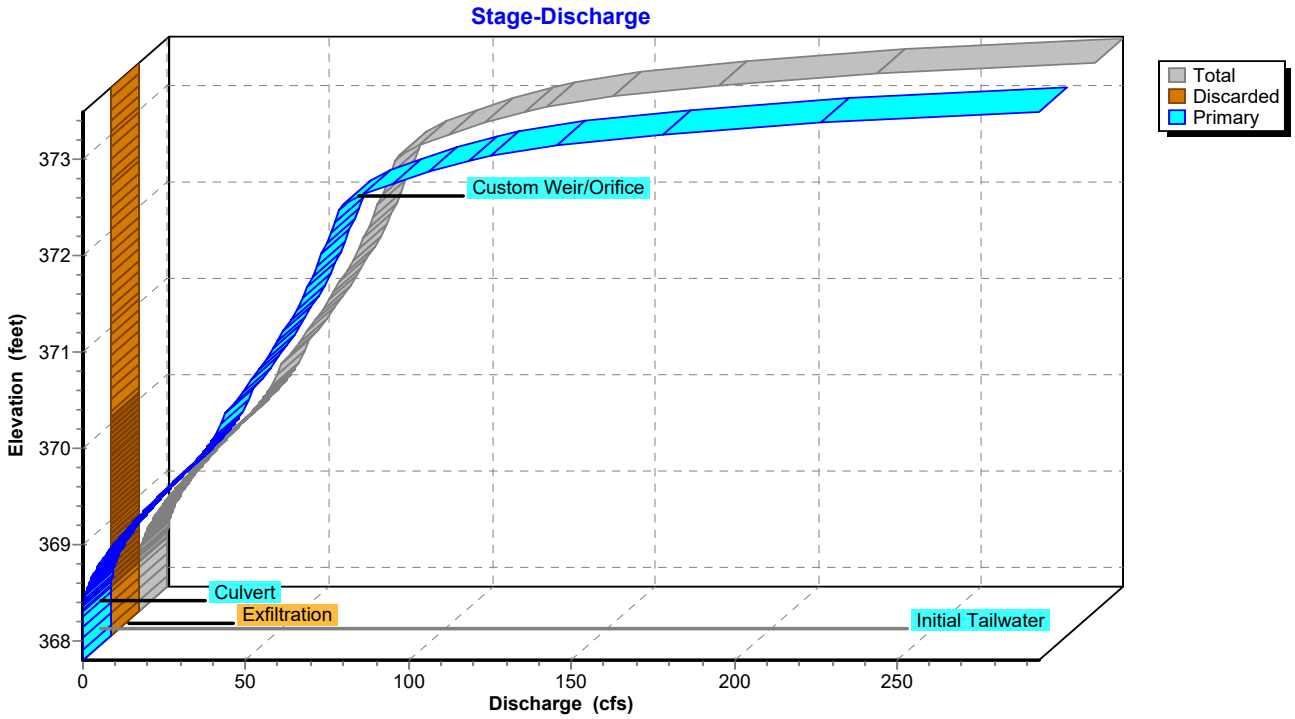
176 Chambers @ $ 0.00 /ea = $ 0.00
1,316.4 cy Field Excavation @ $ 2.50 /cy = $ 3,291.09
1,033.5 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 3,291.09



Pond 13P: NEW BLDG 8 SS Basin



Pond 13P: NEW BLDG 8 SS Basin



Summary for Pond 17P: PR NEW BLDG SWALE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=44)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 1.17" for 10-yr event
Inflow = 2.12 cfs @ 12.45 hrs, Volume= 0.286 af
Outflow = 1.91 cfs @ 13.80 hrs, Volume= 0.286 af, Atten= 10%, Lag= 80.7 min
Primary = 1.91 cfs @ 13.80 hrs, Volume= 0.286 af
Routed to Pond OS-2 : Small Pond @ Billboard

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 370.38' @ 12.95 hrs Surf.Area= 3,152 sf Storage= 1,812 cf

Plug-Flow detention time= 28.2 min calculated for 0.285 af (100% of inflow)
Center-of-Mass det. time= 28.1 min (918.8 - 890.7)

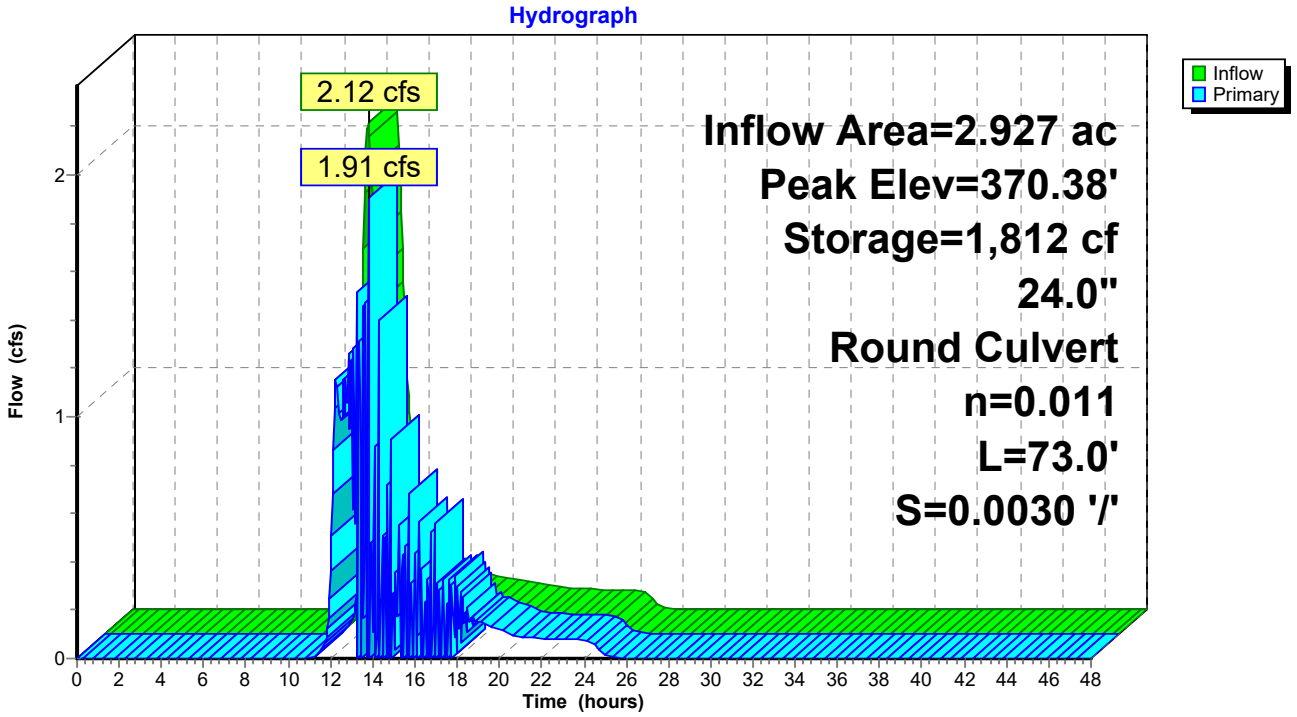
Volume	Invert	Avail.Storage	Storage Description
#1	368.71'	27,959 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.71	0	0	0
369.00	106	15	15
370.00	1,642	874	889
371.00	5,566	3,604	4,493
372.00	10,031	7,799	12,292
373.00	21,303	15,667	27,959

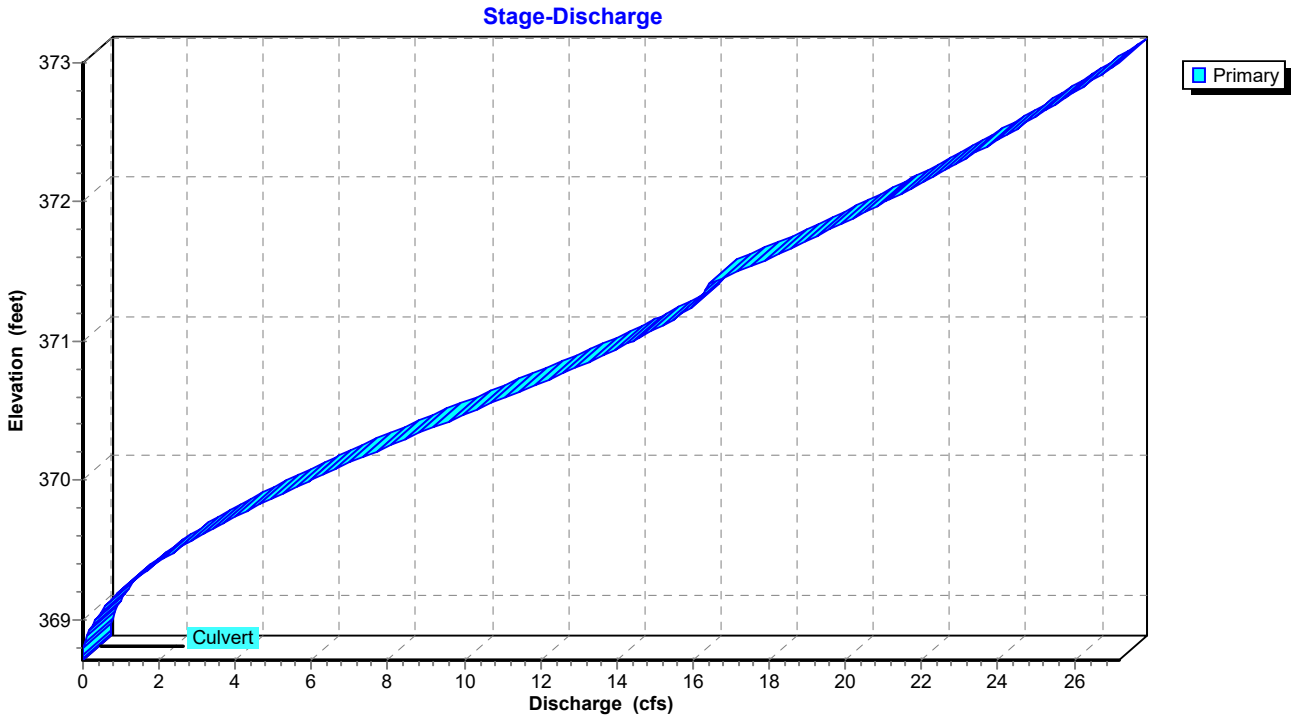
Device	Routing	Invert	Outlet Devices
#1	Primary	368.72'	**24.0" Round Culvert** L= 73.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 368.72' / 368.50' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=0.00 cfs @ 13.80 hrs HW=370.20' TW=370.22' (Dynamic Tailwater)
1=Culvert (Controls 0.00 cfs)

Pond 17P: PR NEW BLDG SWALE



Pond 17P: PR NEW BLDG SWALE



Summary for Pond DMH-3: DMH-3

[57] Hint: Peaked at 368.41' (Flood elevation advised)
[80] Warning: Exceeded Pond OS-1 by 0.38' @ 3.20 hrs (0.12 cfs 0.028 af)

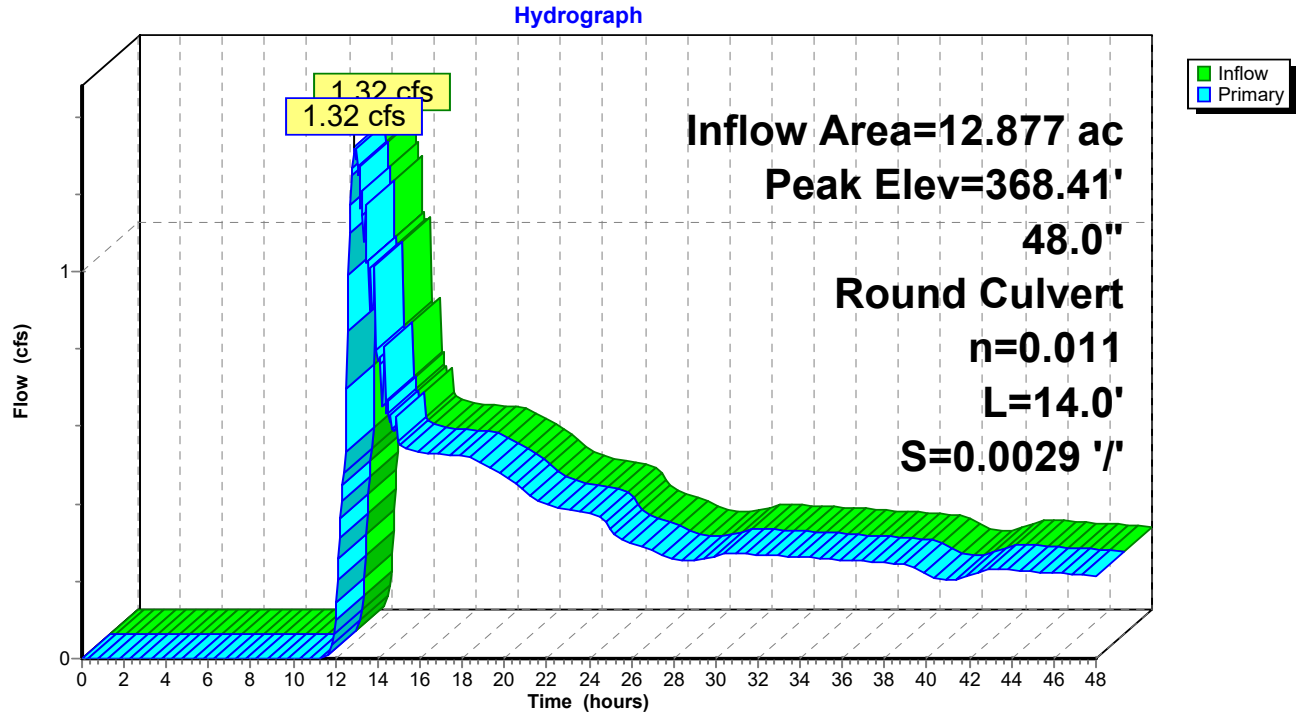
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 0.98" for 10-yr event
Inflow = 1.32 cfs @ 12.89 hrs, Volume= 1.057 af
Outflow = 1.32 cfs @ 12.89 hrs, Volume= 1.057 af, Atten= 0%, Lag= 0.0 min
Primary = 1.32 cfs @ 12.89 hrs, Volume= 1.057 af
Routed to Link ES-6 : OUTFALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 368.41' @ 16.05 hrs

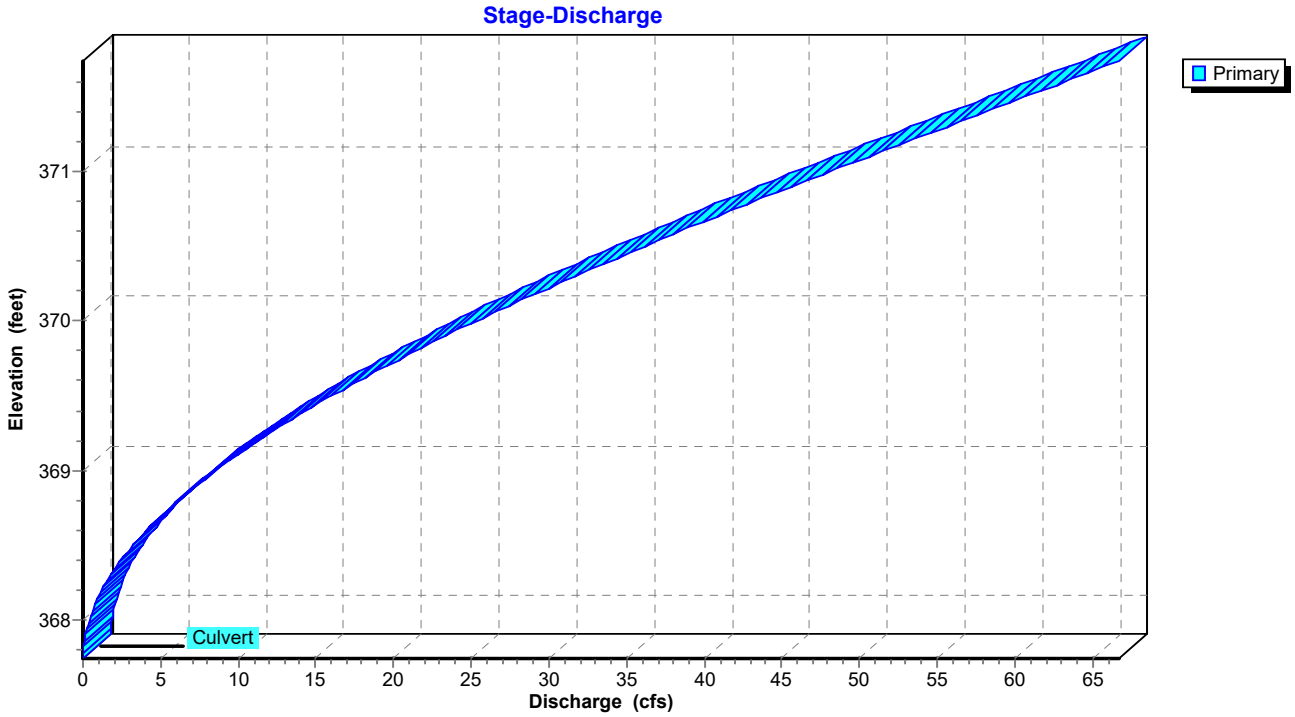
Device	Routing	Invert	Outlet Devices
#1	Primary	367.74'	**48.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.74' / 367.70' S= 0.0029 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=1.32 cfs @ 12.89 hrs HW=368.22' TW=367.70' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.32 cfs @ 2.36 fps)

Pond DMH-3: DMH-3



Pond DMH-3: DMH-3



Summary for Pond DMH-7: Bldg 5 Parking SS Basin

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=2)

Inflow Area = 1.270 ac,100.00% Impervious, Inflow Depth = 3.17" for 10-yr event
Inflow = 5.31 cfs @ 12.01 hrs, Volume= 0.335 af
Outflow = 1.56 cfs @ 12.18 hrs, Volume= 0.207 af, Atten= 71%, Lag= 10.6 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 1.56 cfs @ 12.18 hrs, Volume= 0.207 af
Routed to Pond 13P : NEW BLDG 8 SS Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 369.59' @ 24.60 hrs Surf.Area= 14,527 sf Storage= 11,654 cf

Plug-Flow detention time= 1,079.2 min calculated for 0.207 af (62% of inflow)
Center-of-Mass det. time= 972.9 min (1,727.8 - 754.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	368.05'	15,020 cf	**140.09'W x 103.70'L x 3.30'H Field A** 47,915 cf Overall - 10,365 cf Embedded = 37,550 cf x 40.0% Voids
#2A	368.55'	8,512 cf	**Lane HDPE 18"** x 235 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 235 Chambers in 47 Rows 138.19' Header x 1.76 sf x 1 = 243.1 cf Inside
		23,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	368.05'	**1.000 in/hr Exfiltration over Surface area above 368.05'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 14,527 sf
#2	Primary	368.55'	**18.0" Round Culvert** L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.55' / 368.33' S= 0.0040 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=368.05' (Free Discharge)
↑**1=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=1.51 cfs @ 12.18 hrs HW=369.20' TW=368.84' (Dynamic Tailwater)
↑**2=Culvert** (Outlet Controls 1.51 cfs @ 3.01 fps)

Pond DMH-7: Bldg 5 Parking SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

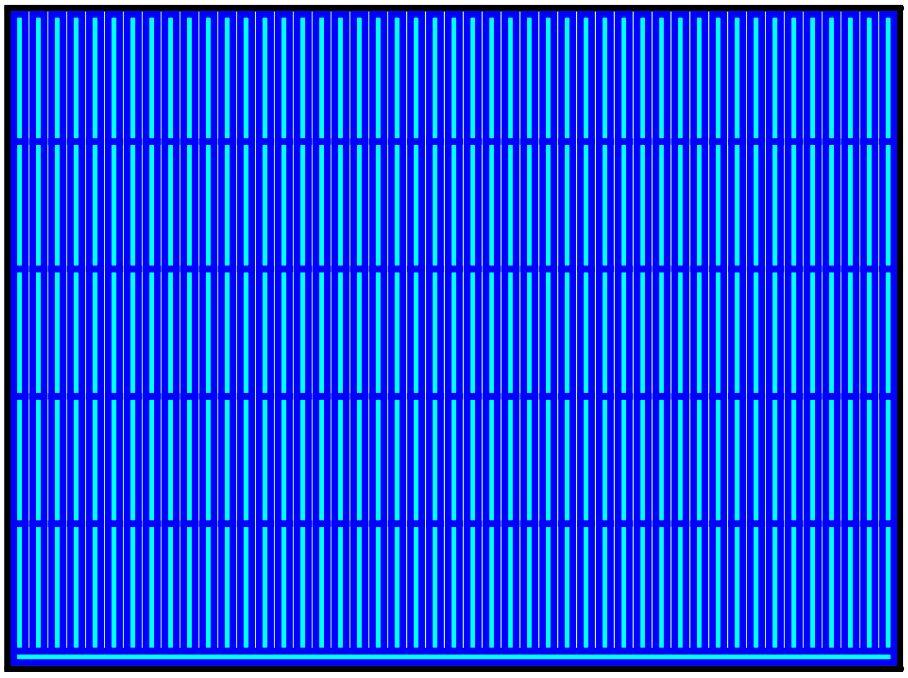
5 Chambers/Row x 20.00' Long +1.80' Header x 1 = 101.80' Row Length +11.4" End Stone x 2 = 103.70' Base Length
47 Rows x 21.6" Wide + 14.0" Spacing x 46 + 11.4" Side Stone x 2 = 140.09' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

235 Chambers x 35.2 cf + 138.19' Header x 1.76 sf = 8,511.8 cf Chamber Storage
235 Chambers x 42.8 cf + 138.19' Header x 2.14 sf = 10,364.9 cf Displacement

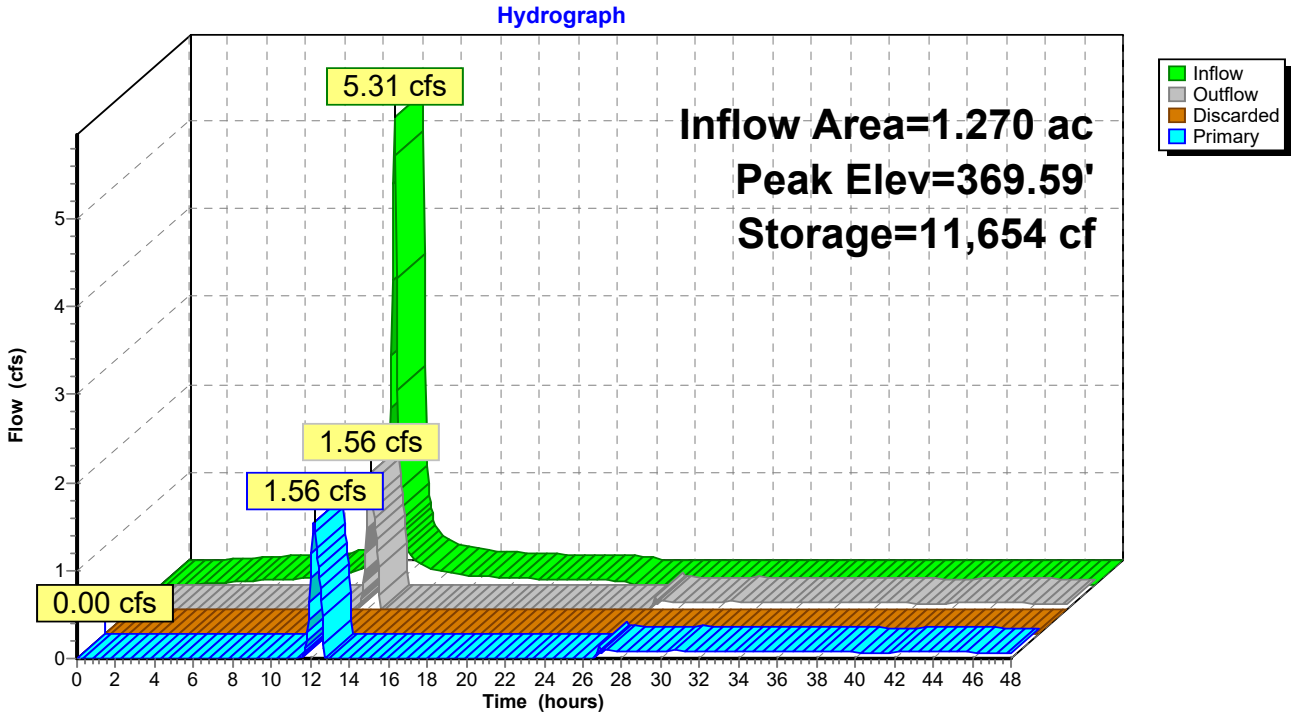
47,914.6 cf Field - 10,364.9 cf Chambers = 37,549.8 cf Stone x 40.0% Voids = 15,019.9 cf Stone Storage

Chamber Storage + Stone Storage = 23,531.7 cf = 0.540 af
Overall Storage Efficiency = 49.1%
Overall System Size = 103.70' x 140.09' x 3.30'

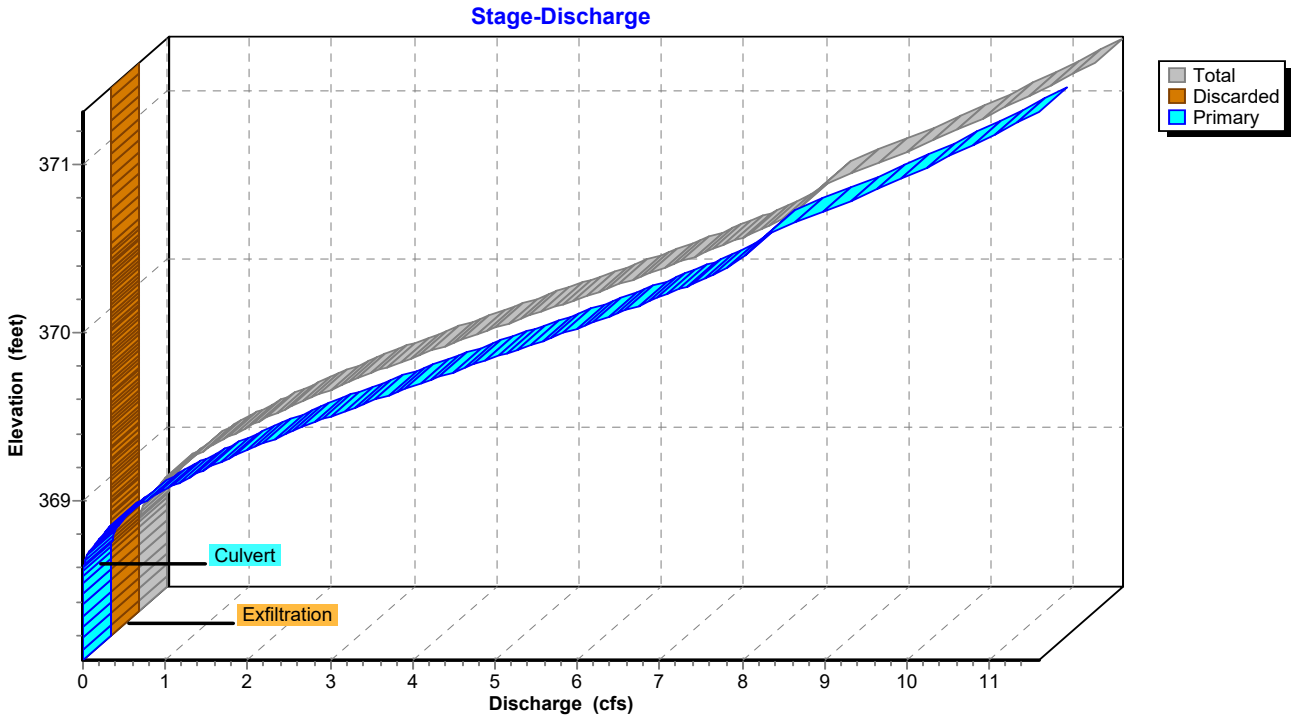
235 Chambers @ $ 0.00 /ea = $ 0.00
1,774.6 cy Field Excavation @ $ 2.50 /cy = $ 4,436.54
1,390.7 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 4,436.54



Pond DMH-7: Bldg 5 Parking SS Basin



Pond DMH-7: Bldg 5 Parking SS Basin



Summary for Pond OS-1: Big Pond

[80] Warning: Exceeded Pond 13P by 0.02' @ 12.60 hrs (3.06 cfs 0.963 af)

Inflow Area = 9.950 ac, 68.02% Impervious, Inflow Depth > 1.22" for 10-yr event
Inflow = 8.68 cfs @ 12.29 hrs, Volume= 1.008 af
Outflow = 0.30 cfs @ 19.79 hrs, Volume= 0.771 af, Atten= 97%, Lag= 449.8 min
Primary = 0.30 cfs @ 19.79 hrs, Volume= 0.771 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.00' Surf.Area= 10,025 sf Storage= 18,221 cf
Peak Elev= 369.74' @ 19.79 hrs Surf.Area= 13,473 sf Storage= 38,646 cf (20,425 cf above start)

Plug-Flow detention time= 1,583.7 min calculated for 0.352 af (35% of inflow)
Center-of-Mass det. time= 526.0 min (1,753.8 - 1,227.8)

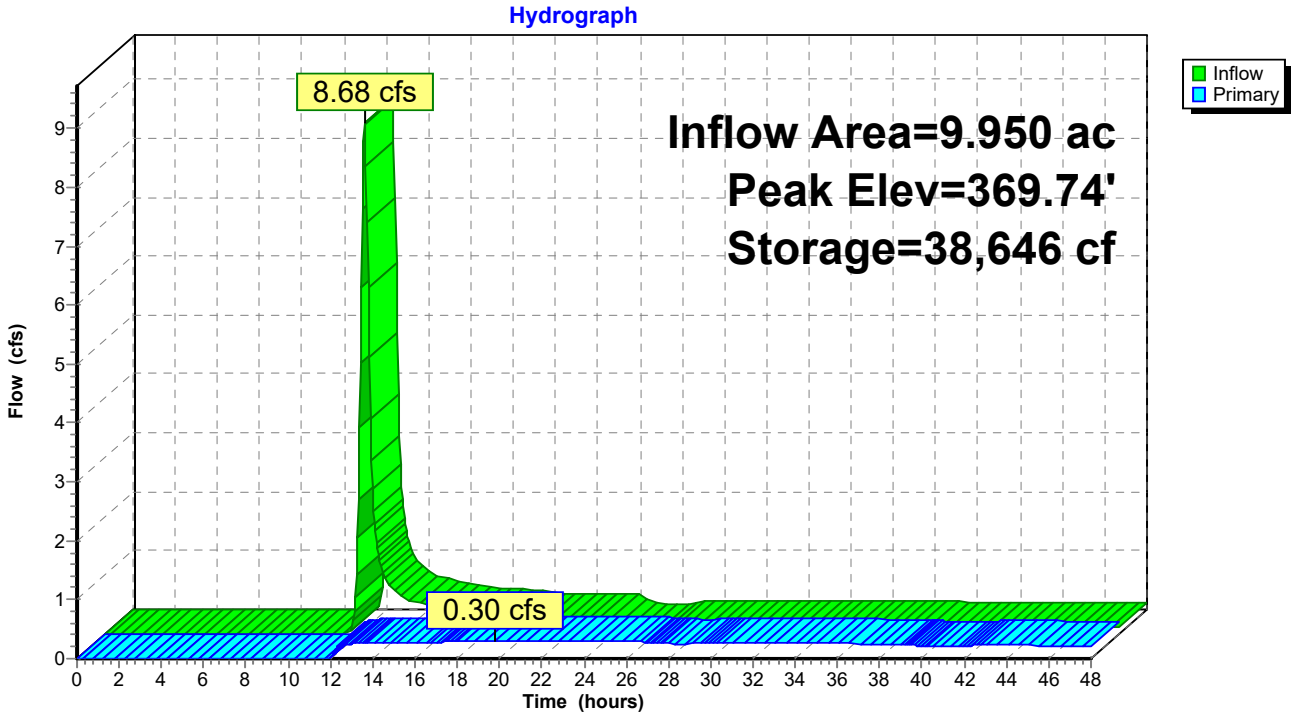
Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	124,961 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	239	0	0
363.00	738	489	489
364.00	1,448	1,093	1,582
365.00	2,304	1,876	3,458
366.00	3,561	2,933	6,390
367.00	5,124	4,343	10,733
367.50	5,887	2,753	13,485
367.51	9,000	74	13,560
368.00	10,025	4,661	18,221
369.00	11,979	11,002	29,223
370.00	13,997	12,988	42,211
371.00	16,112	15,055	57,265
372.00	20,006	18,059	75,324
372.50	41,916	15,481	90,805
373.00	94,708	34,156	124,961

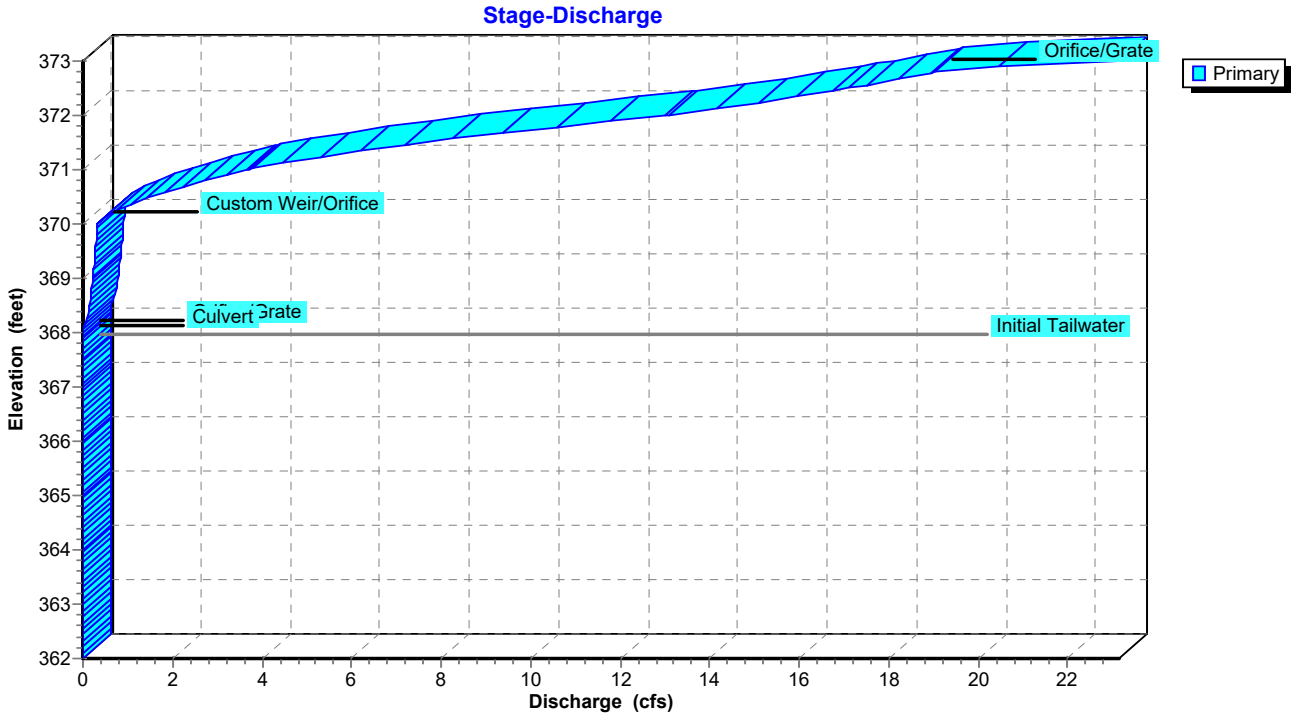
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.80'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 in 24.0" x 36.0" Grate (100% open area) Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	367.91'	**48.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.91' / 367.84' S= 0.0032 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=0.30 cfs @ 19.79 hrs HW=369.74' TW=368.03' (Dynamic Tailwater)
└─**4=Culvert** (Passes 0.30 cfs of 17.52 cfs potential flow)
  ├─**1=Orifice/Grate** (Orifice Controls 0.30 cfs @ 6.12 fps)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Custom Weir/Orifice** (Controls 0.00 cfs)

Pond OS-1: Big Pond



Pond OS-1: Big Pond



Summary for Pond OS-2: Small Pond @ Billboard

[80] Warning: Exceeded Pond 17P by 0.12' @ 12.35 hrs (2.11 cfs 0.292 af)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 1.17" for 10-yr event
Inflow = 1.91 cfs @ 13.80 hrs, Volume= 0.286 af
Outflow = 1.07 cfs @ 12.89 hrs, Volume= 0.286 af, Atten= 44%, Lag= 0.0 min
Primary = 1.07 cfs @ 12.89 hrs, Volume= 0.286 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.50' Surf.Area= 692 sf Storage= 479 cf
Peak Elev= 370.38' @ 12.89 hrs Surf.Area= 1,366 sf Storage= 2,223 cf (1,744 cf above start)

Plug-Flow detention time= 79.5 min calculated for 0.274 af (96% of inflow)
Center-of-Mass det. time= 49.8 min (968.6 - 918.8)

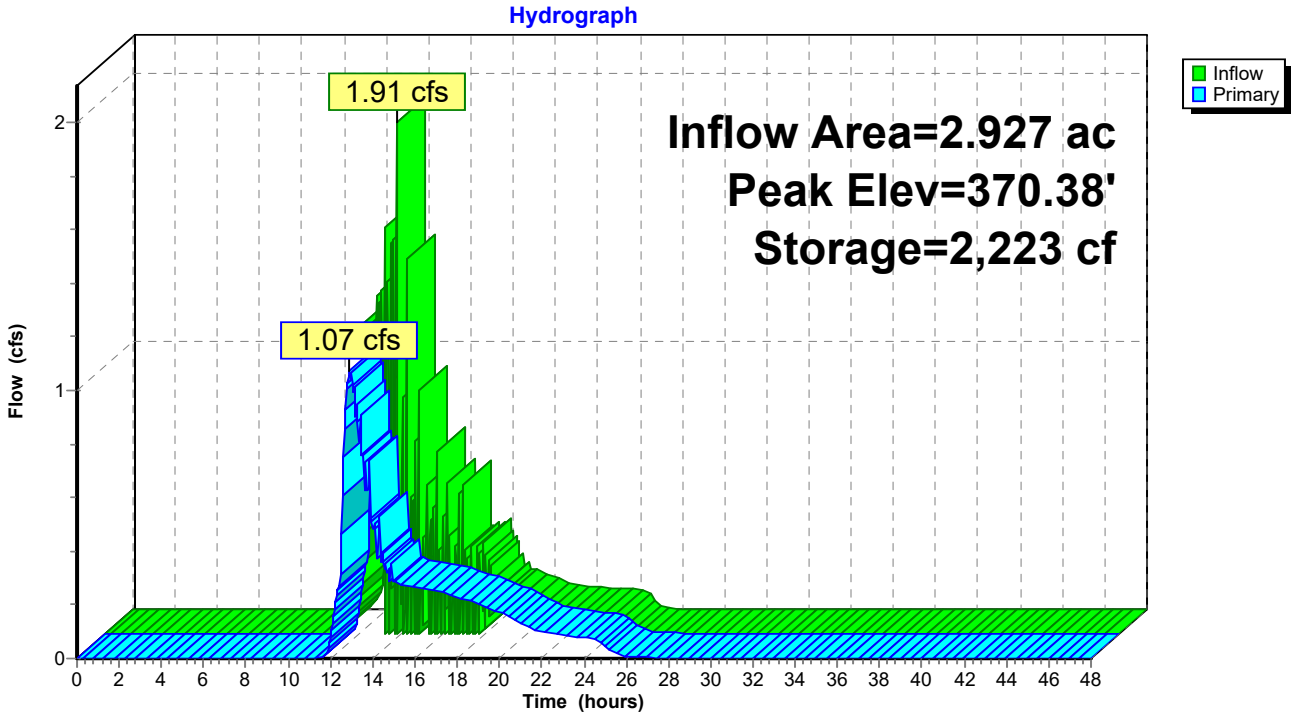
Volume	Invert	Avail.Storage	Storage Description
#1	366.00'	8,328 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
366.00	2	0	0
367.00	62	32	32
368.00	198	130	162
368.01	585	4	166
369.00	801	686	852
370.00	1,035	918	1,770
371.00	1,913	1,474	3,244
372.00	2,407	2,160	5,404
373.00	3,442	2,925	8,328

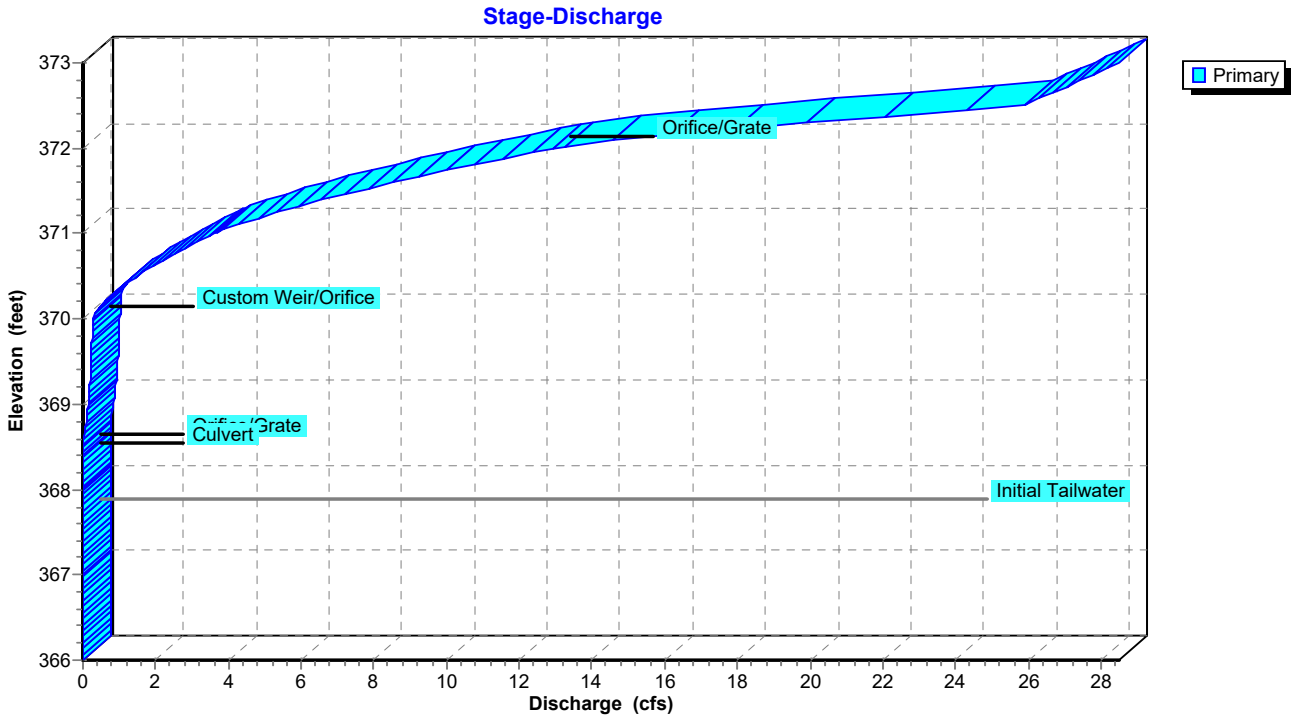
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.50'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	368.40'	**24.0" Round Culvert** L= 81.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.40' / 368.16' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=1.07 cfs @ 12.89 hrs HW=370.38' TW=368.22' (Dynamic Tailwater)
└**4=Culvert** (Passes 1.07 cfs of 11.95 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.31 cfs @ 6.37 fps)
  ├**2=Orifice/Grate** (Controls 0.00 cfs)
  └**3=Custom Weir/Orifice** (Weir Controls 0.76 cfs @ 2.01 fps)

Pond OS-2: Small Pond @ Billboard



Pond OS-2: Small Pond @ Billboard

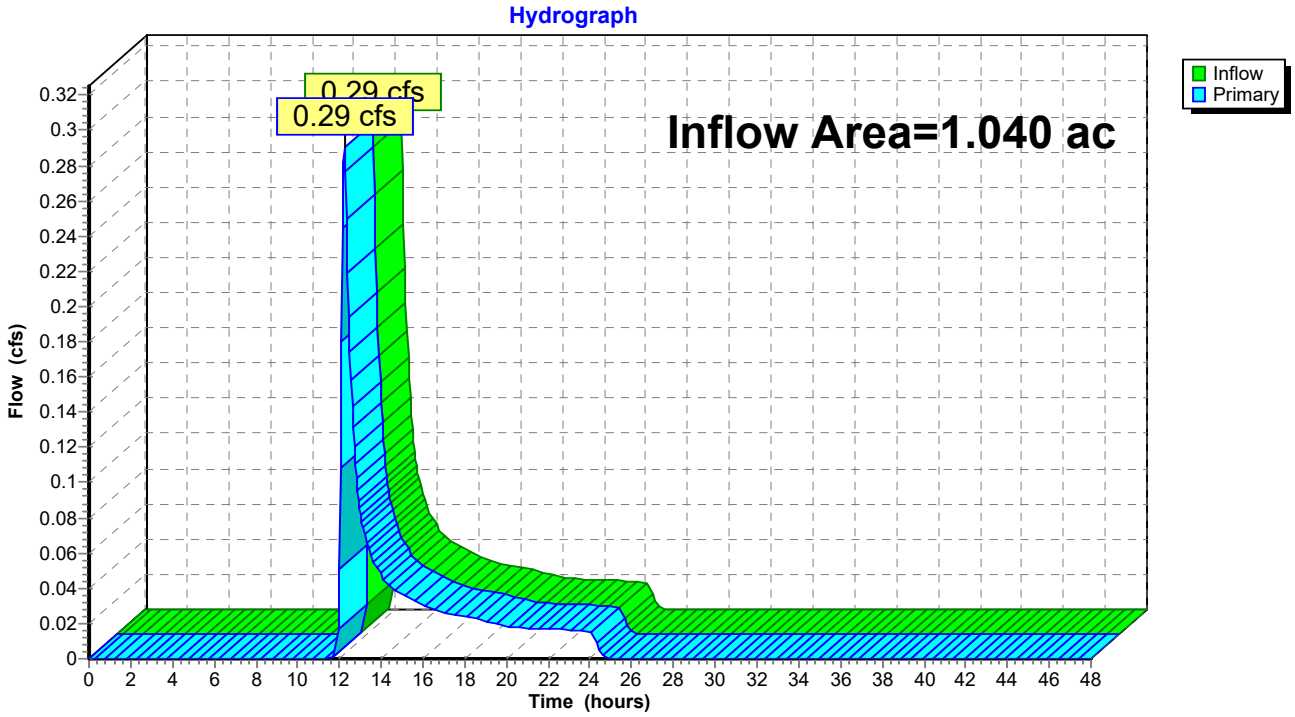


Summary for Link 1L: Discharge @NE Corner

Inflow Area = 1.040 ac, 36.54% Impervious, Inflow Depth = 0.45" for 10-yr event
Inflow = 0.29 cfs @ 12.24 hrs, Volume= 0.039 af
Primary = 0.29 cfs @ 12.24 hrs, Volume= 0.039 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Discharge @NE Corner

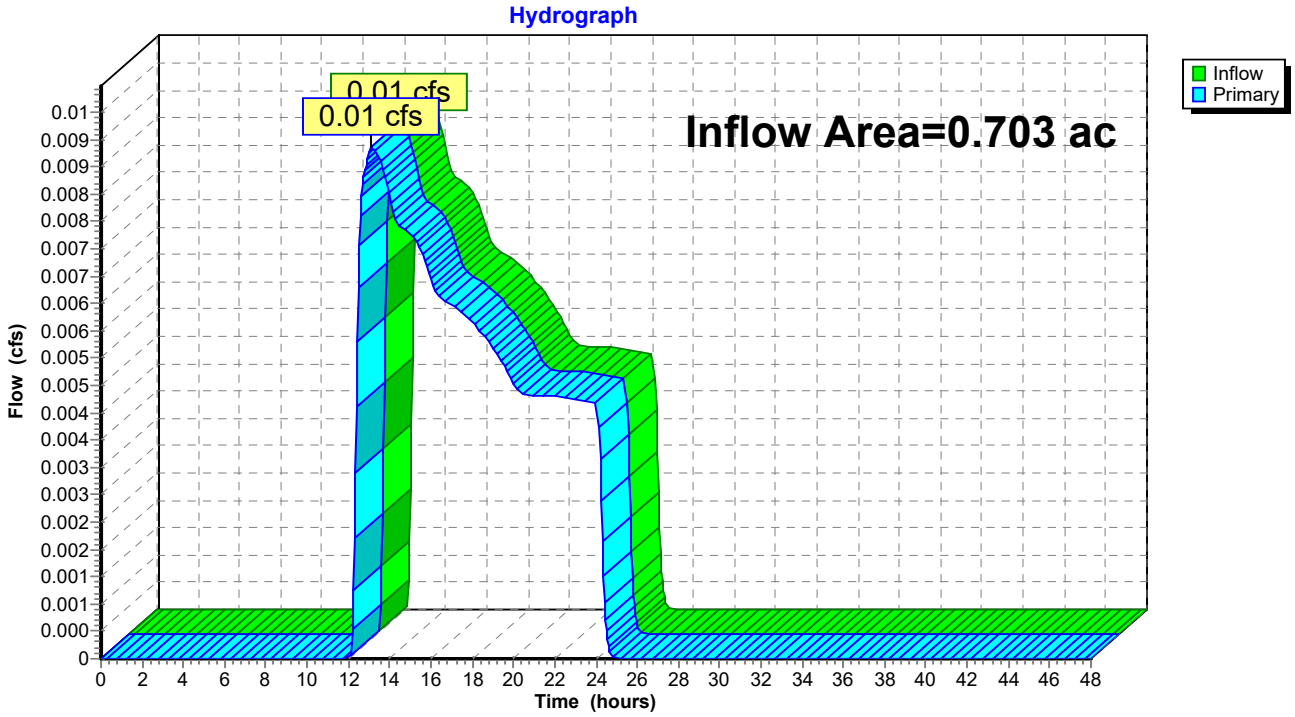


Summary for Link 15L: PR PARK ST DISCHARGE

Inflow Area = 0.703 ac, 13.09% Impervious, Inflow Depth = 0.11" for 10-yr event
Inflow = 0.01 cfs @ 13.10 hrs, Volume= 0.006 af
Primary = 0.01 cfs @ 13.10 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 15L: PR PARK ST DISCHARGE



Summary for Link ES-6: OUTFALL

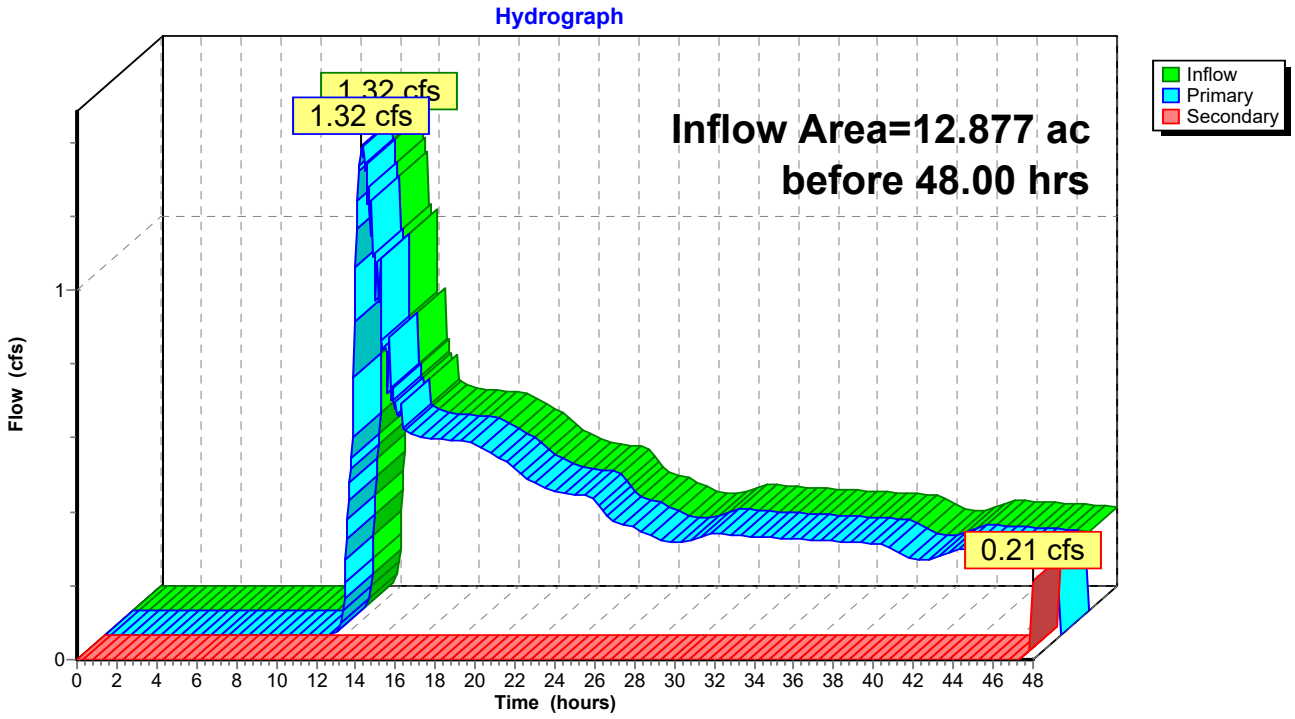
[80] Warning: Exceeded Pond DMH-3 by 0.06' @ 0.75 hrs (0.02 cfs 0.257 af)

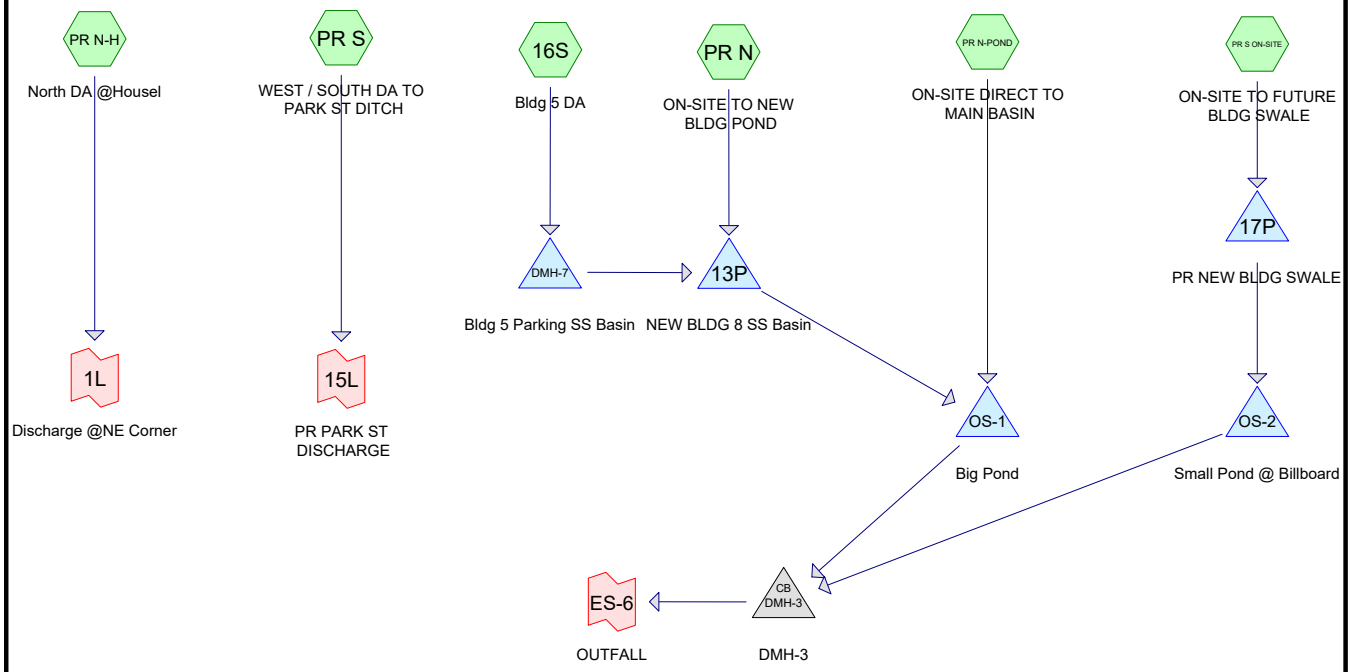
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 0.98" for 10-yr event
Inflow = 1.32 cfs @ 12.89 hrs, Volume= 1.057 af
Primary = 1.32 cfs @ 12.89 hrs, Volume= 1.056 af, Atten= 0%, Lag= 0.0 min
Secondary = 0.21 cfs @ 48.00 hrs, Volume= 0.001 af

Primary outflow = Inflow before 48.00 hrs, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

High tide Elevation = 368.40' at 16.00 hrs
Low tide Elevation = 367.00' at 22.21 hrs

Link ES-6: OUTFALL





Subcat Reach Pond Link

Routing Diagram for URBan Villages_PROPOSED-100_01-2024_Storm Chambers_Lane 18-inch HDPE_REV 01-2026

Prepared by Calocerinos Engineering, PLLC

HydroCAD® 10.20-2h s/n 08759 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100-yr	Type II 24-hr		Default	24.00	1	5.80	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.255	39	>75% Grass cover, Good, HSG A (PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE)
1.052	35	Brush, Fair, HSG A (PR N, PR N-H, PR S ON-SITE)
0.071	76	Gravel roads, HSG A (PR N-POND)
5.082	98	Paved parking, HSG A (16S, PR N, PR N-POND, PR S ON-SITE)
0.092	98	Paved roads w/curbs & sewers, HSG A (PR S)
3.554	98	Roofs, HSG A (16S, PR N, PR N-H, PR S ON-SITE)
0.244	98	Water Surface, HSG A (PR N-POND, PR S ON-SITE)
0.270	36	Woods, Fair, HSG A (PR N)
14.620	**75**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
14.620	HSG A	16S, PR N, PR N-H, PR N-POND, PR S, PR S ON-SITE
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
14.620		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
4.255	0.000	0.000	0.000	0.000	4.255	>75% Grass cover, Good	PRN, PRN-H, PRN-POND, PRS, PRS ON-SITE
1.052	0.000	0.000	0.000	0.000	1.052	Brush, Fair	PRN, PRN-H, PRS ON-SITE
0.071	0.000	0.000	0.000	0.000	0.071	Gravel roads	PRN-POND
5.082	0.000	0.000	0.000	0.000	5.082	Paved parking	16S, PRN, PRN-POND, PRS ON-SITE
0.092	0.000	0.000	0.000	0.000	0.092	Paved roads w/curbs & sewers	PRS

Ground Covers (all nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.554	0.000	0.000	0.000	0.000	3.554	Roofs	16S, PRN, PRN-H, PRS ON-SITE
0.244	0.000	0.000	0.000	0.000	0.244	Water Surface	PRN-POND, PRS ON-SITE
0.270	0.000	0.000	0.000	0.000	0.270	Woods, Fair	PRN
14.620	**0.000**	**0.000**	**0.000**	**0.000**	**14.620**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	13P	368.30	368.00	60.0	0.0050	0.011	0.0	18.0	0.0
2	17P	368.72	368.50	73.0	0.0030	0.011	0.0	24.0	0.0
3	DMH-3	367.74	367.70	14.0	0.0029	0.011	0.0	48.0	0.0
4	DMH-7	368.55	368.33	55.0	0.0040	0.011	0.0	18.0	0.0
5	OS-1	367.91	367.84	22.0	0.0032	0.011	0.0	48.0	0.0
6	OS-2	368.40	368.16	81.0	0.0030	0.011	0.0	24.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 16S: Bldg 5 DA Runoff Area=1.270 ac 100.00% Impervious Runoff Depth=5.56"
Flow Length=230' Tc=1.1 min CN=98 Runoff=11.58 cfs 0.589 af

Subcatchment PR N: ON-SITE TO NEW Runoff Area=7.111 ac 65.93% Impervious Runoff Depth=3.31"
Flow Length=875' Tc=30.0 min CN=77 Runoff=20.35 cfs 1.959 af

Subcatchment PR N-H: North DA @Housel Runoff Area=1.040 ac 36.54% Impervious Runoff Depth=1.71"
Flow Length=650' Tc=24.2 min CN=59 Runoff=1.62 cfs 0.148 af

Subcatchment PR N-POND: ON-SITE Runoff Area=1.569 ac 51.63% Impervious Runoff Depth=2.74"
Flow Length=105' Tc=8.7 min CN=71 Runoff=6.86 cfs 0.358 af

Subcatchment PR S: WEST / SOUTH DA TO Runoff Area=0.703 ac 13.09% Impervious Runoff Depth=0.85"
Flow Length=825' Tc=20.3 min CN=47 Runoff=0.45 cfs 0.050 af

Subcatchment PR S ON-SITE: ON-SITE TO Runoff Area=2.927 ac 59.17% Impervious Runoff Depth=3.02"
Flow Length=990' Tc=44.5 min CN=74 Runoff=5.82 cfs 0.736 af

Pond 13P: NEW BLDG 8 SS Basin Peak Elev=371.23' Storage=17,436 cf Inflow=20.35 cfs 2.263 af
Discarded=0.00 cfs 0.000 af Primary=15.49 cfs 2.013 af Outflow=15.49 cfs 2.013 af

Pond 17P: PR NEW BLDG SWALE Peak Elev=371.07' Storage=4,887 cf Inflow=5.82 cfs 0.736 af
24.0" Round Culvert n=0.011 L=73.0' S=0.0030 '/' Outflow=3.87 cfs 0.736 af

Pond DMH-3: DMH-3 Peak Elev=371.30' Inflow=7.83 cfs 2.665 af
48.0" Round Culvert n=0.011 L=14.0' S=0.0029 '/' Outflow=7.83 cfs 2.665 af

Pond DMH-7: Bldg 5 Parking SS Basin Peak Elev=370.45' Storage=18,297 cf Inflow=11.58 cfs 0.589 af
Discarded=0.00 cfs 0.000 af Primary=3.74 cfs 0.305 af Outflow=3.74 cfs 0.305 af

Pond OS-1: Big Pond Peak Elev=371.23' Storage=61,037 cf Inflow=16.67 cfs 2.371 af
Outflow=4.34 cfs 1.929 af

Pond OS-2: Small Pond @ Billboard Peak Elev=371.06' Storage=3,357 cf Inflow=3.87 cfs 0.736 af
Outflow=3.67 cfs 0.736 af

Link 1L: Discharge @NE Corner Inflow=1.62 cfs 0.148 af
Primary=1.62 cfs 0.148 af

Link 15L: PR PARK ST DISCHARGE Inflow=0.45 cfs 0.050 af
Primary=0.45 cfs 0.050 af

Link ES-6: OUTFALL before 48.00 hrs Inflow=7.83 cfs 2.665 af
Primary=7.83 cfs 2.663 af Secondary=0.29 cfs 0.001 af

Total Runoff Area = 14.620 ac Runoff Volume = 3.839 af Average Runoff Depth = 3.15"
38.63% Pervious = 5.648 ac 61.37% Impervious = 8.972 ac

Summary for Subcatchment 16S: Bldg 5 DA

[49] Hint: Tc<2dt may require smaller dt

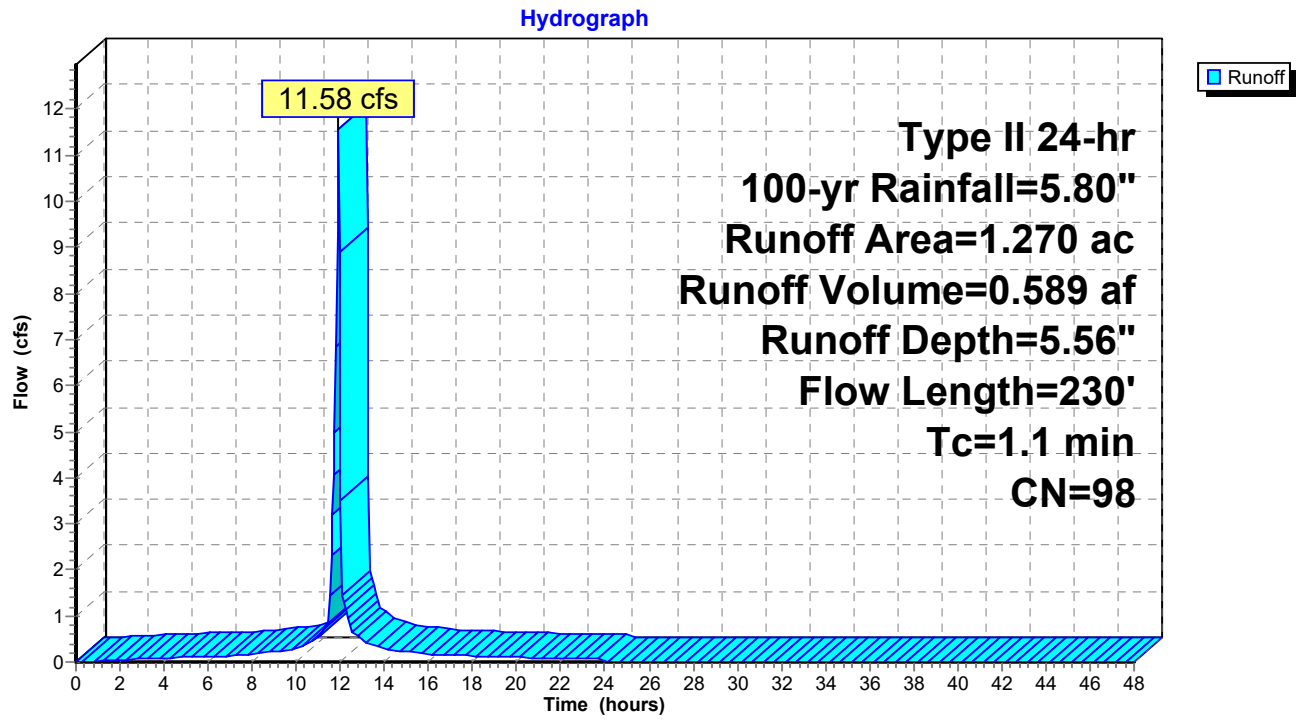
Runoff = 11.58 cfs @ 11.90 hrs, Volume= 0.589 af, Depth= 5.56"
Routed to Pond DMH-7 : Bldg 5 Parking SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.400	98	Roofs, HSG A
0.870	98	Paved parking, HSG A
1.270	98	Weighted Average
1.270		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	60	0.3300	3.37		**Sheet Flow, SF** Smooth surfaces n= 0.011 P2= 2.50"
0.1	50	0.3300	11.66		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.7	120	0.0200	2.87		**Shallow Concentrated Flow, SCF-2** Paved Kv= 20.3 fps
1.1	230	Total			

Subcatchment 16S: Bldg 5 DA



Summary for Subcatchment PR N: ON-SITE TO NEW BLDG POND

[47] Hint: Peak is 1616% of capacity of segment #4

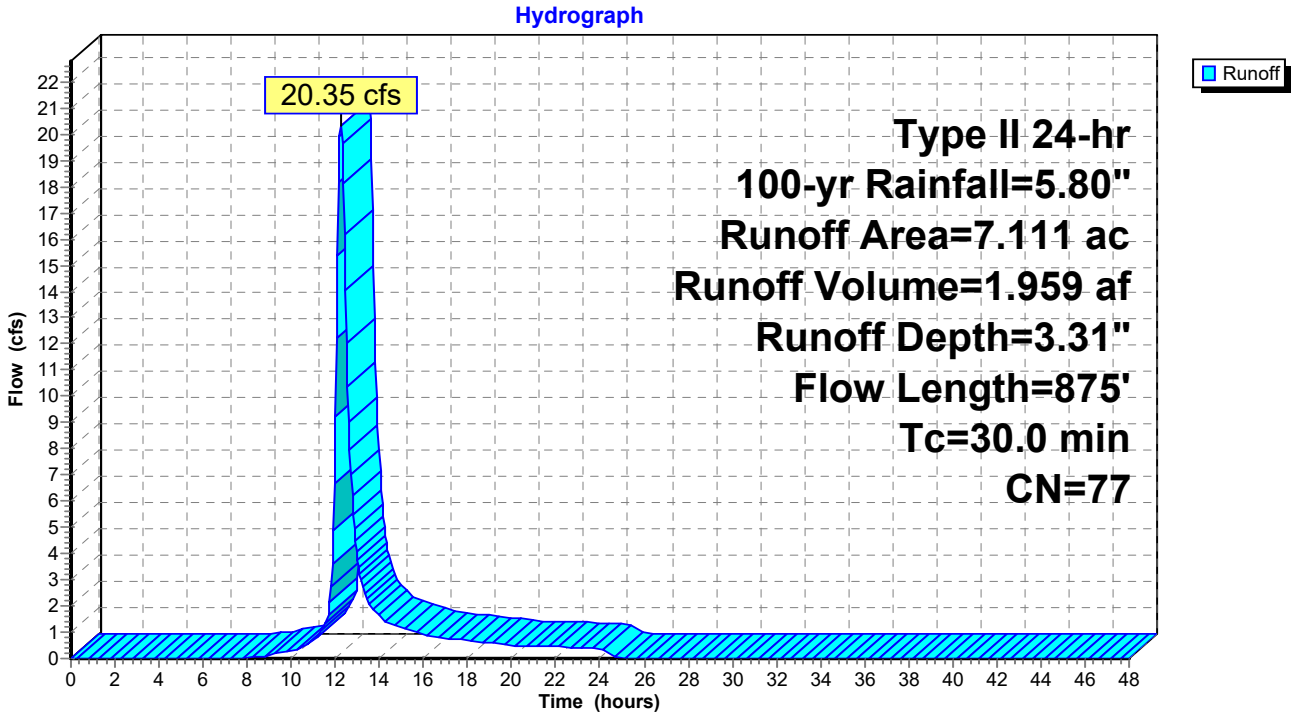
Runoff = 20.35 cfs @ 12.24 hrs, Volume= 1.959 af, Depth= 3.31"
Routed to Pond 13P : NEW BLDG 8 SS Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.270	36	Woods, Fair, HSG A
2.326	98	Roofs, HSG A
0.596	35	Brush, Fair, HSG A
1.557	39	>75% Grass cover, Good, HSG A
2.362	98	Paved parking, HSG A
7.111	77	Weighted Average
2.423		34.07% Pervious Area
4.688		65.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.3	100	0.0200	0.07		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.7	100	0.0200	2.28		**Shallow Concentrated Flow, SCF-1** Unpaved Kv= 16.1 fps
0.1	35	0.1200	5.58		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	250	0.0100	1.80	1.26	**Channel Flow, CF** Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 Riprap, 1-inch
2.6	390		2.50		**Direct Entry, PIPE FLOW**
30.0	875	Total			

Subcatchment PR N: ON-SITE TO NEW BLDG POND



Summary for Subcatchment PR N-H: North DA @Housel

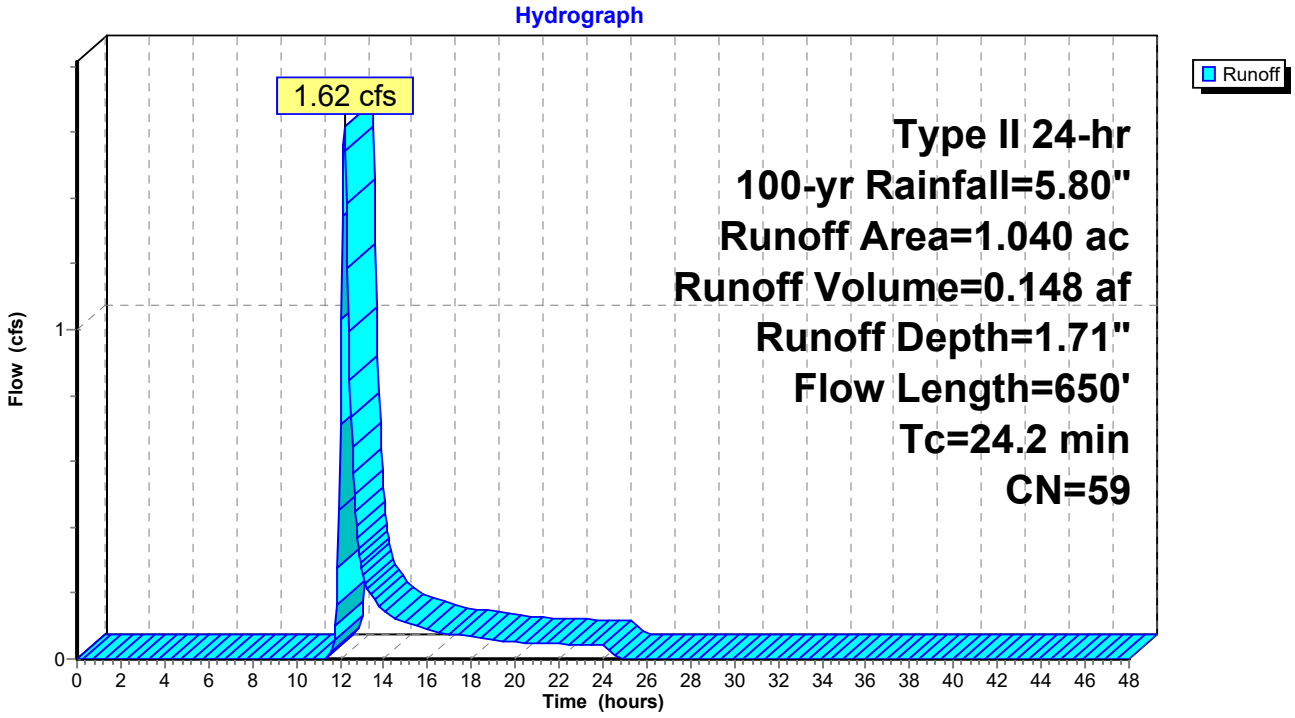
Runoff = 1.62 cfs @ 12.20 hrs, Volume= 0.148 af, Depth= 1.71"
Routed to Link 1L : Discharge @NE Corner

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.280	39	>75% Grass cover, Good, HSG A
0.380	35	Brush, Fair, HSG A
0.380	98	Roofs, HSG A
1.040	59	Weighted Average
0.660		63.46% Pervious Area
0.380		36.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
1.3	130	0.0100	1.61		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
6.1	420	0.0050	1.14		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
24.2	650	Total			

Subcatchment PR N-H: North DA @Housel



Summary for Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN

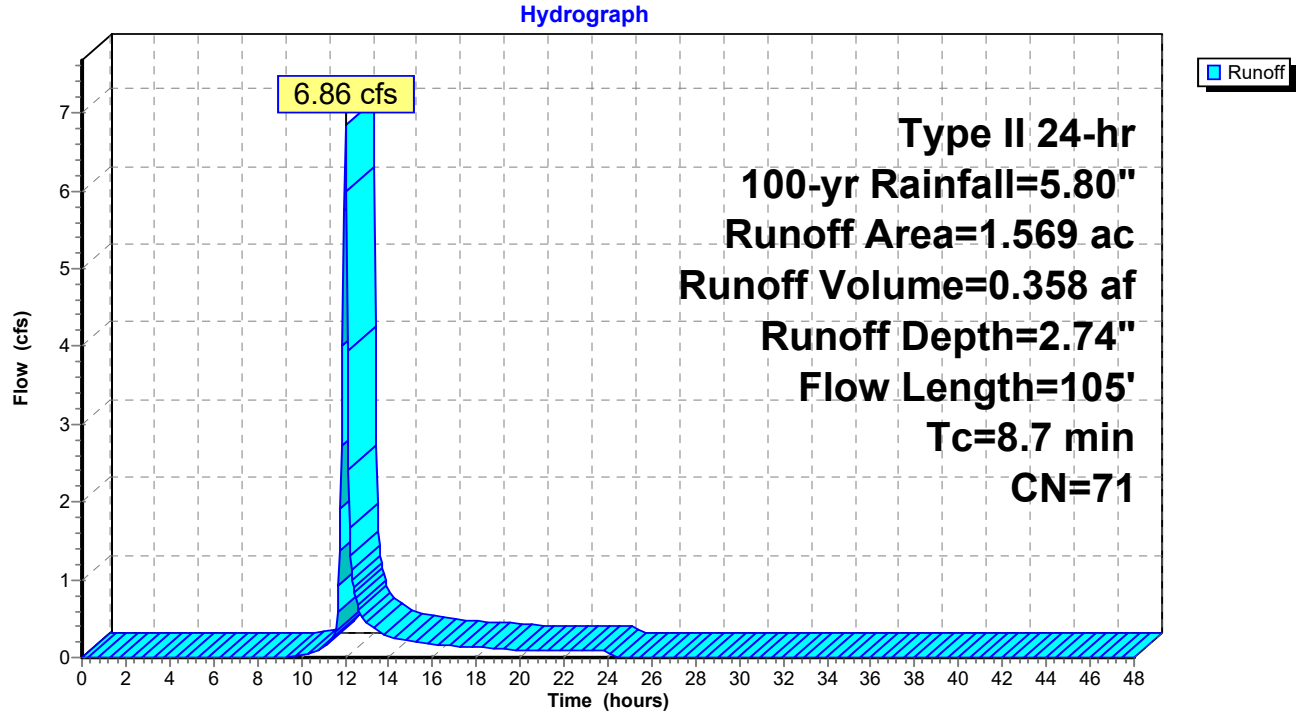
Runoff = 6.86 cfs @ 12.00 hrs, Volume= 0.358 af, Depth= 2.74"
Routed to Pond OS-1 : Big Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.071	76	Gravel roads, HSG A
0.587	98	Paved parking, HSG A
0.223	98	Water Surface, HSG A
0.688	39	>75% Grass cover, Good, HSG A
1.569	71	Weighted Average
0.759		48.37% Pervious Area
0.810		51.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	45	0.0200	0.09		**Sheet Flow, SF** Grass: Dense n= 0.240 P2= 2.50"
0.2	40	0.0200	2.87		**Shallow Concentrated Flow, SCF** Paved Kv= 20.3 fps
0.0	20	0.2500	8.05		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
8.7	105	Total			

Subcatchment PR N-POND: ON-SITE DIRECT TO MAIN BASIN



Summary for Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH

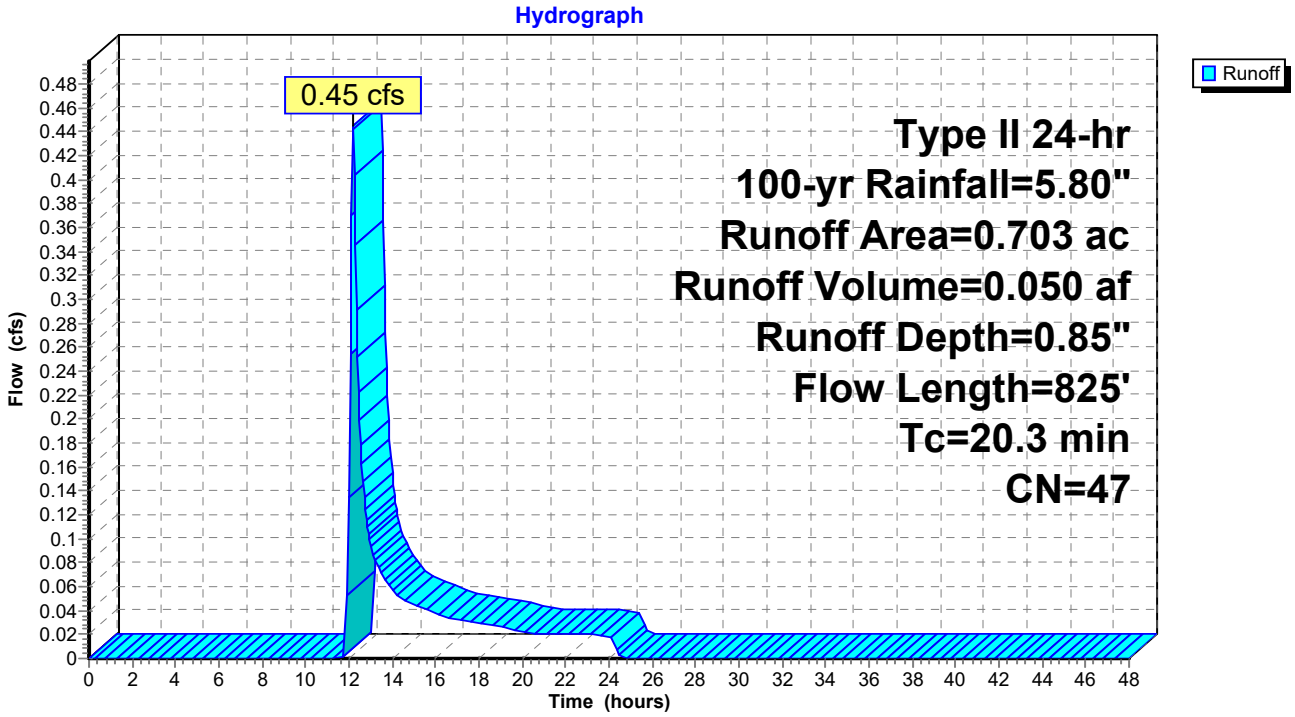
Runoff = 0.45 cfs @ 12.18 hrs, Volume= 0.050 af, Depth= 0.85"
Routed to Link 15L : PR PARK ST DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.092	98	Paved roads w/curbs & sewers, HSG A
0.611	39	>75% Grass cover, Good, HSG A
0.703	47	Weighted Average
0.611		86.91% Pervious Area
0.092		13.09% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	80	0.0250	0.11		**Sheet Flow, SF** Grass: Dense n= 0.240 P2= 2.50"
0.8	125		2.50		**Direct Entry, PIPE FLOW-1**
5.8	440	0.0050	1.27	0.89	**Channel Flow, CF-1** Area= 0.7 sf Perim= 3.2' r= 0.22' n= 0.030 High grass
0.4	60		2.50		**Direct Entry, PIPE FLOW-2**
0.9	120	0.0050	2.14	6.41	**Channel Flow, CF-2** Area= 3.0 sf Perim= 6.3' r= 0.48' n= 0.030 High grass
20.3	825	Total			

Subcatchment PR S: WEST / SOUTH DA TO PARK ST DITCH



Summary for Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE

[47] Hint: Peak is 2780% of capacity of segment #5

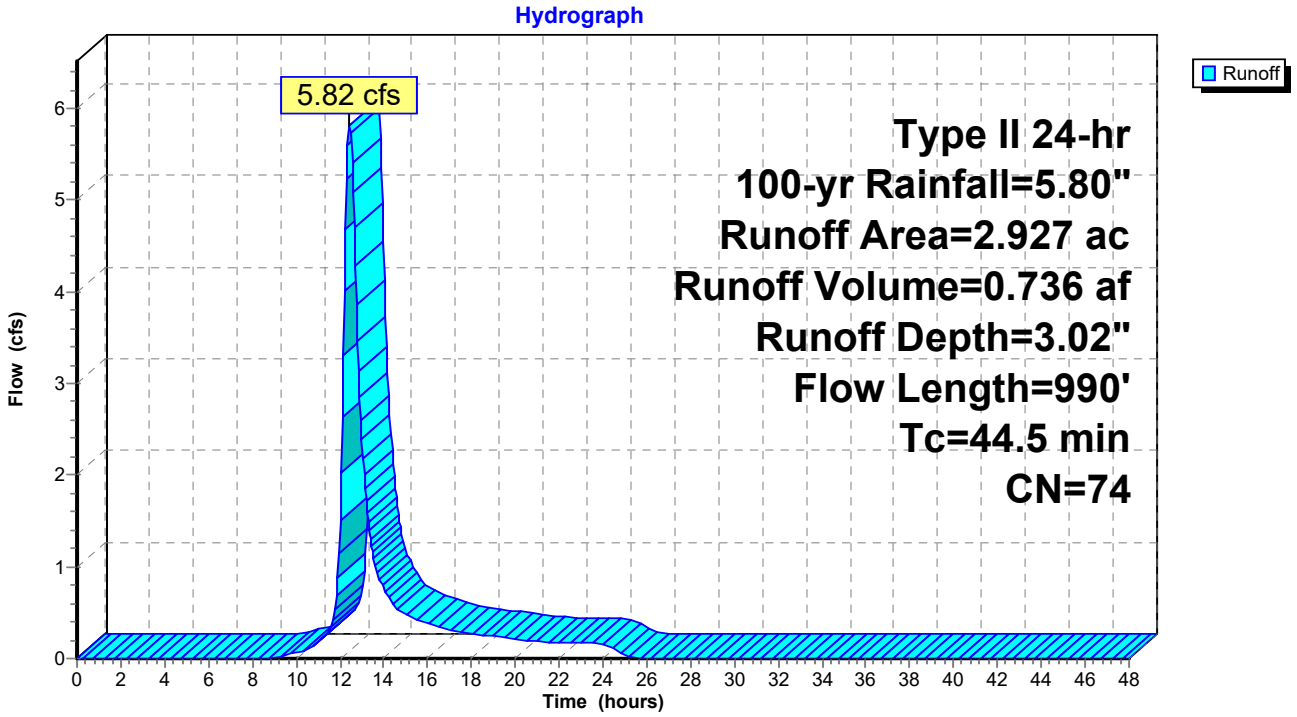
Runoff = 5.82 cfs @ 12.42 hrs, Volume= 0.736 af, Depth= 3.02"
Routed to Pond 17P : PR NEW BLDG SWALE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-yr Rainfall=5.80"

Area (ac)	CN	Description
0.448	98	Roofs, HSG A
1.119	39	>75% Grass cover, Good, HSG A
0.021	98	Water Surface, HSG A
0.076	35	Brush, Fair, HSG A
1.263	98	Paved parking, HSG A
2.927	74	Weighted Average
1.195		40.83% Pervious Area
1.732		59.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.2	60	0.0625	0.10		**Sheet Flow, SF** Woods: Light underbrush n= 0.400 P2= 2.50"
0.1	20	0.0200	2.28		**Shallow Concentrated Flow, SCF** Unpaved Kv= 16.1 fps
1.1	110	0.0100	1.61		**Shallow Concentrated Flow, SCF-2** Unpaved Kv= 16.1 fps
2.3	340		2.50		**Direct Entry, PIPE FLOW-1**
30.3	380	0.0075	0.21	0.21	**Channel Flow, CF-1** Area= 1.0 sf Perim= 4.1' r= 0.24' n= 0.240 Sheet flow over Dense Grass
0.5	80		2.50		**Direct Entry, PIPE FLOW-2**
44.5	990	Total			

Subcatchment PR S ON-SITE: ON-SITE TO FUTURE BLDG SWALE



Summary for Pond 13P: NEW BLDG 8 SS Basin

[92] Warning: Device #1 is above defined storage
[93] Warning: Storage range exceeded by 0.13'
[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=29)
[80] Warning: Exceeded Pond DMH-7 by 1.36' @ 12.90 hrs (9.94 cfs 4.816 af)

Inflow Area = 8.381 ac, 71.09% Impervious, Inflow Depth > 3.24" for 100-yr event
Inflow = 20.35 cfs @ 12.24 hrs, Volume= 2.263 af
Outflow = 15.49 cfs @ 12.28 hrs, Volume= 2.013 af, Atten= 24%, Lag= 1.9 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 15.49 cfs @ 12.28 hrs, Volume= 2.013 af
Routed to Pond OS-1 : Big Pond

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 371.23' @ 16.72 hrs Surf.Area= 10,776 sf Storage= 17,436 cf

Plug-Flow detention time= 192.4 min calculated for 2.013 af (89% of inflow)
Center-of-Mass det. time= 91.1 min (1,001.0 - 909.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	367.80'	11,162 cf	**48.17'W x 223.70'L x 3.30'H Field A** 35,544 cf Overall - 7,640 cf Embedded = 27,904 cf x 40.0% Voids
#2A	368.30'	6,274 cf	**Lane HDPE 18"** x 176 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 176 Chambers in 16 Rows 46.27' Header x 1.76 sf x 1 = 81.4 cf Inside
		17,436 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	372.50'	**Custom Weir/Orifice, Cv= 3.33 (C= 4.16)** Head (feet) 0.00 0.50 1.00 Width (feet) 24.00 24.00 200.00
#2	Primary	368.30'	**18.0" Round Culvert X 5.00** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.30' / 368.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#3	Discarded	367.80'	**1.000 in/hr Exfiltration over Surface area above 367.80'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 10,776 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=367.80' (Free Discharge)
└**3=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 12.28 hrs HW=370.10' TW=370.17' (Dynamic Tailwater)
└**1=Custom Weir/Orifice** (Controls 0.00 cfs)
└**2=Culvert** (Controls 0.00 cfs)

Pond 13P: NEW BLDG 8 SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

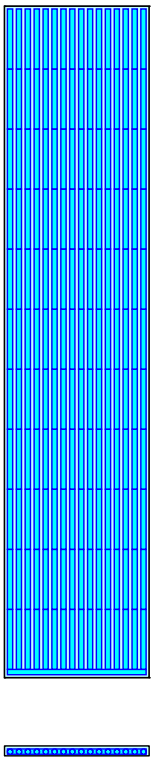
11 Chambers/Row x 20.00' Long +1.80' Header x 1 = 221.80' Row Length +11.4" End Stone x 2 = 223.70' Base Length
16 Rows x 21.6" Wide + 14.0" Spacing x 15 + 11.4" Side Stone x 2 = 48.17' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

176 Chambers x 35.2 cf + 46.27' Header x 1.76 sf = 6,274.1 cf Chamber Storage
176 Chambers x 42.8 cf + 46.27' Header x 2.14 sf = 7,640.0 cf Displacement

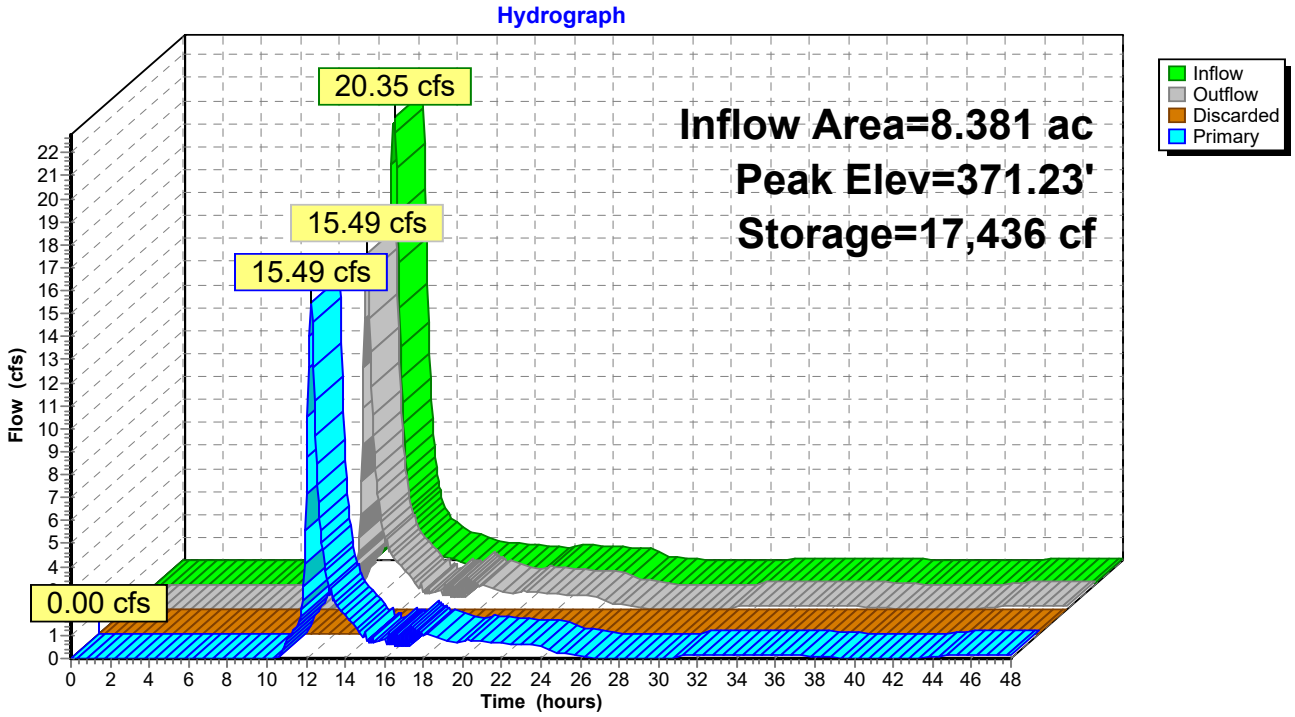
35,543.8 cf Field - 7,640.0 cf Chambers = 27,903.8 cf Stone x 40.0% Voids = 11,161.5 cf Stone Storage

Chamber Storage + Stone Storage = 17,435.7 cf = 0.400 af
Overall Storage Efficiency = 49.1%
Overall System Size = 223.70' x 48.17' x 3.30'

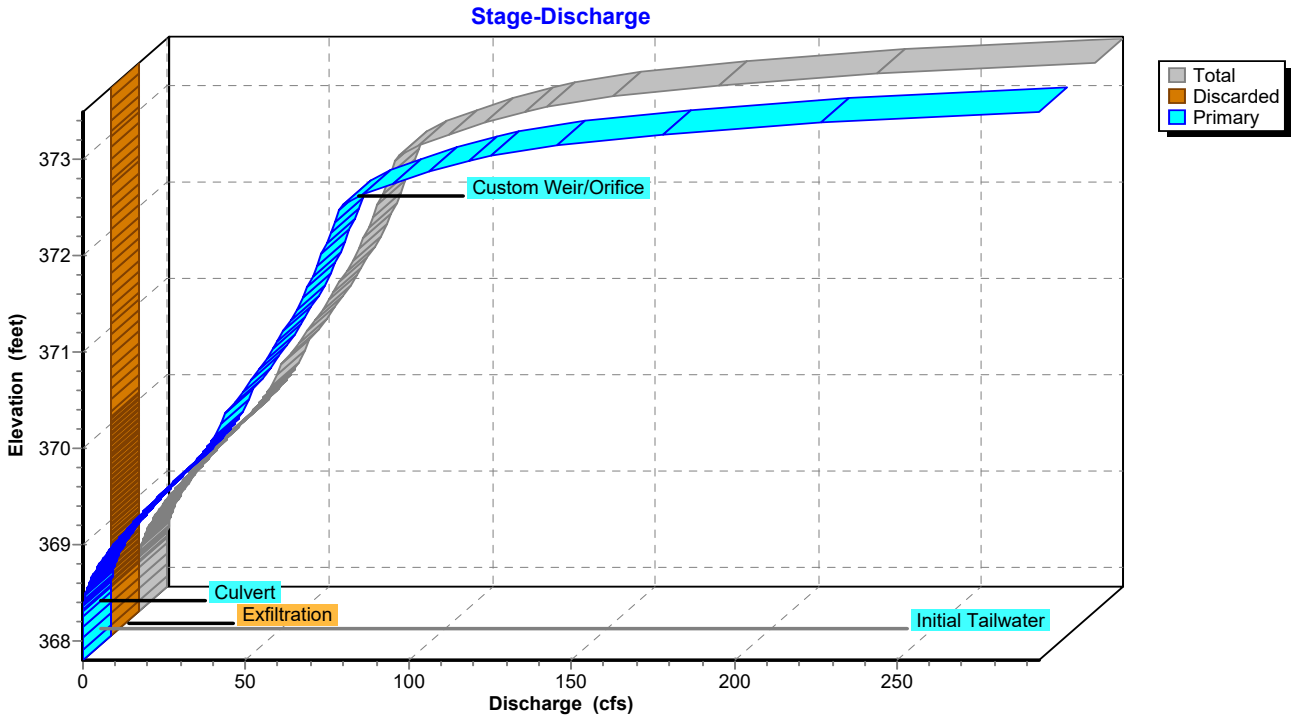
176 Chambers @ $ 0.00 /ea = $ 0.00
1,316.4 cy Field Excavation @ $ 2.50 /cy = $ 3,291.09
1,033.5 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 3,291.09



Pond 13P: NEW BLDG 8 SS Basin



Pond 13P: NEW BLDG 8 SS Basin



Summary for Pond 17P: PR NEW BLDG SWALE

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=72)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 3.02" for 100-yr event
Inflow = 5.82 cfs @ 12.42 hrs, Volume= 0.736 af
Outflow = 3.87 cfs @ 12.60 hrs, Volume= 0.736 af, Atten= 33%, Lag= 10.5 min
Primary = 3.87 cfs @ 12.60 hrs, Volume= 0.736 af
Routed to Pond OS-2 : Small Pond @ Billboard

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 371.07' @ 12.78 hrs Surf.Area= 5,873 sf Storage= 4,887 cf

Plug-Flow detention time= 49.1 min calculated for 0.736 af (100% of inflow)
Center-of-Mass det. time= 48.6 min (911.5 - 862.9)

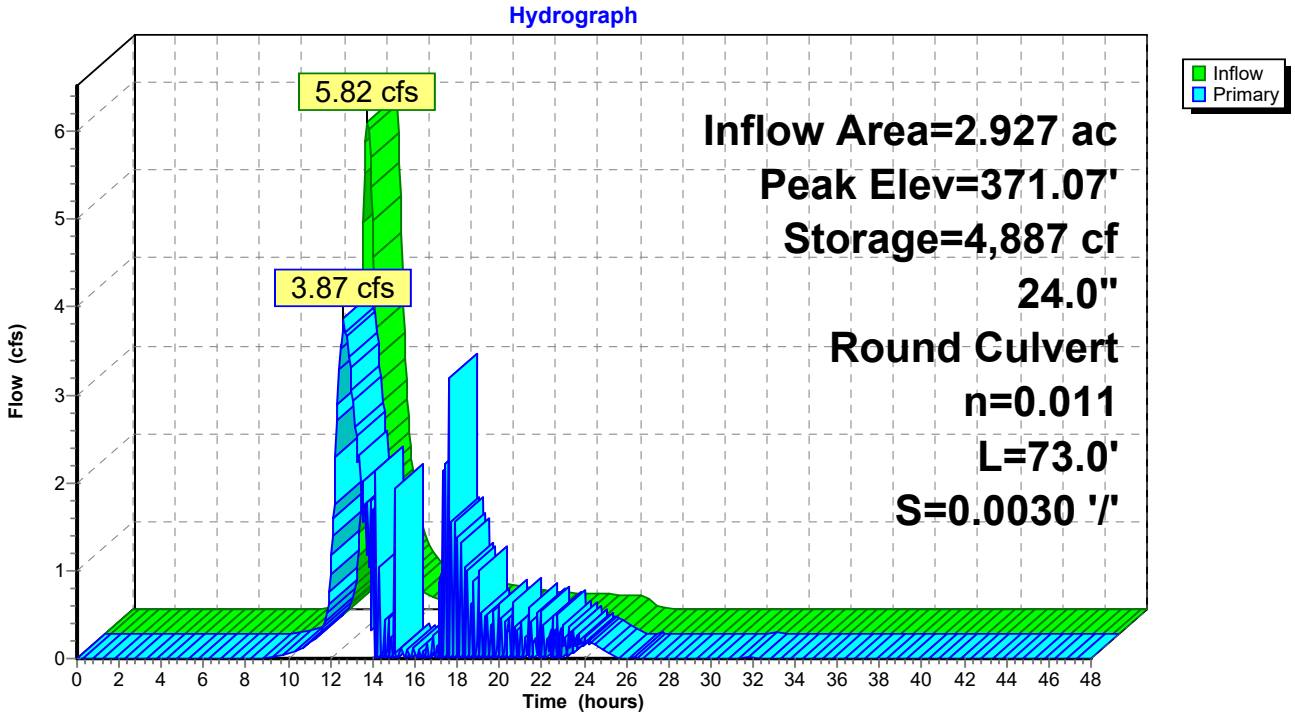
Volume	Invert	Avail.Storage	Storage Description
#1	368.71'	27,959 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
368.71	0	0	0
369.00	106	15	15
370.00	1,642	874	889
371.00	5,566	3,604	4,493
372.00	10,031	7,799	12,292
373.00	21,303	15,667	27,959

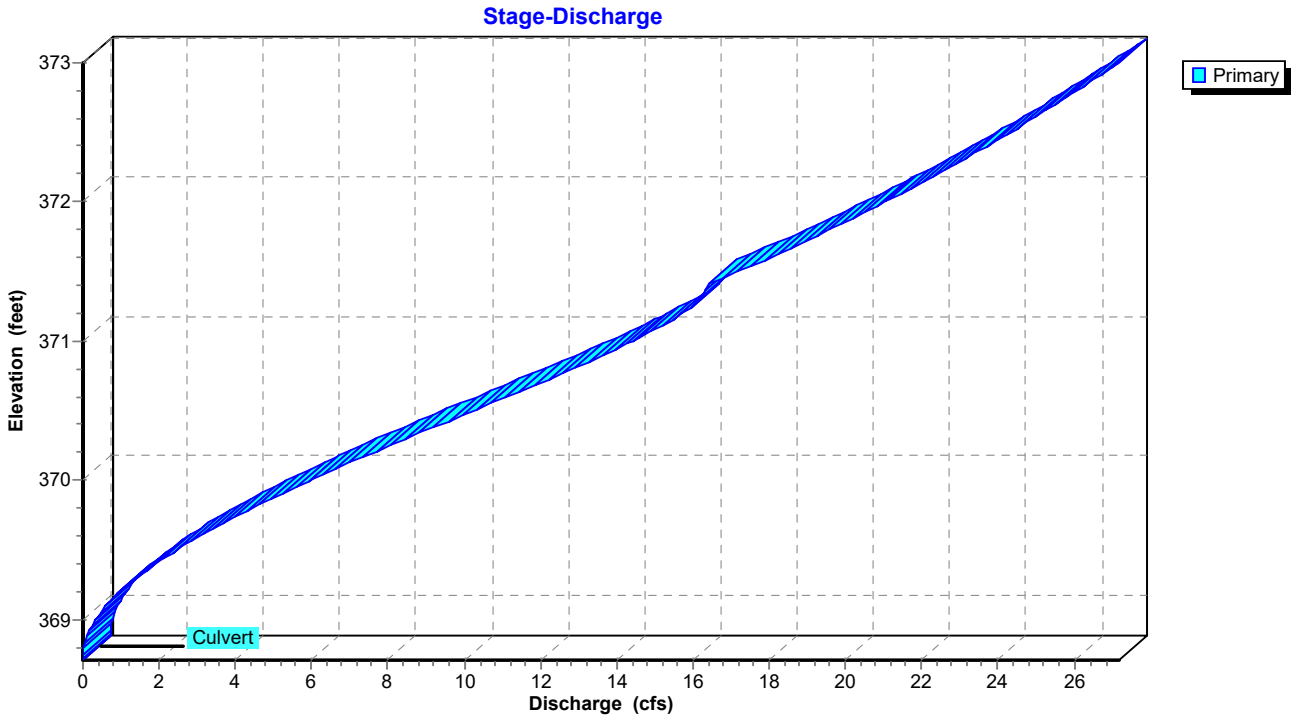
Device	Routing	Invert	Outlet Devices
#1	Primary	368.72'	**24.0" Round Culvert** L= 73.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 368.72' / 368.50' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=2.41 cfs @ 12.60 hrs HW=371.00' TW=370.97' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 2.41 cfs @ 0.77 fps)

Pond 17P: PR NEW BLDG SWALE



Pond 17P: PR NEW BLDG SWALE



Summary for Pond DMH-3: DMH-3

[57] Hint: Peaked at 371.30' (Flood elevation advised)
[80] Warning: Exceeded Pond OS-1 by 3.14' @ 4.25 hrs (4.56 cfs 3.242 af)
[80] Warning: Exceeded Pond OS-2 by 2.74' @ 40.55 hrs (5.44 cfs 3.649 af)

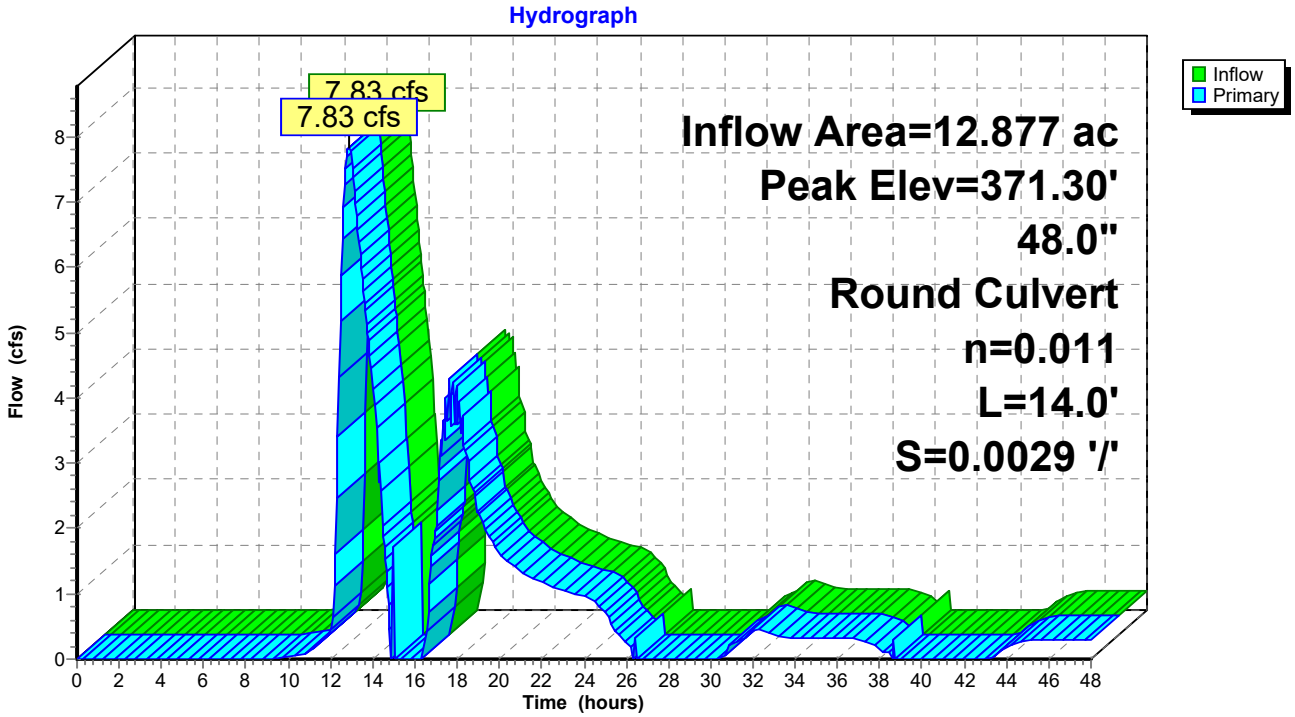
Inflow Area = 12.877 ac, 66.01% Impervious, Inflow Depth > 2.48" for 100-yr event
Inflow = 7.83 cfs @ 12.87 hrs, Volume= 2.665 af
Outflow = 7.83 cfs @ 12.87 hrs, Volume= 2.665 af, Atten= 0%, Lag= 0.0 min
Primary = 7.83 cfs @ 12.87 hrs, Volume= 2.665 af
Routed to Link ES-6 : OUTFALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 371.30' @ 16.05 hrs

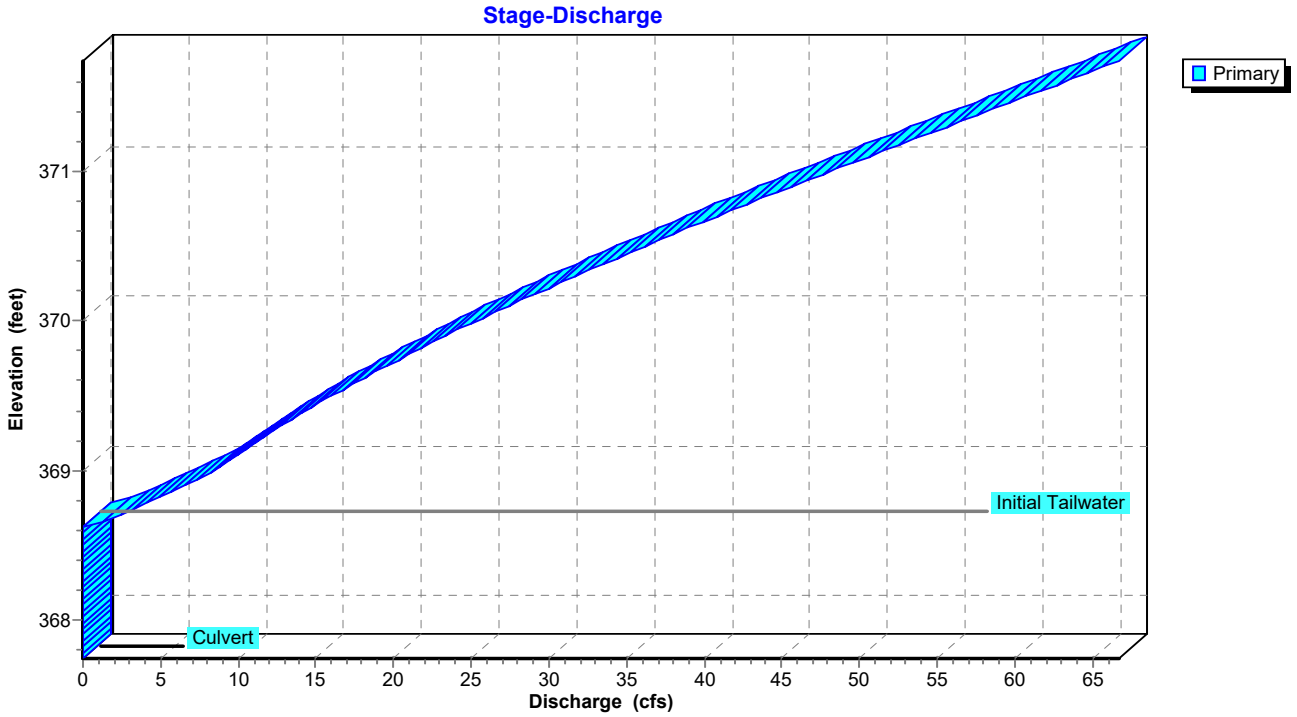
Device	Routing	Invert	Outlet Devices
#1	Primary	367.74'	**48.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.74' / 367.70' S= 0.0029 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=6.52 cfs @ 12.87 hrs HW=369.25' TW=369.13' (Dynamic Tailwater)
1=Culvert (Outlet Controls 6.52 cfs @ 2.23 fps)

Pond DMH-3: DMH-3



Pond DMH-3: DMH-3



Summary for Pond DMH-7: Bldg 5 Parking SS Basin

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=8)

Inflow Area = 1.270 ac,100.00% Impervious, Inflow Depth = 5.56" for 100-yr event
Inflow = 11.58 cfs @ 11.90 hrs, Volume= 0.589 af
Outflow = 3.74 cfs @ 12.01 hrs, Volume= 0.305 af, Atten= 68%, Lag= 6.7 min
Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 3.74 cfs @ 12.01 hrs, Volume= 0.305 af
Routed to Pond 13P : NEW BLDG 8 SS Basin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 370.45' @ 20.08 hrs Surf.Area= 14,527 sf Storage= 18,297 cf

Plug-Flow detention time= 732.9 min calculated for 0.304 af (52% of inflow)
Center-of-Mass det. time= 607.7 min (1,344.7 - 737.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	368.05'	15,020 cf	**140.09'W x 103.70'L x 3.30'H Field A** 47,915 cf Overall - 10,365 cf Embedded = 37,550 cf x 40.0% Voids
#2A	368.55'	8,512 cf	**Lane HDPE 18"** x 235 Inside #1 Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf 235 Chambers in 47 Rows 138.19' Header x 1.76 sf x 1 = 243.1 cf Inside
		23,532 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	368.05'	**1.000 in/hr Exfiltration over Surface area above 368.05'** Conductivity to Groundwater Elevation = 366.00' Excluded Surface area = 14,527 sf
#2	Primary	368.55'	**18.0" Round Culvert** L= 55.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.55' / 368.33' S= 0.0040 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=368.05' (Free Discharge)
1=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=3.71 cfs @ 12.01 hrs HW=369.63' TW=369.10' (Dynamic Tailwater)
2=Culvert (Barrel Controls 3.71 cfs @ 3.81 fps)

Pond DMH-7: Bldg 5 Parking SS Basin - Chamber Wizard Field A

Chamber Model = Lane HDPE 18" (Lane HDPE Pipe)
Inside= 18.0"W x 18.0"H => 1.76 sf x 20.00'L = 35.2 cf
Outside= 21.6"W x 21.6"H => 2.14 sf x 20.00'L = 42.8 cf

21.6" Wide + 14.0" Spacing = 35.6" C-C Row Spacing

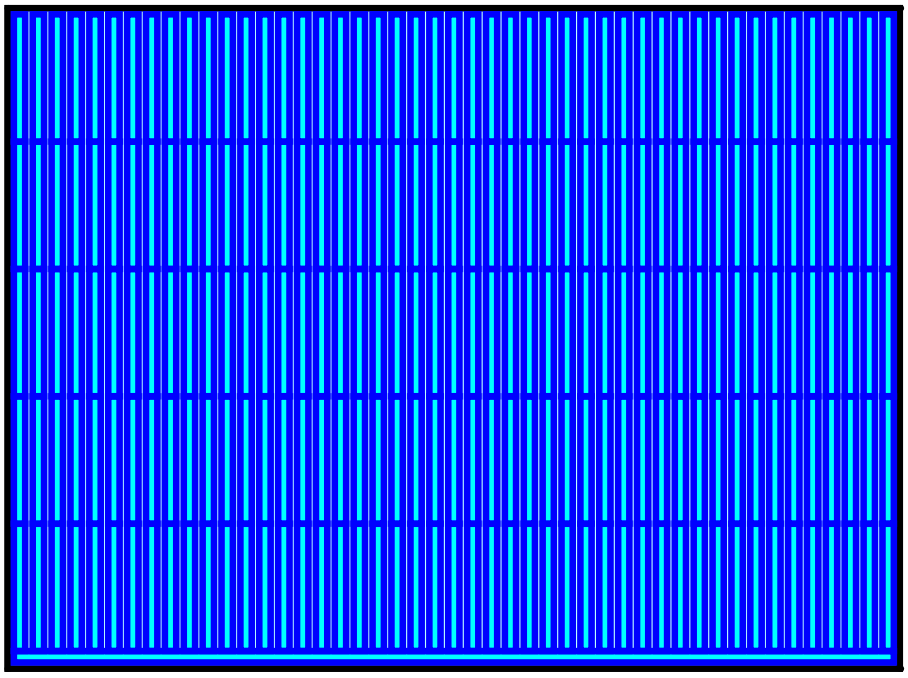
5 Chambers/Row x 20.00' Long +1.80' Header x 1 = 101.80' Row Length +11.4" End Stone x 2 = 103.70' Base Length
47 Rows x 21.6" Wide + 14.0" Spacing x 46 + 11.4" Side Stone x 2 = 140.09' Base Width
6.0" Stone Base + 21.6" Chamber Height + 12.0" Stone Cover = 3.30' Field Height

235 Chambers x 35.2 cf + 138.19' Header x 1.76 sf = 8,511.8 cf Chamber Storage
235 Chambers x 42.8 cf + 138.19' Header x 2.14 sf = 10,364.9 cf Displacement

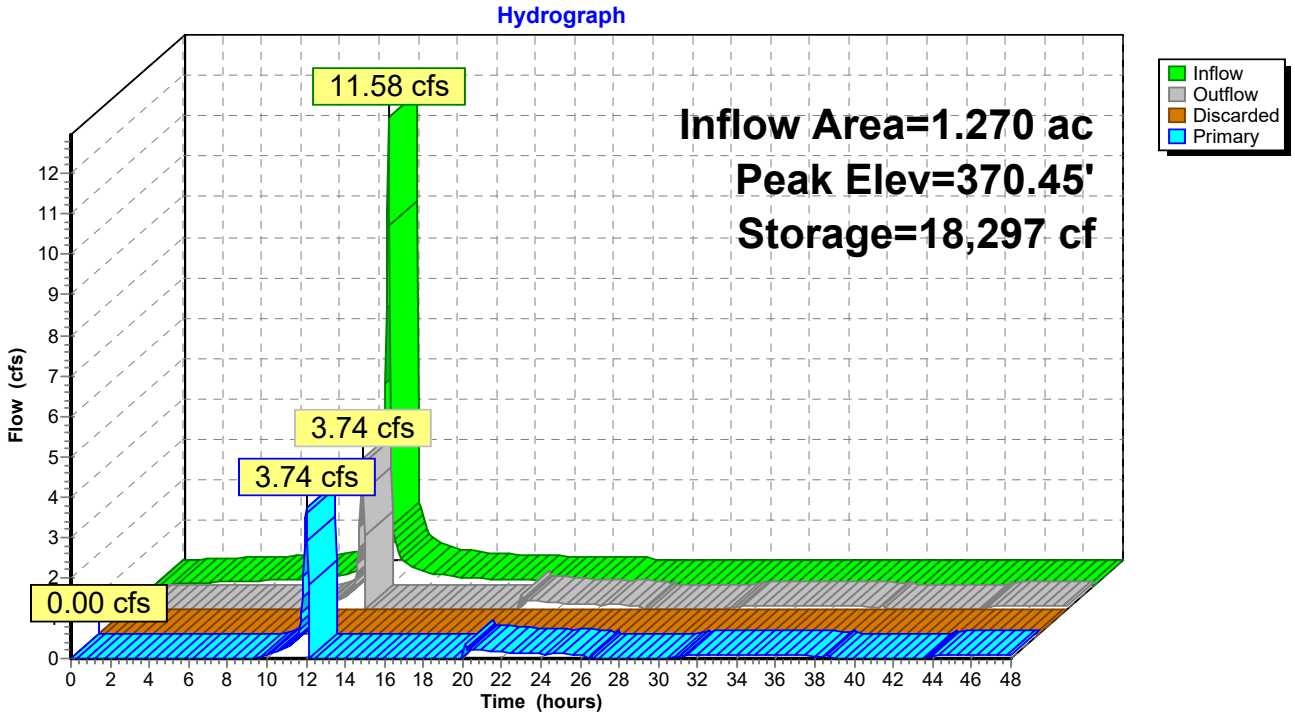
47,914.6 cf Field - 10,364.9 cf Chambers = 37,549.8 cf Stone x 40.0% Voids = 15,019.9 cf Stone Storage

Chamber Storage + Stone Storage = 23,531.7 cf = 0.540 af
Overall Storage Efficiency = 49.1%
Overall System Size = 103.70' x 140.09' x 3.30'

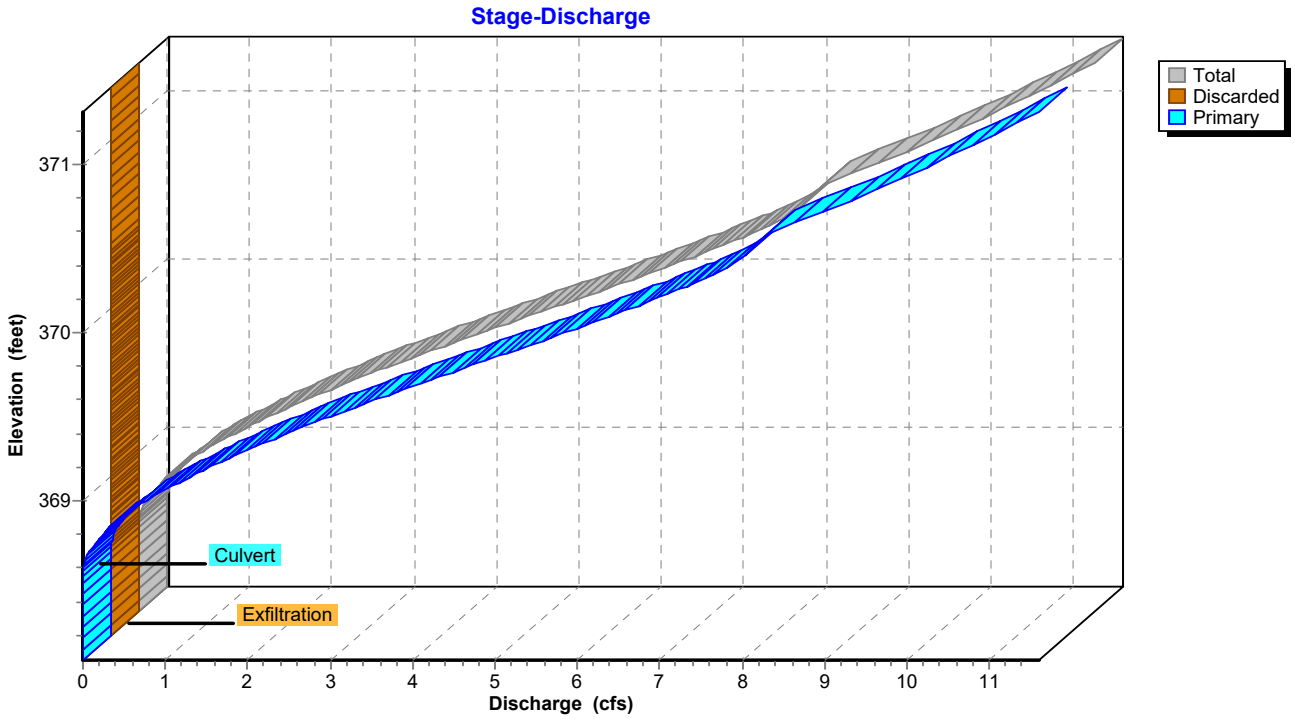
235 Chambers @ $ 0.00 /ea = $ 0.00
1,774.6 cy Field Excavation @ $ 2.50 /cy = $ 4,436.54
1,390.7 cy Stone @ $ 0.00 /cy = $ 0.00
Total Cost = $ 4,436.54



Pond DMH-7: Bldg 5 Parking SS Basin



Pond DMH-7: Bldg 5 Parking SS Basin



Summary for Pond OS-1: Big Pond

[80] Warning: Exceeded Pond 13P by 0.08' @ 12.25 hrs (11.67 cfs 2.811 af)

Inflow Area = 9.950 ac, 68.02% Impervious, Inflow Depth > 2.86" for 100-yr event
Inflow = 16.67 cfs @ 12.27 hrs, Volume= 2.371 af
Outflow = 4.34 cfs @ 12.97 hrs, Volume= 1.929 af, Atten= 74%, Lag= 42.3 min
Primary = 4.34 cfs @ 12.97 hrs, Volume= 1.929 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.00' Surf.Area= 10,025 sf Storage= 18,221 cf
Peak Elev= 371.23' @ 16.67 hrs Surf.Area= 16,999 sf Storage= 61,037 cf (42,816 cf above start)

Plug-Flow detention time= 600.0 min calculated for 1.511 af (64% of inflow)
Center-of-Mass det. time= 254.0 min (1,230.2 - 976.2)

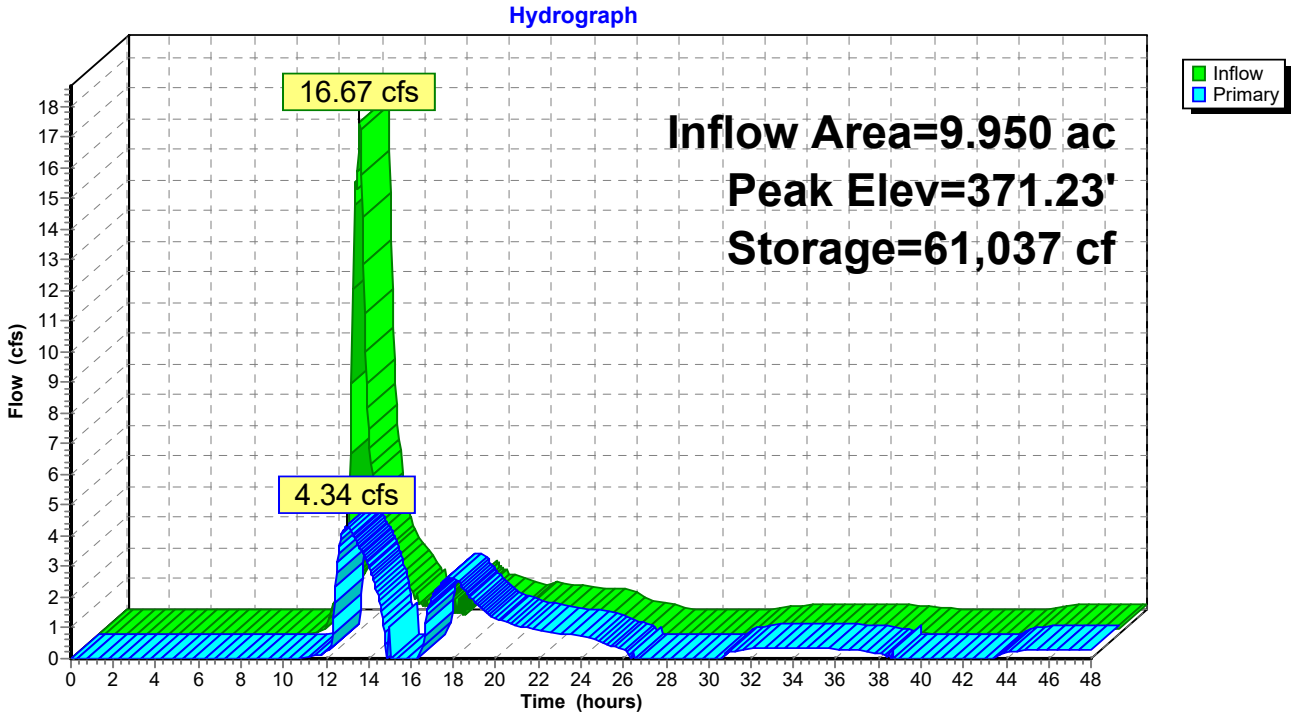
Volume	Invert	Avail.Storage	Storage Description
#1	362.00'	124,961 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
362.00	239	0	0
363.00	738	489	489
364.00	1,448	1,093	1,582
365.00	2,304	1,876	3,458
366.00	3,561	2,933	6,390
367.00	5,124	4,343	10,733
367.50	5,887	2,753	13,485
367.51	9,000	74	13,560
368.00	10,025	4,661	18,221
369.00	11,979	11,002	29,223
370.00	13,997	12,988	42,211
371.00	16,112	15,055	57,265
372.00	20,006	18,059	75,324
372.50	41,916	15,481	90,805
373.00	94,708	34,156	124,961

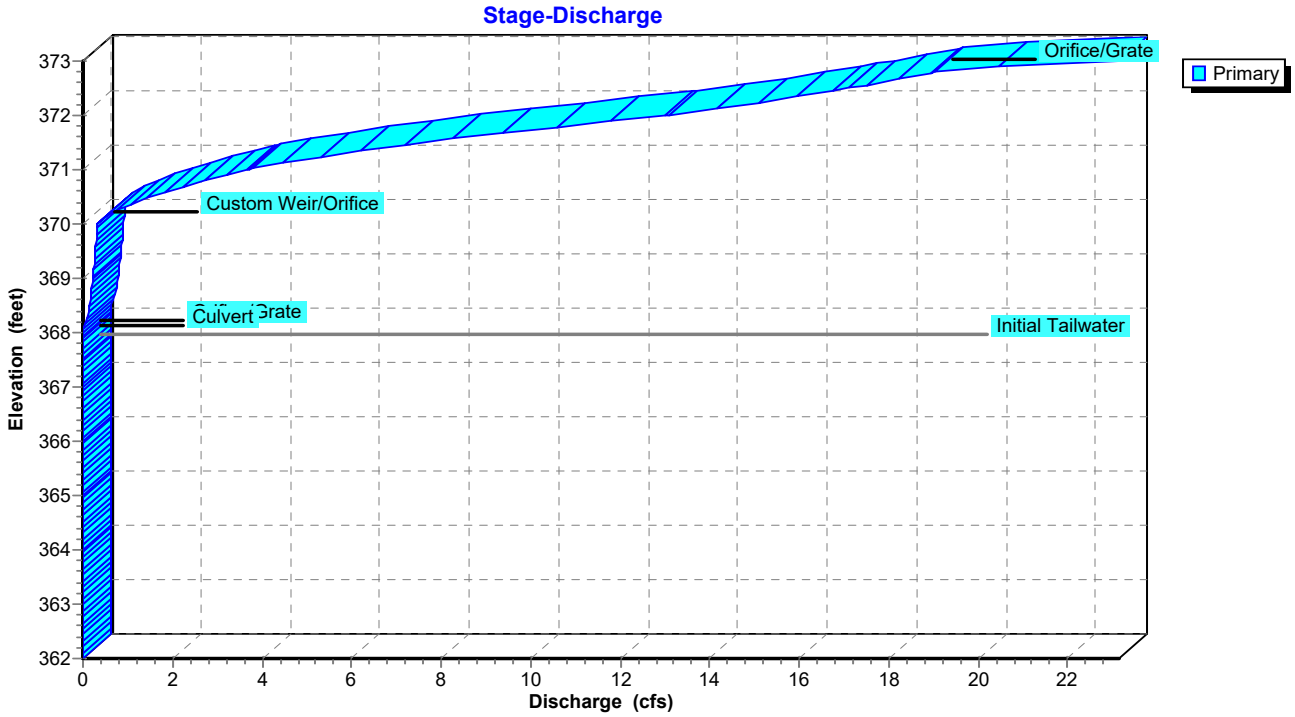
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.80'	**24.0" x 36.0" Horiz. Orifice/Grate** C= 0.600 in 24.0" x 36.0" Grate (100% open area) Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	367.91'	**48.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 367.91' / 367.84' S= 0.0032 '/' Cc= 0.900 n= 0.011, Flow Area= 12.57 sf

Primary OutFlow Max=4.33 cfs @ 12.97 hrs HW=371.12' TW=369.33' (Dynamic Tailwater)
└─**4=Culvert** (Passes 4.33 cfs of 47.32 cfs potential flow)
  ├─**1=Orifice/Grate** (Orifice Controls 0.32 cfs @ 6.45 fps)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Custom Weir/Orifice** (Weir Controls 4.01 cfs @ 3.25 fps)

Pond OS-1: Big Pond



Pond OS-1: Big Pond



Summary for Pond OS-2: Small Pond @ Billboard

[80] Warning: Exceeded Pond 17P by 0.15' @ 12.15 hrs (3.63 cfs 1.067 af)

Inflow Area = 2.927 ac, 59.17% Impervious, Inflow Depth = 3.02" for 100-yr event
Inflow = 3.87 cfs @ 12.60 hrs, Volume= 0.736 af
Outflow = 3.67 cfs @ 12.76 hrs, Volume= 0.736 af, Atten= 5%, Lag= 9.7 min
Primary = 3.67 cfs @ 12.76 hrs, Volume= 0.736 af
Routed to Pond DMH-3 : DMH-3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Starting Elev= 368.50' Surf.Area= 692 sf Storage= 479 cf
Peak Elev= 371.06' @ 17.05 hrs Surf.Area= 1,942 sf Storage= 3,357 cf (2,879 cf above start)

Plug-Flow detention time= 63.8 min calculated for 0.724 af (98% of inflow)
Center-of-Mass det. time= 49.8 min (961.3 - 911.5)

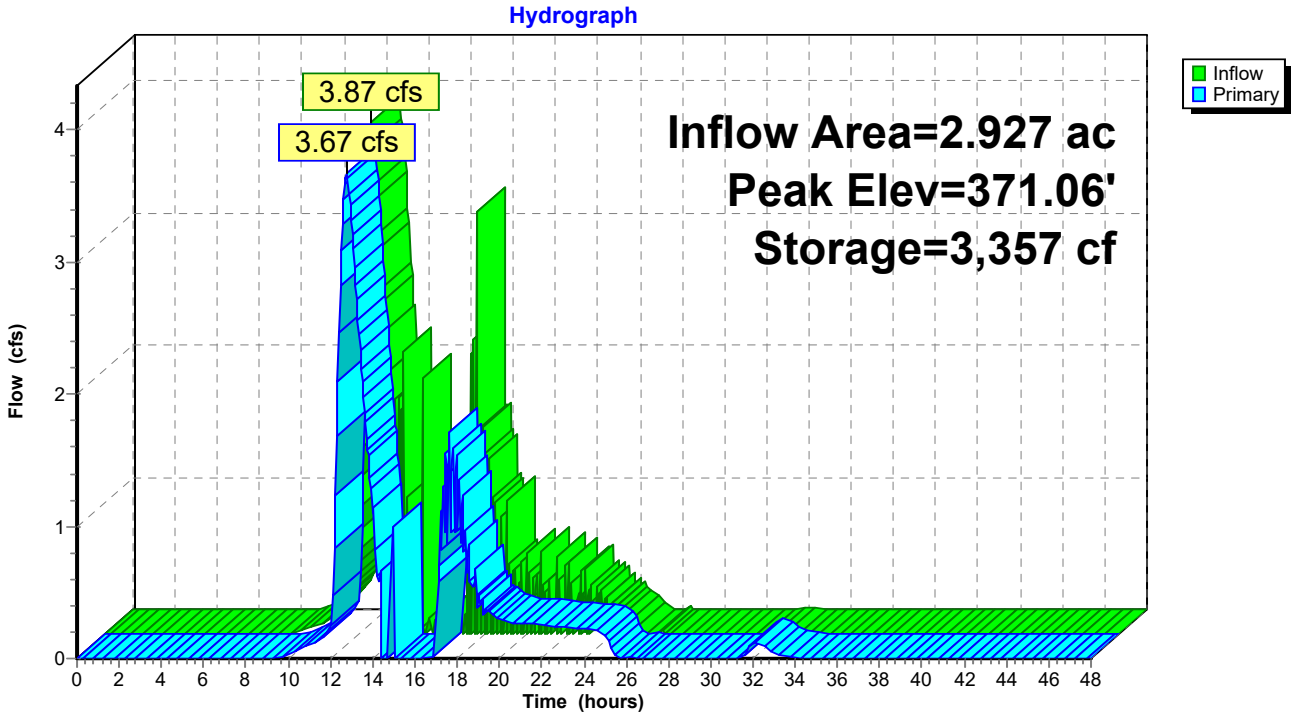
Volume	Invert	Avail.Storage	Storage Description
#1	366.00'	8,328 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
366.00	2	0	0
367.00	62	32	32
368.00	198	130	162
368.01	585	4	166
369.00	801	686	852
370.00	1,035	918	1,770
371.00	1,913	1,474	3,244
372.00	2,407	2,160	5,404
373.00	3,442	2,925	8,328

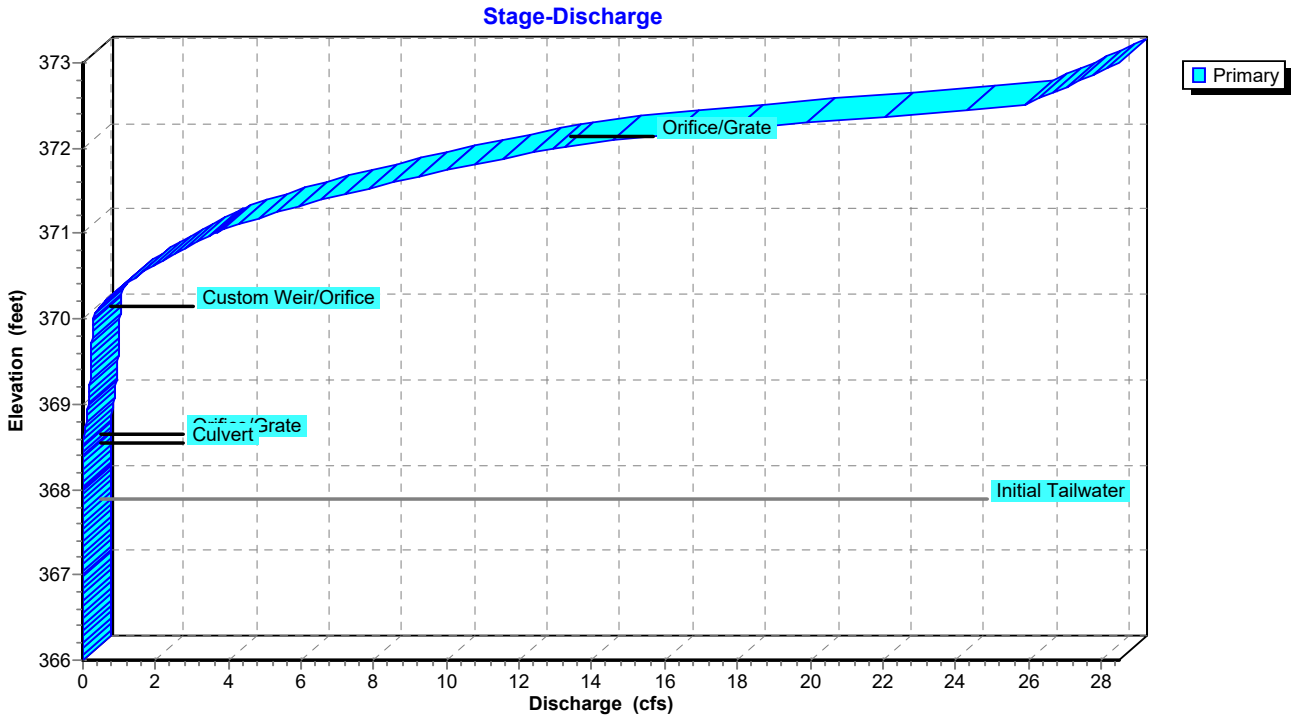
Device	Routing	Invert	Outlet Devices
#1	Device 4	368.50'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	372.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 4	370.00'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.00 1.00 1.01 2.00 Width (feet) 1.00 1.00 2.00 2.00
#4	Primary	368.40'	**24.0" Round Culvert** L= 81.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 368.40' / 368.16' S= 0.0030 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf

Primary OutFlow Max=3.66 cfs @ 12.76 hrs HW=371.01' TW=369.16' (Dynamic Tailwater)
└**4=Culvert** (Passes 3.66 cfs of 16.21 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.32 cfs @ 6.56 fps)
  ├**2=Orifice/Grate** (Controls 0.00 cfs)
  └**3=Custom Weir/Orifice** (Weir Controls 3.34 cfs @ 3.27 fps)

Pond OS-2: Small Pond @ Billboard



Pond OS-2: Small Pond @ Billboard

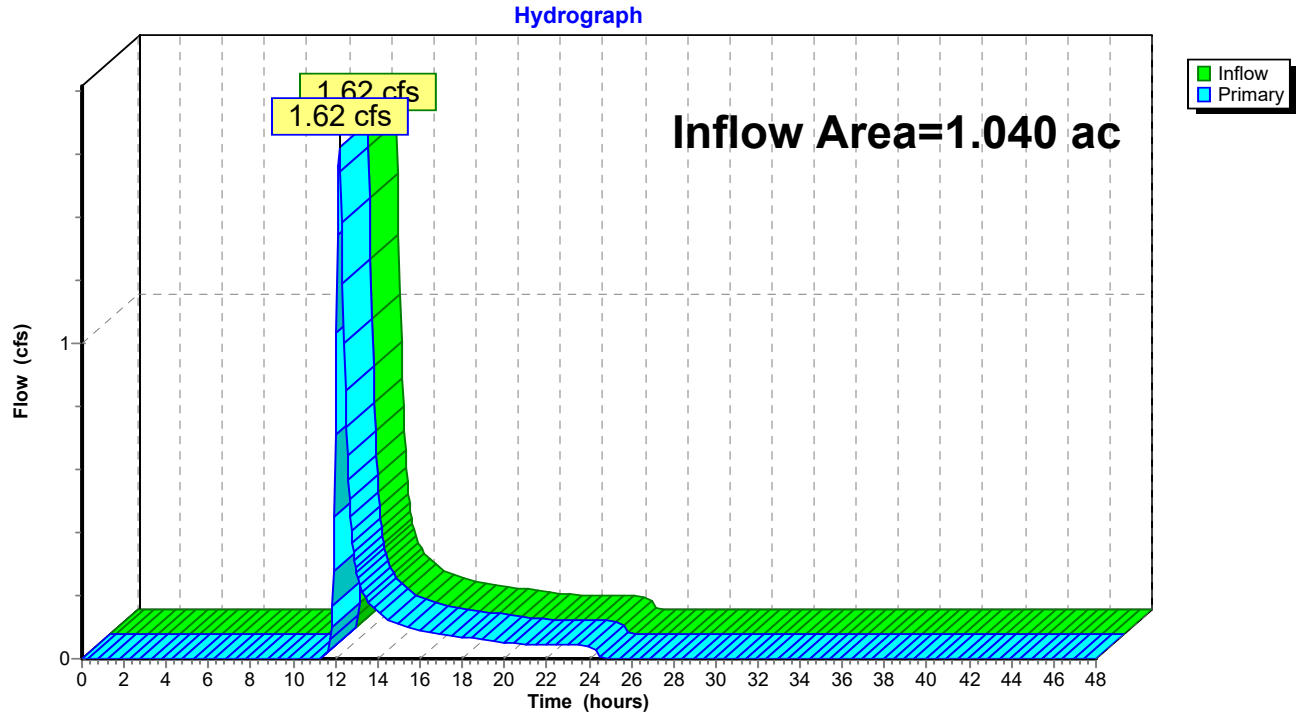


Summary for Link 1L: Discharge @NE Corner

Inflow Area = 1.040 ac, 36.54% Impervious, Inflow Depth = 1.71" for 100-yr event
Inflow = 1.62 cfs @ 12.20 hrs, Volume= 0.148 af
Primary = 1.62 cfs @ 12.20 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 1L: Discharge @NE Corner

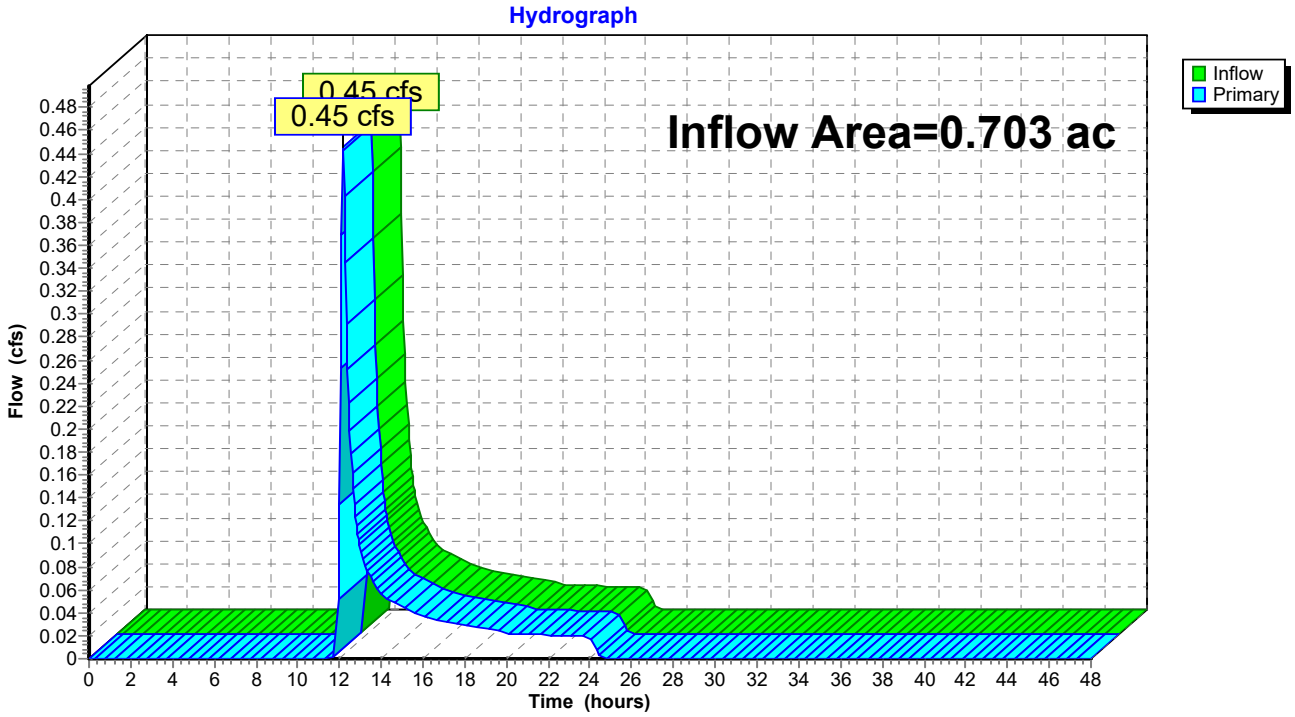


Summary for Link 15L: PR PARK ST DISCHARGE

Inflow Area = 0.703 ac, 13.09% Impervious, Inflow Depth = 0.85" for 100-yr event
Inflow = 0.45 cfs @ 12.18 hrs, Volume= 0.050 af
Primary = 0.45 cfs @ 12.18 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 15L: PR PARK ST DISCHARGE



Summary for Link ES-6: OUTFALL

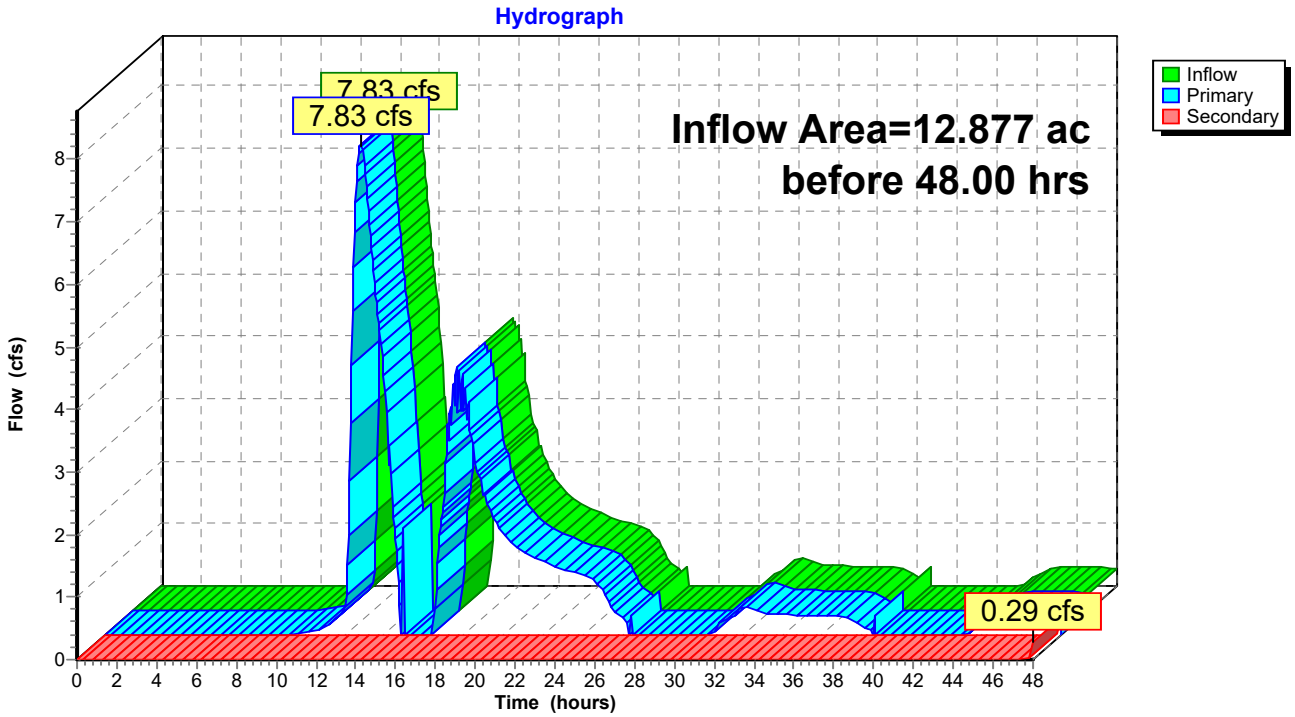
[80] Warning: Exceeded Pond DMH-3 by 3.26' @ 14.95 hrs (48.18 cfs 20.463 af)

Inflow Area =	12.877 ac,	66.01% Impervious,	Inflow Depth >	2.48" for 100-yr event
Inflow =	7.83 cfs @	12.87 hrs,	Volume=	2.665 af
Primary =	7.83 cfs @	12.87 hrs,	Volume=	2.663 af, Atten= 0%, Lag= 0.0 min
Secondary =	0.29 cfs @	48.00 hrs,	Volume=	0.001 af

Primary outflow = Inflow before 48.00 hrs, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

High tide Elevation = 371.30' at 16.00 hrs
Low tide Elevation = 367.00' at 22.21 hrs

Link ES-6: OUTFALL



Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point	
Smoothing	Yes
State	New York
Location	New York, United States
Latitude	43.080 degrees North
Longitude	76.177 degrees West
Elevation	110 feet
Date/Time	Mon Feb 24 2025 12:44:35 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.54	0.71	0.88	1.08	**1yr**	0.76	0.98	1.23	1.46	1.73	2.02	2.25	**1yr**	1.79	2.17	2.59	3.14	3.67	**1yr**
2yr	0.33	0.51	0.64	0.84	1.06	1.29	**2yr**	0.91	1.18	1.46	1.73	2.03	2.35	2.64	**2yr**	2.08	2.54	2.99	3.60	4.17	**2yr**
5yr	0.40	0.62	0.78	1.04	1.33	1.64	**5yr**	1.15	1.46	1.85	2.18	2.52	2.88	3.27	**5yr**	2.55	3.15	3.66	4.34	4.94	**5yr**
10yr	0.45	0.71	0.90	1.22	1.58	1.96	**10yr**	1.37	1.70	2.21	2.59	2.98	3.37	3.85	**10yr**	2.98	3.71	4.26	4.99	5.63	**10yr**
25yr	0.54	0.86	1.09	1.51	2.00	2.48	**25yr**	1.73	2.10	2.79	3.25	3.69	4.13	4.78	**25yr**	3.66	4.60	5.21	6.01	6.69	**25yr**
50yr	0.61	0.99	1.26	1.77	2.39	2.97	**50yr**	2.06	2.47	3.34	3.87	4.36	4.83	5.63	**50yr**	4.27	5.41	6.07	6.92	7.62	**50yr**
100yr	0.71	1.15	1.48	2.10	2.85	3.55	**100yr**	2.46	2.90	3.99	4.59	5.14	5.64	6.63	**100yr**	4.99	6.38	7.08	7.97	8.68	**100yr**
200yr	0.82	1.33	1.73	2.47	3.41	4.24	**200yr**	2.94	3.40	4.76	5.44	6.05	6.59	7.82	**200yr**	5.83	7.52	8.26	9.17	9.90	**200yr**
500yr	0.99	1.63	2.13	3.08	4.31	5.37	**500yr**	3.72	4.22	6.00	6.82	7.51	8.11	9.72	**500yr**	7.18	9.35	10.12	11.06	11.78	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.25	0.39	0.48	0.65	0.79	0.90	**1yr**	0.69	0.88	0.93	1.10	1.38	1.69	1.82	**1yr**	1.50	1.75	2.28	2.78	3.32	**1yr**
2yr	0.32	0.50	0.62	0.84	1.03	1.16	**2yr**	0.89	1.13	1.29	1.58	1.91	2.28	2.55	**2yr**	2.02	2.46	2.90	3.50	4.05	**2yr**
5yr	0.37	0.56	0.70	0.96	1.22	1.38	**5yr**	1.06	1.35	1.52	1.90	2.31	2.66	3.04	**5yr**	2.35	2.92	3.39	4.02	4.61	**5yr**
10yr	0.40	0.61	0.76	1.06	1.37	1.55	**10yr**	1.19	1.52	1.72	2.13	2.59	2.98	3.44	**10yr**	2.64	3.30	3.82	4.42	5.05	**10yr**
25yr	0.45	0.68	0.85	1.21	1.59	1.80	**25yr**	1.37	1.76	2.04	2.50	2.99	3.50	4.05	**25yr**	3.10	3.89	4.48	4.98	5.69	**25yr**
50yr	0.48	0.73	0.91	1.30	1.75	2.02	**50yr**	1.51	1.98	2.30	2.79	3.32	3.95	4.59	**50yr**	3.50	4.42	5.06	5.44	6.23	**50yr**
100yr	0.52	0.78	0.98	1.42	1.95	2.30	**100yr**	1.68	2.25	2.61	3.12	3.68	4.47	5.22	**100yr**	3.95	5.02	5.73	5.95	6.83	**100yr**
200yr	0.56	0.85	1.07	1.55	2.17	2.60	**200yr**	1.87	2.54	2.95	3.47	4.08	5.06	5.94	**200yr**	4.48	5.71	6.49	6.46	7.48	**200yr**
500yr	0.72	1.07	1.38	2.01	2.85	3.07	**500yr**	2.46	3.00	3.48	4.02	4.67	5.97	7.09	**500yr**	5.29	6.82	7.68	7.22	8.43	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.31	0.47	0.58	0.78	0.96	1.08	**1yr**	0.82	1.06	1.22	1.56	1.85	2.18	2.43	**1yr**	1.93	2.34	2.80	3.36	3.96	**1yr**
2yr	0.35	0.55	0.67	0.91	1.13	1.26	**2yr**	0.97	1.24	1.39	1.74	2.10	2.45	2.75	**2yr**	2.17	2.64	3.09	3.78	4.32	**2yr**
5yr	0.43	0.66	0.82	1.12	1.42	1.62	**5yr**	1.23	1.59	1.77	2.23	2.65	3.15	3.55	**5yr**	2.79	3.41	3.93	4.68	5.35	**5yr**
10yr	0.50	0.77	0.96	1.34	1.73	2.00	**10yr**	1.49	1.96	2.16	2.74	3.25	3.82	4.32	**10yr**	3.38	4.15	4.72	5.57	6.31	**10yr**
25yr	0.63	0.96	1.19	1.70	2.24	2.64	**25yr**	1.93	2.58	2.80	3.63	4.28	4.91	5.63	**25yr**	4.34	5.41	6.01	7.02	7.84	**25yr**
50yr	0.74	1.13	1.41	2.03	2.73	3.24	**50yr**	2.35	3.17	3.41	4.47	5.23	5.93	6.87	**50yr**	5.25	6.61	7.21	8.37	9.26	**50yr**
100yr	0.89	1.34	1.68	2.43	3.34	3.97	**100yr**	2.88	3.89	4.16	5.54	6.43	7.16	8.38	**100yr**	6.34	8.06	8.65	9.98	10.92	**100yr**
200yr	1.06	1.59	2.02	2.92	4.08	4.90	**200yr**	3.52	4.79	5.06	6.87	7.92	8.65	10.21	**200yr**	7.66	9.82	10.39	11.88	12.91	**200yr**
500yr	1.36	2.03	2.61	3.79	5.39	6.45	**500yr**	4.65	6.31	6.56	9.13	10.43	11.09	13.26	**500yr**	9.81	12.75	13.22	14.97	16.11	**500yr**

Powered by ACIS
Northeast Regional Climate Center

$$WQ_v = RR_v = \frac{P_{1yr} \times R_v \times A}{12}$$

$R_v = 0.05 + 0.009(I)$

$P_{1yr} = 2.0$ in

A = CONTRIBUTING "NON-BUILDING" AREA

= 9.322 AC

I = IMPERVIOUS COVER (%)

$= \frac{5.174}{9.332} \times 100 = 55.4\%$

$= \frac{(2.0)(0.55)(9.332)}{12}$

= 0.855 AC-FT (37,262.7 CF)

$RR_{v\,min} = \frac{P_{1yr} \times R_v \times A_{IC} \times S}{12}$

$R_v = 0.95$
$A_{IC} = 5.174$
$S = 0.55$

$= \frac{(2.0)(0.95)(5.174)(0.55)}{12}$

= 0.45 AC-FT (19,626.8 CF)

ASSUMPTIONS:

1. AREAS TRIBUTARY TO THE NORTH PROPERTY (HOUSEL) AND DIRECTLY TO THE PARK STREET DITCH HAVE BEEN EXCLUDED AS THESE REMAIN LARGELY UNCHANGED

2. BUILDING ROOFTOP AREA HAS BEEN EXCLUDED AS THIS WILL NOT QUALIFY AS DISTURBED (IN GENERAL) AND REMAIN LARGELY UNCHANGED FROM EXISTING TO PROPOSED CONDITIONS

3. CONSIDERING THE TWO PREVIOUSLY NOTED EXCLUSIONS, THE DRAINAGE AREA USED TO CALCULATE WATER QUALITY AND RUNOFF REDUCTION VOLUMES HAS BEEN ASSUMED TO BE 9.332 AC, WITH AN IMPERVIOUS COVER OF 5.174 AC.

WQv PROVISIONS

	PERMANENT POOL	EXTENDED DETENTION
PRIMARY BASIN	0.421 AC-FT	0.551 AC-FT @ 370.00'
SMALL BASIN (SOUTH)	0.011 AC-FT	0.030 AC-FT @ 370.00'

TOTAL WQv PROVIDED

= 0.432 AC-FT W/IN PERMANENT POOL

= 0.581 ACFT W/IN EXTENDED DETENTION

= 1.013 AC-FT

1-YR RUNOFF VOLUME FROM ALL AREAS TRIBUTARY TO ES-6 (C_{PV}):

DA	VOLUME, AC-FT
165	0.188
PR N	0.266
PR N-POND	0.035
PR S-ON-SITE	0.085

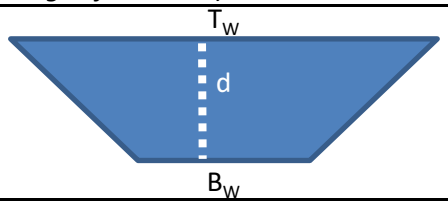
TOTAL = 0.574 AC-FT < 0.581 ok ✓

Dry Swale Worksheet

Design Point:	Master

Enter Site Data For Drainage Area to be Treated by Practice							
Catchment Number	**Total Area** *(Acres)*	**Impervious Area** *(Acres)*	**Percent Impervious** *%*	**Rv**	**WQv** *(ft^3)*	**Precipitation** *(in)*	**Description**
5	2.93	1.71	0.58	0.58	12236.73	2.00	Dry Swale
Enter Impervious Area Reduced by Disconnection of Rooftops		0.00	58%	0.58	12,237	<<WQv after adjusting for Disconnected Rooftops	

Pretreatment Provided			Pretreatment Technique
Pretreatment (10% of WQv)	1,224	ft^3	Level spreader and filter strip

Calculate Available Storage Capacity			
Bottom Width	4	*ft*	Design with a bottom width no greater than eight feet to avoid potential gullying and channel braiding, but no less than two feet
Side Slope (X:1)	5	*Okay*	Channels shall be designed with moderate side slopes (flatter than 3:1) for most conditions. 2:1 is the absolute maximum side slope
Longitudinal Slope	1%	*Okay*	*Maximum longitudinal slope shall be 4%*
Flow Depth	1	*ft*	*Maximum ponding depth of one foot at the mid-point of the channel, and a maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Top Width	14	*ft*	
Area	9.00	*sf*	
Minimum Length	1224	*ft*	
Actual Length	370	*ft*	
End Point Depth check	1.00	*Okay*	*A maximum depth of 18" at the end point of the channel (for storage of the WQv)*
Storage Capacity	4,554	ft^3	
Soil Group (HSG)		A	

Runoff Reduction				
Is the Dry Swale contributing flow to another practice?		Yes	Select Practice	Other/Standard SMP
RRv	**1,821**	ft^3	**Runnoff Reduction equals 40% in HSG A and B and 20% in HSG C and D up to the WQv**	
Volume Treated	0	ft^3	This is the difference between the WQv calculated and the runoff reduction achieved in the swale	
Volume Directed	10,415	ft^3	This volume is directed another practice	
Volume √	*Error*		Check to be sure that channel is long enough to store WQv	

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**Master**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
3	7.11	4.69	0.66	0.64	33225.39	2.00	Infiltration Basin

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	33,225	*ft^3*	*WQv*
Depth of Soil Media	2	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0.5	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	6645	*ft^2*	*Af*

Area of Filter

Width	100	*ft*
Length	100	*ft*
Area Provided	10000	*ft^2*
Volume Provided	50000	

Runoff Reduction

Soil Type	A
Flow Through Planter?	*No*

Determine the Runoff Reduction

RRv	**33,225**	***ft^3***	
RRv Applied	**33,225**	***ft^3***	

Stormwater Planter Worksheet

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**Master**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
5	2.93	1.71	0.58	0.58	12236.73	2.00	Dry Swale

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	12,237	*ft^3*	*WQv*
Depth of Soil Media	2	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0.5	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	2447	*ft^2*	*Af*

Area of Filter

Width	35	*ft*
Length	35	*ft*
Area Provided	1225	*ft^2*
Volume Provided	6125	

Runoff Reduction

Soil Type	A
Flow Through Planter?	*No*

Determine the Runoff Reduction

RRv	**12,237**	***ft^3***	
RRv Applied	**12,237**	***ft^3***	

Af=WQv*(df)/[k*(hf+df)(tf)]

Stormwater Planter Worksheet

where:

Af	Required Surface Area (ft2)
WQv	Water Quality Volume (ft^3)
df	Depth of the Soil Medium (ft)
k	The Hyrdaulic Conductivity (ft/day), usually set at 4 ft/day when soil is loosely ***Sand*** - 3.5 ft/day (City of Austin 1988); ***Peat*** - 2.0 ft/day (Galli 1990); ***Leaf Compost*** - 8.7 ft/day (Claytor and Schueler, 1996); ***Bioretention Soil***
hf	Average Height of Water above planter bed (ft)
tf	The Design Time to Filter the Treatment Volume Through the Filter Media (days)

Design Point:	**Master**

Enter Site Data For Drainage Area to be Treated by Practice

Catchment Number	Total Area *(Acres)*	Impervious Area *(Acres)*	Percent Impervious *%*	Rv	WQv *(ft^3)*	Precipitation *(in)*	Description
4	1.57	0.66	0.42	0.43	4882.35	2.00	

Calculate the Mimimum Filter Area

Parameter	Value	Units	
WQv	4,882	ft^3	*WQv*
Depth of Soil Media	2	*ft*	*df*
Hydraulic Conductivity	4	*ft/d*	*k*
Average Height of Ponding	0.5	*ft*	*hf*
Filter Time	1	*d*	*tf*
Required Area of Filter	976	ft^2	*Af*

Area of Filter

Width	33	*ft*
Length	33	*ft*
Area Provided	1089	ft^2
Volume Provided	5445	

Runoff Reduction

Soil Type	
Flow Through Planter?	

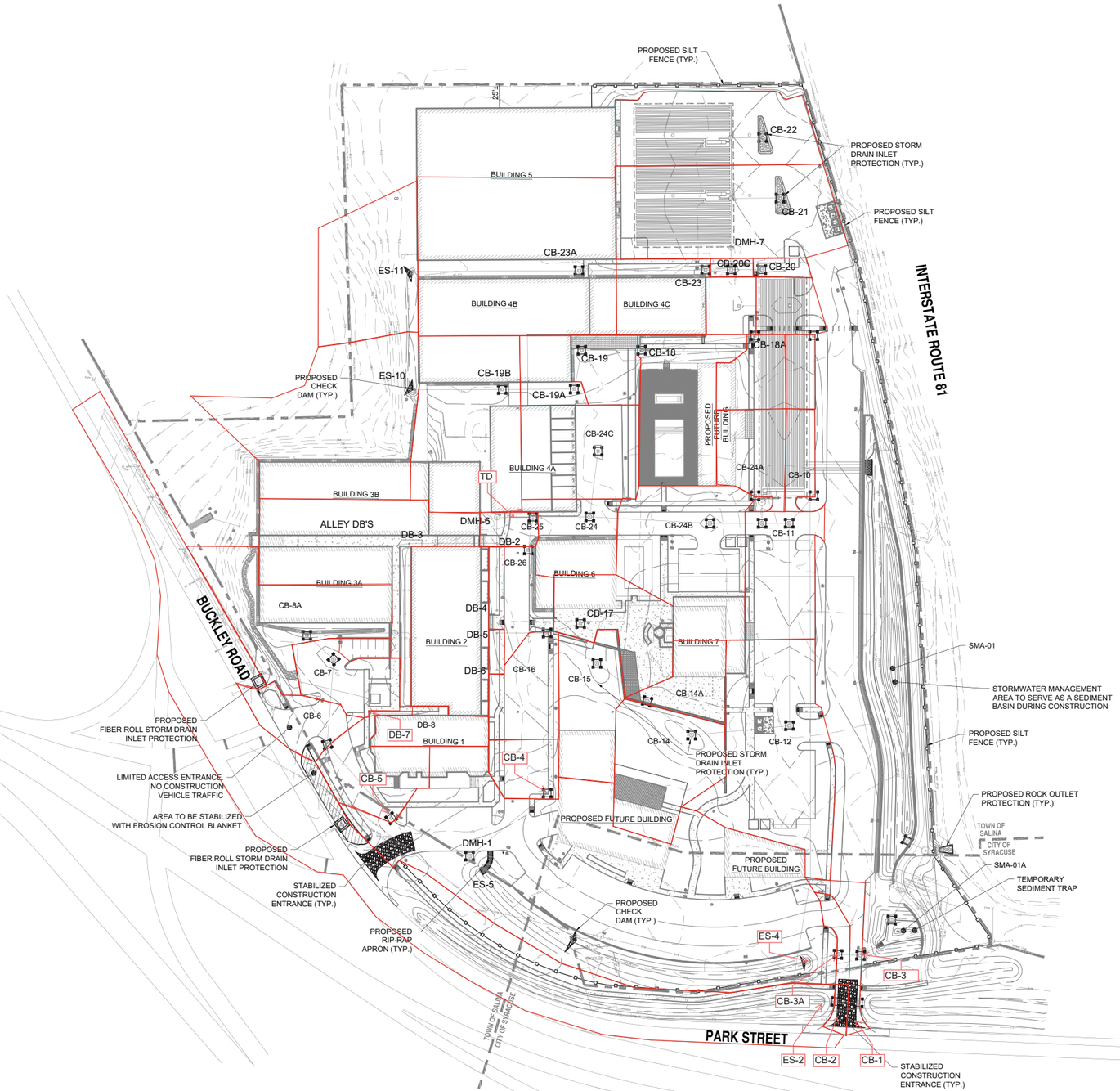
Determine the Runoff Reduction

RRv	**4,882**	ft^3	
RRv Applied	**4,882**	ft^3	

Af=WQv*(df)/[k*(hf+df)(tf)]

where:

Af	Required Surface Area (ft2)



A1 EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1" = 60-0"

0 60 120

Calocerinos Engineering, PLLC
P.O. Box 2187
Syracuse, New York 13220
Phone: (315)214-5861
Fax: (315)214-5904

STATE OF NEW YORK · STEVEN CALOCERINOS · 121781 · PROFESSIONAL ENGINEER

URBAN VILLAGES
100 Buckley Road
Liverpool, New York 13088
Tax Parcel ID #086.-01-15.2

For:

Urban Villages PFA, LLC
925 Seventh North Street
Liverpool, New York 13088

Town of Salina,
Onondaga County, New York

MARK	DATE	DESCRIPTION
1	08.31.24	REVIEW COMMENTS

REVISIONS

PROJECT NO:	1039.002
DATE:	01.26.24
DRAWN BY:	MPD
DESIGNED BY:	S. CALOCERINOS, P.E.
CHECKED BY:	S. CALOCERINOS, P.E.

NO ALTERATION PERMITTED HERON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

CIVIL

EROSION AND SEDIMENT CONTROL PLAN

C-108

Copyright

Storm Sewer Design
Rational Method

Project: URBan Villages **Designed By:** SC **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design **Checked By:** X **Date:** _____

File: 1039.002 **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) **Sheet:** 1 **of** 5

Location		Junction?		Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length,	Travel Time (min.)	
In	Out		'C'	Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	Capacity (cfs)	Size (in)	Slope (ft/ft)	Manning's "n"	ft	In to Out	Remarks
CB-8A	CB-7	x	0.85	6.0	0.0	6.0	3.8	5.6	8.4	0.35	0.04	0.11	0.17	0.25	3.1	12	0.0053	0.011	38	0.2	
CB-7	CB-6	x	0.95	6.0	6.2	6.2	3.8	5.6	8.4	0.15	0.50	1.81	2.66	3.99	6.9	18	0.0031	0.011	90	0.5	
DB-8	DB-7		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.10	0.10	0.36	0.53	0.80	3.7	10	0.0200	0.011	50	0.3	
DB-7	CB-6	x	0.95	6.0	6.3	6.3	3.7	5.5	8.2	0.00	0.10	0.35	0.52	0.78	11.1	12	0.0700	0.011	56	0.3	
CB-6	CB-5	x	0.9	6.0	6.7	6.7	3.7	5.3	8.0	0.12	0.60	2.00	2.86	4.32	6.5	18	0.0027	0.011	103	0.6	
CB-5	DMH-1	x	0.9	6.0	7.3	7.3	3.5	5.1	7.6	0.18	0.78	2.46	3.58	5.34	7.1	18	0.0033	0.011	92	0.5	
CB-4	DMH-1		0.9	6.0	0.0	6.0	3.8	5.6	8.4	0.10	0.10	0.34	0.50	0.76	2.9	12	0.0048	0.011	106	0.6	
DMH-1	ES-5	x	0.9	6.0	7.8	7.8	3.4	5.0	7.4	0.00	0.88	2.69	3.96	5.86	5.3	18	0.0018	0.011	17	0.1	
ES-4	CB-3A		0.7	6.0	7.9	7.9	3.4	5.0	7.4	1.69	2.57	6.12	9.00	13.31	14.6	24	0.0030	0.011	30	0.2	
CB-3A	CB-3	X	0.7	6.0	8.1	8.1	3.4	5.0	7.4	0.04	2.61	6.21	9.14	13.52	14.6	24	0.0030	0.011	24	0.1	
CB-3	ES-3	X	0.7	6.0	8.2	8.2	3.4	4.9	7.3	0.06	2.67	6.35	9.16	13.64	14.6	24	0.0030	0.011	19	0.1	

Storm Sewer Design
Rational Method

Project: URBan Villages **Designed By:** SC **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design **Checked By:** X **Date:** _____

File: 1039.002 **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) **Sheet:** 2 **of** 5

Location		Junction?		Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length,	Travel Time (min.)	
															Capacity	Size	Slope	Manning's			
In	Out		'C'	Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	(cfs)	(in)	(ft/ft)	"n"	ft	In to Out	Remarks
DB-4	DB-2		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.23	0.03	0.11	0.16	0.24	4.2	12	0.0100	0.011	93	0.5	
DB-3	DB-2	x	0.95	6.0	6.5	6.5	3.7	5.4	8.1	0.45	0.45	1.58	2.31	3.46	4.2	15	0.0030	0.011	71	0.4	
DB-2	DMH-6	x	0.95	6.0	6.5	6.5	3.7	5.4	8.1	0.00	0.48	1.69	2.46	3.69	10.8	15	0.0200	0.011	28	0.2	
DMH-6	CB-25	x	0.95	6.0	6.7	6.7	3.7	5.4	8.1	0.00	0.48	1.69	2.46	3.69	4.2	15	0.0030	0.011	38	0.2	17" x 13" CMPA
CB-26	CB-25		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.11	0.11	0.38	0.56	0.84	3.0	12	0.0050	0.011	35	0.2	
TD	CB-25		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.02	0.02	0.07	0.11	0.16	1.8	10	0.0050	0.011	65	0.4	
CB-25	CB-24	x	0.95	6.0	6.9	6.9	3.6	5.2	7.8	0.05	0.66	2.26	3.26	4.89	4.2	15	0.0030	0.011	60	0.3	
CB-24C	CB-24		0.9	6.0	0.0	6.0	3.8	5.6	8.4	0.28	0.28	0.96	1.42	2.13	2.9	12	0.0046	0.011	70	0.4	
CB-24	CB-24B	x	0.9	6.0	7.2	7.2	3.6	5.2	7.8	0.16	1.10	3.56	5.15	7.72	4.2	15	0.0030	0.011	127	0.7	
CB-24B	DMH-5	x	0.9	6.0	7.9	7.9	3.4	5.0	7.4	0.43	1.53	4.68	6.89	10.19	4.4	15	0.0033	0.011	55	0.3	
DB-6	DB-5		0.85	6.0	0.0	6.0	3.8	5.6	8.4	0.18	0.18	0.58	0.86	1.29	5.4	15	0.0050	0.011	39	0.2	
DB-5	CB-16	x	0.85	6.0	6.2	6.2	3.8	5.5	8.2	0.01	0.19	0.61	0.89	1.32	17.6	15	0.0530	0.011	53	0.3	
CB-17	CB-16		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.23	0.23	0.83	1.22	1.84	3.0	12	0.0050	0.011	60	0.3	
CB-16	CB-15	x	0.9	6.0	6.5	6.5	3.7	5.4	8.1	0.17	0.59	1.96	2.87	4.30	7.0	18	0.0032	0.011	62	0.3	
CB-15	CB-14A	x	0.95	6.0	6.8	6.8	3.4	5.3	8.0	0.22	0.81	2.62	4.08	6.16	14.6	24	0.0030	0.011	66	0.4	
CB-14A	CB-14	x	0.9	6.0	7.2	7.2	3.6	5.2	7.8	0.13	0.94	3.05	4.40	6.60	14.6	24	0.0030	0.011	59	0.3	
CB-14	CB-12	x	0.9	6.0	7.5	7.5	3.5	5.1	7.6	0.30	1.24	3.91	5.69	8.48	14.6	24	0.0030	0.011	104	0.6	
CB-12	CB-11	x	0.9	6.0	8.1	8.1	3.4	5.0	7.4	0.57	1.81	5.54	8.15	12.05	15.4	24	0.0033	0.011	214	1.2	
CB-10	CB-11		0.9	6.0	0.0	6.0	3.8	5.6	8.4	0.07	0.07	0.24	0.35	0.53	3.0	12	0.0050	0.011	30	0.2	
CB-11	DMH-5	x	0.95	6.0	9.3	9.3	3.1	4.6	6.9	0.24	2.12	6.24	9.26	13.90	14.6	24	0.0030	0.011	29	0.2	
DMH-5	DMH-4		0.95	6.0	9.5	9.5	3.1	4.6	6.9	0.00	3.65	10.75	15.95	23.75	14.6	24	0.0030	0.011	22	0.1	

Storm Sewer Design
Rational Method

Project: URBan Villages | **Designed By:** SC | **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design | **Checked By:** X | **Date:** _____

File: 1039.002 | **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) | **Sheet:** 3 | **of** 5

Location		Junction?	'C'	Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length, ft	Travel Time (min.) In to Out	Remarks
In	Out			Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	Capacity (cfs)	Size (in)	Slope (ft/ft)	Manning's "n"			
ES-10	CB-19B		0.3	6.0	0.0	6.0	3.8	5.6	8.4	0.62	0.62	0.71	1.04	1.56	5.0	15	0.0043	0.011	95	0.5	
CB-19B	CB-19A	x	0.45	6.0	6.5	6.5	3.7	5.4	8.1	0.47	1.09	1.81	2.65	3.97	5.5	15	0.0051	0.011	115	0.6	
CB-19A	CB-19	x	0.5	6.0	7.1	7.1	3.6	5.2	7.8	0.10	1.19	2.14	3.09	4.64	5.4	15	0.0050	0.011	140	0.8	
CB-19	CB-18	x	0.55	6.0	7.9	7.9	3.4	5.0	7.4	0.11	1.30	2.43	3.58	5.29	5.4	15	0.0050	0.011	55	0.3	
CB-18	CB-18A	x	0.6	6.0	8.2	8.2	3.4	4.9	7.3	0.32	1.62	3.30	4.76	7.10	5.6	15	0.0053	0.011	65	0.4	
CB-18A	SS	x	0.65	6.0	8.6	8.6	3.3	4.7	7.2	0.07	1.69	3.63	5.16	7.91	4.9	15	0.0041	0.011	65	0.4	

Storm Sewer Design
Rational Method

Project: URBan Villages **Designed By:** SC **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design **Checked By:** X **Date:** _____

File: 1039.002 **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) **Sheet:** 4 **of** 5

Location		Junction?	'C'	Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length,	Travel Time (min.)	Remarks
															Capacity	Size	Slope	Manning's			
In	Out			Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	(cfs)	(in)	(ft/ft)	"n"	ft	In to Out	
ES-11	CB-23A		0.3	6.0	0.0	6.0	3.8	5.6	8.4	0.34	0.34	0.39	0.58	0.87	3.0	12	0.0050	0.011	174	1.0	
CB-23A	CB-23	x	0.7	6.0	7.0	7.0	3.6	5.2	7.8	0.80	1.14	2.87	4.15	6.22	3.0	12	0.0050	0.011	134	0.7	
CB-23	CB-20C	x	0.85	6.0	7.7	7.7	3.5	5.1	7.5	0.18	1.32	3.93	5.72	8.42	5.4	15	0.0050	0.011	27	0.2	
DMH-7	CB-20C	x	0.85	6.0	6.5	6.5	3.7	5.4	8.1	0.00	0.88	2.77	4.04	6.06	9.0	18	0.0052	0.011	23	0.1	
CB-20C	CB-20	x	0.85	6.0	7.9	7.9	3.4	5.0	7.4	0.02	2.22	6.42	9.44	13.96	6.8	18	0.0030	0.011	32	0.2	
CB-20	SS	x	0.85	6.0	8.1	8.1	3.4	5.0	7.4	0.03	2.25	6.50	9.56	14.15	6.8	18	0.0030	0.011	10	0.1	
CB-22	DIV MH3		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.36	0.36	1.30	1.92	2.87	3.0	12	0.0050	0.011	34	0.2	to DMH-7
CB-21	DIV MH2		0.95	6.0	0.0	6.0	3.8	5.6	8.4	0.52	0.52	1.88	2.77	4.15	3.0	12	0.0050	0.011	52	0.3	to DMH-7

Storm Sewer Design
Rational Method

Project: URBan Villages **Designed By:** SC **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design **Checked By:** X **Date:** _____

File: 1039.002 **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) **Sheet:** 5 **of** 5

Location		Junction?	'C'	Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length,	Travel Time (min.)	Remarks
															Capacity	Size	Slope	Manning's		
In	Out			Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	(cfs)	(in)	(ft/ft)	"n"	ft	In to Out	
ES-2	CB-2		0.85	10.0	0.0	10.0	3.0	4.5	6.7	1.56	1.56	3.98	5.97	8.88	7.2	18	0.0034	0.011	12	0.1	From OCDOT Sys
CB-2	CB-1	X	0.9	6.0	10.1	10.1	3.0	4.5	6.7	0.02	1.58	4.27	6.40	9.53	7.2	18	0.0034	0.011	24	0.1	
CB-1	ES-1	X	0.95	6.0	10.2	10.2	3.0	4.5	6.7	0.02	1.60	4.56	6.84	10.18	7.2	18	0.0034	0.011	11	0.1	

Storm Sewer Design
Rational Method

Project: URBan Villages **Designed By:** SC **Date:** 10/4/2024

Description: Storm Sewer / Drainage Facilities Design **Checked By:** X **Date:** _____

File: 1039.002 **Storms:** 2-yr (Storm Sewers); 100-yr (Flood Routes) **Sheet:** 5 **of** 5

Location		Junction?	'C'	Tc - Minutes To Inlet			Intensity, I in/hr			Area, A acres		Flow, Q cfs			Pipe Design Flow				Section Length,	Travel Time (min.)	Remarks
															Capacity	Size	Slope	Manning's		
In	Out			Overland	System	Total	2	10	100	To Inlet	Total	2	10	100	(cfs)	(in)	(ft/ft)	"n"	ft	In to Out	
ES-2	CB-2		0.85	10.0	0.0	10.0	3.0	4.5	6.7	1.56	1.56	3.98	5.97	8.88	7.2	18	0.0034	0.011	12	0.1	From OCDOT Sys
CB-2	CB-1	X	0.9	6.0	10.1	10.1	3.0	4.5	6.7	0.02	1.58	4.27	6.40	9.53	7.2	18	0.0034	0.011	24	0.1	
CB-1	ES-1	X	0.95	6.0	10.2	10.2	3.0	4.5	6.7	0.02	1.60	4.56	6.84	10.18	7.2	18	0.0034	0.011	11	0.1	

Elevation, ft	Area, SF	Ave Area, SF	Inc. Volume, CF	Cumm. Volume, CF	Cumm. Volume, Ac-FT	
Primary Basin						
362.00	238.60			0.0	0.0000	
		488.15	488.2			
363.00	737.70			488.2	0.0112	
		1,093.00	1,093.0			
364.00	1,448.30			1,581.2	0.0363	
		1,876.30	1,876.3			
365.00	2,304.30			3,457.5	0.0794	
		2,977.45	2,977.5			
366.00	3,650.60			6,434.9	0.1477	
		4,387.50	4,387.5			
367.00	5,124.40			10,822.4	0.2484	
		5,505.85	2,752.9			
367.50	5,887.30			13,575.3	0.3116	
		7,443.70	74.4			
367.51	9,000.10			13,649.8	0.3134	
		9,528.10	4,668.8			
368.00	10,056.10			**18,318.5**	**0.4205**	
368.00	10,056.10					**Permanent Pool Volume**
		11,031.35	11,031.4			**WSE =368.00'**
369.00	12,006.60			11,031.4	0.2532	
		12,989.10	12,989.1			
370.00	13,971.60			24,020.5	0.5514	
		14,826.15	14,826.2			
371.00	15,680.70			38,846.6	0.8918	
		18,900.85	18,900.9			
372.00	22,121.00			57,747.5	1.3257	
		58,414.70	58,414.7			
373.00	94,708.40			116,162.2	2.6667	
Small Pond						
366.00	2.00			0.0	0.0000	
		32.15	32.2			
367.00	62.30			32.2	0.0007	
		130.00	130.0			
368.00	197.70			162.2	0.0037	
		391.40	3.9			
368.01	585.10			166.1	0.0038	
		639.15	313.2			
368.50	693.20			479.2	0.0110	
368.50	693.20					**Permanent Pool Volume**
		747.20	373.6			**WSE =368.50'**
369.00	801.20			373.6	0.0086	
		918.20	918.2			
370.00	1,035.20			1,291.8	0.0297	
		1,473.85	1,473.9			
371.00	1,912.50			2,765.7	0.0635	
		2,159.60	2,159.6			
372.00	2,406.70			4,925.3	0.1131	
		2,924.35	2,924.4			
373.00	3,442.00			7,849.6	0.1802	
Bio-Swale						
368.72	0.00			0.0	0.0000	
		53.00	14.8			
369.00	106.00			14.8	0.0003	
		873.85	873.9			
370.00	1,641.70			888.7	0.0204	
		3,603.95	3,604.0			
371.00	5,566.20			4,492.6	0.1031	
		7,798.55	7,798.6			
372.00	10,030.90			12,291.2	0.2822	
		15,667.10	15,667.1			
373.00	21,303.30			27,958.3	0.6418	

Elevation, ft	Area, SF	Ave Area, SF	Inc. Volume, CF	Cumm. Volume, CF	Cumm. Volume, Ac-FT
Existing Floodplain					
368.50	328.30			0.0	**0.0000**
		4,529.70	2,264.9		
369.00	8,731.10			2,264.9	**0.0520**
		45,612.95	45,613.0		
370.00	82,494.80			47,877.8	**1.0991**
		148,055.95	148,056.0		
371.00	213,617.10			195,933.8	**4.4980**
368.50' = Approximate lowest on-site elevation / permanent pond elevation					
Proposed Floodplain					
368.00	10,641.20			0.0	**0.0000**
		12,345.30	6,172.7		
368.50	14,049.40			6,172.7	**0.1417**
		21,079.80	10,539.9		
369.00	28,110.20			16,712.6	**0.3837**
		43,892.90	43,892.9		
370.00	59,675.60			60,605.5	**1.3913**
		70,247.40	70,247.4		
371.00	80,819.20			130,852.9	**3.0040**
368.00' = Elevation of 3" orifice to maintain permanent pool elevation					

APPENDIX C

EROSION & SEDIMENT CONTROL PLAN AND DETAILS

- Sequence of Construction Activities
- Erosion & Sediment Control Plan and Details
(Refer to Sheet C-108 and C-505 of the Site Plan Drawings)

URBan Villages

100 Buckley Road

Liverpool, New York 13088

Sequence of Construction Activities

1. Contractor shall ensure all permits have been secured through the Town of Salina and NYSDEC.
2. Contractor shall ensure Contractors Certification Statement has been completed for all site contractors responsible for site-related construction activities.
3. Contractor shall ensure that a copy of the SWPPP is maintained on-site.
4. Owner and Contractor shall attend a pre-construction meeting with the Town of Salina Department of Building & Code Enforcement prior to commencement of construction activities.

PHASE 1 – Buildings 1, 2, 3A, 3B & 5 Development and Stormwater Management Facilities:

5. Contractor shall delineate proposed phase 1 disturbance limits prior to commencement of construction;
6. Contractor shall establish waste-disposal area(s) on-site prior to commencement of construction;
7. Contract shall clear trees and brush to limits shown;
8. Prior to grubbing activities, contractor shall install Silt Fence as shown on the Erosion & Sediment Control Plan, primarily along the northerly, easterly and southerly property lines;
9. A 12’ wide x 50’ long portion of the existing gravel access pad shall be installed and be utilized as a stabilized construction entrance. This area shall be top-dressed with additional stone as necessary to maintain a clean access;
10. Contractor shall strip topsoil, and establish temporary stockpile on-site. Stockpile shall have silt fence installed along downstream side;
11. Contractor shall excavate (to rough grades) proposed detention basin and emergency spillway to serve as a sediment trap during construction;
12. Contractor shall then establish rough grades for perimeter drainage swales proposed phase 1 temporary drainage facilities and site improvements;
13. Remove existing pavement areas to subgrade as needed and establish proposed subgrade for proposed paving areas;

14. Contractor shall establish a concrete wash area on-site to accommodate concrete truck and/or equipment washing, as well as to allow for the hardening of excess concrete prior to disposal;
15. Upon establishment of parking area and any building pad improvements, contractor shall fine grade swale(s), and turf and detention basin, and seed & mulch to establish vegetation;
16. Upon final stabilization of all disturbed areas, remove phase 1 erosion & sediment control practices.

PHASE 2 – Redevelopment of Buildings 4A, 4B & 4C, 6, 7 and New Buildings:

Due to the uncertain nature of the final limits of Phase 2, Owner shall be required to prepare a separate Erosion & Sediment Control Plan commensurate with Phase 2 (and each subsequent phase) of development, and shall implement said plan accordingly. The following is a general description of subsequent development phases and requirements of each.

17. Prior to commencement of phase 2 construction activities, contractor shall install silt fence along the southerly and easterly perimeter of the proposed phase 2;
18. Contractor shall define a single-point of entry for phase 2 construction traffic and activities, and shall provide a stone stabilized construction entrance from disturbed areas to the defined point of access. Existing pavements shall be maintained free and clean of all sediment at all times;
19. Establish subgrade and pads of any new building construction under phase 2;
20. Complete proposed phase 2 paving;
21. Final grade, topsoil, seed & mulch all proposed turf areas;
22. Upon final stabilization of all disturbed areas, remove phase 2 erosion & sediment control practices;

- Contractor shall perform inspections in accordance with section 3.5 of the SWPPP.
- Upon stabilization of all areas susceptible to erosion, all temporary erosion and sediment control measures may be removed, however, Contractor shall maintain ALL construction related materials on-site at all times, and shall take appropriate actions to ensure no construction related materials impact adjacent properties or storm sewers.
- Upon project completion (phases 1 & 2, and any subsequent phases) Owner shall complete and file Notice of Termination (NOT) to terminate permit coverage.

APPENDIX D

CONTRACTOR'S CERTIFICATION STATEMENT

Contractor's Certification Statement

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the terms and conditions of the most current version of the New York State Pollution Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Project Name & Location:
URBan Villages
100 Buckley Rd
Liverpool, New York 13209

Owners Name / Address / Contact Information:

925 7th North St Liverpool, NY 13088	Contact: Vittorio Pascarela Title: Owner Phone: (315) 457-1305 Fax: E-Mail: Vittorio@pdm-llc.com

Contractor's Name / Address / Contact Information:

	Contact: Title: Phone: Fax: E-Mail:

Contractor's SWPPP Element Responsibilities On-Site:

Signatures

Contractor:

_____
print

_____ _____
sign **date**

APPENDIX E

INSPECTION CHECKLISTS

- During Construction Checklist
- Post-Construction / Long-Term Checklist

CONSTRUCTION PHASE
EROSION & SEDIMENT CONTROL FACILITIES
INSPECTION & MAINTENANCE RECOMMENDATIONS

Periodic maintenance of the erosion & sediment control facilities is required to ensure proper functioning and performance of these facilities during the construction phase of a project. Facilities should be continually monitored, however, shall be inspected weekly as a minimum. The following are recommendations for facility inspection and maintenance activities during construction of the project:

Project: _____

Contractor: _____

Inspector: _____

Inspection Date: _____

	Item	Yes	No	NA
Maintaining Water Quality				
	Is there an increase in turbidity causing a substantial visible contrast to normal conditions?			
	Is there residue from oil or floating substances, visible oil film, or globules or grease?			
	Is all disturbance within the limits of the approved plans?			
	Is there any evidence of sediment deposition (associated to this project) on adjacent streets?			
General Site Conditions				
	Is construction site litter & debris appropriately managed?			
	Are facilities and equipment necessary for implementation of erosion & sediment control in working order and/or properly maintained?			
	Is construction impacting adjacent properties or public roadways?			
	Is dust adequately contolled?			
Excavation Dewatering				
	Is excavation adequately protected from incoming surface water runoff?			
	Is pumped water from excavation being pumped through filtering device?			
	Is discharge water clean & free of sediment?			
Topsoil and Spoil Stockpiles				
	Stockpiles are stabilized with seed or mulch?			
	Sediment control (silt fence) is installed at the toe of slope?			

Item		Yes	No	NA
Stabilized Construction Entrance				
	Is stone clean enough to effectively remove mud from vehicles?			
	Installed per standards and specifications?			
	Does all construction vehicle traffic use the stabilized entrance to enter and leave the work area?			
	Is adequate drainage provided to prevent ponding at entrance?			
Silt Fence				
	Installed on contour or as shown on plans?			
	Joints constructed by wrapping the two ends together for continuous support?			
	Fabric buried 6-inches minimum?			
	Posts are stable, fabric is tight and without rips or frayed areas?			
	Accumulated sediment requiring removal?			
Check Dams				
	Are check dams installed as shown on Plans?			
	Has sediment accumulated to ½ depth of upstream side of check dam? (If so, remove sediment.)			
Concrete Washout Area				
	Is concrete washout area installed?			
	Is constructed size adequate to support construction activities?			
	Is dried concrete being reclaimed for use on site?			
	Is dried concrete being disposed of off-site?			
	Does washout area require cleanout more frequently than concrete can solidify? (If so, enlarge.)			
	Is liner intact and free of tears? (If not, repair or replace.)			

Recommended Corrective Actions and/or Plan Modifications:

_____

_____

_____

_____

_____

Signature: _____

LONG-TERM STORMWATER MANAGEMENT FACILITY MAINTENANCE RECOMMENDATIONS

Periodic maintenance of the storm water management facilities is required to ensure proper functioning and performance of these facilities. The following are recommendations for maintenance frequency of these facilities once they have been completed, and long-term maintenance responsibilities have been assumed by the Owners of the URBan Villages. Specific design data for all drainage facilities is included in this Stormwater Report as well as on the Site Plan which are retained by the Owner.

Owner/Contact: Vittorio Pascarella
Address: URBan Villages PFA LLC
925 Seventh North Street
Liverpool, NY 13088
Phone No.: (315)457-1305

Item		Initial Year (Year 1)	Subsequent Years
Detention Basin and Dry Swales			
	Inspection and cleanout of accumulated sediment and debris within pond permanent pool and sediment forebays	Quarterly	Semi-Annually (Spring, Fall)
	Inspection and repair of any erosion by topsoiling, seeding and mulching	Quarterly	Semi-Annually (Spring, Fall)
Outlet Control Structure			
	Inspection and cleanout of sump of accumulated debris	Quarterly	Semi-Annually (Spring, Fall)
	Inspection of and removal of any blockages	Quarterly	Semi-Annually (Spring, Fall)
Rock Outlet Protection			
	Visually for accumulated sediment or dislodged riprap, replace riprap as necessary	Quarterly	Annually (Spring)
Permanent Check Dams			
	Visually inspect for and remove any accumulated sediment	Quarterly	Semi-Annually (Spring, Fall)

APPENDIX F

GP-0-25-001 FORMS

- GP-0-25-001
- Notice of Intent (NOI)
- MS4 SWPPP Acceptance Form
- Notice of Termination (NOT)

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name: URBan Villages

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Steven		Calocerinos
SWPPP Preparer First Name	MI	SWPPP Preparer Last Name

Signature Date

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: URBan Villages

eNOI Submission ID: _____

eNOI Submitted by: ☐ **Owner/Operator** ☑ **SWPPP Preparer** ☐ **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Vittorio		Pascarella
Owner/Operator First Name	MI	Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information	
1. Owner/Operator Name:	URBan Villages PFA LLC
2. Contact Person:	Vittorio Pascarella
3. Street Address:	925 7th North Street
4. City/State/Zip:	Liverpool, NY 13088
II. Project Site Information	
5. Project/Site Name:	URBan Villages
6. Street Address:	100 Buckley Road
7. City/State/Zip:	Liverpool, NY 13088
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information	
8. SWPPP Reviewed by:	
9. Title/Position:	
10. Date Final SWPPP Reviewed and Accepted:	
IV. Regulated MS4 Information	
11. Name of MS4 Operator:	Town of Salina
12. MS4 SPDES Permit Identification Number: NYR20A	
13. Street Address:	201 School Road
14. City/State/Zip:	Liverpool, NY 13088
15. Telephone Number:	(315)457-6661

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

eNOT MS4 Acceptance

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name: URBan Villages PFA LLC
b. Contact Person: Vittorio Pascarella
c. Street Address: 201 School Road
d. City/State/Zip: Liverpool, NY 13088

II. Project Site Information

a. Project/Site Name: URBan Villages
b. Street Address: 201 School Road
c. City/State/Zip: Liverpool, NY 13088
d. CGP SPDES Permit ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator: Town of Salina
b. MS4 SPDES Permit ID Number: NYR20A
c. Street Address: 201 School Road
d. City/State/Zip: Liverpool, NY 13088
e. Telephone Number: (315)457-6661

IV. Certification Statement

I have determined that it is acceptable for the owner or operator of the construction project identified above to submit the electronic Notice of Termination in accordance with CGP Part V. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:
c. Signature:
d. Date:

eNOT Owner or Operator Certification

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name: URBan Villages PFA LLC

b. Contact Person: Vittorio Pascarella

c. Street Address: 100 Buckley Road

d. City/State/Zip: Liverpool, NY 13088

II. Project Site Information

a. Project/Site Name: URBan Villages

b. Street Address: 100 Buckley Road

c. City/State/Zip: Liverpool, NY 13088

d. CGP SPDES Permit ID:

III. Certification Statement

I certify that I have met the requirements of CGP Part V.A.1., 2., 3., and 4. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Owner or Operator: Vittorio Pascarella

b. Title/Position: Principal

c. Signature:

d. Date:

eNOT Qualified Inspector Certification – Final Stabilization

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name: URBan Villages PFA LLC
b. Contact Person: Vittorio Pascarella
c. Street Address: 100 Buckley Road
d. City/State/Zip: Liverpool, NY 13088

II. Project Site Information

a. Project/Site Name: URBan Villages
b. Street Address: 100 Buckley Road
c. City/State/Zip: Liverpool, NY 13088
d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.i., ii., and iii. or CGP Part V.A.1.b.i., ii., and iii. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector: Steven Calocerinos, P.E.
b. Title/Position: Project Engineer
c. Signature:
d. Date:

eNOT Qualified Inspector Certification – SMPs

for construction activities seeking termination from the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(The completed form must be attached to the eNOT, which must be submitted to NYSDEC electronically in accordance with CGP Part V.A.5.)

I. Project Owner/Operator Information

a. Owner/Operator Name: URBan Villages PFA LLC

b. Contact Person: Vittorio Pascarella

c. Street Address: 100 Buckley Road

d. City/State/Zip: Liverpool, NY 13088

II. Project Site Information

a. Project/Site Name: URBan Villages

b. Street Address: 100 Buckley Road

c. City/State/Zip: Liverpool, NY 13088

d. CGP SPDES Permit ID:

III. Certification Statement

I hereby certify that all the requirements in CGP Part V.A.1.a.iv. or CGP Part V.A.1.b.iv. have been achieved. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the Qualified Inspector: Steven Calocerinos, P.E.

b. Title/Position: Project Engineer

c. Signature:

d. Date:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

Issued Pursuant to Article 17, Titles 7, 8 and Article 70

of the Environmental Conservation Law

Effective Date: January 29, 2025 Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

Scott E. Sheeley JAN. 29, 2025

Authorized Signature Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

C*onstruction activities* constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

Table of Contents

Part I. How to Obtain Coverage and General Requirements 5
A. Eligibility Requirements 5
B. Types of *Discharges* Authorized 9
C. Prohibited *Discharges* 10
D. Electronic Notice of Intent (eNOI) Submittal 10
E. General Requirements for *Owners or Operators* with Permit Coverage 14
F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001 18
G. Change of *Owner or Operator* 19
Part II. Water Quality-Based Effluent Limitations 20
A. Maintaining Water Quality 20
B. Effluent Limitations Applicable to *Discharges* from *Construction Activities* 20
C. Post-Construction Stormwater Management Practice (SMP) Requirements 23
Part III. Stormwater Pollution Prevention Plan (SWPPP) 28
A. General *SWPPP* Requirements 28
B. Required *SWPPP* Contents 32
C. Required *SWPPP* Components by Project Type 37
Part IV. Inspection and Maintenance Requirements 37
A. General Construction Site Inspection and Maintenance Requirements 37
B. Contractor Maintenance Inspection Requirements 37
C. *Qualified Inspector* Inspection Requirements 38
Part V. How to Terminate CGP Coverage 43
A. Electronic Notice of Termination (eNOT) Submittal 43
Part VI. Record Retention and Reporting 45
A. Record Retention 46
B. Reporting 46
Part VII. Standard Permit Requirements 46
A. Duty to Comply 46
B. Need to Halt or Reduce Activity Not a Defense 46
C. Penalties 46
D. False Statements 47
E. Re-Opener Clause 47
F. Duty to Mitigate 47
G. Requiring Another General Permit or Individual SPDES Permit 47
H. Duty to Provide Information 49
I. Extension 49
J. Signatories and Certification 50
K. Inspection and Entry 52
L. Confidentiality of Information 53
M. Other Permits May Be Required 53

N. NYSDEC Orders or Civil Decrees/Judgments 53
O. Property Rights 53
P. Compliance with Interstate Standards 53
Q. Oil and Hazardous Substance Liability 54
R. Severability 54
S. NYSDEC Approved Forms 54
APPENDIX A – Abbreviations and Definitions 55
Abbreviations 55
Definitions 56
APPENDIX B – Required SWPPP Components by Project Type 64
Table 1 64
Table 2 66
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal 68
APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants) 74
APPENDIX E – List of NYSDEC Regional Offices 80
APPENDIX F – SWPPP Preparer Certification Form 81
APPENDIX G – MS4 SWPPP Acceptance Form 83
APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form 86
APPENDIX I – MS4 No Jurisdiction Form 89
APPENDIX J – Owner/Operator Certification Form 91

Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:

    a. one or more acres; or

    b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or

    c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.

        i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or

        ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or

        iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or

        iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges* from the *owner's or operator's construction activities* are/were not:

    a. already covered by a different SPDES permit; or

    b. covered under a different SPDES permit that was denied, terminated, or revoked; or

    c. identified in an expired individual SPDES permit that was not renewed; or

    d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

    a. permit issued pursuant to 6 NYCRR Part 182 for the project; or

    b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

    a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

        i. 1-5 acres of disturbance - 20 feet; or

        ii. 5-20 acres of disturbance - 50 feet; or

iii. 20+ acres of disturbance - 100 feet.

b. NYSDEC consultation form sent to OPRHP,[1] and copied to NYSDEC's Agency Historic Preservation Officer (APO), and

i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or

ii. documentation from OPRHP that the *construction activity* will result in No Impact; or

iii. documentation from OPRHP providing a determination of No Adverse Impact; or

iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).

c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

i. No Affect; or

ii. No Adverse Affect; or

iii. Executed Memorandum of Agreement.

d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.

5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.

6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

[1] The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:

    a. obtain all such necessary permits; or

    b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.

8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:

    a. For linear transportation and linear utility project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb two or more acres of *steep slope*.

    b. For all other project types, the *construction activities*:

        i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and

        ii. are undertaken on land with no existing *impervious cover*; and

        iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:

   a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.

   b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:

      i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and

      ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and

      iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and

      iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.

2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:

   a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: "*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned"; and

   b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and

   c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges* of *stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:

    a. Wastewater from washout of concrete; and

    b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and

    c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and

    d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and

    e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:

    a. *construction activities* that are not part of a *common plan of development or sale*; or

b. an entire *common plan of development or sale*; or

c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:

    i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and

    ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and

    iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or

d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:

    i. meets all other eligibility requirements of Part I.A.; and

    ii. will occur in NYSDEC's Regions 3-9; and

    iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and

    iv. will occur between November 1st and March 31st.

2. As prerequisites for submitting an eNOI, the *owner or operator* must:

    a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and

    b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:

        i. for all eNOIs:

            1. the SWPPP Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and

ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:

1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:

a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or

b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or

c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and

2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:

a. if outside the municipal boundaries of NYC: the MS4 SWPPP Acceptance Form, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and

3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator,* or by a duly authorized representative of that person in accordance with Part VII.J.2.

3. Submitting an eNOI:

a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.[2]

b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.

i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

[2] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for *Owners or Operators* with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.

2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:

   a. all areas of disturbance have achieved *final stabilization;* and

   b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.

3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:

   a. all documentation necessary to demonstrate eligibility with this permit; and

   b. this permit; and

   c. the *SWPPP*; and

   d. the signed SWPPP Preparer Certification Form; and

   e. the signed MS4 SWPPP Acceptance Form or signed NYCDEP SWPPP Acceptance/Approval Form or signed MS4 No Jurisdiction Form (when applicable); and

   f. the signed Owner/Operator Certification Form; and

g. the eNOI; and

h. the LOA; and

i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).

4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:

   a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and

   b. inspection reports in accordance with Part IV.C.4. and 6.; and

   c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and

   d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and

   e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).

5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.

6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:

   a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or

ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or

iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.

b. The written Request to Disturb Greater Than Five Acres must include:

i. The SPDES permit identification number (Permit ID); and

ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and

iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and

iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and

v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and

vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."

c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or

ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.

7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.

8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).[3] *Construction activity* shall not resume until written permission to do so has been received from the RWE.

9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:

   a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and

   b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and

   c. receive an updated LOA.

10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

[3] The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of *a construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.

2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,[4] which contains the information identified in Part I.F.3. below, if:

   a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and

   b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.

3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.

4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.

5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

[4] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:

    a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and

    b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and

    c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and

    d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and

    e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or

    f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:

        i. the revised area of disturbance and/or *impervious area(s)*; and

        ii. the revised SMP information, if applicable; and

        iii. a narrative description of what has changed; and

        iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

    Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharge*s necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and

2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and

3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharge*s authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard,* the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharge*s authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharge*s will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

*Discharge*s authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

    a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:

        i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharge*s; and

        ii. Control *stormwater discharge*s, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and

        iii. *Minimize* the amount of soil exposed during *construction activity*; and

        iv. *Minimize* the disturbance of *steep slope*; and

        v. *Minimize* sediment *discharge*s from the site; and

        vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharge*s, unless *infeasible*; and

        vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and

ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.

b. **Soil Stabilization**. In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.

c. **Dewatering**. *Discharge*s from *dewatering* activities, including *discharge*s from *dewatering* of trenches and excavations, must be managed by appropriate control measures.

d. **Pollution Prevention Measures**. Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:

i. *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and

ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for *New Development*

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

   In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

   1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

   2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or

   3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams, or

2. A downstream analysis reveals that *overbank* control is not required.

b. *Sizing Criteria* for *New Development* in Enhanced Phosphorus Removal Watersheds

i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):

1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or

2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible.*

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:

1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or

2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or

3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:

1. the site *directly discharges* to tidal waters or fifth order or larger streams; or

2. A downstream analysis reveals that *overbank* control is not required.

c. *Sizing Criteria* for *Redevelopment Activity*

i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.

1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or

2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or

3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or

4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or

6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.

ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.

iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria* for Combination of *Redevelopment Activity* and *New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General *SWPPP* Requirements

1. A *SWPPP* must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the *SWPPP*. The *SWPPP* must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.

    a. The owner or operator must consider:

        i. the following physical risks due to climate change:

            (i) increasing temperature; and

            (ii) increasing precipitation; and

            (iii) increasing variability in precipitation, including chance of drought; and

            (iv) increasing frequency and severity of flooding; and

            (v) rising sea level; and

            (vi) increasing storm surge; and

            (vii) shifting ecology.

        ii. for each of the following:

            (i) overall site planning; and

            (ii) location, elevation, and sizing of:

                a. control measures and practices; and

                b. conveyance system(s); and

                c. detention system(s).

3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.

5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:

   a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and

   b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*; and

   c. to address issues or deficiencies identified during an inspection by the *qualified inspector,* NYSDEC, or other regulatory authority; and

   d. to document the final construction conditions in an as-built drawing.

6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.

7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

> "I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.

    a. Erosion and sediment control practices must be designed:

        i. in conformance with the BB; or

        ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.

    b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.

    c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:

        i. Background information about the scope of the project, including the location, type and size of project; and

        ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge*(s) and receiving surface water(s); and

        iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and

        iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:

    a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and

    b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and

2. A sequencing plan for a specific *phase* must include:

    a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and

    b. all permanent and *temporary stabilization* measures; and

v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and

vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and

vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and

ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and

x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and

xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

2. SMP component – The *owner or operator* of *construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.

   a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and

   b. SMPs must be designed in conformance with the *performance criteria*:

      i. in the DM; or

      ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or

      iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:

    a. subject to governmental review and approval:

        i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and

        ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or

    b. not subject to governmental review and approval:

        i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and

        ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and

c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and

d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and

e. The SMP component of the *SWPPP* must include the following:

    i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and

    ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

iii. A Stormwater Modeling and Analysis Report that includes:

(i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and

(ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and

(iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and

(iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and

(v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and

(vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.

iv. Soil testing results and locations (test pits, borings); and

v. Infiltration test results, when required in accordance with Part III.B.2.a.; and

vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

a. if the corrective action does not require engineering design:

    i. begin implementing corrective actions within one business day; and

    ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

    i. begin the engineering design process within five business days; and

    ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.

3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. *Qualified Inspector* Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:

    a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D; and

c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and

d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.

2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:

a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or

b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or

c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator,* the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or

e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.

3. At a minimum, the *qualified inspector* must inspect:

   a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and

   b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and

   c. all areas of disturbance that have not achieved *final stabilization*; and

   d. all points of *discharge* to *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and

   e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:

   a. Permit identification number; and

   b. Date and time of inspection; and

   c. Name and title of person(s) performing inspection; and

   d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and

   e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and

   f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and

   g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and

   h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and

   i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and

   j. Estimates, in square feet or acres, of the following areas:

i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and

ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and

iii. Total area that has achieved *temporary stabilization*; and

iv. Total area that has achieved *final stabilization*; and

k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and

l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and

m. Identification and status of all corrective actions that were required by previous inspection; and

n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.

5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:

a. if the corrective action does not require engineering design:

i. begin implementing corrective actions within one business day; and

ii. complete the corrective actions within five business days; or

b. if the corrective action requires engineering design:

i. begin the engineering design process within five business days; and

ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.

6. All inspection reports must be signed by the *qualified inspector.* In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:

a. Total project completion:

i. all *construction activity* identified in the *SWPPP* has been completed; and

ii. all areas of disturbance have achieved *final stabilization*; and

iii. all temporary, structural erosion and sediment control measures have been removed; and

iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and

v. an as-built drawing has been prepared; or

b. Planned shutdown with partial project completion:

   i. all soil disturbance activities have ceased; and

   ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and

   iii. all temporary, structural erosion and sediment control measures have been removed; and

   iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and

   v. an as-built drawing has been prepared; or

c. In accordance with Part I.G. Change of Owner or Operator; or

d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.

2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice(s)" certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.

3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the "MS4 Acceptance" statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector*'s final site inspection certification(s) when required in Part V.A.2.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:

    a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or

    b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or

    c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or

    d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.

5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.[5]

    a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

[5] Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to $37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and

b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and

c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and

d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and

e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and

f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and

g. the *discharge* is in violation of section 17-0501 of the ECL; and

h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:

   i. the location of the *discharge(s)* with respect to *surface waters of the State*; and

   ii. the size of the *discharge(s)*; and

   iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and

   iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.

2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,[6] that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

[6] The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

    a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

        (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

        (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

        Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

    b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

    1. the chief executive officer of the agency; or

    2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

    c. The written authorization is submitted to NYSDEC.

3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

    I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and

2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and

3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and

5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for "*Construction Activity(ies)*" also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The "common plan" of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for "*Commence (Commencement of) Construction Activities"* and "*Common Plan of Development or Sale."*

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges* to *surface waters of the State*; and

2. designed or used for collecting or conveying *stormwater*; and

3. which is not a *combined sewer system*; and

4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRv, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank* Flood (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint source*s. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint source*s, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not *directly discharging* to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned[1]
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the "Agricultural Best Management Practice Systems Catalogue" (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, "temporary" means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPS)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover,* and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators* of *construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

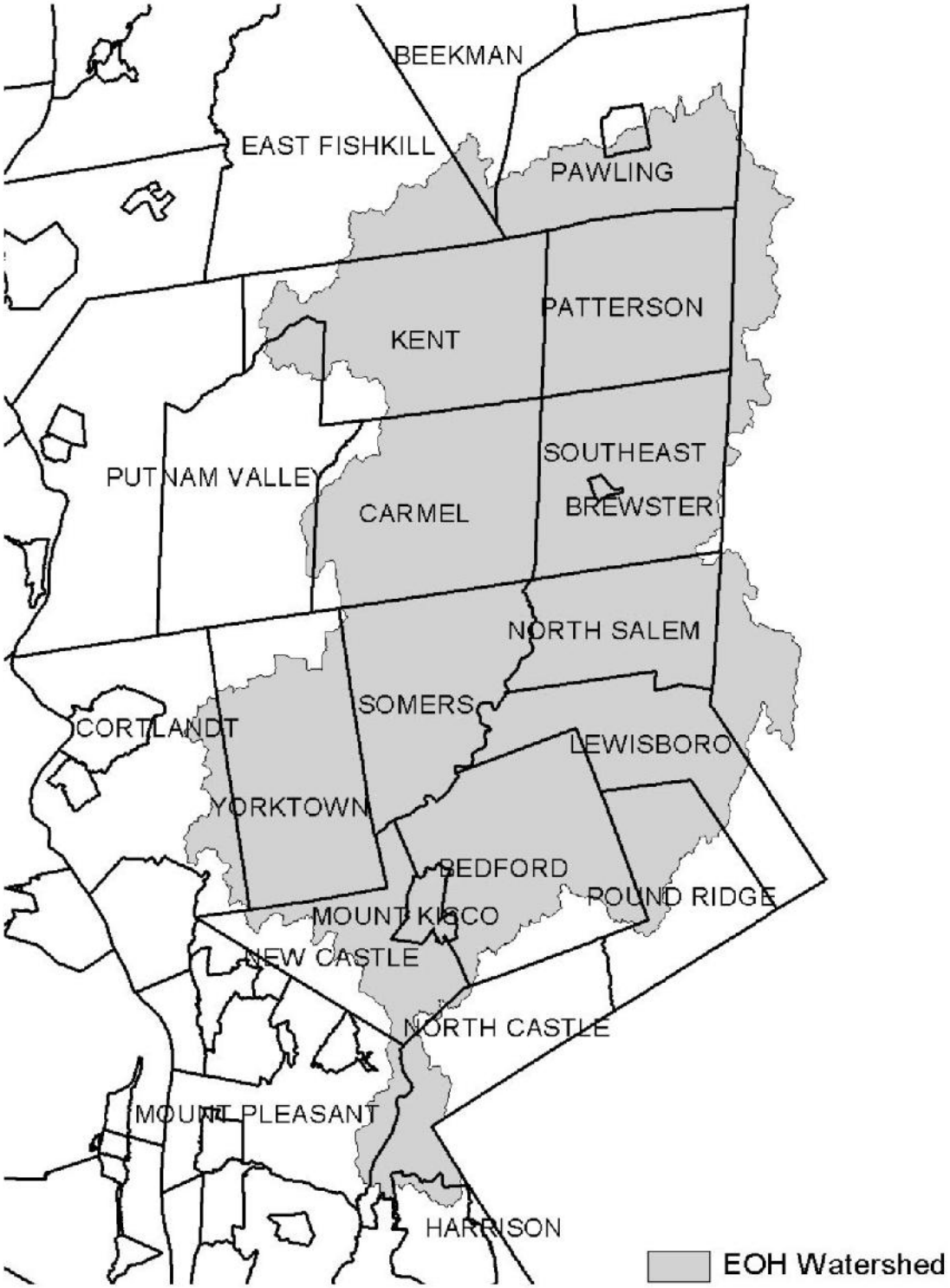


Figure 2 - Onondaga Lake Watershed

Figure 3 - Greenwood Lake Watershed

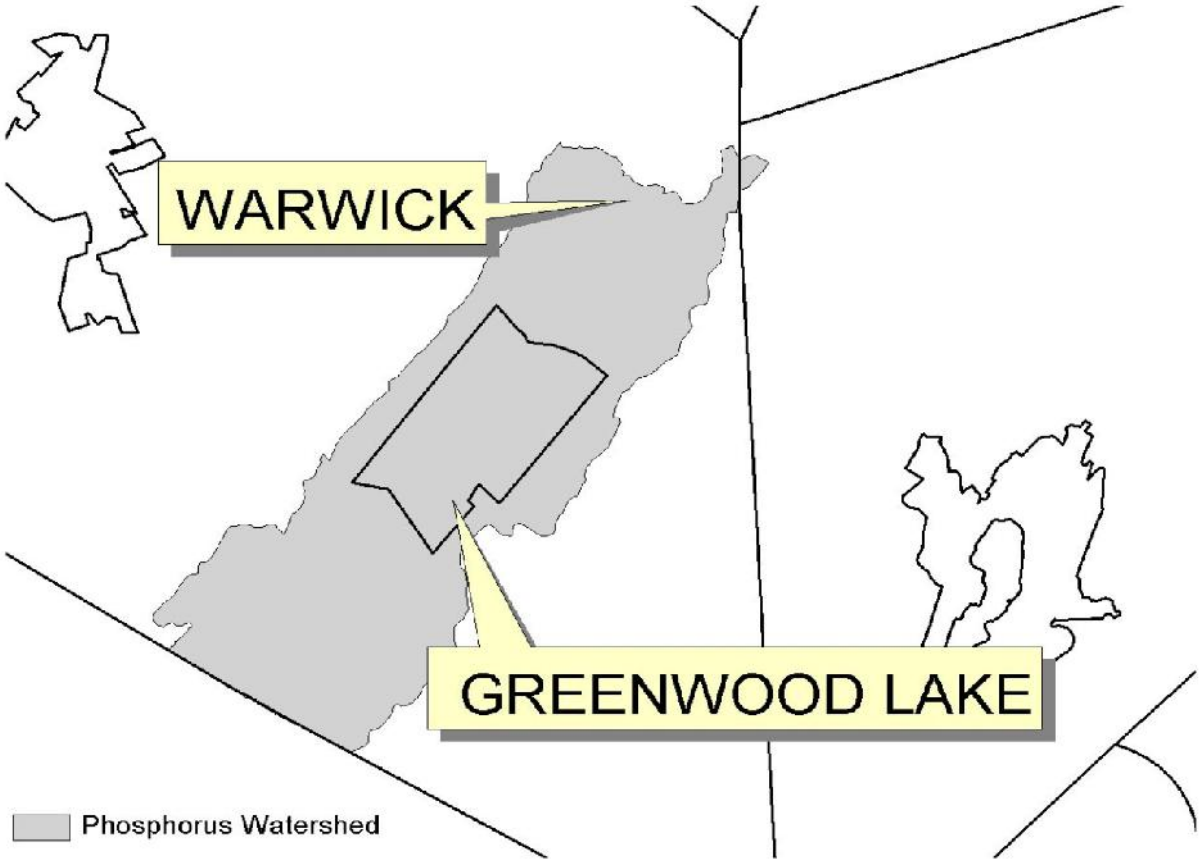


Figure 4 - Oscawana Lake Watershed

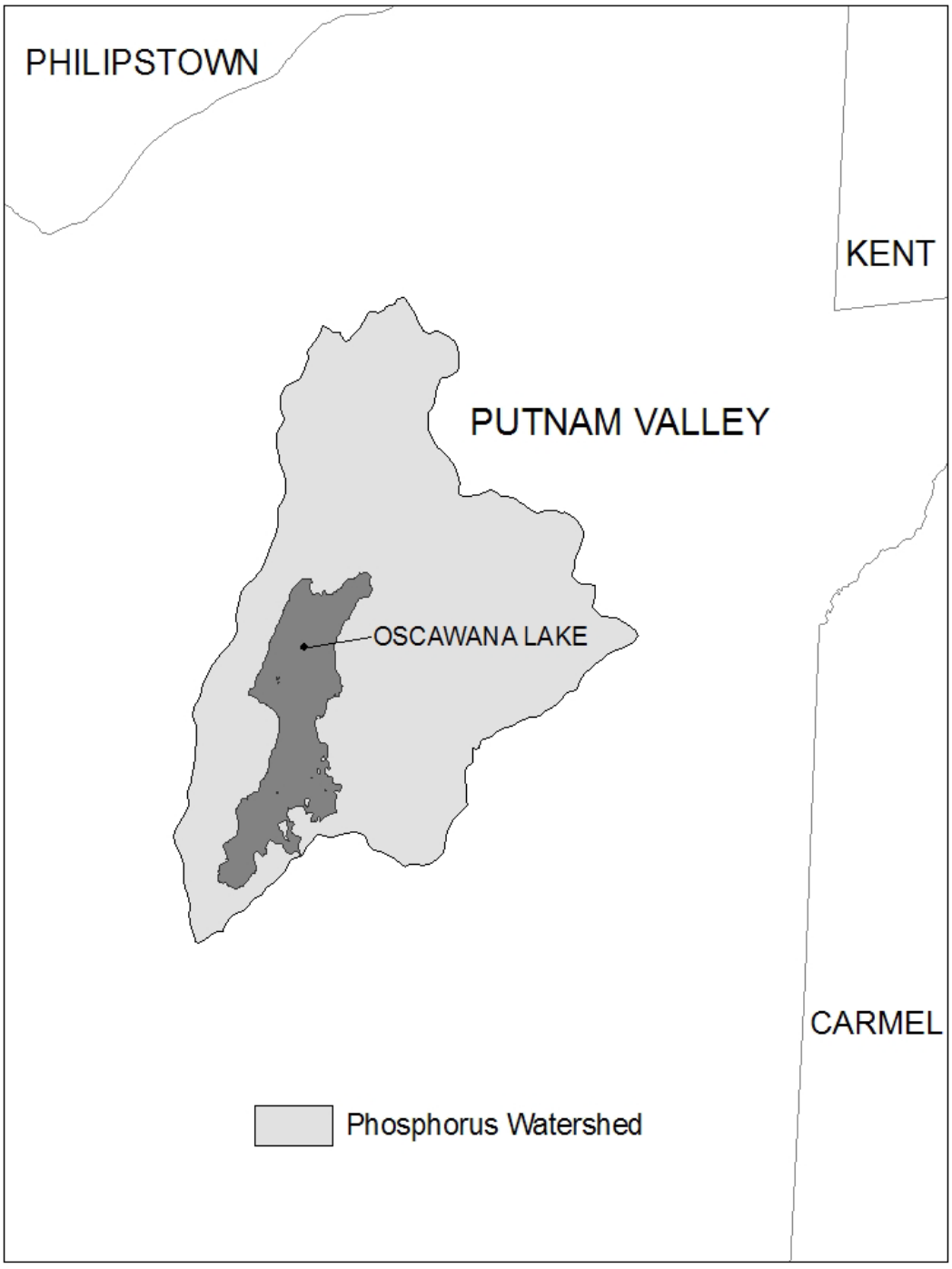
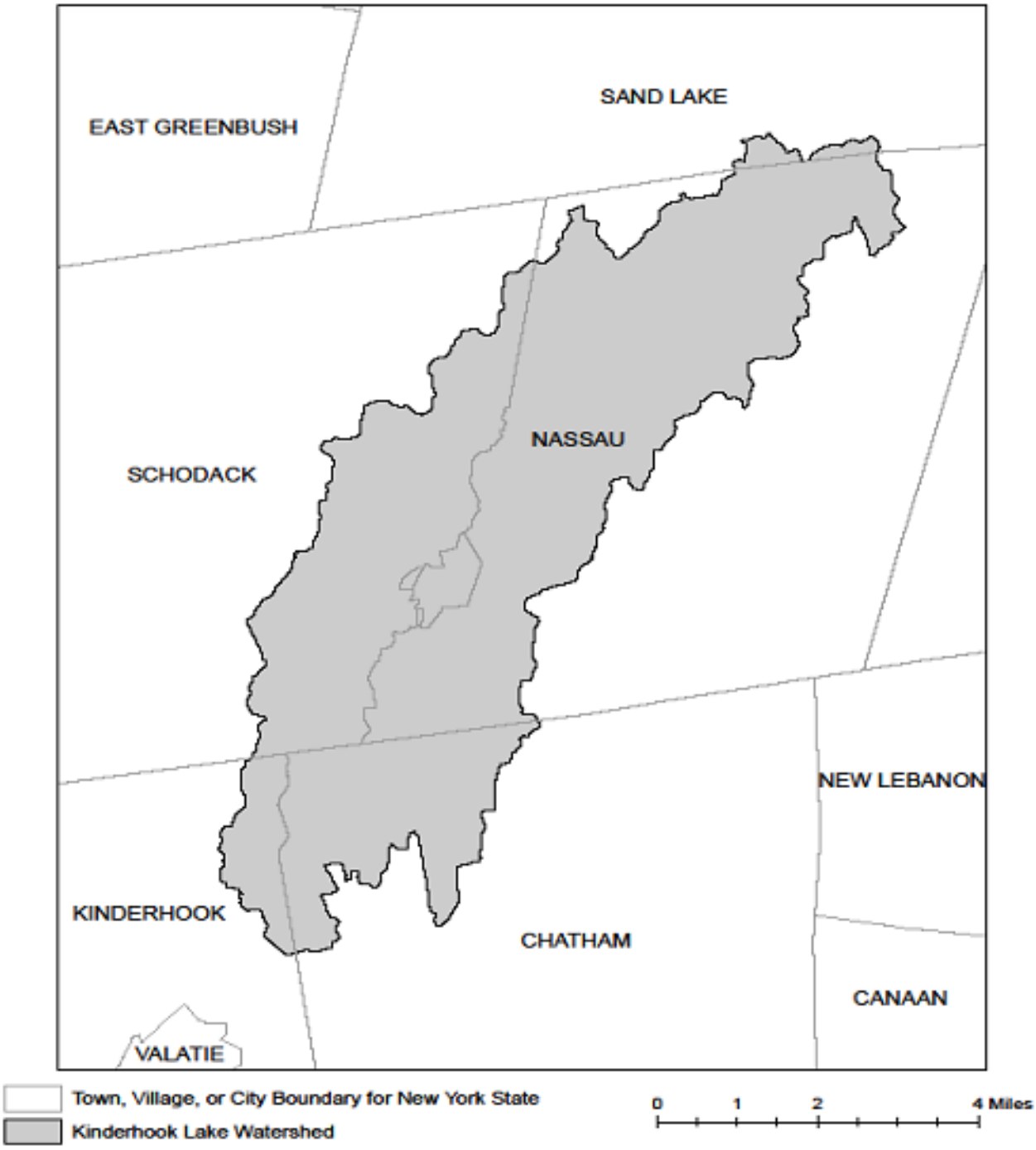


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of "The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL" dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402 0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genessee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH3, NO2)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenvwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Mongomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

Region	Covering the following counties:	DIVISION OF ENVIRONMENTAL PERMITS (DEP) Permit Administrators	DIVISION OF WATER (DOW) Water (SPDES) Program
1	Nassau and Suffolk	50 Circle Road Stony Brook, NY 11790 Tel. (631) 444-0365	50 Circle Road Stony Brook, NY 11790-3409 Tel. (631) 444-0405
2	Bronx, Kings, New York, Queens and Richmond	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4997	1 Hunters Point Plaza, 47-40 21st St. Long Island City, NY 11101-5407 Tel. (718) 482-4933
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester	21 South Putt Corners Road New Paltz, NY 12561-1696 Tel. (845) 256-3059	220 White Plains Road, Suite 110 Tel. (914) 428 - 2505
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1130 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	1115 State Route 86, Po Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Golf Course Road Warrensburg, NY 12885-1172 Tel. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.

SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name MI SWPPP Preparer Last Name

Signature Date

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information
1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:
II. Project Site Information
5. Project/Site Name:
6. Street Address:
7. City/State/Zip:
III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information
8. SWPPP Reviewed by:
9. Title/Position:
10. Date Final SWPPP Reviewed and Accepted:
IV. Regulated MS4 Information
11. Name of MS4 Operator:
12. MS4 SPDES Permit Identification Number: NYR20A
13. Street Address:
14. City/State/Zip:
15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name[1]:

Title/Position:

Signature:

Date:

VI. Additional Information

[1] Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information

1. Owner/Operator Name:
2. Contact Person:
3. Street Address:
4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:
6. Street Address:
7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval

8. SWPPP Reviewed by:
9. Title/Position: /
10. Date Final SWPPP Reviewed and Accepted:
11. Acceptance/Approval Expiration Date:

IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity

12. Name of MS4: *CITY OF NEW YORK*
13. MS4 SPDES Permit Identification Number: *NY-0287890*
14. Contact Person:
15. Street Address: *59-17 Junction Blvd. 9th Floor*
16. City/State/Zip: *Flushing, NY 11373*
17. Telephone Number:

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).

Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Conditions of Acceptance/Approval and Additional Information

Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

a. Owner/Operator Name:

b. Contact Person:

c. Street Address:

d. City/State/Zip:

II. Project Site Information

a. Project/Site Name:

b. Street Address:

c. City/State/Zip:

d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

a. Name of MS4 Operator:

b. MS4 SPDES Permit ID Number: NYR20A

c. Street Address:

d. City/State/Zip:

e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:

b. Title/Position:

c. Signature:

d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: **Owner/Operator** **SWPPP Preparer** **Other**

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name MI Owner/Operator Last Name

_____

Signature

_____

Date

Revised: January 2025

APPENDIX G

SHPO CORRESPONDENCE

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner Pro Tempore

January 10, 2025

Steven Calocerinos
Calocerinos Engineering, PLLC
PO Box 2187
Syracuse, NY 13220

Re: DEC
UR-ban Villages Salina: Redevelopment of Will & Baumer Candle Factory site
100 Buckley Rd, Liverpool, Onondaga County
20PR04479

Dear Steven Calocerinos:

Thank you for your continued consultation with the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

We have reviewed the submission received on January 10, 2025, including the submitted site plan dated January 26, 2024. Based on that review, we request the following additional information:

- Please submit a complete set of construction drawings, including demolition and proposed, of the exterior façade of each building where work is proposed to occur.
- Please be sure to include fully dimensioned window drawings, and manufacturer specification sheets detailing all proposed exterior finishes.

If you have any questions, you can call or e-mail me at the contact information below.

Sincerely,

Robyn Sedgwick
Historic Site Restoration Coordinator
e-mail: robyn.sedgwick@parks.ny.gov

Appendix K

Community Air Monitoring Plan

Community Air Monitoring Plan
for
Urban Villages (Former Will & Baumer Candle Co., Inc.) BCP Site

100 Buckley Road
Town of Salina, Onondaga County, New York

BCP Site No. C734154

Prepared by:

C&S Engineers, Inc.
499 Col Eileen Collins Blvd.
Syracuse, New York 13212

April 2022
Revised July 27, 2022
Revised May 30, 2025
Revised March 3, 2026

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil / waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

<u>VOC Monitoring, Response Levels and Actions</u>

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate

surrogate, such as isobutylene. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 $\mu g/m^3$ above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

    a. Objects to be measured: Dust, mists or aerosols;
    b. Measurement Ranges: 0.001 to 400 mg/m^3 (1 to 400,000 µg/m^3);
    c. Precision (2-sigma) at constant temperature: +/- 10 g/m^3 for one second averaging; and +/- 1.5 g/m^3 for sixty second averaging;
    d. Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 m, g= 2.5, as aerosolized);
    e. Resolution: 0.1% of reading or 1 g/m^3, whichever is larger;
    f. Particle Size Range of Maximum Response: 0.1-10;
    g. Total Number of Data Points in Memory: 10,000;
    h. Logged Data: Each data point with average concentration, time / date and data point number;

i. Run Summary: overall average, maximum concentrations, time / date of maximum, total number of logged points, start time / date, total elapsed time (run duration), STEL concentration and time / date occurrence, averaging (logging) period, calibration factor, and tag number;
j. Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
k. Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
l. Operating Temperature: -10 to 50°C (14 to 122°F); and
m. Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record-keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM-10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

    a. Applying water on haul roads;
    b. Wetting equipment and excavation faces;
    c. Spraying water on buckets during excavation and dumping;
    d. Hauling materials in properly tarped or watertight containers;
    e. Restricting vehicle speeds to 10 miles per hour (mph);
    f. Covering excavated areas and material after excavation activity ceases; and
    g. Reducing the excavation size and/or number of excavations.

    Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

9. CAMP action level exceedances and corrective actions will be reported to the Department within one business day.

Special Requirements

The following special requirements shall apply at any time which intrusive work is conducted within 20 feet of an occupied structure:

When intrusive work is to be performed within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates will reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices will be considered

and implemented to prevent exposures related to the work activities and to control dust and odors. To the extent practicable, the planned activities will be performed when potentially exposed populations are at a minimum, such as during weekdays when tenants are away for work.

- If total VOC concentrations outside the walls of occupied structures or next to intake vents exceed 1 part-per-million, additional monitoring will be conducted within the occupied structure(s). Background readings in the occupied spaces will be taken prior to commencement of the planned work. Any unusual background readings will be discussed with NYSDEC and NYSDOH prior to commencement of the work.

- If total particulate concentrations outside the walls of occupied structures or next to intake vents exceed 150 micrograms per cubic meter, work activities will be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 micrograms per cubic meter or less at the monitoring point.

Appendix L

Citizen Participation Plan

NEW YORK STATE | Department of Environmental Conservation

Brownfield Cleanup Program

Citizen Participation Plan
for
Urban Villages

April 2022

Revised March 2026

Site # C735154
100 Buckley Road
Town of Salina
Onondaga County, New York

Contents

Section **Page Number**

1. What is New York's Brownfield Cleanup Program? 3

2. Citizen Participation Activities.....3

3. Major Issues of Public Concern.....9

4. Site Information.....9

5. Investigation and Cleanup Process 11

Appendix A - Project Contacts and Locations of Reports and Information 15

Appendix B - Site Contact List.....16

Appendix C - Site Location Map.....18

Appendix D - Brownfield Cleanup Program Process 19

* * * * *

Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.
Applicant: **UR-ban Villages PFA, LLC ("Applicant")**
Site Name: **Urban Villages ("Site")**
Site Address: **100 Buckley Road, Town of Salina**
Site County: **Onondaga**
Site Number: **C734154**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so

that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants who conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at:
http://www.dec.ny.gov/chemical/8450.html .

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interested in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment

- Improving public access to, and understanding of, issues and information related to a particular site and that site's investigation and cleanup process

- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process

- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community

- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contacts to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.
The site contact list includes, at a minimum:

- chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;
- residents, owners, and occupants of the site and properties adjacent to the site;
- the public water supplier which services the area in which the site is located;
- any person who has requested to be placed on the site contact list;
- the administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility;
- location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contacts identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

Note: The first site fact sheet (usually related to the draft Remedial Investigation Work Plan) is distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The fact sheet includes instructions for signing up with the appropriate county listserv to receive future notifications about the site. See http://www.dec.ny.gov/chemical/61092.html .

Subsequent fact sheets about the site will be distributed exclusively through the listserv, except for households without internet access that have indicated the need to continue to receive site information in paper form. Please advise the NYSDEC site project manager identified in Appendix A if that is the case. Paper mailings may continue during the investigation and cleanup process for some sites, based on public interest and need.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation

and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.

- **Public forums, comment periods and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the site, as described in Section 5.

If the site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the site.

As of the date the declaration (page 2) was signed by the NYSDEC project manager, the significant threat determination for the site had not yet been made.

To verify the significant threat status of the site, the interested public may contact the NYSDEC project manager identified in Appendix A.

For more information about TAGs, go online at
http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Activities	Timing of CP Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repository(ies)	At time of preparation of application to participate in the BCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the site contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement (BCA):	
• Prepare Citizen Participation (CP) Plan	Before start of Remedial Investigation **Note:** Applicant must submit CP Plan to NYSDEC for review and approval within 20 days of the effective date of the BCA.
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describes RI results	Before NYSDEC approves RI Report
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about draft RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that NYSDEC is reviewing the Final Engineering Report • Distribute fact sheet to site contact list announcing NYSDEC approval of Final Engineering Report and issuance of Certificate of Completion (COC)	At the time the cleanup action has been completed. **Note:** The two fact sheets are combined when possible if there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the site. There have been no major issues of public concern identified at this time; however, major issues of public concern may be identified during the course of the site's investigation and cleanup process. This information will be updated in the future if such issues are identified.

Based on the nature of site contaminants, direct contact with contaminated soil or inhalation of airborne dust originating from contaminated areas of the site pose the primary exposure risk to the local public. Potential for volatile organic compounds to migrate off-site through groundwater flow or through soil vapor also present potential concerns to nearby properties. The remedial program will eliminate or reduce the potential for exposure.

4. Site Information

Appendix C contains a map identifying the location of the site.

Site Description

Location: 100 Buckley Road, Salina, Onondaga County
Setting: Urban
Site size: 11.68 acres

Adjacent properties:

- **East:** Public highway **(**Interstate Route 81)
- **South:** Public roadways, followed by Onondaga Lake
- **West:** Public roadway (Buckley Road), followed by residential parcels
- **North:** Commercial (medical offices)

History of Site Use, Investigation, and Cleanup

Available historic information indicates that the Site was used for industrial purposes by the Will & Baumer Candle Co., Inc. (Will & Baumer), and/or its predecessors and successors, from at least 1911 (and possibly as early as 1904) until 2010. Will & Baumer manufactured beeswax candles at the Site.

On-site historic operations included offices, manufacturing spaces, laboratory, press and pan rooms, multiple sheds, digester house, still house, store room, machine shop and maintenance building, bleach house, bleach yard, oil / boiler house, and packaging and decorating areas. Multiple storage tanks containing fuel oil, gasoline, grease and oil, and

acid were used on the Site throughout its period of operation. The majority of the tanks were present on the southeastern portion of the Site. Railroad sidings and spurs were also present on the eastern and southern portions of the site. In addition, a refinery building was located adjacent to the south in at least 1911.

Facility operations resulted in the generation of regulated hazardous wastes, with documented generation from at least 1982 through at least 2010. As the nature of operations remained generally consistent throughout Will & Baumer's presence at the site (dating to the early 1900s), it is suspected that similar wastes were also generated prior to 1982. Wastes generated include spent industrial solvents (such as those used in cleaning metal components), ignitable wastes, corrosive wastes, and heavy metal-containing wastes.

Information regarding the nature and condition of soil and groundwater beneath the site was collected during a Phase II Environmental Site Assessment (Phase II ESA) that was completed at the Site in May 2020. A Phase II ESA is a form of limited subsurface investigation where soil and groundwater samples are collected and analyzed for suspected potential contaminants. The Phase II ESA revealed that the upper approximately five feet of soil across much of the eastern and southeastern portion of the site consists of historic fill material. In June 2021, the Applicant arranged for a more extensive investigation into the conditions associated with the historic fill material. The historic fill material contains assorted materials, including concrete, brick, coal debris/dust, ash, slag, metal shavings, railroad ties, and plastic bottles. The underlying native soils consist of a mixture of silts and clays. Groundwater was found to be present at depths ranging from 0.4 to 7.2 feet below grade at the time of the investigation.

The Phase II ESA and historic fill investigation revealed that various organic and inorganic contaminants are present in soil, including volatile organic compounds (including those commonly used in industrial operations and those that are commonly related to petroleum products); semi-volatile organic compounds (SVOCs), which are commonly associated with the burning of coal, fuel oil, and similar fossil fuels; polychlorinated biphenyls, which were historically used in electrical transformers and other similar equipment, as well as as an additive to caulks and sealants; various heavy metals, including arsenic, cadmium, copper, mercury, nickel, lead and zinc; and pesticides.

The Phase II ESA also revealed that various organic contaminants are present in groundwater, including volatile organic compounds (acetone, 2-butanone, and vinyl chloride, which are commonly used in industrial applications); and, potentially SVOCs, but it was concluded that "these detections may not be representative of actual groundwater conditions but rather particulate matter within the sample".

Eleven buildings that were formerly associated with the Will & Baumer operations remain on the site. The buildings are currently vacant and unused except for one building that is

leased by a local furniture retailer and used for temporary storage of office furniture inventory.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program as a Volunteer. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination onsite, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for restricted residential purposes.

To achieve this goal, the Applicant will conduct investigation and/or cleanup activities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the site.

Investigation

The Applicant has completed a partial site investigation before it entered into the BCP. For the partial investigation, NYSDEC will determine if the data are useable.

The Applicant will conduct an investigation of the site officially called a "remedial investigation" (RI). This investigation will be performed with NYSDEC oversight. The Applicant must develop a remedial investigation work plan, which is subject to public comment.

The site investigation has several goals:

1) define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) identify the source(s) of the contamination;
3) assess the impact of the contamination on public health and the environment; and
4) provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant submits a draft “Remedial Investigation Work Plan” to NYSDEC for review and approval. NYSDEC makes the draft plan available to the public review during a 30-day public comment period.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the site poses a significant threat to public health or the environment. If the site is a “significant threat,” it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Interim Remedial Measures

An Interim Remedial Measure (IRM) is an action that can be undertaken at a site when a source of contamination or exposure pathway can be effectively addressed before the site investigation and analysis of alternatives are completed. If an IRM is likely to represent all or a significant part of the final remedy, NYSDEC will require a 30-day public comment period.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a “Certificate of Completion” (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a “Remedial Work Plan”. The Remedial Work Plan describes the Applicant’s proposed remedy for addressing contamination related to the site.

When the Applicant submits a draft Remedial Work Plan for approval, NYSDEC would announce the availability of the draft plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The selected remedy is formalized in the site Decision Document.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a final engineering report that certifies that cleanup requirements have been achieved or will be achieved within a specific time

frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the site, it will approve the final engineering report. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

The purpose of site management is to ensure the safe reuse of the property if contamination will remain in place. Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An *institutional control* is a non-physical restriction on use of the site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the site suitable for some, but not all uses.

An *engineering control* is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that pumps and treats groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A -
Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Abigail Beckman, Project Manager
NYSDEC Region 7
Division of Environmental Remediation
5786 Widewaters Parkway
Syracuse, NY 13214-1867
P: (315) 426-7735
M: (680) 323- 0035
Email: abigail.beckman@dec.ny.gov

Kerry McElroy or Stephanie Webb
Public Participation Specialist
NYSDEC Region 7
615 Erie Boulevard West
Syracuse, New York 13204
(315)426-7400
Email: info.r7@dec.ny.gov

New York State Department of Health (NYSDOH):

Renata E. Ockerby
Project Manager
NYSDOH
Bureau of Environmental Exposure
Investigation
Empire State Plaza
Corning Tower; Room1787
Albany, NY 12237 Tel. (518) 402-7867
Email: BEEI@health.ny.gov

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Liverpool Public Library
310 Tulip Street
Liverpool, New York 13088
Attn: Glenna Wisniewski, Director
Phone: (315)457-0310
Hours: Mon. to Thurs. 9 am to 9 pm
Fri. 9 am to 5 pm
Sat. 9 am to 4 pm
Sun.11 am to 4 pm

NYSDEC Region 7
615 Erie Boulevard West
Syracuse, New York 13204
Attn: Joshua Cook, P.E.
Phone: (315)426-7411
Hours: Call for Appointment

Appendix B - Site Contact List

Local Government – Town of Salina and Onondaga County:

Colleen A. Gunnip
Town of Salina Supervisor
201 School Road
Liverpool, New York 13088
(315)457-6661
Supervisor@salina.ny.us

Mark Lafaver
Town of Salina Planning and Development Director
201 School Road
Liverpool, New York 13088
(315)451-0492

J. Ryan McMahon, II
Onondaga County Executive
John H. Mulroy Civic Center, 14th Floor
Syracuse, New York 13202
(315)435-3516

Dan Kwasnowski, AICP, Planning Director
Syracuse-Onondaga County Planning Agency
John H. Mulroy Civic Center
421 Montgomery Street, 11th Floor
Syracuse, New York 13202
(315)435-2611

Local Media:

Local Newspaper:

Syracuse Post Standard
220 South Warren Street
Syracuse, New York 13202
(315) 470-0011
http://www.syracuse.com

Eagle News Online
2501 James Street, Suite 100
Syracuse, New York 13206
(315) 434-8889 x. 302
David Tyler, Publisher
dtyler@eaglenewsonline.com
http://www.eaglenewsonline.com

Local Television:

WSYR – TV Channel 9
5904 Bridge Street
East Syracuse, New York 13057
(315) 446-9900
http://www.localsyr.com

WSTM, WSTQ, WTVH – TV Channel 3, 5, CW6
1030 James Street
Syracuse, New York 13203
(315) 477-9400
http://www.cnycentral.com

Spectrum News
815 Erie Boulevard East
Syracuse, New York 13210
(315)234-1010
yournews@charter.com
http://www.spectrumlocalnews.com/nys/central-ny

Radio:

WSYR 570 AM Radio
500 Plum Street
Syracuse, New York 13204
(315) 472-9797
http://www.wsyr.iheart.com

WCNY 91.3 FM Radio
P.O. Box 2400
Syracuse, New York 13220-2400
(315) 453-2424
http://www.wcny.org

Local Water Supplier:

Onondaga County Water Authority
P.O. Box 4949
Syracuse, New York 13221-4949

Persons Requesting to be Placed on Contact List:

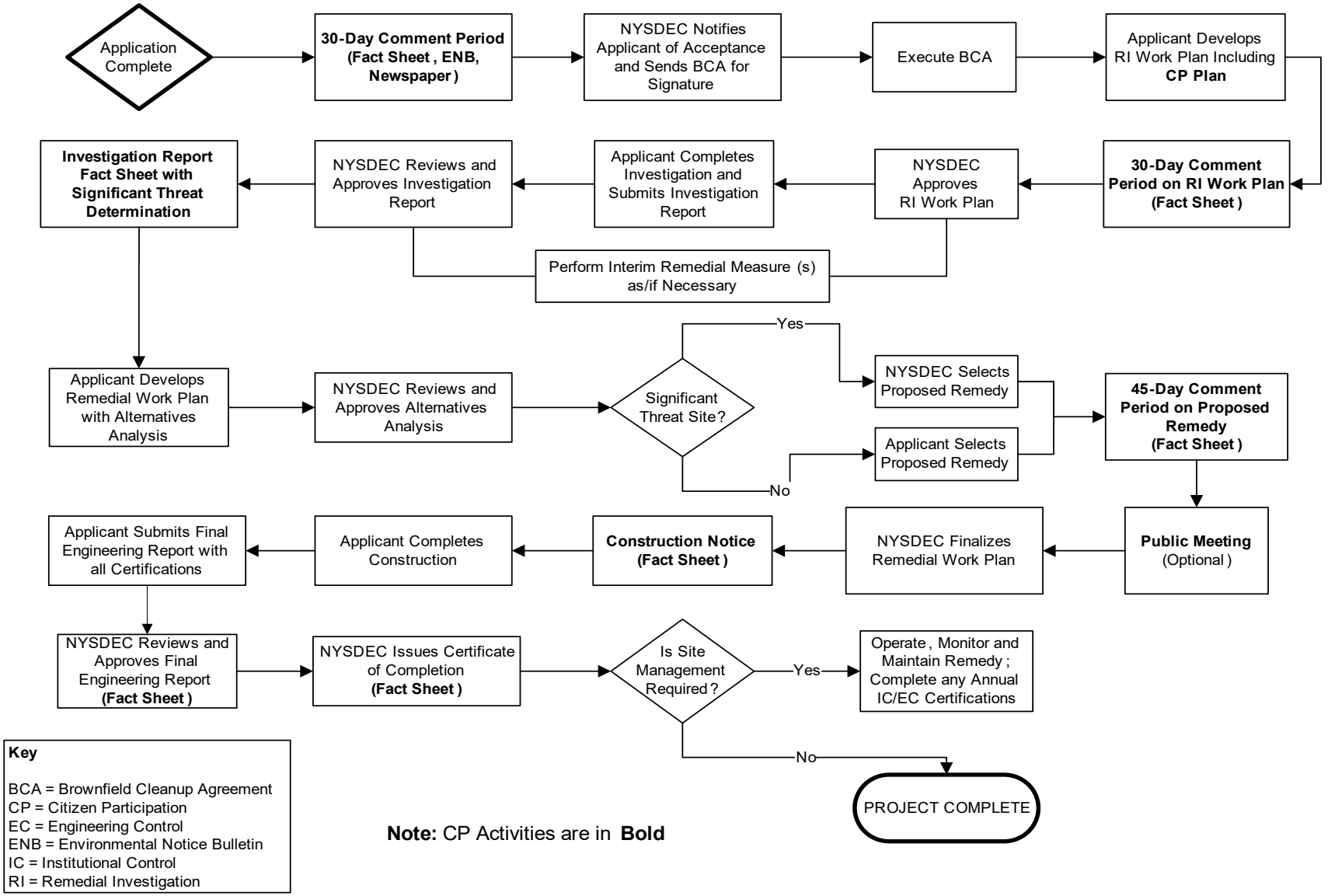
To Be Completed as Necessary

(Please note, for residential properties, the names, addresses, and email addresses of adjacent property owners and residents are not placed in versions of this document available to the public. Instead, they are maintained confidentially in the NYSDEC Project Manager's files.)

School and Day Care Facilities:

There are no schools or day care facilities identified within ½ mile of the Site.

Appendix D– Brownfield Cleanup Program Process



Key

BCA = Brownfield Cleanup Agreement
CP = Citizen Participation
EC = Engineering Control
ENB = Environmental Notice Bulletin
IC = Institutional Control
RI = Remedial Investigation

Note: CP Activities are in **Bold**

Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.
- The Scoping Sheet may be prepared by DEC or a remedial party, but must be reviewed and approved by the DER site project manager or his/her designee.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be unique or appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Identify the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g. Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g. Can our children play outside? Can we garden? Must we avoid certain areas? Can we recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g. who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?
- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby people, properties, natural resources, etc.?
- Are activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Does the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated to the Community.

- Specific site investigation or remediation activities currently underway, or that will begin in the near future.
- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - e. Obtain information from local officials, property owners and residents, site reports, site visits, "windshield surveys," other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. In its remedial programs, DER seeks to integrate, and be consistent with, environmental justice principles set forth in *DEC Commissioner Policy 29 on Environmental Justice* and *DER 23 – Citizen Participation Handbook for Remedial Programs*. Is the site and/or affected community wholly or partly in an Environmental Justice (EJ) Area? Use the Search feature on DEC's public web site for "environmental justice". DEC's EJ pages define an EJ area, and link to county maps to help determine if the site and/or community are in an EJ area.

h. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.
- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.
- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public.

Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential, or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial stages, or may only be interested in particular issues.

It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help to select and conduct appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage
- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups

Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern (see instructions)

Site Name: Click here to enter text.

Site Number: Click here to enter text.

Site Address and County: Click here to enter text.

Remedial Party(ies): Click here to enter text.

Note: For Parts 1. – 3. the individuals, groups, organizations, businesses and units of government identified should be added to the site contact list as appropriate.

Part 1. List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and information needs. **Use this information as an aid to prepare or update the Major Issues of Public Concern section of the site Citizen Participation Plan.**
Click here to enter text.

How were these issues and/or information needs identified?
Click here to enter text.

Part 2. List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses and/or units of government related to the information needed.
Click here to enter text.

How were these information needs identified?
Click here to enter text.

Part 3. List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.
Click here to enter text.

How were these issues and/or information needs identified?
Click here to enter text.

Part 4. Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):

a. Land use/zoning at and around site:
☐ **Residential** ☐ **Agricultural** ☐ **Recreational** ☐ **Commercial** ☐ **Industrial**

b. Residential type around site:
☐ **Urban** ☐ **Suburban** ☐ **Rural**

c. Population density around site:
☐ **High** ☐ **Medium** ☐ **Low**

d. Water supply of nearby residences:
☐ **Public** ☐ **Private Wells** ☐ **Mixed**

e. Is part or all of the water supply of the affected/interested community currently impacted by the site?
☐ **Yes** ☐ **No**

Provide details if appropriate:
Click here to enter text.

f. Other environmental issues significantly impacted/impacting the affected community?
☐ **Yes** ☐ **No**

Provide details if appropriate:
Click here to enter text.

g. Is the site and/or the affected/interested community wholly or partly in an Environmental Justice Area?
☐ **Yes** ☐ **No**

h. Special considerations:
☐ **Language** ☐ **Age** ☐ **Transportation** ☐ **Other**

Explain any marked categories in **h:**
Click here to enter text.

Part 5. The site contact list must include, at a minimum, the individuals, groups, and organizations identified in Part 2. of the Citizen Participation Plan under 'Site Contact List'. Are *other* individuals, groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)

☐ **Non-Adjacent Residents/Property Owners:** Click here to enter text.

☐ **Local Officials:** Click here to enter text.

☐ **Media:** Click here to enter text.

☐ **Business/Commercial Interests:** Click here to enter text.

☐ **Labor Group(s)/Employees:** Click here to enter text.

☐ **Indian Nation:** Click here to enter text.

☐ **Citizens/Community Group(s):** Click here to enter text.

☐ **Environmental Justice Group(s):** Click here to enter text.

☐ **Environmental Group(s):** Click here to enter text.

☐ **Civic Group(s):** Click here to enter text.

☐ **Recreational Group(s):** Click here to enter text.

☐ **Other(s):** Click here to enter text.

Prepared/Updated By: Click here to enter text. **Date:** Click here to enter text.

ReviewedApproved By: Click here to enter text. **Date:** Click here to enter text.

Appendix M

Remedial Action Costs

Urban Villages BCP Site - Track 1 Cleanup Estimate
Salina, New York

Work Element	Unit	Estimated Quantity	Unit Rate	Estimated Budget	Notes/Assumptions
Remedial Construction					
Mobilization	LS	1	30,000	30,000.00	
Erosion, Sediment, and Dust Control	LS	1	25,000	25,000.00	
Site Control and Security	LS	1	20,000	20,000.00	
Excavation	CY	64,000	5	320,000.00	Based on site grading plan; soil reuse on-site
Dewatering and Water Management	LS	1	1,300,000	1,300,000.00	
Shoring	LS	1	500,000	500,000.00	
Waste Characterization	Ea	80	850	68,000.00	Assumes current landfill criteria
Transportation/Disposal	T	86,400	120	10,368,000.00	Assmues off-site disposal of all excavation spoils at permitted landfill, as non-hazardous waste
General Backfill	CY	37,844	30	1,135,320.00	
Structural Fill (upper two feet)	CY	25,229	35	883,015.00	
Topsoil	CY	2,584	74	191,216.00	
Seeding	SF	139,551	0.1	13,955.10	
Backfill Material /Imported Fill Testing	LS	1	35,000	35,000.00	Per DER-10 Criteria
VI Mitigation Systems (Buildings 6 and 7)	Ea	2	50,000	100,000.00	
Site Survey	LS	1	50,000	50,000.00	
Remediation Oversight				-	
Inspections of Remedy, Pre-Occuancy Indoor Air Testing	LS	1	50,000	50,000.00	
C&S Construction Oversight	Mo	18	25,000	450,000.00	
C&S Reporting (SMP, FER)	LS	1	35,000	35,000.00	
SUBTOTAL:				**15,574,506.10**	
CONTINGENCY (20%):				3,114,901.22	
CONSTRUCTION SUBTOTAL:				**18,689,407.32**	
ANNUAL CERTIFICATION:	Yr	30	3,000	90,000.00	
TOTAL:				**18,779,407.32**	

Urban Villages BCP Site - Track 4 Cleanup Estimate
Salina, New York

Work Element	Unit	Estimated Quantity	Unit Rate	Estimated Budget	Notes/Assumptions
Remedial Construction					
Mobilization	LS	1	30,000	30,000.00	
Erosion, Sediment, and Dust Control	LS	1	25,000	25,000.00	
Site Control and Security	LS	1	20,000	20,000.00	
Grading (Cut)	CY	3,386	5	16,930.00	Based on site grading plan; soil reuse on-site
Waste Characterization	Ea	0	850	-	Assmues on-site reuse of excavation spoils beneath cover system
Transportation/Disposal	T	0	120	-	Assumes 1.5 T/CY; assumes reuse of all cut spoils on-site under cover system
Cover System					
Asphalt Pavement System (subbase, base course, binder, topcoat)					
Compacted subbase (12-inch thickness)	T	7,668	30	230,040.00	
Asphalt (binder and topcoat courses, 4-inch thickness)	SF	138,036	5	690,180.00	
Concrete and Paver Systems (sidewalks, patios, pads)					
Compacted subbase (6-inch thickness)	T	1,260	35	44,100.00	
Fine-grade Sidewalks	SF	45,456	0.5	22,728.00	
Concrete (4-inch thickness)	SF	45,456	8.5	386,376.00	
Soil Cover System (demarcation fabric, 18 inches general fill, 6 inches topsoil, seed)					
Demarcation Fabric	SF	139,551	1	139,551.00	
General Fill (18 inch thickness)	CY	7,753	30	232,590.00	
Topsoil (Top 6 inches of cover system)	CY	2,584	74	191,216.00	
Seeding	SF	139,551	0.1	13,955.10	
Backfill Material /Imported Fill Testing	LS	1	16,000	16,000.00	General Fill and topsoil for cover system, per DER-10 criteria
VI Mitigation Systems (Buildings 6 and 7)	Ea	2	50,000	100,000.00	
Site Survey	LS	1	30,000	30,000.00	
Remediation Oversight				-	
Inspections of Remedy, Pre-Occupancy Indoor Air Testing	LS	1	35,000	35,000.00	
C&S Construction Oversight	Mo	6	25,000	150,000.00	
C&S Reporting (SMP, FER)	LS	1	35,000	35,000.00	
SUBTOTAL:				**2,408,666.10**	
CONTINGENCY (20%):				481,733.22	
CONSTRUCTION SUBTOTAL:				**2,890,399.32**	
ANNUAL CERTIFICATION:	Yr	30	5,000	150,000.00	
TOTAL:				**3,040,399.32**	

Appendix N

Request to Import / Reuse Fill Material

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

The allowable site use is: Choose an item

Have Ecological Resources been identified? Choose an item

Is this soil originating from the site? Choose an item

How many cubic yards of soil will be imported/reused? Choose an item

If greater than 1000 cubic yards will be imported, enter volume to be imported:

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? Choose an item

Does it contain less than 10%, by weight, material that passes a size 100 sieve? Choose an item

Is this virgin material from a permitted mine or quarry? Choose an item

Is this material recycled concrete or brick from a DEC registered processing facility? Choose an item

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Location where fill was obtained:

Identification of any state or local approvals as a fill source:

If no approvals are available, provide a brief history of the use of the property that is the fill source:

Provide a list of supporting documentation included with this request:

The information provided on this form is accurate and complete.

_____ _____

Signature Date

_____

Print Name

_____

Firm

Revised April 2023