

Soil/Fill Management Plan (SFMP) for Remedial Investigation Activities and Interim Remedial Measures

*Sonwil Distribution Center
Buffalo Lakeside Commerce Park Site*

August 2007

0131-001-200

Prepared For:



SONWIL DISTRIBUTION CENTER
Buffalo, New York

Prepared By:



SOIL/FILL MANAGEMENT PLAN

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SOIL/FILL MANAGEMENT PLAN

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1.0 INTRODUCTION

1.1 Background

The Sonwil Buffalo Lakeside Commerce Park Site is an approximate 26-acre parcel located at 99 Tifft Street in the City of Buffalo (the City), Erie County, New York (see Figures 1 and 2). The Sonwil BCP Site is located in an underused and former heavy industrial area near the southern boundary of the City of Buffalo. The Site is surrounded by current and former heavy industrial sites, NYSDEC Inactive Hazardous Waste Sites, NYSDEC Petroleum Spill Sites, and other Brownfield Cleanup Program Sites. The Sonwil BCP Site is comprised of a portion of the following three properties:

- Approximately 2.5 acres of the former Herbert F. Darling (Darling) site, which is vacant undeveloped land generally covered with grass and brush vegetation as well as areas of slag and gravel. Several soil/fill piles and slag piles are located in the central portion of the site.
- Approximately 16.0 acres of the former CSX site, which is located in a vacant former railroad corridor and is generally covered with slag and gravel (apparently used as railroad ballast). The remainder of the Site is generally covered with vegetation.
- Approximately 7.5 acres of the Shenango Steel and Mold (Shenango) site, which is part of the former Hanna Furnace property located at 1750 Fuhrmann Boulevard (near Route 5) at the southern limit of the City of Buffalo. The property is currently unoccupied.

The Sonwil BCP Site has been segmented into five Areas of Concern (AOCs) for ease of discussion based upon historic activities conducted at the Site. The AOCs are identified as follows:

- AOC 1 – Site subsurface soils outside AOCs 4 and 5.
- AOC 2 – Site surface soils outside AOCs 4 and 5.
- AOC 3 – Site groundwater.
- AOC 4 – Former Shenango Mold Polychlorinated Biphenyl (PCB) Area.
- AOC 5 – Former Shenango Mold Groundwater Infiltration Area.

The Site is currently owned by the Buffalo Urban Development Corporation. Sonwil Distribution intends to purchase the property and redevelop the Site as a commercial office and warehouse facility. The project will include immediate construction of a 300,000 square foot building, with future plans to construct an adjacent 300,000 square foot. The Site will be serviced by a railroad siding that will be constructed and connected to the existing railroad corridor located to the east of the Site.

1.2 Environmental Investigations and Remedial Activities

Benchmark prepared Phase I Environmental Site Assessment Reports (Refs. 1 and 3) in August 2006 and Phase II Environmental Site Investigation Reports (Refs. 2 and 4) in October 2006 for the Darling and CSX sites. Ecology and Environment Engineering prepared a Construction Certification Report for the Shenango site (Ref. 5) in September 2006. The following paragraphs summarize the environmental history of these sites as described in the above-referenced reports.

From approximately 1926 to 1986, the Darling site was used as a slag dumping area and apparent railroad corridor; the property has been vacant since 1995. Slag and other industrial fill materials used as rail ballasts contain highly variable and sometimes elevated concentrations of metals and semi-volatile organic compounds (SVOCs). Miscellaneous dumping was noted in various areas on-site. Materials observed included scrap automobile parts, household items, apparent asbestos house siding, and tires. Historic slag sampling conducted by the NYSDEC on the greater Darling parcel indicated that elevated arsenic, barium and PCBs were noted within at least one slag sample on-site. Possible dumping or landfill activities were noted on the north and south adjacent parcels.

From approximately 1926 to 1986, the CSX site was operated as a rail yard; the property has been vacant since approximately 1995. The CSX property is located in a vacant former railroad corridor and is generally covered with slag and gravel, which was apparently used as railroad ballast. The remainder of the Site is generally covered with vegetation.

From 1962 to 1982, the Shenango Steel Mold facility produced ingot molds for the steel industry. In October 1993, the NYSDEC investigated an anonymous report of trespassers scrapping electrical transformers and disposing of the transformer oil at the abandoned Shenango Steel Mold site. Sampling and analysis of oil-soaked soils detected polychlorinated biphenyl (PCB) contamination at hazardous levels greater than 50 parts per million (>50ppm).

In April 1994, NYSDEC initiated a removal action at the Shenango site that consisted of excavating and disposing visually contaminated concrete debris, a small amount of soil, and waste drums and pails from the area. In 2001, a remedial investigation was conducted to determine the nature and extent of any remaining site contamination and the potential impact these contaminants posed to human health and the environment. The findings of the RI were that PCBs, hydraulic oil, and semi-volatile compounds (SVOCs) were present in the soils and demolition debris at the site. A state Superfund supplemental investigation was completed in 2004, which better defined the nature and extent of PCB and hydraulic oil contamination on-site. The PCB contamination was highest in the north-central section of the site, with concentrations up to 138 parts per million (ppm). Other contaminants found on-site include metals such as lead, iron, mercury, and zinc; polycyclic aromatic hydrocarbons (PAHs); and volatile organic compounds (VOCs), including toluene, ethyl benzene, and xylenes. Design drawings and specifications for the remedial cleanup were completed by NYSDEC in June 2005. In February 2006, approximately 3,997 tons of PCB-impacted soil and debris, and approximately 5,955 tons of LNAPL-impacted soil were removed from the site (it should be noted that the LNAPL area is outside the boundaries of the Sonwil site). In addition, approximately 974 tons of sand/fill from an infiltration basin used to re-introduce groundwater and surface water extracted from remedial excavations showed slightly elevated levels of metals contamination and was disposed off-site. Of particular note, cleanup objectives of that remedial effort used 10 ppm in subsurface soil and the current commercial/industrial.

1.3 Purpose and Scope

The purpose of this Soil/Fill Management Plan (SFMP) is to protect both the environment and human health during redevelopment of the Site and subsequent to completion of Brownfield Cleanup activities. While assessments of surface and subsurface soil/fill and groundwater at the Site will be performed during the RI, subsurface information is never 100 percent complete or accurate, especially on a site with a long and diverse history. As such, it is not unreasonable to anticipate the possibility that some quantity of impacted subsurface soil/fill may be encountered following completion of the IRM and Brownfield cleanup activities. In particular, soil/fill impacts may be encountered during development activities such as infrastructure construction (i.e., roads, waterline, sewers,

electric cable, etc.) or foundation excavation and site grading. The SFMP will be modified/expanded as appropriate based on the results of the RI.

Compliance with this SFMP is required to properly manage any impacted subsurface soil/fill encountered during redevelopment activities at the Site. This SFMP was developed with the express purpose of addressing unknown subsurface impacts if and when encountered. The SFMP also facilitates the transfer of responsibilities with property ownership.

The SFMP provides protocols for the proper handling of Site soil/fill during maintenance and development activities, including:

- Excavation, grading, sampling, handling, and disposing Site soil/fill.
- Sampling, analyzing, and determining acceptability of soil/fill from off-site sources for backfill or subgrade fill.
- Acceptability and placement of final soil and vegetative cover.
- Erosion and dust control measures.
- Access controls.
- Health and safety procedures for subsurface construction work and the protection of the surrounding community.
- Environmental easements.
- Program responsibilities.
- Notification and reporting requirements.

1.4 Soil/Fill Management Program Responsibility

As the developer and future property owner, Sonwil Distribution will be responsible for all monitoring, implementation, and reporting requirements of the SFMP. The developer and owner will not perform, nor contract, nor permit their employees, agents, or assigns to perform any excavations or disturbance of site soils, except as delineated in this SFMP. Any excavation, regrading or disturbance of on-site soils inconsistent with the provisions of the Plan may be grounds for NYSDEC to void its release from claims, actions, suits, proceeding by the NYSDEC against the site owner(s), successor(s) or assigns for environmental conditions on the Site. Such nonconformance with this SFMP may also void or limit environmental insurance protection of the owner(s) and their successors and assigns in accordance with policy terms and conditions. The property owner(s) or their agents will be responsible for proper notification and reporting to regulatory agencies (i.e., NYSDEC

Region 9, Division of Environmental Remediation and NYSDOH) prior to and following site development as described in Section 2.11.

The NYSDEC may provide periodic construction oversight and monitoring during Site redevelopment activities to verify that the requirements of this SFMP are adhered to.

2.0 SOIL/FILL MANAGEMENT

2.1 Excavation and Handling of On-Site Soil/Fill

A environmental professional with experience in environmental site investigations and the New York State Brownfield Cleanup Program will inspect soil/fill excavations or disturbances (e.g., when using heavy equipment to disturb more than 10 cubic yards) on behalf of the subject property owner. The soil/fill will be inspected for staining or discoloration, and will be field screened for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). The PID detector will be calibrated as per the manufacturer's requirements. Sampling and analyses to verify excavation limits and analysis for disposal purposes will be in accordance with the protocols delineated in Section 2.3.

Excavation of impacted soil/fill will continue horizontally until visually impacted materials are removed to the satisfaction of TurnKey and the NYSDEC representative, but will not extend beyond the Site boundaries. All excavation work will be directed by an experienced TurnKey scientist to remove all impacted material. Lateral and vertical excavation will continue as described above until visually impacted soil/fill is removed, Part 375 restricted-commercial SCOs are met, or NYSDEC agrees that no further excavation is required.

2.2 Subgrade Material

Subgrade material used to backfill excavations or to increase Site grades or elevations shall meet the following criteria:

- Excavated on-site soil/fill meeting the requirements of Track 2 Restricted-Commercial or Industrial SCOs (Track 2 SCOs).
- Off-site soil/fill originating from known sources having no evidence of disposal or releases of hazardous substances, hazardous, toxic or radioactive wastes, or petroleum and tested to meet all Track 2 Restricted-Commercial or Industrial SCOs (Track 2 SCOs).
- All off-site sources of soil to be used as backfill must be tested in accordance with the Sampling and Analytical Protocol (Section 2.3), and found to contain

concentrations less than criteria listed in Table 1 – Criteria for Use of Off-Site Soil.

- No off-site materials meeting the definition of a solid waste as defined in 6 NYCRR, Part 360 shall be used as backfill.

2.2.1 Borrow Source Sampling Requirements

If an off-site soil/fill borrow source is of unknown origin or originates from a commercial, industrial or urban site, then it must meet the SCO's for the analytes listed on Table 1. A minimum of one composite sample will be collected for each 500 cubic yards (CY) up to 1,000 CY of a borrow source. If the first 1,000 CY meet the re-use criteria, the sample collection frequency may be reduced to one composite sample for each additional 1,000 CY of borrow source, up to 5,000 CY and one composite sample per 5,000 CY thereafter. If an off-site soil/fill borrow source is of known origin, NYSDEC would be involved in the decision as to whether the source is in fact known and acceptable for use.

Grab samples will be collected for VOC analysis. For all other analyses, a minimum of four grab samples will be collected per composite sample. Approximately equal aliquots of the grab samples will be composited in the field using a stainless steel trowel and bowl. The trowel and bowl shall be decontaminated with a non-phosphate detergent (i.e., Alconox®) and potable water wash solution followed by a distilled water rinse between sampling locations. The soil/fill samples will be analyzed in accordance with USEPA SW-846 Methodology by a NYSDOH ELAP-certified laboratory.

2.3 Soil/Fill Sampling and Analysis Protocol

Excavated soil/fill that is designated for off-site disposal shall be sampled in accordance with the requirements of the off-site disposal facility and the appropriate regulatory authorities. In addition, the resulting excavation following removal of impacted soil/fill will require verification sampling and analysis to determine the limits of impact. Both characterization and verification sampling and analysis are discussed in the following sections.

2.3.1 Soil/Fill Characterization

The following procedure represents a suggested method for determining off-site disposal requirements for impacted soil/fill designated for off-site disposal. The sampling procedures, frequency and parameter list must be coordinated with the off-site disposal facility prior to undertaking characterization work.

Visually impacted soil/fill, olfactory evidence of contamination, or fill exhibiting elevated PID readings (i.e. >5 ppm) encountered during excavation will be placed on and covered with polyethylene sheeting, and sampled to determine proper off-site disposal. The stockpiled material will be managed to prevent infiltration of precipitation and wind erosion.

The stockpiled impacted material will be characterized per the requirements of a permitted disposal facility and an appropriate disposal plan will be developed. Stockpiled impacted material will not remain on-site for more than 90 days. Excavated soil/fill should be separately stockpiled in 250 CY or smaller piles. A representative sample will be collected from each stockpile. If the stockpiles are from a single source area, sampling may be reduced to one sample per 1,000 cubic yards following receipt of data from four 250 cubic yard stockpiles without concentrations of analytes greater than the guidance concentrations in Table 1.

2.3.2 Verification Sampling

Verification sampling will be performed on the sidewalls and bottom of the excavation after lateral excavation limits have been achieved and visibly impacted soil/fill has been removed. Lateral and vertical excavation will continue until NYSDEC Part 375 restricted-commercial SCOs are met, or NYSDEC agrees that no further excavation is required. All field decisions concerning the limits of excavation shall be approved by the NYSDEC site representative.

In general, one sidewall sample will be collected on each of the four sides of the excavation for each 30 linear feet of excavation sidewall and one bottom sample of the excavation will be collected for each 900-square feet of excavation bottom. The samples will be collected by retrieving a discrete sample from across the excavation face. The backhoe bucket will be used to assist in sample collection and avoid the need for confined space entry.

All samples will be analyzed by a National Environmental Laboratory Accreditation Counsel (NELAC) approved analytical laboratory for NYSDEC TCL plus STARS List

VOCs (if necessary based on PID readings), TCL SVOCs, TAL metals, and PCBs (only in AOC 4) in accordance with USEPA SW-846 Methodology with an equivalent Category B deliverables package to facilitate data evaluation by a third-party validation expert. Two-business day turnaround will be requested for the analytical results to minimize the time that the excavation(s) remains open.

2.4 Groundwater Management

Historical groundwater elevation measurements taken from monitoring wells on the Site indicate that the first water bearing zone (i.e., water table) ranges from approximately 1.0 to 4.0 feet below grade within the soil/fill unit. Accordingly, groundwater management will likely be necessary as part of the construction and redevelopment effort. Groundwater and surface water run-in to foundation excavations will be treated on-site (if necessary) prior to discharge to the sanitary sewer with permission from the Buffalo Sewer Authority (BSA). Specifically, water will be stored in a portable tank and pumped through bag filter units, followed by treatment using GAC. Following completion of excavation work, settled solids remaining in the tank and spent filter bags will be containerized for off-site disposal. Spent GAC will be characterized and regenerated off-site, or disposed at a permitted treatment storage and disposal facility (TSDF) in accordance with applicable federal and state regulations. The tank will be decontaminated via pressure washing. The property owner or general contractor will coordinate with the BSA to obtain necessary temporary discharge permits.

2.5 Excavation Backfill

Following NYSDEC concurrence that the excavation is complete, the resulting excavation will be backfilled with non-impacted Site soil or clean imported fill material. Backfill material will be placed into the excavation and compacted with the excavator/backhoe bucket in 2-foot lifts to match the existing grade of the Site and minimize settling. Alternatively, Sonwil Distribution's redevelopment plans may require that select backfill be placed in accordance with certain geotechnical requirements (e.g., 95% of a standard proctor test).

2.6 Erosion Controls

An important element of soil/fill management on this Site is the mitigation and control of surface erosion from stormwater runoff. For this reason, a Master Erosion Control Plan (MECP), developed and incorporated as Attachment A2, will be used during all RI and IRM activities.

2.7 Dust Controls

Particulate monitoring will be performed along the downwind perimeter of the Site during subgrade excavation, grading, and handling activities in accordance with the NYSDOH Generic Community Monitoring Plan contained in Attachment A1 and the NYSDEC Technical Assistance and Guidance Memorandum (TAGM) 4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites. Dust suppression techniques will be employed as necessary to mitigate fugitive dust from non-vegetated or disturbed soil/fill during post-remediation maintenance activities and/or future development. All reasonable attempts will be made to keep visible and/or fugitive dust to a minimum. Techniques to be used may include one or more of the following:

- Applying water on haul roads.
- Wetting equipment and excavation faces.
- Spraying water on buckets during excavation and dumping.
- Hauling materials in properly tarped containers or vehicles.
- Restricting vehicle speeds on-site.
- Covering excavated areas and materials after excavation activity ceases.
- Reducing the excavation size and/or number of excavations.

2.8 Fencing and Access Control

Interior temporary fencing shall be erected and maintained as necessary during construction activities to control access to open excavations and construction areas. Temporary fencing will be relocated by the property owner(s) as necessary as construction proceeds. All temporary fencing will be posted with “No Trespassing” signs.

2.9 Property Use Limitations

Environmental easements will be part of the final remedial measures for the Site and will include:

- Use restrictions such as commercial, office, and light industrial use. Commercial use includes retail and wholesale establishments (e.g., shoe stores, gasoline service stations, food stores, etc.) while light industrial use includes manufacturing, warehousing, storing, etc. The zoning specifically prohibits residential use.
- Requirements for annual certification as discussed in Section 2.10.

The environmental easement will be recorded with the Erie County Clerk. The environmental easement will be binding for the current property owner and all subsequent property owners and occupants.

2.10 Notification and Reporting Requirements

The following minimum notification and reporting requirements shall be followed by the property owner prior to and following Site maintenance activities or additional development, as appropriate:

- The NYSDEC and NYSDOH will be notified that subgrade activities are being initiated a minimum of 5 working days in advance of construction.
- A construction certification report, stamped by a NYS-licensed Professional Engineer, will be prepared and submitted to the NYSDEC and NYSDOH within 90 days after site re-development. At a minimum, the report will include:
 - An area map showing the area requiring maintenance or planned for development.
 - A map of the developed property showing actual building locations and dimensions, roads, parking areas, utility locations, berms, fences, property lines, sidewalks, green areas, contours and other pertinent improvements and features.
 - Plans showing areas and depth of fill removal.
 - Copies of daily inspection reports.

- A text narrative describing the excavation activities performed, health and safety monitoring performed (both site specific and Community Air Monitoring), quantities and locations of soil/fill excavated, disposal locations for the soil/fill, soil sampling locations and results, a description of any problems encountered, location and acceptability test results for backfill sources, and other pertinent information necessary to document that the site activities were carried out properly.
- Plans documenting the thickness of the clean soil cover system.
- A certification that all work was performed in conformance with the SFMP.
- The owners of developed parcels shall complete and submit to the NYSDEC, an Annual Report by January 15 of the following year (or in accordance with the specific requirements of the BCA). This report shall contain certification that the institutional controls put in place, pursuant to the SFMP, are still in place, have not been altered, and are still effective.

3.0 HEALTH AND SAFETY PROCEDURES

During maintenance or future development activities, the Site owner or developer shall be responsible for implementing suitable procedures to prevent both Site construction workers and the community from adverse exposure to residual parameters of concern and other potential hazards posed by the redevelopment work. This will be accomplished through adherence to a written, site-specific Health and Safety Plan (HASP), prepared in accordance with the regulations contained in OSHA 29CFR 1910.120 and a Community Air Monitoring Plan (CAMP) prepared in conformance with NYSDOH requirements. The site-specific HASP should include the following items:

- A safety and health or hazard analysis for each site task and operation.
- Employee training requirements.
- Personal protective equipment (PPE) to be used by employees for the site tasks.
- Medical surveillance requirements.
- Site control measures.
- Decontamination procedures.
- An emergency response plan.
- Confined space entry procedures.
- A spill containment program.
- Frequency and type of air monitoring, personnel monitoring, and environmental sampling techniques and instrumentation to be used, including methods of maintenance and calibration of equipment.

As an integral component of the HASP, the developer or Site owner will be responsible for implementing a CAMP designed to prevent the surrounding community from adverse exposures due to potential release/migration of airborne particulates or vapors. The community as referenced herein includes potential receptors located off-site (e.g., neighboring residents or businesses) as well as on-site receptors not directly involved in maintenance or development activities (e.g., businesses or contractors occupying the Site). The CAMP, presented as Attachment A1, will be implemented during activities involving disturbance or handling of Site soil/fill. The CAMP includes appropriate monitoring,

mitigation and response measures consistent with NYSDOH and NYSDEC guidelines. The results of the CAMP must be documented to the NYSDEC as described in Section 2.10.

4.0 REFERENCES

1. Benchmark Environmental Engineering and Science, PLLC, *Phase I Environmental Site Assessment Report, Herbert F. Darling Site, Buffalo, New York*, prepared for Buffalo Urban Development Corporation, August 2006.
2. Benchmark Environmental Engineering and Science, PLLC, *Phase II Environmental Site Investigation Report, Herbert F. Darling Site, Buffalo, New York*, prepared for Buffalo Urban Development Corporation, October 2006.
3. Benchmark Environmental Engineering and Science, PLLC, *Phase I Environmental Site Assessment Report, CSX (Former Penn 200 Yard) Site, Buffalo, New York*, prepared for Buffalo Urban Development Corporation, August 2006.
4. Benchmark Environmental Engineering and Science, PLLC, *Phase II Environmental Site Investigation Report, CSX (Former Penn 200 Yard) Site, Buffalo, New York*, prepared for Buffalo Urban Development Corporation, October 2006.
5. Ecology and Environment Engineering, P.C. 2006. *Construction Certification Report for the Sherango Steel Mold Site – Remedial Activity, City of Buffalo, Erie County, New York*. September

TABLES

TABLE 1
CRITERIA FOR USE OF OFF-SITE SOIL

Soil/Fill Management Plan
 Sonwil Distribution Center
 Buffalo Lakeside Commerce Park Site
 Buffalo, New York

Parameter	TRACK 2 Restricted-Commercial or Industrial SCOs
Volatile Organic Compounds (mg/kg)	
1,1,1-Trichloroethane	0.68
1,1-Dichloroethane	0.27
1,1-Dichloroethene	0.33
1,2-Dichlorobenzene	1.1
1,2-Dichloroethane	0.02
1,2-Dichloroethene(cis)	0.25
1,2-Dichloroethene(trans)	0.19
1,3-Dichlorobenzene	2.4
1,4-Dichlorobenzene	1.8
1,4-Dioxane	0.1
Acetone	0.05
Benzene	0.06
Butylbenzene	12
Carbon tetrachloride	0.76
Chlorobenzene	1.1
Chloroform	0.37
Ethylbenzene	1
Hexachlorobenzene	3.2
Methyl ethyl ketone	0.12
Methyl tert-butyl ether	0.93
Methylene chloride	0.05
Propylbenzene-n	3.9
Sec-Butylbenzene	11
Tert-Butylbenzene	5.9
Tetrachloroethene	1.3
Toluene	0.7
Trichloroethene	0.47

TABLE 1
CRITERIA FOR USE OF OFF-SITE SOIL

Soil/Fill Management Plan
 Sonwil Distribution Center
 Buffalo Lakeside Commerce Park Site
 Buffalo, New York

Parameter	TRACK 2 Restricted-Commercial or Industrial SCOs
Volatile Organic Compounds (mg/kg)	
Trimethylbenzene-1,2,4	3.6
Trimethylbenzene-1,3,5	8.4
Vinyl chloride	0.02
Xylene (mixed)	1.6
Semi-Volatile Organic Compounds (mg/kg)	
Acenaphthene	98
Acenaphthylene	107
Anthracene	500
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1.7
Benzo(g,h,i)perylene	500
Benzo(k)fluoranthene	1.7
Chrysene	1
Dibenz(a,h)anthracene	0.56
Fluoranthene	500
Fluorene	386
Indeno(1,2,3-cd)pyrene	5.6
m-Cresol(s)	0.33
Naphthalene	12
o-Cresol(s)	0.33
p-Cresol(s)	0.33
Pentachlorophenol	0.8
Phenanthrene	500
Phenol	0.33
Pyrene	500

TABLE 1

CRITERIA FOR USE OF OFF-SITE SOIL

Soil/Fill Management Plan
Sonwil Distribution Center
Buffalo Lakeside Commerce Park Site
Buffalo, New York

Parameter	TRACK 2 Restricted-Commercial or Industrial SCOs
Metals (mg/kg)	
Arsenic	16
Barium	400
Beryllium	47
Cadmium	7.5
Chromium, Hexavalent ¹	19
Chromium, Trivalent ¹	1500
Copper	270
Cyanide	27
Lead	450
Manganese	2000
Mercury (total)	0.73
Nickel	130
Selenium	4
Silver	8.3
Zinc	2480
PCBs/Pesticides (mg/kg)	
2,4,5-TP Acid (Silvex)	3.8
4,4'-DDE	17
4,4'-DDT	47
4,4'-DDD	14
Aldrin	0.19
Alpha-BHC	0.02
Beta-BHC	0.09
Chlordane (alpha)	2.9
Delta-BHC	0.25
Dibenzofuran	210
Dieldrin	0.1
Endosulfan I	102

TABLE 1

CRITERIA FOR USE OF OFF-SITE SOIL

**Soil/Fill Management Plan
Sonwil Distribution Center
Buffalo Lakeside Commerce Park Site
Buffalo, New York**

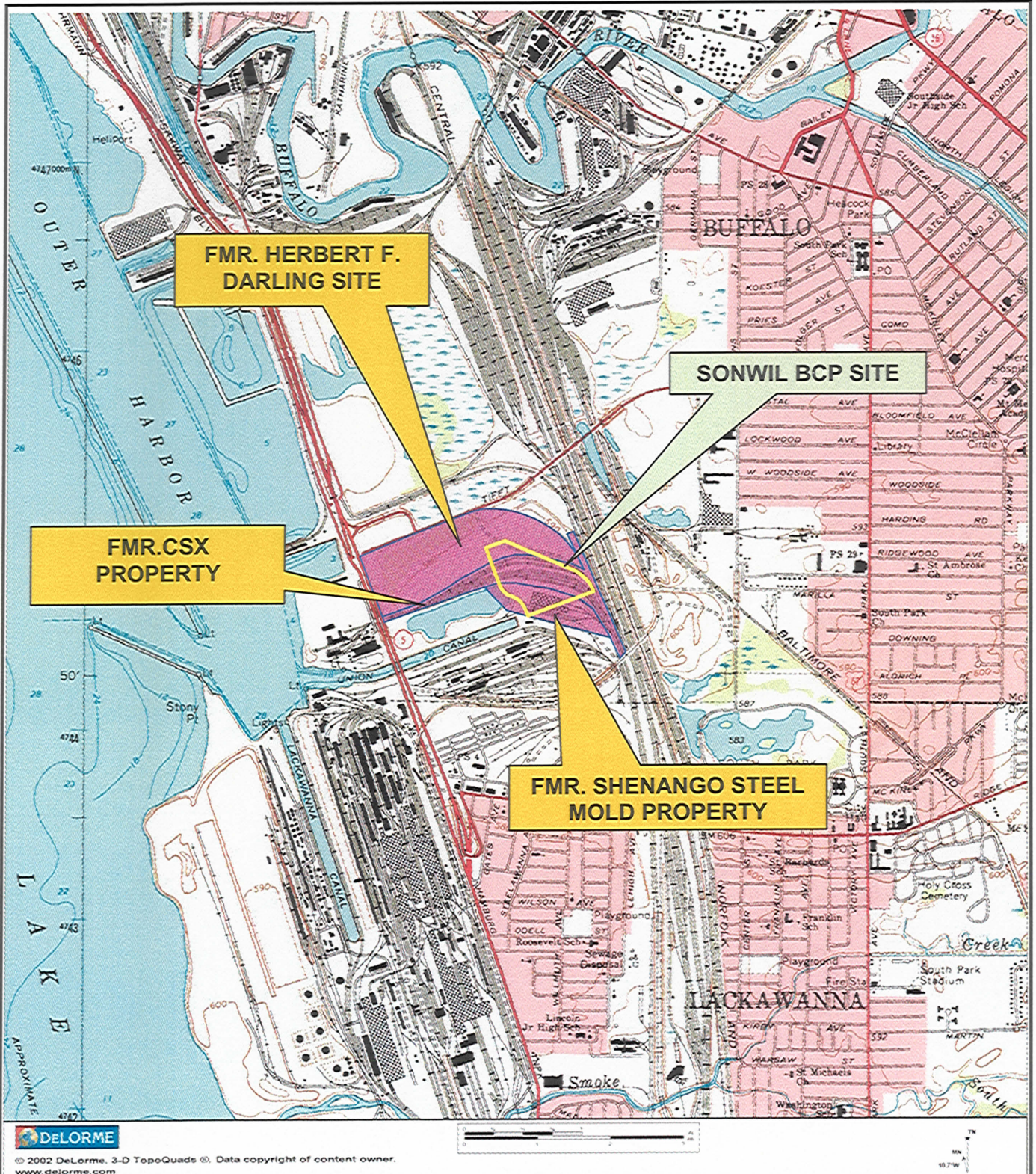
Parameter	TRACK 2 Restricted-Commercial or Industrial SCOs
PCBs/Pesticides (mg/kg)	
Endosulfan II	102
Endosulfan sulfate	200
Endrin	0.06
Heptachlor	0.38
Lindane	0.1
Polychlorinated biphenyls	1

Notes:

1. The SCO for Hexavalent or Trivalent Chromium is considered to be met if the analysis for the total species of this contaminant is below the specific SCO for Hexavalent Chromium.

FIGURES

FIGURE 1



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726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-635

SITE LOCATION AND VICINITY MAP

SFMP

BUFFALO LAKESIDE COMMERCE PARK
BUFFALO, NEW YORK

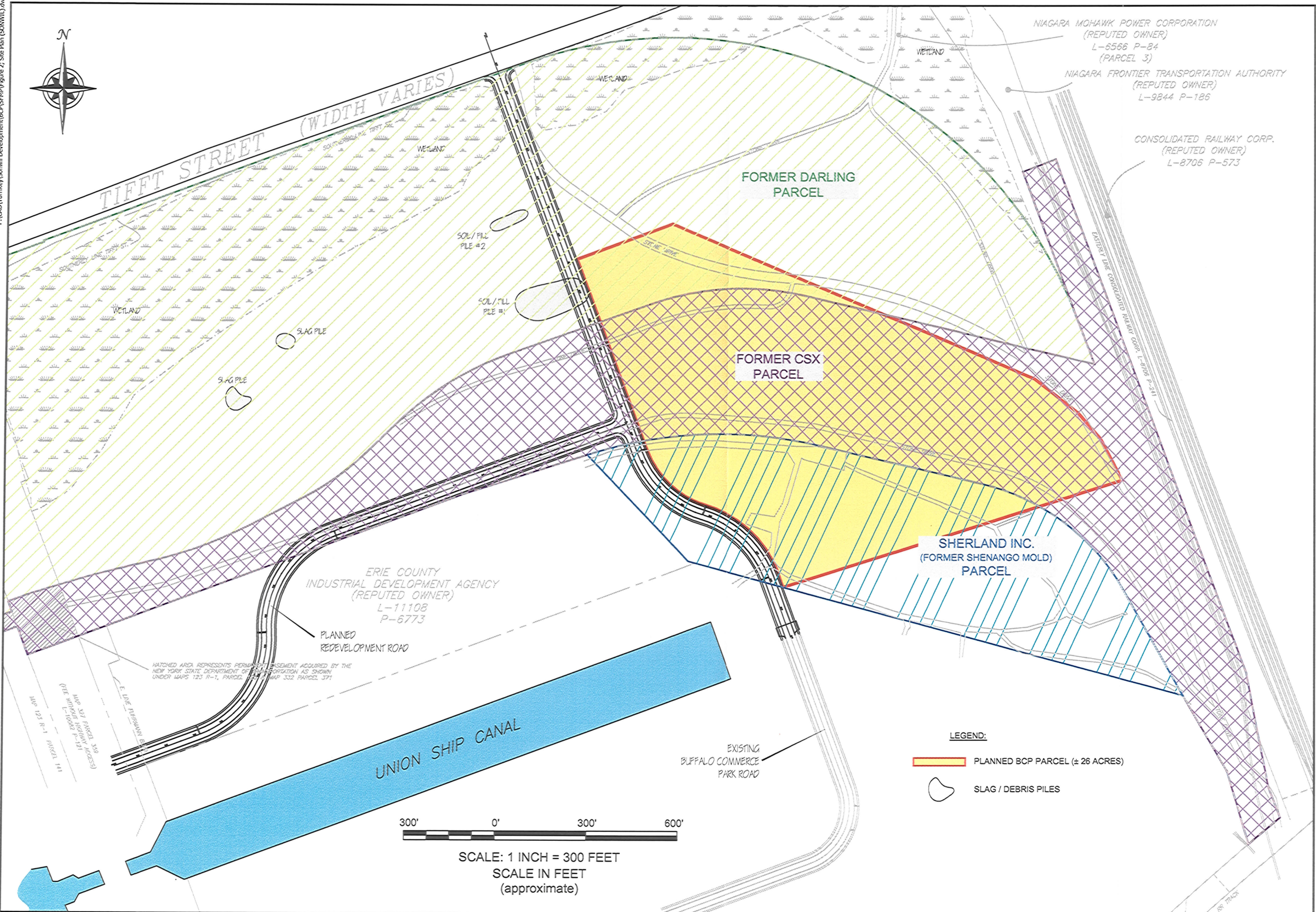
PREPARED FOR
SONWIL DISTRIBUTION

PROJECT NO.: 0131-001-100

DATE: AUGUST 2007

DRAFTED BY: BCH

FILEPATH: \\sonwil\turnkey\sonwil\development\topo\sfmp\figure 1: site location and vicinity map (sonwil).dwg



726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 858-0835

TURNKEY
ENVIRONMENTAL
RESTORATION, LLC

JOB NO.: 0131-001-100

SITE PLAN
SFMP
BUFFALO LAKESIDE COMMERCE PARK
BUFFALO, NEW YORK

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FIGURE 2

ATTACHMENT A1

COMMUNITY AIR MONITORING PLAN

**SOIL/FILL MANAGEMENT PLAN
ATTACHMENT A1**

COMMUNITY AIR MONITORING PLAN

**SONWIL DISTRIBUTION CENTER
BUFFALO LAKESIDE COMMERCE PARK SITE
BUFFALO, NEW YORK**

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COMMUNITY AIR MONITORING PLAN

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Attachment A1-1	Community Air Monitoring Documentation Forms
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1.0 INTRODUCTION

This Community Air Monitoring Plan (CAMP) presents requirements for real-time community air monitoring and responses following completion of Brownfield cleanup activities at the Sonwil Distribution Site (hereafter referred to as the Site) located within the Buffalo Lakeside Commerce Park in Buffalo, New York. This plan is generally consistent with the requirements for community air monitoring at remediation sites as established by the New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC). It follows procedures and practices outlined under the NYSDOH's generic Community Air Monitoring Plan dated June 20, 2000 and NYSDEC Technical Assistance and Guidance Memorandum (TAGM) 4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites.

This CAMP requires real-time monitoring for particulates (i.e., dust) only at the downwind perimeter of each designated work area when certain activities are in progress at the Site. 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 from potential airborne contaminant releases as a direct result of post-development monitoring and maintenance activities. The community, as referenced in this document, includes off-site residences, public buildings and grounds, and commercial or industrial establishments on or adjacent to the Site (see Figure 1). The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, this CAMP helps to confirm that work activities do not spread contamination into the surrounding community.

2.0 MONITORING AND MITIGATION REQUIREMENTS

Real-time air monitoring for particulate levels and organic vapors at the perimeter of the work area will be necessary. Periodic monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, subgrade soil/fill excavation, grading and handling, subgrade trench excavation and backfill.

“Periodic” monitoring will reasonably consist of taking at least one reading immediately following the installation of the above-referenced activities and taking at least one reading during intrusive activities. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include any subgrade excavation and backfilling within 100 feet of occupied structures or publicly accessible locations.

2.1 Organic Vapors

VOCs must be monitored at the downwind perimeter of the Site on a continuous basis or as otherwise specified throughout the Site. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. 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.

The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the various action levels referenced in this section.

2.1.1 Vapor Emission Response Plan

If the ambient air concentration of total organic vapors at the downwind perimeter of the site 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.

If total organic vapor levels at the downwind perimeter of the site 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 site 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.

If the organic vapor level is above 25 ppm at the perimeter of the site, the Site Safety and Health Officer (SSHO) must be notified and work activities shut down. The SSHO will determine when re-entry of the work zone is possible and will implement downwind air monitoring to ensure vapor emissions do not impact the nearest off-site residential or commercial structure at levels exceeding those specified under the Major Vapor Emission Monitoring program described below. All 15-minute readings must be recorded and be available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Routine trips will be made into the surrounding community during construction activities to check for the presence of nuisance odors. If nuisance odors are determined to be pervasive in the surrounding community, construction activities will be halted or modified until odor mitigation measures are applied before resuming work.

2.1.2 Major Vapor Emission Monitoring

If the organic vapor level is greater than 5 ppm over background 200 feet downwind from the Site or half the distance to the nearest off-site receptor (residential or commercial structure), whichever is less, all work activities must be halted. If, following the cessation of the work activities or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest off-site residential or

commercial structure from the site perimeter, then the air quality must be monitored within 20 feet of the perimeter of the nearest off-site receptor (20-foot zone).

If efforts to abate the emission source are unsuccessful and if organic vapor levels approach or exceed 5 ppm above background within the 20-foot zone for more than 30 minutes, or are sustained at levels greater than 10 ppm above background for longer than one minute, then the Major Vapor Emission Response Plan will automatically be placed into effect.

2.1.3 Major Vapor Emission Response Plan

Upon activation of Major Vapor Emission Response Plan, the following activities will be undertaken:

1. All Emergency Response Contacts as listed below and in the Site-Specific Health and Safety Plan will be contacted.
2. The local police authorities will immediately be contacted by the SSHO and advised of the situation.
3. Frequent air monitoring will be conducted at 30-minute intervals within the 20-foot zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the SSHO.
4. The SSHO will determine if site workers can safely undertake source abatement measures. Abatement measures may include covering the source area with clean fill or plastic sheeting, or consolidating contaminated materials to minimize surface area. The SSHO will adjust worker personal protective equipment as necessary to protect workers from over-exposure to organic vapors.

The following personnel are to be notified by the SSHO in the listed sequence if the Major Vapor Emission Response Plan is activated:

Contact	Phone
Police/Fire Department	911
NYSDOH	(716) 847-4502
NYSDEC	(716) 851-7220
State Emergency Response Hotline	(800) 457-7362

In addition, the SSHO will provide these authorities with a description of the apparent source of the contamination and abatement measures being taken by the contractor, if any.

2.2 Airborne Particulates

Fugitive dust suppression and airborne particulate monitoring shall be performed during any redevelopment or post-remediation activities involving disturbance or handling of Site soil/fill. Fugitive dust suppression techniques will include the following minimum measures:

- Excavated stockpiles from post remediation site redevelopment activities that generate unacceptable dust levels, will be seeded, covered with synthetic materials (e.g., tarps, membranes, etc.), or watered, to reduce dust generation to acceptable levels.
- Stockpiles of soil/fill from post-remediation and redevelopment activities that are contaminated (i.e. are visually stained, discolored or produce elevated PID readings) and awaiting analytical results should be covered with tarps or poly membranes at the end of each day's work activities.
- All fill materials leaving the Site will be hauled in properly covered containers or haul trailers.

Additional dust suppression efforts may be required as discussed in Section 2.2.3.

2.2.1 Particulate Monitoring

Particulate concentrations should be monitored at least periodically (i.e., not less than two times per day) at the upwind and downwind perimeters of the work zone at temporary particulate monitoring stations during work activities. 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.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/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 ug/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 ug/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, such as those described in Section 2.2.3 are employed and are successful in reducing the downwind PM-10 particulate concentration to within 150 ug/m^3 of the upwind level and in preventing visible dust migration.

2.2.2 Visual Assessment

In conjunction with the real-time monitoring program, the property owner(s) or their agents will be responsible for visually assessing fugitive dust migration from the site. If airborne dust is observed leaving undeveloped portions of the Site (i.e., migrating onto off-site parcels or redeveloped areas of the Site), the work will be stopped and supplemental dust suppression techniques will be employed.

2.2.3 Supplemental Dust Suppression

Supplemental dust suppression techniques may include, but are not necessarily limited to, the following measures:

- Reducing the excavation size, number of excavations or volume of material handled.
- Restricting vehicle speeds.
- Applying water on buckets during excavation and dumping.

- Wetting equipment, excavation faces, and haul roads.
- Restricting work during extreme wind conditions.
- Using street sweepers on paved haul roads, where feasible.

Work can resume while using supplemental dust suppression techniques provided the measures are successful in reducing the downwind particulate concentration to below 150 ug/m³ or 100 ug/m³ above background and preventing visible dust migration off-site.

3.0 MONITORING EQUIPMENT

3.1 Particulate Monitoring Equipment

Particulate monitoring will be performed using real-time particulate monitors and shall monitor particulate matter less than 10 microns (PM10) with the following minimum performance standards:

Size Range:	<0.1 to 10 microns
Sensitivity:	1 ug/m ³
Range:	0.001 to 10 mg/m ³
Overall Accuracy:	+/- 10% as compared to gravimetric analysis of stearic acid or reference dust
Battery Rating:	8-hour continuous operation
Operating Conditions:	
Temperature:	0-40°C
Humidity:	0-99% relative humidity

The device will be fitted with a microprocessor capable of calculating 15-minute moving average concentrations. An adjustable audible alarm will be provided to indicate exceedance of the action levels prescribed in Section 2.2.

3.2 Weather Station Equipment

A portable meteorological station will be used to record wind speed, direction, temperature, relative humidity and barometric pressure. Weather station parameters will be verified on a routine basis throughout the workday.

4.0 QA/QC REQUIREMENTS

Quality assurance/quality control (QA/QC) requirements for the particulate meter and organic vapor monitoring equipment include instrument calibration, training, and documentation/record keeping.

4.1 Instrument Calibration

Instrument calibration shall be performed in accordance with the manufacturer's instructions at the beginning of each workday. Following calibration and initial (upwind) measurement of background conditions, audio alarms shall be set so as to activate at the appropriate action levels based on a 15-minute moving average (i.e., short term exposure limit) concentration.

4.2 Training

All persons responsible for calibrating, handling and/or interpreting the meters or meter output data should be experienced with such work. As a minimum, the following training and experience will be required:

- 40-hour OSHA Hazwoper Training per 29 CFR 1910.120(e)(3) and 1910.120(e)(8).
- 8 hour supervisory training, in compliance with 29 CFR 1910.120(e)(4).
- Site-specific training, as required by the Site Health and Safety Plan.
- A minimum 40-hours field experience in the operation of same or similar equipment.

The Site Safety and Health Officer will designate the person(s) responsible for performing air-monitoring work. Construction activities involving disruption or handling of site fill soils will not be performed unless a qualified individual is available on site to perform the community air monitoring specified in this document.

4.3 Documentation and Reporting

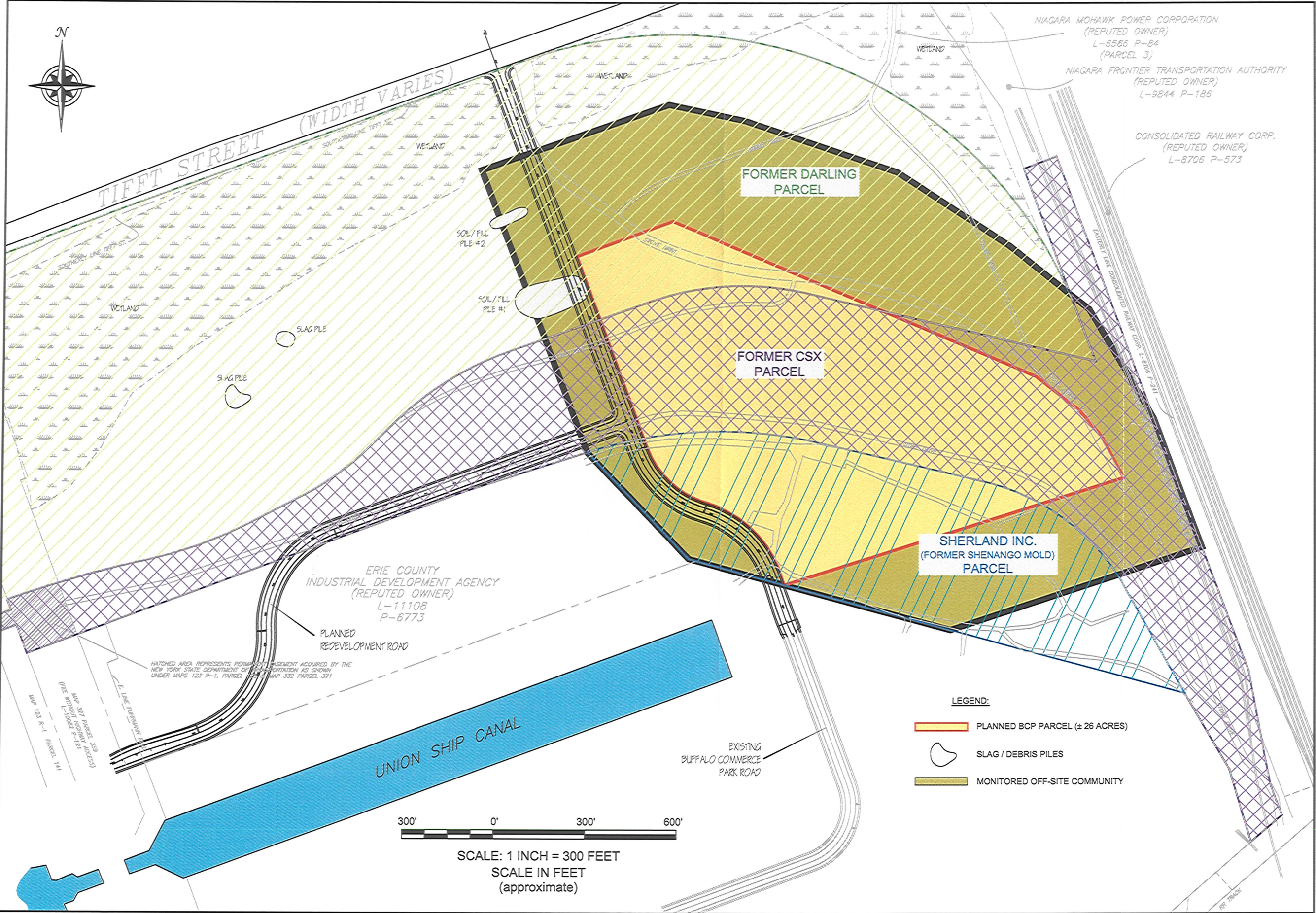
Documentation of community air monitoring information will be required to provide written record of the air monitoring results and response actions taken, and to allow for verification that the program was followed in accordance with this Community Air Monitoring Plan. Monitoring information will be recorded on forms presented in Attachment A1-1 or on similar loose-leaf forms to facilitate photocopying. The following documentation schedule will be followed during typical site conditions (i.e., organic vapor and particulate concentrations below action levels).

<u>Item</u>	<u>Documentation Schedule</u>
Instrument Calibration Results	Whenever calibration is performed (minimum once daily).
Background Monitoring Results	At beginning of work day and once every 4 hours thereafter.
Downwind Monitoring Results (15-minute moving average)	Hourly

All documentation records will be maintained in the project file for inspection by the NYSDEC and/or the NYSDOH upon request. NYSDEC will be provided copies of the monitoring results recorded during voluntary cleanup activities as part of close-out reporting for the site. Monitoring results recorded during redevelopment activities will be maintained and furnished to NYSDEC upon substantial completion of the redevelopment project.

During the redevelopment period, NYSDEC and NYSDOH will be contacted if will be contacted in writing within 5 days of exceeding the 150 ug/m³ respirable dust action level. These notifications will include a description of the control measures implemented to prevent further exceedances.

FIGURES



MONITORED COMMUNITY
SFMP
BUFFALO LAKESIDE COMMERCE PARK
BUFFALO, NEW YORK

728 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0635



JOB NO.: 0131-001-100

PREPARED FOR
SONWIL DISTRIBUTION

FIGURE 1

ATTACHMENT A1-1

COMMUNITY AIR MONITORING DOCUMENTATION FORMS



COMMUNITY AIR MONITORING DAILY LOG

Date: _____
Project: _____
Job No.: _____
Client: _____

WEATHER CONDITIONS:

Time of Day: _____ A.M. _____ P.M.
Ambient Air Temp.: _____
Wind Direction: _____
Wind Speed: _____
Precipitation: _____

LOCATION of ACTIVITIES/MONITORING STATIONS (Provide Sketch on Attached Map): _____

DESCRIPTION OF SITE ACTIVITIES: _____

PARTICULATE MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 100 ug/m3 ¹					
Exceedence of 150 ug/m3 ¹					
Visual Observation of Fugitive Dust			NA		
			NA		
			NA		

VOC MONITORING	Location	Time	Value	Duration	Corrective Measures Taken (Eng Controls/Work Stoppage, etc.)
Exceedence of 5 ppm ¹					Temporarily halt Work and continue monitoring
Reading of 5 to 25 ppm ¹					Temporarily halt Work, abate emissions with corrective actions and continue monitoring ³
Exceedence of 25 ppm ²					Shut Down Work Immediately and notify Site Safety & Health Officer

- Above background for 15 minute moving average.
 - Above background at Site perimeter (indicate location on attached sketch)
 - Work may resume when total VOC conc. 200 ft downwind or half the distance to nearest receptor (whichever is less) is below 5 ppm for 15 min.
- NOTE: All exceedences are to be reported to Benchmark within 15 minutes.

Prepared By: _____ Date: _____
Checked By: _____ Date: _____

ATTACHMENT A2

MASTER EROSION CONTROL PLAN

**SOIL/FILL MANAGEMENT PLAN
ATTACHMENT A2**

MASTER EROSION CONTROL PLAN

**SONWIL DISTRIBUTION CENTER
BUFFALO LAKESIDE COMMERCE PARK SITE
BUFFALO, NEW YORK**

August 2007

0131-001-200

Prepared for:

Sonwil Distribution



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LIST OF ATTACHMENTS

A2-1	NYSDEC SPDES General Permit for Storm Water Discharges from Construction Activities
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A2-3	Inspection and Maintenance Report Form

1.0 INTRODUCTION

1.1 Background

The Sonwil Buffalo Lakeside Commerce Park Site is an approximate 26-acre parcel located at 99 Tifft Street in the City of Buffalo (the City), Erie County, New York (see Figures 1 and 2 of the RI/AAR/IRM Work Plan). The Sonwil BCP Site is located in an underused and former heavy industrial area near the southern boundary of the City of Buffalo. The Site is surrounded by current and former heavy industrial sites, NYSDEC Inactive Hazardous Waste Sites, NYSDEC Petroleum Spill Sites, and other Brownfield Cleanup Program Sites. The Sonwil BCP Site is comprised of a portion of the following three properties:

- Approximately 2.5 acres of the former Herbert F. Darling (Darling) site, which is vacant undeveloped land generally covered with grass and brush vegetation as well as areas of slag and gravel. Several soil/fill piles and slag piles are located in the central portion of the site.
- Approximately 16.0 acres of the former CSX site, which is located in a vacant former railroad corridor and is generally covered with slag and gravel (apparently used as railroad ballast). The remainder of the Site is generally covered with vegetation.
- Approximately 7.5 acres of the Shenango Steel and Mold (Shenango) site, which is part of the former Hanna Furnace property located at 1750 Fuhrmann Boulevard (near Route 5) at the southern limit of the City of Buffalo. The property is currently unoccupied.

The Site is currently owned by the Buffalo Urban Development Corporation. Sonwil Distribution intends to purchase the property and redevelop the Site as a commercial office and warehouse facility. The project will include immediate construction of a 300,000 square foot building, with future plans to construct an adjacent 300,000 square foot. The Site will be serviced by a railroad siding that will be constructed and connected to the existing railroad corridor located to the east of the Site.

1.2 Purpose and Scope

A Soil/Fill Management Plan (SFMP) was prepared as part of the RI/AAR/IRM Work Plan that describes protocols to protect both the environment and human health by screening and identifying areas of soil/fill contamination during development and post-development maintenance activities at the Site. The property owner at the time of development/maintenance will be responsible for all monitoring, implementation, and reporting requirements of the SFMP.

This Master Erosion Control Plan (MECP) was prepared to provide guidance to developers since erosion control will be a critical component of preventing the potential migration of contaminants onto developed property or off-site during maintenance activities and/or development of the Site. This MECP is a critical component of the SFMP. This document is generic in nature and provides minimum erosion control practices to be used by Site owners and/or developers.

2.0 GENERAL PERMIT REQUIREMENTS

If construction activities disturb more than 1 acre of land, the Federal Water Pollution Control Act (as amended, 33 U.S.C. 1251 et. seq.) and the New York State Environmental Conservation Law (Article 17, Titles 7 and 8, and Article 70) would apply.

With some exceptions, operators of construction activities that will result in the disturbance of 1 or more acres of land must obtain coverage under SPDES General Permit (GP-02-01) prior to the commencement of soil disturbance. Also requiring a permit are construction activities disturbing less than 1 acre if they are part of a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre, or activities that are designated by the NYSDEC. The NYSDEC can require a permit for construction activities disturbing less than 1 acre based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States.

To obtain coverage under the general permit, the operator of a construction activity must file a completed Notice of Intent (NOI) with the NYSDEC. Submitting a NOI is an affirmation that a Stormwater Pollution Prevention Plan (SWPPP) has been prepared for the site and will be implemented prior to the commencement of construction activities. Coverage under the general permit will begin either 5 or 60 business days after receipt of a completed NOI by the NYSDEC. Figure 1 is a flowchart to be used in determining whether a SWPPP will be required during site redevelopment construction activities. The Notice of Intent application form and the text of the Construction Storm Water General Permit are provided in Attachment A2-1.

3.0 POTENTIAL EROSION AND SEDIMENT CONTROL CONCERNS

Potential areas and items of concern during Site maintenance and/or development activities include the following:

- The transportation and placement activities associated with soil cover systems will require erosion and sediment controls to prevent the surface soil from being washed off the area being developed.
- Remediated areas or off-site properties adjacent to unremediated parcels need protection so they do not become impacted by site operations.
- Storm water inlets will require protective measures to limit sediment transfer to storm sewers.
- Runoff from soil stockpiles will require erosion controls.
- Surface slopes need to be minimized as much as practical to control sediment transfer.
- Soil/fill excavated during maintenance and/or development will require proper handling and disposal.

4.0 EROSION AND SEDIMENT CONTROL MEASURES

4.1 Background

Standard soil conservation practices need to be incorporated into the maintenance and development plans to mitigate soil erosion damage, off-site sediment migration, and water pollution from erosion. These practices combine vegetative and structural measures, many of which will be permanent in nature and become part of the completed project (i.e., drainage channels and grading). Other measures will be temporary and serve only during the construction stage. Selected erosion and sediment control measures will meet the following criteria:

- Minimize erosion through project design (maximum slopes, phased construction, etc.).
- Incorporate temporary and permanent erosion control measures.
- Remove sediment from sediment-laden storm water before it leaves the Site.

4.2 Temporary Measures

Temporary erosion and sedimentation control measures and facilities will be used during construction. They will be installed by the Site developer and will be maintained until they are either no longer needed or until such time as permanent measures are installed and become effective. Erosion and sediment controls shall be installed in accordance with the standards and specifications presented in Attachment A2-2. At a minimum, the following temporary measures will be used:

- Silt fencing
- Straw/hay bales
- Temporary vegetation/mulching
- Temporary sedimentation basins
- Cautious placement, compaction and grading of stockpiles

4.2.1 Silt Fencing

Construction and regrading activities will result in surface water flow to drainage ditches and swales, storm sewers, Union Ship Canal, and adjacent properties. Silt fencing will be the primary sediment control measure used in these areas. Prior to extensive soil excavation or grading activities, silt fences will be installed along the perimeter of all construction areas. The orientation of the fencing will be adjusted as necessary as the work proceeds to accommodate changing site conditions.

Intermediate fencing will be used upgradient of the perimeter fencing to help lower surface water runoff velocities and reduce the volume of sediment to perimeter fencing. Stockpiles will also be surrounded with silt fencing.

As sediment collects, the silt fences will be cleaned as necessary to maintain their integrity. Removed sediment will be used elsewhere on-site as general fill. All perimeter silt fences will remain in place until construction activities in an area are completed and vegetative cover has been established.

4.2.2 Straw and/or Hay Bales

Straw and/or hay bales will be used to intercept sediment laden storm water runoff in drainage channels during construction. The use of either hay or straw will be based on the availability of materials at the time of construction.

Bales will be placed in swales and ditches where the anticipated flow velocity is not expected to be greater than 5 feet/second (fps). Intermediate bales will be placed upgradient of the final barrier to reduce flow velocities and sediment loadings where higher velocities are anticipated.

As with silt fencing, sediment will be removed as necessary from behind the bales and disposed of on-site. Bales that have become laden with sediment or that have lost their structural integrity or effectiveness due to the weather will be replaced.

4.2.3 Temporary Vegetation and Mulching

Intermediate areas where development activities will not occur or resume for an extended period of time (greater than 90 days) will be seeded with a quick germinating variety of grass or covered with a layer of mulch to control fugitive dust and erosion. Soil/fill stockpiles that will not be used for an extended period of time will also be vegetated or covered.

4.2.4 Temporary Sedimentation Basins

Temporary sedimentation basins will be constructed as necessary upgradient of storm water inlets to reduce the volume of sediment laden runoff from the site. The basins can be as simple as a small excavated area along the alignment of a storm water ditch or as elaborate as a full-scale sedimentation basin with outlet structures designed for certain storm events from a given area of the Site. The basins will be cleaned as necessary and the removed sediment utilized elsewhere on-site as subgrade fill material.

4.2.5 Cautious Placement of Stockpiles

Excavation activities will produce stockpiles of soil and subgrade soil/fill materials. Careful placement and construction of stockpiles will be required to control erosion. Stockpiles will be placed no closer than 50 feet from storm water inlets and parcel boundaries. Additionally, stockpiles will be graded and compacted as necessary for positive surface water runoff and dust control. Impacted stockpiles will be underlain and covered with secured polyethylene tarpaulin until proper disposal has been secured.

4.3 Permanent Control Measures during Site Redevelopment

Permanent erosion and sedimentation control measures and structures will be installed as soon as practical during construction for long-term erosion protection. Examples of permanent erosion control measures could include:

- Using maximum slopes in erosion prone areas to limit erosion.

- Minimizing the potential contact with, and migration of, subsurface soil/fill through the placement of a “clean” soil cover system in all areas not covered with structures, roads, parking areas, sidewalks, etc.
- Constructing permanent storm water detention ponds where appropriate.
- Planting and maintaining vegetation.
- Limiting runoff flow velocities to the extent practical.
- Lining collection channels with riprap, erosion control fabric, vegetation, or similar materials.

5.0 CONSTRUCTION MANAGEMENT PRACTICES

5.1 General

The following general construction practices should be evaluated for erosion and sedimentation control purposes during Site maintenance/development activities:

- Clearing and grading only as much area as is necessary to accommodate the construction needs to minimize disturbance of areas subject to erosion (i.e., phasing the work).
- Covering exposed or disturbed areas of the site as quickly as practical.
- Installing erosion and sediment control measures before disturbing the Site subgrade.
- Minimizing both on-site and off-site tracking of soil by vehicles by using routine entry/exit routes.

5.2 Monitoring, Inspection and Maintenance

All erosion and sedimentation controls described in this Plan will be inspected by a qualified representative of the Site developer within 24 hours of a heavy rainfall event (defined as more than 0.5 inches of precipitation in a 24-hour period) and repaired or modified as necessary to effectively control erosion of turbidity problems. Inspections should include areas under construction, stockpile areas, erosion control devices (i.e., silt fences, hay bales, etc.) and locations where vehicles enter and leave the site. Routine inspections of the entire site should also be made on a monthly basis during development.

If inspections indicate problems, corrective measures should be implemented within 24 hours. A report summarizing the scope of the inspection, name of the inspector, date, observations made, and a description of the corrective actions taken should be completed. Attachment A2-3 includes the Inspection and Maintenance Report Form.

5.2.1 Implementation

The Contractor shall at all times, properly construct, operate and maintain all erosion controls and features in accordance with regulatory requirements, and with good engineering and construction practices. Erosion control measures and activities will be in accordance with currently accepted Best Management Practices (BMPs).

Erosion control monitoring, inspection, and maintenance are an integral part of Site storm water and erosion control. The key elements of the monitoring effort include the following:

- Site inspections and maintenance
- BMPs monitoring
- Recordkeeping
- Review and modifications
- Certification of compliance

5.2.2 Site Inspections and Maintenance Practices

The temporary erosion control features installed by the Contractor will be maintained by the Contractor until no longer needed or permanent erosion control methods are installed. Site inspections are required every seven days or within 24 hours of a rainfall of 0.5 inches or greater. All disturbed areas, areas for material storage, locations where vehicles enter or exit the site, and all of the erosion and sediment controls that are identified as part of this Plan must be inspected. Controls must be in good operating condition until the affected area they protect has been completely stabilized and the construction activity is complete. If a repair is necessary, it must be completed within seven days of receipt of a report or notice, if practical. Inspection for specific erosion and sediment controls will include the following:

- Silt fence will be inspected to determine the following:
 - 1) Depth
 - 2) Condition of fabric
 - 3) That the fabric is attached to the posts
 - 4) That the fence posts are firmly in the ground

- The silt fences will be inspected weekly and within 24 hours of a 0.5 inch or greater storm event.
- Diversion berms, if used, will be inspected and any breaches promptly repaired.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and other potential erosion control problems.
- The Contractor shall designate individual(s) that will be responsible for erosion control, maintenance, and repair activities. The designated individual will also be responsible for inspecting the site and filling out the inspection and maintenance report.
- Personnel selected for inspection and maintenance responsibilities will receive training as directed by the Engineer. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

The individual inspecting the Site must record any damages or deficiencies on the Inspection and Maintenance Report Form in Attachment A2-3. This form can be used to request maintenance and repair and to document inspection and maintenance activities. Damages or deficiencies must be corrected as soon as possible after the inspection. Any changes that may be required to correct deficiencies in the MECP should also be made as soon as possible, but in no case later than seven days after the inspection. The Contractor's erosion control inspection records must be presented to the Engineer at the Site.

5.2.3 Recordkeeping

A copy of this MECP, as well as inspection and maintenance records must be kept at the construction site from the time construction begins until the site is stabilized. These documents will be made available upon request to regulatory agency representatives or members of the public.

5.2.4 Modifications to Master Erosion Control Plan

During the course of construction, unanticipated changes may occur that affect this MECP such as schedule changes, phasing changes, staging area modifications, off-site drainage impacts, and repeated failures of designed controls. Any changes to the activities and controls identified in this Plan must be documented and the Plan revised accordingly. Certification of revisions to this plan shall be included at the end of the document.

ATTACHMENT A2-1

NYSDEC SPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES

- Notice of Intent
- Notice of Termination
- NYSDEC SPDES General Permit For Storm Water Discharges from Construction

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Page 1 of 9

Project/Site Name

[illegible]

Street Address (NOT P.O. BOX)

[illegible]

City/Town/Village (THAT ISSUES BUILDING PERMIT)

[illegible]

State

N	Y
---	---

Zip

--	--	--	--	--	--	--	--

County

[illegible]

DEC Region (if known)

Name of Nearest Cross Street

[illegible]

Distance to Nearest Cross Street (Feet)

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Direction to Nearest Cross Street

☐ North ☐ South ☐ East ☐ West

1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

www.dec.state.ny.us/website/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site go to the dropdown menu on the left and choose "Get Coordinates". Click on the center of your site and a small window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

X Coordinates (Easting)

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Y Coordinates (Northing)

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2. What is the nature of this construction project?

- ☐ New Construction
- ☐ Redevelopment with increase in imperviousness
- ☐ Redevelopment with no increase in imperviousness

Pre-Development Existing Land Use		Post-Development Future Land Use																					
<input type="radio"/> FOREST		<input type="radio"/> SINGLE FAMILY HOME	Number of Lots <table border="1"><tr><td></td><td></td><td></td></tr></table>																				
<input type="radio"/> PASTURE/OPEN LAND		<input type="radio"/> SINGLE FAMILY SUBDIVISION																					
<input type="radio"/> CULTIVATED LAND		<input type="radio"/> TOWN HOME RESIDENTIAL																					
<input type="radio"/> SINGLE FAMILY HOME		<input type="radio"/> MULTIFAMILY RESIDENTIAL																					
<input type="radio"/> SINGLE FAMILY SUBDIVISION		<input type="radio"/> INSTITUTIONAL/SCHOOL																					
<input type="radio"/> TOWN HOME RESIDENTIAL		<input type="radio"/> INDUSTRIAL																					
<input type="radio"/> MULTIFAMILY RESIDENTIAL		<input type="radio"/> COMMERCIAL																					
<input type="radio"/> INSTITUTIONAL/SCHOOL		<input type="radio"/> ROAD/HIGHWAY																					
<input type="radio"/> INDUSTRIAL		<input type="radio"/> RECREATIONAL/SPORTS FIELD																					
<input type="radio"/> COMMERCIAL		<input type="radio"/> BIKE PATH/TRAIL																					
<input type="radio"/> ROAD/HIGHWAY		<input type="radio"/> LINEAR UTILITY (water, sewer, gas, etc.)																					
<input type="radio"/> RECREATIONAL/SPORTS FIELD		<input type="radio"/> PARKING LOT																					
<input type="radio"/> BIKE PATH/TRAIL		<input type="radio"/> OTHER																					
<input type="radio"/> SUBSURFACE UTILITY		OTHER	<table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																				
<input type="radio"/> PARKING LOT																							
<input type="radio"/> OTHER																							
OTHER	<table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>																						

☐ Yes ☐ No

☐ Yes ☐ No

☐ Yes ☐ No

Total Site Acreage	Acreage To Be Disturbed	Existing Impervious Area Within Disturbed	Future Impervious Area Within Disturbed
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> . <input type="text"/>

☐ Yes ☐ No

A
B
C
D

%
 %
 %
 %

10. Is this a phased project? (if yes, The SWPPP must address all planned phases)

☐ **Yes** ☐ **No**

11. Enter the planned start and end dates of the disturbance activities

Start Date**End Date**

		/			/				-			/			/			
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12. Provide the name of the nearest, natural, classified surface waterbody(ies) into which construction site runoff has the potential to discharge.

which construction site runoff has the potential to discharge

For Questions 13 and 14 refer to the Instruction Manual for a subset of 303(d) segments and TMDL watersheds subject to Condition A of the permit. These waterbodies and watersheds have been identified for regulation within the stormwater program due to some level of impairment by nutrients, silt or sediment. The Instruction Manual can be accessed at www.dec.state.ny.us/website/dow/toolbox/instr_man.pdf

13. Has the surface waterbody(ies) in question 12 been identified as a 303(d) segment?

☐ Yes ☐ No

14. Is this project located in a TMDL Watershed?

☐ Yes ☐ No

***NOTE:** If you answered Yes to either question 13 or 14, Pursuant to Part I.D.3. (b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review.

15. Does the site runoff enter a separate storm sewer system-including roadside drains, swales, ditches, culverts, etc?
(if no, skip question 16)

☐ Yes ☐ No ☐ Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

[illegible]

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?

☐ Yes ☐ No ☐ Unknown

Stormwater Pollution Prevention Plan (SWPPP)

18. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book) ?

☐ Yes ☐ ^{*}No

19. Does this construction activity require the development of a SWPPP that includes Water Quality and Quantity Control components (Post-Construction Stormwater Management Practices) **If no, Skip question 20**

☐ Yes ☐ No

20. Have the Water Quality and Quantity Control components of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual ?

☐ Yes ☐ ^{*}No

NOTE: If you answered no to question 18 or 20, Pursuant to Part I.D.3.(b) of the permit, you must have your SWPPP prepared and certified by a licensed/certified professional and the SWPPP is subject to a 60-business day review. Please provide further details in the details/comment section on the last page of this form.

21. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:

- ☐ Professional Engineer (P.E.)
- ☐ Soil and Water Conservation District (SWCD)
- ☐ Registered Landscape Architect (R.L.A)
- ☐ Certified Professional in Erosion and Sediment Control (CPESC)
- ☐ Owner/Operator
- ☐ Other

SWPPP Preparer Information (if different from Owner/Operator info)

SWPPP Preparer

Contact Name (Last, Space, First)

Mailing Address

City

State

Zip

Phone

Fax

Email

Erosion and Sediment Control Practices

22. Has a construction sequence schedule for the planned management practices been prepared?

☐ Yes ☐ No

23. Select **all** of the erosion and sediment control practices that will be employed on the project site.

Temporary Structural

- ☐ Check Dams
- ☐ Construction Road Stabilization
- ☐ Dust Control
- ☐ Earth Dike
- ☐ Level Spreader
- ☐ Perimeter Dike/Swale
- ☐ Pipe Slope Drain
- ☐ Portable Sediment Tank
- ☐ Rock Dam
- ☐ Sediment Basin
- ☐ Sediment Traps
- ☐ Silt Fence
- ☐ Stabilized Construction Entrance
- ☐ Storm Drain Inlet Protection
- ☐ Straw/Hay Bale Dike
- ☐ Temporary Access Waterway Crossing
- ☐ Temporary Stormdrain Diversion
- ☐ Temporary Swale
- ☐ Turbidity Curtain
- ☐ Water bars

Biotechnical

- ☐ Brush Matting
- ☐ Wattling

Other

Vegetative Measures

- ☐ Brush Matting
- ☐ Dune Stabilization
- ☐ Grassed Waterway
- ☐ Mulching
- ☐ Protecting Vegetation
- ☐ Recreation Area Improvement
- ☐ Seeding
- ☐ Sodding
- ☐ Straw/Hay Bale Dike
- ☐ Streambank Protection
- ☐ Temporary Swale
- ☐ Topsoiling
- ☐ Vegetating Waterways

Permanent Structural

- ☐ Debris Basin
- ☐ Diversion
- ☐ Grade Stabilization Structure
- ☐ Land Grading
- ☐ Lined Waterway (Rock)
- ☐ Paved Channel (Concrete)
- ☐ Paved Flume
- ☐ Retaining Wall
- ☐ Riprap Slope Protection
- ☐ Rock Outlet Protection
- ☐ Streambank Protection

Important: Completion of Questions 24-30 is not required if the project:

Disturbs less than 5 acres and is planned for single-family residential homes (including subdivisions) or construction on agricultural property and does not have a discharge to a 303(d) water or is not located within a TMDL watershed.

Additionally, sites where there will be no future impervious area within the disturbed area and that do not have a change (pre to post development) in hydrology do not need to complete questions 24-30.

Post Construction Stormwater Management Practices

Wetlands

- ☐ Shallow Wetland (W-1)
- ☐ Extended Detention Wetland (W-2)
- ☐ Pond/Wetland System (W-3)
- ☐ Pocket Wetland (W-4)

Infiltration

- Infiltration Trench (I-1)
- Infiltration Basin (I-2)
- Dry Well (I-3)

- ☐ Dry Swale (0-1)
- ☐ Wet Swale (0-2)

--

☐ Yes ☐ No

[illegible]

**Stormwater Pollution Prevention Plan (SWPPP)
Water Quality and Quantity Controls**

25. Provide the total water quality volume required and the total provided for the site.

<u>Total Water Quality Volume (WQv)</u>	
<p align="center">WQv Required</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">acre-feet</p>	<p align="center">WQv Provided</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">acre-feet</p>

26. Provide the following Unified Stormwater Sizing Criteria for the site.

Total Channel Protection Storage Volume (CPv) - Extended detention of post-developed 1 year, 24 hour storm event

<p>CPv Required</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">acre-feet</p>	<p>CPv Provided</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">acre-feet</p>
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The need to provide for channel protection has been waived because
☐ Site discharges directly to fourth order stream or larger

Total Overbank Flood Control Criteria (Qp) - Peak discharge rate for the 10 year storm

<p>Pre-Development</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">CFS</p>	<p>Post-development</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">CFS</p>
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Total Extreme Flood Control Criteria (Qf) - Peak discharge rate for the 100 year storm

<p>Pre-Development</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">CFS</p>	<p>Post-development</p> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="margin: 0 5px;">.</div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px; margin-right: 5px;"></div> </div> <p align="right">CFS</p>
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The need to provide for flood control has been waived because
☐ Site discharges directly to fourth order stream or larger
☐ Downstream analysis reveals that flood control is not required

IMPORTANT: For questions 27 and 28 impervious area should be calculated considering the project site and all offsite areas that drain to the post-construction stormwater management practice(s) (Total Drainage Area = Project Site + Offsite areas)

27. Pre-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the existing impervious areas before construction begins.

%

28. Post-Construction Impervious Area - As a percent of the Total Drainage Area enter the percentage of the future impervious areas that will be created/remain on the site after completion of construction.

%

29. Indicate the total number of permanent stormwater management practices to be installed

30. Provide the total number of stormwater discharge points from the site (include discharges to either surface waters or to separate storm sewer systems)

☐ None

<input type="radio"/> Air Pollution Control	<input type="radio"/> Stream Protection/Article 15
<input type="radio"/> Coastal Erosion	<input type="radio"/> Water Quality Certificate
<input type="radio"/> Hazardous Waste	<input type="radio"/> Dam Safety
<input type="radio"/> Long Island Wells	<input type="radio"/> Water Supply
<input type="radio"/> Mined Land Reclamation	<input type="radio"/> Freshwater Wetlands
<input type="radio"/> Other SPDES	<input type="radio"/> Tidal Wetlands
<input type="radio"/> Solid Waste	<input type="radio"/> Wild, Scenic and Recreational Rivers

[illegible]

N	Y	R					
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DETAILS / COMMENTS

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Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I also certify under penalty of law that this document and the corresponding documents 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(s) 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. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name															MI									
Print Last Name																								
Owner/Operator Signature																								
															Date									
																	/			/				

**New York State Department of Environmental Conservation
Division of Water**



Bureau of Water Permits, 4th Floor
625 Broadway, Albany, New York 12233-3505
Phone: (518) 402-8111 . **Fax:** (518) 402-9029
Website: www.dec.state.ny.us

NYR

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(for DEC use only)

Notice of Intent or Termination

For Stormwater Discharges Associated with Industrial Activity under the State Pollutant Discharge Elimination System (SPDES) Multi-Sector General Permit GP-0-06-002

All Sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this Notice of Intent or Termination (NOIT) Form. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

"IMPORTANT - PRINT CAPITAL LETTERS USING BLACK INK. AVOID CONTACT WITH THE EDGE OF THE BOXES. FILL IN CIRCLES COMPLETELY AND DO NOT USE CHECK MARKS. OWNER/OPERATOR MUST SIGN FORM."

Owner/Operator Information

0/0 Name

[illegible]

0/0 Street Address

[illegible]

O/O City

[illegible]

0/0 State

N	Y
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0/0 Zip

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Contact Information

Contact First Name

[illegible]

Contact Last Name

[illegible]

Contact Phone

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Contact Fax

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Contact eMail

[illegible]

0250215049

Facility Information

[illegible][illegible][illegible]

N	Y
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[illegible][illegible]

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☐ North ☐ South ☐ East ☐ West

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- ☐ Coverage for a new facility (not previously permitted)
- ☐ Permit Renewal
- ☐ Modification (There has been a change in information since the earlier submission)
- ☐ Want to terminate general stormwater permit coverage

- | | | | | | |
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These coordinates can be obtained through the NYSDEC Stormwater Interactive Map on the DEC Website at: <http://www.dec.state.ny.us/website/imsmaps/stormwater/viewer.htm>

Page 2 of 8

0735215047

4. Identify all applicable Industrial Activities from the Industrial Sectors shown below that are located within areas subject to the stormwater discharges covered under this permit. Check all that apply to your facility.

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
Sector A: Timber Products			
B, C	<input type="radio"/>	2411	Log Storage and Handling (Wet deck storage areas are only authorized if no chemical additives are used in the spray water or applied to the logs).
B	<input type="radio"/>	2421	General Sawmills and Planing Mills
B	<input type="radio"/>	2426	Hardwood Dimension and Flooring Mills
B	<input type="radio"/>	2429	Special Product Sawmills, Not Elsewhere
B	<input type="radio"/>	2431-2439 (except 2434 - see sector W)	Millwork, Veneer, Plywood, and Structural Wood.
B	<input type="radio"/>	2441, 2448, 2449	Wood Containers
B	<input type="radio"/>	2451, 2452	Wood Buildings and Mobile Homes
B	<input type="radio"/>	2491	Wood Preserving
B	<input type="radio"/>	2493	Reconstituted Wood Products
B	<input type="radio"/>	2499	Wood Products, Not Elsewhere Classified
Sector B: Paper and Allied Products			
B	<input type="radio"/>	2611	Pulp Mills
	<input type="radio"/>	2621	Paper Mills
	<input type="radio"/>	2631	Paperboard Mills
	<input type="radio"/>	2652-2657	Paperboard Containers and Boxes
	<input type="radio"/>	2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes
Sector C: Chemical and Allied Products			
B	<input type="radio"/>	2812-2819	Industrial Inorganic Chemicals.
B	<input type="radio"/>	2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
B	<input type="radio"/>	2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; In Vitro and In Vivo Diagnostic Substances; Biological Products, Except Diagnostic Substances.
	<input type="radio"/>	2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
	<input type="radio"/>	2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
B, C	<input type="radio"/>	2861-2869	Industrial Organic Chemicals.
	<input type="radio"/>	2873-2879	Agricultural Chemicals.
	<input type="radio"/>	2891-2899	Miscellaneous Chemical Products.
	<input type="radio"/>	3952 (limited to list)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors.
Sector D: Asphalt Paving and Roofing Materials and Lubricants			
B, C	<input type="radio"/>	2951, 2952	Asphalt Paving and Roofing Materials
	<input type="radio"/>	2992, 2999	Miscellaneous Products of Petroleum and Coal
Sector E: Glass Clay, Cement, Concrete, and Gypsum Products			
C	<input type="radio"/>	3211	Flat Glass
	<input type="radio"/>	3221, 3229	Glass and Glassware, Pressed or Blown
	<input type="radio"/>	3231	Glass Products Made of Purchased Glass
	<input type="radio"/>	3241	Hydraulic Cement
B	<input type="radio"/>	3251-3259	Structural Clay Products
B	<input type="radio"/>	3261-3269	Pottery and Related Products
B, C	<input type="radio"/>	3271-3275	Concrete, Gypsum and Plaster
	<input type="radio"/>	3281	Cut Stone and Stone Products
	<input type="radio"/>	3291-3299	Abrasive, Asbestos, and Miscellaneous Non-metallic Mineral Products

Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
Sector F: Primary Metals			
B	<input type="radio"/>	3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
B	<input type="radio"/>	3321-3325	Iron and Steel Foundries
	<input type="radio"/>	3331-3339	Primary Smelting and Refining of Nonferrous Metals
	<input type="radio"/>	3341	Secondary Smelting and Refining of Nonferrous Metals
B	<input type="radio"/>	3351-3357	Rolling, Drawing, and Extruding of Nonferrous
B	<input type="radio"/>	3363-3369	Nonferrous Foundries (Castings)
	<input type="radio"/>	3398, 3399	Miscellaneous Primary Metal Products
Sector G: Metal Mining (Ore Mining and Dressing)			
B	<input type="radio"/>	1011	Iron Ores
B	<input type="radio"/>	1021	Copper Ores
B	<input type="radio"/>	1031	Lead and Zinc Ores
B	<input type="radio"/>	1041, 1044	Gold and Silver Ores
B	<input type="radio"/>	1061	Ferroalloy Ores, Except Vanadium
B	<input type="radio"/>	1081	Metal Mining Services
B	<input type="radio"/>	1094, 1099	Miscellaneous Metal Ores
Sector H: Coal Mines and Coal Mining Related Facilities			
Sector I: Oil and Gas Extraction and Refining			
B	<input type="radio"/>	1311	Crude Petroleum and Natural Gas
B	<input type="radio"/>	1321	Natural Gas Liquids
B	<input type="radio"/>	1381-1389	Oil and Gas Field Services
B	<input type="radio"/>	2911	Petroleum Refineries
Sector J: Mineral Mining and Dressing			
B	<input type="radio"/>	1411	Dimension Stone
B,C	<input type="radio"/>	1422-1429	Crushed and Broken Stone, Including Rip Rap
B,C	<input type="radio"/>	1442, 1446	Sand and Gravel
	<input type="radio"/>	1455, 1459	Clay, Ceramic, and Refractory Materials
	<input type="radio"/>	1474-1479	Chemical and Fertilizer Mineral Mining
B	<input type="radio"/>	1481	Nonmetallic Minerals Services, Except Fuels
B	<input type="radio"/>	1499	Miscellaneous Nonmetallic Minerals, Except Fuels
Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities			
B,C	<input type="radio"/>	HZ	Hazardous Waste Treatment, Storage or Disposal
Sector L: Land Fills and Land Application Sites			
B,C	<input type="radio"/>	LF	Landfills, Land Application Sites, and Open Dumps
Sector M: Automobile Salvage Yards			
B	<input type="radio"/>	5015	Automobile Salvage Yards
Sector N: Scrap Recycling Facilities			
B	<input type="radio"/>	5093	Scrap Recycling Facilities
B	<input type="radio"/>	4499 (limited to list)	Dismantling Ships, Marine Salvaging, and Marine Wrecking - Ships for Scrap
Sector O: Steam Electric Generating Facilities			
B,C	<input type="radio"/>	SE	Steam Electric Generating Facilities

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Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
Sector P: Land Transportation and Warehousing			
B	<input type="radio"/>	4011, 4013	Railroad Transportation
B	<input type="radio"/>	4111-4173	Local and Highway Passenger Transportation
B	<input type="radio"/>	4212-4231	Motor Freight Transportation and Warehousing
B	<input type="radio"/>	4311	United States Postal Service
B	<input type="radio"/>	5171	Petroleum Bulk Stations and Terminals
Sector Q: Water Transportation			
B	<input type="radio"/>	4412-4499 (except 4499 as specified in Sector N)	Water Transportation
Sector R: Ship and Boat Building or Repairing Yards			
	<input type="radio"/>	3731, 3732	Ship and Boat Building or Repair Yards
Sector S: Air Transportation			
B	<input type="radio"/>	4512-4581	Air Transportation Facilities
Sector T: Treatment Works			
B	<input type="radio"/>	TW	Treatment Works
Sector U: Food and Kindred Products			
B	<input type="radio"/>	2011-2015	Meat Products
	<input type="radio"/>	2021-2026	Dairy Products
	<input type="radio"/>	2032-2038	Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties
	<input type="radio"/>	2041-2048	Grain Mill Products
	<input type="radio"/>	2051-2053	Bakery Products
B	<input type="radio"/>	2061-2068	Sugar and Confectionery Products
	<input type="radio"/>	2074-2079	Fats and Oils
	<input type="radio"/>	2082-2087	Beverages
	<input type="radio"/>	2091-2099	Miscellaneous Food Preparations and Kindred Products
	<input type="radio"/>	2111-2141	Tobacco Products
Sector V: Textile Mills, Apparel, and Other Fabric Product Manufacturing, Leather and Leather Products			
	<input type="radio"/>	2211-2299	Textile Mill Products
	<input type="radio"/>	2311-2399	Apparel and Other Finished Products Made From Fabrics and Similiar Materials
	<input type="radio"/>	3131-3199 (except 3111- see sector Z)	Leather and Leather Products, except Leather Tanning and Finishing
Sector W: Furniture and Fixtures			
	<input type="radio"/>	2434	Wood Kitchen Cabinets
	<input type="radio"/>	2511-2599	Furniture and Fixtures
Sector X: Printing and Publishing			
	<input type="radio"/>	2711-2796	Printing, Publishing, and Allied Industries
Sector Y: Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries			
B	<input type="radio"/>	3011	Tires and Inner Tubes
B	<input type="radio"/>	3021	Rubber and Plastics Footwear
B	<input type="radio"/>	3052, 3053	Gaskets, Packing, and Sealing Devices and rubber and Plastics Hose and Belting
B	<input type="radio"/>	3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
B	<input type="radio"/>	3081-3089	Miscellaneous Plastics Products
	<input type="radio"/>	3931	Musical Instruments
	<input type="radio"/>	3942-3949	Dolls, Toys, Games and Sporting and Athletic Goods
	<input type="radio"/>	3951-3955	Pens, Pencils, and Other Artists' Materials
	<input type="radio"/>	3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
	<input type="radio"/>	3991-3999	Miscellaneous Manufacturing Industries

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Sampling Notes	Mark all that apply	SIC Code or Activity Code	Activity Represented
Sector Z: Leather Tanning and Finishing			
B	<input type="radio"/>	3111	Leather Tanning, Currying and Finishing
Sector AA: Fabricated Metal Products			
B	<input type="radio"/>	3411-3499	Fabricated Metal Products, Except Machinery and Transportation Equipment
B	<input type="radio"/>	3911-3915	Jewelry, Silverware, and Plated Ware
Sector AB: Transportation Equipment, Industrial or Commercial Machinery			
	<input type="radio"/>	3511-3599 (except 3571-3579 see Sector AC)	Industrial and Commercial Machinery (Except Computer and Office Equipment)
	<input type="radio"/>	3711-3799 (except 3731 & 3732 see Sector R)	Transportation Equipment (Except Ship and Boat Building and Repairing)
Sector AC: Electronic, Electrical, Photographic, and Optical Goods			
B	<input type="radio"/>	3571-3579	Computer and Office Equipment
B	<input type="radio"/>	3612-3699	Electronic, Electrical Equipment and Components, Except Computer Equipment
B	<input type="radio"/>	3812-3873	Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods
Sector AD & AE: Non-Classified Facilities/Storm Water Discharges Designated By the Board As Requiring Permits			
B	<input type="radio"/>	Sector AD	Other Storm Water Discharges Designated By the Department As Needing a Permit or Any Facility Discharging Storm Water Associated With Industrial Activity Not Described By Any of Sectors A-AC. Note: Facilities may not elect to be covered under Sector AD. Only the Department may assign a facility to Sector AD.
B	<input type="radio"/>	Sector AE	

Notes: B - Benchmark Monitoring Required
C - Compliance Monitoring for Point Source Category Effluent Limitations

5. Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared for this facility in accordance with the requirements of the SPDES Multi-Sector General Permit? Please be advised that you cannot obtain coverage under this permit without having first prepared a SWPPP. ☐ Yes ☐ No
6. For each stormwater discharge associated with industrial activity at your facility identify the outfall number (e.g., 001, 002, etc.); the four digit Standard Industrial Classification (SIC) codes or 2-letter Industrial Activity Codes that best represent the principal products or services rendered by the facility for that drainage area; and the acreage of industrial activity exposed to stormwater for each outfall (round to nearest tenth of an acre):

Outfall No.	Industrial Activities (SIC or 2-letter Codes)												Acreage		
	A			B			C								
1															
2															
3															
4															
5															
6															
7															
8															
9															
Total Acreage															

(Note: SIC information can be obtained at the following web sites: <http://www.osha.gov/pls/imis/sicsearch.html> and <http://www.softshare.com/tables/sic/>. The 2-letter Industrial Activity Codes are: HZ - hazardous waste treatment, storage or disposal facilities; LF - landfills/disposal facilities that receive or have received any industrial waste; SE - steam electric power generating facilities; or TW - treatment works for treating domestic sewage.)

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7. Does this facility have coal piles that are exposed to precipitation? ☐ Yes ☐ No
8. Does this facility discharge have salt piles that are exposed to precipitation? ☐ Yes ☐ No
9. Does this facility discharge stormwater from secondary containment areas for liquid bulk storage or transfer areas? ☐ Yes ☐ No
10. Is the facility subject to any of the following EPA Point Source Category Effluent Limitations?

- Runoff from material storage piles at cement manufacturing facilities
(40 CFR Part 411 Subpart C)? ☐ Yes ☐ No

If yes, list Outfall Nos.

- Contaminated runoff from phosphate fertilizer manufacturing facilities (40 CFR Part 418 Subpart A)? ☐ Yes ☐ No

If yes, list Outfall Nos.

- Coal Pile runoff at steam electric power generating facilities (40 CFR Part 423)? ☐ Yes ☐ No

If yes, list Outfall Nos.

- Discharges resulting from spraydown or intentional wetting of logs at wet deck storage areas (40 CFR Part 429 Subpart I)? ☐ Yes ☐ No

If yes, list Outfall Nos.

- Mine dewatering discharges at crushed stone, construction sand and gravel, and industrial sand mines (40 CFR Part 436)? ☐ Yes ☐ No

If yes, list Outfall Nos.

- Runoff from asphalt emulsion facilities
(40 CFR Part 443 Subpart A)? ☐ Yes ☐ No

[illegible]

- Runoff from landfills (40 CFR 445 Subpart A and B)? ☐ Yes ☐ No

[illegible]

11. Provide the name(s) of the surface waterbody(ies) into which site runoff will discharge:

[illegible]

- 12 (a) . Does site runoff enter a Municipal Separate Storm Sewer System including roadside drains, swales, ditches, culverts, etc.? ☐ Yes ☐ No

- 12 (b) . If yes, what is the name of the municipality/entity that owns the Municipal Separate Storm Sewer System?

[illegible]

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13. Identify any other DEC Permits that are required for this facility:

- | | |
|--|--|
| <input type="radio"/> Air Pollution Control | <input type="radio"/> Stream Protection/Article 15 |
| <input type="radio"/> Coastal Erosion | <input type="radio"/> Water Quality Certificate |
| <input type="radio"/> Hazardous Waste | <input type="radio"/> Dam Safety |
| <input type="radio"/> Long Island Wells | <input type="radio"/> Water supply |
| <input type="radio"/> Mined Land Reclamation | <input type="radio"/> Freshwater Wetlands |
| <input type="radio"/> Other SPDES | <input type="radio"/> Tidal Wetlands |
| <input type="radio"/> Solid Waste | <input type="radio"/> Wild, Scenic and Recreational Rivers |

Other

[illegible]

Certification

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 gathered and evaluated 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.

Owner/Operator First Name (please print or type)

MT

Date / /

Owner/Operator Last Name (please print or type)

Signature



NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

from

CONSTRUCTION ACTIVITY

Permit No. GP-02-01

Issued Pursuant to Article 17, Titles 7, 8 and Article 70
of the Environmental Conservation Law

Effective Date: January 8, 2003

Expiration: January 8, 2008

William R. Adriance
Chief Permit Administrator

Address: NYS DEC
Div. Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

Authorized Signature

William R. Adriance

Date: January 8, 2003

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**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES
FROM CONSTRUCTION ACTIVITY**

Preface

Pursuant to Section 402 of the Clean Water Act ("CWA"), stormwater discharges from certain construction activities to waters of the United States¹ are unlawful unless they are authorized by a NPDES (National Pollutant Discharge Elimination System) permit or by a state permit program. New York's SPDES (State Pollutant Discharge Elimination System) is a NPDES-approved program with permits issued in accordance with the Environmental Conservation Law ("ECL"). Discharges of pollutants to all other "Waters of New York State" such as groundwaters are also unlawful unless they are authorized by a SPDES permit.

A discharger, owner, or operator may² obtain coverage under this general permit by submitting a Notice of Intent ("NOI") to the Department. Copies of this General Permit and the NOI for New York are available by calling (518) 402-8109 or at any Department of Environmental Conservation (the Department) regional office (see Appendix A on Page 23). They are also available on the Department's website at:

www.dec.state.ny.us

¹ "Waters of the United States" means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; and
- (b) All interstate waters, including interstate "wetlands"; and
- (c) All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce; and
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition; and
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; and
- (f) The territorial sea; and
- (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the CWA are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal areas in wetlands) nor resulted from the impoundment of waters of the United States.

² "may" refers to circumstances under which the discharger is ineligible for coverage under this general permit because of other provisions of this permit. Dischargers which are excluded from coverage under this general permit as provided for in Part I, Section C, for example, are not authorized to discharge under this permit. This also applies to possible situations in which an NOI has been submitted and/or a regulatory fee paid pursuant to Article 72 of the ECL. The submittal of an NOI and/or regulatory fee has no bearing or relevance whatsoever on the eligibility of the construction activity discharging stormwater runoff under the authority of this permit.

Local Programs of a Regulated MS4

Under the federal Phase II stormwater program, many cities, villages, towns, and other public entities in New York State which are located within "Urbanized Areas" as defined by the U.S. Census and who operate a Municipal Separate Storm Sewer System ("MS4") will be required to obtain SPDES permit coverage for stormwater discharges under their jurisdiction and control (see 40CFR Part 122 §122.26.32). Additionally, MS4s may be designated by the Department as regulated MS4s. Among other requirements, the Phase 2 NPDES stormwater regulations require regulated MS4s to address stormwater runoff from construction activities. Construction activities covered under this general permit, which are subject to stormwater runoff controls of a regulated MS4, will also need to comply with the MS4's controls.

Five (5) Day Coverage

Prior to the submission of an NOI, the owner or operator must have completed a Storm Water Pollution Prevention Plan (SWPPP) that complies with all requirements of this general permit. Submitting an NOI is an affirmation that a SWPPP has been prepared and will be implemented. If an applicant certifies that the SWPPP has been developed in conformance with the Department's technical standards, the applied-for activity may obtain coverage under this general permit in five (5) business days after the Department's receipt of the NOI provided, that the activity is eligible for coverage under this general permit and that the Department has not informed the applicant otherwise.

Sixty (60) Day Coverage

While the Department's technical standards are appropriate statewide, it is recognized that there may be situations where stormwater management goals can best be met by alternative means that are more suitable given local conditions.

For construction projects in these situations, applicants must identify in their NOI each of the deviations from the Department's technical standards that they are seeking. Applicants must also explain why the deviations are needed or desired and what impacts to water quality, if any, can be expected if the deviation were allowed. Applicants must also explain the actions, if any, that local board(s) have taken with respect to the deviation(s). For applicants which cannot certify conformance with the Department's technical standards, the SWPPP must also be certified by a licensed/certified professional that the SWPPP has been developed in a manner which will insure compliance with water quality standards and with the substantive intent of this permit.

In cases of deviations from the Department's technical standards, applicants must allow sixty (60) business days after the receipt by the Department of a completed NOI and certification before gaining coverage under this general permit and before initiating any construction activity. During this 60 day period, the Department may conduct further review of the NOI and SWPPP. If additional information is needed to complete the review, the NOI will be considered

incomplete and the applicant will be so advised. The intent of this provision is to require conformance the Department's technical standards wherever possible and appropriate. At the same time, alternative means to address stormwater control may be allowed under this general permit where they are more suitable for the site in question and where they will not diminish water quality protection.

There are other scenarios under which coverage under this general permit will not occur until 60 business days from the receipt of a completed NOI. For example, if the construction activity or post construction runoff causes the discharge of a pollutant of concern to a water identified on the 303(d) list or a watershed with an approved TMDL for that pollutant of concern, coverage under the general permit will not occur until sixty (60) business days from the receipt by the Department of a completed NOI. For these projects the operator may be required to submit the SWPPP and/or appropriate certification(s) to the Department for review. The flowchart shown in Figure 1 on page vi will help to describe the process under which certain conditions exist that require possible further analysis and water quality/quantity considerations.

Computer Tool Available For Completion of SWPPPs and NOIs Under Development

The Department is currently developing an interactive computer software tool entitled "How to Prepare SWPPPs and Notices of Intent" to assist applicants in both developing SWPPPs and completing NOIs. This will be available in the near future for use on the Department website as well as being packaged independently on compact discs. This tool will contain guidance as well as many useful links to reference materials and documents concerning erosion and sedimentation control, as well as to the design of stormwater management practices. The Department's website will contain the latest information and guidance on the various tools available.

The Department's Technical Standards

The Department's technical standards for erosion and sediment control are contained in the document, "*New York Standards and Specifications for Erosion and Sediment Control*"³ published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quantity and water quality controls (post-construction stormwater control practices), the Department's technical standards are detailed in the "*New York State Stormwater Management Design Manual*." Both of these documents are available on the Department's website. If an applicant certifies that stormwater management practices will conform to the Department's technical standards, then coverage under the permit may occur sooner than otherwise would be the case if non-conformance with the manuals existed. See Figure 1 on page vi for more information.

³ Previously, the "*New York Guidelines for Urban Erosion and Sediment Control*", also commonly referred to as the "Blue Book".

Permit Valid for Any Size Disturbance

This permit may be used for construction activities involving any amount of disturbed acreage, provided that all other eligibility conditions in subsection B of Part I are satisfactorily met (see page 2 of this permit). Thus, this permit may apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(14)(x) which are also referred to as “NPDES Phase 1 construction activities” involving soil disturbances of five (5) acres or more. This permit may also apply to activities identified under 40 CFR Part 122, subsection 122.26(b)(15) which are also referred to as “NPDES Phase 2 small construction activities” involving soil disturbances of between one (1) and five (5) acres. And, this permit may also apply to construction activities involving soil disturbances of less than one (1) acre if the Department determines that a SPDES permit is required pursuant to the ECL. In any and all cases, all of the eligibility provisions of this general permit must be met in order to gain coverage.

Notice of Termination

After construction is completed as defined in the general permit (see Part II beginning on Page 7), cancellation of coverage is accomplished by the submittal of a Notice of Termination (“NOT”). Failure to submit a NOT may result in the continued obligation to pay a yearly Regulatory Fee established pursuant to Article 72 of the ECL and/or may be cause for suspension of permit coverage.

Previous versions of NOIs, NOTs and Notices of Intent, Transfer and Termination (“NOITT”)s cannot be used in conjunction with this general permit. There is a new NOI required for obtaining coverage under this general permit. Failure to include information identified as “mandatory” entries on the new NOI form may prevent and/or delay discharge authorization being sought under this permit.

The new NOT will also include an identification of any permanent structures that are being left on the site after stabilization occurs and after termination of permit coverage under this general permit. The NOT will also include a certification that the structures were constructed as described in the SWPPP and that an Operation and Maintenance (“O&M”) manual has been prepared and has been made available to the owner of such permanent structures who is expected to conduct the necessary O&M over the life of the structure(s).

Ineligible Activities

The submittal of a completed NOI and/or the payment of an annual regulatory fee by an applicant does not necessarily mean that an applicant is covered under this permit if the applicant is ineligible for coverage under this permit under the terms cited in Part I of this permit. In other words, submitting a completed NOI and paying an annual regulatory fee does not automatically gain an applicant permit coverage if the applicant is ineligible for coverage under this permit even if the Department fails to immediately inform the applicant of such ineligibility.

Permit Expiration Date

Coverage under this general permit is available January 8, 2003 and will expire five (5) years after issuance on January 8, 2008.

Activities Previously Covered Under GP-93-06

In a separate proposal, the Department is also concurrently seeking to re-issue GP-93-06 with an expiration of August 1, 2003. The purpose of this action is to provide a transition period for permittees which have had SPDES permit coverage under GP-93-06 immediately prior to January 8, 2003, the effective date of GP-02-01. **Prior to August 1, 2003**, these activities will need to:

- (1) stabilize their sites in accordance with GP-93-06 and submit an NOT; or, if necessary,
- (2) gain coverage under GP-02-01 by submitting a new NOI.

For **new** construction activities, coverage under GP-93-06 will not be available after the effective date of GP-02-01, January 8, 2003. Such discharges may be eligible for coverage under GP-02-01 (see Part I.B. on page 2 of this permit).

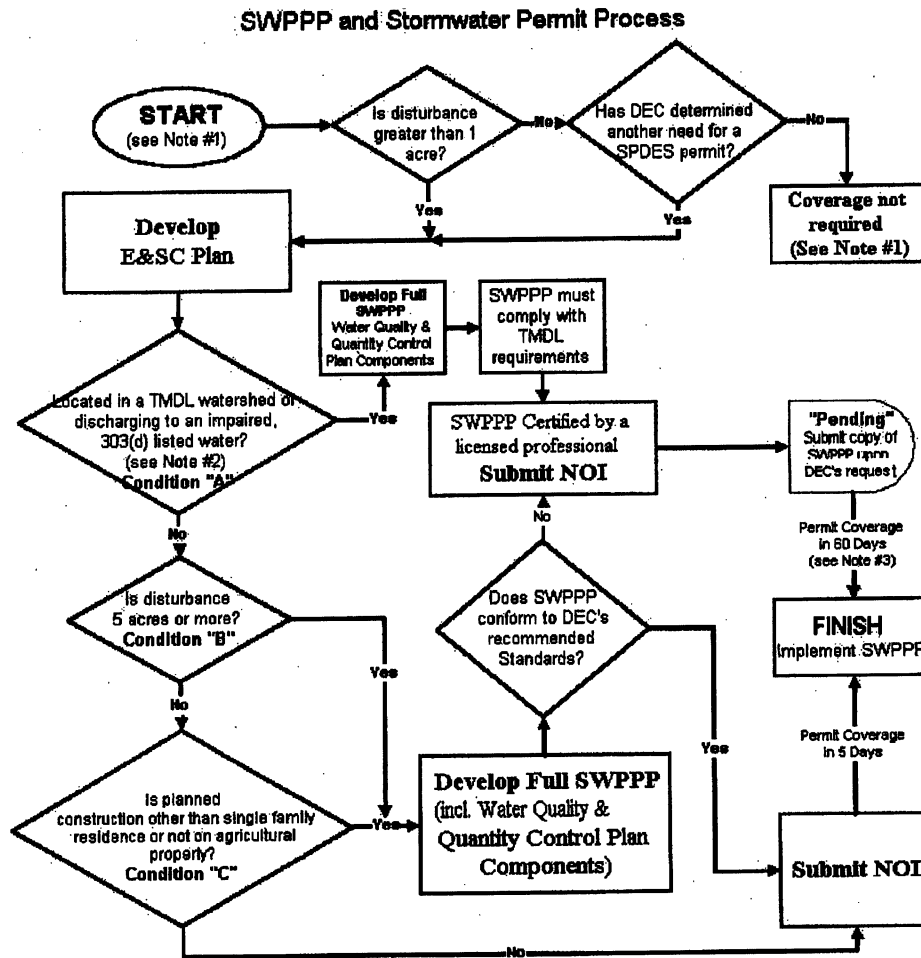
Water Quality Violations Not Permitted

This permit does not authorize any person to cause or contribute to a condition in contravention of any water quality standards that are contained in the Rules and Regulations of the State of New York (see Part I of this permit on page 2) even if the permittee is in compliance with all other provisions of this permit. Any violations of water quality standards may be considered by the Department to be violations of this permit and/or the ECL, including its accompanying regulations.

Other Department Permits

Construction activities may also require other Department permits in addition to the coverage provided by this general permit including, but not limited to, dam safety, wetlands and stream protection. Such other Department permits must be obtained separately from coverage under this general permit. Further information concerning these permits should be sought from the Regional Permit Administrator at the appropriate Department regional office (See Appendix A on page 23).

FIGURE 1



NOTES:

1. Under any of the above conditions other environmental permits may be required. DEC may require permit for construction disturbance < 1 acre on a case by case basis.
2. and the following exists: construction and/or stormwater discharges from the construction or post-construction site contain the pollutant of concern identified in the TMDL or 303(d) listing.
3. After receipt by DEC of completed application.

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES**

FROM CONSTRUCTION ACTIVITIES

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Part I. COVERAGE UNDER THIS PERMIT

A. **Maintaining Water Quality** - It shall be a violation of this general permit and the Environmental Conservation Law ("ECL") for any discharge authorized by this general permit to either cause or contribute to a violation of 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 including, but not limited to:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in 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, nor visible oil film, nor globules of grease.

B. **Eligibility Under This General Permit**

1. This permit may authorize all discharges of stormwater from construction activity⁴ to surface waters and groundwaters except for ineligible discharges identified under subparagraph C of this Part (see below). Discharge authorization under this permit requires the submittal of a completed NOI.
2. Except for non-stormwater discharges explicitly listed in the next paragraph, this permit only authorizes stormwater discharges from construction activities.
3. Notwithstanding paragraphs B.1 and B.2 above, the following non-stormwater discharges may be authorized by this permit: discharges from fire

⁴ This includes discharges of stormwater associated with industrial activity identified under 40 CFR Part 122, subsection 122.26(b)(14)(x), small construction activities identified under 40 CFR Part 122, subsection 122.26(b)(15) or any other stormwater from construction activities that are not otherwise ineligible for coverage under this permit (See Part I, subsection B beginning on page 2).

fighting activities; fire hydrant flushings; waters to which cleansers or other components have **not** been added that are used to wash vehicles or control dust in accordance with the SWPPP, routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; and foundation or footing drains where flows are not contaminated with process materials such as solvents. For those entities required to obtain coverage under this general permit, and who discharge as noted in this paragraph, and with the exception of flows from fire fighting activities, these discharges must be identified in the SWPPP (see Part III beginning on Page 7). Under all circumstances, the permittee must still comply with water quality standards (see Part I, subsection A on Page 2).

C. Activities Which Are Ineligible for Coverage Under This General Permit - All of the following stormwater discharges from construction activities are **not** authorized by this permit:

1. Discharges after construction activities have been completed and the site has undergone final stabilization⁵;
2. Discharges that are mixed with sources of non-stormwater other than those expressly authorized under subsection B.3. of this Part (see page 3) and identified in the SWPPP required by this permit;
3. Discharges that are subject to an existing SPDES individual or general permit or which are required to obtain an individual or alternative general permit pursuant to Part V, subparagraph K (see page 21) of this permit;
4. Discharges that are likely to adversely affect a listed, or proposed to be listed, endangered or threatened species, or its critical habitat;
5. Discharges which are subject to an existing effluent (limitation) guideline addressing stormwater and/or process wastewater unless said guidelines are contained herein; or
6. Discharges which either cause or contribute to a violation of water quality standards adopted pursuant to the ECL and its accompanying regulations (See subsection A of Part I on page 2).

⁵ "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% has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

D. Authorization Under This General Permit

1. An operator⁶ must submit a completed NOI form in order to be authorized to discharge under this general permit. The NOI form shall be one which is associated with this general permit, signed in accordance with Part V. H. (see Page 19) of this permit and submitted to the address indicated on the NOI form. NOIs and NOITTs used in association with either previous or other general permits are not valid for obtaining coverage under this general permit. The submittal of an NOI is an affirmation to the operators' understanding and belief that the activity is eligible for coverage under this permit and that a SWPPP has been prepared and will be implemented in accordance with Part III of this permit.

2. All contractors and subcontractors of the operator identified under Part III.E.1 (see page 17) must provide the certification cited under Part III.E.2 (see page 17). Such certifications shall become part of the SWPPP for the construction activity covered under this general permit.

3. Unless notified by the Department to the contrary, operators who are eligible for coverage under this permit **and** who submit an NOI in accordance with the requirements of this permit, may be authorized to discharge stormwater from construction activities under the terms and conditions of this permit, and in accordance with the following timetable:

a. For construction activities which:

(1) develop a SWPPP in conformance with the Department's technical standards (See subsection D of Part III on page 10), and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

or

(2) as of the effective date of this general permit, GP-02-01, have obtained coverage under, and are operating in compliance with, GP-93-06; and do not or will not discharge a pollutant of concern to an impaired water or a TMDL watershed;

authorization to discharge under this permit may occur five (5) business days after the date on which the NOI is received by the Department.

⁶ For the purposes of this permit, the term "operator" means the person, persons, or legal entity which owns or leases the property on which the construction activity is occurring. Also, see Part V., subsection H. on page 19 of this permit.

- b. For activities which do not comply with the preceding subsection (i.e. Part I.D.3.a.), authorization to discharge under this permit will begin no sooner than sixty (60) business days from the receipt of the completed NOI unless notified differently by the Department pursuant to Part V, subsection K of this permit (see page 21). For activities not satisfying Part I.D.3.a.(1) above, or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must be prepared by a licensed/certified professional⁷ and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with water quality standards (see Part I.A.) and with the substantive intent of this permit.
- c. For construction activities which are subject to a sixty-day period provision identified in the preceding subparagraph b., the SWPPP shall include each of the components identified in Part III.A.1.b. (see page 8).
4. At its sole discretion, the Department may deny or terminate coverage under this permit and require coverage under another SPDES permit at any time based on a review of the NOI, the SWPPP or other relevant information (see Part V, subsection K of this permit on page 21).
5. A copy of the NOI and a brief description of the project shall be posted at the construction site in a prominent place for public viewing.
6. A signed copy of the NOI, the SWPPP, and any reports required by this permit shall also be submitted concurrently to the local governing body and any other authorized agency⁸ having jurisdiction or regulatory control over the construction project.
7. New stormwater discharges from construction activities that require any other Uniform Procedures Act permit (Environmental Conservation Law, 6 NYCRR Part 621) cannot be covered under this general permit until the other required permits are obtained. Upon satisfaction of the State Environmental Quality Review Act ("SEQRA") for the proposed action and issuance of necessary permits, the applicant may submit an NOI to obtain coverage under this general

⁷ A "licensed/certified professional" means a person currently licensed to practice engineering in New York State or is a Certified Professional in Erosion and Sediment Control (CPESC).

⁸ For the purposes of this general permit, "any other authorized agency" shall include any local, regional, or state entity or agency except the Department which has authority to review stormwater discharge from the project, including authority under any approved watershed protection plan or regulations.

permit.⁹ In order to facilitate the Department's review of a multi-permitted project, an applicant should submit, at a minimum, a copy of the SWPPP which contains the information specified in Appendix B (see page 24). This information will assist the Department in determining whether or not coverage under this general permit or another SPDES permit is the more appropriate option. The Department may also require the submission of additional information in order to determine the SWPPP's conformance with the Department's technical standards.

8. Upon renewal of this general permit or issuance of a new general permit, the permittee is required to notify the Department of its intent to be covered by the new general permit. Coverage will continue under this permit for its term unless action is taken to terminate permit coverage as provided elsewhere in this permit. See also Part V. subsection B. on page 18 of this permit.

9. In the event of a transfer of ownership or responsibility for stormwater runoff, there can be no "automatic" transfer of permit coverage from one permittee to the next without appropriate notification from the dischargers. The former permittee must submit an NOT and notify the new discharger of the possible need for the new discharger to submit a new NOI (see Section E, subparagraph 2 below).

E. Deadlines for Notification

1. Operators who intend to obtain coverage under this general permit for stormwater runoff from construction activities must submit an NOI in accordance with the requirements of this Part at least five (5), or sixty (60) business days, as appropriately determined from Part I, Section D.3 (see page 4) prior to the commencement of construction¹⁰ activities.

2. For stormwater runoff from construction activities where the operator changes, a new NOI must be submitted by the new operator in accordance with the requirements of this permit. The former operator must submit a NOT in accordance with Part II (see page 7) of this permit and notify the new operator of the requirement to submit a new NOI to obtain coverage under this permit. The new operator must also review and sign the SWPPP in accordance with Part III.B.(see page 9) and continue implementation of the SWPPP as required by this

⁹ The purposes of this subsection is to assure that the requirements of SEQRA are fulfilled, if necessary, before any discharge authorization under this general permit is granted.

¹⁰ "Commencement of Construction" means the initial disturbance of soils associated with clearing, grading, or excavating activities, or other construction activities.

permit.

Part II. TERMINATION OF COVERAGE¹¹

Where a site has been finally stabilized, the operator must submit a NOT form prescribed by the Department for use with this general permit. The NOT shall be signed in accordance with Part V. H.(see page 19) of this permit and submitted to the address indicated on the approved NOT form.

The permittee must identify all permanent stormwater management structures that have been constructed and provide the owner(s) of such structures with a manual describing the operation and maintenance practices that will be necessary in order for the structure to function as designed after the site has been stabilized. The permittee must also certify that the permanent structure(s) have been constructed as described in the SWPPP.

Part III. STORMWATER POLLUTION PREVENTION PLANS (“SWPPP”s)

A. General

1. SWPPP Preparation

a. A SWPPP shall be developed by the operator for construction activities at each site to be covered by this permit, prior to the initiation of activities requiring coverage under this permit. SWPPPs shall be prepared in accordance with sound engineering practices. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges. In addition, the SWPPP shall describe and ensure the implementation of practices which will be used to reduce the pollutants in stormwater discharges and to assure compliance with the terms and conditions of this permit. Operators are encouraged to have their SWPPP reviewed for adequacy and completeness by the local soil and water conservation district (“SWCD”) and/or other professionals qualified in erosion and sediment control practices¹² and stormwater management. Moreover, if the construction activity is identified under Part I, subsection D.3.b. (See page 5), or for construction site runoff subject to a TMDL (see Figure 1 on page vi), the SWPPP must include a certification by a licensed/certified professional.

¹¹ Submittal of an NOT will terminate coverage under this general permit and will also remove the permittee from subsequent billings of the annual regulatory fee levied under Article 72 of the ECL.

¹² For example, CPESC, Inc. administers a certified program of individuals under its CPESC (Certified Professional in Erosion and Sediment Control) program which is sponsored by the International Erosion Control Association (IECA) and the Soil and Water Conservation Society (SWCS) and is endorsed by USDA - Natural Resources Conservation Service. CPESC, Inc. also administers the CPSWQ (Certified Professional in Stormwater Quality) program.

b. All SWPPPs shall include erosion and sediment controls. For construction activities meeting either Condition "A", "B" or "C" described below, the SWPPP shall also include water quantity and water quality controls (post-construction stormwater control practices).(see Part III. D.).

(1) Condition A - Construction site or post construction runoff discharging a pollutant of concern to either an impaired water identified on DEC's 303(d) list or a TMDL watershed for which pollutants in stormwater have been identified as a source of the impairment.

(2) Condition B - Construction site runoff from Phase 1 construction activities (construction activities disturbing five (5) or more acres) identified under 40 CFR Part 122, §122.26(b)(14)(x).

(3) Condition C - Construction site runoff from construction activity disturbing between one (1) and five (5) acres of land during the course of the project, exclusive of the construction of single family residences and construction activities at agricultural properties.

2. **SWPPP Implementation** - Operators are responsible for implementing the provisions of the SWPPP and ensuring that all contractors and subcontractors who perform professional services at the site provide certification of the SWPPP in accordance with Part I.D.2. (see page 4) and Part III.E.2. (see page 17) of this permit. All contractors and subcontractors identified in the SWPPP in accordance with Part III.E.1. (see page 17) of this permit must agree to implement applicable provisions of the SWPPP and satisfy the certification requirement of Part III.E.2. (see page 17). However, contractors and subcontractors who are not operators, as defined in this permit (see page 4), are not required to submit a NOI in addition to the NOI submitted by the operator.

3. **Deadlines for SWPPP Preparation and Compliance** - The SWPPP must be developed prior to the submittal of an NOI and provide for compliance with the terms and schedule of the SWPPP beginning with the initiation of construction activities. The operator shall also certify in the SWPPP that all appropriate stormwater control measures will be in place before commencement of construction of any segment of the project that requires such measures.

4. **Local Requirements** - Developing a SWPPP that complies with the requirements listed herein does not relieve an operator from the obligation of complying with stormwater management requirements of the local government having jurisdiction over the project.

5. **Activities Previously Covered Under GP-93-06** - For construction activities which are covered by GP-93-06 as of the effective date of this permit (GP-02-01), the continued implementation of their SWPPP that was developed and implemented in accordance with GP-93-06 is acceptable until such time as:

- (a) an NOT is submitted;
- (b) the Department notifies them otherwise in accordance with this permit, including Part V, subsection K (see page 21); or
- (c) this permit expires.

B. Signature and SWPPP Review

1. The SWPPP shall be signed in accordance with Part V. H.(see page 19), and be retained at the site where the construction activity occurs in accordance with Part IV (see retention of records on page 17) of this permit.

2. The permittee shall submit a copy of the SWPPP and any amendments thereto to the local governing body and any other authorized agency having jurisdiction or regulatory control over the construction activity. The operator shall make SWPPPs available upon request to the Department and any local agency having jurisdiction; or in the case of a stormwater discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the municipal operator of the system.

3. The Department, or its authorized representative, may notify the permittee at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. Such notification shall identify those provisions of the permit which are not being met by the SWPPP and identify which provisions of the SWPPP require modifications in order to meet the minimum requirements of this permit. Within seven (7) days of such notification, (or as otherwise provided by the Department) the permittee shall make the required changes to the SWPPP and shall submit to the Department a written certification that the requested changes have been made. Notwithstanding the foregoing, the Department reserves all rights to enforce the terms of the ECL.

C. **Keeping SWPPPs Current** - The permittee shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or
2. The SWPPP proves to be ineffective in:
 - a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP required by this permit, or
 - b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity.
3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP (see Part III.E, page 17 below). Amendments to the SWPPP may be reviewed by the Department in the same manner as provided by Part III.B (see page 9 above).

D. **General Contents of SWPPPs** -

1. **Standards for construction activities covered under this permit** - The Department's technical standards for erosion and sediment controls are detailed in the "*New York Standards and Specifications for Erosion and Sediment Control*"¹³ published by the Empire State Chapter of the Soil and Water Conservation Society. For the design of water quality and water quantity controls (post-construction stormwater control practices), the Department's technical standards are detailed in the "*New York State Stormwater Management Design Manual*."

If an operator certifies that the SWPPP has been developed in conformance with the Department's technical standards referenced above, they may obtain coverage under this general permit in five (5) business days from the Department's receipt of the NOI, provided the construction activity does not meet Condition A in Part III.A.1.b. For SWPPPs which will not conform with the Department's technical standards, the SWPPP must be prepared by a licensed/certified professional and include a certification stating that the SWPPP has been developed in a manner which will assure compliance with the State's water quality standards and with the substantive intent of this permit. In addition, coverage under this general permit will not begin until sixty (60) business days from the receipt of a completed NOI.

¹³ Previously, the "*New York Guidelines for Urban Erosion and Sediment Control*," also commonly referred to as the "Blue Book."

2. Minimum SWPPP Components SWPPPs prepared pursuant to this general permit shall present fully designed and engineered stormwater management practices with all necessary maps, plans and construction drawings. The SWPPP must, at a minimum, include the following:

a. For all construction activities subject to this general permit -

- (1). provide background information about the scope of the project, including the location, type and size of project.
- (2) provide a site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should 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), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharge(s);
- (3) provide a description of the soil(s) present at the site;
- (4) provide a construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Guidelines for Urban Erosion and Sediment Control, there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the Department;
- (5) provide 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 storm water discharges;
- (6) provide a description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response;
- (7) describe the temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land

clearing and grubbing to project close-out;

(8) identify and show on a site map/construction drawing(s) the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

(9) provide the dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

(10) identify temporary practices that will be converted to permanent control measures;

(11) provide an implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and the duration that each practice should remain in place;

(12) provide a maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices;

(13) provide the names(s) of the receiving water(s);

(14) provide a delineation of SWPPP implementation responsibilities for each part of the site;

(15) provide a description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

(16) provide any existing data that describes the stormwater runoff characteristics at the site.

b. For construction activities meeting Condition A, B or C in Part III.A.1.b.

- (1) provide all the information required in Parts III.D.2.a.1 - 16 above;
- (2) provide a description of each post-construction stormwater control practice;
- (3) identify and show on a site map/construction drawing(s) the specific location(s) and size(s) of each post-construction stormwater control practice;
- (4) provide a hydrologic and hydraulic analysis for all structural components of the stormwater control system for the applicable design storms;
- (5) provide a comparison of post-development stormwater runoff conditions with pre-development conditions;
- (6) provide the dimensions, material specifications and installation details for each post-construction stormwater control practice;
- (7) provide a maintenance schedule to ensure continuous and effective operation of each post-construction stormwater control practice.

The following three subsections, Part III.D. 3. through Part III.D. 5., apply only to construction activities covered under this general permit which meet Conditions “A” , “B”¹⁴ or “C” in Part III. A.1.b. Beginning with Part III.E. below (see page 17) the requirements set forth therein apply to all permittees covered under this permit.

3. Site Assessment and Inspections -

a. The operator shall have a qualified professional¹⁵ conduct an assessment of the site prior to the commencement of construction and certify in an inspection report that the appropriate erosion and sediment controls described in the SWPPP and required by Part III.D. (see page 10) of this permit have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction. Following the commencement of construction, site inspections shall be conducted by the qualified professional at least every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. During each inspection, the qualified professional shall record the following information:

- (1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- (2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- (3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- (4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- (5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and

¹⁴ Condition “B” includes construction activities covered under GP-93-06 and, therefore, are subject to Part III.D.3 through Part III.D. 5.

¹⁵ “Qualified professional” means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a licensed professional engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist.

containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water;
and

- (6) All deficiencies that are identified with the implementation of the SWPPP.

b. The operator shall maintain a record of all inspection reports in a site log book. The site log book shall be maintained on site and be made available to the permitting authority upon request. Prior to the commencement of construction,¹⁶ the operator shall certify in the site log book that the SWPPP, prepared in accordance with Part III.D. (see page 10) of this permit, meets all Federal, State and local erosion and sediment control requirements.

The operator shall post at the site, in a publicly-accessible location, a summary of the site inspection activities on a monthly basis.

c. Prior to filing of the Notice of Termination or the end of permit term, the operator shall have the qualified professional perform a final site inspection. The qualified professional shall certify that the site has undergone final stabilization¹⁷ using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

d. The operator shall certify that the requirements of Parts III.D.3., III.D.4. and III.D.5 of this permit have been satisfied within 48 hours of actually meeting such requirements.

¹⁶ "Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

¹⁷ "Final stabilization" means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

4. **Stabilization**¹⁸ - The operator shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. This requirement does not apply in the following instances:

a. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable;

b. Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures need not be initiated on that portion of the site.

5. **Maintenance** - Sediment shall be removed from sediment traps or sediment ponds whenever their capacity has been reduced by fifty (50) percent from the design capacity.

¹⁸ "Stabilization" means covering or maintaining an existing cover over soil. Cover can be vegetative (e.g. grass, trees, seed and mulch, shrubs, or turf) or non-vegetative (e.g. geotextiles, riprap, or gabions).

E. **Contractors**

1. The SWPPP must clearly identify for each measure identified in the SWPPP, the contractor(s) and subcontractor(s) that will implement the measure. All contractors and subcontractors identified in the SWPPP must sign a copy of the certification statement in Part III.E.2 (see below) of this permit in accordance with Part V.H.(see page 19) of this permit. All certifications must be included in the SWPPP. Additionally, new contractors and subcontractors (see subsection C.3. above) need to similarly certify.

2. **Certification Statement** - All contractors and subcontractors identified in a SWPPP in accordance with Part III.E.1 (see above) of this permit shall sign a copy of the following certification statement before undertaking any construction activity at the site identified in the SWPPP:

"I certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP for the construction site identified in such SWPPP as a condition of authorization to discharge stormwater. I also understand that the operator must comply with the terms and conditions of the New York State Pollutant 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."

The certification must include the name and title of the person providing the signature in accordance with Part V.H.(see page 19) of this permit; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification is made.

Part IV. MONITORING, REPORTING AND RETENTION OF RECORDS

A. The Department may, at its sole discretion, require monitoring of discharge(s) from the permitted construction activity after notifying the permittee in writing of the basis for such monitoring, the parameters and frequency at which monitoring shall occur and the associated reporting requirements, if any.

B. The operator shall retain copies of SWPPPs and any reports submitted in conjunction with this permit, and records of all data used to complete the NOI to be covered by this permit, for a period of at least three years from the date that the site is finally stabilized. This period may be extended by the Department, in its sole discretion, at any time upon written notification.

C. The operator shall retain a copy of the SWPPP required by this permit at the construction site from the date of initiation of construction activities to the date of final

stabilization.

D. The operator shall also prepare a written summary of its status with respect to compliance with this general permit at a minimum frequency of every three months during which coverage under this permit exists. The summary should address the status of achieving each component of the SWPPP. This summary shall be handled in the same manner as prescribed for SWPPPs under Part III, subsection B (see Page 9).

E. **Addresses** - Except for the submittal of NOIs and NOTs, all written correspondence under this permit directed to the Department, including the submittal of individual permit applications, shall be sent to the address of the appropriate Department Office as listed in Appendix A (see page 23).

Part V. STANDARD PERMIT CONDITIONS

A. **Duty to Comply** - The operator must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the ECL and is grounds for an enforcement action against either the operator or the contractor/subcontractor; permit revocation or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all construction activity at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the operator or the operator's on-site representative.

B. **Continuation of the Expired General Permit** - This permit expires five (5) years after issuance on January 8, 2008. However, coverage may be obtained under the expired general permit which will continue in force and effect until a new general permit is issued. After issuance of a new general permit, those with coverage under GP-02-01 will have six (6) months from the effective date of the new general permit to complete their project or obtain coverage under the new permit. Unless otherwise notified by the Department in writing, operators seeking authorization under a new general permit must submit a new NOI in accordance with the terms of such new general permit. See also Part I, subsection D.8. on page 6.

C. **Penalties for Violations of Permit Conditions** - There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$25,000 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

D. **Need to halt or reduce activity not a defense** - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the construction activity in order to maintain compliance with the conditions of this permit.

E. **Duty to Mitigate** - The permittee and its contractors and subcontractors shall 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.

F. **Duty to Provide Information** - The permittee shall furnish any information requested by any agency with regulatory or review authority over this project for the purpose of determining compliance with this permit or compliance with any other regulatory requirements placed on the project in conjunction with this permit. Failure to provide requested information shall be a violation of this permit. Such regulating agencies include but are not limited to the Department, SWCDs,¹⁹ local planning, zoning, health, and building departments that review and approve erosion and sediment control plans, grading plans, and Stormwater Management Plans, as well as MS4s into whose system runoff from the permitted project or activity discharges. The SWPPP and inspection reports required by this general permit are public documents that the operator must make available for inspection, review and copying by any person within five (5) business days of the operator receiving a written request by any such person to review the SWPPP and/or the inspection reports. Copying of documents will be done at the requester's expense.

G. **Other Information** - When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Department, he or she shall promptly submit such facts or information.

H. **Signatory Requirements** - All NOIs, NOTs, SWPPPs, reports, certifications or information required by this permit or submitted pursuant to this permit, shall be signed as follows:

1. All NOIs and NOTs shall be signed as follows:

a. For a corporation: by (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person authorized to and who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

¹⁹

"SWCD" means Soil and Water Conservation District

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

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. The SWPPP and all reports required by the permit and other information requested by the Department or local agency shall be signed by a person described above 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 above and submitted to the Department.

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or 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).

c. **Certification** - Except for NOIs and NOTs, any person signing documents in accordance with this Part shall 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 gathered and evaluated 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 false statements made herein are punishable as a class A misdemeanor pursuant to Section 210.45 of the Penal Law."

I. **Property Rights** - The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

J. **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 shall not be affected thereby.

K. **Denial of Coverage Under This Permit**

1. At its sole discretion, the Department may require any person authorized by this permit to apply for and/or obtain either an individual SPDES permit or an alternative SPDES general permit. Where the Department requires a discharger authorized to discharge under this permit to apply for an individual SPDES permit, the Department shall notify the discharger in writing that a permit application is required. This notification shall include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application, and a statement that on the effective date of issuance or denial of the individual SPDES permit or the alternative general permit as it applies to the individual permittee, coverage under this general permit shall automatically terminate. Applications shall be submitted to the appropriate Department Office indicated in Appendix A of this permit. The Department may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual SPDES permit application as required by the Department under this paragraph, then the applicability of this permit to the individual SPDES permittee is automatically terminated at the end of the day specified by the Department for application submittal.

2. Any discharger authorized by this permit may request to be excluded from the coverage under this permit by applying for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii) and 6 NYCRR Part 621, with reasons supporting the request, to the Department at the address for the appropriate Department Office (see addresses in Appendix A on page 23 of this permit). The request may be granted by issuance of an individual permit or an alternative general permit at the discretion of the Department.

3. When an individual SPDES permit is issued to a discharger covered by this permit, or the discharger is authorized to discharge under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual SPDES permit is denied to an operator otherwise subject to this permit, or the operator is denied for coverage under an alternative SPDES general permit, the applicability of this permit to the individual SPDES permittee is automatically terminated on the date of such denial, unless otherwise specified by the Department.

L. **Proper Operation and Maintenance** - The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWPPPs. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

M. **Inspection and Entry** - The permittee shall allow the Department or an authorized representative of EPA, the State, 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 permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment).

N. **Permit Actions** - At the Department's sole discretion, this permit may, at any time, be modified, revoked, or renewed. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not stay compliance with any terms of this permit.

APPENDIX A

List of NYS DEC Regional Offices

Region	<u>Covering the following counties:</u>	DIVISION OF ENVIRONMENTAL PERMITS (DEP) <u>Permit Administrators</u>	DIVISION OF WATER (DOW) <u>Water (SPDES) Program</u>
1	Nassau and Suffolk	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 Tel. (631) 444-0365	Bldg 40 - SUNY @ Stony Brook Stony Brook, NY 11790-2356 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	200 White Plains Road, 5 th Floor Tarrytown, NY 10591-5805 Tel. (845) 332-1835
4	Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady and Schoharie	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2069	1150 North Westcott Road Schenectady, NY 12306-2014 Tel. (518) 357-2045
5	Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren and Washington	Route 86, PO Box 296 Ray Brook, NY 12977-0296 Tel. (518) 897-1234	232 Hudson Street Warrensburg, NY 12885-0220 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	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7438	615 Erie Blvd. West Syracuse, NY 13204-2400 Tel. (315) 426-7500
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne and Yates	6274 East Avon-Lima Road Avon, 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	270 Michigan Avenue Buffalo, NY 14203-2999 Tel. (716) 851-7165	270 Michigan Ave. Buffalo, NY 14203-2999 Tel. (716) 851-7070

APPENDIX B

Information Required of Construction Activities Which Are Identified Under Part I, subsection D.7. (see page 5)

- A. The location (including a map) and the nature of the construction activity;
- B. The total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;
- C. Proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;
- D. Proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;
- E. An estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of the fill material and existing data describing the soil or the quality of the discharge;
and
- F. The name of the receiving water(s).

ATTACHMENT A2-2

EROSION CONTROL DETAILS

- Temporary Critical Area Plantings
- Mulching
- Temporary Swale
- Perimeter Dike/Swale
- Straw Bale Dike
- Silt Fence
- Sediment Trap



**New York State
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

Division of Water

New York State Standards and Specifications for Erosion and Sediment Control

August 2005



**New York State
Department of Environmental Conservation**

George E. Pataki, Governor

STANDARD AND SPECIFICATIONS FOR TEMPORARY CRITICAL AREA PLANTINGS



Definition

Providing erosion control protection to a critical area for an interim period. A critical area is any disturbed, denuded slope subject to erosion.

Purpose

To provide temporary erosion and sediment control. Temporary control is achieved by covering all bare ground areas that exist as a result of construction or a natural event.

Conditions Where Practice Applies

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

Criteria

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

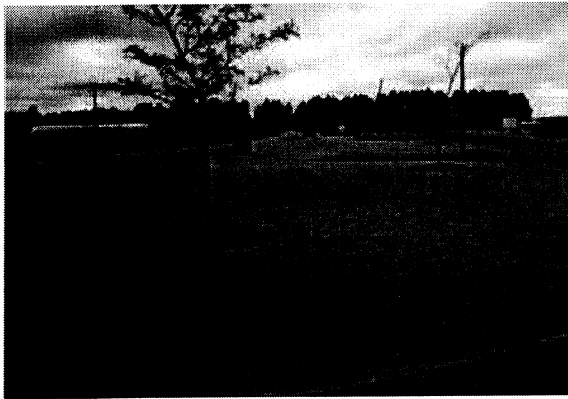
Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).
IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding.

STANDARD AND SPECIFICATIONS FOR MULCHING



Definition

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface.

Purpose

The primary purpose is to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch is also used alone for temporary stabilization in non-growing months.

Conditions Where Practice Applies

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

Criteria

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.

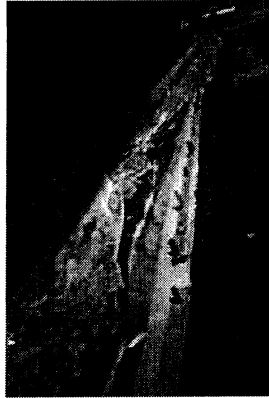
Table 3.7
Guide to Mulch Materials, Rates, and Uses

Mulch Material	Quality Standards	per 1000 Sq. Ft.	per Acre	Depth of Application	Remarks
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	8" x 100" 2-sided plastic, 48" x 180" 1-sided plastic	—	—	Use without additional mulch. Excellent for seeding establishment. Tie down as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Compost	Up to 3" pieces, moderately to highly stable	3-9 cu. yds.	134-402 cu. yds.	1-3"	Coarser textured mulches may be more effective in reducing weed growth and wind erosion.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

Table 3.8
Mulch Anchoring Guide

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45 ⁰ Fahrenheit are required.

STANDARD AND SPECIFICATIONS FOR TEMPORARY SWALE



Definition

A temporary excavated drainage way.

Purpose

The purpose of a temporary swale is to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment laden water and divert it to a sediment trapping device.

Conditions Where Practice Applies

Temporary swales are constructed:

1. to divert flows from entering a disturbed area.
2. intermittently across disturbed areas to shorten overland flow distances.
3. to direct sediment laden water along the base of slopes to a trapping device.
4. to transport offsite flows across disturbed areas such as rights-of-way.

Swales collecting runoff from disturbed areas shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 5A.2 on page 5A.5 for details.

	Swale A	Swale B
Drainage Area	<5 Ac	5-10 Ac
Bottom Width of Flow Channel	4 ft	6 ft
Depth of Flow Channel	1 ft	1 ft
Side Slopes	2:1 or flatter	2:1 or flatter
Grade	0.5% Min. 20% Max.	0.5% Min. 20% Max.

For drainage areas larger than 10 acres, refer to the Standard and Specification for Waterways on page 5B.11.

Stabilization

Stabilization of the swale shall be completed within 7 days of installation in accordance with the appropriate standard and specifications for vegetative stabilization or stabilization with mulch as determined by the time of year. The flow channel shall be stabilized as per the following criteria:

Type of Treatment	Channel Grade ¹	Flow Channel	
		A (<5 Ac.)	B (5-10 Ac)
1	0.5-3.0%	Seed & Straw Mulch	Seed & Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed and cover with RECP, Sod, or lined with plastic or 2 in. stone
3	5.1-8.0%	Seed and cover with RECP, Sod, or line with plastic or 2 in. stone	Line with 4-8 in. or stone or Recycled Concrete Equivalent ² or geotextile
4	8.1-20%	Line with 4-8 in. stone or Recycled Concrete Equivalent ² or geotextile	Site Specific Engineering Design

¹ In highly erodible soils, as defined by the local approving agency, refer to the next higher slope grade for type of stabilization.

² Recycled Concrete Equivalent shall be concrete broken into the required size, and shall contain no steel reinforcement.

Outlet

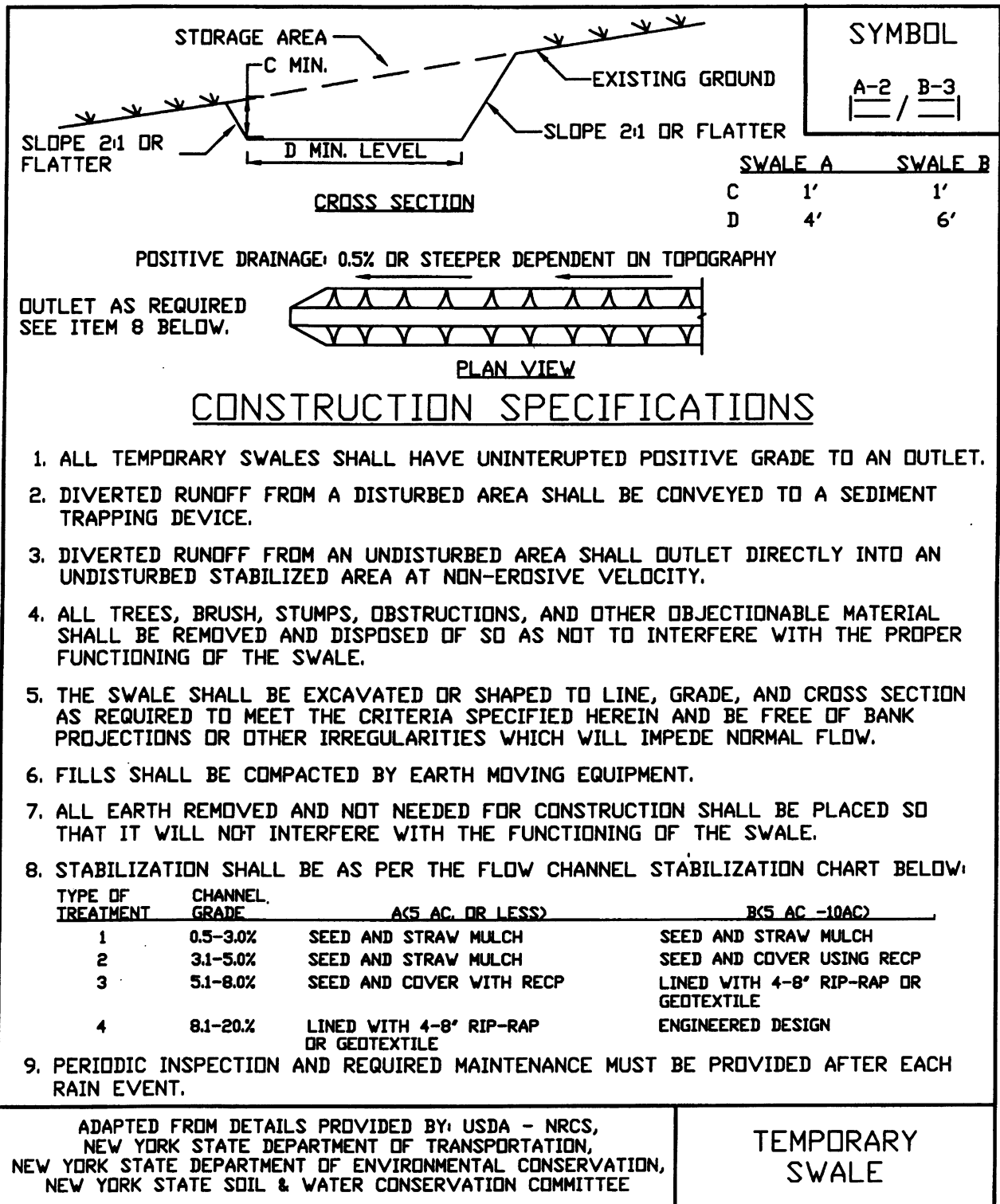
Swale shall have an outlet that functions with a minimum of erosion, and dissipates runoff velocity prior to discharge off the site.

Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin until the drainage area above the swale is adequately stabilized.

The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet condition.

If a swale is used to divert clean water flows from entering a disturbed area, a sediment trapping device may not be needed.

Figure 5A.2
Temporary Swale



STANDARD AND SPECIFICATIONS FOR PERIMETER DIKE/SWALE



Definition

A temporary ridge of soil excavated from an adjoining swale located along the perimeter of the site or disturbed area.

Purpose

The purpose of a perimeter dike/swale is to prevent off site storm runoff from entering a disturbed area and to prevent sediment laden storm runoff from leaving the construction site or disturbed area.

Conditions Where Practice Applies

Perimeter dike/swale is constructed to divert flows from entering a disturbed area, or along tops of slopes to prevent flows from eroding the slope, or along base of slopes to direct sediment laden flows to a trapping device.

The perimeter dike/swale shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 5A.3 on page 5A.8 for details.

The perimeter dike/swale shall not be constructed outside the property lines without obtaining legal easements from affected adjacent property owners. A design is not required for perimeter dike/swale. The following criteria shall be used:

Drainage area – Less than 2 acres (for drainage areas larger than 2 acres but less than 10 acres, see earth dike or temporary swale; for drainage areas larger than 10 acres, see standard and specifications for diversion).

Height – 18 inches minimum from bottom of swale to top of dike evenly divided between dike height and swale depth.

Bottom width of dike – 2 feet minimum.

Width of swale – 2 feet minimum.

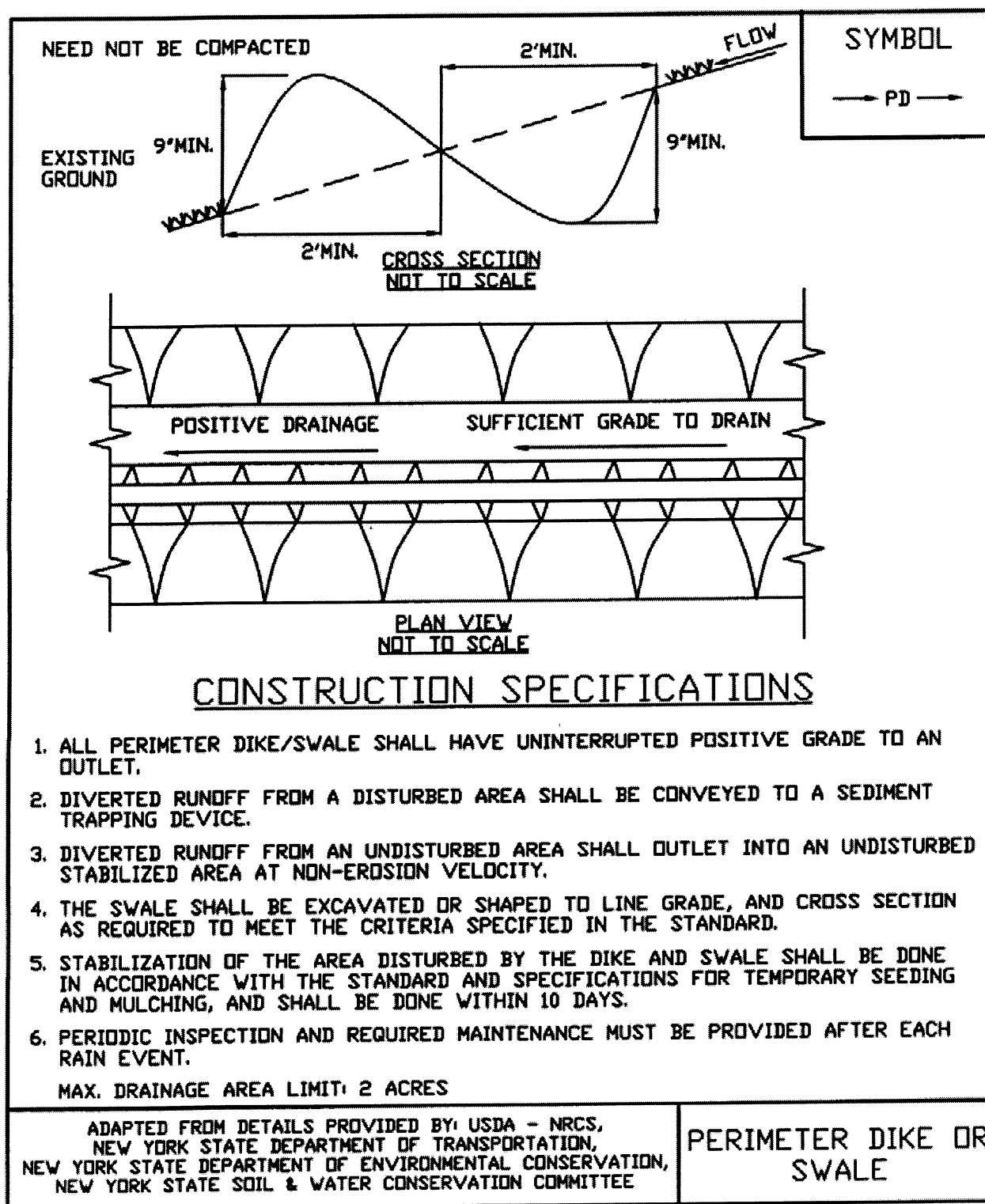
Grade – Dependent upon topography, but shall have positive drainage (sufficient grade to drain) to an adequate outlet. Maximum allowable grade not to exceed 8 percent.

Stabilization – The disturbed area of the dike and swale shall be stabilized within 7 days of installation, in accordance with the standard and specifications for temporary swales.

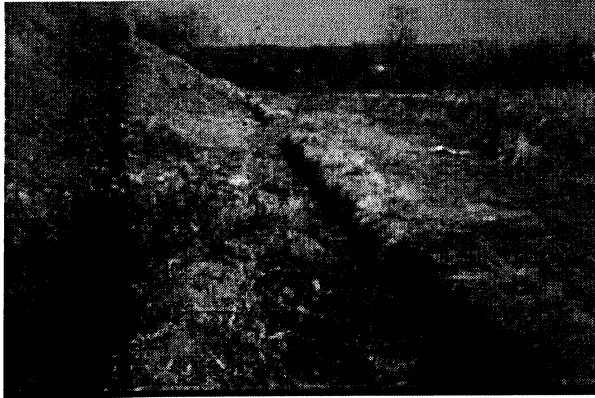
Outlet

1. Perimeter dike/swale shall have a stabilized outlet.
2. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area.
3. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap, sediment basin, or to an area protected by any of these practices.
4. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

Figure 5A.3
Perimeter Dike/Swale



STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE



Definition

A temporary barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.

2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits.

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

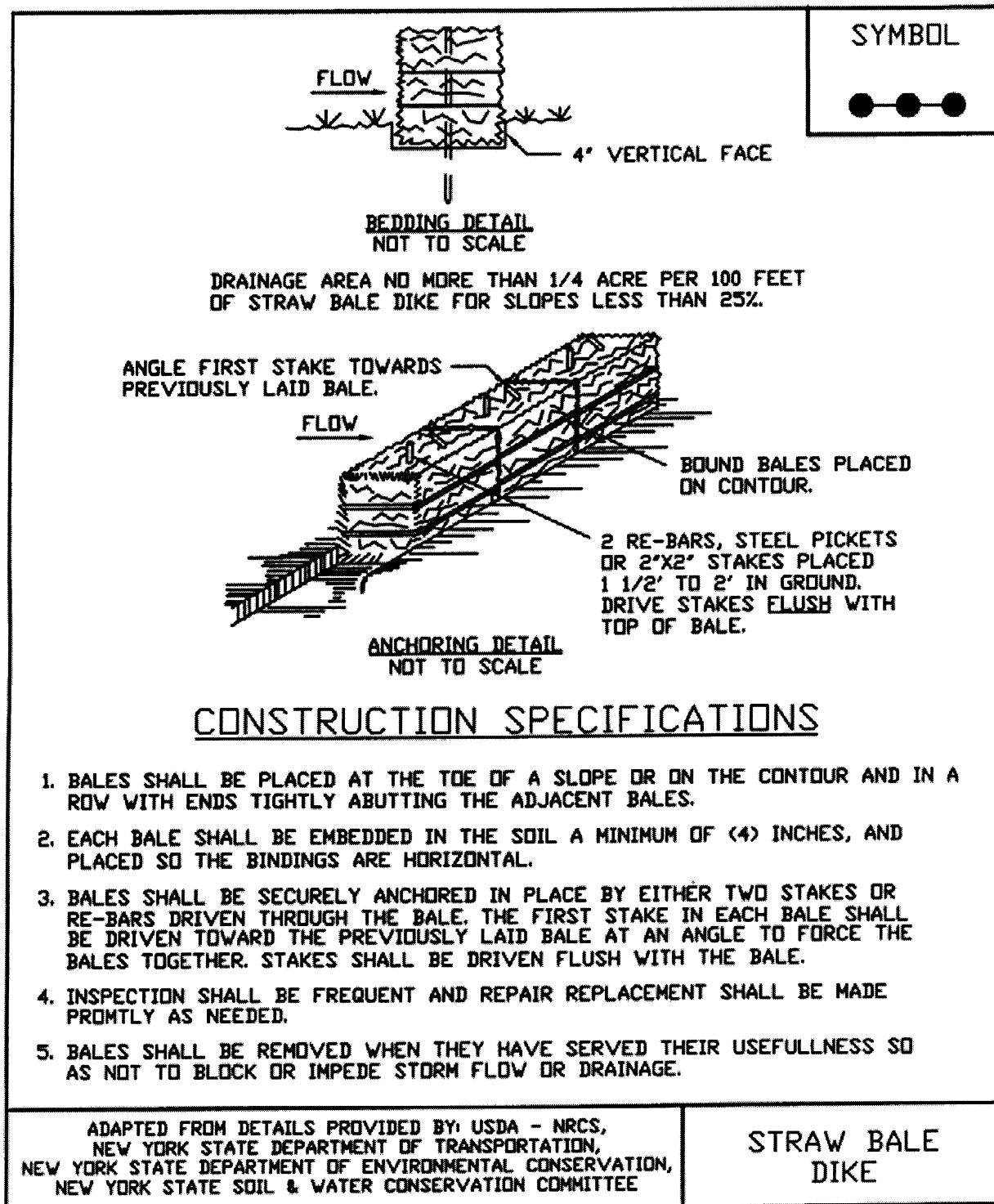
Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one quarter of an acre per 100 feet of fence and the length of slope above the dike shall be less than 200 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rainfall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 5A.7 on page 5A.18 or details.

**Figure 5A.7
Straw Bale Dike**



STANDARD AND SPECIFICATIONS FOR SILT FENCE



Definition

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.

Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. A detail of the silt fence shall be shown on the plan. See Figure 5A.8 on page 5A.21 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682

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A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

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Conditions Where Practice Applies

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1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence, with maximum ponding depth of 1.5 feet behind the fence; and
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4. There is no concentration of water flowing to the barrier.

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Elongation at Failure (%)	50	ASTM D1682

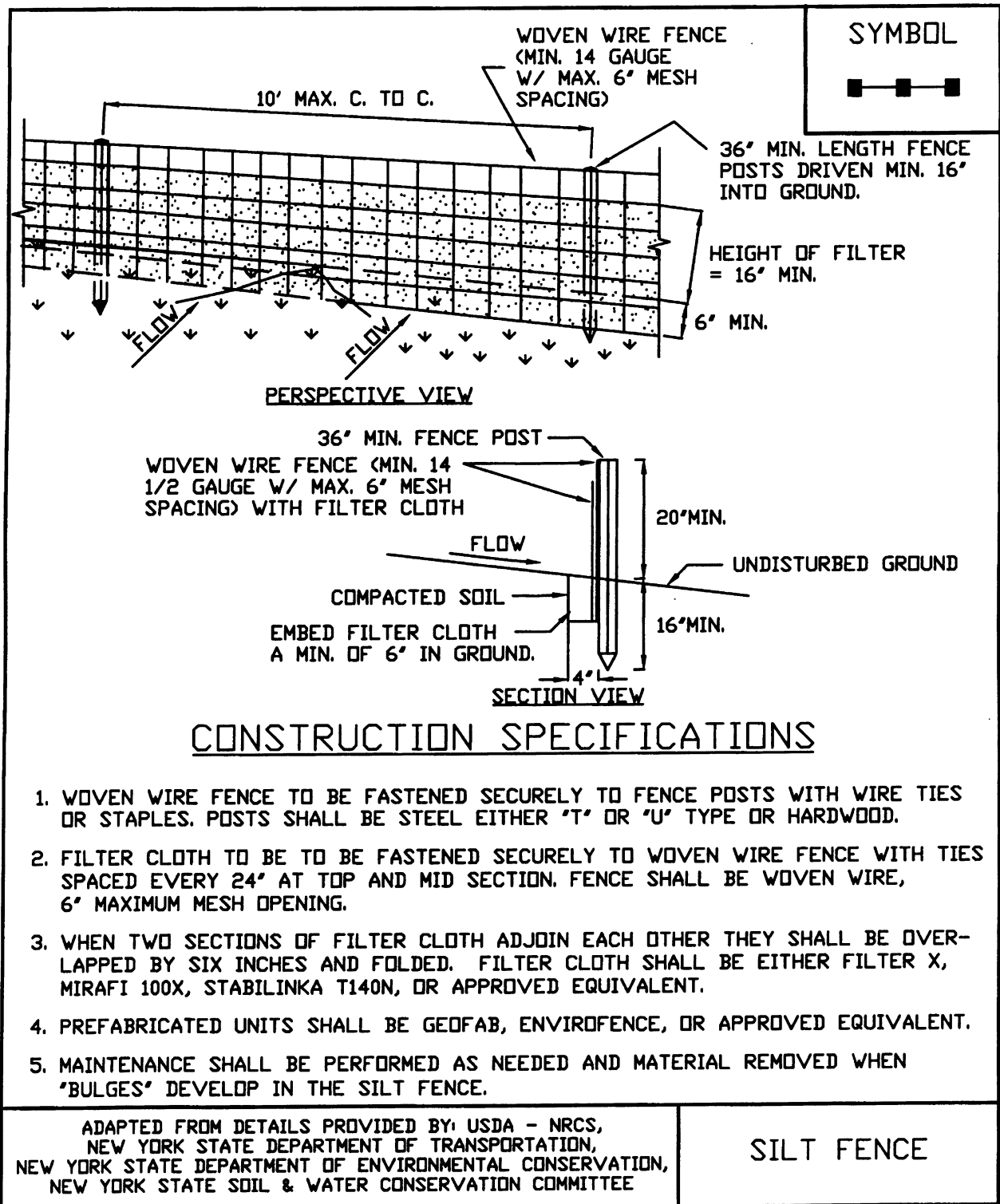
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot.

3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated Units: Envirofence, Geofab, or approved equal, may be used in lieu of the above method providing the unit is installed per details shown in Figure 5A.8.

Figure 5A.8
Silt Fence



STANDARD AND SPECIFICATIONS FOR SEDIMENT TRAP



Definition

A temporary sediment control device formed by excavation and/or embankment to intercept sediment laden runoff and retain the sediment.

Purpose

The purpose of the structure is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties, and rights-of-way below the sediment trap from sedimentation.

Conditions Where Practice Applies

A sediment trap is usually installed in a drainage way, at a storm drain inlet, or other points of collection from a disturbed area.

Sediment traps should be used to artificially break up the natural drainage area into smaller sections where a larger device (sediment basin) would be less effective.

Design Criteria

If any of the design criteria presented here cannot be met, see Standard and Specification for Sediment Basin on page 5A.49.

Drainage Area

The drainage area for sediment traps shall be in accordance with the specific type of sediment trap used (Type I through V).

Location

Sediment traps shall be located so that they can be installed

prior to grading or filling in the drainage area they are to protect. Traps must not be located any closer than 20 feet from a proposed building foundation if the trap is to function during building construction. Locate traps to obtain maximum storage benefit from the terrain and for ease of cleanout and disposal of the trapped sediment.

Trap Size

The volume of a sediment trap as measured at the elevation of the crest of the outlet shall be at least 3,600 cubic feet per acre of drainage area. The volume of a constructed trap shall be calculated using standard mathematical procedures. The volume of a natural sediment trap may be approximated by the equation: $\text{Volume (cu.ft.)} = 0.4 \times \text{surface area (sq.ft.)} \times \text{maximum depth (ft.)}$.

Trap Cleanout

Sediment shall be removed and the trap restored to the original dimensions when the sediment has accumulated to $\frac{1}{2}$ of the design depth of the trap. Sediment removed from the trap shall be deposited in a protected area and in such a manner that it will not erode.

Embankment

All embankments for sediment traps shall not exceed five (5) feet in height as measured at the low point of the original ground along the centerline of the embankment. Embankments shall have a minimum four (4) foot wide top and side slopes of 2:1 or flatter. The embankment shall be compacted by traversing with equipment while it is being constructed. The embankment shall be stabilized with seed and mulch as soon as it is completed.

The elevation of the top of any dike directing water to any sediment trap will equal or exceed the maximum height of the outlet structure along the entire length of the trap.

Excavation

All excavation operations shall be carried out in such a manner that erosion and water pollution shall be minimal. Excavated portions of sediment traps shall have 1:1 or flatter slopes.

Outlet

The outlet shall be designed, constructed, and maintained in such a manner that sediment does not leave the trap and that erosion at or below the outlet does not occur.

Sediment traps must outlet onto stabilized (preferable undisturbed) ground, into a watercourse, stabilized channel, or into a storm drain system. Distance between inlet and outlet should be maximized to the longest length practicable.

Trap Details Needed on Erosion and Sediment Control Plans

Each trap shall be delineated on the plans in such a manner that it will not be confused with any other features. Each trap on a plan shall indicate all the information necessary to properly construct and maintain the structure. If the drawings are such that this information cannot be delineated on the drawings, then a table shall be developed. If a table is developed, then each trap on a plan shall have a number and the numbers shall be consecutive.

The following information shall be shown for each trap in a summary table format on the plans.

1. Trap number
2. Type of trap
3. Drainage area
4. Storage required
5. Storage provided (if applicable)
6. Outlet length or pipe sizes
7. Storage depth below outlet or cleanout elevation
8. Embankment height and elevation (if applicable)

Type of Sediment Traps

There are five (5) specific types of sediment traps which vary according to their function, location, or drainage area.

- I. Pipe Outlet Sediment Trap
- II. Grass Outlet Sediment Trap
- III. Catch Basin Sediment Trap
- IV. Stone Outlet Sediment Trap
- V. Riprap Outlet Sediment Trap

I. Pipe Outlet Sediment Trap

A Pipe Outlet Sediment Trap consists of a trap formed by embankment or excavation. The outlet for the trap is through a perforated riser and a pipe through the embankment. The outlet pipe and riser shall be made of steel, corrugated metal or other suitable material. The top of the embankment shall be at least 1 ½ feet above the crest of the riser. The top 2/3 of the riser shall be perforated with one (1) inch nominal diameter holes or slits spaced six (6) inches vertically and horizontally placed in the concave portion of the corrugated pipe.

No holes or slits will be allowed within six (6) inches of the top of the horizontal barrel. All pipe connections shall be watertight. The riser shall be wrapped with ½ to ¾ inch hardware cloth wire then wrapped with filter cloth with a sieve size between #40-80 and secured with strapping or

connecting band at the top and bottom of the cloth. The cloth shall cover an area at least six (6) inches above the highest hole and six (6) inches below the lowest hole. The top of the riser pipe shall not be covered with filter cloth. The riser shall have a base with sufficient weight to prevent flotation of the riser. Two approved bases are:

1. A concrete base 12 in. thick with the riser embedded 9 in. into the concrete base, or
2. One quarter inch, minimum, thick steel plate attached to the riser by a continuous weld around the circumference of the riser to form a watertight connection. The plate shall have 2.5 feet of stone, gravel, or earth placed on it to prevent flotation. In either case, each side of the square base measurement shall be the riser diameter plus 24 inches.

Pipe outlet sediment traps shall be limited to a five (5) acre maximum drainage area. Pipe outlet sediment traps may be interchangeable in the field with stone outlet or riprap sediment traps provided that these sediment traps are constructed in accordance with the detail and specifications for that trap.

Select pipe diameter from the following table:

Minimum Sizes

Barrel Diameter ¹ (in.)	Riser Diameter ¹ (in.)	Maximum Drainage Area (ac.)
12	15	1
15	18	2
18	21	3
21	24	4
21	27	5

¹ Barrel diameter may be same size as riser diameter.

See details for Pipe Outlet Sediment Trap ST-I in Figure 5A.16 (1) and 5A.16 (2) on pages 5A.38 and 5A.39.

II. Grass Outlet Sediment Trap

A Grass Outlet Sediment Trap consists of a trap formed by excavating the earth to create a holding area. The trap has a discharge point over natural existing grass. The outlet crest width (feet) shall be equal to four (4) times the drainage area (acres) with a minimum width of four (4) feet. The outlet shall be free of any restrictions to flow. The outlet lip must remain undisturbed and level. The volume of this trap shall be computed at the elevation of the crest of the outlet. Grass outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Grass Outlet Sediment Trap ST-II in Figure 5A.17 on page 5A.40.

III. Catch Basin Sediment Trap

A Catch Basin Sediment Trap consists of a basin formed by excavation on natural ground that discharges through an opening in a storm drain inlet structure. This opening can either be the inlet opening or a temporary opening made by omitting bricks or blocks in the inlet.

A yard drain inlet or an inlet in the median strip of a dual highway could use the inlet opening for the type outlet. The trap should be out of the roadway so as not to interfere with future compaction or construction. Placing the trap on the opposite side of the opening and diverting water from the roadway to the trap is one means of doing this. Catch basin sediment traps shall be limited to a three (3) acre maximum drainage area. The volume of this trap is measured at the elevation of the crest of the outlet (invert of the inlet opening).

See details for Catch Basin Sediment Trap ST-III in Figure 5A.18 on page 5A.41.

IV. Stone Outlet Sediment Trap

A Stone Outlet Sediment Trap consists of a trap formed by an embankment or excavation. The outlet of this trap is over a stone section placed on level ground. The minimum length (feet) of the outlet shall be equal to four (4) times the drainage area (acres).

Required storage shall be 3,600 cubic feet per acre of drainage area.

The outlet crest (top of stone in weir section) shall be level, at least one (1) foot below top of embankment and no more than one (1) foot above ground beneath the outlet. Stone used in the outlet shall be small riprap (4 in. x 8 in.). To provide more efficient trapping effect, a layer of filter cloth should be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.

Stone Outlet Sediment Traps may be interchangeable in the field with pipe or riprap outlet sediment traps provided they are constructed in accordance with the detail and specifications for those traps. Stone outlet sediment traps shall be limited to a five (5) acre maximum drainage area.

See details for Stone Outlet Sediment Trap ST-IV in Figure 5A.19 on page 5A.42.

V. Riprap Outlet Sediment Trap

A Riprap Outlet Sediment Trap consists of a trap formed by an excavation and embankment. The outlet for this trap

shall be through a partially excavated channel lined with riprap. This outlet channel shall discharge onto a stabilized area or to a stable watercourse. The riprap outlet sediment trap may be used for drainage areas of up to a maximum of 15 acres.

Design Criteria for Riprap Outlet Sediment Trap

1. The total contributing drainage area (disturbed or undisturbed either on or off the developing property) shall not exceed 15 acres.
2. The storage needs for this trap shall be computed using 3600 cubic feet of required storage for each acre of drainage area. The storage volume provided can be figured by computing the volume of storage area available behind the outlet structure up to an elevation of one (1) foot below the level weir crest.
3. The maximum height of embankment shall not exceed five (5) feet.
4. The elevation of the top of any dike directing water to a riprap outlet sediment trap will equal or exceed the minimum elevation of the embankment along the entire length of this trap.

Riprap Outlet Sediment Trap ST-V (for Stone Lined Channel)

Contributing Drainage Area (ac.)	Depth of Channel (a) (ft.)	Length of Weir (b) (ft.)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0
11	2.0	14.0
12	2.0	14.0
13	2.0	16.0
14	2.0	16.0
15	2.0	18.0

See details for Riprap Outlet Sediment Trap ST-V on Figures 5A.20(1) and 5A.20(2) on pages 5A.43 and 5A.44.

Optional Dewatering Methods

Optional dewatering devices may be designed for use with sediment traps. Included are two methods, which may be used. See Figure 5A.21 on page 5A.45 for details.

Figure 5A.16(1)
Pipe Outlet Sediment Trap: ST-I

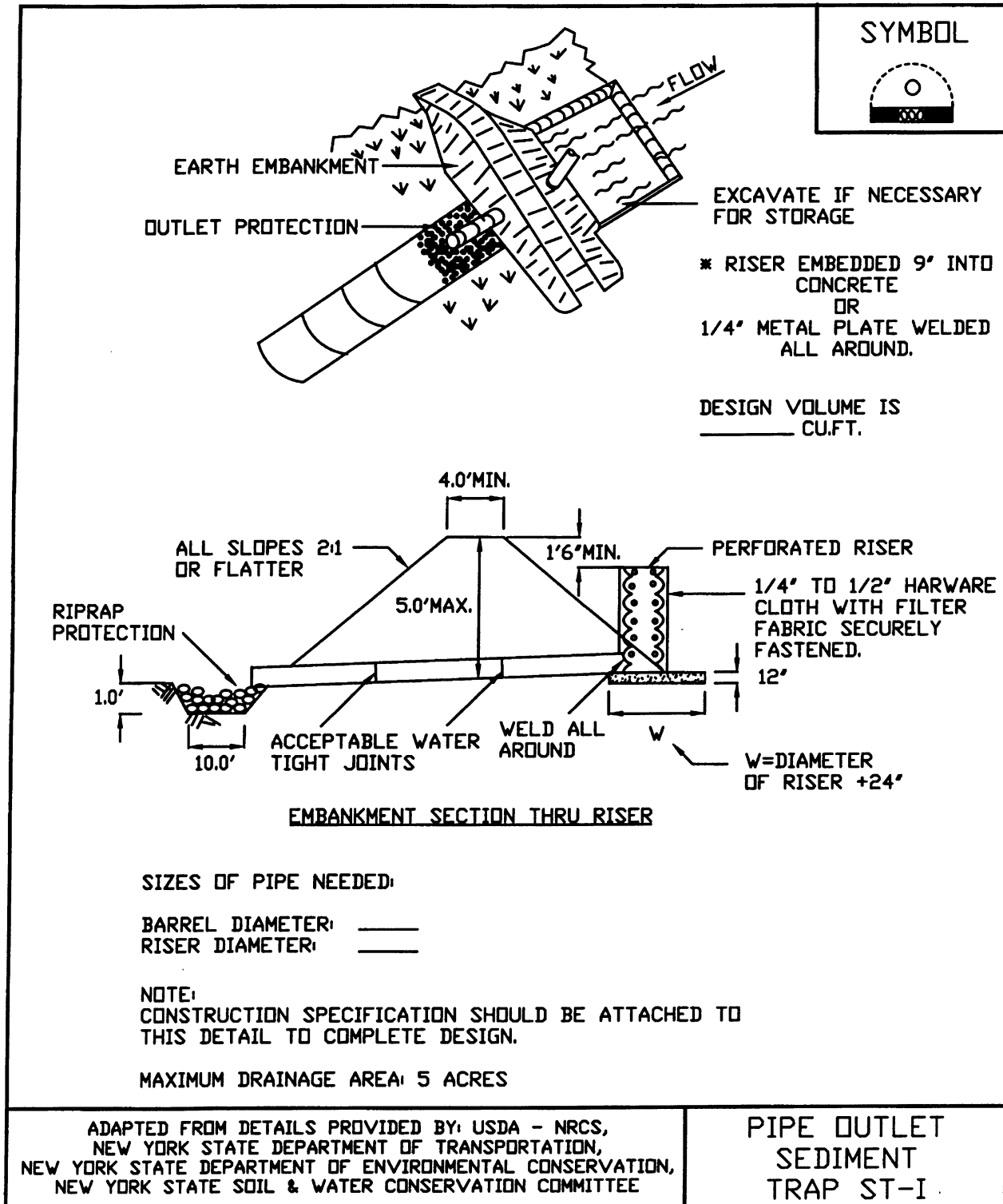


Figure 5A.16(2)
Pipe Outlet Sediment Trap: ST-I—Construction Specifications


<p style="text-align: center;"><u>CONSTRUCTION SPECIFICATIONS</u></p>	<p style="text-align: center;">SYMBOL</p> 
<ol style="list-style-type: none"> 1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED. 2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. 3. VOLUME OF SEDIMENT STORAGE SHALL BE 3600 CUBIC FEET PER ACRE OF CONTRIBUTORY DRAINAGE. 4. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND STABILIZED. 5. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. 6. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND SEDIMENT ARE CONTROLLED. 7. THE STRUCTURE SHALL BE REMOVED AND AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. 8. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER; CUT SLOPES 1:1 OR FLATTER. 9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT. 10. THE TOP 2/3 OF THE RISER SHALL BE PERFORATED WITH ONE (1) INCH DIAMETER HOLES OR SLITS SPACED SIX (6) INCHES VERTICALLY AND HORIZONTALLY AND PLACED IN THE CONCAVE PORTION OF PIPE. NO HOLES WILL BE ALLOWED WITHIN SIX (6) INCHES OF THE HORIZONTAL BARREL. 11. THE RISER SHALL BE WRAPPED WITH 1/4 TO 1/2 INCH HARDWARE CLOTH WIRE THEN WRAPPED WITH FILTER CLOTH (HAVING AN EQUIVALENT SIEVE SIZE OF 40-80). THE FILTER CLOTH SHALL EXTEND SIX (6) INCHES ABOVE THE HIGHEST HOLE AND SIX (6) INCHES BELOW THE LOWEST HOLE. WHERE ENDS OF THE FILTER CLOTH COME TOGETHER, THEY SHALL BE OVER-LAPPED, FOLDED AND STAPLED TO PREVENT BYPASS. 12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH. 13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN FOUR (4) INCH LAYERS. A MINIMUM OF TWO (2) FEET OF HAND COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. 14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. FOR CONCRETE BASED THE DEPTH SHALL BE TWELVE (12) INCHES WITH THE RISER EMBEDDED NINE (9) INCHES. A 1/4 INCH MINIMUM THICKNESS STEEL PLATE SHALL BE ATTACHED TO THE RISER BY A CONTINUOUS WELD AROUND THE BOTTOM TO FORM A WATERTIGHT CONNECTION AND THEN PLACE TWO (2) FEET OF STONE, GRAVEL, OR TAMPED EARTH ON THE PLATE. 	
<p>ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE</p>	<p style="text-align: center;">PIPE OUTLET SEDIMENT TRAP ST-I</p>

Figure 5A.17
Grass Outlet Sediment Trap: ST-II

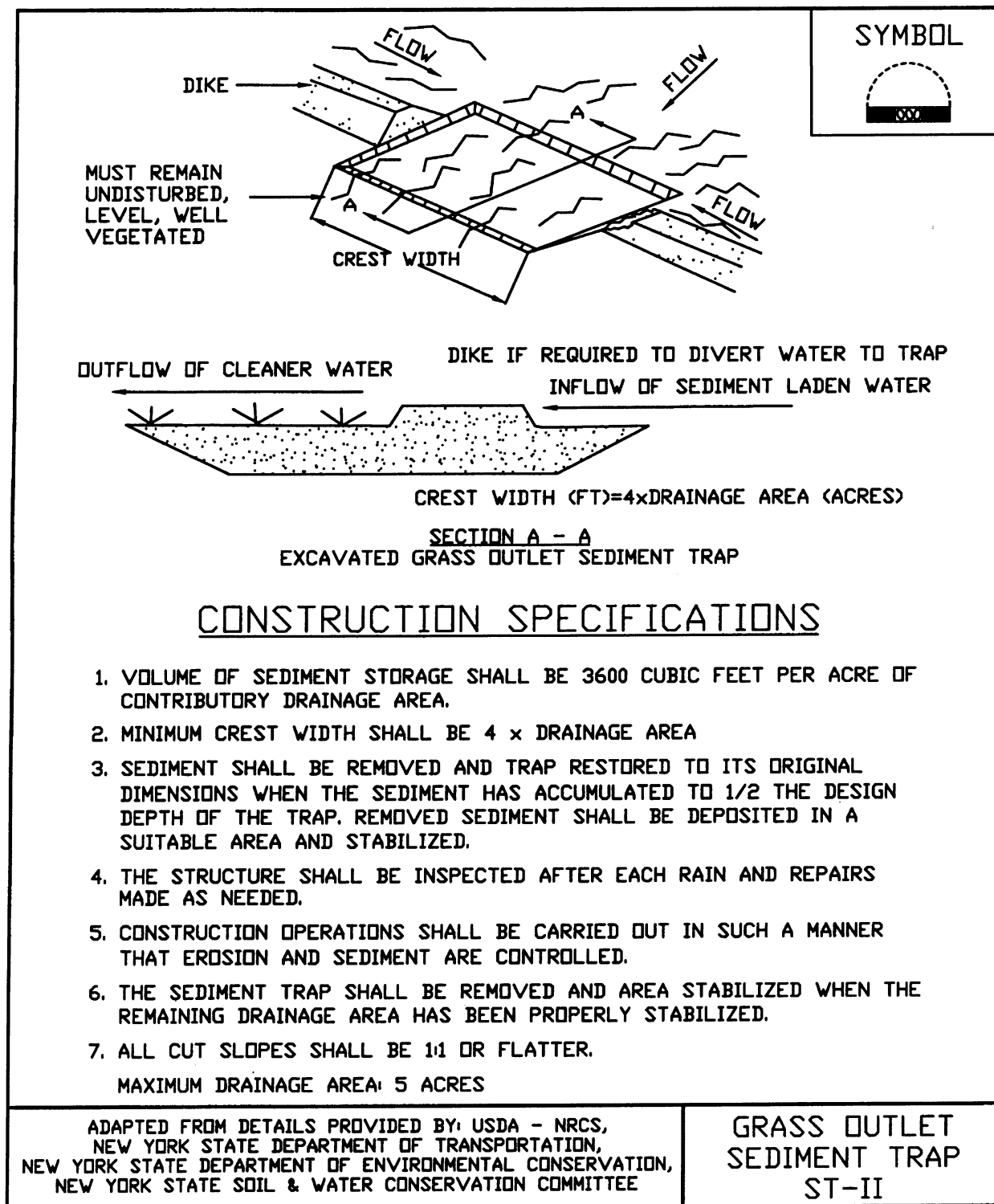


Figure 5A.18
Catch Basin Sediment Trap: ST-III

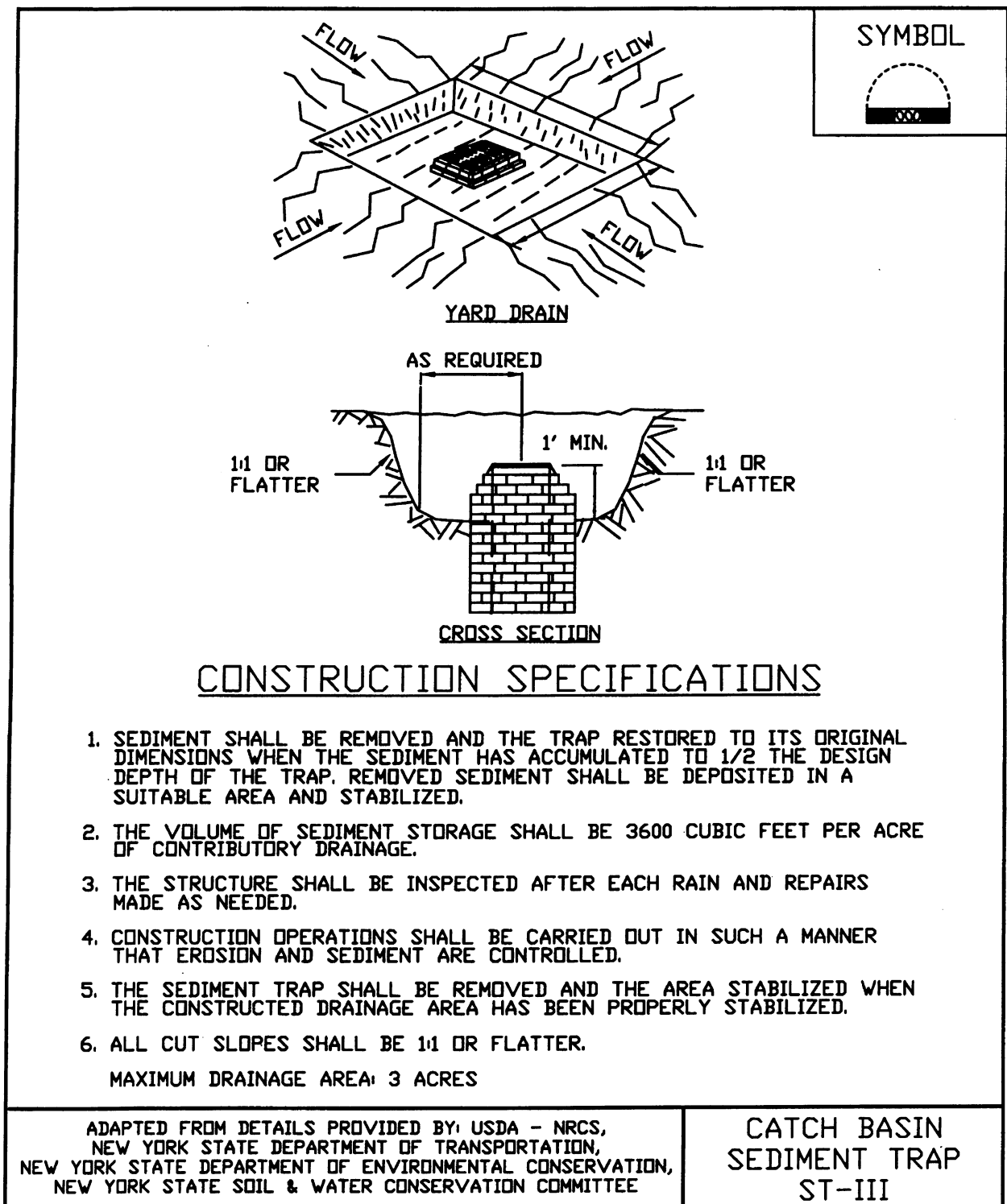


Figure 5A.19
Stone Outlet Sediment Trap: ST-IV

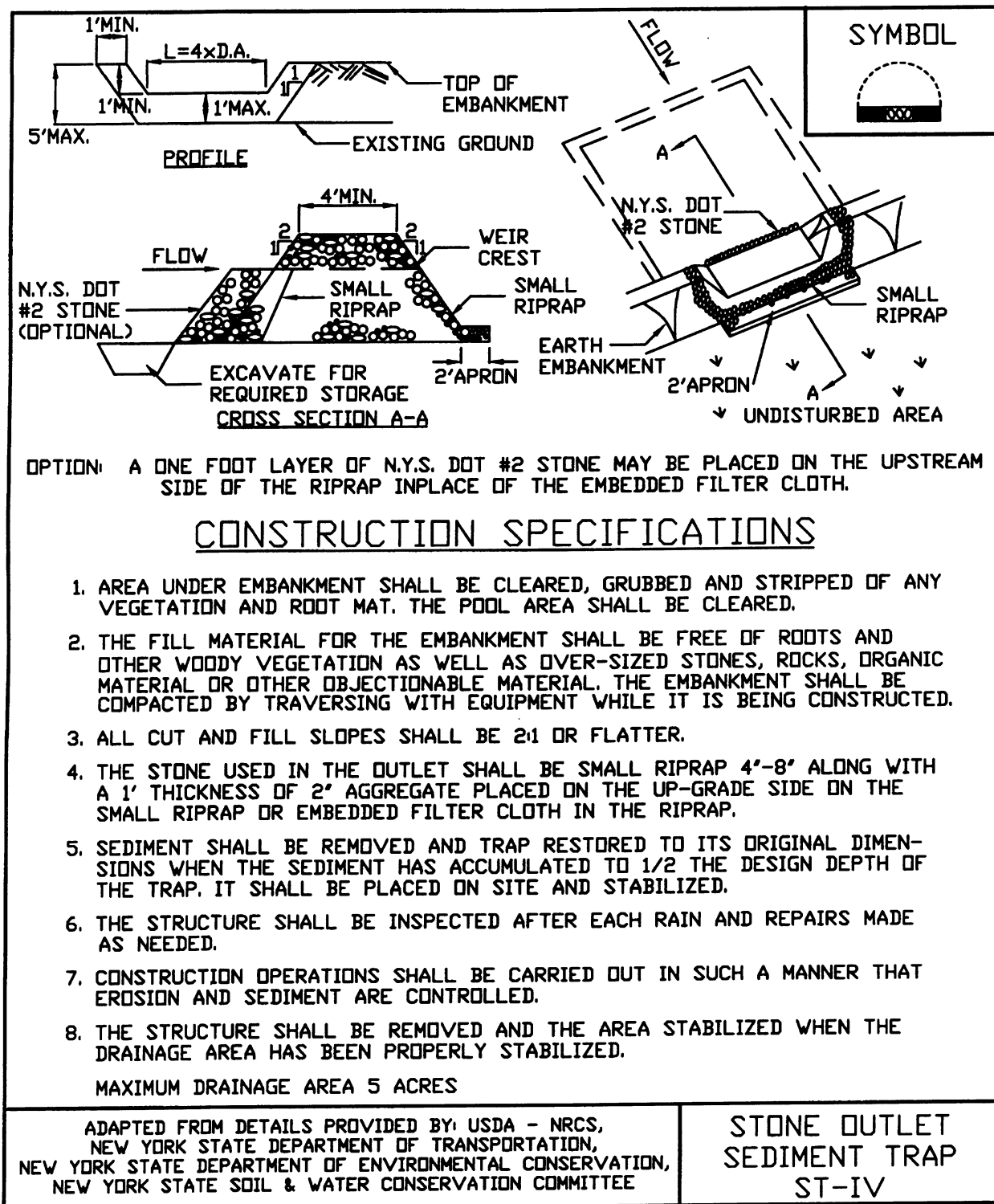


Figure 5A.20(1)
Riprap Outlet Sediment Trap: ST-V

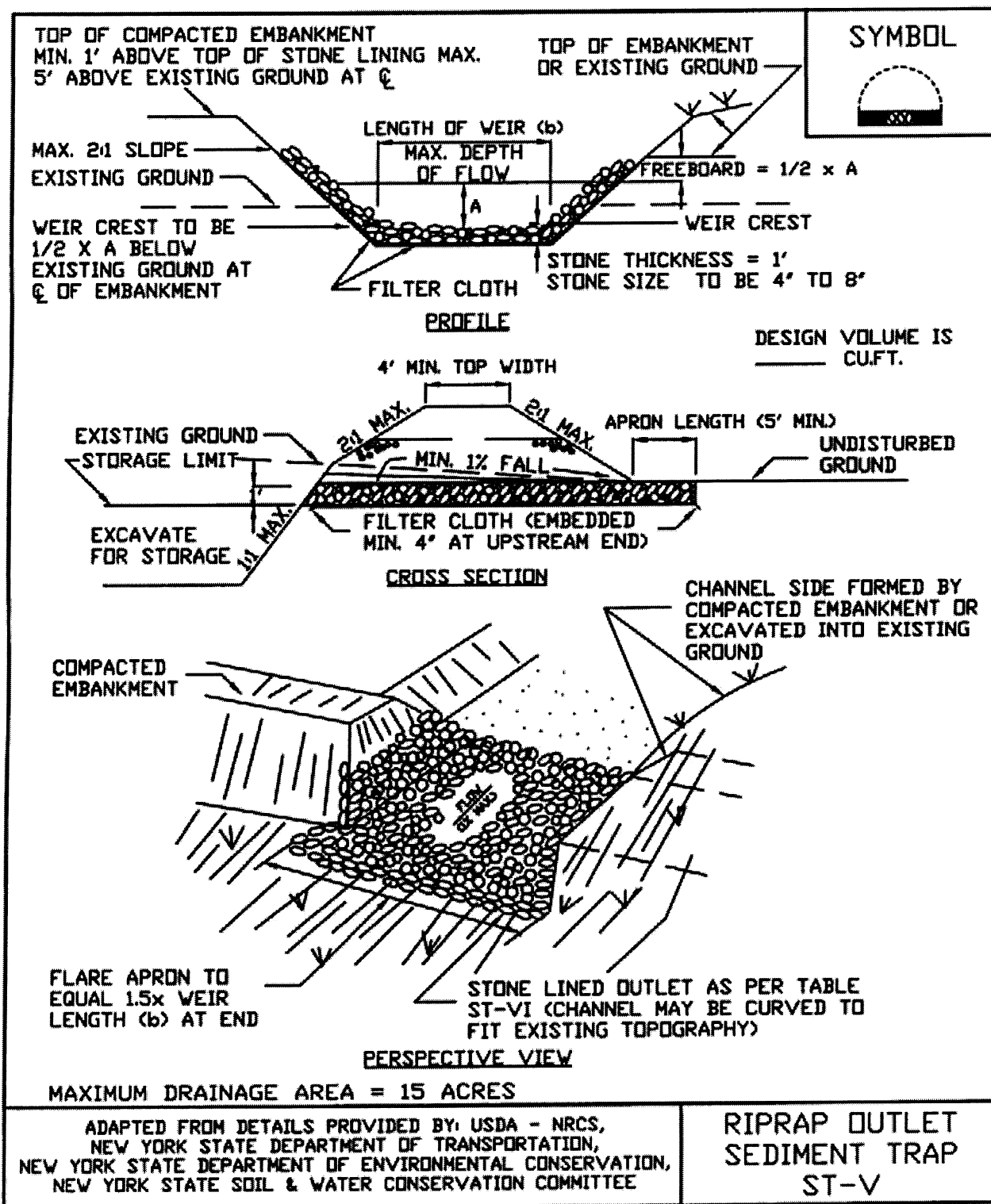


Figure 5A.202)
Riprap Outlet Sediment Trap: ST-V—Construction Specifications


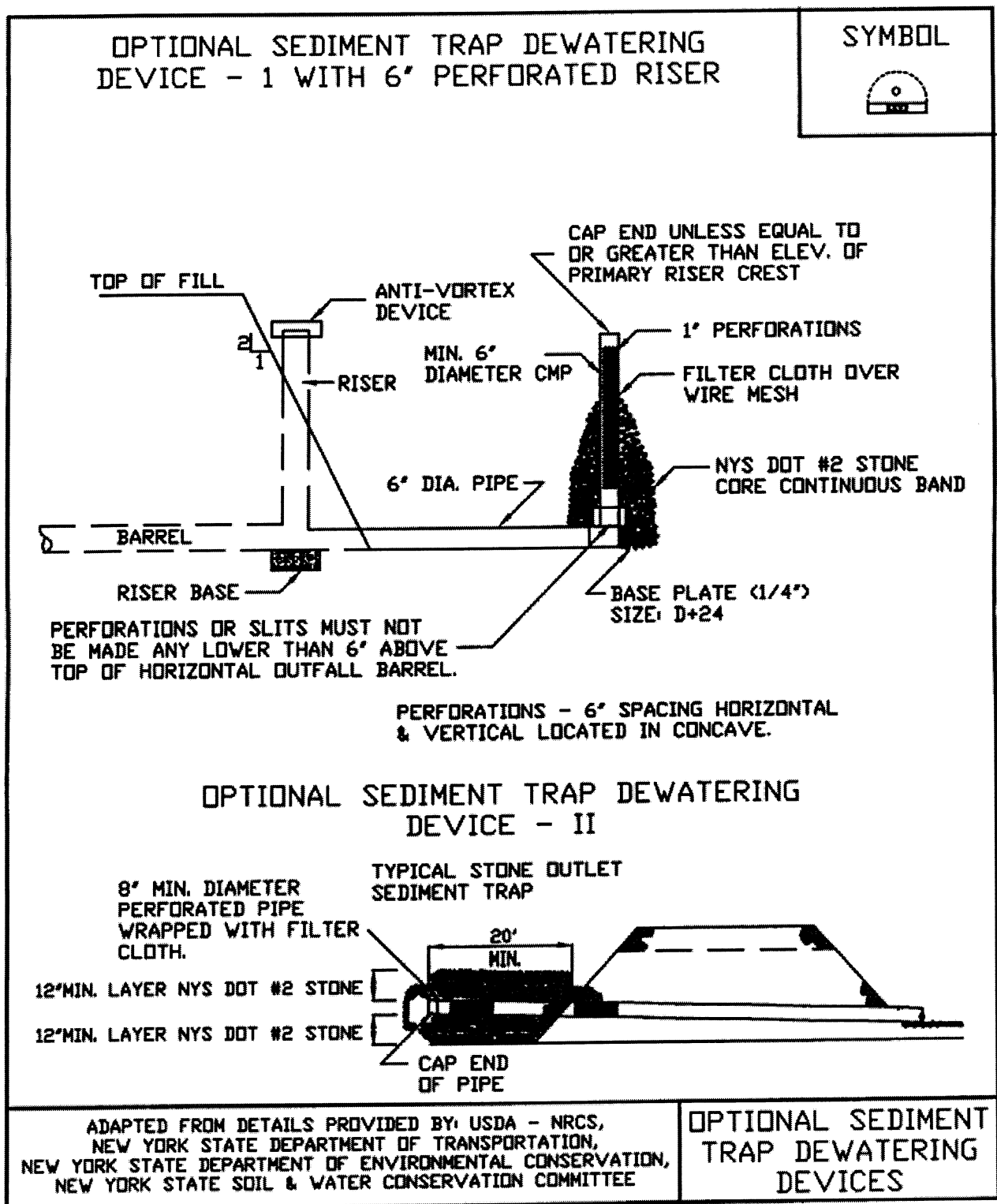
	<p style="text-align: center;">SYMBOL</p> 
<p style="text-align: center;"><u>CONSTRUCTION SPECIFICATIONS</u></p> <ol style="list-style-type: none"> 1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED. 2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF OF EMBANKMENT SHALL BE FIVE (5) FEET, MEASURED AT CENTERLINE OF EMBANKMENT. 3. ALL FILL SLOPES SHALL BE 2:1 OR FLATTER, CUT SLOPES 1:1 OR FLATTER. 4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF EMBANKMENT. 5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME AVAILABLE BEHIND THE OUTLET CHANNEL UP TO AN ELEVATION OF ONE (1) FOOT BELOW THE LEVEL WEIR CREST. 6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTIONS OF FABRIC MUST OVERLAP AT LEAST ONE (1) FOOT WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OUTLET CHANNEL. 7. STONE USED IN THE OUTLET CHANNEL SHALL BE FOUR (4) TO EIGHT (8) INCH RIPRAP. TO PROVIDE A FILTERING EFFECT, A LAYER OF FILTER CLOTH SHALL BE EMBEDDED ONE (1) FOOT WITH SECTION NEAREST ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST SIX (6) INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL. 8. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. 9. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED. 10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE MINIMIZED. 11. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN DRAINAGE AREA HAS BEEN PROPERLY STABILIZED. 12. DRAINAGE AREA FOR THIS PRACTICE IS LIMITED TO 15 ACRES OR LESS. 	
<p>ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE</p>	<p style="text-align: center;">RIPRAP OUTLET SEDIMENT TRAP ST-V</p>

Figure 5A.21
Optional Sediment Trap Dewatering Devices



ATTACHMENT A2-3

INSPECTION AND MAINTENANCE REPORT FORM

Inspection and Maintenance Report Form

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Regular Inspector: _____ Rainfall Event Inspector: _____ Rainfall (inches): _____

Contractor Activities	OK	NO	N/A	Notes
Are construction onsite traffic routes, parking, and storage of equipment and supplies restricted to areas specifically designated for those uses?				
Are locations of temporary soil stock piles of construction materials in approved areas?				
Is there any evidence of spills and resulting cleanup procedures?				
General Erosion & Sediment Controls				
Are sediment and erosion BMPs installed in the proper location and according to the specifications set out in the SWM & ECP?				
Are all operational storm drain inlets protected from sediment inflow?				
Do any seeded or landscaped areas require maintenance, irrigation, fertilization, seeding or mulching?				
Is there any evidence that sediment is leaving the site?				
Is there any evidence of erosion or cut fill slopes?				
Perimeter Road Use				
<p>Does much sediment get tracked on to the perimeter road?</p> <p>Is the gravel clean or is it filled with sediment?</p> <p>Does all traffic use the perimeter road to leave the site?</p> <p>Is maintenance or repair required for the perimeter road?</p>				

Inspected by (Signature) _____

Date _____

Inspection and Maintenance Report Form

To be completed every 7 days and within 24 hours of a rainfall event of 0.5 inches or more

Inspector: _____

STABILIZATION MEASURES					
Area	Date Since Last Disturbed	Date of Next Disturbance	Stabilized? Yes/No	Stabilized with	Condition

Stabilization Required: _____

To be performed by: _____ On or before: _____