DECISION DOCUMENT

NYSEG - Binghamton Court St. MGP
Operable Unit Number 02:
Susquehanna River Sediment
Manufactured Gas Plant Project
Binghamton, Broome County
Site No. 704031
June 2021

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

NYSEG - Binghamton Court St. MGP
Operable Unit Number: 02
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 02: Susquehanna River Sediment of the NYSEG - Binghamton Court St. Manufactured Gas Plant (MGP) site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Number: 02 of the NYSEG - Binghamton Court St. MGP site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternatives analysis (AA). The IRM(s) undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore, No Further Action with Monitoring is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

The elements of the selected remedy are as follows:

1. Green Remediation

Green remediation principals and techniques will be implemented to the extent feasible in the 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 gas 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; and
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and,
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Site Management Plan

a. The Site Management Plan for OU1 will be updated to include OU2 site management activities, which include the following:

- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the engineering controls.

b. A monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of sediment and riverbank to assess the performance and effectiveness of the remedial measures; and
- a schedule of monitoring and frequency of submittals to the Department.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

6/28/21
Date

Janet E Brown
Janet Brown, Director
Remedial Bureau C

DECISION DOCUMENT

NYSEG - Binghamton Court St. MGP – OU2
Binghamton, Broome County
Site No. 704031
June 2021

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternative analysis (AA). The IRMs undertaken at this site are discussed in Section 6.2. Contaminants include hazardous waste and/or petroleum.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action with Monitoring is the selected remedy. A No Further Action remedy may include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This DD identifies the IRM(s) conducted and discusses the basis for No Further Action.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=704031

Broome County Central Library
185 Court Street
Binghamton, NY 13901
Phone: (607) 778-6407

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The Binghamton Court Street MGP site is located in an industrial section of Binghamton, NY and occupies approximately 4.3 acres of land identified as 271-291, and 293 Court Street. The site is bordered on the west by Brandywine Avenue and to south by Court Street and the Susquehanna River.

Site Features: The site is a gravel lot. Immediately north of the site is a major Norfolk and Southern Railroad line.

Current Zoning and Land Use: The site is currently used as a natural gas service center and a combination of storage and warehousing. The site is zoned for industrial use.

Past Use of the Site: The site was used as a former Manufactured Gas Plant from 1888 until it was decommissioned in approximately 1969.

Operable Units: The site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. Operable unit 1 (OU1) is the on-site former MGP area. OU2 consists of the off-site sediment impacts in the Susquehanna River.

Site Geology and Hydrogeology: The surface and subsurface soils within OU1 consist of fill material which starts at the surface and extends to approximately 12 feet below ground surface (bgs). Below the fill unit is an alluvial silt and clay layer which is approximately 10 feet thick. Underneath the alluvial and clay layer is a sand and gravel layer which averages about 30 feet thick. Below this is the till layer which is approximately 45 feet thick and of very low permeability which forms a lower confining unit. A dark gray shale bedrock underlies the till at a depth of 100 ft bgs. The groundwater level is generally at 6 to 8 feet below grade and flows south toward the Susquehanna River.

The subsurface of the Susquehanna River (OU2) consists primarily of outwash sands and gravels from the sediment surface to the top of till that ranges from loose to very dense. The till is approximately 30 to 35 feet below the sediment surface and is composed of a dense silt and clay matrix containing embedded sand and gravel, rounded to angular with multiple rock types. The shale bedrock underlies the till at approximately 70 to 80 feet below sediment surface. The Susquehanna River in OU2 flows towards the west.

Operable Unit (OU) Number 02 is the subject of this document.

A Record of Decision was issued previously for OU1 in March 2013. The majority of site remediation occurred from the late 1990's through 2006 and included the removal of gas holders and other MGP infrastructure, construction of a coal tar barrier wall, and replacement of a 66-inch storm sewer than bisected the site. Residual contamination is currently managed through on-going Site Management.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. This Decision Document evaluates remedial options for addressing sediment in the Susquehanna River and does not address on-site soil remediation. On-site soil contamination was addressed under the 2013 Record of Decision for the site.

A comparison of the results of the RI to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

New York State Electric and Gas (NYSEG)

The Department and NYSEG entered into a Consent Order (Index No. D7-001-96-03) on November 11, 1996, and a Modified Consent Order (Index No. A7-0379-9811) on January 4, 1999. The Order obligates the NYSEG to implement a full remedial program for MGP-related contamination both on and off the site, and states that the selected remedy be memorialized in a decision document that shall be incorporated into and shall become an enforceable part of that Order.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on OU2 includes data for:

- surface water
- sediment

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data.

The contaminant(s) of concern identified for this Operable Unit at this site is/are:

coal tar	polycyclic aromatic hydrocarbons (PAHS), total

The contaminant(s) of concern exceed the applicable SCGs for:

- sediment

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Off-Site Sediment IRM

In 2018 and 2019, NYSEG implemented a sediment removal IRM to address the most accessible and contiguous shallow sediments with MGP-related visual impacts and/or polycyclic aromatic hydrocarbons (PAHs) exceeding the Department's Class A sediment guidance value of 4 parts per million (ppm). Approximately 750 cubic yards of MGP-impacted sediment was excavated from two distinct areas of the Susquehanna River that bordered the former MGP. The excavation depths ranged from 1 to 5 feet below sediment surface. Following removal of shallow sediment, clean backfill meeting Class A sediment guidance values were placed to restore the excavation areas to its pre-construction elevation. The actions taken during this IRM are documented in an IRM Final Engineering Report, for both OU1 and OU2, dated December 2019.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 02, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination:

For OU1: On-Site Areas

Remediation at this operable unit is complete. Prior to remediation, the primary contaminants of concern for OU1 were related to coal tar and included volatile organic compounds (VOC)

comprised primarily of benzene, toluene, ethyl benzene, and xylene (BTEX); semi-volatile organic compounds (SVOC) comprised mainly of polycyclic aromatic hydrocarbons (PAHs); heavy metals; and cyanide. The upper foot of soil on-site is clean gravel which meets the requirements for commercial (and industrial) use specified in 6NYCRR Part 375-6.7(d). Residual contamination in the soil and groundwater is being managed under a Site Management Plan as mandated by the OU1 Record of Decision, dated March 2013.

For OU2: Off-Site Areas

At OU2, and prior to the IRM, the primary contaminants of concern were non-aqueous phase liquid (NAPL), in the form of coal tar, and PAHs. Coal tar contains VOCs comprised primarily of benzene, toluene, ethyl benzene, and xylene (BTEX) and a complex mixture of PAHs. The pre-IRM contamination extent is shown on Figure 2.

Sediments: A sediment removal IRM was completed in 2018-2019 to address accessible MGP-impacted sediments located adjacent to the site. Prior to the IRM, the above-noted contaminants of concern were found in portions of the Susquehanna River that border Court Street next to OU1. Specifically, shallow contamination was observed from the sediment surface to approximately 5 feet below sediment surface (bss) in two portions of the river - one proximate to a former 66-inch storm sewer (in the southwest corner of OU1), and another where a 24-inch pipe and two other outfall pipes in the Court Street floodwall discharged into the river. Deep contamination was observed at approximately 20 to 30 feet bss in these areas within a sand and gravel layer that exists below the river bottom. These outfalls likely acted as a migration pathway that allowed contamination from the site to impact shallow sediments, while the sand and gravel layer acted as a migration pathway that allowed deeper contamination to migrate off-site beneath the Court Street flood wall.

The shallow sediments in both IRM areas contained NAPL blebs, light NAPL coating, odors, staining, and sheens as well as PAH concentrations up to 850 ppm which exceeded the Class A sediment screening value for total PAHs of 4 ppm, which is considered to be the level of PAHs that poses a low risk to aquatic life. The deeper sediments contain NAPL-coated sand and gravel with faint to strong coal tar odors. Following the completion of the OU2 IRM, shallow sediments were restored with clean backfill that meets the Class A sediment screening value, with remaining residual or minor impacts occurring at isolated, non-contiguous locations. The extent of the IRM excavation areas are shown on Figure 3.

Surface Water: Surface water was not found to be directly impacted by site-related contamination.

Special Resources Impacted/Threatened:

Prior to implementation of the OU2 sediment removal IRM, the Fish and Wildlife Resources Impact Analysis (FWRIA), which is included in the RI report, presented a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. In summary, the Susquehanna River sediments and bed materials represented the only complete exposure pathway for wildlife at the

site. Notably, PAHs detected in the riverbed materials exceeded the Departments screening levels with the majority of samples containing PAHs above screening levels located in two areas of the riverbed and shoreline that received MGP-related discharges. The result of the FWRIA necessitated the implementation of the OU2 sediment removal IRM to address this contamination. Following completion of the OU2 sediment removal IRM, these resources are no longer significantly impacted.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Within Operable Unit 1 (OU1) measures are in place to prevent public exposure to residual site-related contaminants. Within Operable Unit 2 (OU2), people are unlikely to come into contact with residual contaminants in river sediments because access to the river within OU2 is restricted by a flood wall and a steep embankment.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Sediment

RAOs for Public Health Protection

- Prevent direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria).
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.
- Restore sediments to pre-release/background conditions to the extent feasible.

SECTION 7: SUMMARY OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in a Focused Feasibility Study. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The selected remedy is referred to as the No Further Action with Monitoring.

Based on the results of the investigations at the site, and the IRM that have been performed, the Department is selecting No Further Action with Monitoring as the remedy for the site. The Department believes that, based on the remedial measure already implemented, this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the selected remedy are as follows:

1. Green Remediation

Green remediation principals and techniques will be implemented to the extent feasible in the 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 gas 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; and
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and,
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

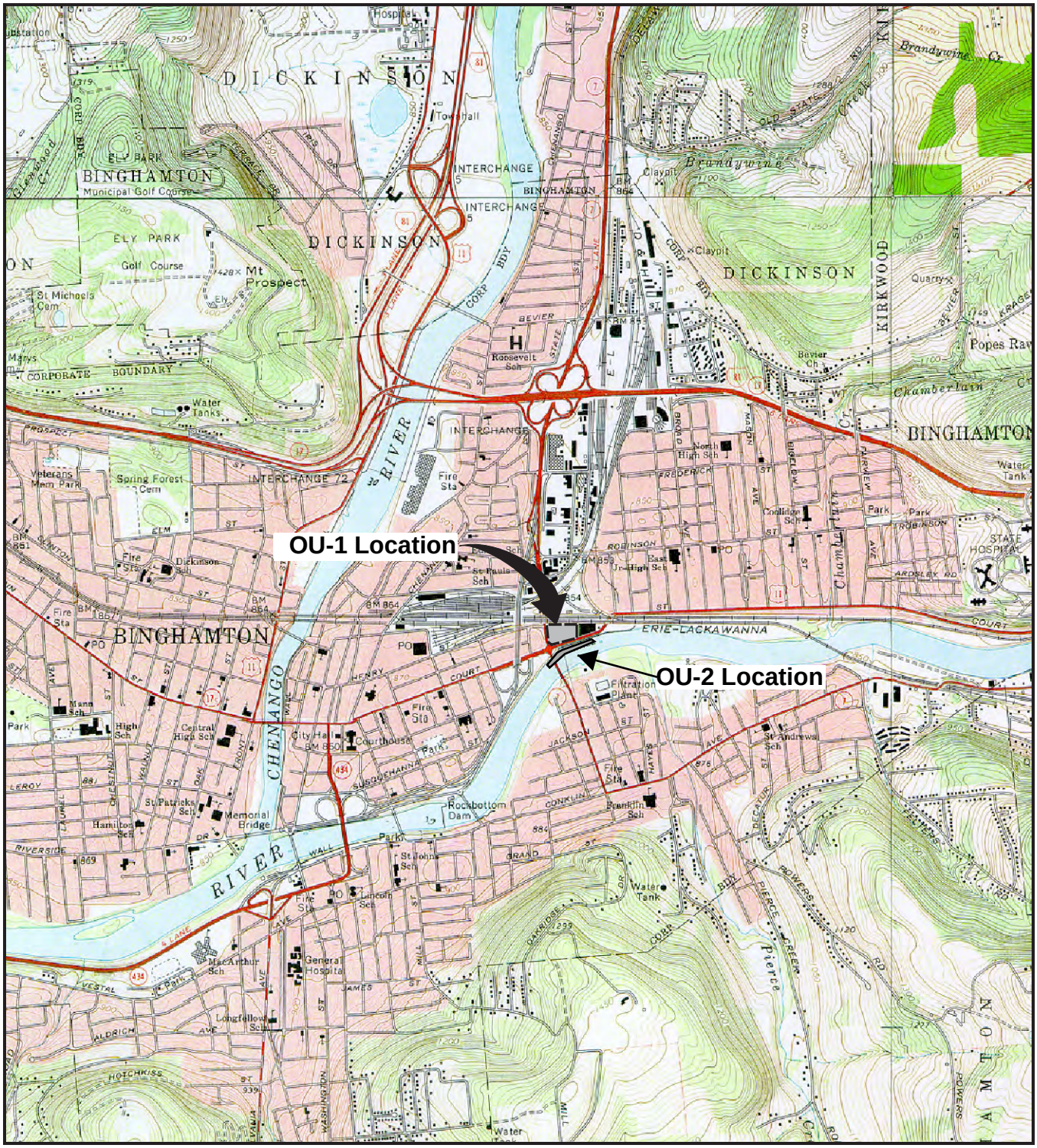
2. Site Management Plan

a. The Site Management Plan for OU1 will be updated to include OU2 site management activities, which include the following:

- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the engineering controls.

b. A monitoring plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

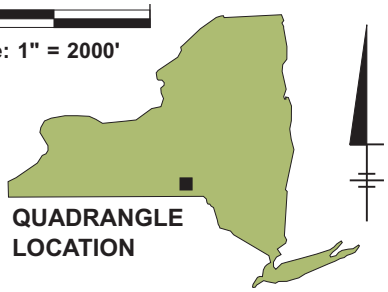
- monitoring of sediment and riverbank to assess the performance and effectiveness of the remedial measures; and
- a schedule of monitoring and frequency of submittals to the Department.



REFERENCE: BASE MAP SOURCE: USGS 7.5 MIN. TOPO. QUAD., BINGHAMTON EAST, NY., BINGHAMTON WEST, NY., CASTLE CREEK, NY., CHENANGO FORKS, NY. (1968, PHOTOREVISED 1976).

2000' 0 2000'

Approximate Scale: 1" = 2000'



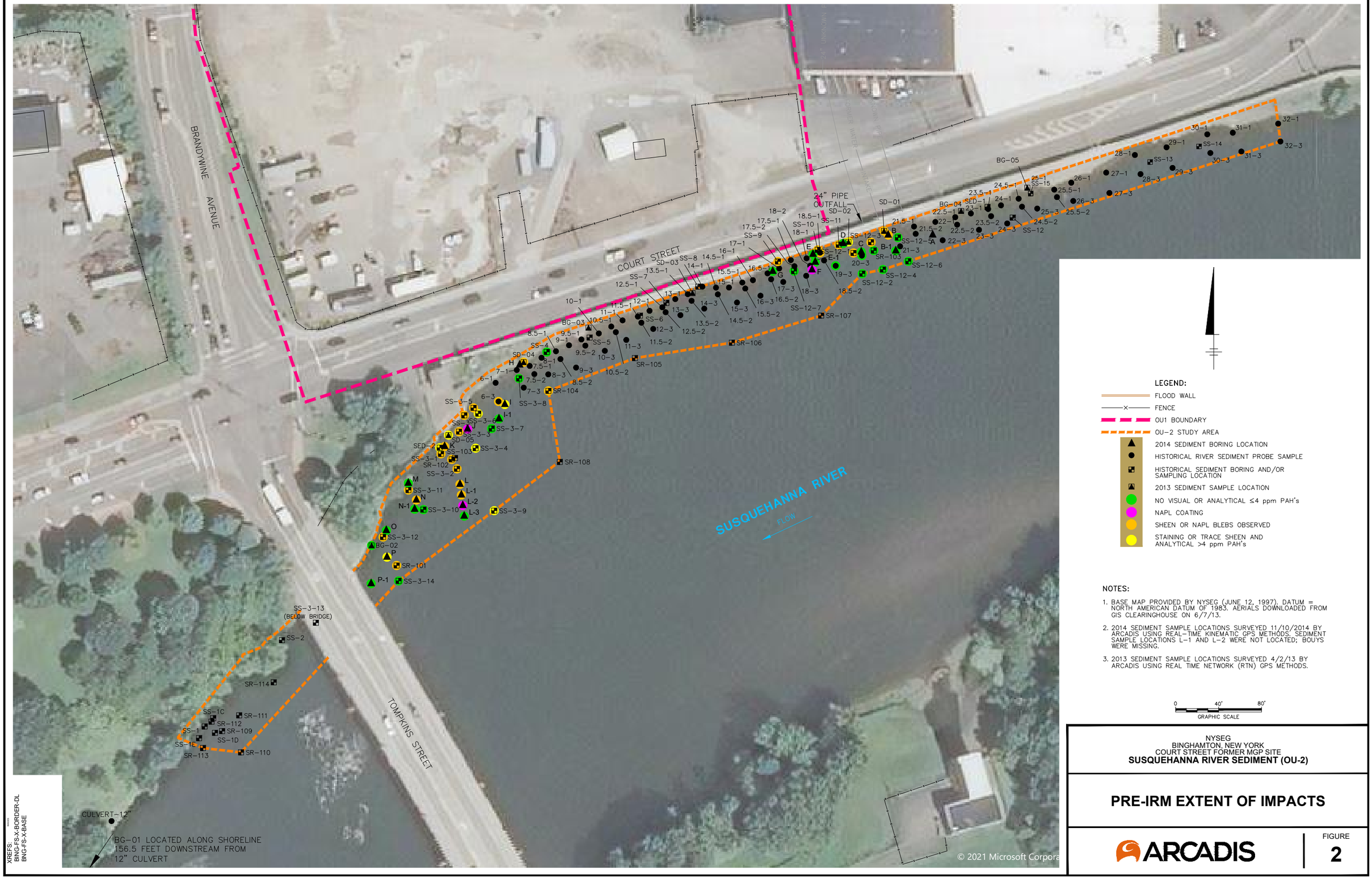
NYSEG
COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

SITE LOCATION MAP

ARCADIS

FIGURE
1

12/11/2012 SYRACUSE, DIV/GROUP: ENV/IM-DV DJHOWES
B0013103/0003/00010/CDR/13103N01.CDR



XREFS:
BING-FS-X-BORDER-DL
BING-FS-X-BASE

LEGEND:

- FLOOD WALL
- FENCE
- OU1 BOUNDARY
- OU-2 STUDY AREA
- 2014 SEDIMENT BORING LOCATION
- HISTORICAL RIVER SEDIMENT PROBE SAMPLE
- HISTORICAL SEDIMENT BORING AND/OR SAMPLING LOCATION
- 2013 SEDIMENT SAMPLE LOCATION
- NO VISUAL OR ANALYTICAL ≤4 ppm PAH's
- NAPL COATING
- SHEEN OR NAPL BLEBS OBSERVED
- STAINING OR TRACE SHEEN AND ANALYTICAL >4 ppm PAH's

NOTES:

1. BASE MAP PROVIDED BY NYSEG (JUNE 12, 1997). DATUM = NORTH AMERICAN DATUM OF 1983. AERIALS DOWNLOADED FROM GIS CLEARINGHOUSE ON 6/7/13.
2. 2014 SEDIMENT SAMPLE LOCATIONS SURVEYED 11/10/2014 BY ARCADIS USING REAL-TIME KINEMATIC GPS METHODS. SEDIMENT SAMPLE LOCATIONS L-1 AND L-2 WERE NOT LOCATED; BOUYS WERE MISSING.
3. 2013 SEDIMENT SAMPLE LOCATIONS SURVEYED 4/2/13 BY ARCADIS USING REAL TIME NETWORK (RTN) GPS METHODS.

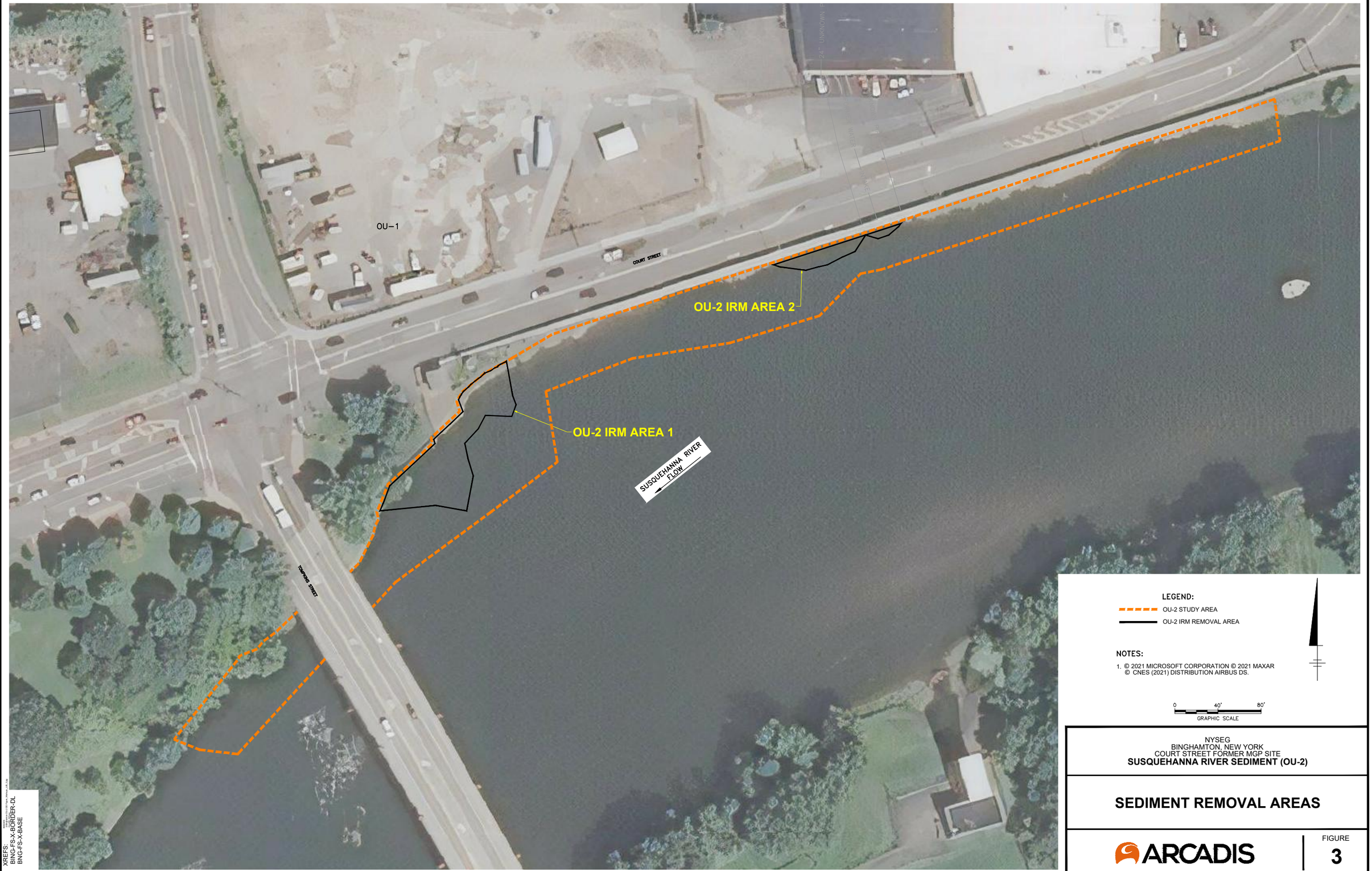
0 40' 80'
GRAPHIC SCALE

NYSEG
BINGHAMTON, NEW YORK
COURT STREET FORMER MGP SITE
SUSQUEHANNA RIVER SEDIMENT (OU-2)

PRE-IRM EXTENT OF IMPACTS

ARCADIS

FIGURE
2



LEGEND:

- OU-2 STUDY AREA
- OU-2 IRM REMOVAL AREA

NOTES:

1. © 2021 MICROSOFT CORPORATION © 2021 MAXAR © CNES (2021) DISTRIBUTION AIRBUS DS.

0 40' 80'
GRAPHIC SCALE

NYSEG
BINGHAMTON, NEW YORK
COURT STREET FORMER MGP SITE
SUSQUEHANNA RIVER SEDIMENT (OU-2)

SEDIMENT REMOVAL AREAS

ARCADIS

FIGURE
3

CITY:SYRACUSE, N.Y. DIV/GROUP:ENV/IM/DV DB:RCB, K.SARTORI LD:(OPT) PIC:(OPT) PM:JTM:J.BISTROVICH LYR:(OPT)ON=*;*OFF=*REF*
C:\Users\Ksartori\ACCDocs\Arcadis\ANA - NEW YORK STATE ELECTRIC AND GAS\Project Files\2021101-DWG\BING-SRS-F01-SED-REM.dwg LAYOUT: 1 SAVED: 6/9/2021 1:39 PM ACADVER: 24.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/9/2021 1:39 PM BY:
SARTORI, KATHERINE
XREFS:
BING-FS-X-BORDER-DL
BNG-FS-X-BASE