

STORMWATER POLLUTION PREVENTION PLAN

Carson Power
Renaissance Battery Energy Storage Systems Project
370 Youngs Road
Town of Amherst
Erie County, New York 14221

CHA Project Number: 113192.000

September 2026

Prepared for:
Carson Power LLC
39 Broadway, 32nd Floor
New York, NY 10006

Prepared by:
CHA Consulting, Inc.
111 Winners Circle
Albany, New York 12205
Phone: (518) 453-4500

This document is intended for the use of the individual or entity for which it was prepared and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. Any dissemination, distribution, or copying of this document is strictly prohibited.



SIGNATURE PAGE

This report has been prepared by the following qualified engineers employed by CHA.



Joseph P. Romano, P.E.

Printed Name of Reviewing Engineer

Senior Principal Engineer VII

Title of Reviewing Engineer

A handwritten signature in black ink, appearing to read "J. Romano", is written over a horizontal line. Below the line, the text "Signature of Reviewing Engineer" is printed.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

TABLE OF CONTENTS

1.0	PROJECT INFORMATION	4
2.0	PROJECT DESCRIPTION	4
2.1	Purpose and Extent of Proposed Development.....	4
2.2	Project Disturbance Area	5
2.3	Description and Limitations of On-Site Soils.....	6
2.4	Historic Places	7
3.0	SEQUENCE OF MAJOR ACTIVITIES.....	7
3.1	Construction Sequence.....	7
3.2	Name of Receiving Waters	7
4.0	EROSION AND SEDIMENT CONTROLS	8
4.1	Pre-Construction	8
4.2	Timing of Controls/Measures	8
4.3	Erosion and Sediment Controls / Stabilization Practice.....	8
4.3.1	Temporary Stabilization.....	9
4.3.2	Permanent Stabilization.....	9
4.4	Compliance with Climate Change Regulations.....	10
4.5	Winter Operations	10
4.5.1	Winter Shutdown	10
4.6	Final Site Inspection.....	10
4.7	Other Controls	10
4.7.1	Waste Disposal	11
4.7.2	Sediment Tracking by Vehicles	11
4.7.3	Non-Stormwater Discharges.....	11
4.8	Certification of Compliance with Federal, State, and Local Regulations	11
5.0	POST CONSTRUCTION STORMWATER MANAGEMENT	12
5.1	Hydrologic Evaluation	12
5.2	Existing Condition Hydrology	12
5.3	Proposed Condition Hydrology.....	13
5.4	Post-Development Stormwater Management Practices	14
5.4.1	Runoff Reduction Volume.....	14
5.4.2	Green Infrastructure Techniques	15
5.4.3	Water Quality	16
5.4.4	Peak Flow Attenuation.....	16
5.5	Floodplains	17
6.0	MAINTENANCE/INSPECTION PROCEDURES.....	17
6.1	Erosion and Sediment Control Inspection and Maintenance Practices.....	17
6.1.1	Owner/Operator Inspection Requirements.....	17
6.1.2	Qualified Inspector Inspection Requirements	18
6.1.3	General Requirements	19
6.1.4	Dewatering Methods	19
6.1.5	Dust Control	20
7.0	INVENTORY FOR POLLUTION PREVENTION PLAN.....	20
8.0	SPILL PREVENTION	20
8.1	Good Housekeeping	20
8.2	Hazardous Products	20
8.3	Product Specific Practices	21

	Petroleum Products	21
	Paints	21
	Concrete Trucks.....	21
	Watercourse Protection.....	21
8.4	Spill Control Practices	21
9.0	UPDATING THE SWPPP	22
10.0	SWPPP CERTIFICATION	23
	Contractor's Certification.....	23

LIST OF TABLES

Table 1 – Construction Project Activity Category.....	5
Table 2 - Soil Analysis Summary	6
Table 3 - Existing Condition Analysis Summary	13
Table 4 – Proposed Condition Analysis Summary.....	14
Table 5 - Summary of Required Runoff Reduction Volumes	15
Table 6 - Summary of Water Quality Volumes.....	16
Table 7 – Existing Condition & Post-Development Peak Flow Comparison.....	16

LIST OF FIGURES

Figure 1	Project Location Map
Figure 2	USDA Soils Map
Figure 3	FEMA FIRM Map
Figure 4	Existing Condition Drainage Area Map
Figure 5	Proposed Condition Drainage Area Map

LIST OF APPENDIXS

Appendix A	Figures
Appendix B	Geotechnical Report and Historic Resource
Appendix C	National Grid Memo from NYSDEC
Appendix D	Existing Condition HydroCAD Outputs
Appendix E	Proposed Condition HydroCAD Outputs
Appendix F	Runoff Reduction and Water Quality Volumes Computations
Appendix G	Grading and Drainage Plan and ESC Plan and Details
Appendix H	Inspection Forms
Appendix I	Post Construction Operation and Maintenance
Appendix J	Notice of Intent (NOI)/SPDES Permit GP-0-25-001)

1.0 PROJECT INFORMATION

Project Name and Location	Owner/Operator Name and Address
Renaissance Battery Energy Storage Systems Project 370 Youngs Road Amherst, New York 14221	RQC, Ltd. 370 Youngs Road Amherst, New York 14221

2.0 PROJECT DESCRIPTION

2.1 Purpose and Extent of Proposed Development

The proposed Renaissance Battery Energy Storage Systems (BESS) Project is located on a parcel at 370 Youngs Road, in the Town of Amherst, Erie County, New York (see Figure 1 – Site Location Map in Appendix A). The proposed project site is bounded by Wehrle Drive to the north, Youngs Road to the west, and commercial buildings and parking areas to the south and east. The parcel is approximately 3.9 acres of land containing mostly grass areas in the northern half of the property and an existing building structure, parking lot area, and access entrance in the south portion of the property.

Carson Power, LLC is proposing to construct four (4) 5 MW battery storage systems on the northern portion of the property. Project work will also include earthwork and installation of pervious gravel areas, conventional gravel areas, and an asphalt drive, as well as proposed dry swales for stormwater management. The porous gravel areas will contain stone sections which NYSDEC have reviewed and approved as an alternative stormwater management practice for National Grid substations. A copy of the memorandum is included in Appendix C. Stormwater within these gravel sections will be collected via underdrains and routed towards the storm pipe system for conveyance.

Nevertheless, the proposed battery storage facility project will be classified under Appendix B Table 2 of the SPDES General Permit GP-0-25-001, with proposed stormwater management practices and ESC measures. In order to evaluate the potential impacts associated with the development of the site, existing and proposed condition hydrographs were generated using standard NRCS TR-55 methodology. Peak flows were computed using the HydroCAD software and the required Water Quality Volume (WQv) and Runoff Reduction Volume (RRv) were computed using the Runoff Frequency Spectrum (RFS) Method, discussed in the New York State Stormwater Management Design Manual.

For the purposes of the hydrologic analysis, 1 design point was defined to characterize the drainage patterns of the existing conditions watershed. The proposed improvements will increase impervious area and alter the permeability of the project site. This increase in impervious area will create the potential for an increase in the amount of stormwater runoff and a need for stormwater treatment. To meet the full stormwater quality (WQv) and minimum runoff reduction volume (RRv) criteria, runoff will be treated through the proposed porous gravel sections with underdrains, while runoff from the conventional gravel areas will sheet flow into 2 proposed dry swales onsite.

This SWPPP was prepared to cover the construction of the entire project, and it was designed based on the criteria presented in the State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-25-001), the New York State Stormwater Management Design Manual (July 31, 2024), and the New York State Standards and Specifications for Erosion and Sediment Control (November 2016). Construction under this SWPPP is scheduled to take place from September 2026 through December 2026.

Table 1 – Construction Project Activity Category

The Construction General Permit (GP-0-25-001) eNOI is submitted for:	
X	A construction activity not part of a common plan of development or sale.
	An entire common plan of development or sale.
	One or more phases of a common plan of development or sale.
	Tree clearing that is associated with, or will support, a renewable energy generation, transmission, or storage project.
The nature of this construction project is checked below:	
	New construction with proposed standard SMPs, Green Infrastructures, and ESC measures.
X	Redevelopment with increase in impervious areas with proposed standard SMPs and ESC measures. Green Infrastructures are required for the new impervious areas onsite.
	Redevelopment with no increase in impervious areas with proposed ESC measures only and no SMPs.

2.2 Project Disturbance Area

Site Area:	3.9± acres
Total Disturbed Area:	1.98± acres
Existing Total Impervious Area:	0.01± acres
Proposed Total Impervious Area:	0.55± acres

2.3 Description and Limitations of On-Site Soils

The soil disturbance for the proposed work is limited to the 1.98 acres and consists of mostly loams and rock outcrop complex. Based on a review of the USDA Soil Surveys of Erie County, New York, soils on the project site are described in the following list (see Figure 2 – USDA Soils Map). A summary of the soil composition is shown in Table 2.

Table 2 - Soil Analysis Summary

Soil Name	Hydrologic Soil Group*
BhB – Benson-Rock outcrop complex, 3 to 8 percent slopes	D
WaA – Wassaic silt loam, 0 to 3 percent slopes	C

The Natural Resource Conservation Service (NRCS, formerly known as the SCS), as part of their soil classification system, assigns each soil series to a Hydrologic Soil Group (HSG). The HSG is a four-letter index intended to indicate the minimum rate of infiltration obtained after prolonged wetting, and to indicate the relative potential for a soil type to generate runoff. The infiltration rate is the rate at which water enters the soil at the soil surface. The HSG also indicates the transmission rate – the rate at which water moves within the soil. Soil scientists define the four groups as follows:

- HSG 'A' (sand, loamy sand, or sandy loam): Soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands or gravels and have a high rate of water transmission (> than 0.30 inches/hour).
- HSG 'B' (silt loam or loam): Soils have moderate infiltration rates when thoroughly wetted, and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to fine texture. These soils have a moderate rate of water transmission (0.15 to 0.30 inches/hour).
- HSG 'C' (sandy clay loam): Soils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water, and soils with moderately fine to fine texture. These soils have a low rate of water transmission (0.05 to 0.15 inches/hour).
- HSG 'D' (clay loam, silty clay loam, sandy clay, silty clay, or clay): Soils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high-water table, soils with a clay pan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (< 0.05 inches/hour).

If a soil is classified to a dual hydrologic group (A/D, B/D, or C/D), the first letter represents drained conditions and the second letter represents undrained conditions.

2.4 Historic Places

The proposed Renaissance BESS project will have no impacts, whether stormwater discharge or construction activities, on a property that is listed or eligible for listing on the State or National Register of Historic Places in Erie County, NY. This determination was confirmed based upon review by The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) SHPO and a copy of the letter of No Impact (November 07, 2025) is included in Appendix B.

3.0 SEQUENCE OF MAJOR ACTIVITIES

3.1 Construction Sequence

This SWPPP presents temporary erosion and sediment controls, to assist the operator in compliance with the project's SPDES General Permit for construction activity. To the degree practicable, all temporary erosion and sediment control mitigation measures shall be installed immediately before associated project areas are disturbed in anticipation of all soil disturbing activities to follow.

It is the responsibility of the Contractor to ensure that all soils removed from the project site are spoiled in a manner consistent with all local, state, and federal regulations. Appropriate erosion and sediment controls shall be installed at all spoil sites. Disturbances associated with offsite spoil areas do not contribute to the total disturbances associated with onsite activities.

Phase 1 (±1.75)

- Establish the contractor work area and staging area as shown on the plans.
- Install all temporary erosion and sediment control measures in accordance with the plans and NYSDEC requirements.
- Clear and grub existing trees and vegetation within the project limits, including removal of rock outcrops where necessary.
- Perform earthwork activities including excavation, rock cutting and removal, re-grading of steep slopes, and preparation of subgrades for proposed improvements.
- Construct proposed access roads, pervious gravel areas, and impervious pavement areas.
- Install underground utilities, stormwater management practices, and associated site infrastructure.
- Install the battery storage facility, consisting of transformers, associated switchgear, breakers, electrical tie-ins, and any other above-ground site features.
- Complete proposed landscaping, top-soil placement, and seed/mulch for final stabilization of all disturbed areas.
- Upon final stabilization of disturbed areas, remove all temporary erosion and sediment control measures.

3.2 Name of Receiving Waters

Stormwater runoff from the proposed Renaissance BESS Project will be directed to two catch basins, located on the northern and western portions of the site. Stormwater from both catch

basins will be released through the towns municipal separate storm water system, ultimately discharging into Ellicott Creek, a Class B (Standard B) stream.

The water quality of surface waters in New York State is classified by the New York State Department of Environmental Conservation as A, B, C, or D, with special classifications for water supply sources (AA). A "T" used with the classification indicates the stream supports, or may support, a trout population. Water quality standards are also provided. The standards apply the same classification system but, in some cases, are more stringent in an effort to eventually improve the water quality. The higher standard is most often used to reflect the existence or the potential for breeding trout (designation of (T) as discussed above). All surface waters with a Classification and/or a Standard of C (T), or better, are regulated by the State.

Ellicott Creek in Erie County, NY is currently listed as 303(d) segments impaired by construction related pollutants (Appendix D of the GP-0-25-001 permit), but it is not identified as an enhanced phosphorus watershed (Appendix C of the GP-0-25-001 permit).

4.0 EROSION AND SEDIMENT CONTROLS

4.1 Pre-Construction

Prior to construction, the Owner shall have the Contractors and subcontractors identify at least one (1) person from their company who meets the requirements of a Trained Contractor. A Trained Contractor will be responsible for installing, constructing, repairing, and replacing the erosion and sediment control (ESC) practices.

In addition, the Trained Contractor will be responsible for the implementation of the SWPPP and the inspection and maintenance in accordance with New York Standards and Specifications for Erosion & Sediment Control (Blue Book). The Owner's Representative shall ensure that at least one (1) Trained Contractor is on-site daily when soil disturbance activities are being performed. The Trained Contractor shall inspect the site's ESC practices daily to ensure these facilities are operational. Pre-construction requirements to be followed by the Owner and Contractors prior to the commencement of any construction activities are described in Appendix H.

4.2 Timing of Controls/Measures

The erosion and sediment control measures shall be constructed prior to clearing or grading of any portion of the project. For projects where soil disturbance is greater than five (5) acres, and construction activity has temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. Permanent stabilization should be performed as soon as possible after completion of grading. After the entire project area is stabilized, the accumulated sediment shall be removed from the project area. Erosion control devices shall remain in place until disturbed areas are permanently stabilized. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York Standards and Specifications for Erosion and Sediment Control.

4.3 Erosion and Sediment Controls / Stabilization Practice

Applicable erosion and sediment control measures and details are included in Appendix G.

4.3.1 Temporary Stabilization

Topsoil stockpiles, staging areas and disturbed pervious portions of the project area where construction activity temporarily ceases for at least 7 days shall be stabilized with temporary seed and mulch no later than 7 days from the last construction activity in that area.

Temporary seed shall be ryegrass applied at the rates specified below:

- If seeding in spring, summer or early fall then seed with annual or winter rye at a rate of 30 lbs per acre. If the area is to remain stabilized over the winter into the following spring, use winter rye only.
- If seeding in late fall or early winter, use certified Aroostook winter rye (cereal rye) at a rate of 100 lbs per acre.

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. Area must be free of large rocks and debris and seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding. Fertilizer or lime is not typically used for temporary plantings.

Mulch shall be applied in conjunction with seeding and applied at the rate of 90 lbs per 1000 square feet. Mulch shall be reapplied as necessary. Areas of the project area, which are to be paved, shall be temporarily stabilized by applying temporary gravel subbase until pavement can be applied.

Proposed grades which will have slopes steeper than 3:1 shall be stabilized with erosion control blankets.

Sediment control fencing and inlet protection shall be installed around the site where depicted on the attached plan sheets. Prior to commencing any earthwork, a stabilized construction entrance shall be installed as indicated on the attached plans. This entrance shall be utilized as the exclusive construction entrance and exit to the construction areas. Construction traffic shall be limited to the construction entrance.

4.3.2 Permanent Stabilization

Disturbed portions of the project area where construction activities permanently cease shall be stabilized with permanent seed no later than 7 days after the last construction activity. The permanent seed mix shall be in accordance with the project specifications and plans. Construction and maintenance of erosion and siltation control measures are in accordance with the Blue Book.

Where construction activity is complete over areas to be permanently vegetated, stabilize with permanent seeding. Verify seeding dates with engineer. If engineer determines that seed cannot be applied due to climate, topsoil shall not be spread, and mulching shall be applied to the exposed surface to stabilize soils until the next recommended seeding period. Other project areas shall be permanently stabilized with pavement, concrete, gravel or building structures.

4.4 Compliance with Climate Change Regulations

This project complies with the requirements of the Community Risk and Resiliency Act (CRRA) and 6 NYCRR Part 490 by addressing future physical risks due to climate change. The project design incorporates considerations for increasing temperature, precipitation variability, flooding frequency, sea-level rise, storm surges, and shifting ecological conditions.

In alignment with state guidelines, site planning, elevation, and sizing of control measures, conveyance systems, and detention systems have been evaluated to mitigate climate-related risks. The project references the latest climate data available from the NYSDEC (6 NYCRR Part 490) to ensure resilience against anticipated environmental changes.

By integrating these considerations, this project meets regulatory requirements and supports long-term sustainability and resilience efforts.

4.5 Winter Operations

If construction activities proceed through the winter season, access points should be enlarged and stabilized to provide for snow stockpiling. Drainage structures should be kept open and free of potential snow and ice dams. Inspection and maintenance are necessary to ensure the function of these practices during runoff events. For sites where construction activities temporarily cease, temporary and/or permanent soil stabilization measures shall be installed within seven (7) days from the date the soil disturbing activity ceased. Disturbed areas should be stabilized with seed and mulch, or other approved methods, even if the ground is covered by significant amounts of snow.

4.5.1 Winter Shutdown

Site inspections (by the qualified inspector) may be decreased to a minimum of one (1) time every thirty (30) days for sites where soil disturbing activities have ceased and at least 100% of the site has been stabilized by an approved method. Inlet protection should be installed and/or repaired before shutdown of the site. The owner or operator shall provide written notification to the respective NYSDEC regional office prior to reducing the frequency of any site inspections.

4.6 Final Site Inspection

The qualified inspector shall perform a final inspection of the site to certify that:

- All disturbed areas have achieved final stabilization.
- Temporary erosion and sediment control practices have been removed; and
- Post-construction stormwater management practices (if required) have been constructed in conformance with the SWPPP.

Upon satisfactory completion of the final site inspection, the qualified inspector shall sign the appropriate sections of the Notice of Termination (eNOT) form.

4.7 Other Controls

4.7.1 Waste Disposal

Waste materials – Foreign waste materials shall be collected and stored in a secured area until removal and disposal by a licensed solid waste management company. All trash and construction debris from the project area shall be disposed of in a portable container unit. No foreign waste materials shall be buried within the project area. All personnel shall be instructed regarding the correct procedure for waste disposal. Notices stating these practices shall be posted in the project trailer and the individual who manages day-to-day project operations will be responsible for seeing that these procedures are followed.

Petroleum Impacted Waste – During the excavation activities, there is the potential that petroleum impacted soils may be encountered. If field evidence of contamination is identified during the project, potentially contaminated soils will be segregated and stockpiled on polyethylene sheeting and covered in a predetermined staging area. The potentially impacted stockpiled soils will then be sampled to determine if the soils are suitable for use as clean backfill. In the event that the soils are not suitable for re-use, the contaminated soil will be properly characterized and disposed of at an off-site company and NYSDEC permitted facility. The excavation will then be backfilled with clean, imported fill.

Hazardous Waste - All hazardous waste materials shall be disposed of in a manner specified by local or state regulations or by the manufacturer. Project personnel shall be instructed in these practices and the individual who manages day-to-day project operations shall be responsible for seeing that these practices are followed.

Sanitary Waste - Any sanitary waste from portable units shall be collected from the portable units by a licensed sanitary waste management contractor, as required by NYS DEC regulations.

4.7.2 Sediment Tracking by Vehicles

A stabilized construction entrance shall be installed (where depicted on attached plan) and maintained as necessary to help reduce vehicular tracking of sediment. The entrance shall be cleaned of sediment and redressed when voids in the crushed stone become filled and vehicular tracking of sediment is occurring. Dump trucks hauling materials to and from the construction project area shall be covered with a tarpaulin to reduce dust. Any sediment and debris tracked from work area along project adjacent roadways shall be immediately removed with a street sweeper or equivalent sweeping method.

4.7.3 Non-Stormwater Discharges

Non-stormwater discharges are not expected to exit the project area during construction.

4.8 Certification of Compliance with Federal, State, and Local Regulations

The stormwater pollution prevention plan reflects the New York State requirements for stormwater management and erosion and sediment control. To ensure compliance, this plan was prepared in accordance with New York State Standards. There are no other applicable State or Federal requirements for sediment and erosion plans (or permits), or stormwater management plans (or permits).

5.0 POST CONSTRUCTION STORMWATER MANAGEMENT

5.1 Hydrologic Evaluation

The proposed project has been designed in accordance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP-0-25-001) and the New York State Stormwater Management Design Manual (July,2024). The proposed Carson Power Renaissance BESS Project requires a stormwater management design that meets standard practice requirements for 1-, 10-, and 100-year peak flow mitigation, as well as water quality volume and runoff reduction volume across the entire project site.

The proposed Carson Power Renaissance BESS Project will add approximately 0.44 acres of new impervious area, with runoff directed to a proposed dry swale and a porous gravel area.

The required WQv for the project area was computed using the Runoff Frequency Spectrum (RFS) Method, discussed in the New York State Stormwater Management Design Manual.

$$WQv = \{(P)(Rv)(A)\} / 12$$

Where:

- WQv = water quality volume (acre-feet)
- P = 90 % rainfall event (inches)
- Rv = $0.05 + 0.009 (I)$, where I is percent impervious cover
- A = watershed area (acres)

For the Town of Amherst, the 90% of the annual runoff is generated by storms of 1.0 inches of rainfall. Detailed computations are included in Appendix F.

In order to evaluate the potential impacts associated with the development of the site, existing and proposed condition hydrographs were generated. The conditions were modeled using the SCS unit hydrograph method using a type II rainfall distribution. Rainfall amounts were referenced from Northeast Regional Climate Center, Point Precipitation Frequency Data website. The 24-hour rainfall amounts for the 1-, 10- and 100-year design storms for Erie County are 1.93-, 3.47- and 5.29-inches respectively.

Runoff curve numbers and times of concentration were computed using standard NRCS TR-55 methodology. Additionally, peak stormwater flows and hydrographs for the existing and post-development conditions were computed using HydroCAD version 10.20.

5.2 Existing Condition Hydrology

For the purposes of this analysis, the extent of the hydrologic model included to those areas impacted by the Renaissance BESS project. For the purposes of the existing condition analysis, one (1) design point and two (2) contributing sub-areas were defined to characterize the natural drainage patterns of the watershed (See Figure 4 - Existing Drainage Area Map).

Design Point 1 (DP-1) is located at the proposed project site along with the building and parking lot to the south that will drain into existing catch basins along Youngs Road and Wehrle Drive. Runoff will drain eastward in the existing closed stormwater conveyance systems and will ultimately discharge into the Ellicott Creek.

Drainage Area 1 (DA-1) consists of a grassy terrain situated on the northern portion of the property along with the concrete walks on the north side of the existing building. The natural ground cover primarily consists of grassy vegetation.

Drainage Area 2 (DA-2) consists of the existing building structure and its associated sidewalks and parking lots. This area also includes some grass areas on the edge of the asphalt parking lot and building structure.

Results of the existing condition analysis are shown in Table 3 and detailed computations are included in Appendix D.

Table 3 - Existing Condition Analysis Summary

Design Point	Drainage Area	Area (acres)	Tc (hrs)	Curve Number	Peak Flow Rate (cfs)		
					1-yr	10-yr	100-yr
DP-1	DA-1	1.99	0.083	78	1.57	5.46	10.81
	Total	1.99	--	--	1.57	5.46	10.81

5.3 Proposed Condition Hydrology

The existing condition drainage areas have been revised to reflect the new drainage patterns of the proposed watershed with one (1) design point and three (3) contributing sub-areas (See Figure 5 – Proposed Drainage Area Map).

Design Point 1 (DP-1) remains at the proposed project site along with the building and parking lot to the south that will drain into existing catch basins along Youngs Road and Wehrle Drive. Runoff will drain eastward in the existing closed stormwater conveyance systems and will ultimately discharge into the Ellicott Creek.

Drainage Area 1A (DA-1A) is located on the north of the property consisting of the proposed conventional gravel access drive and surrounding grassy area with the concrete walk to the north of the building. Runoff from this area will be captured by a dry swale or catch basin and carried to DP-1.

Drainage Area 1B (DA-1B) includes the proposed porous gravel section and electric equipment. Stormwater within these gravel sections will be collected via underdrains and routed to the proposed catch basin. The porous gravel areas will contain stone sections which NYSDEC have reviewed and approved as an alternative stormwater management practice for National Grid substations. A copy of the memorandum is included in Appendix C.

Drainage Area 2 (DA-2) consists of the existing building and its associated sidewalks and

parking lots to remain onsite. This area also includes some proposed electric equipment and associated gravel areas on the southern side of the site and the mowed grass areas on the edge of the asphalt and building.

Results of the proposed condition analysis are shown in Table 4 and detailed hydrology computations are included in Appendix E.

Table 4 – Proposed Condition Analysis Summary

Design Point	Drainage Area	Area (acres)	Tc (hrs)	Curve Number	Peak Flow Rate (cfs)			
					1-yr	10-yr	25-yr	100-yr
DP-1	DA-1A	1.56	0.083	81	1.60	4.89	6.55	9.21
	DA-1B	0.43	0.083	94	1.01	2.02	2.49	3.21
Total	Unmitigated	1.99	--	--	2.61	6.91	9.04	12.42
	Mitigated	1.99	--	--	0.09	2.82	5.29	8.38

The proposed condition mitigated peak flow rate of the 25-year storm event (5.29 cfs) will be attenuated by the proposed SMPs to be no greater than the existing condition's peak flow rate of the 10-year storm event (5.46 cfs), in accordance with Town of Amherst requirements.

5.4 Post-Development Stormwater Management Practices

5.4.1 Runoff Reduction Volume

In accordance with the New York State Stormwater Management Design Manual (July 2024), further reduction in the water quality volume (WQv) shall be designed to reduce the total amount of runoff leaving the project site and to replicate pre-development hydrology. This volumetric reduction is defined as the Runoff Reduction Volume (RRv). Runoff reduction shall be achieved by infiltration, groundwater recharge, reuse, recycle evaporation or evapotranspiration of 100% of the post-development water quality volumes to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow by using runoff control techniques to provide treatment in a distributed manner before runoff reaches the collection system. This requirement can be accomplished by application of on-site green infrastructure techniques, standard stormwater management practices with runoff reduction capacity, and good operation and maintenance. Runoff reduction can be achieved by three methods: reduction of contributing drainage area, reduction of runoff volume through practice storage, and using standard stormwater practices with runoff reduction capacity.

Projects that cannot meet 100% of runoff reduction requirement must provide a justification that evaluates each of the green infrastructure planning and reduction techniques and identifies the specific limitations of the site according to which application of this criterion is technically infeasible. Implementation of green infrastructure cannot be considered infeasible unless physical constraints, hydraulic conditions, soil testing, existing and proposed slopes, or other existing technical limitations are objectively documented. And determination of application of

none of the runoff reduction options is feasible may not be based on the cost of implementation measures or lack of space for required footprint of the practice.

Project that do not achieve runoff reduction to pre-construction condition must, at a minimum reduce a percentage of the runoff from impervious areas to be constructed on the site. The percent reduction is based on the Hydrologic Soil Group(s) (HSG) of the site and is defined as Specific Reduction Factor (S) and is defined as the following list.

HSG A = 0.55 (55%)

HSG B = 0.40 (40%)

HSG C = 0.30 (30%)

HSG D = 0.20 (20%)

The required RRv for the watershed areas is computed using the minimum runoff reduction volume equation presented below.

$$RRv = \{(P) (Rv) (Ai)\} / 12$$

Where:

- RRv = runoff reduction volume (acre-feet)
- P = 90 % rainfall event (inches)
- Rv = $0.05 + 0.009 (I)$, where I is 100% impervious cover
- Ai = impervious cover targeted for runoff reduction = (S)(Aic)
- Aic = total area of new impervious cover
- S = Hydrologic Soil Group (HSG) Specific Reduction Factor

For the Town of Amherst, the 90% of the annual runoff is generated by storms of 1.0 inches of rainfall. Detailed computations are included in Appendix F.

5.4.2 Green Infrastructure Techniques

Runoff reduction was achieved for the proposed project with the proposed dry swale. A summary of the practice used in the project for runoff reduction is provided in Table 5.

Table 5 - Summary of Required Runoff Reduction Volumes

Drainage Area	Min. RRv Required (ac-ft)	RRv Provided (ac-ft)	Runoff Reduction Techniques
DA-1A	0.006	0.007	Dry Swale
DA-1B	0.003	0.015	Sheet Flow to Grass Filter Strip
Total	0.009	0.022	

5.4.3 Water Quality

To meet the full stormwater quality (WQv) criteria, dry swale and sheet flow to grass filter strip were employed to provide water quality treatment for stormwater runoff from the proposed project site. Both the dry swale and sheet flow to grass filter strip are all standard SMPs with runoff reduction capacity. Therefore, a percentage of the WQv (provided) is allocated for the RRV provided by the practices based on the Hydraulic Soil Groups (HSG) which the SMP is located. The remaining WQv provided by the SMP is calculated by the following.

$$WQv(Required) = RRV(Provided) + WQv(Provided)$$

The total Water Quality Volume (WQv) required for the project is 0.049 acre-feet. Because the dry swale and grass filter strip will provide 0.022 acre-feet of RRV, the remaining WQv required will be 0.027 acre-feet. The dry swale is designed to provide the remaining 0.027 acre-feet of WQv. Therefore, the project complies with the requirements of the Stormwater Management Design Manual. A summary of the required and provided water quality volumes is presented in Table 6 and 7, with detailed calculations provided in Appendix F.

Table 6 - Summary of Water Quality Volumes

Design Points	Total Area (ac)	Percent Impervious Cover	Required WQv (ac-ft)	Provided WQv (ac-ft)	Treatment Practice
1	1.56	23%	0.027	0.027	Dry Swale

Table 7 – Required and Provided Water Quality and Runoff Reduction Volumes

Required Water Quality Volume; WQv(Required)	0.049 acre-feet
Minimum Runoff Reduction Volume Required; RRV (Min)	0.009 acre-feet
Provided Runoff Reduction Volume; RRV (Provided)	0.022 acre-feet
Provided Water Quality Volume; WQv(Provided)	0.027 acre-feet
Sum of Total RRV Provided and WQv Provided	0.049 acre-feet

5.4.4 Peak Flow Attenuation

Based on a comparison between the existing conditions and the proposed peak flow rates, the proposed development will not increase peak rates of runoff at DP-1. A summary of the existing conditions and post-development peak flow comparison is shown in Table 8.

Table 8 – Existing Condition & Post-Development Peak Flow Comparison

Design Point	Peak Flow Rate (cfs)								
	1-Year Storm			10-Year Storm			100-Year Storm		
	Exist (cfs)	Post Dev. (cfs)	Δ (cfs)	Exist (cfs)	Post Dev. (cfs)	Δ (cfs)	Exist (cfs)	Post Dev. (cfs)	Δ (cfs)
DP-1	1.57	0.09	-1.48	5.46	2.82	-2.64	10.81	8.38	-2.43

In accordance with the governing regulations, the post-development peak runoff rates shall be no greater than the existing condition rates for the 1-, 10-, and 100-year 24-hour storm events.

In accordance with the Town of Amherst requirements, the 25-year post-development peak flow (5.29 cfs) is lower than the 10-year existing peak flow (5.46 cfs).

5.5 Floodplains

Based on a review of the FEMA Flood Insurance Rate Map for the Town of Amherst, Erie County, NY (dated June 7, 2019); the entire project site is not located in the 100-year floodplain (see Figure 3 – FEMA FIRM in Appendix A).

6.0 MAINTENANCE/INSPECTION PROCEDURES

6.1 Erosion and Sediment Control Inspection and Maintenance Practices

These are the minimum required inspection and maintenance practices that shall be used to maintain erosion and sediment controls:

6.1.1 Owner/Operator Inspection Requirements

- Prior to construction activity the owner/operator shall have contractors and sub-contractors identify a trained individual responsible for the implementation of the SWPPP. The trained individual must be on-site on a daily basis when soil disturbing activities are occurring.
- The owner/operator shall inspect the erosion and sediment control measures as identified in the SWPPP to ensure that they are being maintained in effective operating conditions at all times. Where soil disturbing activities temporarily cease (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the owner/operator can reduce frequency of inspections, but shall maintain a minimum of monthly inspections, and after significant rainstorms and snow thaws. The owner/operator shall resume inspections when soil disturbing activities begin again.
- Where soil disturbing activities have ceased with partial project completion, the owner/operator can stop conducting inspections when disturbed areas have reached final stabilization. The qualified inspector shall coordinate and obtain approval from the Owner and Engineer that final stabilization has been achieved. All post construction stormwater management practices required for the completed areas shall have been constructed in

conformance with the SWPPP and be fully operational. Final stabilization means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

- The owner/operator shall notify the DEC Regional Office's stormwater contact person prior to any reduction in the frequency of site inspections.
- The owner/operator shall retain copies of the NOI, NOI acknowledgment letter, SWPPP, MS4 SWPPP acceptance form and any inspection reports submitted in conjunction with this permit and records, or all data used to complete the NOI to be covered by this permit for a period of at least five (5) years from the date that the site is finally stabilized.

6.1.2 Qualified Inspector Inspection Requirements

- The qualified inspector is defined as a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or other Department endorsed individual(s). It may also mean someone working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means the person has received four (4) hours of training endorsed by the Department and shall receive four (4) hours of training every three (3) years after the initial training.
- A site inspection shall be performed at least twice per week, with a minimum interval of two days between inspections by the qualified inspector when soil disturbing activities are occurring. A copy of the "Construction Duration Inspection Form" is included in the Appendix H section of this plan.
- All measures shall be maintained in good working order; if any repairs or corrective actions are necessary, it is the responsibility of the qualified inspector to notify the owner/operator and appropriate contractor within one business day. The contractor shall begin implementing the corrective action within one business day of being notified.
- All inspection forms must be signed by a qualified inspector.
- For construction sites where soil disturbing activities are temporarily suspended, temporary stabilization measures shall be applied, and the qualified inspector shall conduct a site inspection at least once every thirty (30) calendar days.
- Where soil disturbing activities have ceased with partial project completion the qualified inspector can stop conducting inspections when disturbed areas have reached final stabilization and all post construction stormwater management practices required for the completed areas have been constructed in conformance with the SWPPP and are fully operational.

- Where soil disturbing activities are not resumed within two (2) years, from the date of shut down of partial project completion, the qualified inspector shall perform a final inspection and certify that all disturbed areas have achieved final stabilization, all temporary and permanent erosion control measures have been removed, and post-construction stormwater management practices have been constructed in conformance with the SWPPP. Qualified inspector shall sign the “Final Stabilization” and “Post-Construction Stormwater Management Practice” certification statements on the Notice of Termination (NOT).

6.1.3 General Requirements

- A copy of the SPDES General Permit (GP-0-25-001), the signed Notice of Intent (NOI), NOI acknowledgement letter, SWPPP, and inspection reports shall be maintained onsite until the site has achieved final stabilization.
- Built up sediment shall be removed from any silt fence when it has reached one-third the height of the fence / dike.
- Sediment fencing and wetland protection barrier shall be inspected for depth of sediment, and tears, to see if fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- The construction entrance shall be cleaned of sediment and redressed when voids in the crushed stone become filled and vehicular tracking of sediment is occurring.
- Dust shall be controlled on access points and other disturbed areas subject to surface dust movement and blowing.
- Inspection must verify that all practices are adequately operational, maintained properly and that sediment is removed from all control structures.
- Inspection must look for evidence of soil erosion on the site, potential of pollutants entering drainage systems, problems at the discharge points, and signs of soil and mud transport from the site to the public road.

6.1.4 Dewatering Methods

Dewatering is not anticipated during construction. If localized dewatering becomes necessary to conduct the planned construction activities, the water will be evaluated for evidence of potential contamination.

Water that exhibits no visual (e.g. free product/sheens) or olfactory evidence of contamination will be directed to a discharge area established within a vegetated portion of the site and will be pumped through filter bags or socks for removal of sediment prior to discharge. The water will be discharged to the ground at a controlled rate in a manner that will prevent significant runoff. Discharge of dewatering effluent into the storm sewer system is not permitted under any circumstance.

6.1.5 Dust Control

Dust control shall be used through dry weather periods until all disturbed areas are stabilized and will be controlled as needed based on site conditions. Only plain water will be used for dust suppression. Stabilized construction entrances for dust control will be consistent with NYSDEC stabilized construction entrance requirements. All applicable regulations and standards related to dust control will be followed including the New York State Standards and Specifications for Erosion and Sediment Control ("Blue Book") for dust control.

7.0 INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be within the project area during construction:

- Portland cement concrete.
- Fertilizers / seeding materials.
- Stone.
- Petroleum based products.
- Silt fence fabric.
- Lumber.

8.0 SPILL PREVENTION

The following are the material management practices that shall be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

8.1 Good Housekeeping

The following good housekeeping practices shall be followed within project areas during construction:

- An effort shall be made to store only enough products required to do the job.
- All materials stored within project areas shall be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products shall be kept in their original containers with the original manufacturer's label.
- Substances shall not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product shall be used up before disposing of the container.
- Manufacturers' recommendations for proper use and disposal shall be followed.
- The project superintendent shall inspect daily to ensure proper use and disposal of materials.

8.2 Hazardous Products

These practices are used to reduce the risks associated with hazardous materials:

- Products shall be kept in original containers unless they are not resealable.
- Original labels and material safety data shall be retained.
- If surplus product must be disposed of, manufacturers' or local and state recommended methods of proper disposal shall be followed.
- Material Safety Data Sheets for all hazardous products shall be within the project area for the duration of construction.

8.3 Product Specific Practices

The following product-specific practices shall be followed within the project areas:

Petroleum Products

All project related vehicles shall be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products shall be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used during construction shall be applied according to the manufacturer's recommendations.

Paints

All containers shall be tightly sealed and stored when not required for use. Excess paint shall not be discharged to the storm sewer system but shall be properly disposed of according to manufacturer's instructions or State regulations.

Concrete Trucks

Concrete trucks shall be allowed to wash out within project areas provided that the contractor provides an area which collects and contains any concrete / slurry material washed from trucks for recovery and disposal at a later time. No concrete / slurry shall be discharged from the property at any time of construction. If such washing is anticipated, the contractor shall submit a plan detailing the control of concrete / slurry to the engineer for approval.

Watercourse Protection

Construction operations shall be conducted in such a manner as to prevent damage to watercourses from pollution of debris, sediment, or other foreign material, or from manipulation, from equipment and/or materials in or near the watercourse. The contractor shall not return directly to the watercourse any water used for wash purposes or other similar operations which may cause the water to become polluted with sand, silt, cement, oil or other impurities. If the contractor uses water from the water course, the contractor shall construct an intake or temporary dam to protect and maintain watercourse water quality.

8.4 Spill Control Practices

The contractor will be responsible for preparing a project area specific spill control plan in accordance with local and NYS DEC regulations. At a minimum this plan should:

- Reduce stormwater contact if there is a spill.
- Contain the spill.
- Stop the source of the spill.

- Dispose of contaminated material in accordance with manufactures procedures, and NYS DEC regulations.
- Identify responsible and trained personnel.
- Ensure spill area is well ventilated.

9.0 UPDATING THE SWPPP

The SWPPP shall be updated/revised as conditions merit or as directed by the regulating authority. The attached inspection forms included with this document allow for the certification of any updates/revisions.

10.0 SWPPP CERTIFICATION

Contracting Firm Information:

<i>Contracting Firm</i>		
<i>Address</i>		
<i>City/Town</i>	<i>State</i>	<i>Zip</i>

Site Location:

Carson Power Renaissance BESS Project
370 Youngs Road, Amherst, New York 14221

Contractor's Certification

I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the 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. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

<i>Signature (Contractor/Subcontractor)</i>	<i>Date</i>
<i>For</i>	
<i>Responsible For</i>	
<i>Signature (Trained Individual)</i>	<i>Date</i>
<i>For</i>	
<i>Responsible For</i>	
<i>Signature (Contractor/Subcontractor)</i>	<i>Date</i>
<i>For</i>	
<i>Responsible For</i>	
<i>Signature (Trained Individual)</i>	<i>Date</i>
<i>For</i>	
<i>Responsible For</i>	

APPENDIX A

Figure 1 – Project Location Map

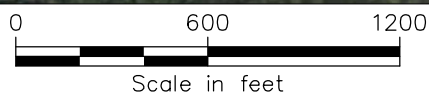
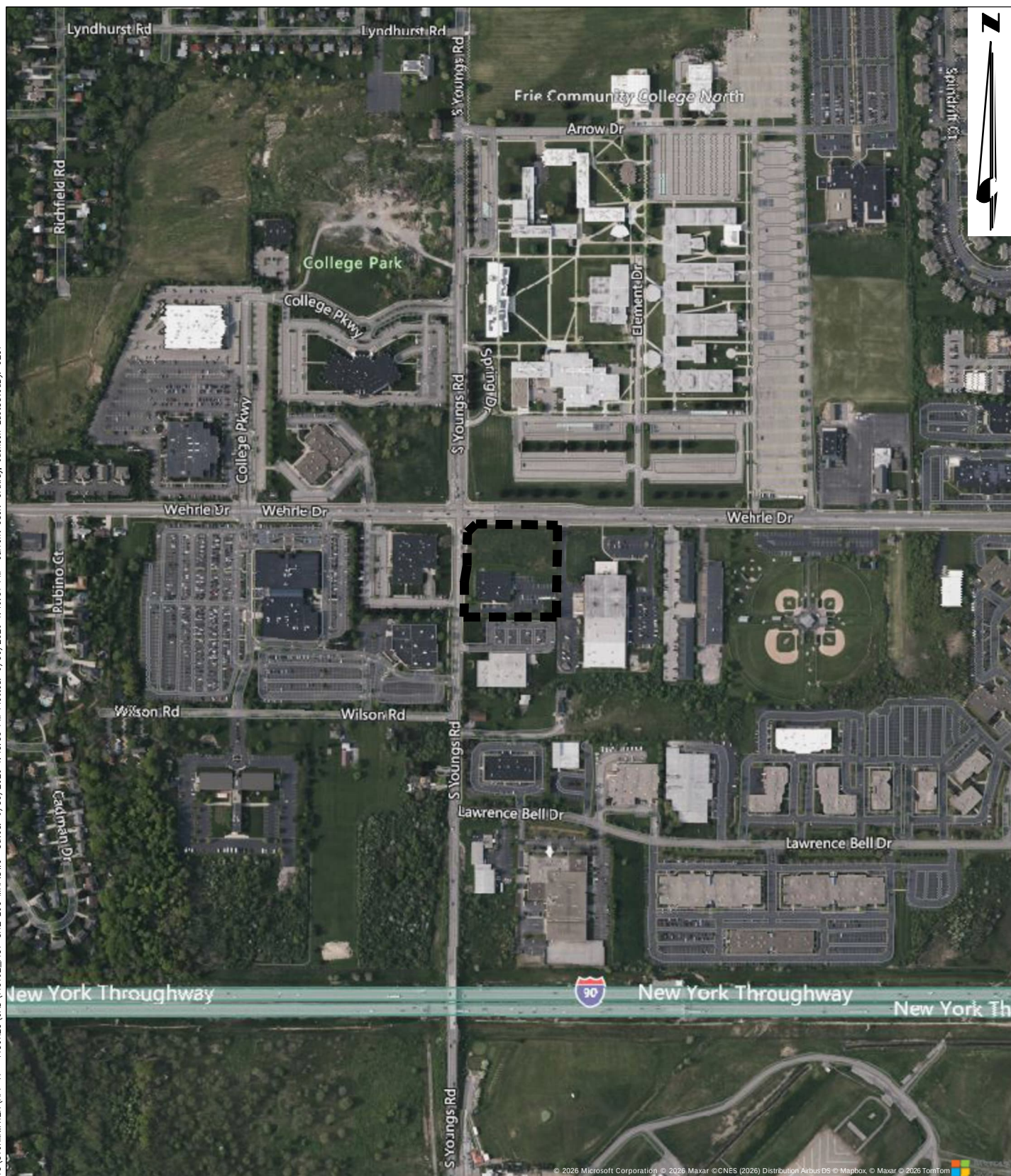
Figure 2 – USDA Soils Map

Figure 3 – FEMA FIRM Map

Figure 4 – Existing Condition Drainage Area Map

Figure 5 - Proposed Condition Drainage Area Map

File: V:\PROJECTS\ANY\K8\13192\000\08_REPORTS\STORMWATER\APP A - FIGURES\CAD\13192_F01-SITE LOC MAP.DWG Saved: 6/30/2026 1:45:33 PM Plotted: 6/30/2026 1:46:31 PM Current User: Ordway, Jackson LastSavedBy: 9237



SITE LOCATION MAP

RENAISSANCE BESS LLC
370 YOUNGS RD, AMHERST, NY 14221

PROJECT NO.
113192

DATE: 07/26

FIGURE 1

Hydrologic Soil Group—Erie County, New York

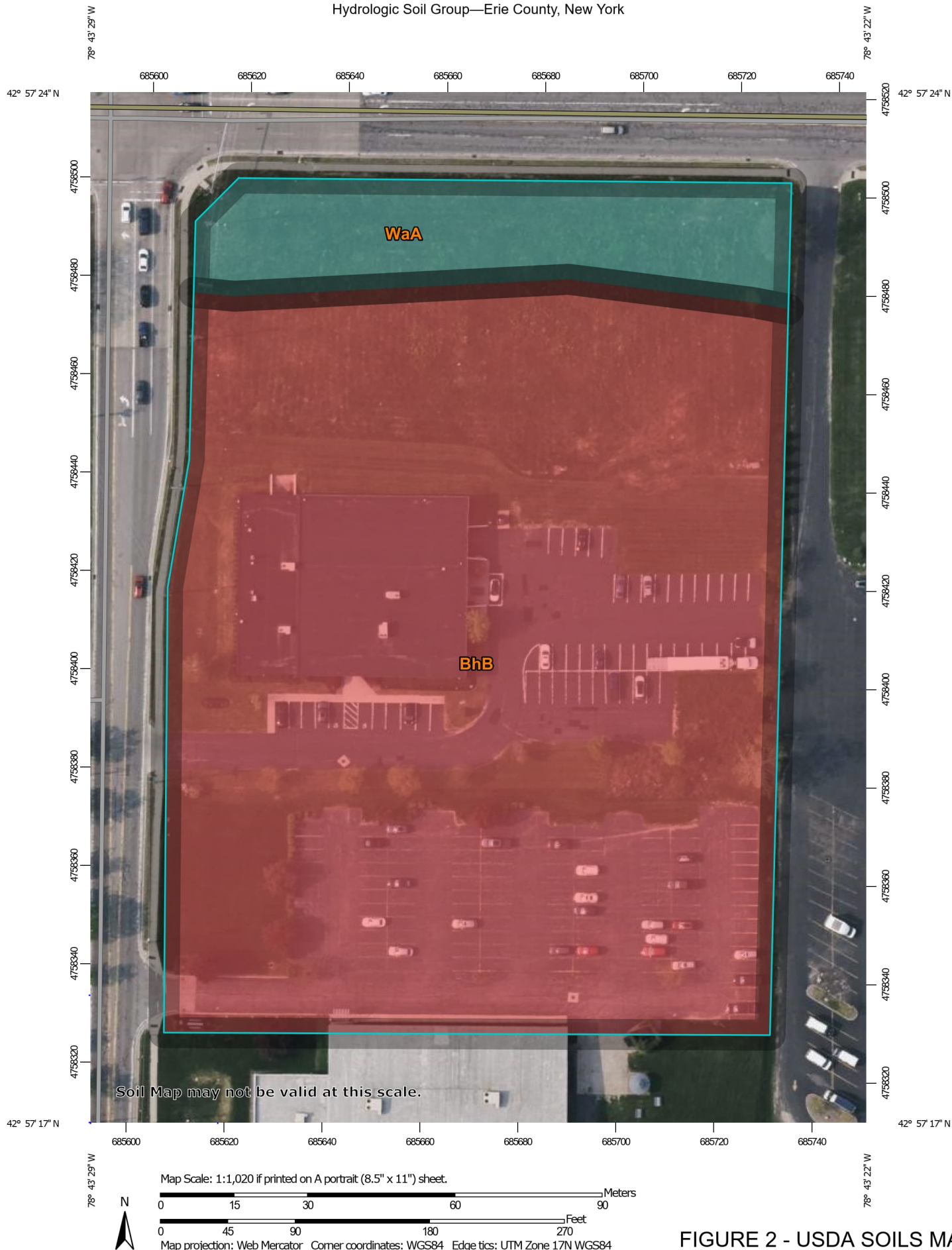


FIGURE 2 - USDA SOILS MAP



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Erie County, New York
 Survey Area Data: Version 25, Sep 4, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 13, 2023—May 27, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BhB	Benson-Rock outcrop complex, 3 to 8 percent slopes	D	4.6	87.5%
WaA	Wassaic silt loam, 0 to 3 percent slopes	C	0.7	12.5%
Totals for Area of Interest			5.3	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

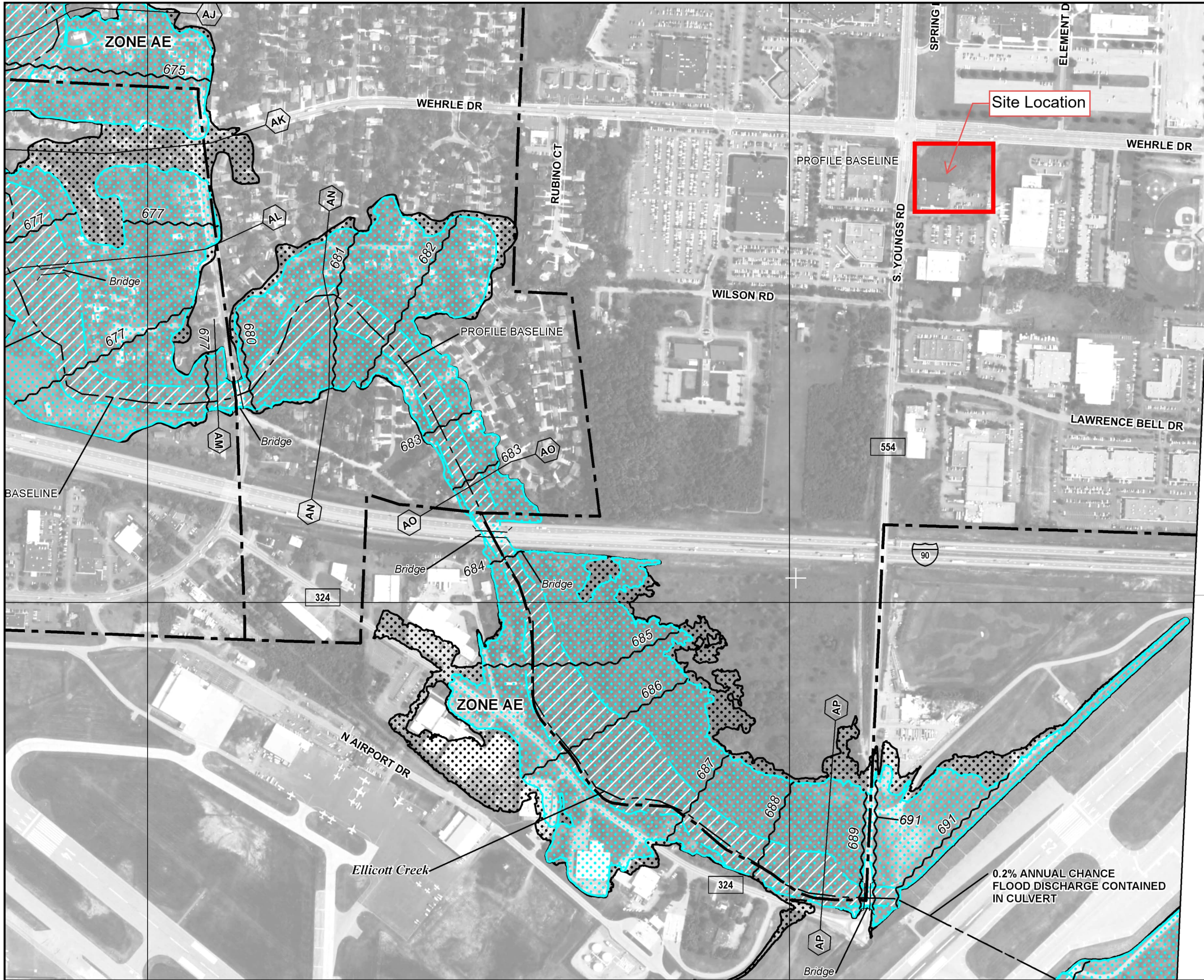
If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



JOINS PANEL 0229

107

MAP SCALE 1" = 500'

250 0 500 1000 FEET

0 0 150 300 METERS

PANEL 0228H

FIRM

FLOOD INSURANCE RATE MAP

ERIE COUNTY,
NEW YORK
(ALL JURISDICTIONS)

PANEL 228 OF 807
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
AMHERST, TOWN OF	360226	0228	H
CHEEKTOWAGA, TOWN OF	360231	0228	H
WILLIAMSVILLE, VILLAGE OF	360263	0228	H

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
36029C0228H

MAP REVISED
JUNE 7, 2019

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

JOINS PANEL 0229

107

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.

FIGURE 3 - FEMA FIRM MAP

RENAISSANCE BESS A LL
RENAISSANCE BESS B LL
RENAISSANCE BESS C LL
RENAISSANCE BESS D LL
370 YOUNGS RD
AMHERST, NY 14221

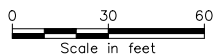
FOR PERMIT ONLY
NOT FOR
CONSTRUCITON

[illegible]

EXISTING CONDITION
DRAINAGE AREA MA

Designed By: JM	Drawn By: JO	Checked By: JR
Issue Date: 09/11/26	Project No.: 113192	Scale: AS SHOWN

Drawing No.:
FIG 4



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

FOR PERMIT ONLY
NOT FOR
CONSTRUCITON

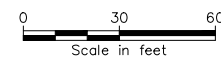
[illegible]

PROPOSED
CONDITION
DRAINAGE AREA MAP

Designed By: JM	Drawn By: JO	Checked By: JR
Issue Date: 09/11/26	Project No.: 113192	Scale: AS SHOWN

Drawing No.:

FIG 5



APPENDIX B

Geotechnical Report and Historic Resources



**New York State
Parks, Recreation and
Historic Preservation**

KATHY HOCHUL
Governor

KATHY MOSER
Acting Commissioner

November 07, 2025

Cameron O'Connor
Origination Manager
Carson Power LLC
110 William Street, Floor 24
New York, NY 10038

Re: AG/MKTS
Renaissance BESS
25PR10482

Dear Cameron O'Connor:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York Parks, Recreation and Historic Preservation Law). These comments are those of the OPRHP and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

Based upon this review, it is the opinion of OPRHP that no properties, including archaeological and/or historic resources, listed in or eligible for the New York State and National Registers of Historic Places will be impacted by this project.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above. If you have any questions, please contact Derek Rohde at the following email address:

Derek.Rohde@parks.ny.gov

Sincerely,

R. Daniel Mackay

Deputy Commissioner for Historic Preservation
Division for Historic Preservation

APPENDIX C

National Grid Memo from NYSDEC

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Water, Bureau of Water Permits
625 Broadway, Albany, New York 12233-3505
P: (518) 402-8111 | F: (518) 402-9029
www.dec.ny.gov

1/20/2017

Michael McPeck, P.E.
Lead Civil/Structural Engineer
National Grid
300 Erie Boulevard West
Syracuse, NY 13202

Re: National Grid's Stormwater Management Practices for Substations – Final Design Report

Dear Mr. McPeck:

We have completed our review of Environmental Design & Research's (EDR's) final design report, dated February 25, 2016, for the post-construction stormwater management practices to be used at National Grid's substation pads and have determined that the two designs comply with the NYS Stormwater Management Design Manual (2015 version).

EDR's final report calls for the use of an "Infiltration" practice at sites with soils that have an infiltration rate greater than or equal to 0.5 in/hr; and "Sheetflow to Riparian Buffer or Filter Strip" practice at sites with soils that have an infiltration rate less than 0.5 in/hr. Please be reminded that the system designs must comply with all applicable criteria in Chapters 5 and 6 of the Design Manual (i.e. separation distance to groundwater/bedrock for infiltration practices, minimum width of the riparian buffer /filter strip is 50 feet, etc.).

If you have any questions or require additional information, please contact me at (518) 402-8114.

Sincerely,



David Gasper, P.E.

cc: Tom Dussing, EDR



NEW YORK
STATE OF
OPPORTUNITY

Department of
Environmental
Conservation

Michael McPeck, P.E.
Lead Civil/Structural Engineer-
Substation Design & Engineering
National Grid



February 25, 2016

Mr. David Gasper, P.E.
NYSDEC
Division of Water
625 Broadway, 4th Floor
Albany, NY 12233-3505

RE: Approval of National Grid's Alternative Stormwater Management Practices for Substations

Dear Mr. Gasper:

National Grid has been working with Environmental & Design and Research for more than 24 months to develop a stormwater management system (**system**) that is integrated into National Grid's substation pad cross-section and meets the requirements of the current version of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity. The **system** that has been developed is included in the attached package Alternative Stormwater Management for National Grid Substations, dated February 12, 2016. The attached design memorandum provides a stormwater management system that is compliant with the requirements of the current version of the NYSDEC General Permit for Stormwater Discharges from Construction Activity, including Water Quality Volume (WQ_v), Runoff Reduction Volume (RR_v), Channel Protection Volume (Cp_v), Overbank Flood Control (Q_p), and Extreme Flood Control (Q_r). The **systems** listed below include the following on-site infiltrations rate scenarios:

- Sites with infiltration rates greater than or equal to 0.5 inches per hour – Detail 1 on Drawing C-101, dated February 12, 2016
- Sites with infiltration rates less than 0.5 inches per hour – Detail 1 on Drawing C-102, dated February 12, 2016

National Grid requests official approval of these **systems**, as compliant stormwater management practices with the New York State Stormwater Management Design Manual (current version), and approval as a NYSDEC Stormwater Standard Stormwater Management Practice. Following the receipt of this approval, the projects utilizing this system will be subject to the standard of five or ten business day permit authorization, provided that the other portions of the project follow the standard General Permit and the Design Manual requirements.

National Grid also grants NYSDEC permission to distribute these **system** designs to other potential users with the understanding that the following disclaimer is to be added to all stormwater reports and contract drawings by the user:

"National Grid (NG) together with the consulting firm, Environmental Design & Research (EDR), prepared a NYSDEC approved stormwater management prototype system (**system**), which may be applicable to substations projects. The user assumes the sole responsibility for the use of this system, its applicability to the project site, and the verification of appropriate use and compliance with village, town, city, county, state and federal stormwater requirements for this location."

Thank you for your continued support and consideration of this system.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael McPeck".

Michael McPeck, P.E.
Lead Civil/Structural Engineer



Environmental Design & Research,
Landscape Architecture, Engineering & Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000, Syracuse, New York 13202
P. 315.471.0688 • F. 315.471.1061 • www.edrcompanies.com

memorandum

To: David Gasper, PE, NYSDEC **EDR Project No:** 12073
From: Carlyne Bean, EIT & Thomas Dussing, PE
Date: February 25, 2016
Reference: Alternate Stormwater Management for National Grid Substations

Discussion

Environmental Design and Research (EDR) has worked with National Grid, the New York State Department of Environmental Conservation (NYSDEC), and the State University of New York, College of Environmental Science and Forestry (SUNY ESF) for more than 24 months to develop a stormwater management system (**system**) that is integrated into National Grid's substation pad construction and meets the requirements of the current version of the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity. The **system** that has been developed is included in the substation pad cross-section and provides a stormwater management compliant design that meets the requirements of the current version of the NYSDEC General Permit for Stormwater Discharges from Construction Activity, including Water Quality Volume (WQ_v), Runoff Reduction Volume (RR_v), Channel Protection Volume (Cp_v), Overbank Flood Control (Q_p), and Extreme Flood Control (Q_t). Our combined efforts have produced two **systems** for the following on-site soil infiltrations rate scenarios, which include:

- Sites with infiltration rates greater than or equal to 0.5 inches per hour – Detail 1 on Drawing C-101
- Sites with infiltration rates less than 0.5 inches per hour – Detail 1 on Drawing C-102

National Grid requests approval of these two **systems**, as compliant stormwater management practices with the New York State Stormwater Manual (current version), and that they be approved as standard stormwater management practices, as required by the current version of the NYSDEC Stormwater General Permit. If a project utilizing one of the cross sections is subject to review by a Municipal Separate Storm Sewer System (MS4), it would be responsibility of the MS4 to review and approve the Stormwater Pollution Prevention Plan (SWPPP) by signing the MS4 SWPPP Acceptance form. If the project is not subject to review by a MS4, the SWPPP would follow the normal approval process for a non-MS4 project that is in conformance with the current version of the NYSDEC Stormwater General Permit.

Based on the demonstration project results, we offer the following in support of this request:

- The proposed stormwater management **systems** are designed for 7 inches of rainfall. This represents the largest 100-year storm rainfall depth within National Grid's service area or greater than six back to back 90% storms (1.1 inches).
- The **systems** provide treatment and management of WQ_v, RR_v, Cp_v, Q_p, and Q_t by providing storage and infiltration (as applicable), of all rain events, up to and including, the 100-year storm.
- The **systems** are self-contained which reduces the impact to the surrounding environment by eliminating additional site disturbance that would be necessary for green infrastructure and traditional stormwater practices.
- National Grid has provided testing at a demonstration area that is supported by laboratory tested infiltration rates and porosities. A portion of the construction and testing of the demonstration project was witnessed by a former NYSDEC representative, Ellen Hahn Kubek. The demonstration area testing results show that the **systems** can accept and hold the 100-year storm volume without ponding or surface runoff.

Demonstration Area Test Results

100-Year Storm Demonstration

Ellen Hahn Kubek, a former NYSDEC representative, was present for the 100-Year storm test on November 21, 2013. 1,800 gallons of water was applied uniformly with a hose over a 30-minute duration, or at rate of 9.2 inches per hour. (Note that according to the Natural Resource Conservation Service (NRCS) Type 2 Rainfall Distribution, the highest 30-minute precipitation intensity of a 24-hour storm is between 11.5 hours and 12 hours. During this 30-minute time frame, 35% of the storm rainfall depth occurs. For a 7 inch, 100-Year Storm this translates to 2.5 inches of rainfall, or a rate of 5.0 inches per hour. Therefore, the application rate used during the test was greater than the maximum intensity that would occur during an NRCS Type 2 rain event.) The November 21, 2013 demonstration showed that the proposed cross section does have an acceptable infiltration rate, with no surface runoff being created during the test even with the high application intensity. (Also, note that the compaction results for the demonstration area were greater than National Grid's requirement of 95% standard proctor for the filter course.)

Demonstration Area Volume Correction

Following the construction of the demonstration area, it was determined that an insufficient depth of the reservoir course had been placed. Measurements from the surface of the test area to the bottom of the observation wells determined that it had been constructed with 4 inches of reservoir course material rather than the 10 inches that is proposed in the attached drawings. Since the 100-Year storm is proposed to be stored within the reservoir and filter courses, EDR calculated the equivalent storage volume required for testing the 100-Year storm based on the cross section as constructed (4-inch reservoir course). Based on this calculation the volume of water used for the 100-Year storm test was 1,800 gallons rather than initially proposed 2,800 gallons.

NYSDEC Stormwater Requirements

Runoff Reduction and Water Quality Volume Management

The proposed **system** for sites with **infiltration rates greater than or equal to 0.5 inches per hour** provides 100% storage and infiltration of the 7-inch rainfall event. This exceeds minimum RRV and WQv requirements for any Hydrologic Soil Group (HSG).

The proposed **system** for sites with **infiltration rates less than 0.5 inches per hour** will meet the RRV and WQv requirements by using practices from the 2010 NYS Stormwater Management Design Manual (Design Manual): vegetated filter strip or riparian forest buffer. Per the Design Manual, a maximum of 75 feet of flow length over impervious area can discharge to these practices. According to the hydrologic modeling reports attached, a 50 feet-wide by 75 feet-long impervious area with CN of 98 creates a peak discharge rate of 114 gallons per minute and an average discharge rate of 57 gallons per minute. Per the Design Manual, this discharge rate can be directed to a 50 feet wide by 60 feet long filter strip or buffer with a slope of 0% to 8% on HSG D soils. A 1-acre substation was modeled using the average porosity provided by the **system** with a 4 inch underdrain outlet. This resulted in a peak discharge rate of 56 gallons per minute. The average discharge rate from the impervious area is similar to the peak discharge rate from the substation area; therefore, it is reasonable to consider the same stormwater management via sheet flow to a filter strip or buffer to be acceptable. National Grid proposes for their **system** to meet the RRV and WQv requirements for sites with an infiltration rate of less than 0.5 inches per hour by using the following design criteria:

- A filter strip or buffer 50 feet wide, with the necessary length per the Design Manual, will be provided for each acre of substation area.
- Per the Design Manual, the length of the filter strip or buffer would be based on the attainable or existing site slopes. Filter strips or buffers with slopes of 0% to 8% would be 50 feet long, 8% to 12% would be 75 feet long and 12% to 15% would be 100 feet long. In HSG C or D soils, the length will be increased by 15% or 20%, respectively.

National Grid proposes that in this site condition, the substation underdrain(s) discharge to a flow dissipater (to create sheet flow) then to a filter strip or buffer sized as described. An example layout for a 5-acre substation on HSG D soils is shown on drawing C-103.

Volume Management

The proposed **system** for sites with infiltration rates greater than or equal to 0.5 inches per hour provide storage of C_p , Q_p , and Q_f and discharged via infiltration. The proposed **system** for sites with infiltration rates less than 0.5 inches per hour will provide storage for volume management and will discharge via an underdrain system that will be appropriately sized to meet the C_p , Q_p , and Q_f requirements. The underdrains will discharge to a flow dissipater and sheet flow over a filter strip or buffer as previously discussed to meet RR_v and WQ_v requirements. Supporting stormwater detention calculations are attached.

Stormwater Management System Summary

In summary, the **systems** proposed by National Grid would provide stormwater management as detailed in the table below.

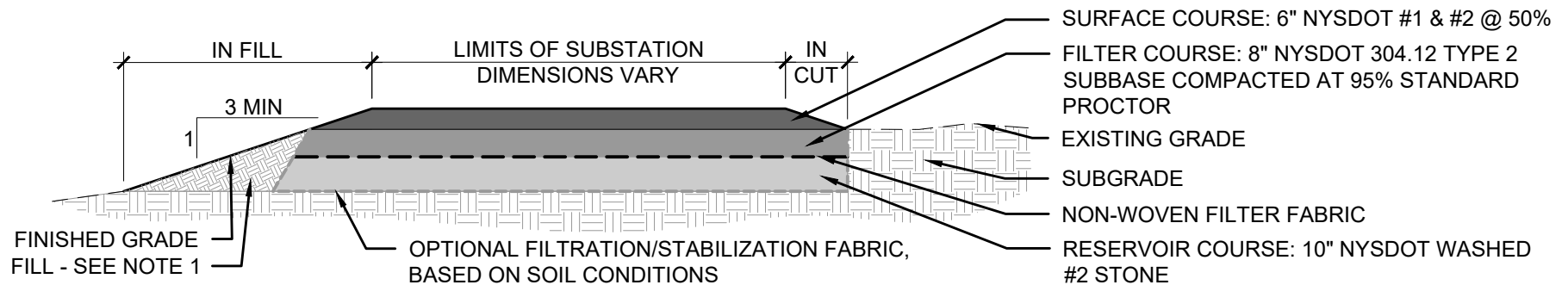
Site Infiltration (in/hr)	RR_v & WQ_v	C_p	Q_p	Q_f
≥ 0.5	100% Infiltration (2.5 hours or less)*	100% Infiltration	100% Infiltration	100% Infiltration (14 hours or less)**
< 0.5	100% Vegetated Filter or Riparian Forest Buffer	Attenuation	Attenuation	Attenuation

* Calculated based on the largest 90% storm rainfall depth within National Grid's service area – 1.1 inches.

** Calculated based on the largest 100-Year storm rainfall depth within National Grid's service area – 7.0 inches

Attachments: C-101 Proposed Substation Sections for Infiltration Rates of 0.5 in/hr and Greater
C-102 Proposed Substation Sections for Infiltration Rates Less Than 0.5 in/hr
C-103 Example Substation Filter Strip Layout for Infiltration Rates Less Than 0.5 in/hr
1 and 100 year Hydrologic Modeling Reports
National Grid Proposed Sections – Volume Storage Calculation
Photo of 11/22/2013 White Board Discussion with Ellen Hahn Kubek
12/27/2013 Email from Ellen Hahn Kubek

Copies To: Michael McPeck, National Grid
Carol Lamb-Lafay, NYSDEC
David Follansbee, NYSDEC
File



1 SUBSTATION SECTION - INFILTRATION RATE ≥ 0.5 IN/HR

C-101 Scale: NTS

nationalgrid

NOTES:

1. ALL FILL USED FOR SIDE SLOPES SHALL BE ONSITE MATERIAL FROM AREA CUT TO CREATE THE SUBSTATION OR SHALL BE OFFSITE FILL COMPACTED TO HAVE AN INFILTRATION RATE LESS THAN THE SUBSTATION SUBGRADE.
2. INFILTRATION TESTING SHALL BE COMPLETED AS REQUIRED BY APPENDIX D OF THE 2010 NYS STORMWATER MANAGEMENT DESIGN MANUAL, OR AS APPROVED BY THE NYS DEC REGIONAL OFFICE OR MS4 REPRESENTATIVE.
3. THIS SECTION SHALL BE APPLICABLE TO MEET THE STORMWATER MANAGEMENT REQUIREMENTS OF NEW DEVELOPMENT AND REDEVELOPMENT PROJECTS, PER THE 2010 NYS STORMWATER MANAGEMENT DESIGN MANUAL, FOR SITES WITH INFILTRATION RATES OF GREATER THAN OR EQUAL TO 0.5 INCHES PER HOUR.
4. ALL THOSE UTILIZING THIS SECTION, WITH THE EXCEPTION OF NATIONAL GRID, SHALL INCLUDE THE FOLLOWING NOTE IN ALL STORMWATER REPORTS AND DRAWINGS:
 "NATIONAL GRID (NG) TOGETHER WITH THE CONSULTING FIRM, ENVIRONMENTAL DESIGN & RESEARCH (EDR), PREPARED A NYSDEC STORMWATER MANAGEMENT PROTOTYPE SYSTEM (SYSTEM), WHICH MAY BE APPLICABLE TO SUBSTATION PROJECTS. THE USER ASSUMES THE SOLE RESPONSIBILITY FOR THE USE OF THIS SYSTEM, ITS APPLICABILITY TO THE PROJECT SITE, AND VERIFICATION OF THE APPROPRIATE USE AND COMPLIANCE WITH VILLAGE, TOWN, CITY, COUNTY, STATE, AND FEDERAL STORMWATER REQUIREMENTS FOR THIS LOCATION."

PROJECT TITLE: **NATIONAL GRID - SUBSTATION STORMWATER MANAGEMENT PRACTICES**

DRAWING TITLE: **PROPOSED SUBSTATION SECTIONS FOR INFILTRATION RATES OF 0.5 IN/HR AND GREATER**

DRAWN BY: **CB**

CHECKED BY: **TD**

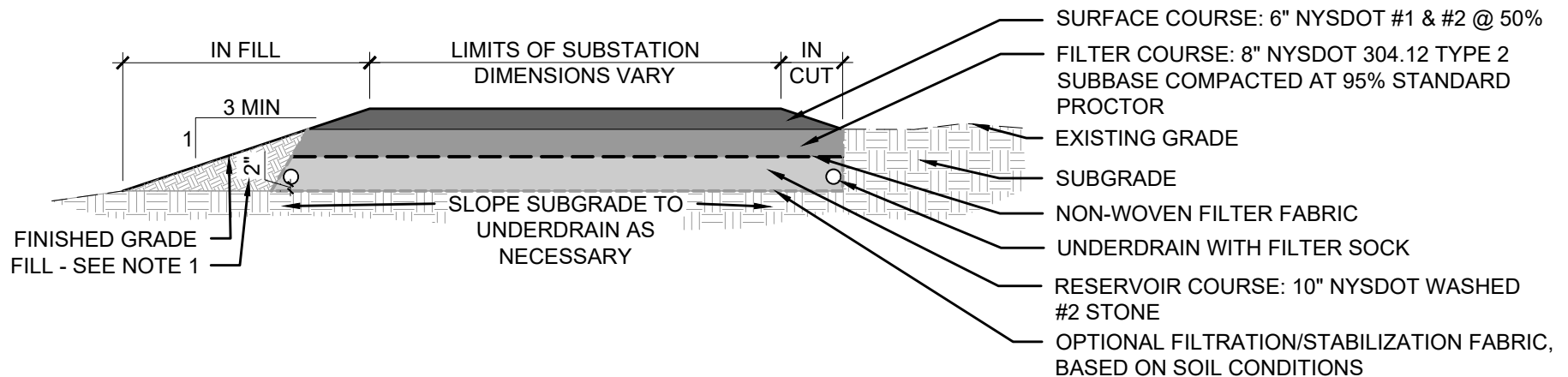
edr JOB NUMBER: **12073**

DRAWING NUMBER: **C-101**

SCALE: **NTS** DATE: **2/25/2016**

**Environmental
Design & Research,**
Landscape Architecture, Engineering
& Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000
Syosset, New York 11590
P. 315.471.0688





1 SUBSTATION SECTION - INFILTRATION RATE < 0.5 IN/HR

C-102 Scale: NTS

nationalgrid

NOTES:

1. ALL FILL USED FOR SIDE SLOPES SHALL BE ONSITE MATERIAL FROM AREA CUT TO CREATE THE SUBSTATION OR SHALL BE OFFSITE FILL COMPACTED TO HAVE AN INFILTRATION RATE LESS THAN THE SUBSTATION SUBGRADE.
2. UNDERDRAIN SIZE AND LAYOUT WILL VARY DEPENDING ON THE SIZE OF THE SUBSTATION.
3. UNDERDRAIN WILL DAYLIGHT AND DISCHARGE TO A LEVEL SPREADER THEN A VEGETATED FILTER STRIP OR RIPARIAN FOREST BUFFER TO MEET RUNOFF REDUCTION VOLUME REQUIREMENTS.
4. LEVEL SPREADER SHALL BE DESIGNED PER THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL TO CREATE SHEET FLOW PRIOR TO DISCHARGE TO THE VEGETATED FILTER STRIP OR RIPARIAN FOREST BUFFER.
6. VEGETATED FILTER STRIP OR RIPARIAN FOREST BUFFER WIDTH SHALL BE 50 FEET PER ACRE OF SUBSTATION. LENGTH AND REMAINING DESIGN CRITERIA SHALL BE PER THE 2010 NYS STORMWATER MANAGEMENT DESIGN MANUAL.
7. UNDERDRAINS SHALL BE SIZED TO MEET CHANNEL PROTECTION VOLUME (C_{pv}), OVER BANK FLOOD CONTROL (Q_p) AND EXTREME FLOOD CONTROL (Q_f) DESIGN CRITERIA.
8. THIS SECTION SHALL BE APPLICABLE TO MEET THE STORMWATER MANAGEMENT REQUIREMENTS OF NEW DEVELOPMENT AND REDEVELOPMENT PROJECTS, PER THE 2010 NYS STORMWATER MANAGEMENT DESIGN MANUAL, FOR SITES WITH INFILTRATION RATES LESS THAN 0.5 INCHES PER HOUR.
9. ALL THOSE UTILIZING THIS SECTION, WITH THE EXCEPTION OF NATIONAL GRID, SHALL INCLUDE THE FOLLOWING NOTE IN ALL STORMWATER REPORTS AND DRAWINGS:

"NATIONAL GRID (NG) TOGETHER WITH THE CONSULTING FIRM, ENVIRONMENTAL DESIGN & RESEARCH (EDR), PREPARED A NYSDEC STORMWATER MANAGEMENT PROTOTYPE SYSTEM (SYSTEM), WHICH MAY BE APPLICABLE TO SUBSTATION PROJECTS. THE USER ASSUMES THE SOLE RESPONSIBILITY FOR THE USE OF THIS SYSTEM, ITS APPLICABILITY TO THE PROJECT SITE, AND VERIFICATION OF THE APPROPRIATE USE AND COMPLIANCE WITH VILLAGE, TOWN, CITY, COUNTY, STATE, AND FEDERAL STORMWATER REQUIREMENTS FOR THIS LOCATION."

PROJECT TITLE: NATIONAL GRID - SUBSTATION STORMWATER MANAGEMENT PRACTICES

DRAWING TITLE: PROPOSED SUBSTATION SECTIONS FOR INFILTRATION RATES LESS THAN 0.5 IN/HR

DRAWN BY: CB

CHECKED BY: TD

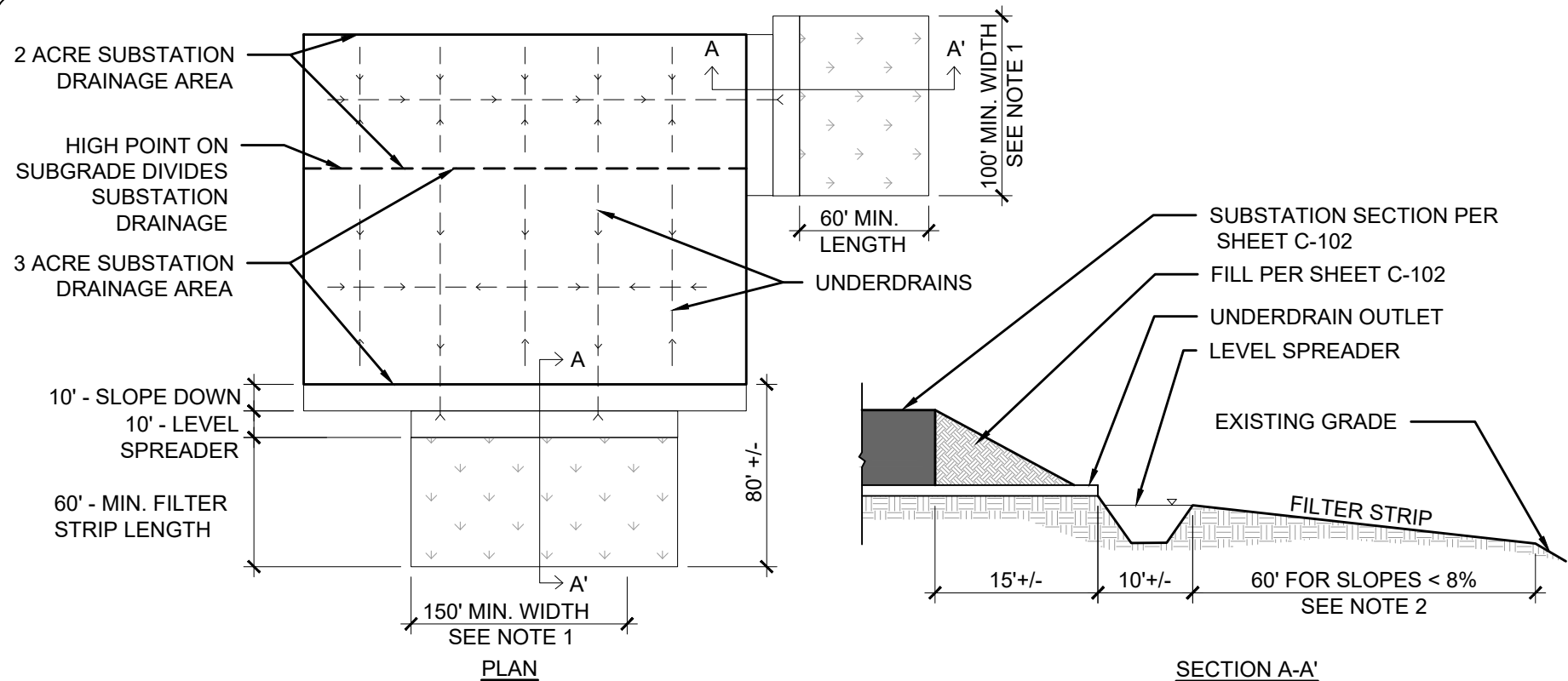
edr JOB NUMBER: 12073

DRAWING NUMBER: C-102

SCALE: NTS DATE: 2/25/2016

**Environmental
Design & Research,**
Landscape Architecture, Engineering
& Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000
Syosset, New York 11550
P. 315.471.0688





NOTES:

1. FILTER STRIP WIDTH PER ACRE = 50'
5 ACRES X 50' WIDTH = 250' TOTAL WIDTH
2. SEE 2010 NYS STORMWATER MANAGEMENT DESIGN MANUAL FOR FILTER STRIP LENGTH REQUIREMENTS BASED ON SITE SLOPES AND HSG. EXAMPLE IS FOR HSG D.
3. FILTER STRIP LAYOUT/ORIENTATION IS AN EXAMPLE. FILTER STRIPS SHOULD BE LOCATED BASED ON SITE CHARACTERISTICS. UNDERDRAIN LAYOUTS MUST BE CONFIGURED TO DRAIN AN AREA THE SUBSTATION TO AN APPROPRIATELY SIZED FILTER STRIP.
4. SLOPE DOWN AND LEVEL SPREADER WIDTH ARE EXAMPLES AND REQUIRE PROJECT SPECIFIC DESIGN.
5. SEE NOTE 9, DRAWING NUMBER C-102.

1 5 ACRE SUBSTATION EXAMPLE C-103 Scale: NTS

nationalgrid

PROJECT TITLE: NATIONAL GRID - SUBSTATION STORMWATER MANAGEMENT PRACTICES

DRAWING TITLE: EXAMPLE SUBSTATION FILTER STRIP LAYOUT FOR INFILTRATION RATES LESS THAN 0.5 IN/HR

DRAWN BY: CB

CHECKED BY: TD

edr JOB NUMBER: 12073

DRAWING NUMBER: C-103

SCALE: NTS

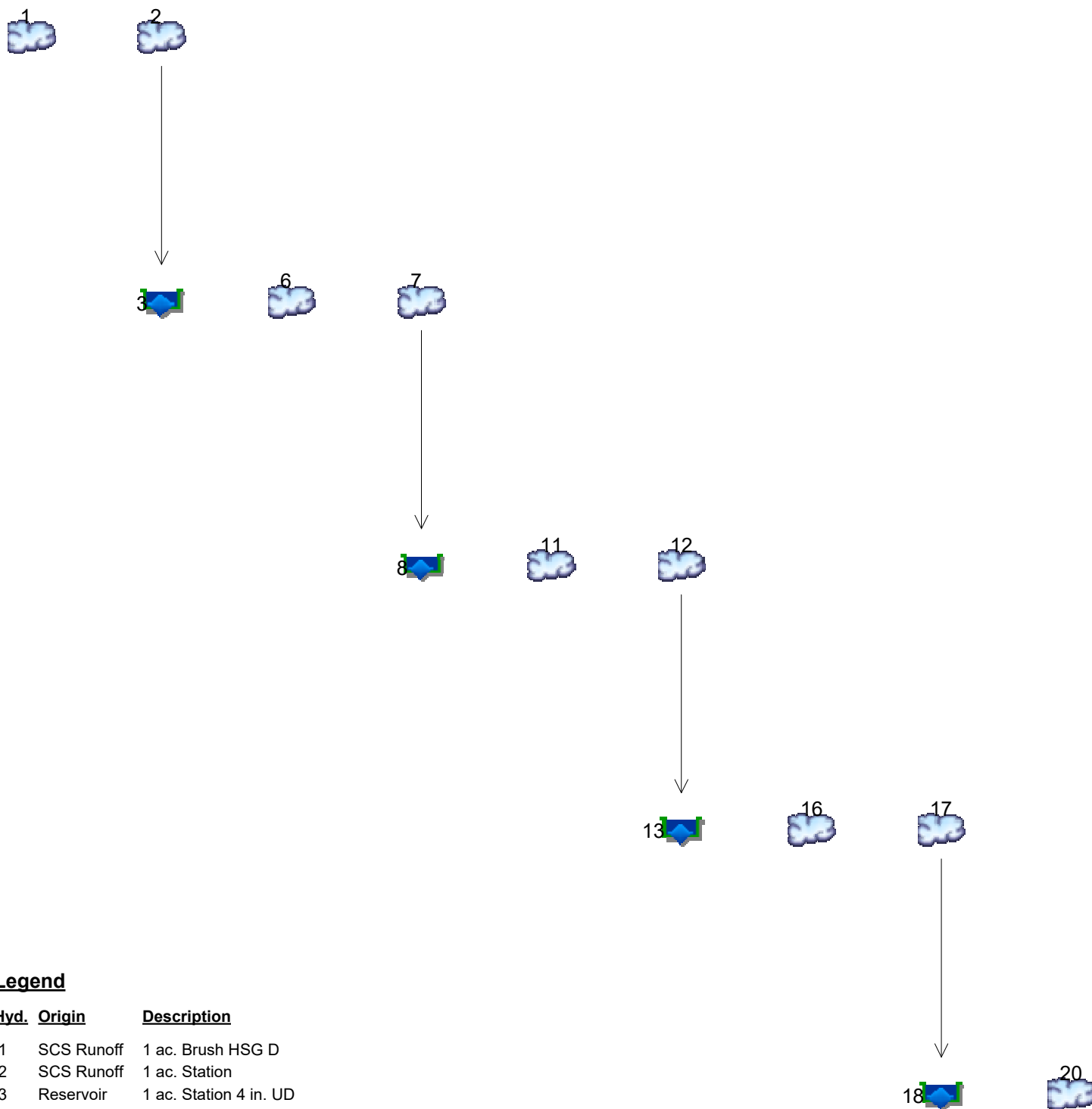
DATE: 2/25/2016

**Environmental
Design & Research,**
Landscape Architecture, Engineering
& Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000
Syosset, New York 11550
P. 315.471.0688



Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10



Legend

Hyd.	Origin	Description
1	SCS Runoff	1 ac. Brush HSG D
2	SCS Runoff	1 ac. Station
3	Reservoir	1 ac. Station 4 in. UD
6	SCS Runoff	5 ac. Brush HSG D
7	SCS Runoff	5 ac. station
8	Reservoir	5 ac Station 5-4 in UD
11	SCS Runoff	10 ac. Brush HSG D
12	SCS Runoff	10 ac. Station
13	Reservoir	10ac Station 10-4in UD
16	SCS Runoff	20 ac. Brush HSG D
17	SCS Runoff	20 ac. Station
18	Reservoir	20ac Station 20-4in UD
20	SCS Runoff	50x75 CN 98

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	0.275	2	744	1,851	-----	-----	-----	1 ac. Brush HSG D
2	SCS Runoff	3.212	2	716	7,389	-----	-----	-----	1 ac. Station
3	Reservoir	0.125	2	796	7,334	2	100.26	4,796	1 ac. Station 4 in. UD
6	SCS Runoff	1.143	2	752	9,336	-----	-----	-----	5 ac. Brush HSG D
7	SCS Runoff	16.06	2	716	36,947	-----	-----	-----	5 ac. station
8	Reservoir	0.623	2	796	36,805	7	100.26	23,973	5 ac Station 5-4 in UD
11	SCS Runoff	1.899	2	764	18,570	-----	-----	-----	10 ac. Brush HSG D
12	SCS Runoff	32.12	2	716	73,894	-----	-----	-----	10 ac. Station
13	Reservoir	1.246	2	796	73,610	12	100.26	47,944	10ac Station 10-4in UD
16	SCS Runoff	3.370	2	772	37,344	-----	-----	-----	20 ac. Brush HSG D
17	SCS Runoff	64.23	2	716	147,788	-----	-----	-----	20 ac. Station
18	Reservoir	2.492	2	796	147,219	17	100.26	95,888	20ac Station 20-4in UD
20	SCS Runoff	0.276	2	716	635	-----	-----	-----	50x75 CN 98
12073-NG_Demo_Areas.gpw					Return Period: 1 Year			Wednesday, 12 / 18 / 2013	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 1

1 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 1.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 0.275 cfs
 Time to peak = 12.40 hrs
 Hyd. volume = 1,851 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 45.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

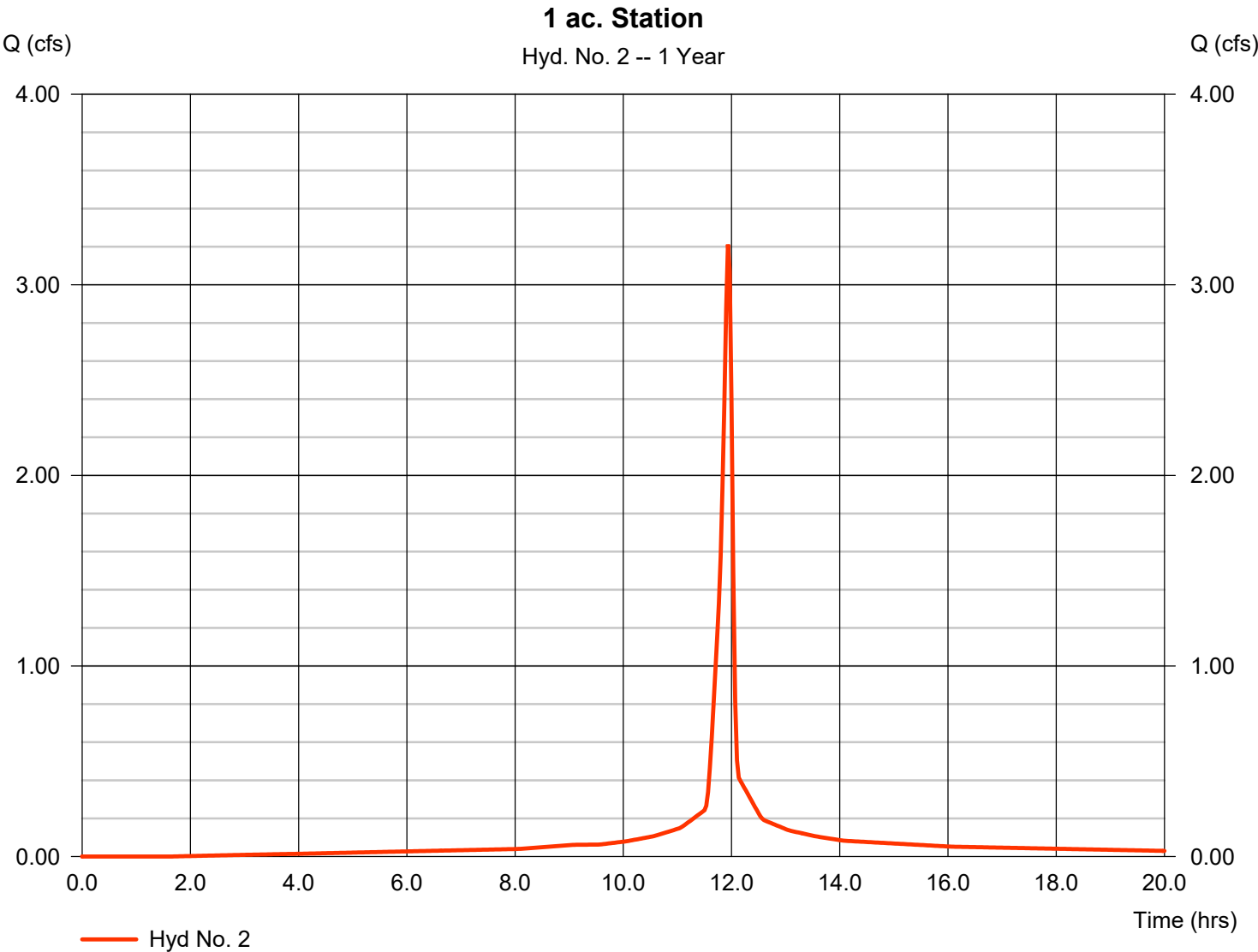
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 2

1 ac. Station

Hydrograph type	= SCS Runoff	Peak discharge	= 3.212 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 7,389 cuft
Drainage area	= 1.000 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.40 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

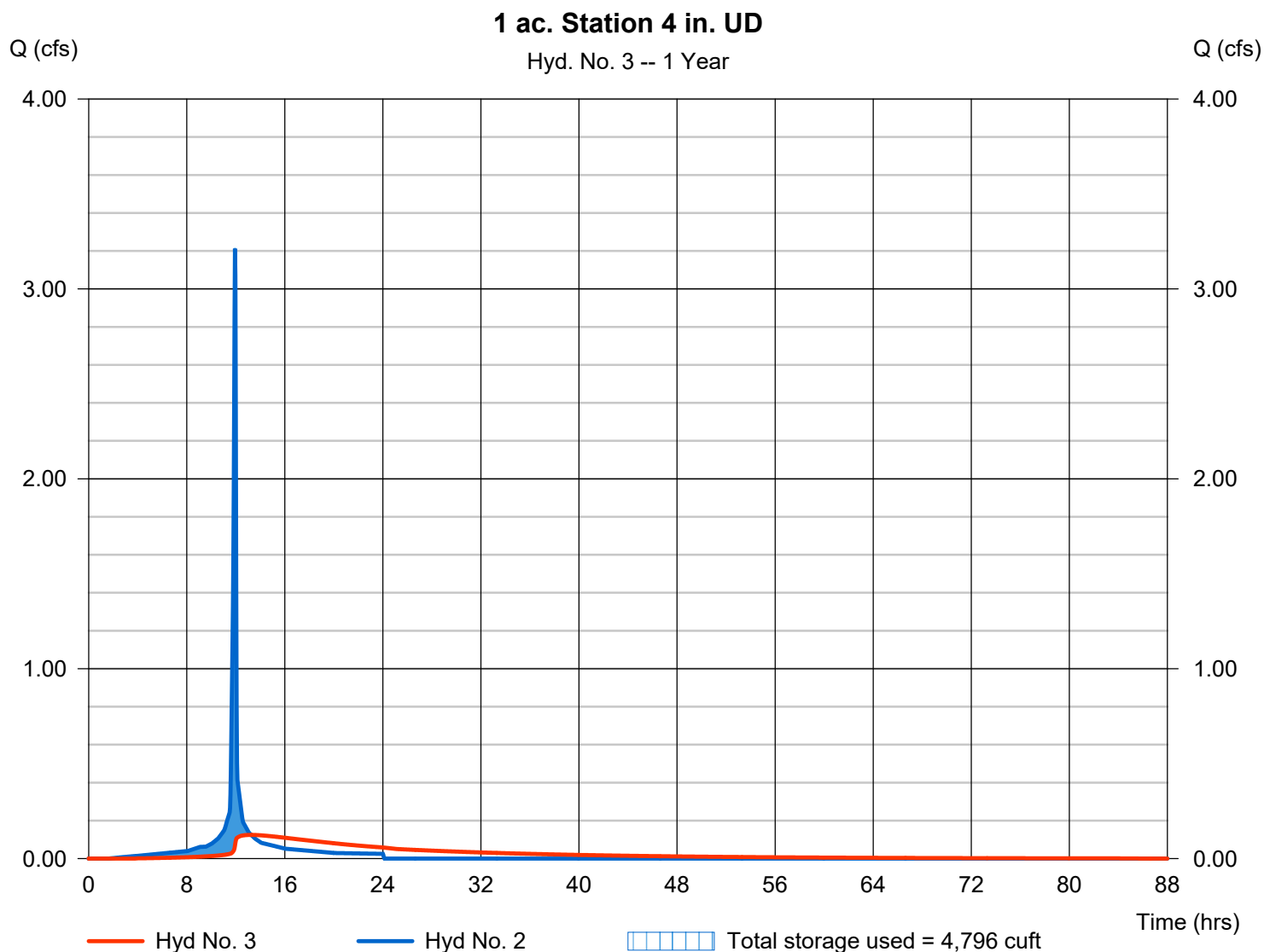
Wednesday, 12 / 18 / 2013

Hyd. No. 3

1 ac. Station 4 in. UD

Hydrograph type	= Reservoir	Peak discharge	= 0.125 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.27 hrs
Time interval	= 2 min	Hyd. volume	= 7,334 cuft
Inflow hyd. No.	= 2 - 1 ac. Station	Max. Elevation	= 100.26 ft
Reservoir name	= 1 ac. Station 4 in. UD	Max. Storage	= 4,796 cuft

Storage Indication method used.



Pond No. 1 - 1 ac. Station 4 in. UD

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 100.00 ft. Voids = 42.80%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	43,560	0	0
1.50	102.50	43,560	27,966	27,966

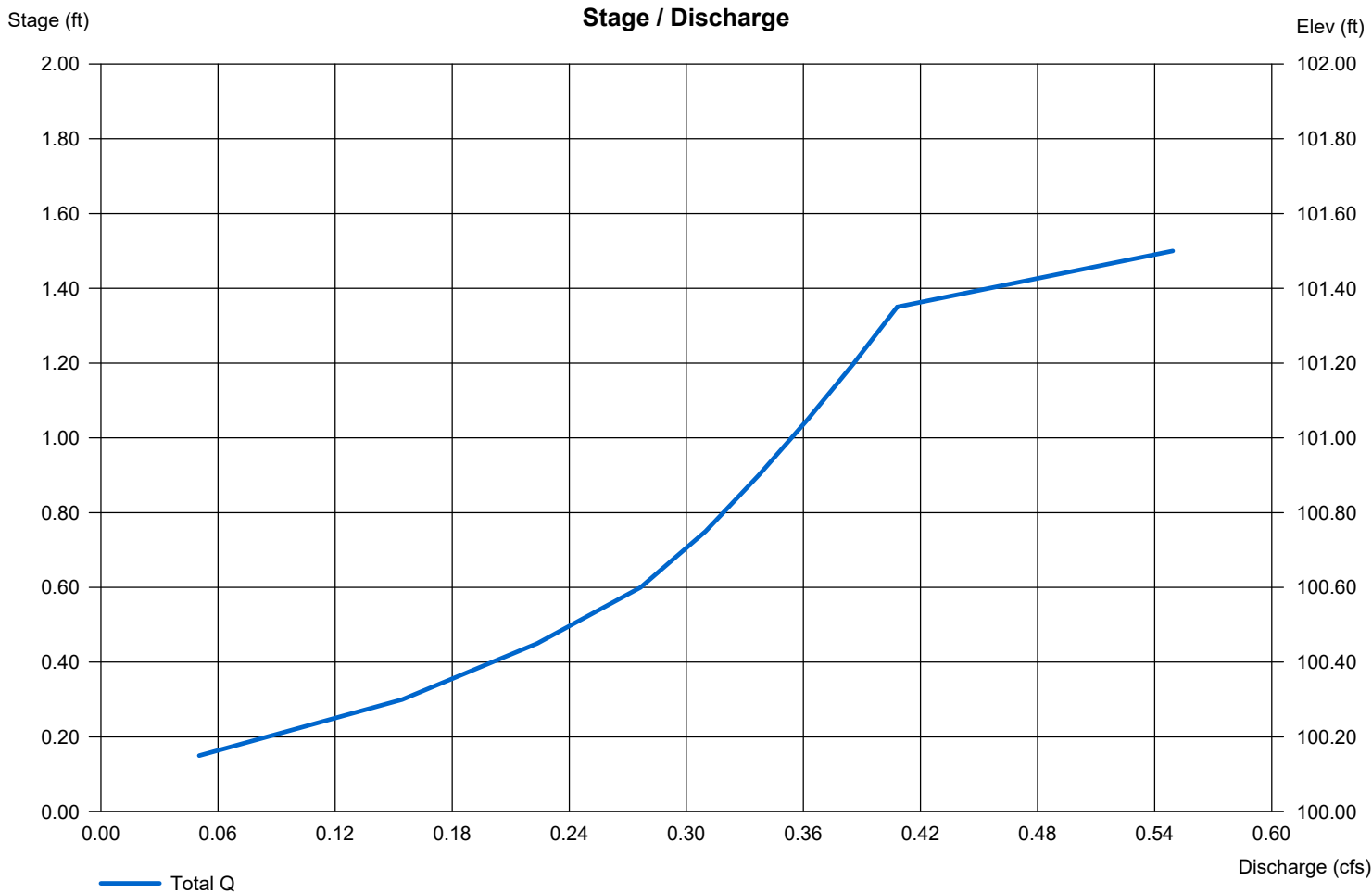
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	0.00	0.00	0.00
Span (in)	= 4.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 6

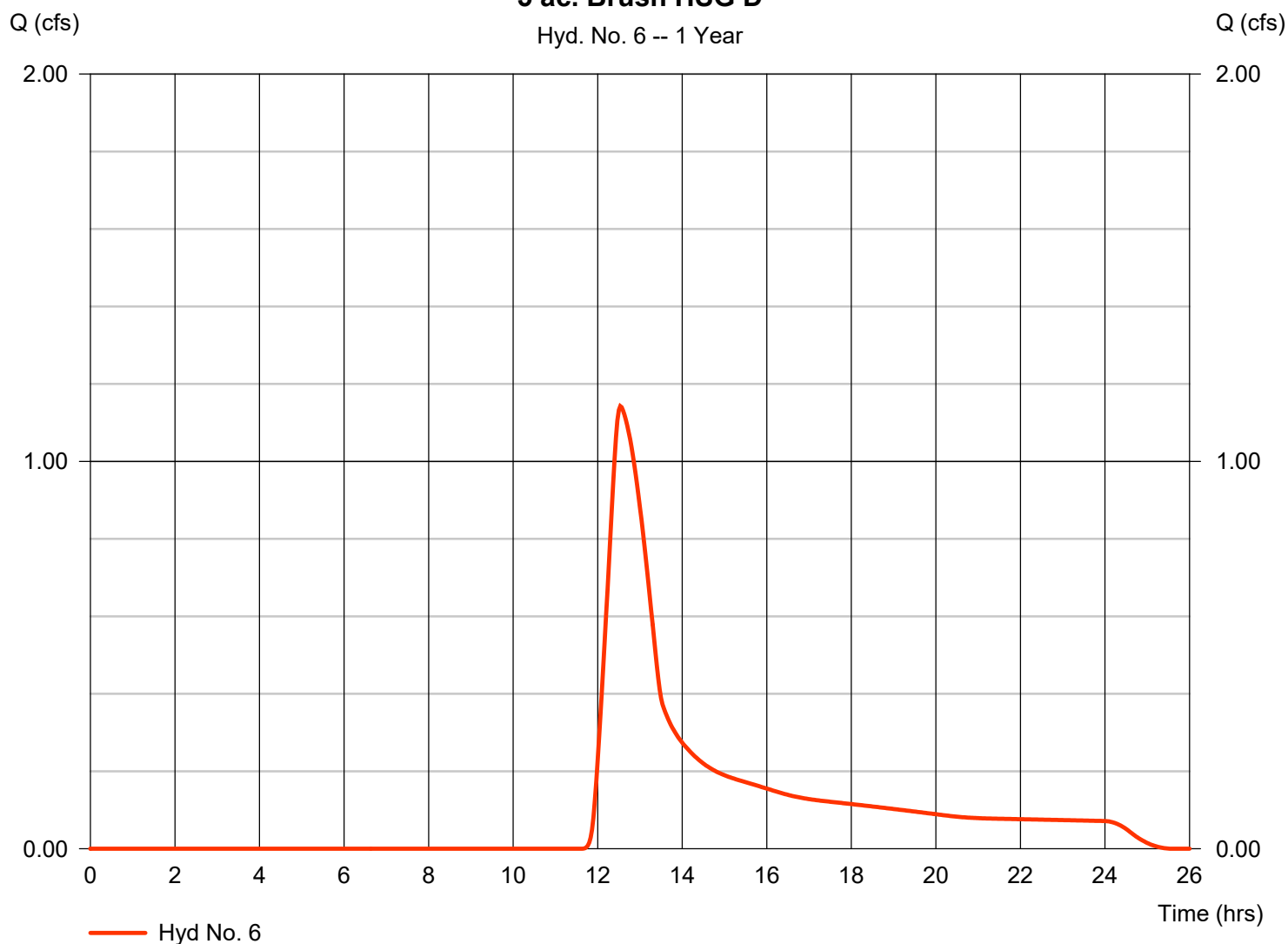
5 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 5.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 1.143 cfs
 Time to peak = 12.53 hrs
 Hyd. volume = 9,336 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 60.00 min
 Distribution = Type II
 Shape factor = 484

5 ac. Brush HSG D

Hyd. No. 6 -- 1 Year



Hydrograph Report

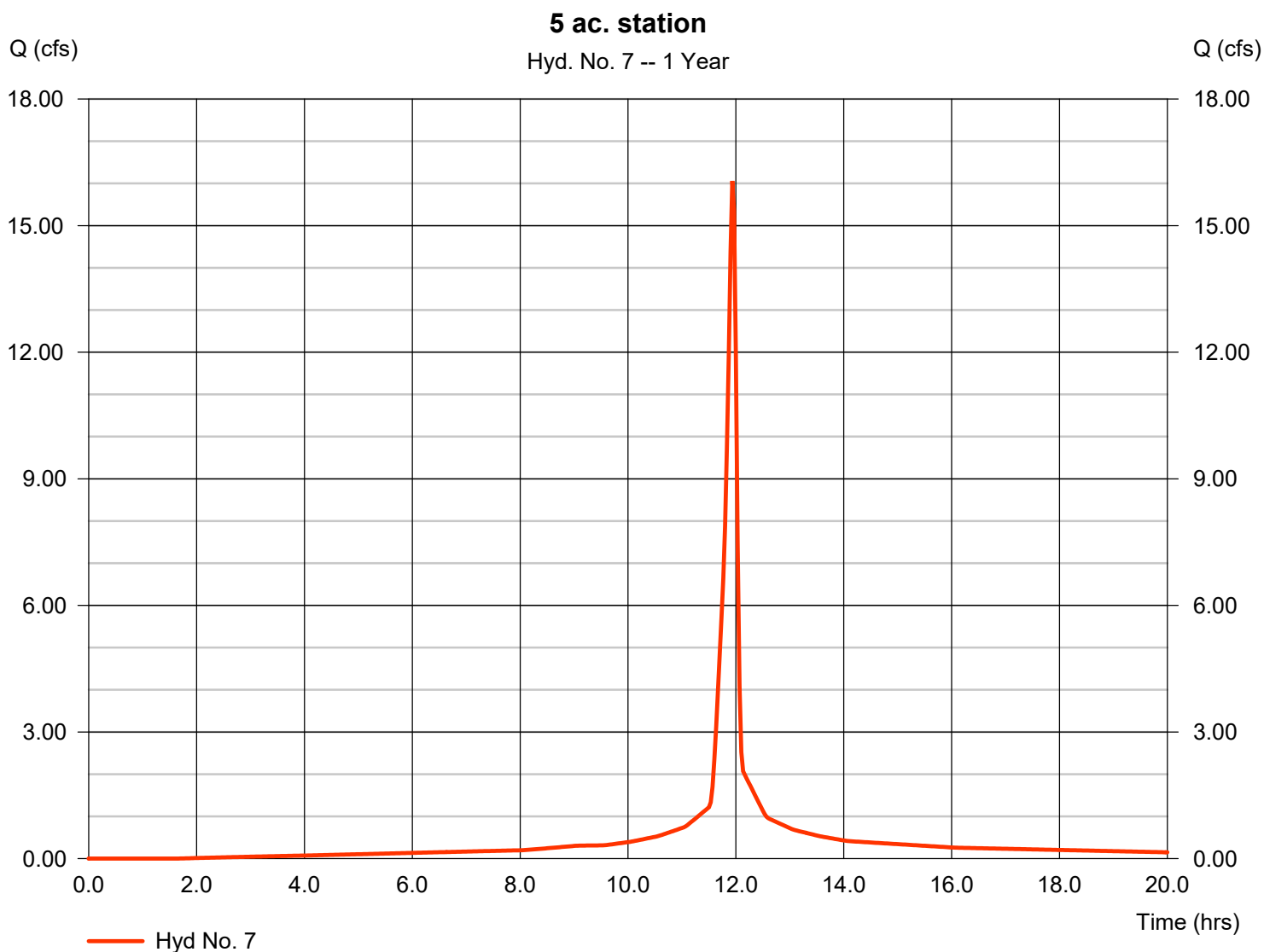
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 7

5 ac. station

Hydrograph type	= SCS Runoff	Peak discharge	= 16.06 cfs
Storm frequency	= 1 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 36,947 cuft
Drainage area	= 5.000 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 2.40 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

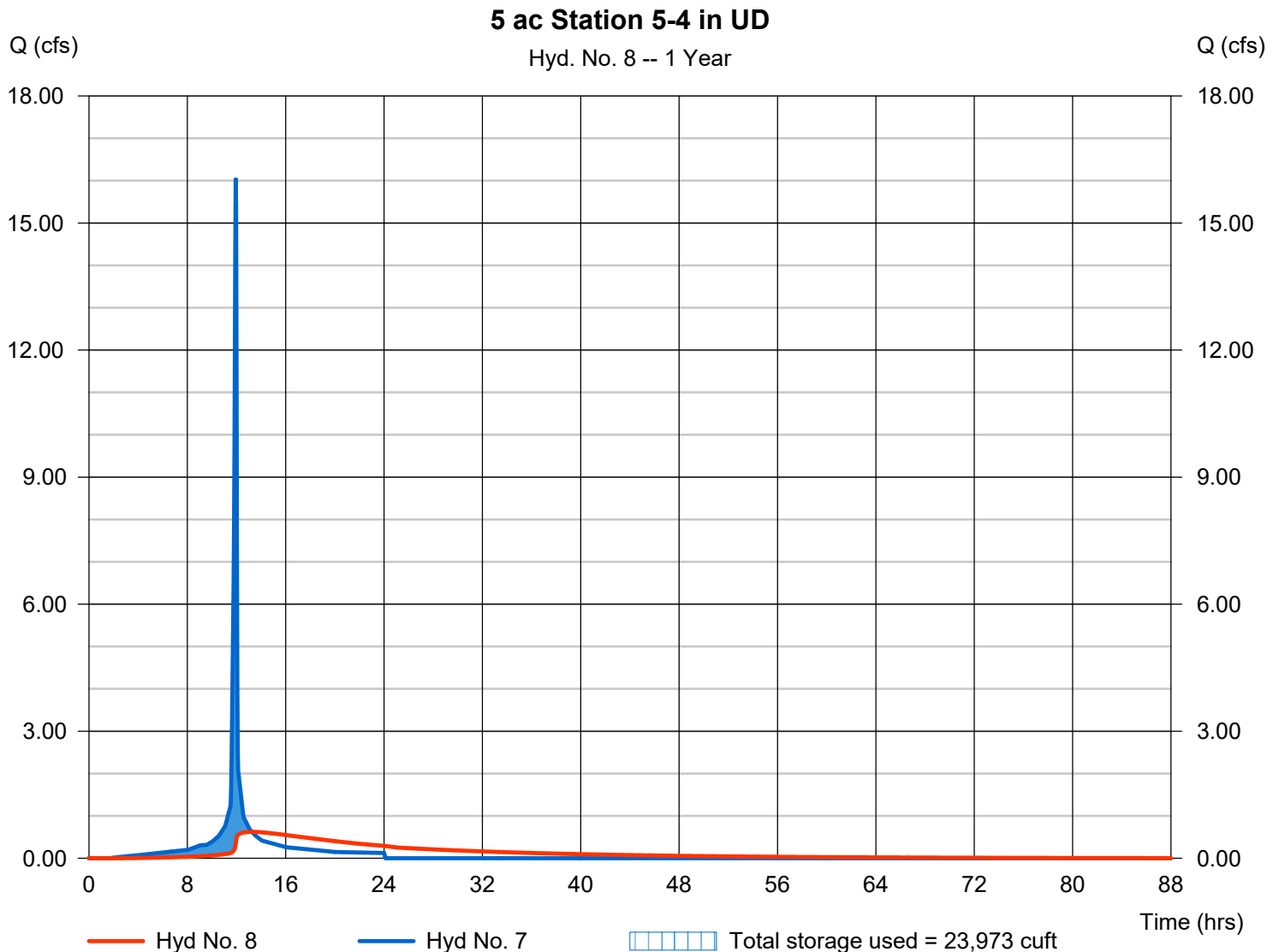
Wednesday, 12 / 18 / 2013

Hyd. No. 8

5 ac Station 5-4 in UD

Hydrograph type	= Reservoir	Peak discharge	= 0.623 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.27 hrs
Time interval	= 2 min	Hyd. volume	= 36,805 cuft
Inflow hyd. No.	= 7 - 5 ac. station	Max. Elevation	= 100.26 ft
Reservoir name	= 5 ac. Station 5-4 in. UD	Max. Storage	= 23,973 cuft

Storage Indication method used.



Pond Report

10

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Pond No. 3 - 5 ac. Station 5-4 in. UD

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 100.00 ft. Voids = 42.80%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	217,800	0	0
1.50	101.50	217,800	139,828	139,828

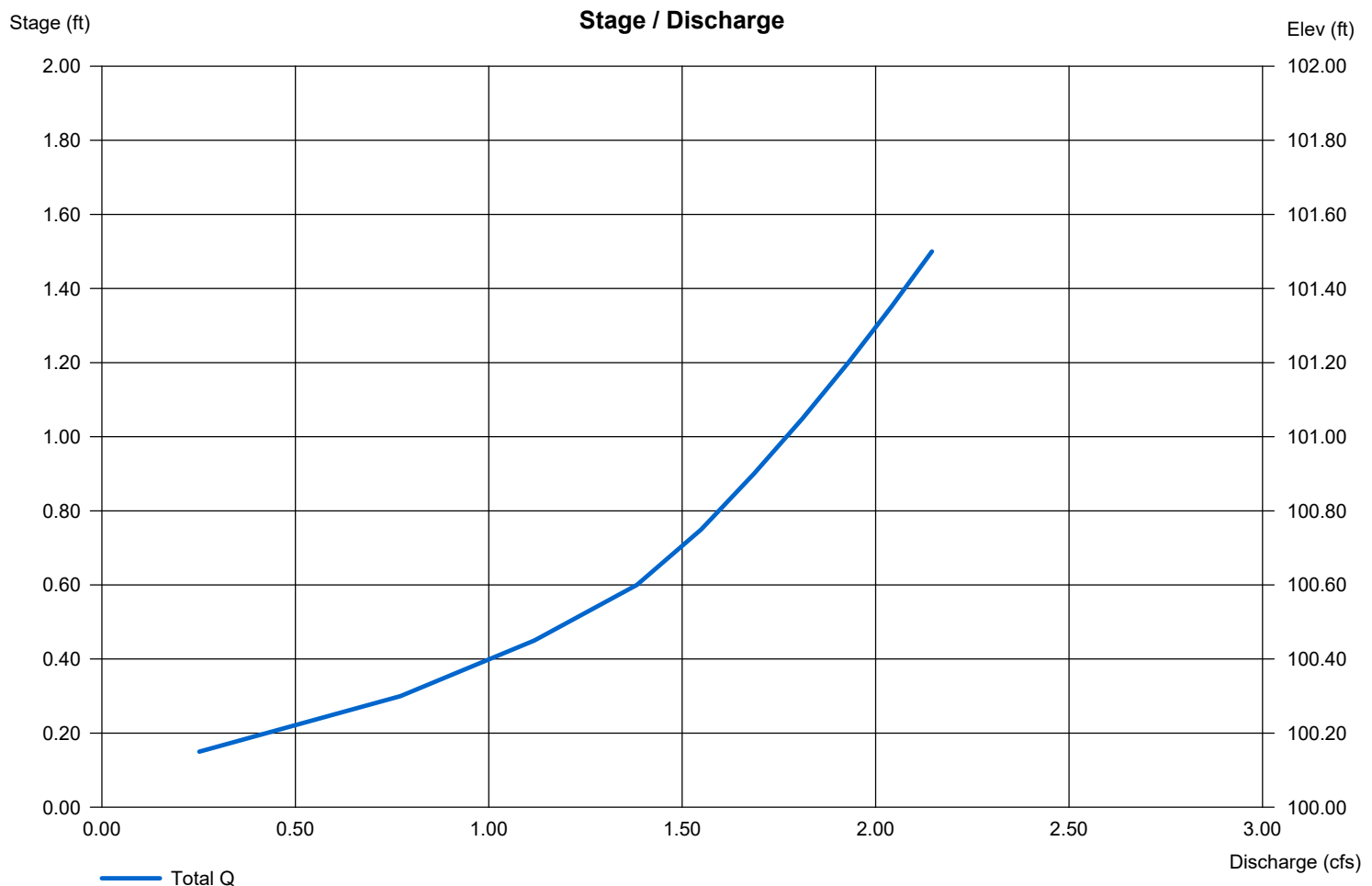
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	0.00	0.00	0.00
Span (in)	= 4.00	0.00	0.00	0.00
No. Barrels	= 5	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

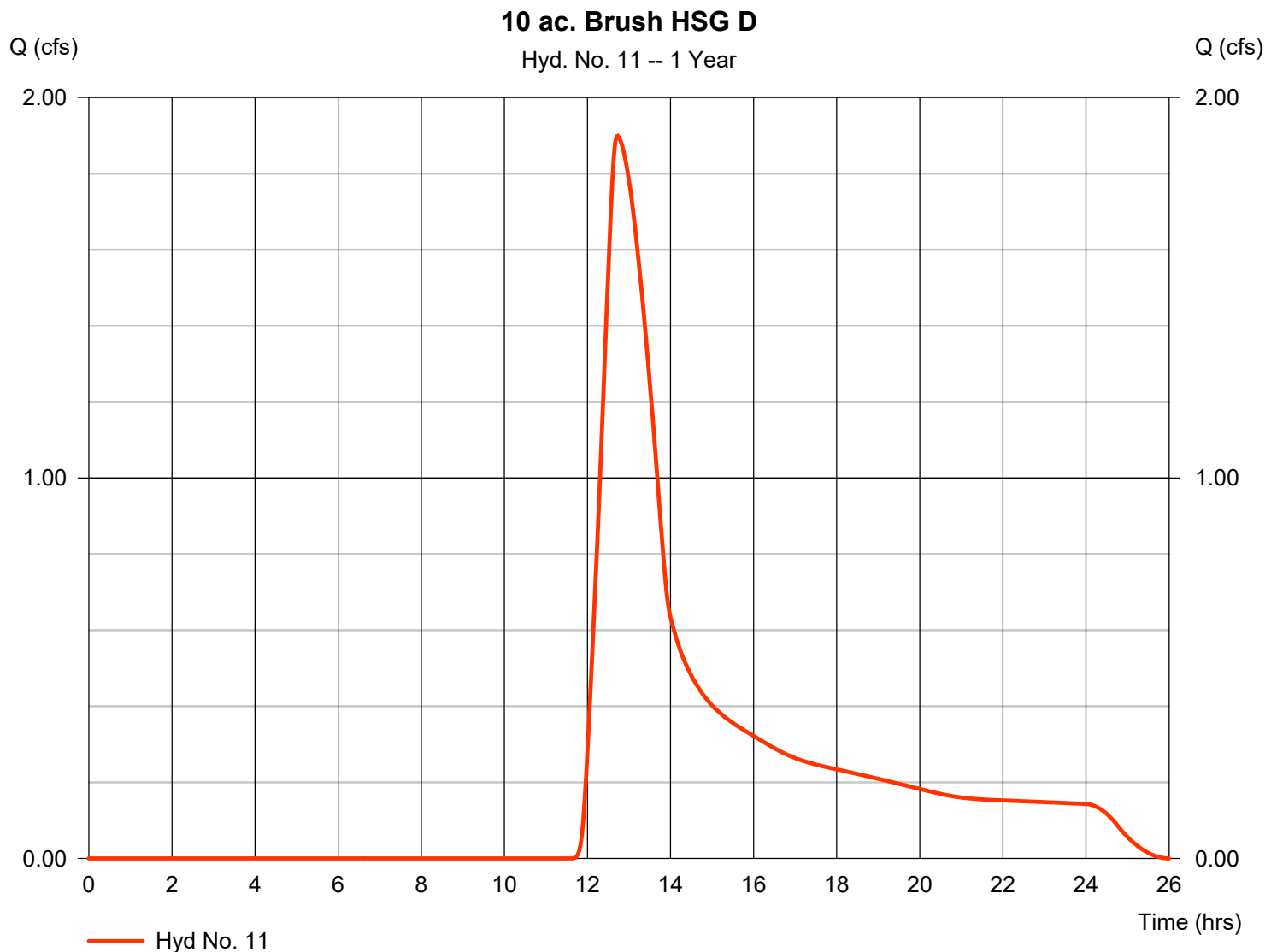
Wednesday, 12 / 18 / 2013

Hyd. No. 11

10 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 10.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 1.899 cfs
 Time to peak = 12.73 hrs
 Hyd. volume = 18,570 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 75.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

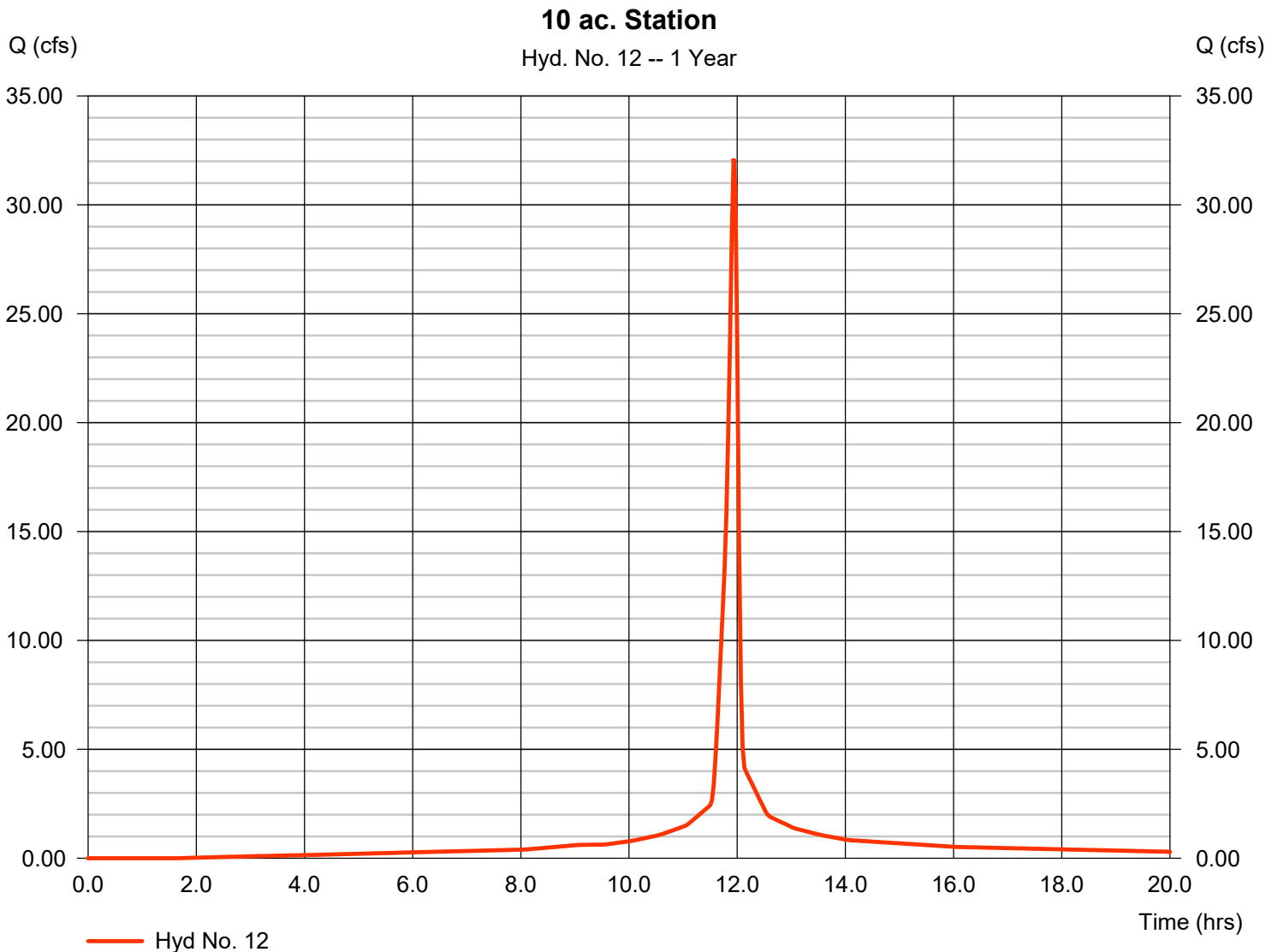
Wednesday, 12 / 18 / 2013

Hyd. No. 12

10 ac. Station

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 10.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 32.12 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 73,894 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

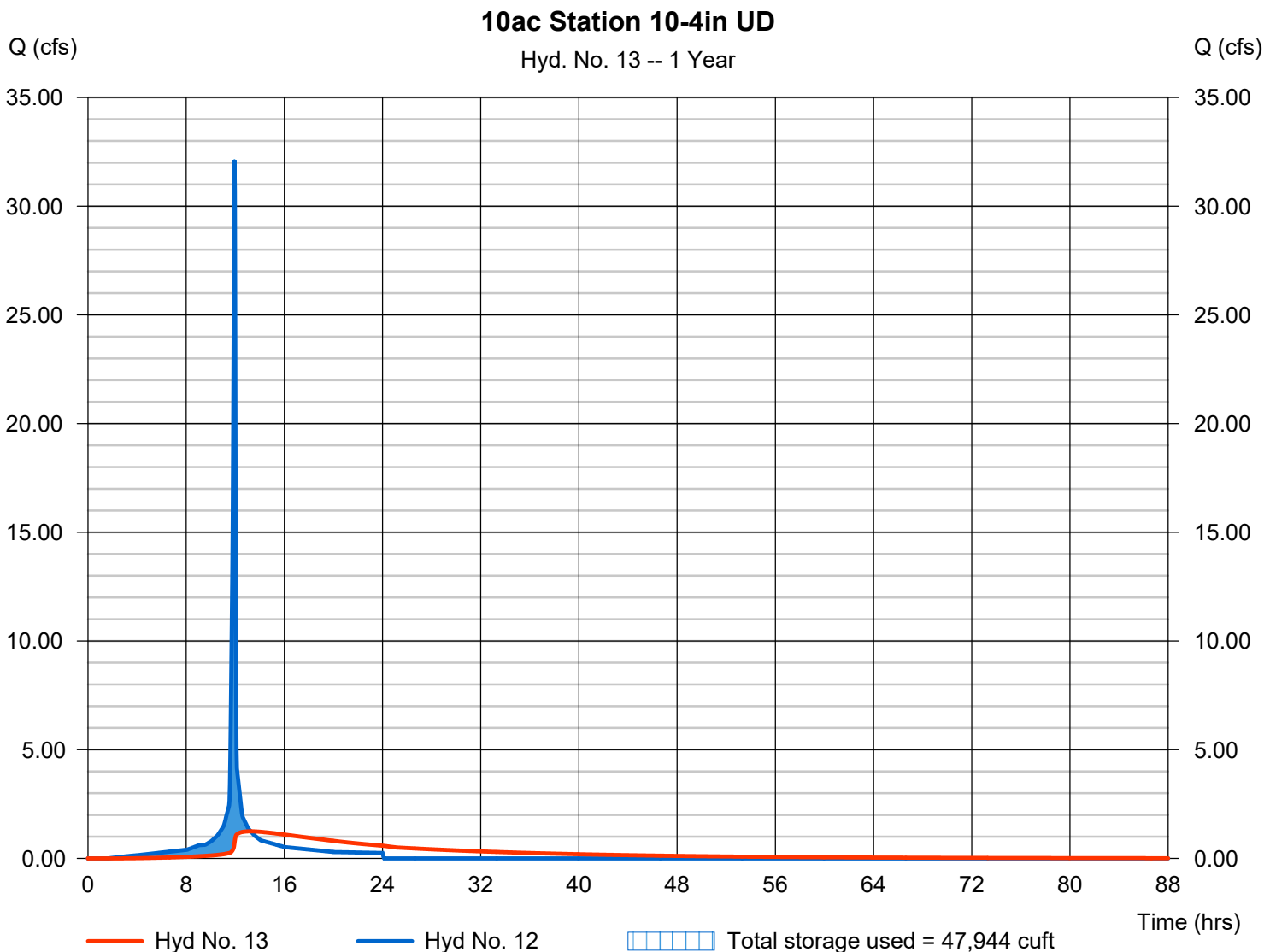
Wednesday, 12 / 18 / 2013

Hyd. No. 13

10ac Station 10-4in UD

Hydrograph type	= Reservoir	Peak discharge	= 1.246 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.27 hrs
Time interval	= 2 min	Hyd. volume	= 73,610 cuft
Inflow hyd. No.	= 12 - 10 ac. Station	Max. Elevation	= 100.26 ft
Reservoir name	= 10 ac. Station 10 in. UD	Max. Storage	= 47,944 cuft

Storage Indication method used.



Pond Report

14

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Pond No. 5 - 10 ac. Station 10 in. UD

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 100.00 ft. Voids = 42.80%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	435,600	0	0
1.50	101.50	435,600	279,655	279,655

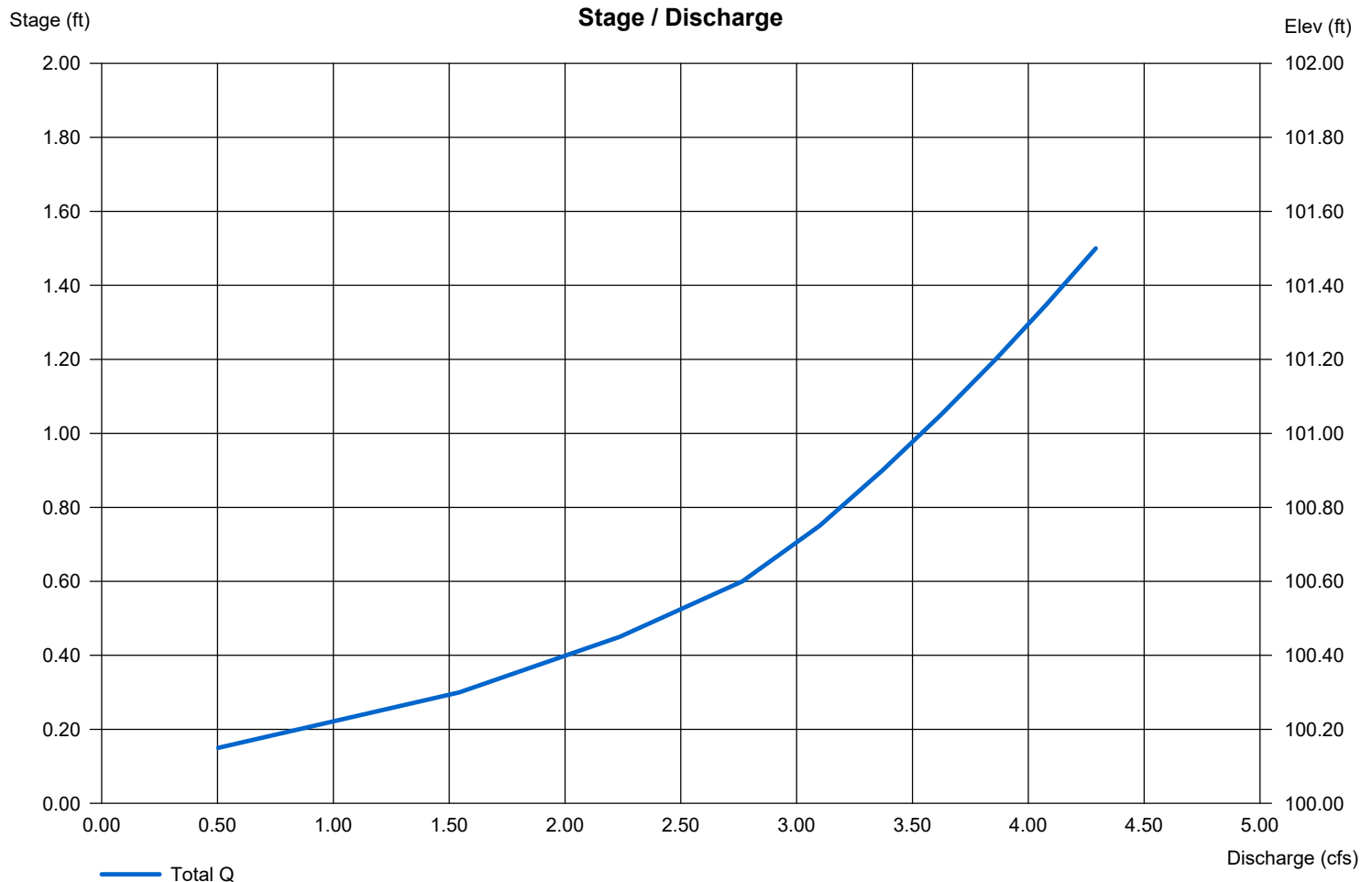
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	0.00	0.00	0.00
Span (in)	= 4.00	0.00	0.00	0.00
No. Barrels	= 10	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 16

20 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 20.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 3.370 cfs
 Time to peak = 12.87 hrs
 Hyd. volume = 37,344 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 90.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 17

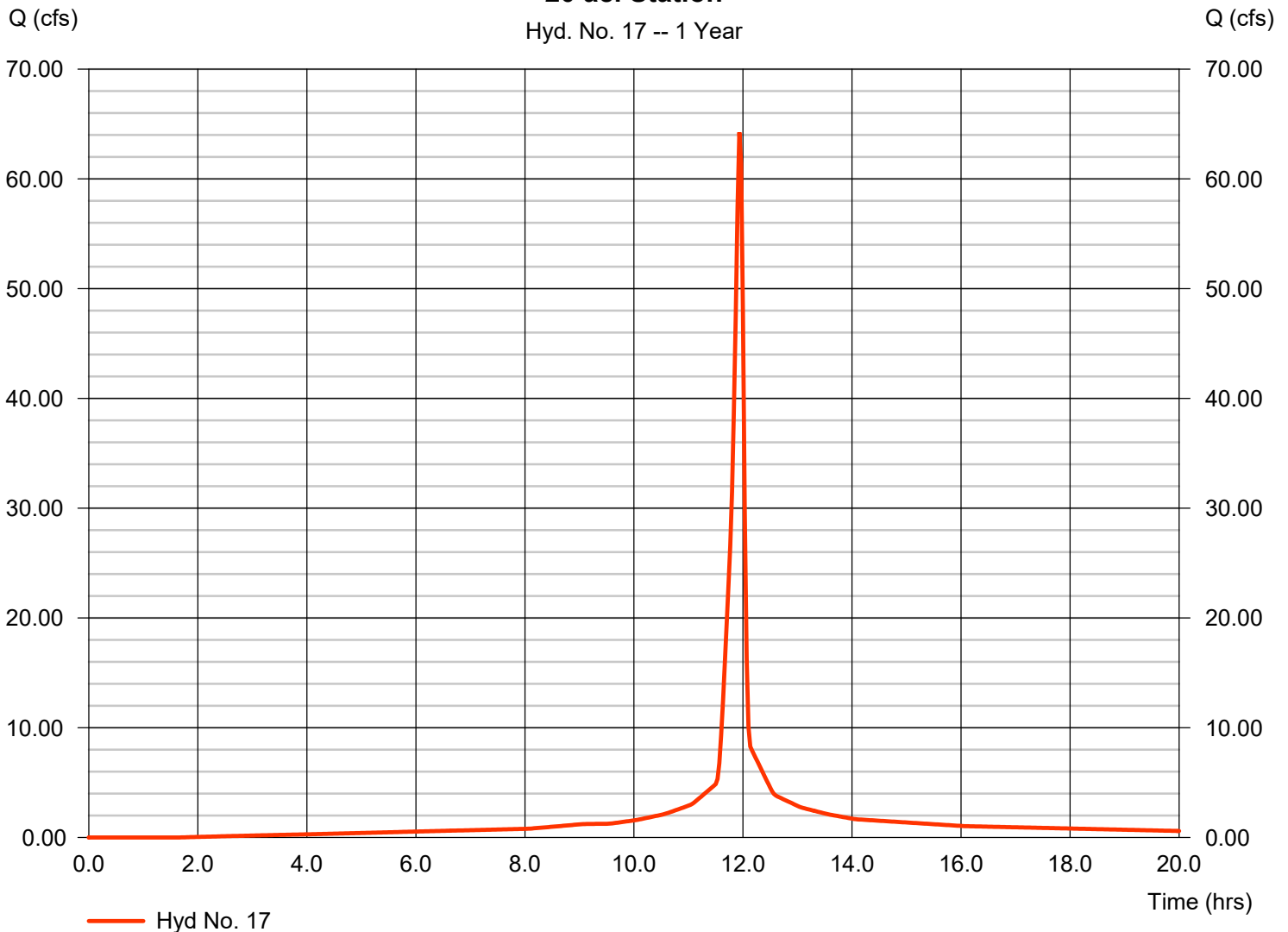
20 ac. Station

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 20.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 64.23 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 147,788 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484

20 ac. Station

Hyd. No. 17 -- 1 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

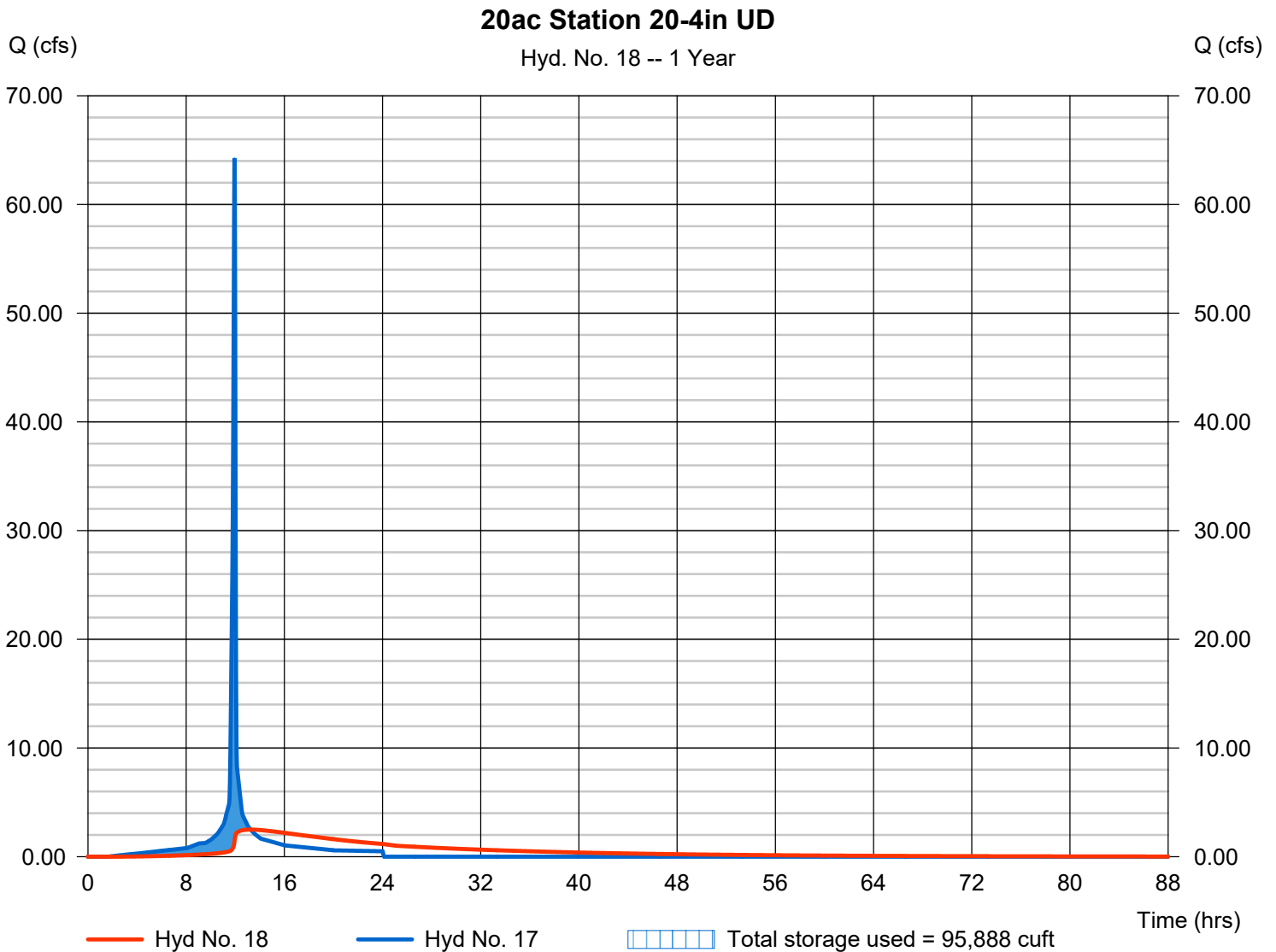
Wednesday, 12 / 18 / 2013

Hyd. No. 18

20ac Station 20-4in UD

Hydrograph type	= Reservoir	Peak discharge	= 2.492 cfs
Storm frequency	= 1 yrs	Time to peak	= 13.27 hrs
Time interval	= 2 min	Hyd. volume	= 147,219 cuft
Inflow hyd. No.	= 17 - 20 ac. Station	Max. Elevation	= 100.26 ft
Reservoir name	= 20 ac. Station 20-4 in. UD	Max. Storage	= 95,888 cuft

Storage Indication method used.



Pond Report

18

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Pond No. 7 - 20 ac. Station 20-4 in. UD

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 100.00 ft. Voids = 42.80%

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	871,200	0	0
1.50	101.50	871,200	559,310	559,310

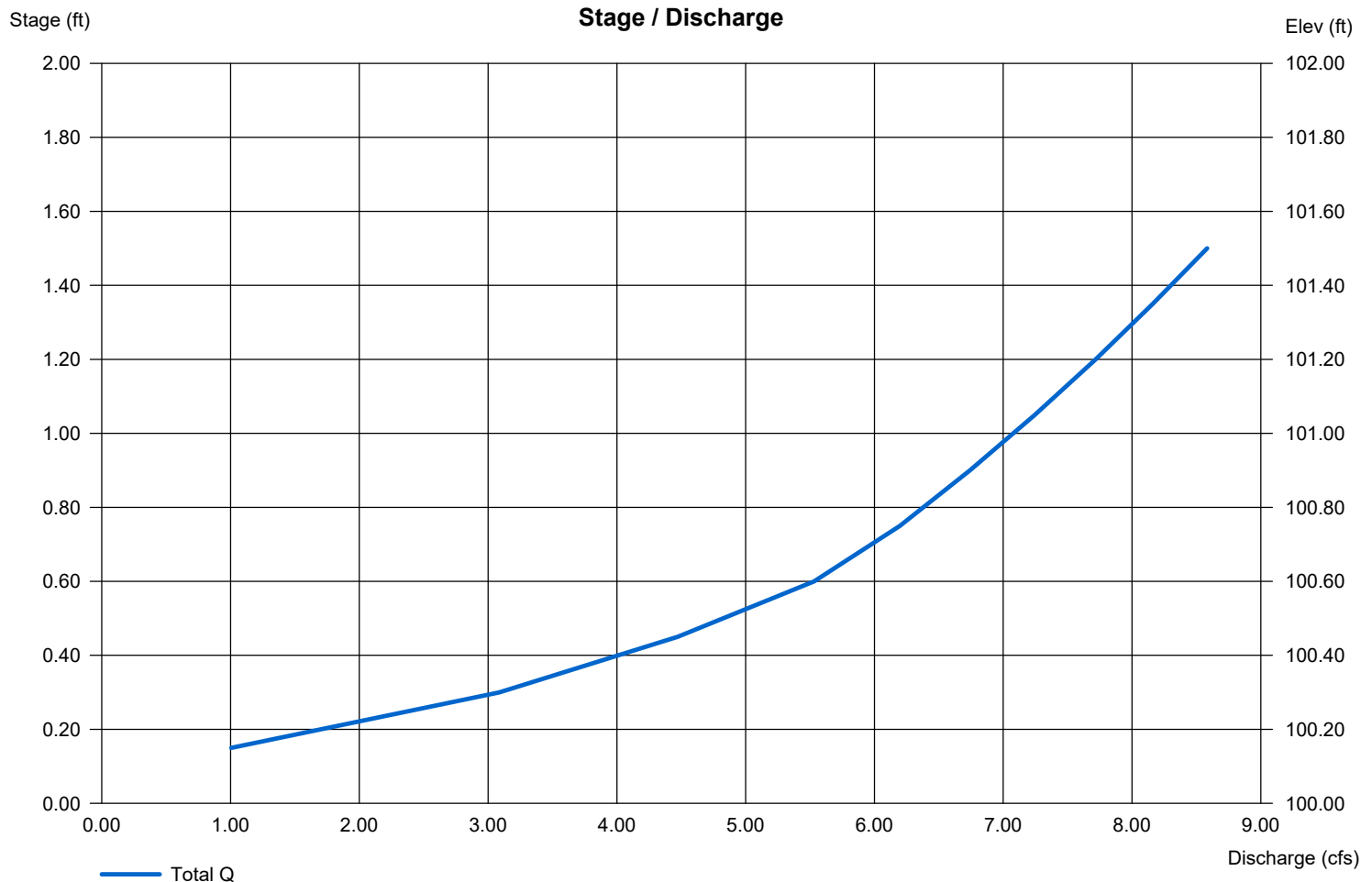
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 4.00	0.00	0.00	0.00
Span (in)	= 4.00	0.00	0.00	0.00
No. Barrels	= 20	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 20.00	0.00	0.00	0.00
Slope (%)	= 2.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No
Exfil.(in/hr)	= 0.000 (by Wet area)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

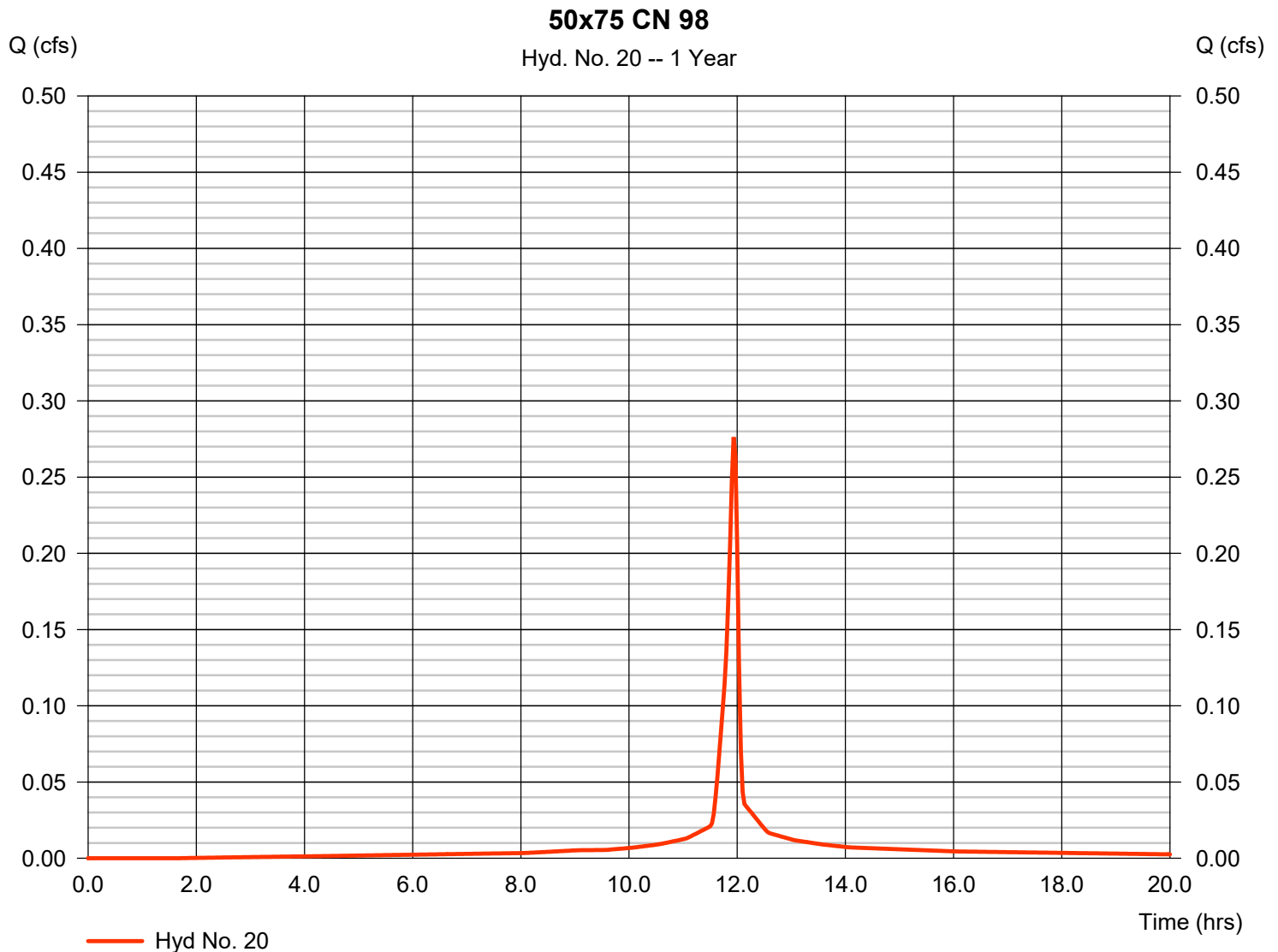
Wednesday, 12 / 18 / 2013

Hyd. No. 20

50x75 CN 98

Hydrograph type = SCS Runoff
 Storm frequency = 1 yrs
 Time interval = 2 min
 Drainage area = 0.086 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 2.40 in
 Storm duration = 24 hrs

Peak discharge = 0.276 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 635 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	2.638	2	742	14,158	-----	-----	-----	1 ac. Brush HSG D
2	SCS Runoff	9.538	2	716	23,008	-----	-----	-----	1 ac. Station
3	Reservoir	0.320	2	810	22,946	2	100.81	15,042	1 ac. Station 4 in. UD
6	SCS Runoff	11.06	2	750	71,425	-----	-----	-----	5 ac. Brush HSG D
7	SCS Runoff	47.69	2	716	115,041	-----	-----	-----	5 ac. station
8	Reservoir	1.601	2	810	114,729	7	100.81	75,210	5 ac Station 5-4 in UD
11	SCS Runoff	18.46	2	760	142,074	-----	-----	-----	10 ac. Brush HSG D
12	SCS Runoff	95.38	2	716	230,083	-----	-----	-----	10 ac. Station
13	Reservoir	3.202	2	810	229,458	12	100.81	150,420	10ac Station 10-4in UD
16	SCS Runoff	32.78	2	768	285,701	-----	-----	-----	20 ac. Brush HSG D
17	SCS Runoff	190.75	2	716	460,165	-----	-----	-----	20 ac. Station
18	Reservoir	6.403	2	810	458,916	17	100.81	300,839	20ac Station 20-4in UD
20	SCS Runoff	0.820	2	716	1,979	-----	-----	-----	50x75 CN 98
12073-NG_Demo_Areas.gpw					Return Period: 100 Year			Wednesday, 12 / 18 / 2013	

Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

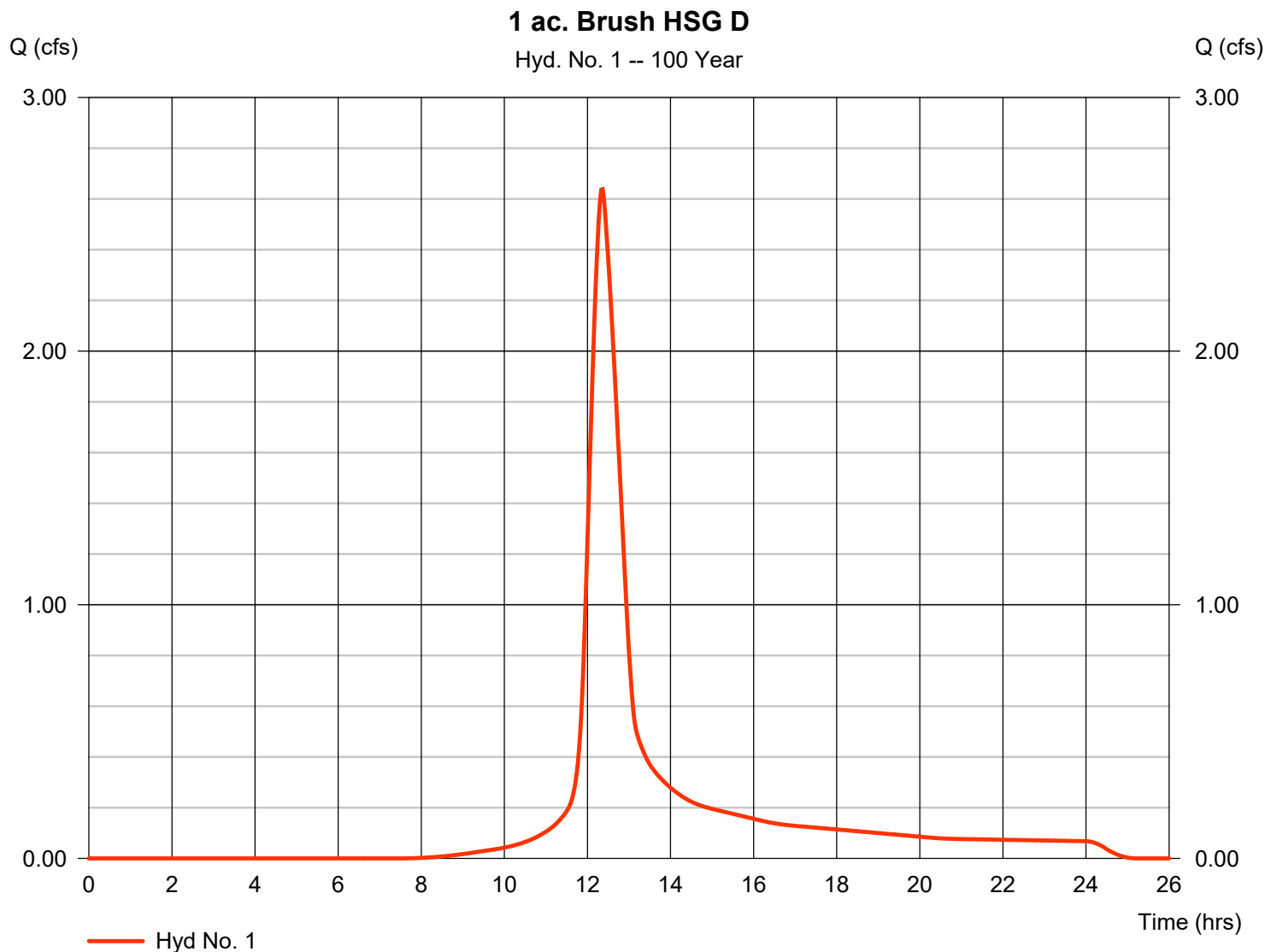
Wednesday, 12 / 18 / 2013

Hyd. No. 1

1 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 1.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 2.638 cfs
 Time to peak = 12.37 hrs
 Hyd. volume = 14,158 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 45.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

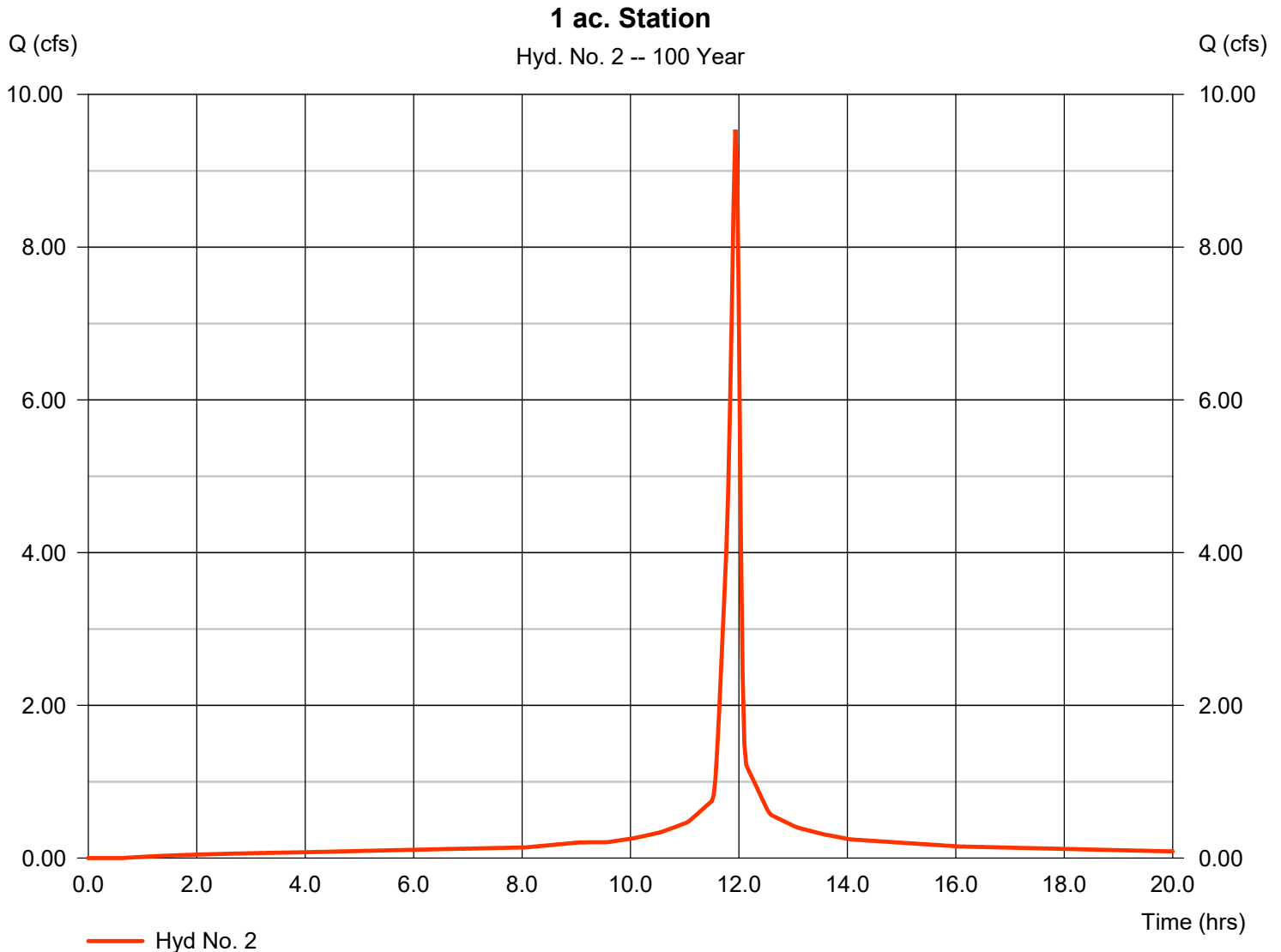
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 2

1 ac. Station

Hydrograph type	= SCS Runoff	Peak discharge	= 9.538 cfs
Storm frequency	= 100 yrs	Time to peak	= 11.93 hrs
Time interval	= 2 min	Hyd. volume	= 23,008 cuft
Drainage area	= 1.000 ac	Curve number	= 98
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 7.00 in	Distribution	= Type II
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

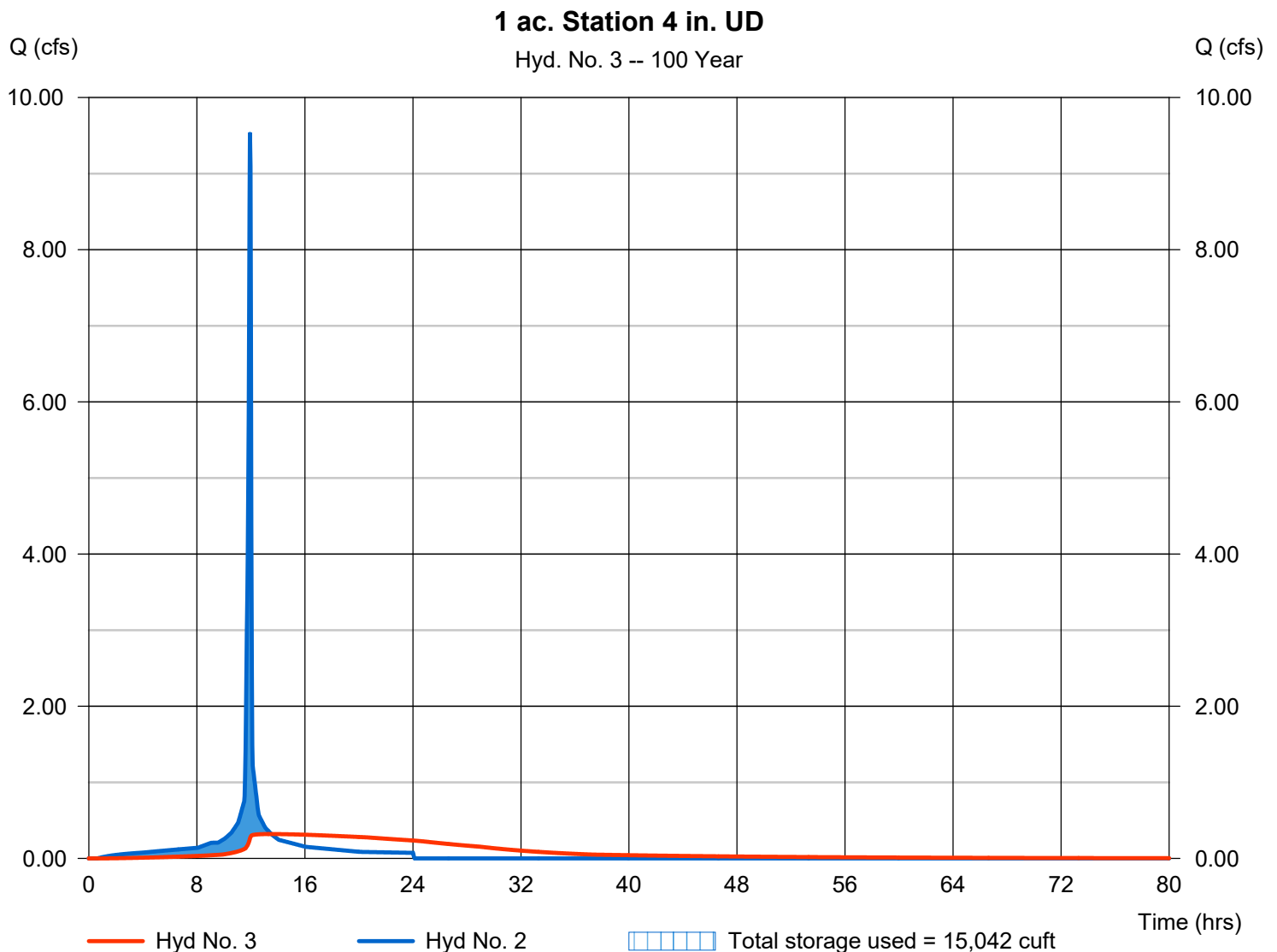
Wednesday, 12 / 18 / 2013

Hyd. No. 3

1 ac. Station 4 in. UD

Hydrograph type	= Reservoir	Peak discharge	= 0.320 cfs
Storm frequency	= 100 yrs	Time to peak	= 13.50 hrs
Time interval	= 2 min	Hyd. volume	= 22,946 cuft
Inflow hyd. No.	= 2 - 1 ac. Station	Max. Elevation	= 100.81 ft
Reservoir name	= 1 ac. Station 4 in. UD	Max. Storage	= 15,042 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

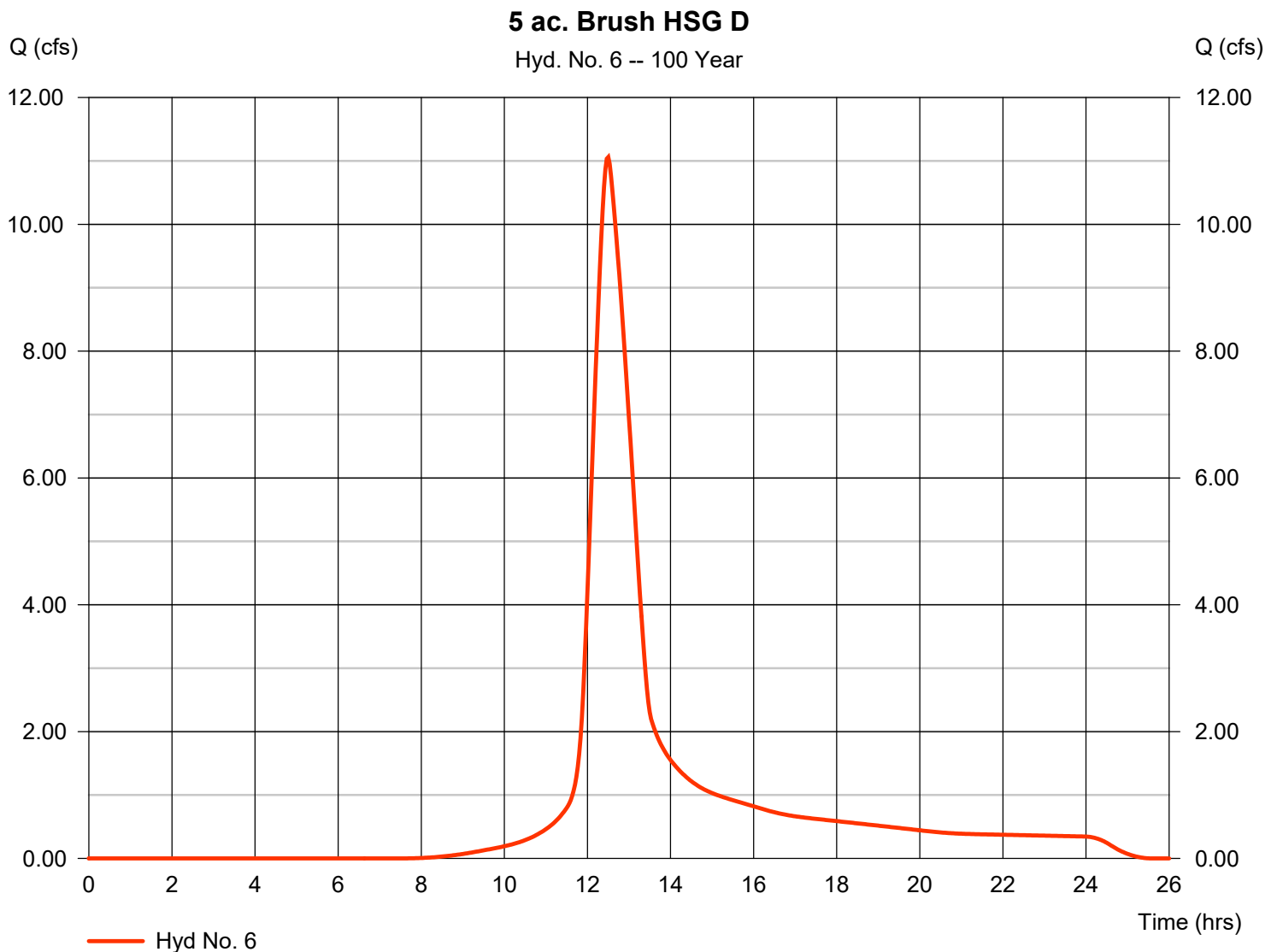
Wednesday, 12 / 18 / 2013

Hyd. No. 6

5 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 5.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 11.06 cfs
 Time to peak = 12.50 hrs
 Hyd. volume = 71,425 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 60.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 7

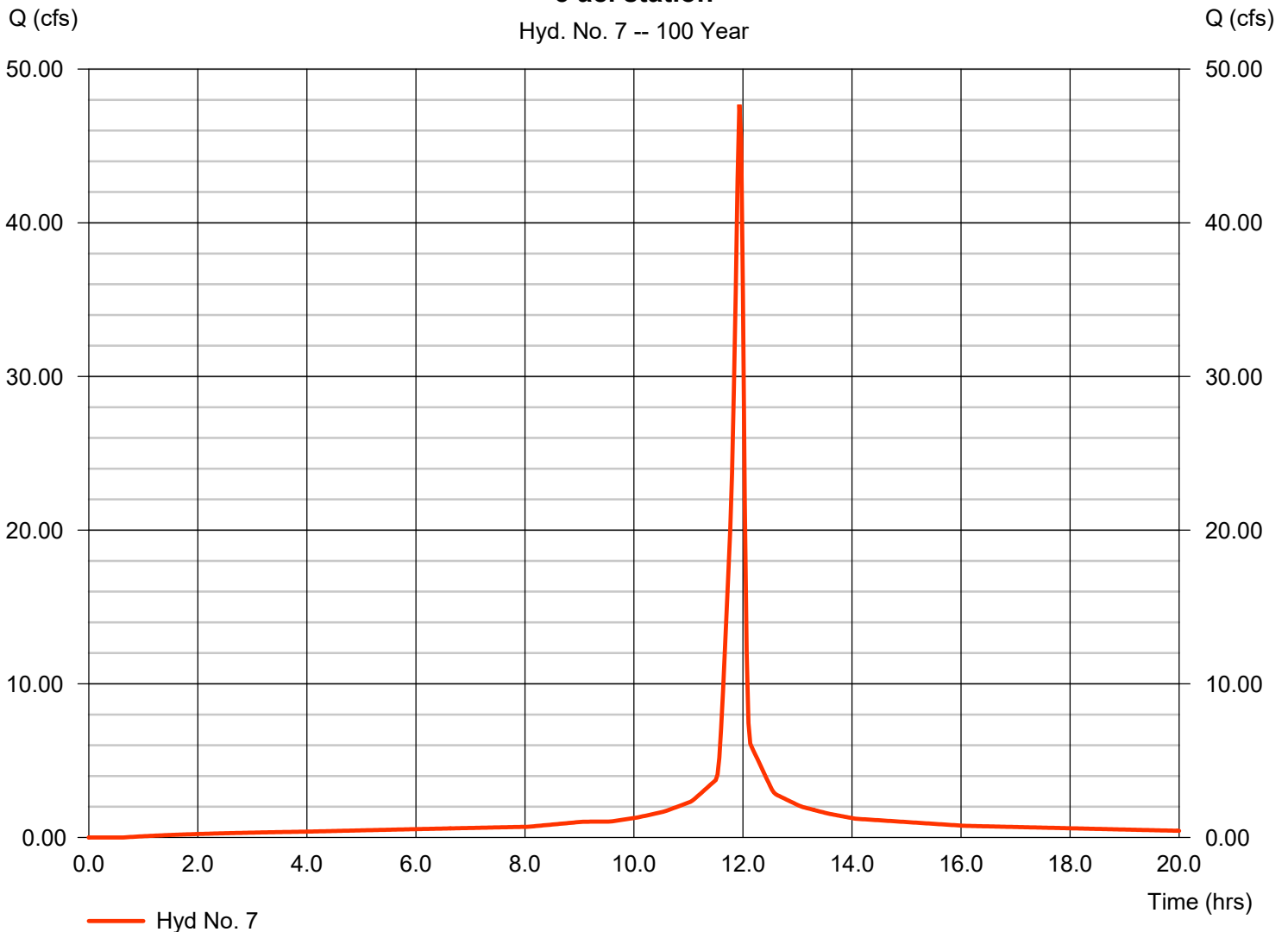
5 ac. station

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 5.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 47.69 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 115,041 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484

5 ac. station

Hyd. No. 7 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

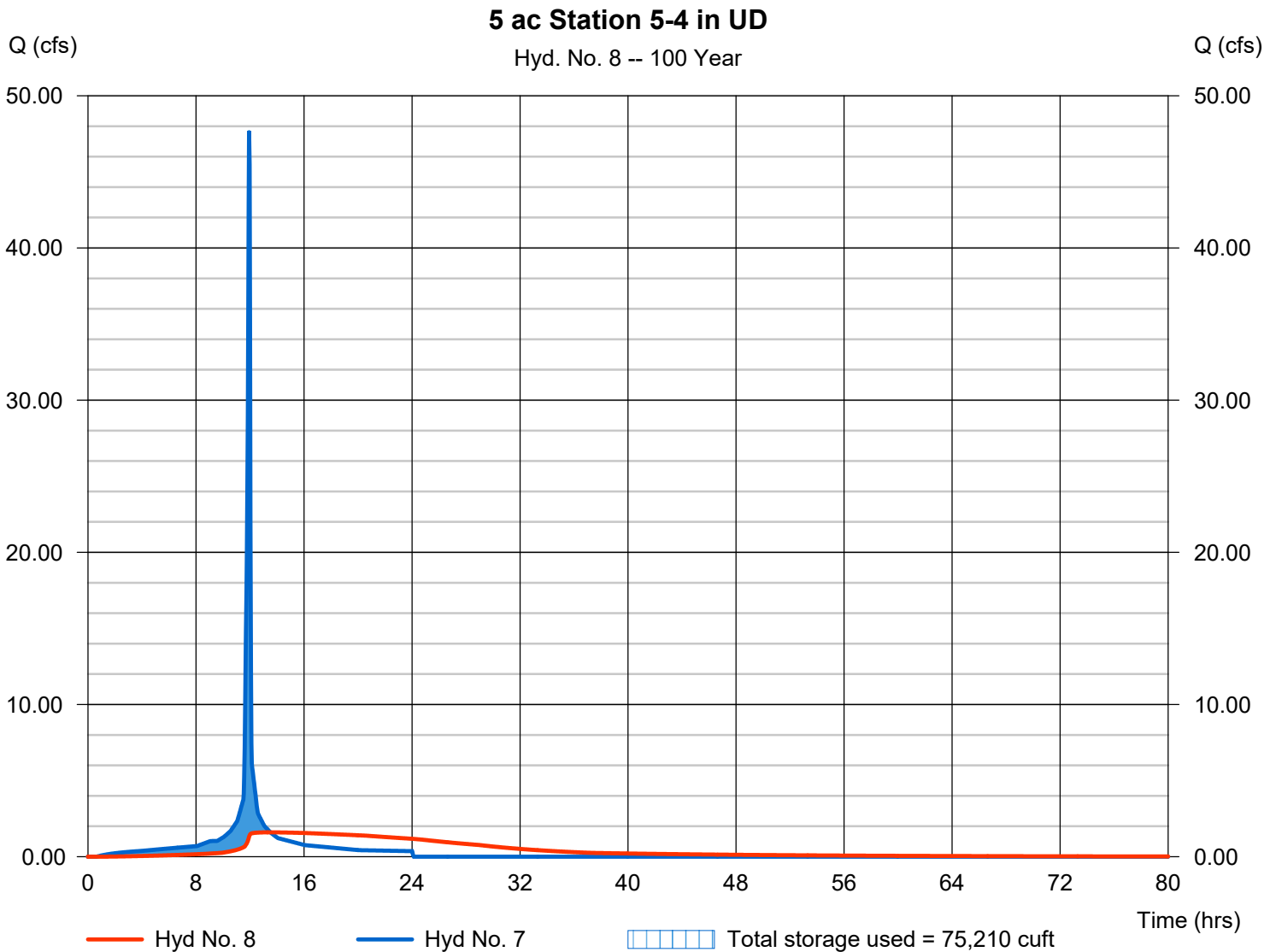
Wednesday, 12 / 18 / 2013

Hyd. No. 8

5 ac Station 5-4 in UD

Hydrograph type	= Reservoir	Peak discharge	= 1.601 cfs
Storm frequency	= 100 yrs	Time to peak	= 13.50 hrs
Time interval	= 2 min	Hyd. volume	= 114,729 cuft
Inflow hyd. No.	= 7 - 5 ac. station	Max. Elevation	= 100.81 ft
Reservoir name	= 5 ac. Station 5-4 in. UD	Max. Storage	= 75,210 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 11

10 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 10.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 18.46 cfs
 Time to peak = 12.67 hrs
 Hyd. volume = 142,074 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 75.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

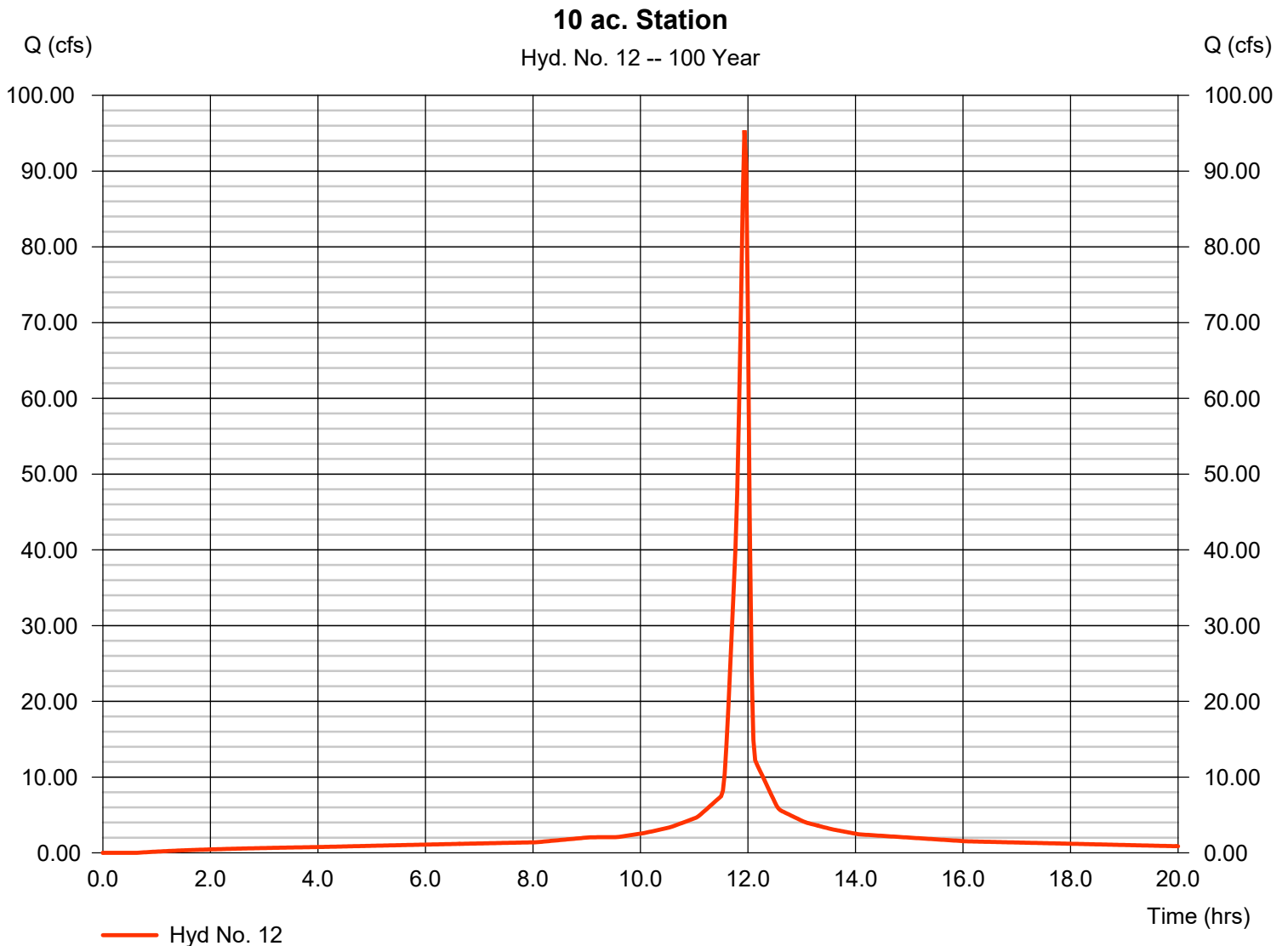
Wednesday, 12 / 18 / 2013

Hyd. No. 12

10 ac. Station

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 10.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 95.38 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 230,083 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

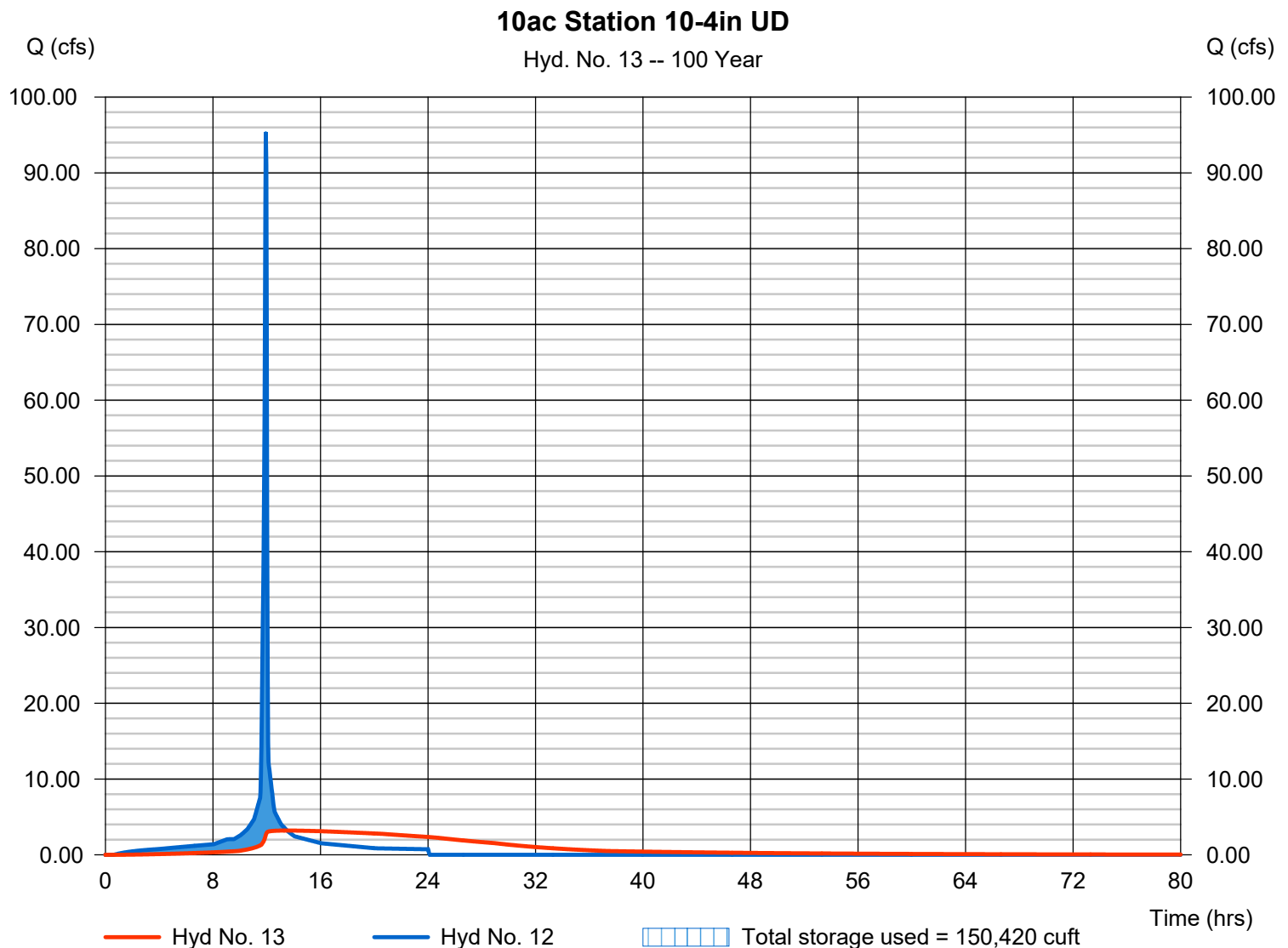
Wednesday, 12 / 18 / 2013

Hyd. No. 13

10ac Station 10-4in UD

Hydrograph type	= Reservoir	Peak discharge	= 3.202 cfs
Storm frequency	= 100 yrs	Time to peak	= 13.50 hrs
Time interval	= 2 min	Hyd. volume	= 229,458 cuft
Inflow hyd. No.	= 12 - 10 ac. Station	Max. Elevation	= 100.81 ft
Reservoir name	= 10 ac. Station 10 in. UD	Max. Storage	= 150,420 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 16

20 ac. Brush HSG D

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 20.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 32.78 cfs
 Time to peak = 12.80 hrs
 Hyd. volume = 285,701 cuft
 Curve number = 73
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 90.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

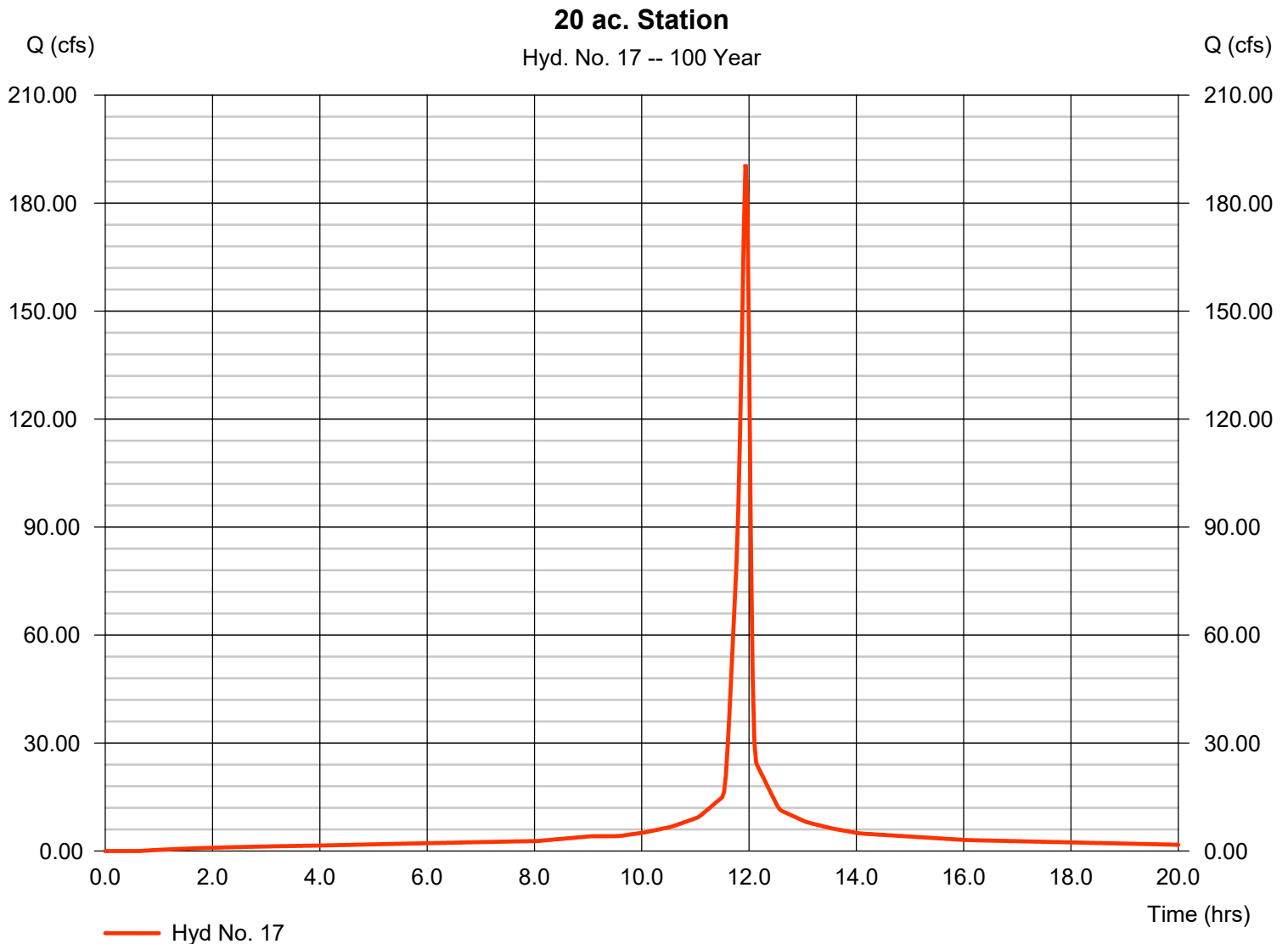
Wednesday, 12 / 18 / 2013

Hyd. No. 17

20 ac. Station

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 20.000 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 190.75 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 460,165 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

Wednesday, 12 / 18 / 2013

Hyd. No. 18

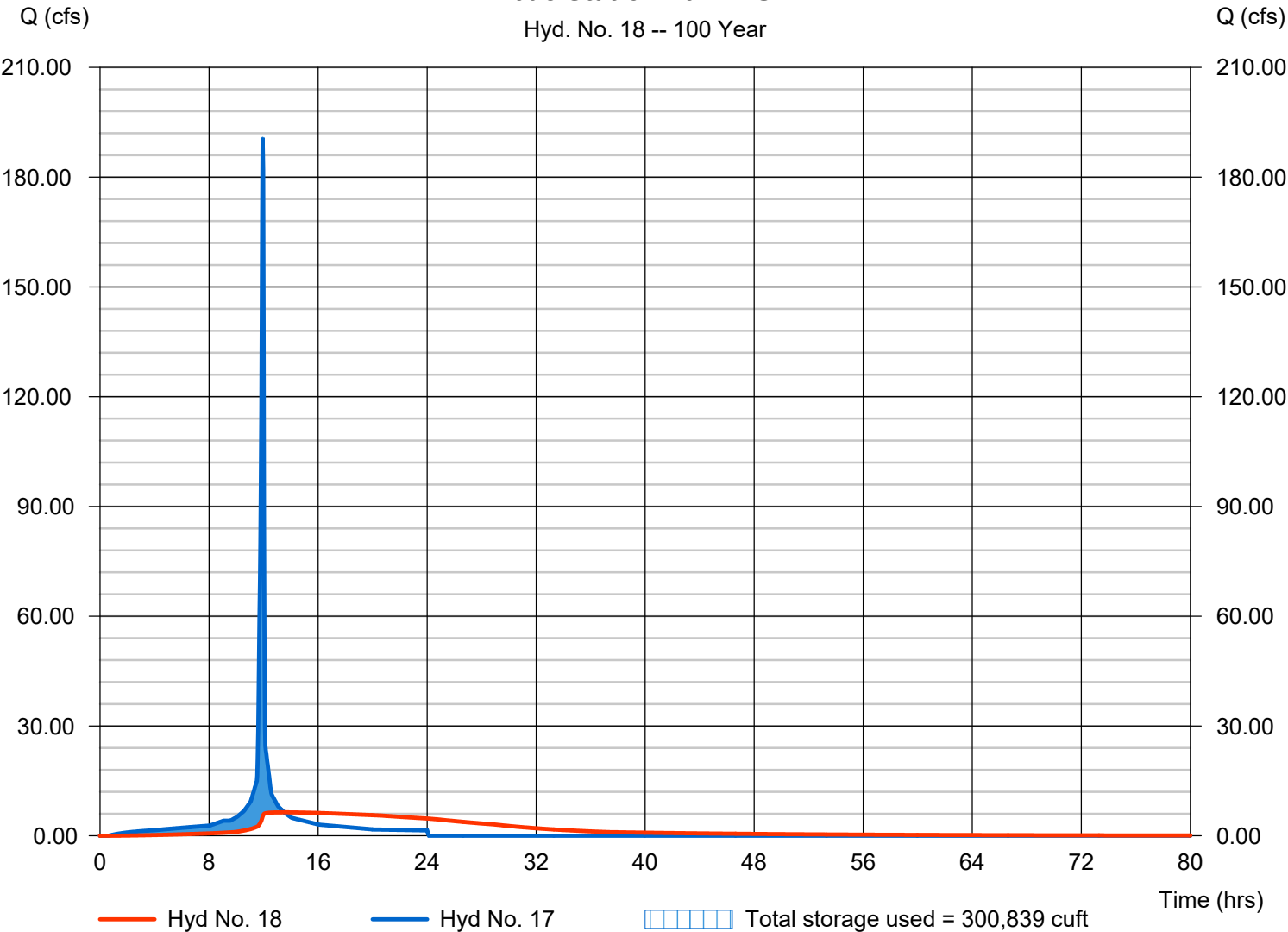
20ac Station 20-4in UD

Hydrograph type	= Reservoir	Peak discharge	= 6.403 cfs
Storm frequency	= 100 yrs	Time to peak	= 13.50 hrs
Time interval	= 2 min	Hyd. volume	= 458,916 cuft
Inflow hyd. No.	= 17 - 20 ac. Station	Max. Elevation	= 100.81 ft
Reservoir name	= 20 ac. Station 20-4 in. UD	Max. Storage	= 300,839 cuft

Storage Indication method used.

20ac Station 20-4in UD

Hyd. No. 18 -- 100 Year



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2013 by Autodesk, Inc. v10

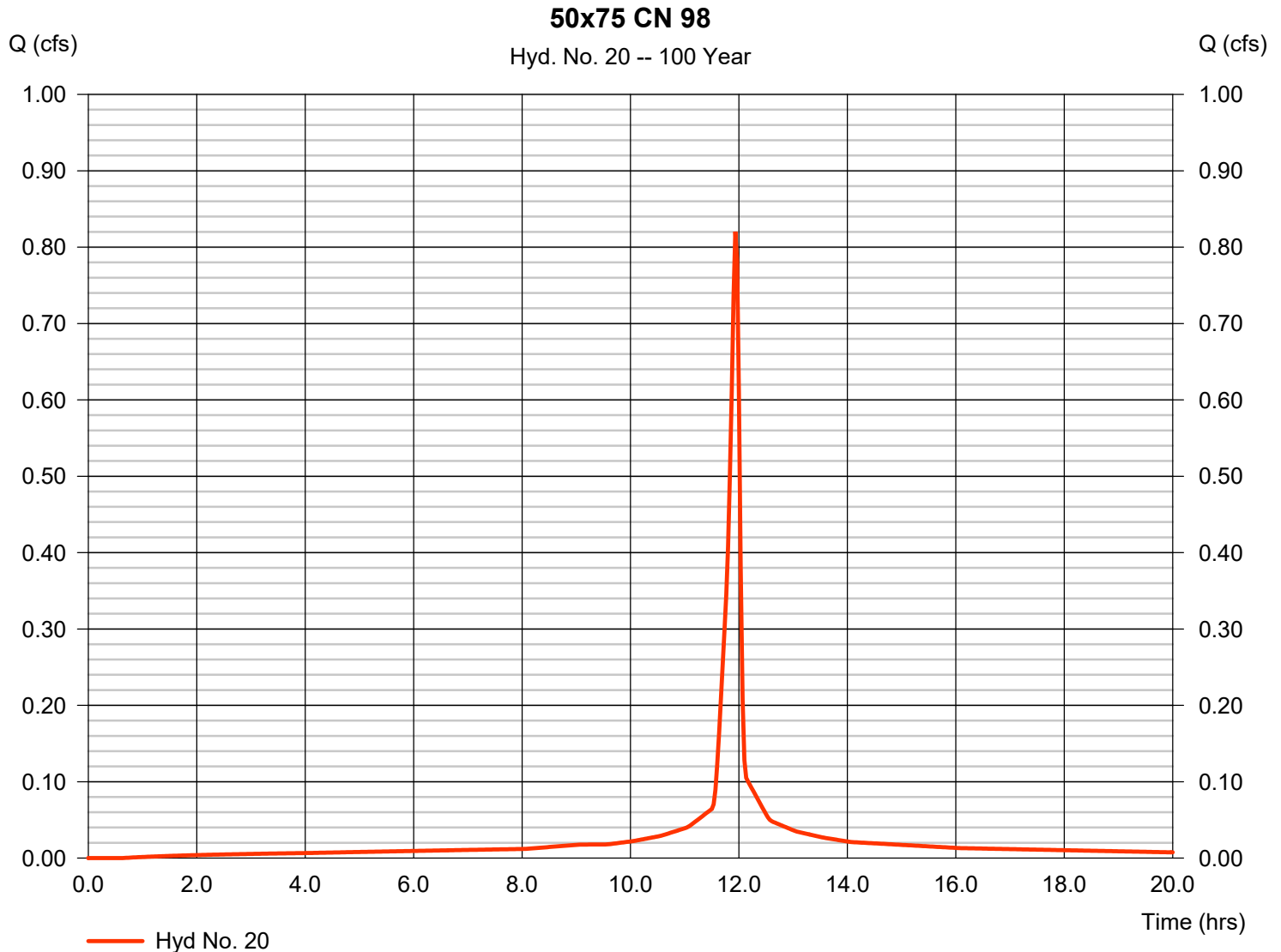
Wednesday, 12 / 18 / 2013

Hyd. No. 20

50x75 CN 98

Hydrograph type = SCS Runoff
 Storm frequency = 100 yrs
 Time interval = 2 min
 Drainage area = 0.086 ac
 Basin Slope = 0.0 %
 Tc method = User
 Total precip. = 7.00 in
 Storm duration = 24 hrs

Peak discharge = 0.820 cfs
 Time to peak = 11.93 hrs
 Hyd. volume = 1,979 cuft
 Curve number = 98
 Hydraulic length = 0 ft
 Time of conc. (Tc) = 6.00 min
 Distribution = Type II
 Shape factor = 484





Environmental Design & Research,
Landscape Architecture, Engineering & Environmental Services, D.P.C.
217 Montgomery Street, Suite 1000, Syracuse, New York 13202
P. 315.471.0688 • F. 315.471.1061 • www.edrcompanies.com

5/1/2014

Revised 7/16/2015

National Grid Proposed Sections – Volume Storage Calculation

For all proposed sections, storage for the 100-Year Storm (7") is provided in the reservoir and filter courses

$$\begin{aligned} &7'' \text{ of rain of a } 1 \text{ sq-ft area} \\ &= (7''/12'')(1 \text{ sq-ft}) \\ &= 0.58 \text{ cu-ft} \end{aligned}$$

Per the 2/11/2013 Stormwater Management Research Report:
Porosity of the Reservoir Course – NYSDOT #2 Washed Stone = 0.485

Per the 9/27/2013 Sample Analysis by SUNY ESF (Revised Value)
Porosity of the Filter Course – NYSDOT 304.12 Type 2 Subbase = 0.335

$$\begin{aligned} &\text{Storage in } 10'' \text{ Reservoir Course for a } 1 \text{ sq-ft area} \\ &= (10''/12'')(1 \text{ sq-ft})(0.485) \\ &= 0.40 \text{ cu-ft} \end{aligned}$$

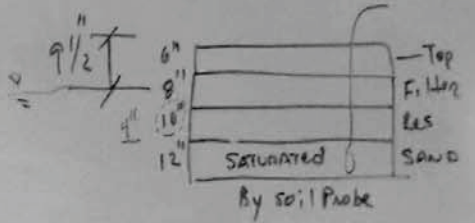
$$\begin{aligned} &\text{Storage in } 8'' \text{ Filter Course for a } 1 \text{ sq-ft area} \\ &= (8''/12'')(1 \text{ sq-ft})(0.335) \\ &= 0.22 \text{ cu-ft} \end{aligned}$$

$$\begin{aligned} &\text{Total Storage in the Reservoir and Filter Courses} \\ &= 0.40 \text{ cu-ft} + 0.22 \text{ cu-ft} \\ &= 0.62 \text{ cu-ft} \end{aligned}$$

100 year - 7 inch. For D Soil
 (60)%
 CN = 73
 4 inch - Runoff
 +/- 3 inch - Initial abstraction
 (40)%
 Plant/depression/evap/infil etc

Meadow
 Brush
 Grass
 Woods

Test



- ☒ Agreed X-Section w/ possibl
- ☐ Does not work.

# > 0.5 in/hr	= verbal approval
0.1 < # < 0.5 in/hr	Need to prove
# < 0.1 in/hr	Need to discuss

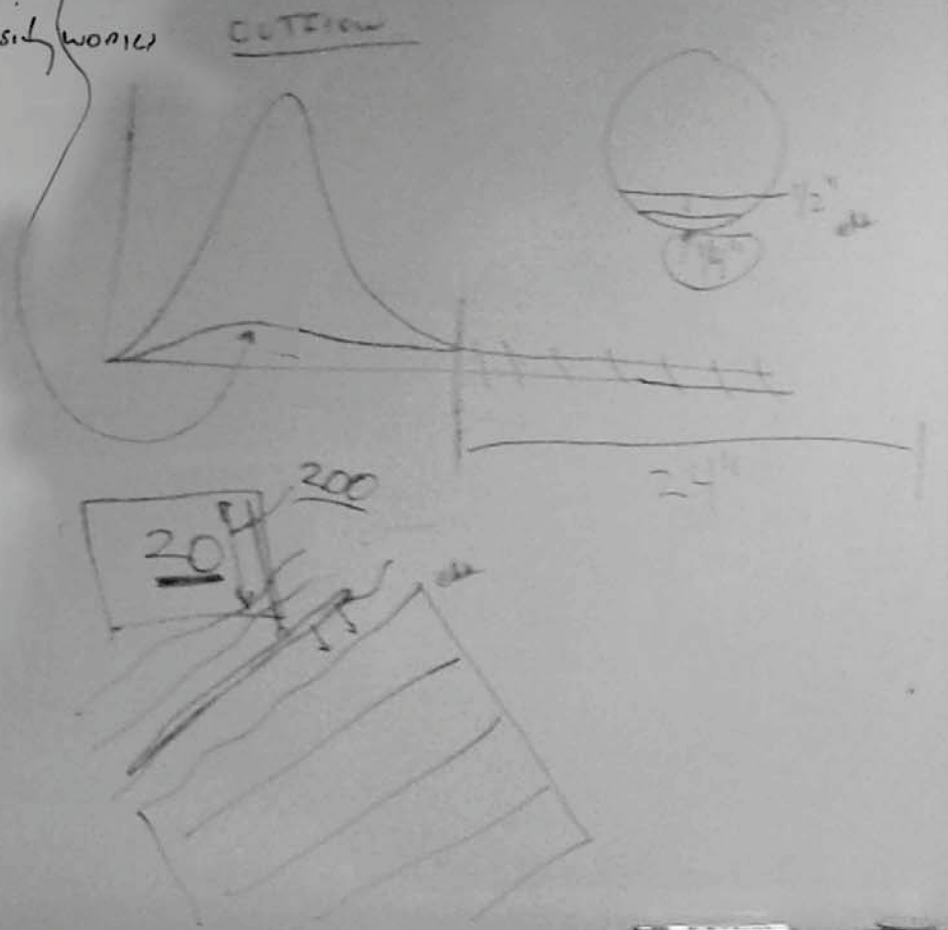
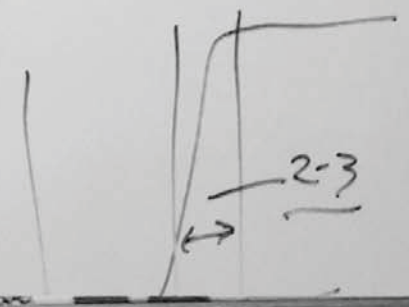
0.5 in/hr = 14 in/hr = 0.5 in/hr
 = 0.1 in/hr = 70 in/hr

Goal = $RR_v = 20\%$ greater for D soils.
MINIMUM

- Benefits - Less soil disturbance
 - More RR_v
 - STORES 7" OR 7-1" Storm - Back to back 7 times - ☒ Agreed pretty conservative
☐ Don't Agree

1 5 10 20 Acre
 $Q_1 \rightarrow 100$ ☒ good

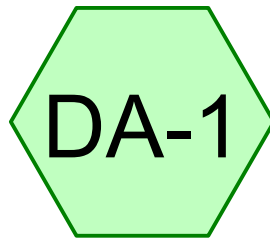
Proof 7" = Administered over 30 Minutes with Filter course compacted to 100% Proctor = worst ☒ Yes
☐ No



11/22/13 Photo of white board from discussion with Tom Dussing and Carolyn Bean of EDR and Ellen Hahn Kubek former of NYSDEC

APPENDIX D

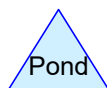
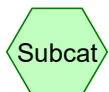
Existing Conditions HydroCAD Outputs



Existing DA-1



DP-1



Routing Diagram for Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc, Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-year	Type II 24-hr		Default	24.00	1	1.93	2
2	10-year	Type II 24-hr		Default	24.00	1	3.47	2
3	100-year	Type II 24-hr		Default	24.00	1	5.29	2

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Printed 9/14/2026

Page 3

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.669	74	>75% Grass cover, Good, HSG C (DA-1)
1.314	80	>75% Grass cover, Good, HSG D (DA-1)
0.006	98	Impervious (DA-1)
1.989	78	TOTAL AREA

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 4

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.669	HSG C	DA-1
1.314	HSG D	DA-1
0.006	Other	DA-1
1.989		TOTAL AREA

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 5

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.669	1.314	0.000	1.983	>75% Grass cover, Good	DA-1
0.000	0.000	0.000	0.000	0.006	0.006	Impervious	DA-1
0.000	0.000	0.669	1.314	0.006	1.989	TOTAL AREA	

Existing Condition Model 2 - Renaissance

Type II 24-hr 1-year Rainfall=1.93"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 6

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: Existing DA-1

Runoff Area=1.989 ac 0.30% Impervious Runoff Depth=0.45"

Tc=5.0 min CN=78 Runoff=1.57 cfs 0.074 af

Link DP-1: DP-1

Inflow=1.57 cfs 0.074 af

Primary=1.57 cfs 0.074 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.074 af Average Runoff Depth = 0.45"
99.70% Pervious = 1.983 ac 0.30% Impervious = 0.006 ac

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 7

Summary for Subcatchment DA-1: Existing DA-1

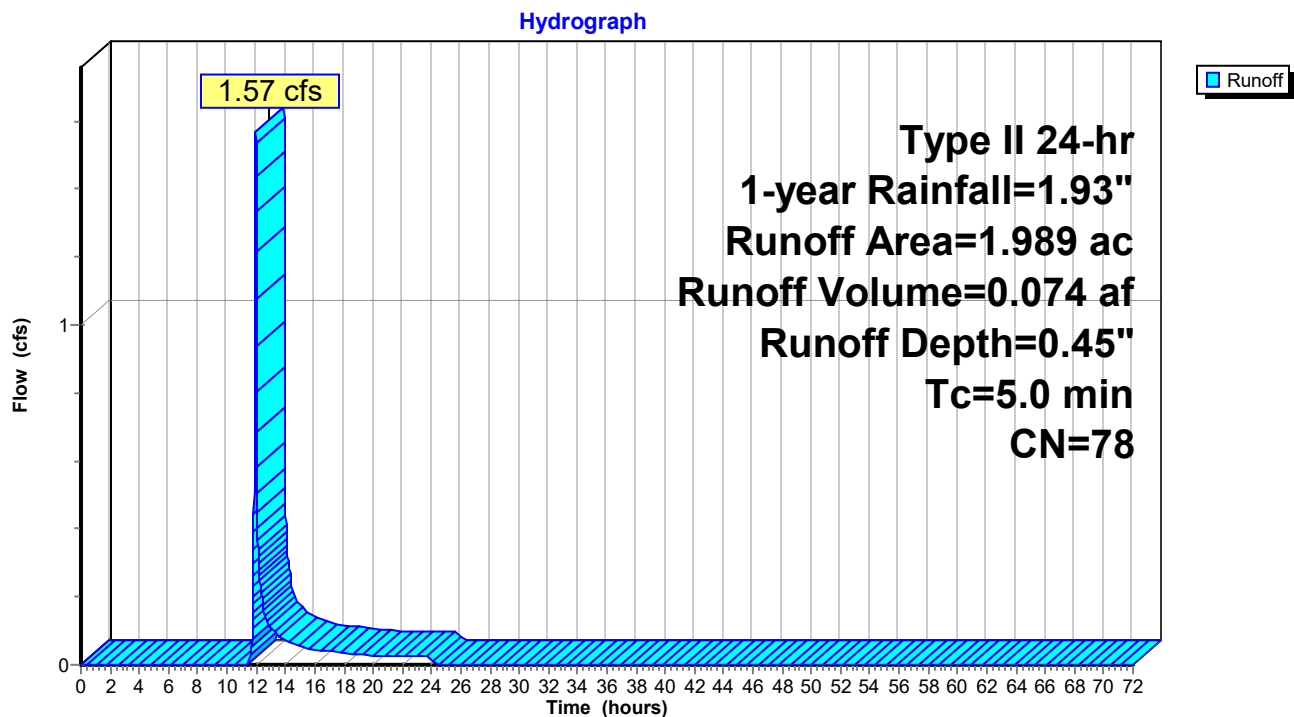
Runoff = 1.57 cfs @ 11.97 hrs, Volume= 0.074 af, Depth= 0.45"
Routed to Link DP-1 : DP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=1.93"

Area (ac)	CN	Description
0.669	74	>75% Grass cover, Good, HSG C
* 0.006	98	Impervious
1.314	80	>75% Grass cover, Good, HSG D
1.989	78	Weighted Average
1.983		99.70% Pervious Area
0.006		0.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1: Existing DA-1



Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 8

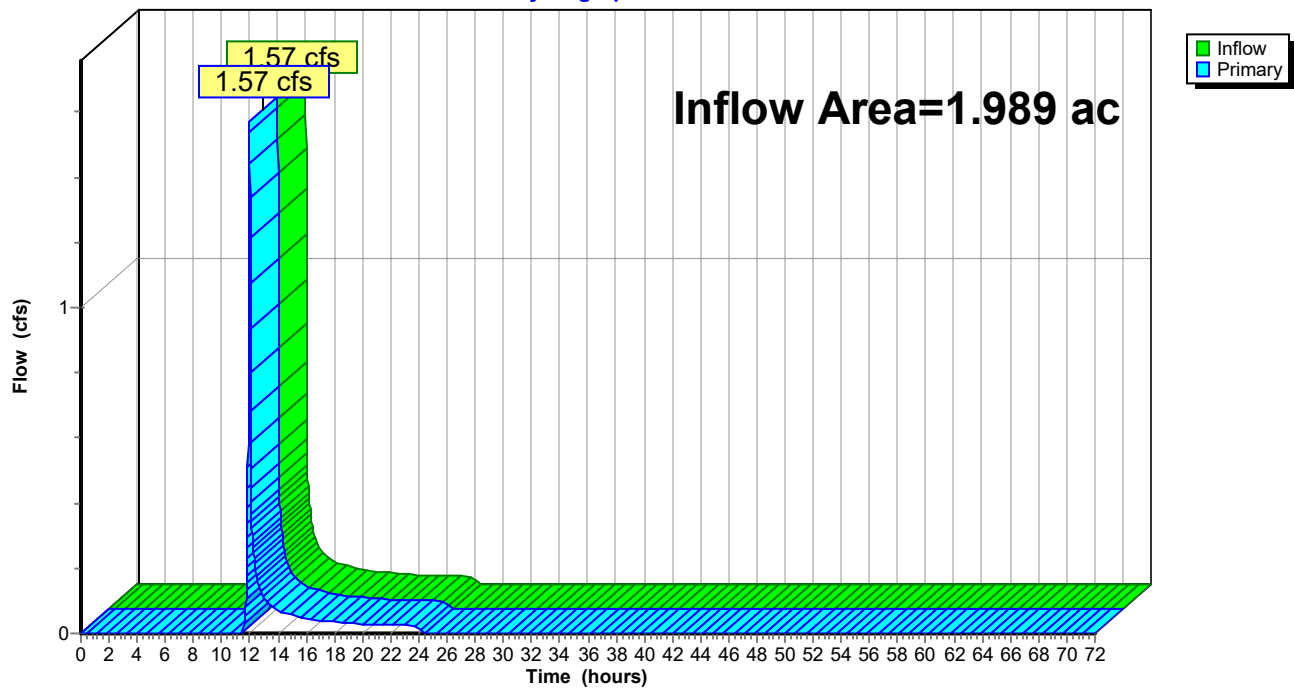
Summary for Link DP-1: DP-1

Inflow Area = 1.989 ac, 0.30% Impervious, Inflow Depth = 0.45" for 1-year event
Inflow = 1.57 cfs @ 11.97 hrs, Volume= 0.074 af
Primary = 1.57 cfs @ 11.97 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DP-1: DP-1

Hydrograph



Existing Condition Model 2 - Renaissance

Type II 24-hr 10-year Rainfall=3.47"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 9

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: Existing DA-1

Runoff Area=1.989 ac 0.30% Impervious Runoff Depth=1.47"

Tc=5.0 min CN=78 Runoff=5.46 cfs 0.244 af

Link DP-1: DP-1

Inflow=5.46 cfs 0.244 af

Primary=5.46 cfs 0.244 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.244 af Average Runoff Depth = 1.47"
99.70% Pervious = 1.983 ac 0.30% Impervious = 0.006 ac

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 10

Summary for Subcatchment DA-1: Existing DA-1

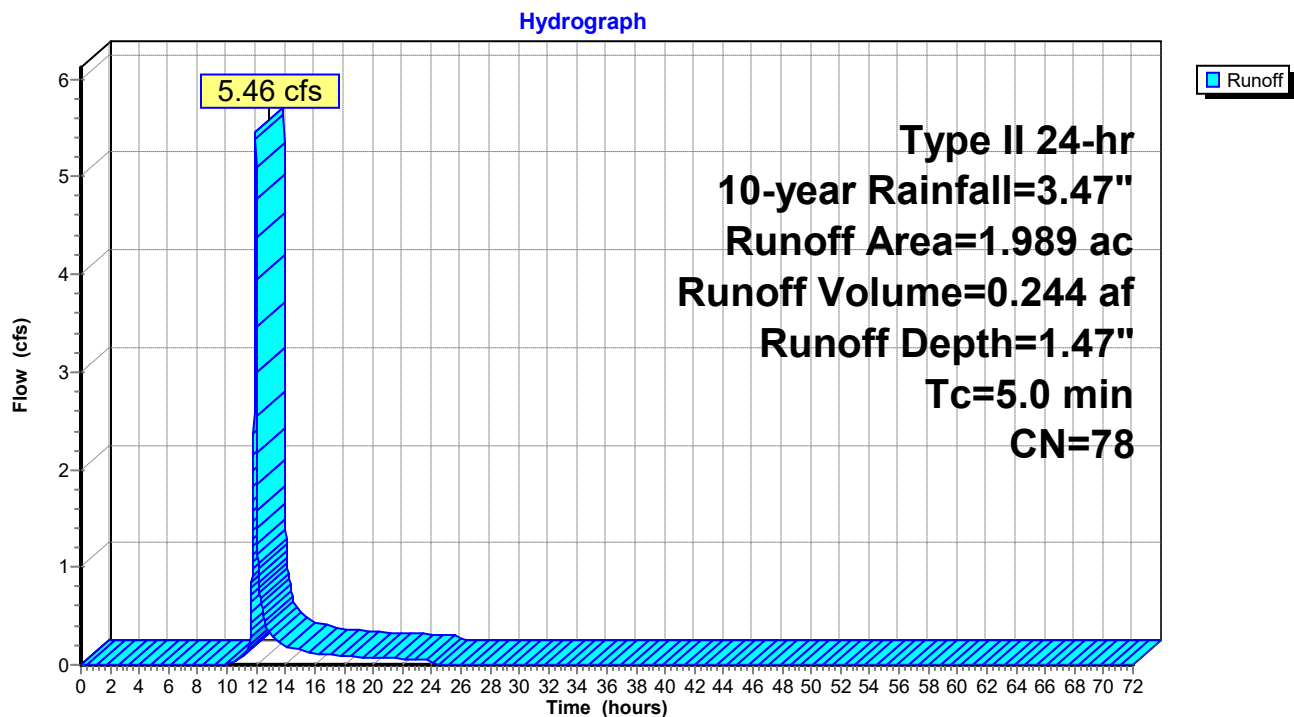
Runoff = 5.46 cfs @ 11.96 hrs, Volume= 0.244 af, Depth= 1.47"
Routed to Link DP-1 : DP-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.47"

Area (ac)	CN	Description
0.669	74	>75% Grass cover, Good, HSG C
* 0.006	98	Impervious
1.314	80	>75% Grass cover, Good, HSG D
1.989	78	Weighted Average
1.983		99.70% Pervious Area
0.006		0.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1: Existing DA-1



Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 11

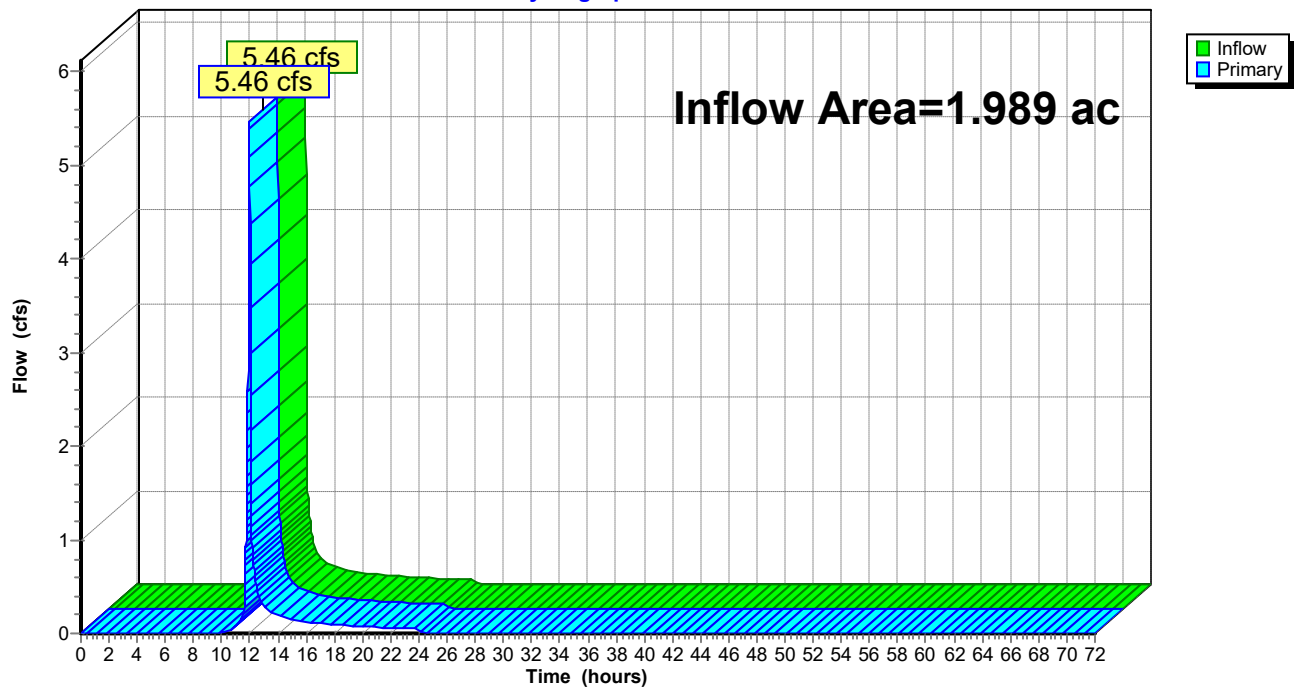
Summary for Link DP-1: DP-1

Inflow Area = 1.989 ac, 0.30% Impervious, Inflow Depth = 1.47" for 10-year event
Inflow = 5.46 cfs @ 11.96 hrs, Volume= 0.244 af
Primary = 5.46 cfs @ 11.96 hrs, Volume= 0.244 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DP-1: DP-1

Hydrograph



Existing Condition Model 2 - Renaissance

Type II 24-hr 100-year Rainfall=5.29"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 12

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1: Existing DA-1

Runoff Area=1.989 ac 0.30% Impervious Runoff Depth=2.96"

Tc=5.0 min CN=78 Runoff=10.81 cfs 0.491 af

Link DP-1: DP-1

Inflow=10.81 cfs 0.491 af

Primary=10.81 cfs 0.491 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.491 af Average Runoff Depth = 2.96"
99.70% Pervious = 1.983 ac 0.30% Impervious = 0.006 ac

Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-year Rainfall=5.29"

Printed 9/14/2026

Page 13

Summary for Subcatchment DA-1: Existing DA-1

Runoff = 10.81 cfs @ 11.96 hrs, Volume= 0.491 af, Depth= 2.96"
Routed to Link DP-1 : DP-1

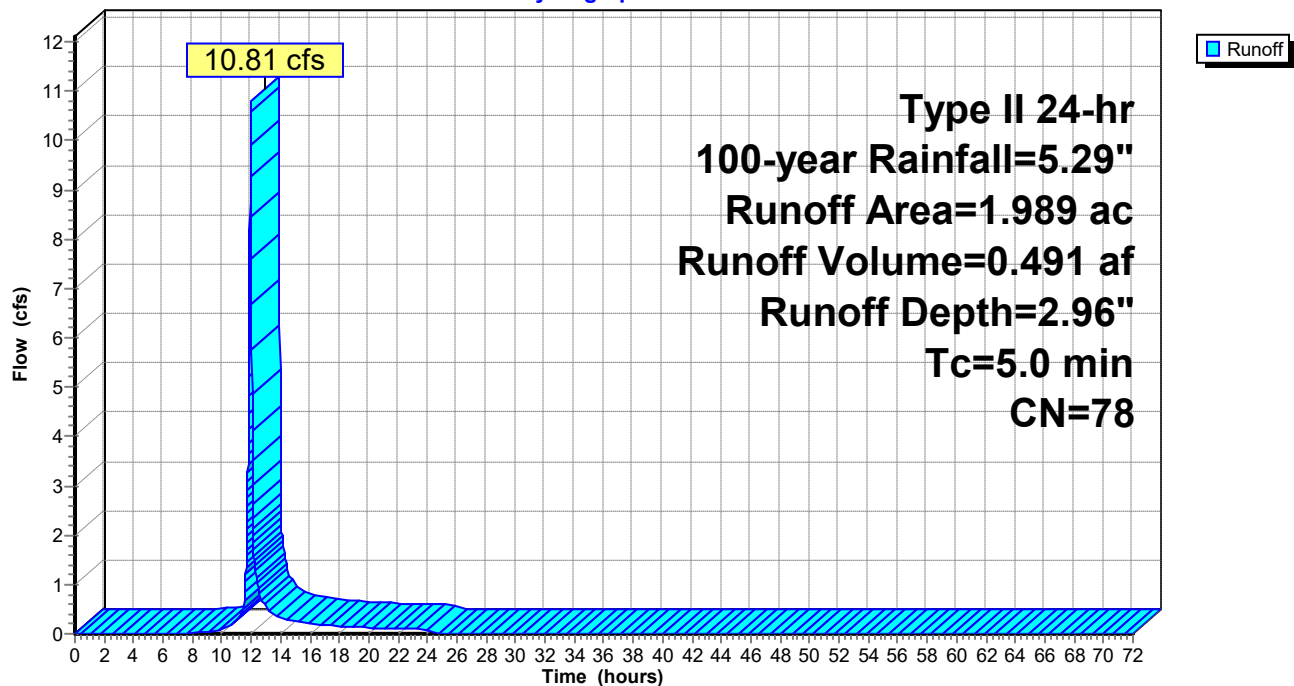
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.29"

Area (ac)	CN	Description
0.669	74	>75% Grass cover, Good, HSG C
* 0.006	98	Impervious
1.314	80	>75% Grass cover, Good, HSG D
1.989	78	Weighted Average
1.983		99.70% Pervious Area
0.006		0.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1: Existing DA-1

Hydrograph



Existing Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-year Rainfall=5.29"

Printed 9/14/2026

Page 14

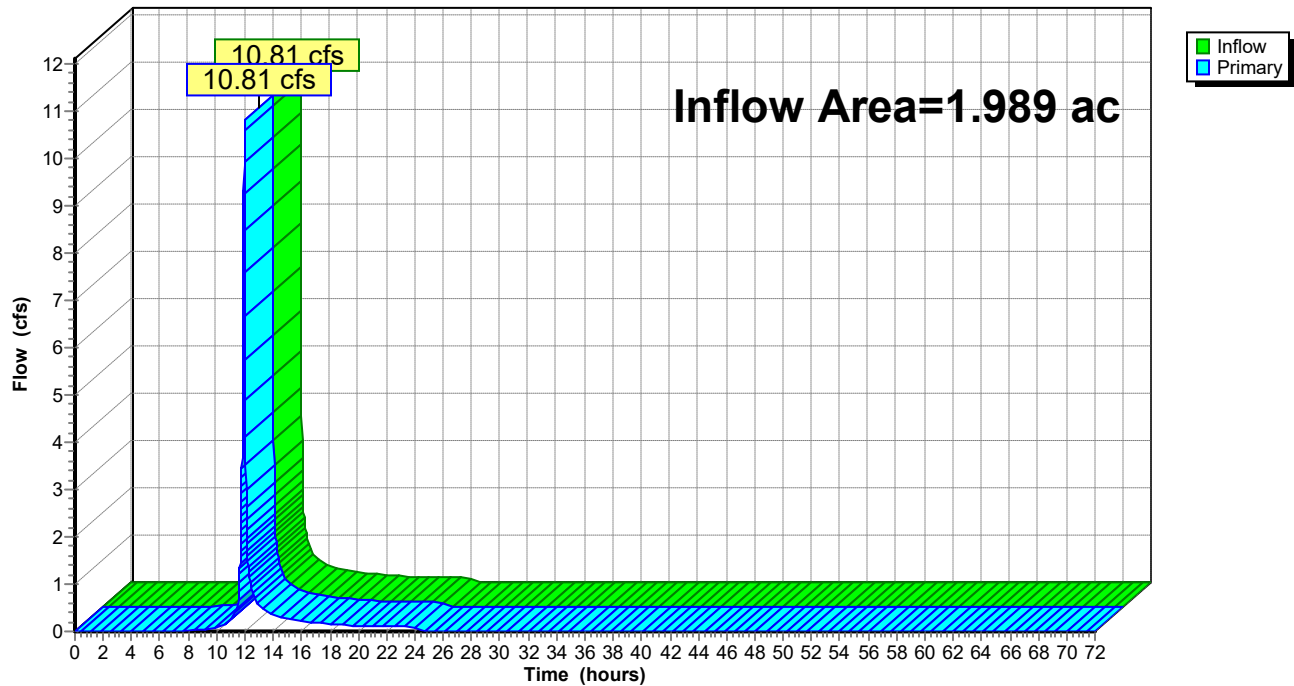
Summary for Link DP-1: DP-1

Inflow Area = 1.989 ac, 0.30% Impervious, Inflow Depth = 2.96" for 100-year event
Inflow = 10.81 cfs @ 11.96 hrs, Volume= 0.491 af
Primary = 10.81 cfs @ 11.96 hrs, Volume= 0.491 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

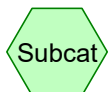
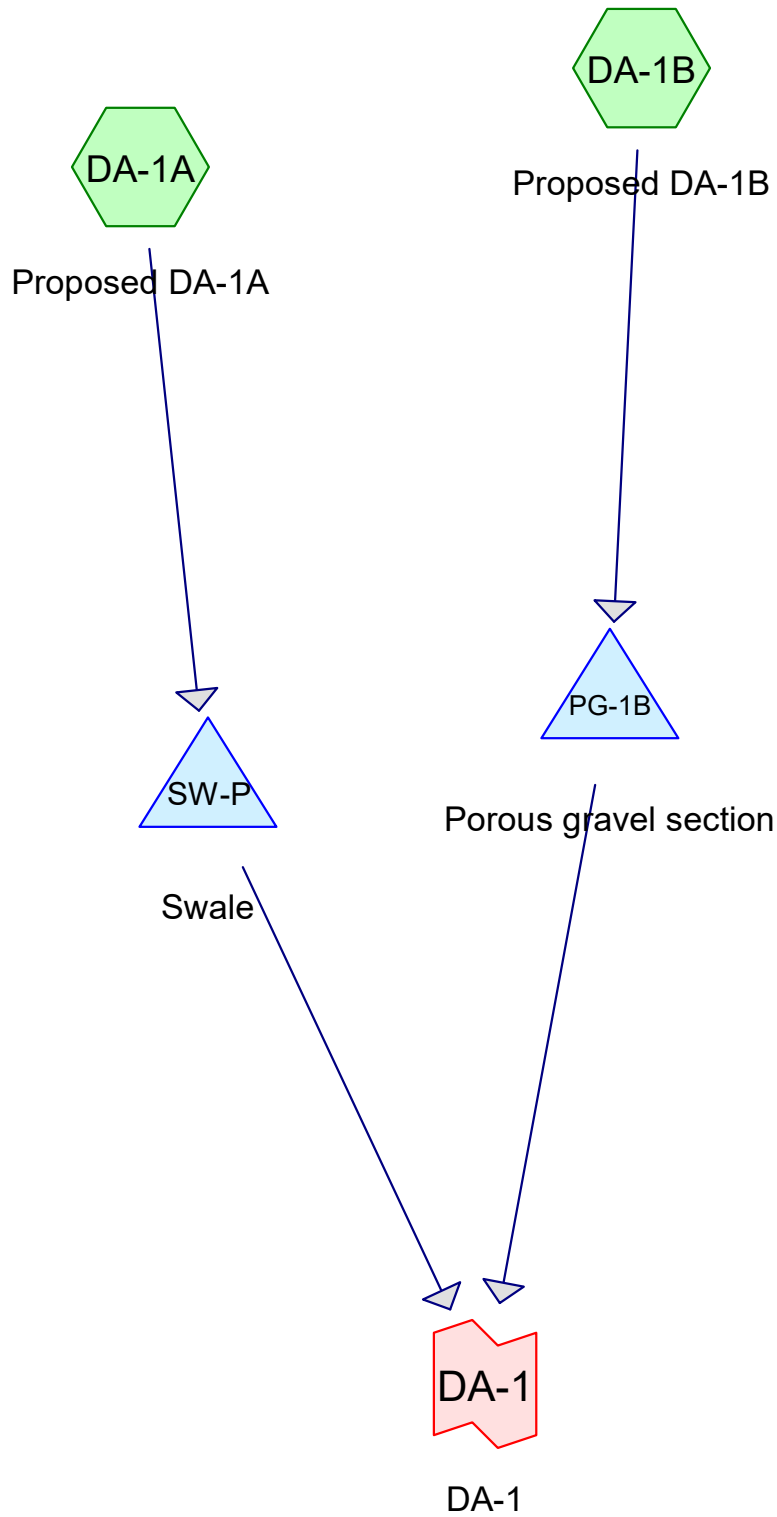
Link DP-1: DP-1

Hydrograph



APPENDIX E

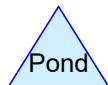
Proposed Conditions HydroCAD Outputs



Subcat



Reach



Pond



Link

Routing Diagram for Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc, Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-year	Type II 24-hr		Default	24.00	1	1.93	2
2	10-year	Type II 24-hr		Default	24.00	1	3.47	2
3	100-year	Type II 24-hr		Default	24.00	1	5.29	2
4	25-year	Type II 24-hr		Default	24.00	1	4.18	2

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Printed 9/14/2026

Page 3

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.544	74	>75% Grass cover, Good, HSG C (DA-1A)
0.651	80	>75% Grass cover, Good, HSG D (DA-1A)
0.458	91	Gravel roads, HSG D (DA-1A, DA-1B)
0.152	98	Impervious (DA-1A)
0.184	98	Paved parking, HSG D (DA-1B)
1.989	84	TOTAL AREA

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 4

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.544	HSG C	DA-1A
1.293	HSG D	DA-1A, DA-1B
0.152	Other	DA-1A
1.989		TOTAL AREA

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 5

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.544	0.651	0.000	1.195	>75% Grass cover, Good	DA-1A
0.000	0.000	0.000	0.458	0.000	0.458	Gravel roads	DA-1A, DA-1B
0.000	0.000	0.000	0.000	0.152	0.152	Impervious	DA-1A
0.000	0.000	0.000	0.184	0.000	0.184	Paved parking	DA-1B
0.000	0.000	0.544	1.293	0.152	1.989	TOTAL AREA	

Proposed Condition Model 2 - Renaissance

Type II 24-hr 1-year Rainfall=1.93"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 6

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1A: Proposed DA-1A Runoff Area=1.563 ac 9.72% Impervious Runoff Depth=0.56"
Tc=5.0 min CN=81 Runoff=1.60 cfs 0.073 af

Subcatchment DA-1B: Proposed DA-1B Runoff Area=0.426 ac 43.19% Impervious Runoff Depth=1.33"
Tc=5.0 min CN=94 Runoff=1.01 cfs 0.047 af

Pond PG-1B: Porous gravel section Peak Elev=699.52' Storage=1,106 cf Inflow=1.01 cfs 0.047 af
Outflow=0.09 cfs 0.046 af

Pond SW-P: Swale Peak Elev=698.76' Storage=0.061 af Inflow=1.60 cfs 0.073 af
Outflow=0.03 cfs 0.013 af

Link DA-1: DA-1 Inflow=0.09 cfs 0.059 af
Primary=0.09 cfs 0.059 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.120 af Average Runoff Depth = 0.73"
83.11% Pervious = 1.653 ac 16.89% Impervious = 0.336 ac

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 7

Summary for Subcatchment DA-1A: Proposed DA-1A

Runoff = 1.60 cfs @ 11.97 hrs, Volume= 0.073 af, Depth= 0.56"
Routed to Pond SW-P : Swale

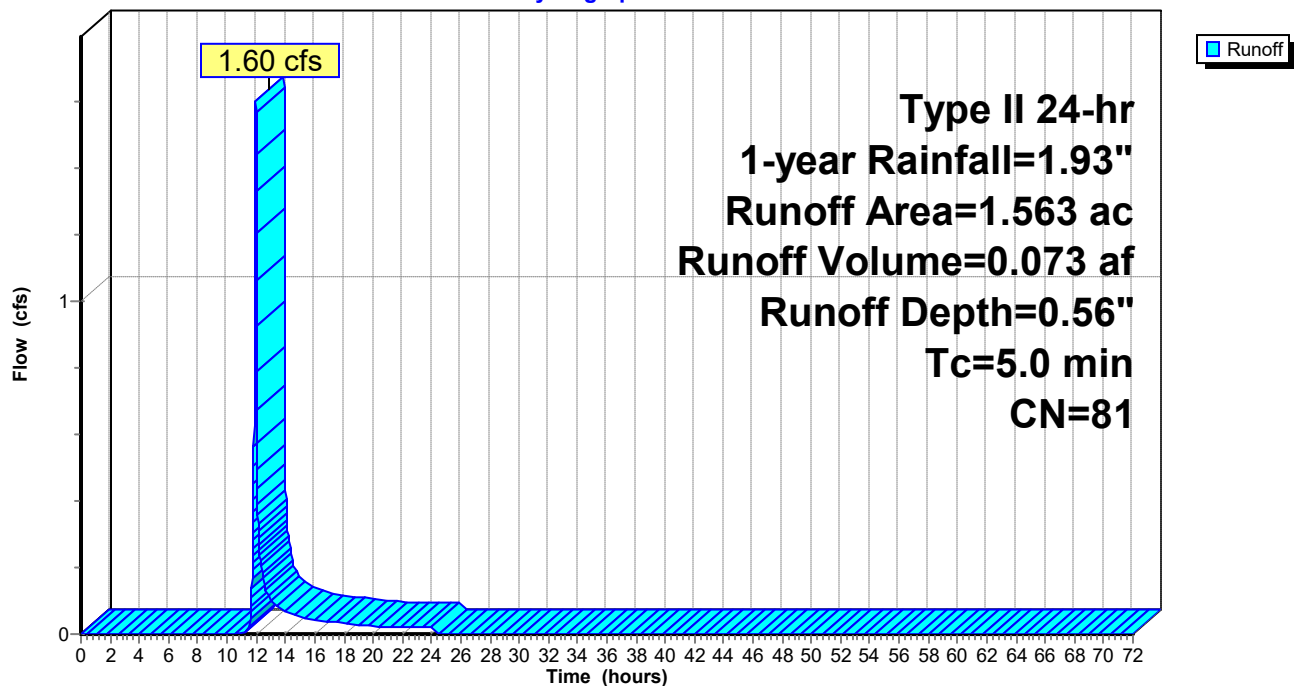
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=1.93"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
* 0.152	98	Impervious
0.651	80	>75% Grass cover, Good, HSG D
0.216	91	Gravel roads, HSG D
1.563	81	Weighted Average
1.411		90.28% Pervious Area
0.152		9.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1A: Proposed DA-1A

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 8

Summary for Subcatchment DA-1B: Proposed DA-1B

Runoff = 1.01 cfs @ 11.96 hrs, Volume= 0.047 af, Depth= 1.33"

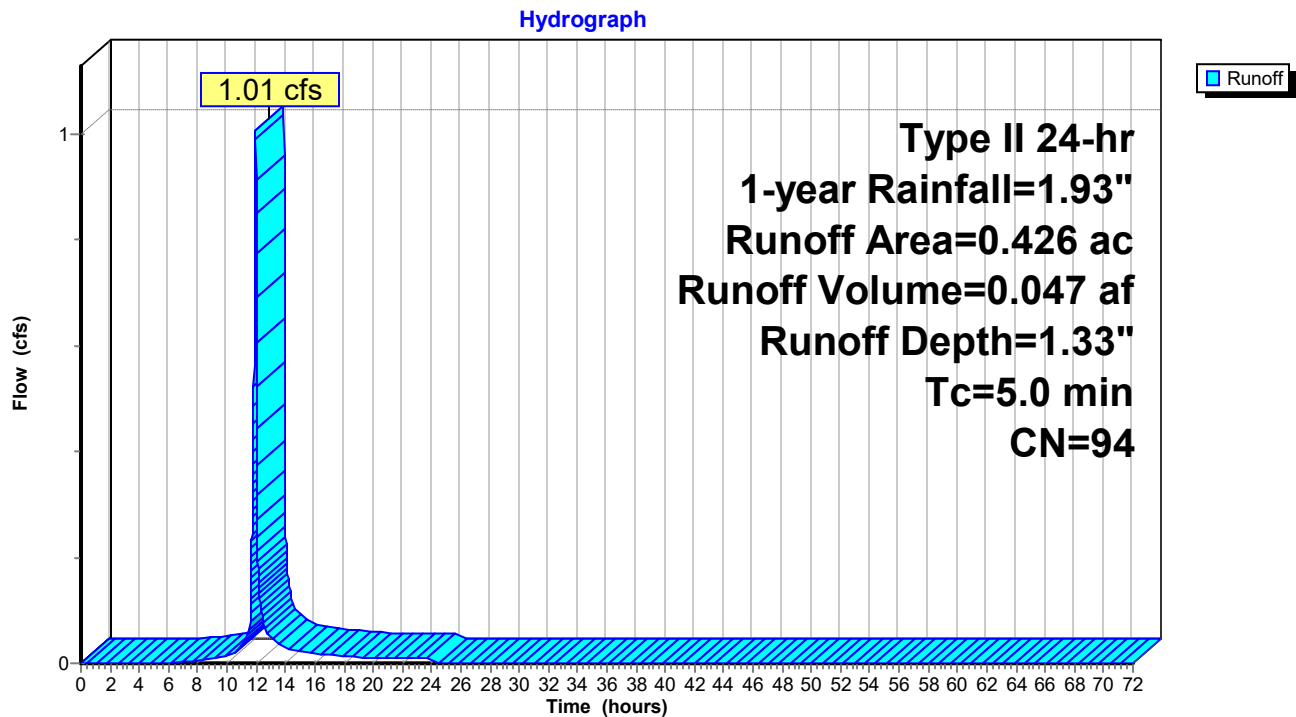
Routed to Pond PG-1B : Porous gravel section

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 1-year Rainfall=1.93"

Area (ac)	CN	Description
0.242	91	Gravel roads, HSG D
0.184	98	Paved parking, HSG D
0.426	94	Weighted Average
0.242		56.81% Pervious Area
0.184		43.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1B: Proposed DA-1B



Proposed Condition Model 2 - Renaissance

Type II 24-hr 1-year Rainfall=1.93"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 9

Summary for Pond PG-1B: Porous gravel section

Inflow Area = 0.426 ac, 43.19% Impervious, Inflow Depth = 1.33" for 1-year event
 Inflow = 1.01 cfs @ 11.96 hrs, Volume= 0.047 af
 Outflow = 0.09 cfs @ 12.39 hrs, Volume= 0.046 af, Atten= 91%, Lag= 26.0 min
 Primary = 0.09 cfs @ 12.39 hrs, Volume= 0.046 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 699.52' @ 12.39 hrs Surf.Area= 10,542 sf Storage= 1,106 cf

Plug-Flow detention time= 337.9 min calculated for 0.046 af (98% of inflow)
 Center-of-Mass det. time= 323.1 min (1,124.1 - 801.0)

Volume	Invert	Avail.Storage	Storage Description
#1	700.13'	2,366 cf	Filter Course (Prismatic) Listed below (Recalc) 7,063 cf Overall x 33.5% Voids
#2	699.30'	4,244 cf	Reservoir course (Prismatic) Listed below (Recalc) 8,750 cf Overall x 48.5% Voids
		6,610 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
700.13	10,542	0	0
700.80	10,542	7,063	7,063

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
699.30	10,542	0	0
700.13	10,542	8,750	8,750

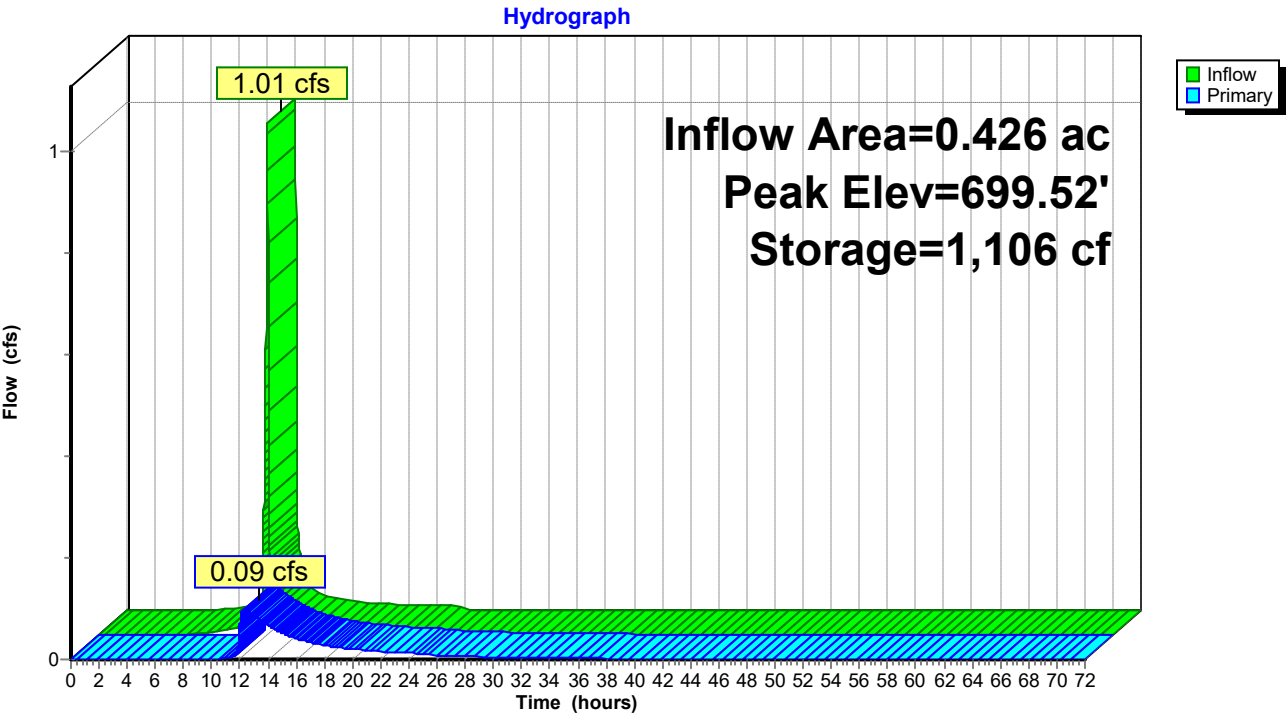
Device	Routing	Invert	Outlet Devices
#1	Primary	699.30'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Device 1	699.30'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.09 cfs @ 12.39 hrs HW=699.52' TW=0.00' (Dynamic Tailwater)

↑ **1=Orifice/Grate** (Passes 0.09 cfs of 0.20 cfs potential flow)

↑ **2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 1.58 fps)

Pond PG-1B: Porous gravel section



Proposed Condition Model 2 - Renaissance

Type II 24-hr 1-year Rainfall=1.93"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 11

Summary for Pond SW-P: Swale

Inflow Area = 1.563 ac, 9.72% Impervious, Inflow Depth = 0.56" for 1-year event
 Inflow = 1.60 cfs @ 11.97 hrs, Volume= 0.073 af
 Outflow = 0.03 cfs @ 18.97 hrs, Volume= 0.013 af, Atten= 98%, Lag= 420.0 min
 Primary = 0.03 cfs @ 18.97 hrs, Volume= 0.013 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 698.76' @ 18.97 hrs Storage= 0.061 af

Plug-Flow detention time= 562.0 min calculated for 0.013 af (18% of inflow)
 Center-of-Mass det. time= 408.2 min (1,272.8 - 864.6)

Volume	Invert	Avail.Storage	Storage Description
#1	697.25'	0.277 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
697.25	0.000
697.75	0.005
698.25	0.023
698.75	0.060
699.25	0.115
699.75	0.188
700.25	0.277

Device	Routing	Invert	Outlet Devices
#1	Primary	698.75'	10.0' long + 2.0 ' SideZ x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=0.03 cfs @ 18.97 hrs HW=698.76' TW=0.00' (Dynamic Tailwater)

↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 0.03 cfs @ 0.26 fps)

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

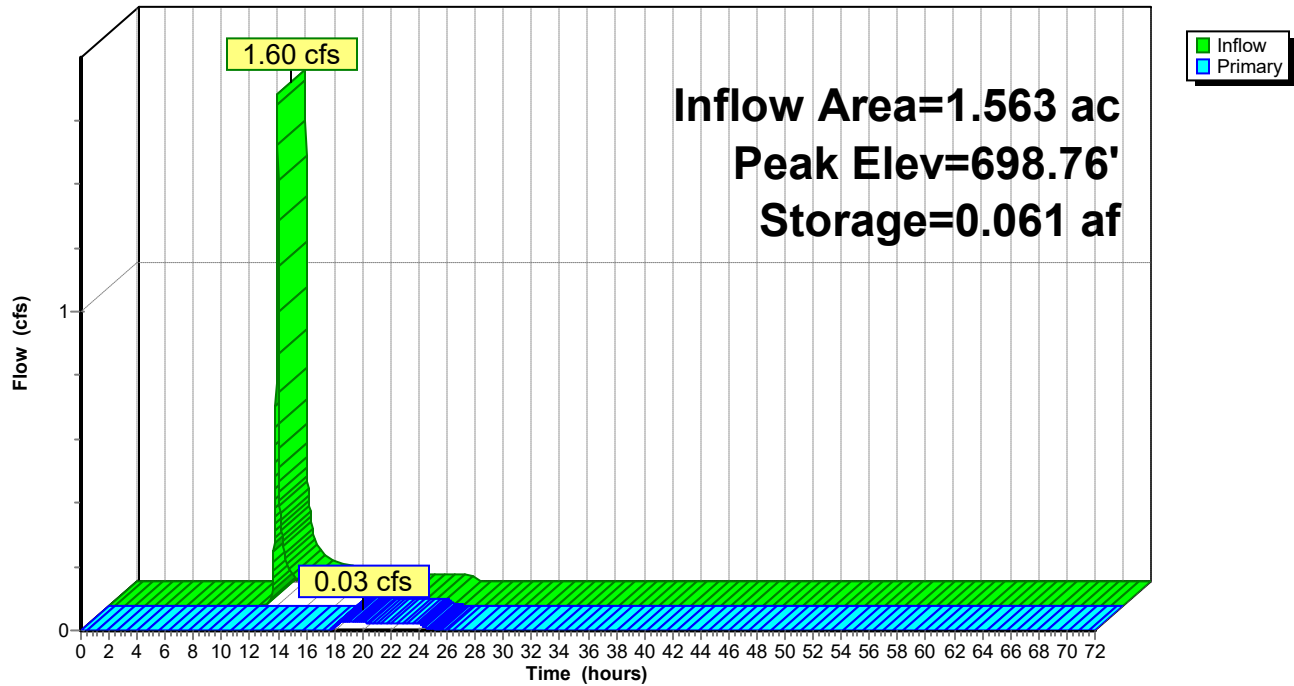
Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 12

Pond SW-P: Swale

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 1-year Rainfall=1.93"

Printed 9/14/2026

Page 13

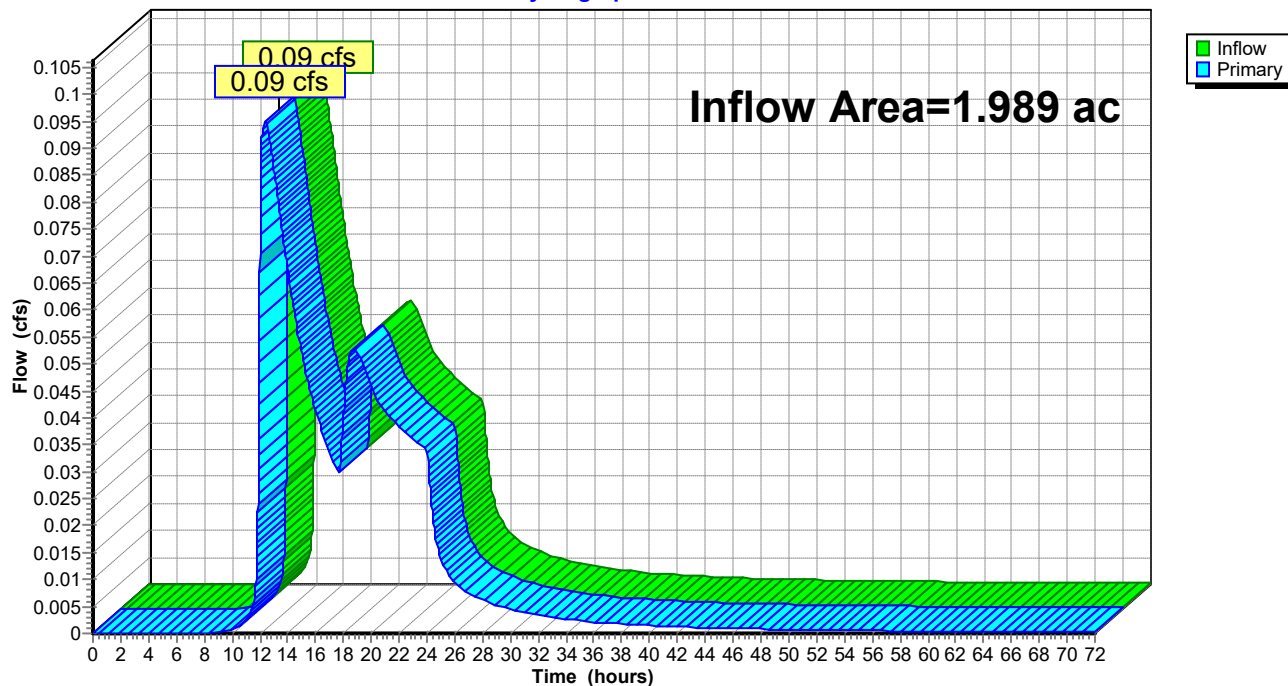
Summary for Link DA-1: DA-1

Inflow Area = 1.989 ac, 16.89% Impervious, Inflow Depth > 0.36" for 1-year event
Inflow = 0.09 cfs @ 12.39 hrs, Volume= 0.059 af
Primary = 0.09 cfs @ 12.39 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DA-1: DA-1

Hydrograph



Proposed Condition Model 2 - Renaissance

Type II 24-hr 10-year Rainfall=3.47"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 14

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1A: Proposed DA-1A Runoff Area=1.563 ac 9.72% Impervious Runoff Depth=1.68"
Tc=5.0 min CN=81 Runoff=4.89 cfs 0.219 af

Subcatchment DA-1B: Proposed DA-1B Runoff Area=0.426 ac 43.19% Impervious Runoff Depth=2.81"
Tc=5.0 min CN=94 Runoff=2.02 cfs 0.100 af

Pond PG-1B: Porous gravel section Peak Elev=699.75' Storage=2,289 cf Inflow=2.02 cfs 0.100 af
Outflow=0.22 cfs 0.098 af

Pond SW-P: Swale Peak Elev=698.96' Storage=0.084 af Inflow=4.89 cfs 0.219 af
Outflow=2.61 cfs 0.159 af

Link DA-1: DA-1 Inflow=2.82 cfs 0.258 af
Primary=2.82 cfs 0.258 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.319 af Average Runoff Depth = 1.92"
83.11% Pervious = 1.653 ac 16.89% Impervious = 0.336 ac

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 15

Summary for Subcatchment DA-1A: Proposed DA-1A

Runoff = 4.89 cfs @ 11.96 hrs, Volume= 0.219 af, Depth= 1.68"
Routed to Pond SW-P : Swale

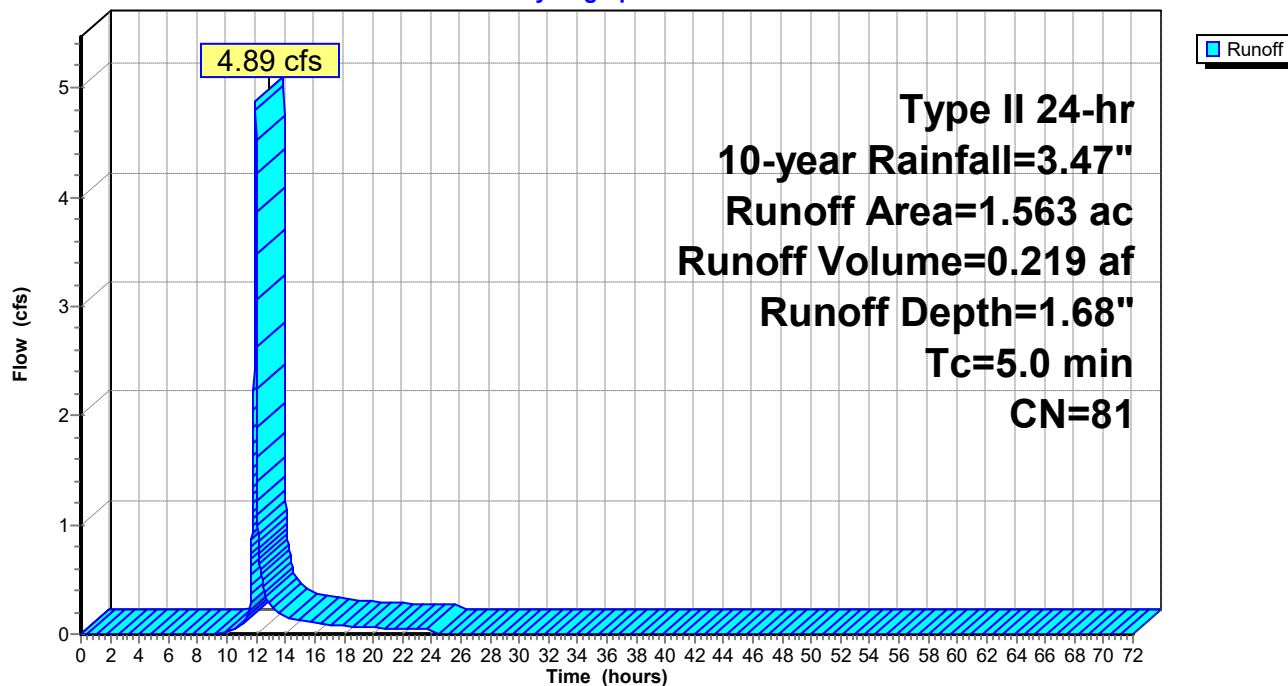
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.47"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
* 0.152	98	Impervious
0.651	80	>75% Grass cover, Good, HSG D
0.216	91	Gravel roads, HSG D
1.563	81	Weighted Average
1.411		90.28% Pervious Area
0.152		9.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1A: Proposed DA-1A

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 16

Summary for Subcatchment DA-1B: Proposed DA-1B

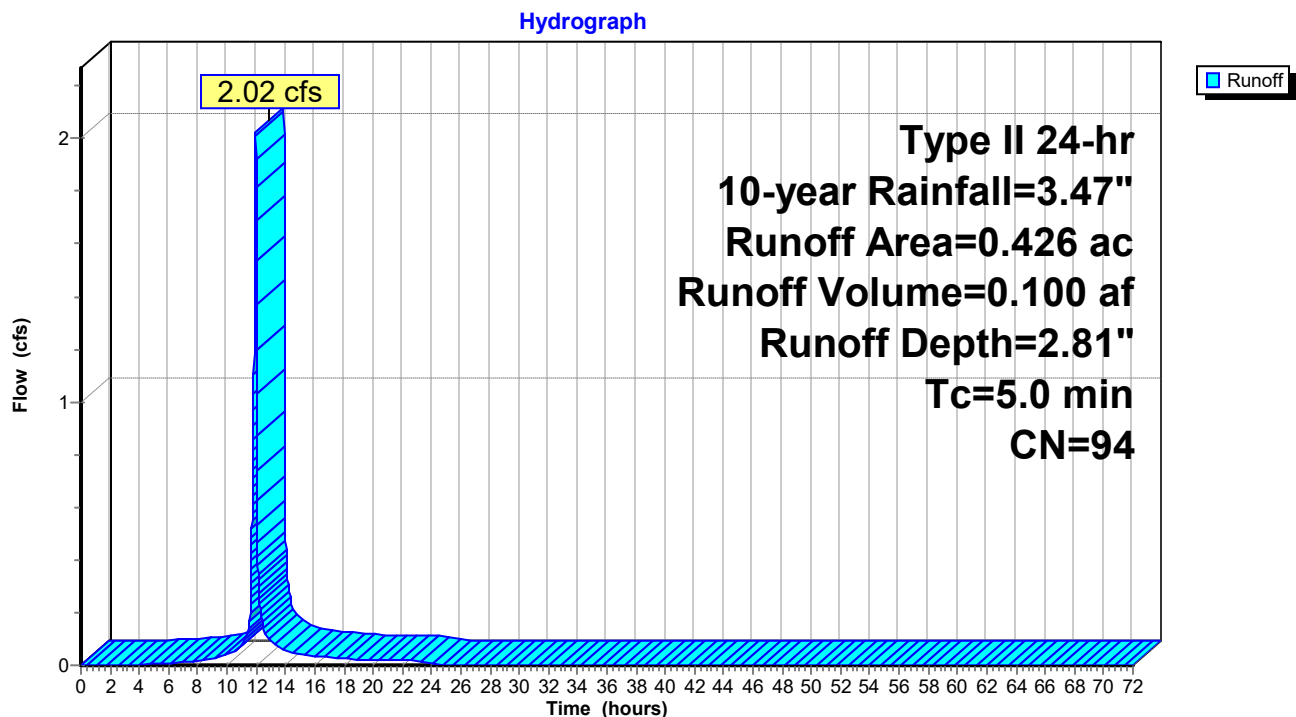
Runoff = 2.02 cfs @ 11.96 hrs, Volume= 0.100 af, Depth= 2.81"
Routed to Pond PG-1B : Porous gravel section

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-year Rainfall=3.47"

Area (ac)	CN	Description
0.242	91	Gravel roads, HSG D
0.184	98	Paved parking, HSG D
0.426	94	Weighted Average
0.242		56.81% Pervious Area
0.184		43.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1B: Proposed DA-1B



Proposed Condition Model 2 - Renaissance

Type II 24-hr 10-year Rainfall=3.47"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 17

Summary for Pond PG-1B: Porous gravel section

Inflow Area = 0.426 ac, 43.19% Impervious, Inflow Depth = 2.81" for 10-year event
 Inflow = 2.02 cfs @ 11.96 hrs, Volume= 0.100 af
 Outflow = 0.22 cfs @ 12.27 hrs, Volume= 0.098 af, Atten= 89%, Lag= 18.8 min
 Primary = 0.22 cfs @ 12.27 hrs, Volume= 0.098 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 699.75' @ 12.27 hrs Surf.Area= 10,542 sf Storage= 2,289 cf

Plug-Flow detention time= 249.1 min calculated for 0.098 af (99% of inflow)
 Center-of-Mass det. time= 241.6 min (1,021.8 - 780.2)

Volume	Invert	Avail.Storage	Storage Description
#1	700.13'	2,366 cf	Filter Course (Prismatic) Listed below (Recalc) 7,063 cf Overall x 33.5% Voids
#2	699.30'	4,244 cf	Reservoir course (Prismatic) Listed below (Recalc) 8,750 cf Overall x 48.5% Voids
		6,610 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
700.13	10,542	0	0
700.80	10,542	7,063	7,063

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
699.30	10,542	0	0
700.13	10,542	8,750	8,750

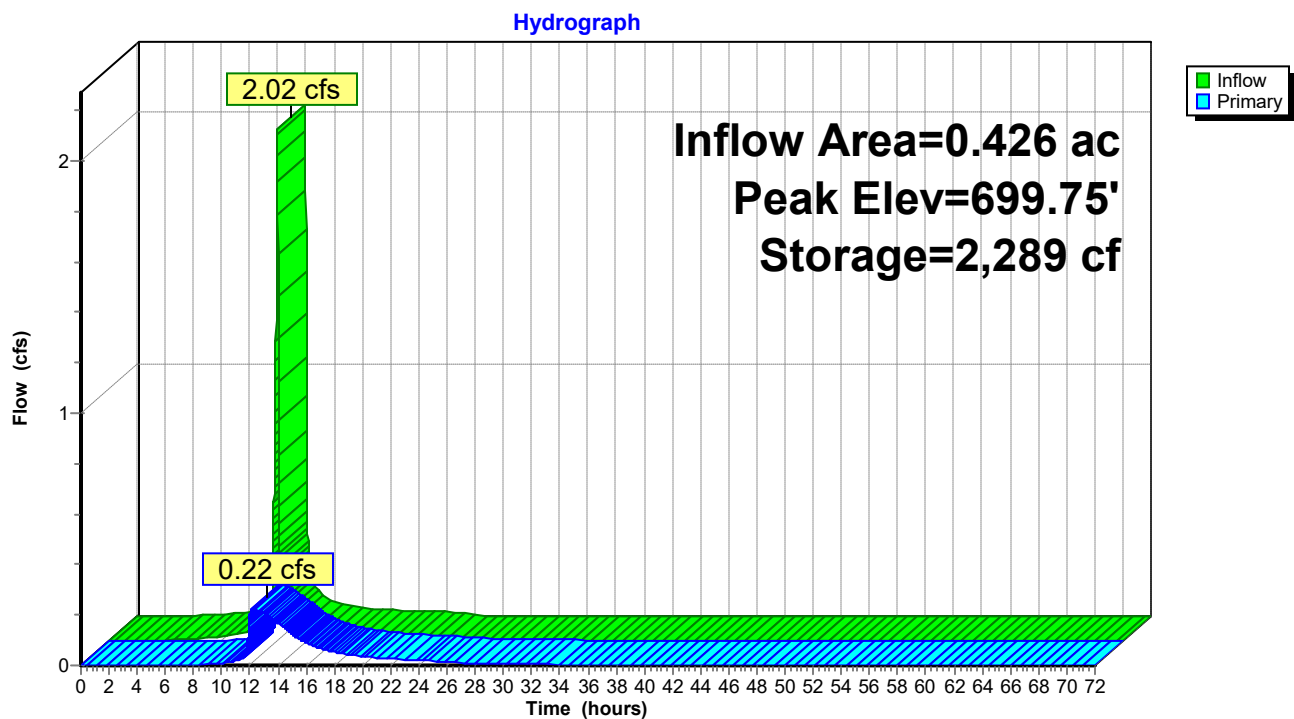
Device	Routing	Invert	Outlet Devices
#1	Primary	699.30'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Device 1	699.30'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.22 cfs @ 12.27 hrs HW=699.75' TW=0.00' (Dynamic Tailwater)

↑ **1=Orifice/Grate** (Passes 0.22 cfs of 0.78 cfs potential flow)

↑ **2=Orifice/Grate** (Orifice Controls 0.22 cfs @ 2.55 fps)

Pond PG-1B: Porous gravel section



Proposed Condition Model 2 - Renaissance

Type II 24-hr 10-year Rainfall=3.47"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 19

Summary for Pond SW-P: Swale

Inflow Area = 1.563 ac, 9.72% Impervious, Inflow Depth = 1.68" for 10-year event
 Inflow = 4.89 cfs @ 11.96 hrs, Volume= 0.219 af
 Outflow = 2.61 cfs @ 12.04 hrs, Volume= 0.159 af, Atten= 47%, Lag= 4.7 min
 Primary = 2.61 cfs @ 12.04 hrs, Volume= 0.159 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 698.96' @ 12.04 hrs Storage= 0.084 af

Plug-Flow detention time= 166.1 min calculated for 0.159 af (73% of inflow)

Center-of-Mass det. time= 65.2 min (896.6 - 831.4)

Volume	Invert	Avail.Storage	Storage Description
#1	697.25'	0.277 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
697.25	0.000
697.75	0.005
698.25	0.023
698.75	0.060
699.25	0.115
699.75	0.188
700.25	0.277

Device	Routing	Invert	Outlet Devices
#1	Primary	698.75'	10.0' long + 2.0 ' SideZ x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=2.61 cfs @ 12.04 hrs HW=698.96' TW=0.00' (Dynamic Tailwater)↑**1=Broad-Crested Rectangular Weir** (Weir Controls 2.61 cfs @ 1.17 fps)

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

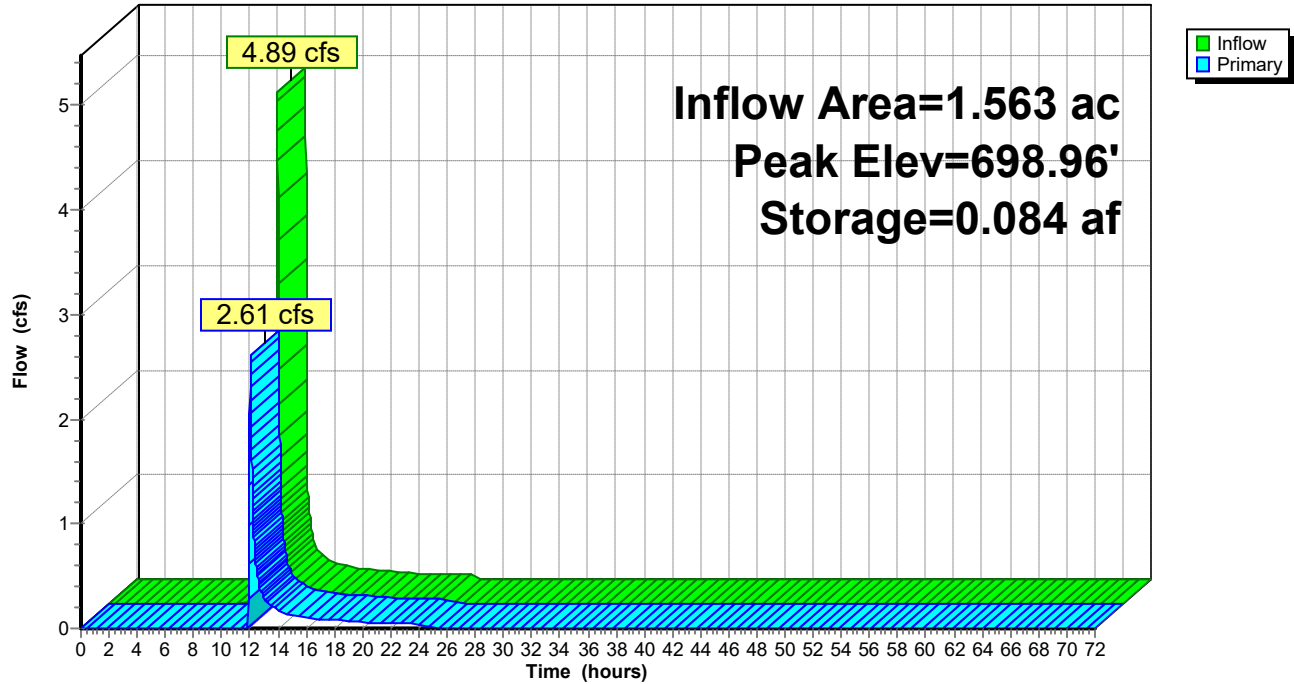
Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 20

Pond SW-P: Swale

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 10-year Rainfall=3.47"

Printed 9/14/2026

Page 21

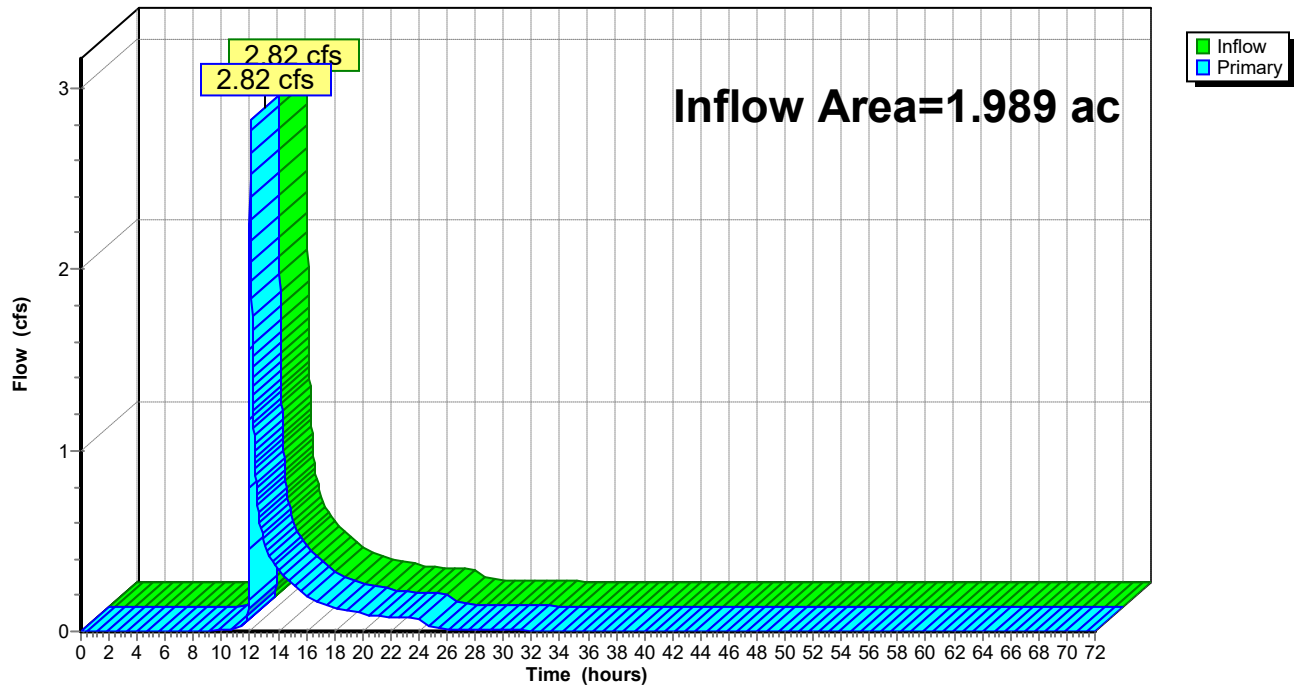
Summary for Link DA-1: DA-1

Inflow Area = 1.989 ac, 16.89% Impervious, Inflow Depth = 1.56" for 10-year event
Inflow = 2.82 cfs @ 12.04 hrs, Volume= 0.258 af
Primary = 2.82 cfs @ 12.04 hrs, Volume= 0.258 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DA-1: DA-1

Hydrograph



Proposed Condition Model 2 - Renaissance*Type II 24-hr 100-year Rainfall=5.29"*

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 22

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1A: Proposed DA-1A Runoff Area=1.563 ac 9.72% Impervious Runoff Depth=3.24"
Tc=5.0 min CN=81 Runoff=9.21 cfs 0.422 af

Subcatchment DA-1B: Proposed DA-1B Runoff Area=0.426 ac 43.19% Impervious Runoff Depth=4.59"
Tc=5.0 min CN=94 Runoff=3.21 cfs 0.163 af

Pond PG-1B: Porous gravel section Peak Elev=700.02' Storage=3,703 cf Inflow=3.21 cfs 0.163 af
Outflow=0.31 cfs 0.162 af

Pond SW-P: Swale Peak Elev=699.19' Storage=0.108 af Inflow=9.21 cfs 0.422 af
Outflow=8.09 cfs 0.362 af

Link DA-1: DA-1 Inflow=8.38 cfs 0.524 af
Primary=8.38 cfs 0.524 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.585 af Average Runoff Depth = 3.53"
83.11% Pervious = 1.653 ac 16.89% Impervious = 0.336 ac

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-year Rainfall=5.29"

Printed 9/14/2026

Page 23

Summary for Subcatchment DA-1A: Proposed DA-1A

Runoff = 9.21 cfs @ 11.96 hrs, Volume= 0.422 af, Depth= 3.24"
Routed to Pond SW-P : Swale

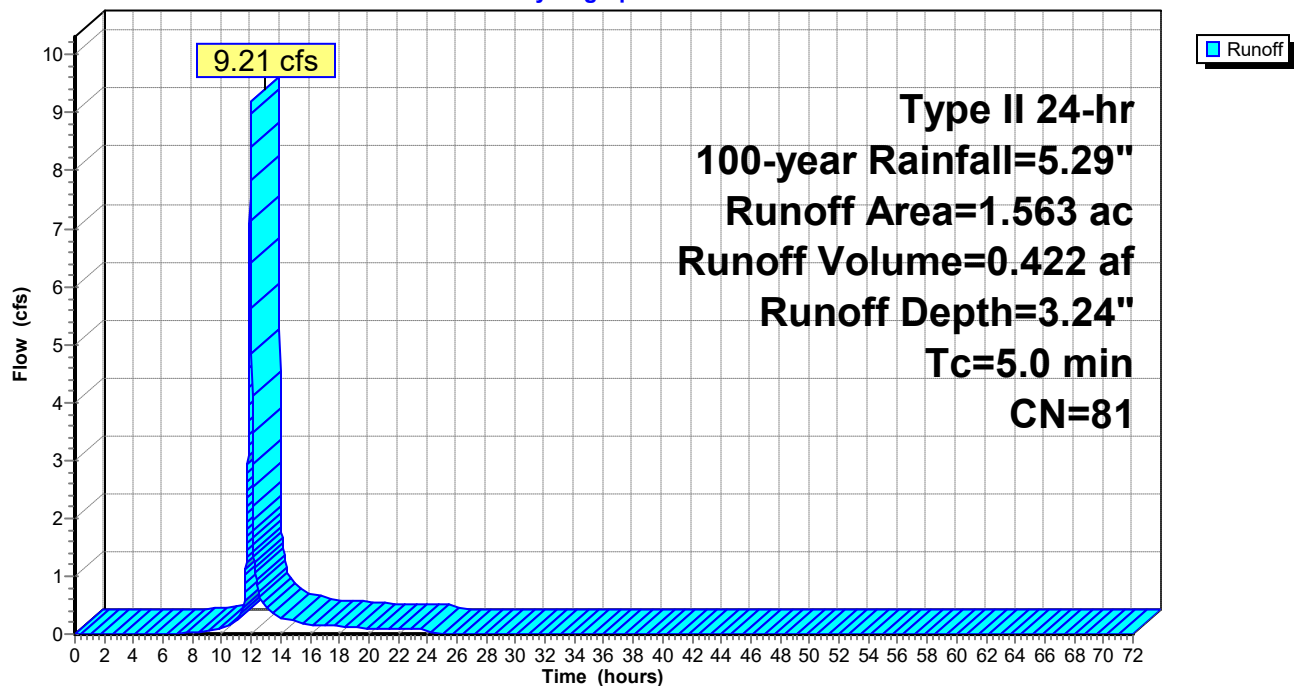
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.29"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
* 0.152	98	Impervious
0.651	80	>75% Grass cover, Good, HSG D
0.216	91	Gravel roads, HSG D
1.563	81	Weighted Average
1.411		90.28% Pervious Area
0.152		9.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1A: Proposed DA-1A

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-year Rainfall=5.29"

Printed 9/14/2026

Page 24

Summary for Subcatchment DA-1B: Proposed DA-1B

Runoff = 3.21 cfs @ 11.96 hrs, Volume= 0.163 af, Depth= 4.59"
Routed to Pond PG-1B : Porous gravel section

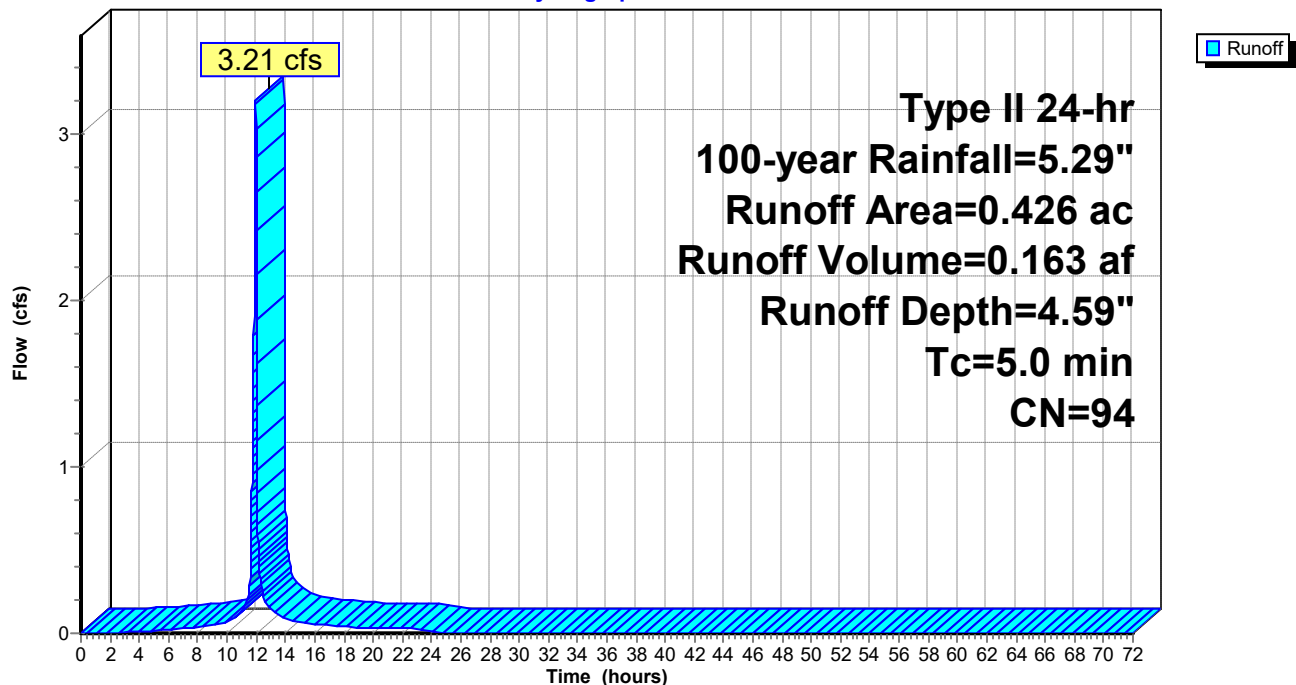
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-year Rainfall=5.29"

Area (ac)	CN	Description
0.242	91	Gravel roads, HSG D
0.184	98	Paved parking, HSG D
0.426	94	Weighted Average
0.242		56.81% Pervious Area
0.184		43.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1B: Proposed DA-1B

Hydrograph



Proposed Condition Model 2 - Renaissance

Type II 24-hr 100-year Rainfall=5.29"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 25

Summary for Pond PG-1B: Porous gravel section

Inflow Area = 0.426 ac, 43.19% Impervious, Inflow Depth = 4.59" for 100-year event
 Inflow = 3.21 cfs @ 11.96 hrs, Volume= 0.163 af
 Outflow = 0.31 cfs @ 12.34 hrs, Volume= 0.162 af, Atten= 90%, Lag= 23.0 min
 Primary = 0.31 cfs @ 12.34 hrs, Volume= 0.162 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 700.02' @ 12.34 hrs Surf.Area= 10,542 sf Storage= 3,703 cf

Plug-Flow detention time= 225.7 min calculated for 0.162 af (99% of inflow)
 Center-of-Mass det. time= 220.6 min (988.0 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1	700.13'	2,366 cf	Filter Course (Prismatic) Listed below (Recalc) 7,063 cf Overall x 33.5% Voids
#2	699.30'	4,244 cf	Reservoir course (Prismatic) Listed below (Recalc) 8,750 cf Overall x 48.5% Voids
		6,610 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
700.13	10,542	0	0
700.80	10,542	7,063	7,063

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
699.30	10,542	0	0
700.13	10,542	8,750	8,750

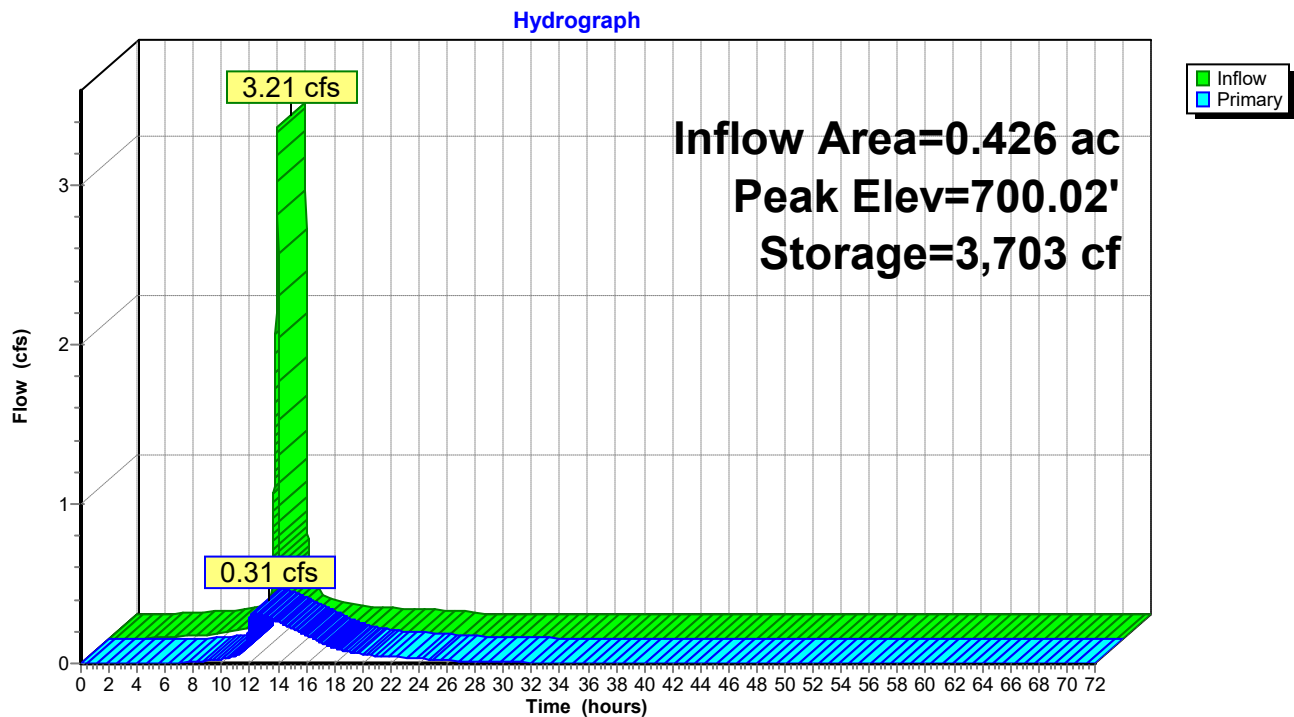
Device	Routing	Invert	Outlet Devices
#1	Primary	699.30'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Device 1	699.30'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.31 cfs @ 12.34 hrs HW=700.02' TW=0.00' (Dynamic Tailwater)

↑ **1=Orifice/Grate** (Passes 0.31 cfs of 1.76 cfs potential flow)

↑ **2=Orifice/Grate** (Orifice Controls 0.31 cfs @ 3.60 fps)

Pond PG-1B: Porous gravel section



Proposed Condition Model 2 - Renaissance

Type II 24-hr 100-year Rainfall=5.29"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 27

Summary for Pond SW-P: Swale

Inflow Area = 1.563 ac, 9.72% Impervious, Inflow Depth = 3.24" for 100-year event
 Inflow = 9.21 cfs @ 11.96 hrs, Volume= 0.422 af
 Outflow = 8.09 cfs @ 12.00 hrs, Volume= 0.362 af, Atten= 12%, Lag= 2.1 min
 Primary = 8.09 cfs @ 12.00 hrs, Volume= 0.362 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Peak Elev= 699.19' @ 12.00 hrs Storage= 0.108 af

Plug-Flow detention time= 103.3 min calculated for 0.362 af (86% of inflow)

Center-of-Mass det. time= 37.2 min (849.9 - 812.7)

Volume	Invert	Avail.Storage	Storage Description
#1	697.25'	0.277 af	Custom Stage Data Listed below

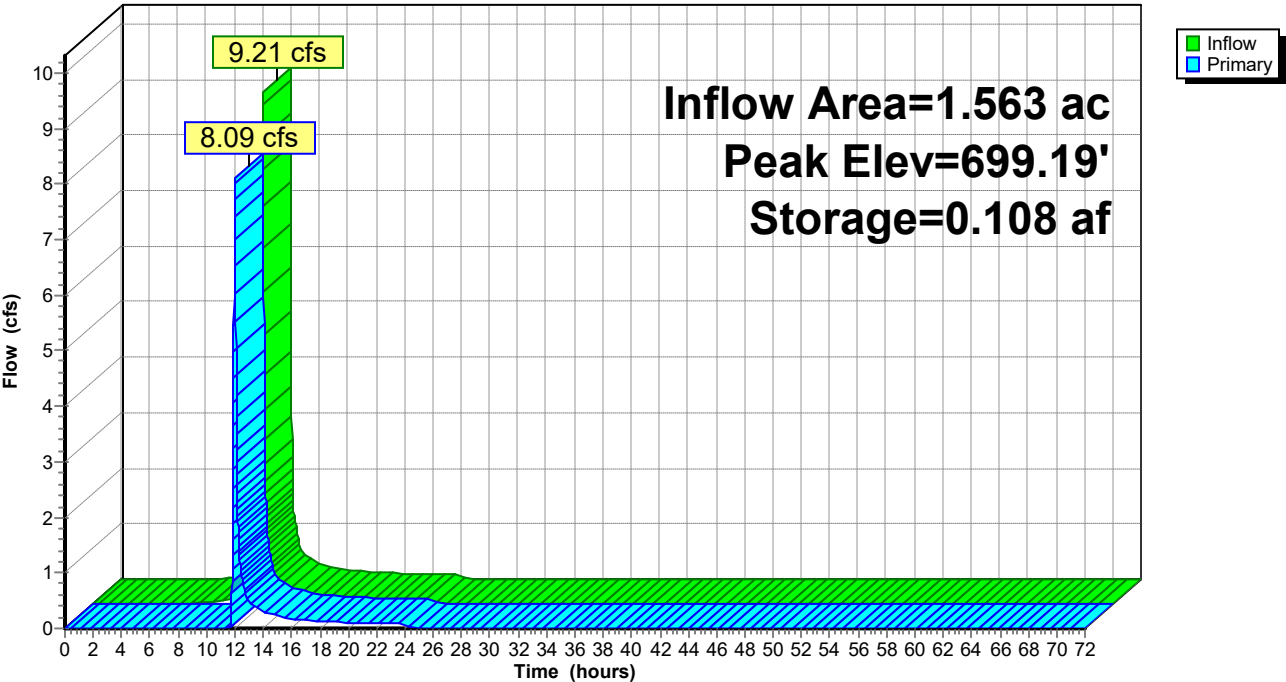
Elevation (feet)	Cum.Store (acre-feet)
697.25	0.000
697.75	0.005
698.25	0.023
698.75	0.060
699.25	0.115
699.75	0.188
700.25	0.277

Device	Routing	Invert	Outlet Devices
#1	Primary	698.75'	10.0' long + 2.0 ' SideZ x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=8.08 cfs @ 12.00 hrs HW=699.19' TW=0.00' (Dynamic Tailwater)↑1=**Broad-Crested Rectangular Weir** (Weir Controls 8.08 cfs @ 1.70 fps)

Pond SW-P: Swale

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 100-year Rainfall=5.29"

Printed 9/14/2026

Page 29

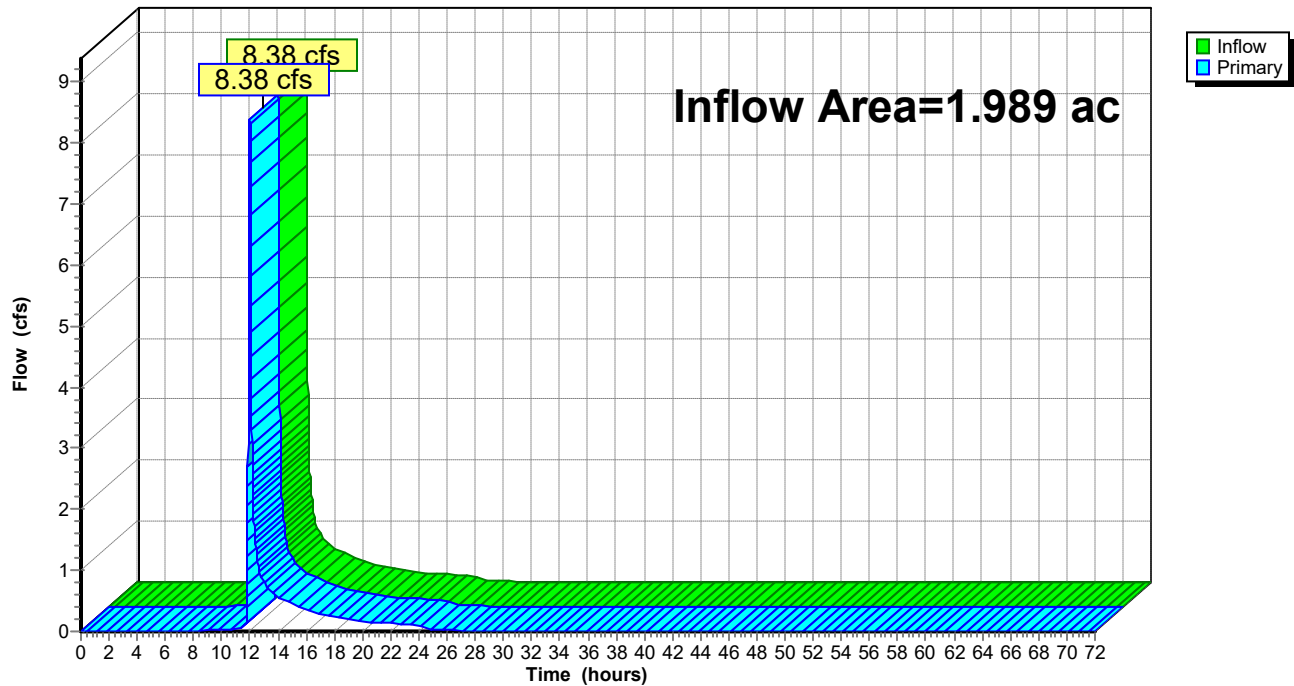
Summary for Link DA-1: DA-1

Inflow Area = 1.989 ac, 16.89% Impervious, Inflow Depth = 3.16" for 100-year event
Inflow = 8.38 cfs @ 12.00 hrs, Volume= 0.524 af
Primary = 8.38 cfs @ 12.00 hrs, Volume= 0.524 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DA-1: DA-1

Hydrograph



Proposed Condition Model 2 - Renaissance*Type II 24-hr 25-year Rainfall=4.18"*

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 30

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment DA-1A: Proposed DA-1A Runoff Area=1.563 ac 9.72% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=81 Runoff=6.55 cfs 0.296 af

Subcatchment DA-1B: Proposed DA-1B Runoff Area=0.426 ac 43.19% Impervious Runoff Depth=3.50"
Tc=5.0 min CN=94 Runoff=2.49 cfs 0.124 af

Pond PG-1B: Porous gravel section Peak Elev=699.86' Storage=2,842 cf Inflow=2.49 cfs 0.124 af
Outflow=0.26 cfs 0.123 af

Pond SW-P: Swale Peak Elev=699.08' Storage=0.096 af Inflow=6.55 cfs 0.296 af
Outflow=5.05 cfs 0.236 af

Link DA-1: DA-1 Inflow=5.29 cfs 0.359 af
Primary=5.29 cfs 0.359 af

Total Runoff Area = 1.989 ac Runoff Volume = 0.420 af Average Runoff Depth = 2.54"
83.11% Pervious = 1.653 ac 16.89% Impervious = 0.336 ac

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 25-year Rainfall=4.18"

Printed 9/14/2026

Page 31

Summary for Subcatchment DA-1A: Proposed DA-1A

Runoff = 6.55 cfs @ 11.96 hrs, Volume= 0.296 af, Depth= 2.27"
Routed to Pond SW-P : Swale

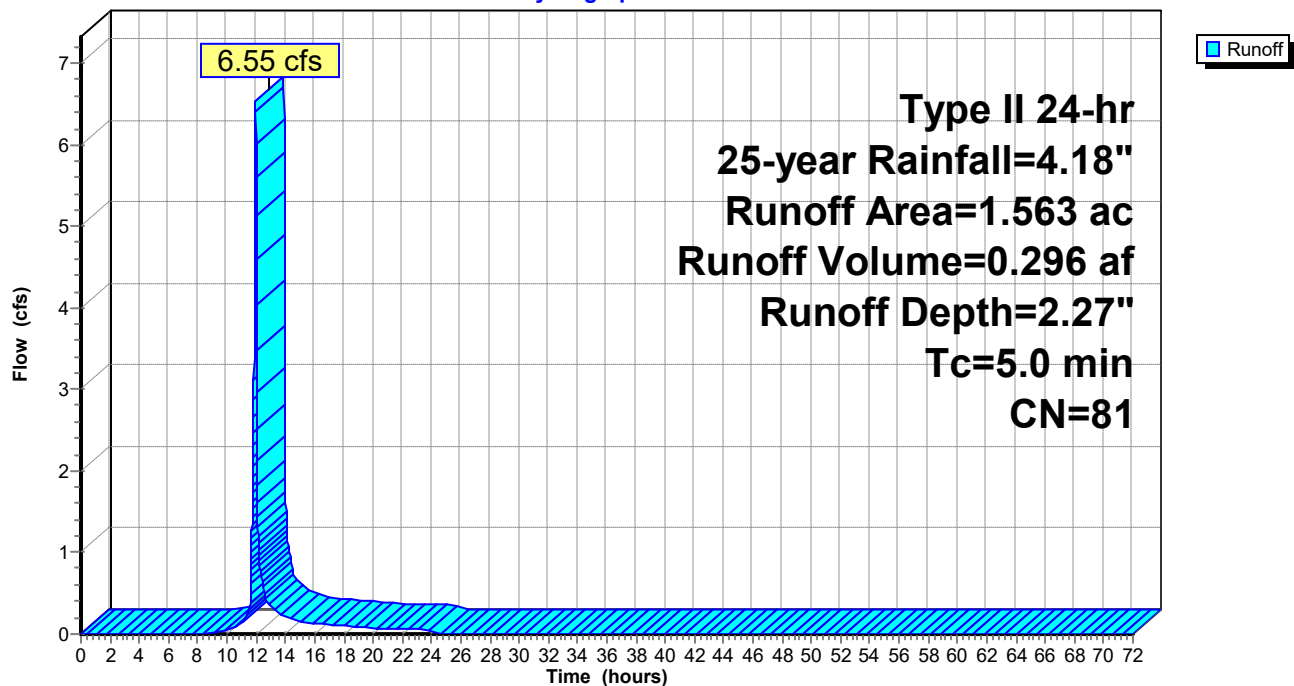
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.18"

Area (ac)	CN	Description
0.544	74	>75% Grass cover, Good, HSG C
* 0.152	98	Impervious
0.651	80	>75% Grass cover, Good, HSG D
0.216	91	Gravel roads, HSG D
1.563	81	Weighted Average
1.411		90.28% Pervious Area
0.152		9.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1A: Proposed DA-1A

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 25-year Rainfall=4.18"

Printed 9/14/2026

Page 32

Summary for Subcatchment DA-1B: Proposed DA-1B

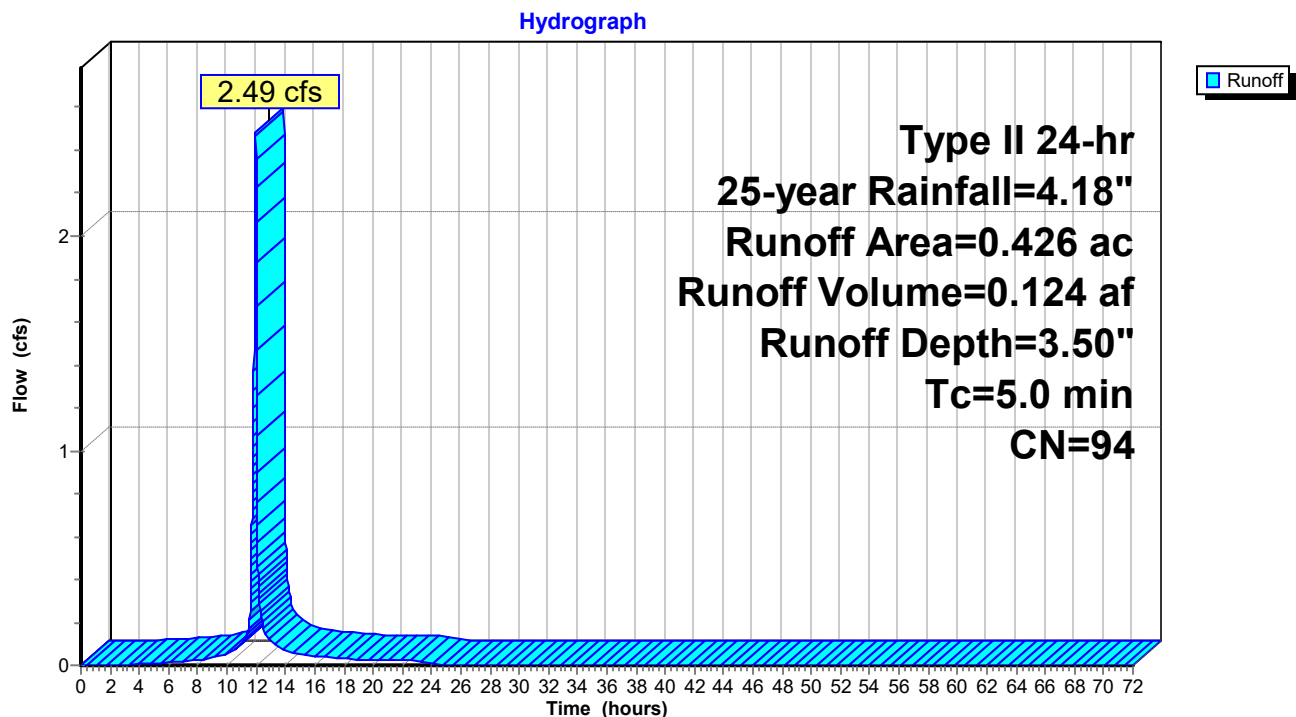
Runoff = 2.49 cfs @ 11.96 hrs, Volume= 0.124 af, Depth= 3.50"
Routed to Pond PG-1B : Porous gravel section

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-year Rainfall=4.18"

Area (ac)	CN	Description
0.242	91	Gravel roads, HSG D
0.184	98	Paved parking, HSG D
0.426	94	Weighted Average
0.242		56.81% Pervious Area
0.184		43.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Tc

Subcatchment DA-1B: Proposed DA-1B



Proposed Condition Model 2 - Renaissance

Type II 24-hr 25-year Rainfall=4.18"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 33

Summary for Pond PG-1B: Porous gravel section

Inflow Area = 0.426 ac, 43.19% Impervious, Inflow Depth = 3.50" for 25-year event
 Inflow = 2.49 cfs @ 11.96 hrs, Volume= 0.124 af
 Outflow = 0.26 cfs @ 12.30 hrs, Volume= 0.123 af, Atten= 89%, Lag= 20.3 min
 Primary = 0.26 cfs @ 12.30 hrs, Volume= 0.123 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 699.86' @ 12.30 hrs Surf.Area= 10,542 sf Storage= 2,842 cf

Plug-Flow detention time= 236.0 min calculated for 0.123 af (99% of inflow)
 Center-of-Mass det. time= 229.5 min (1,003.9 - 774.4)

Volume	Invert	Avail.Storage	Storage Description
#1	700.13'	2,366 cf	Filter Course (Prismatic) Listed below (Recalc) 7,063 cf Overall x 33.5% Voids
#2	699.30'	4,244 cf	Reservoir course (Prismatic) Listed below (Recalc) 8,750 cf Overall x 48.5% Voids
		6,610 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
700.13	10,542	0	0
700.80	10,542	7,063	7,063

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
699.30	10,542	0	0
700.13	10,542	8,750	8,750

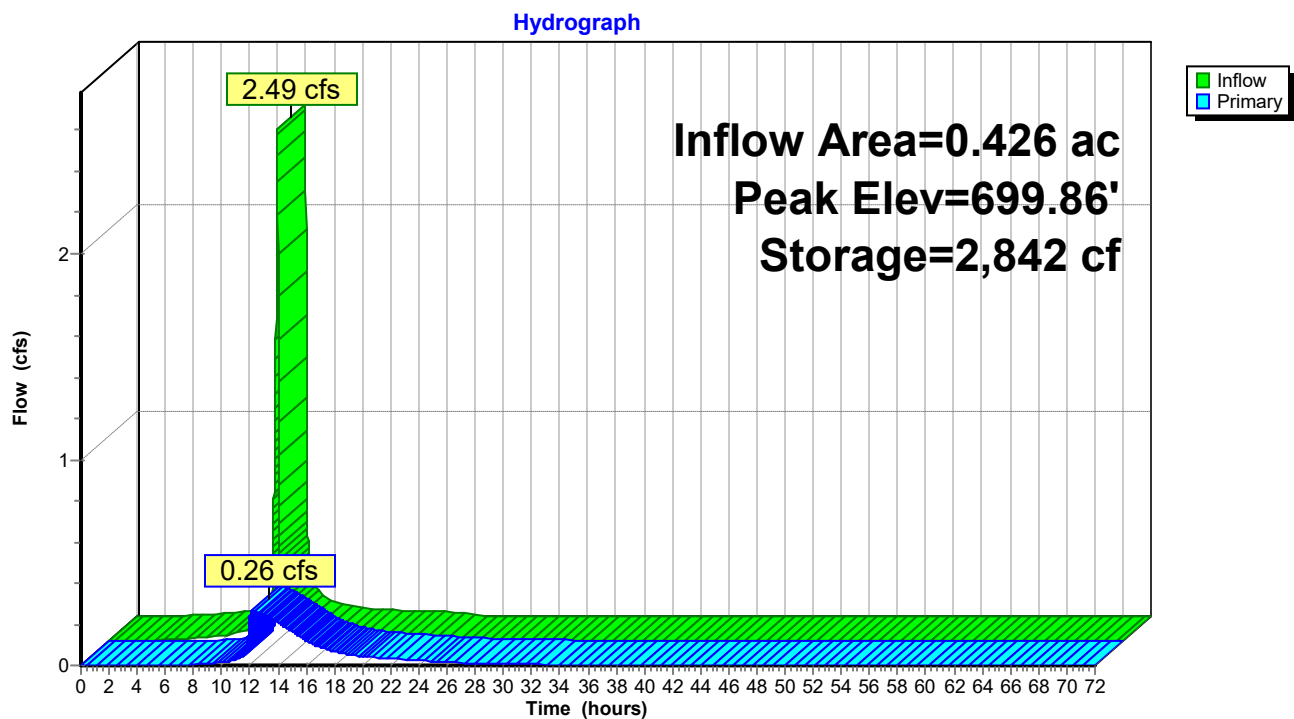
Device	Routing	Invert	Outlet Devices
#1	Primary	699.30'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Device 1	699.30'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.26 cfs @ 12.30 hrs HW=699.86' TW=0.00' (Dynamic Tailwater)

↑ **1=Orifice/Grate** (Passes 0.26 cfs of 1.14 cfs potential flow)

↑ **2=Orifice/Grate** (Orifice Controls 0.26 cfs @ 3.00 fps)

Pond PG-1B: Porous gravel section



Proposed Condition Model 2 - Renaissance

Type II 24-hr 25-year Rainfall=4.18"

Prepared by CHA Consulting, Inc

Printed 9/14/2026

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Page 35

Summary for Pond SW-P: Swale

Inflow Area = 1.563 ac, 9.72% Impervious, Inflow Depth = 2.27" for 25-year event
 Inflow = 6.55 cfs @ 11.96 hrs, Volume= 0.296 af
 Outflow = 5.05 cfs @ 12.01 hrs, Volume= 0.236 af, Atten= 23%, Lag= 3.0 min
 Primary = 5.05 cfs @ 12.01 hrs, Volume= 0.236 af
 Routed to Link DA-1 : DA-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 699.08' @ 12.01 hrs Storage= 0.096 af

Plug-Flow detention time= 132.2 min calculated for 0.236 af (80% of inflow)
 Center-of-Mass det. time= 48.2 min (871.0 - 822.8)

Volume	Invert	Avail.Storage	Storage Description
#1	697.25'	0.277 af	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (acre-feet)
697.25	0.000
697.75	0.005
698.25	0.023
698.75	0.060
699.25	0.115
699.75	0.188
700.25	0.277

Device	Routing	Invert	Outlet Devices
#1	Primary	698.75'	10.0' long + 2.0 ' SideZ x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=5.04 cfs @ 12.01 hrs HW=699.08' TW=0.00' (Dynamic Tailwater)

↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 5.04 cfs @ 1.46 fps)

Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

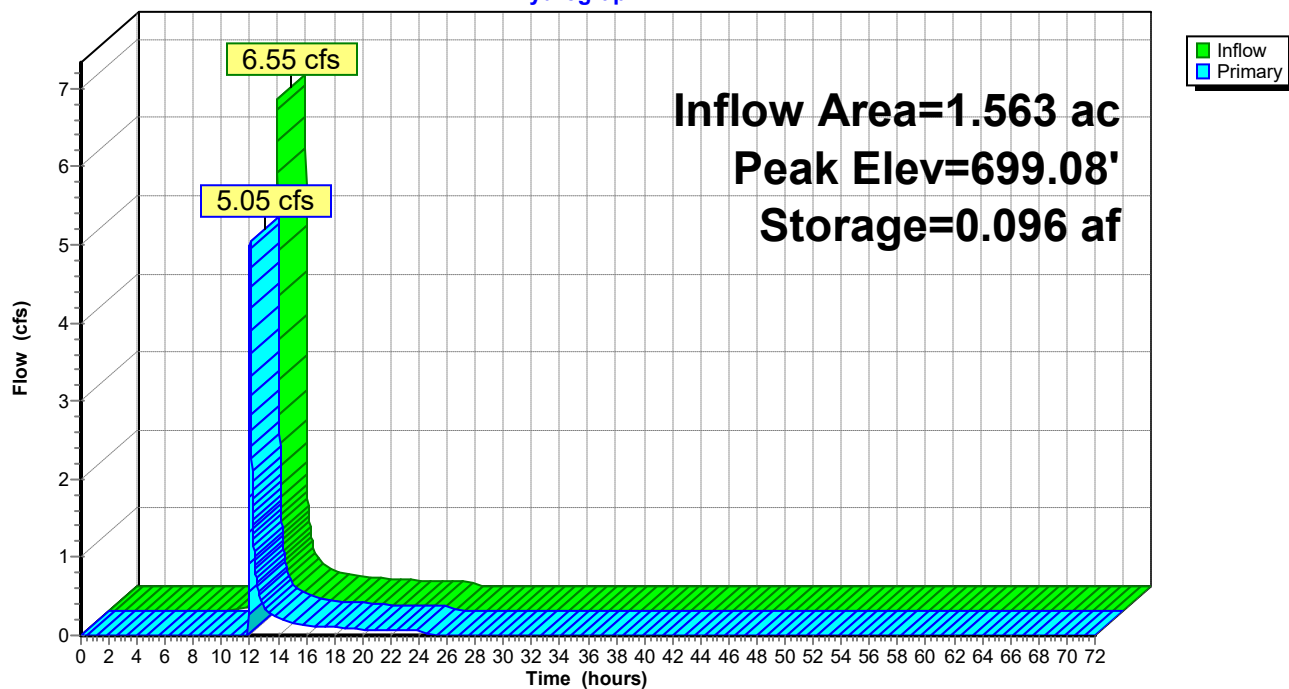
Type II 24-hr 25-year Rainfall=4.18"

Printed 9/14/2026

Page 36

Pond SW-P: Swale

Hydrograph



Proposed Condition Model 2 - Renaissance

Prepared by CHA Consulting, Inc

HydroCAD® 10.20-7a s/n 00409 © 2025 HydroCAD Software Solutions LLC

Type II 24-hr 25-year Rainfall=4.18"

Printed 9/14/2026

Page 37

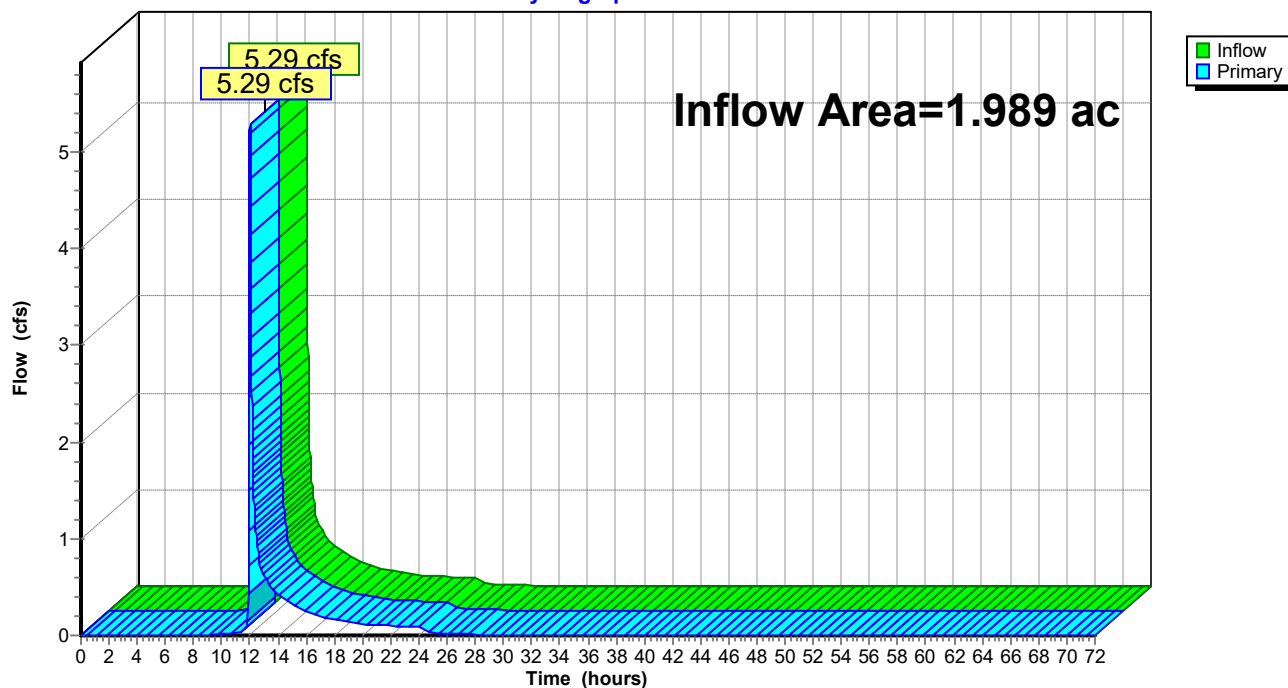
Summary for Link DA-1: DA-1

Inflow Area = 1.989 ac, 16.89% Impervious, Inflow Depth = 2.17" for 25-year event
Inflow = 5.29 cfs @ 12.01 hrs, Volume= 0.359 af
Primary = 5.29 cfs @ 12.01 hrs, Volume= 0.359 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link DA-1: DA-1

Hydrograph



APPENDIX F

Runoff Reduction and Water Quality Volume Computations

NOI QUESTIONS

#	NOI Question	Reported Value	
		cf	af
28	Total Water Quality Volume (WQv) Required	2155	0.049
30	Total RRV Provided	974	0.022
31	Is RRV Provided $\geq$ WQv Required?	No	
32	Minimum RRV	392	0.009
32a	Is RRV Provided $\geq$ Minimum RRV Required?	Yes	
33a	Total WQv Treated	1181	0.027
34	Sum of Volume Reduced & Treated	2155	0.049
35	Is Sum RRV Provided and WQv Provided $\geq$ WQv Required?	Yes	

Step 2 - Calculate Water Quality Volume

Is this project subject to Section 4.3 of the NYS Design Manual for Enhanced Phosphorus Removal? No

What is the nature of this construction project? Redevelopment with increase in impervious area

Design Point: 1
P= 1.00 inches Enter 90% Rainfall Event as P

Calculate Required WQv						
Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	SMP Description
1	1.56	0.37	23	0.26	1,476	Dry Swale
2	0.43	0.18	43	0.44	679	Sheet Flow to Grass Filter Strip
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
Total	1.99	0.55	28	0.30	2155	Required WQv

Steps 3 and 5 - Apply RR Techniques and Standard SMPs

Runoff Reduction Volume and Treated Volumes						
	Runoff Reduction Techniques/Standard SMPs		Total Contributing Area	Total Contributing Impervious Area	WQv Reduced (RRv)	WQv Treated
			(acres)	(acres)	(cf)	(cf)
RR Techniques	Conservation of Natural Areas	RR-1	0.00		0	
	Sheet Flow to Riparian Buffer/Filter Strip	RR-2	0.43	0.18	679	
	Tree Planting/Tree Pit/Tree Trench	RR-3	0.00	0.00	0	
	Disconnection of Rooftop Runoff	RR-4		0.00	0	
	Vegetated Swale	RR-5	0.00	0.00	0	
	Rain Garden	RR-6	0.00	0.00	0	
	Stormwater Planter	RR-7	0.00	0.00	0	
	Rainwater Harvesting Systems	RR-8	0.00	0.00	0	
	Porous Pavement	RR-9	0.00	0.00	0	
	Green Roof (Extensive & Intensive)	RR-10	0.00	0.00	0	
	Stream Daylighting	RR-11				
Standard SMPs w/ RRV Capacity	Infiltration Trench	I-1	0.00	0.00	0	0
	Infiltration Basin	I-2	0.00	0.00	0	0
	Dry Well	I-3	0.00	0.00	0	0
	Underground Infiltration System	I-4	0.00	0.00	0	0
	Infiltration Bioretention	F-4	0.00	0.00	0	0
	Filtration Bioretention	F-5	0.00	0.00	0	0
	Bioslope	F-6	0.00	0.00	0	0
	Dry swale	O-1	1.56	0.37	295	1,181
Standard SMPs	Micropool Extended Detention	P-1	0.00	0.00		0
	Wet Pond	P-2	0.00	0.00		0
	Wet Extended Detention	P-3	0.00	0.00		0
	Multiple Pond System	P-4	0.00	0.00		0
	Shallow Wetland	W-1	0.00	0.00		0
	Extended Detention Shallow Wetland	W-2	0.00	0.00		0
	Pond/Wetland System	W-3	0.00	0.00		0
	Pocket Wetland	W-4	0.00	0.00		0
	Gravel Wetland	W-5	0.00	0.00		0
	Surface Sand Filter	F-1	0.00	0.00		0
	Underground Sand Filter	F-2	0.00	0.00		0
	Perimeter Sand Filter	F-3	0.00	0.00		0
	Wet Swale	O-2	0.00	0.00		0
Alt. SMPs	Flow Based Alternative Practice	-	0.00	0.00		0
	Volume Based Alternative Practice	-				
Totals by RR Technique →			0.43	0.18	679	
Totals by Standard SMP w/RRV →			1.56	0.37	295	1,181
Totals by Standard SMP →			0.00	0.00		0
Totals by Alternative SMP →			0.00	0.00		0

Steps 3 and 5 - Apply RR Techniques and Standard SMPs

Totals (RR Techniques + all SMPs) →	1.99	0.55	974	1,181
--------------------------------------	------	------	-----	-------

Step 4 - Calculate Minimum RRv Required

Enter the Soils Data for the site

Hydrologic Soil Group	Acres	S
A		55%
B		40%
C	0.06	30%
D	0.49	20%
Total Area	0.55	

Calculate the Minimum RRv

S =	0.21	
Impervious =	0.55	<i>acres</i>
Precipitation	1.00	<i>inches</i>
Rv	0.95	
Minimum RRv	0.009	<i>af</i>
	392	<i>cf</i>

Sheet Flow to Grass Filter Strip (RR-3)

Design Point:	1						
Enter Site Data For Drainage Area to be Reduced							
Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (cf)	Precipitation (in)	Description
2	0.43	0.18	43	0.44	679	1.00	Sheet Flow to Grass Filter Strip
Design Criteria							
Is the riparian buffer delineated and permanently protected through establishment of a legal conservation easement?						Yes	
Is the contributing area a designated hotspot?						No	
Is a pretreatment pea gravel diaphragm proposed along the upgradient edge of the buffer?						Yes	
Is runoff entering the buffer as overland sheet flow or a flow spreader proposed upgradient of the buffer?						Yes	
Enter the total length of contributing flow path (ft)						20	
Enter the length of contributing flow path from impervious surfaces (ft)						20	
Enter the slope of contributing flow path (%)						1	
Minimum buffer length based on contributing flow path slope (ft)						35	
Enter the slope for the first 10 ft of the buffer (%)						2	
Sizing Criteria							
			Value	Units	Notes		
Enter Travel Time through Buffer			<i>T</i>	6	min		
Enter 2-yr 24-hr Rainfall Depth			<i>P</i>	2.32	inch		
Enter Overall Buffer Slope			<i>S</i>	0.02	ft/ft		
Enter Manning's Coefficient for Buffer			<i>n</i>	0.24			
Calculated Minimum Length of Buffer			<i>L</i>	28	ft		
Minimum Length of Buffer			<i>L</i>	35	ft		
Is the buffer within HSG C or D soils?				Yes			
Required Length of Buffer			<i>L</i>	40	ft		
Enter Provided Length of Buffer			<i>L</i>	40	ft		
Calculate Runoff Reduction							
RRv Provided		679	cf				

Sheet Flow to Grass Filter Strip (RR-3)

Total Area	0.43	acres
Total Impervious	0	acres
Total RRv Provided	679	cf

Dry Swale (O-1)

Design Point:	1						
Enter Site Data For Drainage Area to be Treated by Practice							
Drainage Area Number	Contributing Area (Acres)	Impervious Area (Acres)	Percent Impervious %	Rv	WQv (ft³)	Precipitation (in)	Description
1	1.56	0.37	23	0.26	1,476	1.00	Dry Swale
Design Criteria							
Select HSG			C				
Is the contributing area to the practice a designated hotspot?			No				
Is the practice the first in series for treatment of a Level 1 (Infiltration Restricted) hotspot?			No				
Is contributing area greater than 5 acres?			No				
Enter depth to seasonal high water table (ft)			4				
Enter depth to bedrock (ft)			6.5				
Enter pretreatment volume provided (cf)			1344				
Enter depth of filter media (inches)			30				
Enter depth of drainage layer (inches)			10				
Is an underdrain proposed?			Yes				
Sizing Criteria							
		Value	Units	Notes			
Enter Bottom Width		b	6.00	ft			
Enter Side Slopes		X:1	3.00	:1			
WQv Maximum Flow Depth		d	1.50	ft			
WQv Flow Top Width		Wwqv	15.00	ft			
Channel Area		Awqv	15.75	sf			
Required Channel Length		Lr	94.00	ft			
Enter Provided Channel Length		Lp	330.00	ft			
Channel Volume Provided		Vc	5197.50	cf			
Enter Check Dam Height		Ch	1.00	ft			
Check Dam Spacing		Cs	67.00	ft			
Number of Check Dams Required		C	5.00				
2-yr 24-hr Flow Depth		d2	0.08	ft			
2-yr Storm Flow Top Width		W2	6.48	ft			
Area of 2-yr 24-hr Flow		A2	0.50	sf			
2-yr Wetted Perimeter		Pw2	6.50	ft			
Enter Mannings Coef.		n	0.24				
Enter Longitudinal Slope		S	0.02	ft/ft			
2-yr Velocity		V	0.14	fps			
Enter 10-yr Freeboard			0.50	ft			
Determine Runoff Reduction							
RRv Provided			295	cf			
WQv Treated			1,181	cf	This is the portion of the WQv that is not reduced/infiltrated		

Dry Swale (O-1)

Total Area	1.56	acres
Total Impervious	0	acres
Total RRv Provided	295	cf
Total WQv Provided	1,181	cf

APPENDIX G

Grading and Drainage Plan and ESC Plan and Details



RENAISSANCE BESS A LL
RENAISSANCE BESS B LL
RENAISSANCE BESS C LL
RENAISSANCE BESS D LL
370 YOUNGS RD
AMHERST, NY 14221

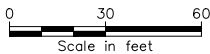
FOR PERMIT ONLY
NOT FOR
CONSTRUCTION

[illegible]

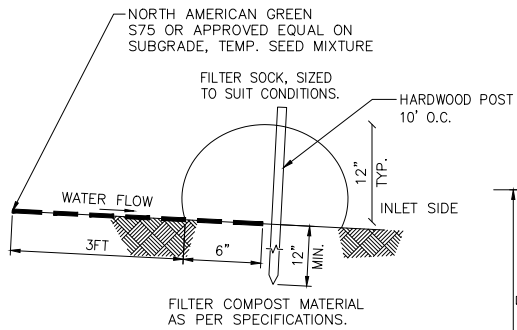
GRADING AND EROSION AND SEDIMENT CONTROL PLAN

Designed By: JM	Drawn By: JO	Checked By: JR
Issue Date: 09/17/26	Project No.: 113192	Scale: AS SHOWN

Drawing No.:
C-200

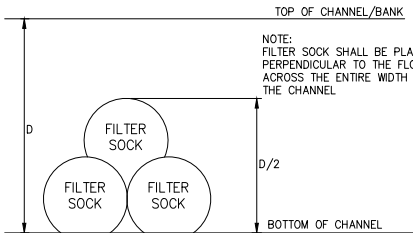


File: V:\PROJECTS\ANYK8\113192.000\09_DESIGN\DRAWINGS\01_SHEETS\C-100 ESC AND GRADING PLANDWG
Saved: 9/16/2026 2:04:12 PM Plotted: 9/16/2026 2:04:43 PM Current User: Ordway, Jackson LastSavedBy: 9237



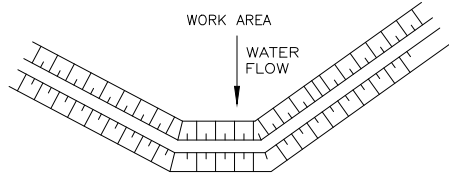
NOTES:

1. ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS.
2. ALL FILTER SOCKS SHALL BE 12" DIAMETER OR LARGER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTER BERM IN A FUNCTIONAL CONDITION AT ALL TIMES AND IT SHALL BE ROUTINELY INSPECTED.
4. WHERE THE BERM REQUIRES REPAIR, IT WILL BE ROUTINELY REPAIRED.
5. THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE BERM WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE BERM, OR AS DIRECTED BY THE OWNERS.
6. THE COMPOST FILTER BERM WILL BE REMOVED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE OWNERS.
7. INSTALL PERPENDICULAR TO FLOW.

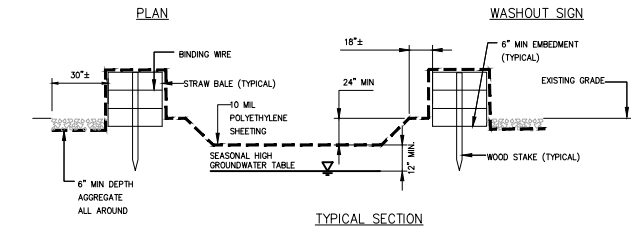
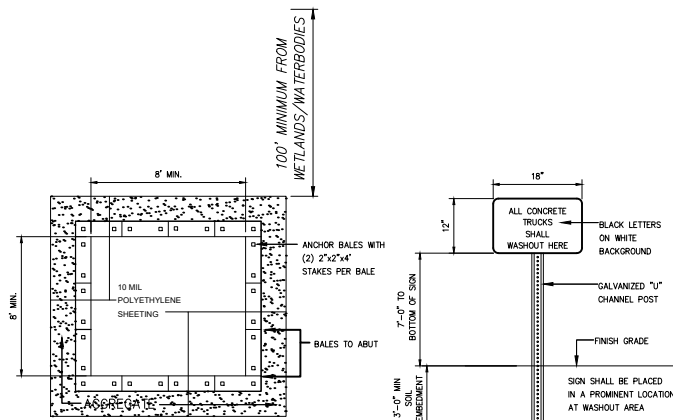


CHANNEL PLACEMENT

- MAINTENANCE NOTES:
1. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
 2. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE AND DISPOSED OF IN ACCORDANCE WITH THE SWPPP.
 3. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED IN THE MANNER REQUIRED BY THE MANUFACTURER OR REPLACED WITHIN 24 HOURS OF INSPECTION NOTIFICATION.
 4. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTO-DEGRADABLE FILTER SOCKS AFTER 1 YEAR. POLY-PROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
 5. UPON STABILIZATION OF THE AREA CONTRIBUTORY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK SHALL BE REMOVED. FOR REMOVAL THE MESH CAN BE CUT AND COMPOST SPREAD AS AN ADDITIONAL MULCH TO ACT AS A SOIL SUPPLEMENT.



AT GRADE PLACEMENT



CONCRETE WASHOUT AREA

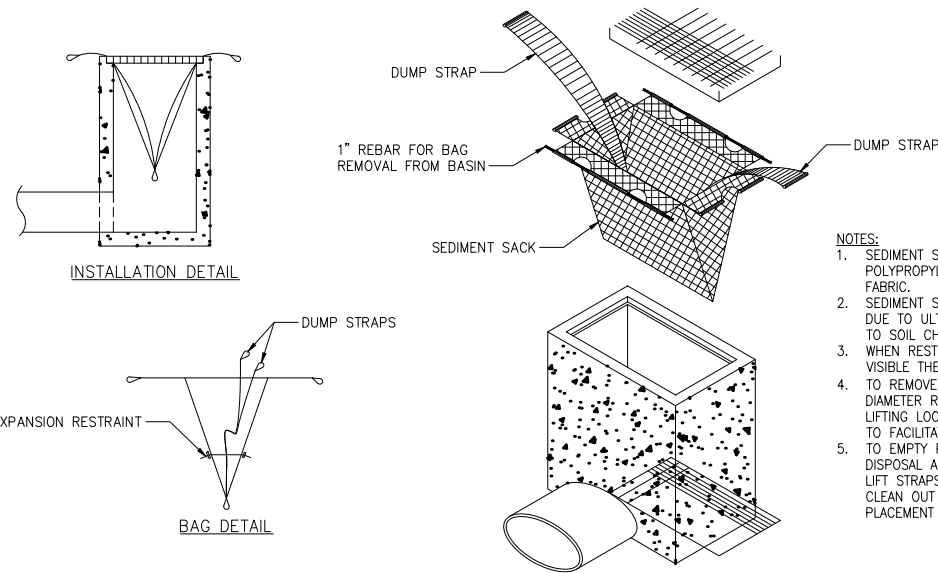
SCALE: N.T.S.

MAINTENANCE NOTES:

1. ALL CONCRETE WASHOUT FACILITIES SHALL BE INSPECTED DAILY. DAMAGED OR LEAKING FACILITIES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY. EXCESS RAINWATER THAT HAS ACCUMULATED OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA SUCH AS A GRASS FILTER STRIP.
2. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 75% OF THE STORAGE CAPACITY OF THE STRUCTURE IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF SITE.
3. DISPOSAL OF THE HARDENED MATERIAL SHALL BE OFF-SITE IN A CONSTRUCTION/DEMOLITION LANDFILL.
4. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE WASHOUT FACILITY.
5. INSPECT THE PROJECT SITE FREQUENTLY TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON-DESIGNATED AREAS.
6. LOCATION(S) TO BE DETERMINED IN THE FIELD BY THE OWNER'S REPRESENTATIVE
7. CONCRETE WASHOUTS SHALL NOT BE LOCATED WITHIN 200' OF ANY KNOWN WELL.

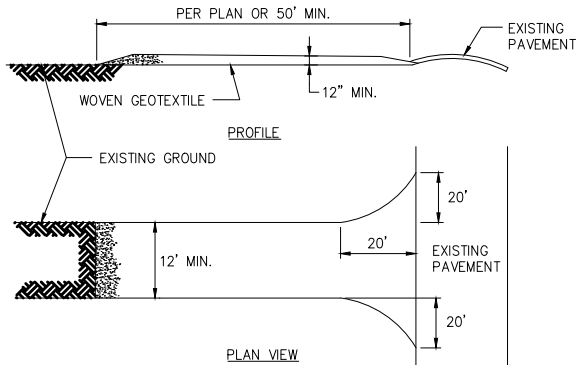
COMPOST FILTER SOCK DETAIL

SCALE: N.T.S.



NOTES:

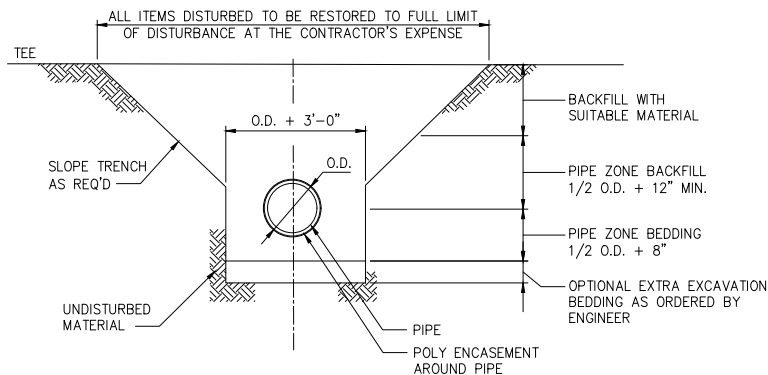
1. SEDIMENT SACK IS TO BE MADE WITH A POLYPROPYLENE WOVEN MONOFILAMENT FABRIC.
2. SEDIMENT SACK SHALL RESIST DEGRADATION DUE TO ULTRAVIOLET LIGHT, BE RESISTANT TO SOIL CHEMICALS, MILDEW AND INSECTS.
3. WHEN RESTRAINT CORD IS NO LONGER VISIBLE THE SACK SHOULD BE EMPTIED.
4. TO REMOVE USE (2) PIECES OF 1\"/>



1. STONE SIZE-USE AASHTO M43 SIZE 3 COARSE AGGREGATE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN 12\"/>
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ACCESS TO SITE.
5. WOVEN GEOTEXTILE FABRIC WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. EXISTING ROAD SIDE DRAINAGE SHALL BE MAINTAINED.
7. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
8. MAINTENANCE-THE ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT OR STONE SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
9. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
10. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

INLET PROTECTION

SCALE: N.T.S.



NOTE:

1. REFER TO SPECIFICATIONS FOR DESCRIPTION OF TRENCH MATERIALS, INCLUDING PIPE ZONE BEDDING, BACKFILL, AND SUITABLE MATERIAL.

TYPICAL TRENCH DETAIL

SCALE: N.T.S.

STABILIZED CONSTRUCTION ACCESS

SCALE: N.T.S.

RENAISSANCE BESS A LLC
RENAISSANCE BESS B LLC
RENAISSANCE BESS C LLC
RENAISSANCE BESS D LLC
370 YOUNGS RD
AMHERST, NY 14221

FOR PERMIT ONLY
NOT FOR
CONSTRUCTION

No.	Submittal / Revision	Appr	By	Date

EROSION AND SEDIMENT CONTROL DETAILS

Designed By: JM	Drawn By: JO	Checked By: JR
Issue Date: 09/17/26	Project No.: 113192	Scale: AS SHOWN

Drawing No.:

C-601

APPENDIX H

Inspection Forms

PERMIT NUMBER: NYR-

PRE-CONSTRUCTION MEETING DOCUMENTS

Project Name _____

GP-0-25-001 Permit No. _____ **Date of Authorization** _____

Name of _____

Owner/Operator _____

General Contractor _____

The Following Information To Be Read By All Person's Involved in The Construction of Stormwater Related Activities:

Site Assessment and Inspections -

- a. The Owner or Operator agrees to have a Qualified Inspector¹ conduct an assessment of the site prior to the commencement of construction. The Qualified Inspector shall certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.
- b. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the owner or operator can stop conducting inspections. The owner or operator shall resume inspections as soon as soil disturbance activities are reinitiated.
- c. For construction sites where soil disturbance activities have been shut down with partial project completion, the owner or operator can stop conducting inspections if all areas disturbed (as of the project shutdown date) have achieved final stabilization and all post-construction stormwater management practices, required for the completed portion of the project, have been constructed in conformance with the SWPPP and are operational.
- d. Following the commencement of construction, site inspections shall be conducted by the Qualified Inspector to ensure that erosion and sediment controls are being maintained in effective operating condition at all times. Inspections shall occur at least: (i) once every 7 calendar days for construction sites where soil disturbance activities are occurring; (ii) twice every 7 calendar days for construction sites where soil disturbance activities are occurring and the Owner/Operator has received authorization to disturb greater than five (5) acres of soil at any one time; (iii) once every thirty (30) calendar days for construction sites where soil disturbance activities have been temporarily suspended and temporary stabilization measures have been applied to all disturbed areas; and (iv) for construction sites where soil disturbance activities have been shut down with partial project completion, the Qualified Inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization, and all post-construction stormwater management practices for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.
- e. The owner or operator shall notify the Regional Office stormwater contact person in writing prior to reducing the frequency of any inspections.

- f. The Owner/Operator shall maintain a record of all inspection reports in the site log book. The site log book shall be maintained on site and be made available to the permitting authorities upon request. Prior to the commencement of construction,² the Owner/Operator shall certify in the site log book that the SWPPP is prepared in accordance with the State's standards and meets all Federal, State and local erosion and sediment control requirements.
- g. Prior to filing of the Notice of Termination or the end of permit term, the Owner/Operator shall have the Qualified Inspector perform a final site inspection. The Qualified Inspector shall certify that the site has undergone final stabilization³ 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.

¹"Qualified Inspector" means a person knowledgeable in the principles and practice of erosion and sediment controls, such as a Certified Professional in Erosion and Sediment Control (CPESC), soil scientist, licensed Professional Engineer (PE), licensed Landscape Architect, or other Department endorsed individual(s). It may also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), or soil scientist provided that person has training in the principles and practices of erosion and sediment control. Training means that person has received four (4) hours of training endorsed by the Department and shall receive four (4) hours of training every three (3) years after the initial training session.

²"Commencement of construction" means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.

³"Final stabilization" means that all soil disturbance activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established, or equivalent stabilization measures (such as the use of mulches or geotextiles, rock rip-rap or washed/crushed stone) have been employed on all disturbed areas that are not covered by permanent structures, concrete or pavement.

PRE-CONSTRUCTION SITE ASSESSMENT FORM

Inspector Name and Title

Date and Time of Inspection

Qualified Inspector

Qualified Inspector Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the following forms is accurate and complete.

a. Notice of Intent, SWPPP, and Contractors' Certification:

Yes No NA

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | Has a Notice of Intent been filed with the NYS Department of Conservation? |
| ☐ | ☐ | ☐ | Is the SWPPP on-site? Where? _____ |
| ☐ | ☐ | ☐ | Is the Plan current? What is the latest revision date? _____ |
| ☐ | ☐ | ☐ | Have all contractors involved with implementing the erosion and sediment control portions of the SWPPP signed the contractor's certification? |

b. Resource Protection

Yes No NA

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | Are construction limits clearly flagged or fenced? |
| ☐ | ☐ | ☐ | Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, etc. have been flagged for protection. |
| ☐ | ☐ | ☐ | Creek crossings installed prior to land-disturbing activity, including clearing and blasting. |

c. Surface Water Protection

Yes No NA

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | Clean stormwater runoff has been diverted away from areas to be disturbed. |
| ☐ | ☐ | ☐ | Bodies of water located either on site or in the vicinity of the site have been identified and protected. |
| ☐ | ☐ | ☐ | Appropriate practices to protect on-site or downstream surface waters are installed. |

d. Stabilized Construction Entrance

Yes No NA

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed. |
| ☐ | ☐ | ☐ | Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover. |
| ☐ | ☐ | ☐ | Sediment tracked onto public streets is removed or cleaned on a regular basis. |

e. Perimeter Sediment Controls

Yes No NA

- | | | | |
|--------------------------|--------------------------|--------------------------|---|
| ☐ | ☐ | ☐ | Silt fence material and installation comply with the standard drawing and specifications. |
| ☐ | ☐ | ☐ | Silt fences are installed at appropriate spacing intervals |
| ☐ | ☐ | ☐ | Sediment/detention basin was installed |
| ☐ | ☐ | ☐ | Sediment traps and barriers are installed. |

PERMIT NUMBER:

INSPECTION REPORT #__ :

Location

Date and Time of Inspection

Qualified Inspector (name and title)

Qualified Inspector Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the following forms is accurate and complete.

☐ Weekly Inspection

Current Phase of Construction (if applicable):

Estimated Current Total Disturbed Area:

IMMEDIATE ACTION ITEMS / INSPECTION SUMMARY:

It is the responsibility of the Qualified Inspector to notify the owner/operator and appropriate contractor of any corrective actions that need to be taken within one (1) business day of the completion of an inspection. It is the responsibility of the contractor (subcontractor) to begin implementing the corrective actions within one (1) business day of this notification and complete the corrective action within a reasonable time frame. If there are action items from the previous inspection which have not been addressed, so note.

Per the GP-0-25-001, Digital photographs with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions shall be included with each inspection report. The qualified inspector shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The qualified inspector shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. Paper color copies of these digital photographs shall be attached to the inspection report, documenting the completion of the corrective action work within seven (7) calendar days of that inspection.

1. GENERAL HOUSEKEEPING

Includes description of the weather and soil conditions (e.g. dry, wet, saturated) during the time of the inspection, a description of the condition of the runoff at all points of discharge from the construction site (including identification of any discharges of sediments from construction site), inspection for stream/pond turbidity, oil and floating substances, visible oil film, or globules or grease, contractor preparedness for implementation of erosion and sediment control, impact on adjacent property, and dust control.

Yes No

☐☐

Is there immediate action required regarding General Housekeeping?

Notes:

2. EXCAVATION DEWATERING

Includes inspection ensuring that clean water from upstream pool is being pumped to the downstream pool, that sediment laden water from work area is being discharged to a silt-trapping device, and that constructed upstream berm has one-foot minimum freeboard.

Yes No

☐☐

Is there immediate action required regarding Excavation Dewatering?

Notes:

3. INTERCEPTOR DIKES AND SWALES

Includes inspection ensuring that dikes and swales are installed per plan with minimum side slopes 2H:1V or flatter, are stabilized by geotextile fabric, seed, or mulch with no erosion occurring, and that sediment-laden runoff is directed to sediment trapping structure.

Yes No

☐☐

Is there immediate action required regarding an Interceptor Dike or Swale?

Notes:

4. EROSION & SEDIMENT CONTROL

Includes inspection ensuring that erosion and sediment control practices are located and installed correctly, BMPs are maintained per specifications, stockpiles are stabilized and contained, de-watering operations prevent direct discharges to sensitive features, and that clearing and grading operations are divided into stages for large areas. Identification of all erosion and sediment control practices that need repair or maintenance.

Yes No

☐☐

Is there immediate action required regarding Erosion & Sediment Control?

Notes:

5. AREAS OF DISTURBANCE

Includes description and sketch of areas that are disturbed at the time of the inspection and areas that have been stabilized (temporary and/or final) since last inspection.

Yes No

☐☐

Is there immediate action required regarding stabilizing disturbed areas?

Notes:

6. STABILIZED CONSTRUCTION ENTRANCE

Includes inspection ensuring that stone is clean enough to effectively remove mud from vehicles, is installed per standards and specifications, that all traffic use the stabilized entrance to enter and leave site, and that adequate drainage is provided to prevent ponding at entrance.

Yes No

☐☐

Is there immediate action required regarding a Stabilized Construction Entrance?

Notes:

7. REINFORCED SILT FENCE

Includes inspection ensuring that silt fence is installed on contour, 10 feet from toe of slope, joints are constructed by wrapping the two ends together for continuous support, steel posts installed (if applicable), installed on downstream side of slope, maximum 6' intervals with 6 x 6 inch 14 gage wire, fabric is buried minimum of 6 inches, posts are stable, fabric is tight and without rips or frayed areas, and that sediment accumulation is less than 1/3 the height of the silt fence.

Yes No

☐ ☐ Is there immediate action required regarding Silt Fence?

Notes:

8. STONE CHECK DAM

Includes inspection ensuring that stone check dam channels are without erosion (i.e., flow is not eroding soil underneath or around the structure), that check dam is in good condition (i.e., rocks have not been displaced and no permanent pools behind the structure), and that sediment accumulation is less than design capacity.

Yes No

☐ ☐ Is there immediate action required regarding a Stone Check Dam?

Notes:

9. COMPOST FILTER SOCK

Includes inspection ensuring that compost filter sock is anchored in earth with 2"x2" wooden stakes driven 12" into the soil on 10 foot centers on the centerline of the sock. On uneven terrain, effective ground contact can be enhanced by the placement of a fillet of filter media on the disturbed area side of the compost sock. Damaged filter socks shall be replaced or repaired according the manufacturer's recommendations.

Yes No

☐ ☐ Is there immediate action required regarding Compost Filter Sock?

Notes:

10. FILTER FABRIC (DROP) INLET PROTECTION

Includes inspection ensuring that protection is installed with 2-inch x 4-inch wood frame and wood posts, with maximum 3-foot spacing, is buried a minimum of 8 inches and secured to frame/posts with staples at max 8-inch spacing, has posts with 3-foot maximum spacing between posts, has posts that are stable, fabric is tight and without rips or frayed areas, and that sediment accumulation is within design capacity.

Yes No

☐☐

Is there immediate action required regarding Filter Fabric (Drop) Inlet Protection?

Notes:

11. SILTSACK® INLET PROTECTION

Includes inspection ensuring that protection is installed per manufacturers specifications and is maintained per manufacturers recommendations.

Yes No

☐☐

Is there immediate action required regarding the Inlet Protection?

Notes:

12. TEMPORARY SEDIMENT TRAP

Includes inspection ensuring that outlet structure is constructed per the approved plan or drawing, that geotextile fabric has been placed beneath rock fill, and that sediment accumulation is within design capacity.

Yes No

☐☐

Is there immediate action required regarding Temporary Sediment Traps?

Notes:

13.CONCRETE WASHOUT

Includes inspection ensuring that the concrete washout is constructed and maintained per the approved plan or drawing.

Yes No

☐ ☐ Is there immediate action required regarding Concrete Washouts?

Notes:

14.STORMWATER BASIN

Includes inspection ensuring that Permanent Stormwater Basins are installed per plans and specifications.

Yes No

☐ ☐ Is there immediate action required regarding Stormwater Basins?

Notes:

15.CURRENT PHASE OF POST-CONSTRUCTION STORMWATER PRACTICES

Includes inspection of current phase of all post-construction stormwater management practices, identification of all construction that is not in conformance with the SWPPP and technical standards, identify corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices, and to correct deficiencies identified with the construction of post-construction stormwater management practice(s).

Yes No

☐ ☐ Is there immediate action required regarding the current phase of post-construction stormwater management practices?

Notes:

ADDITIONAL NOTES / MODIFICATIONS

--

APPENDIX I

Post Construction Operation and Maintenance

Swale Level 1 Inspection

The Level 1 Inspection focuses on the Drainage Area (SW1), Inlets (SW2), Swale Surface Area (SW3), Vegetation (SW4), and Outlets (SW5). This inspection should be conducted on a regular basis, with an early spring inspection to ensure that the practice has survived the winter, particularly if there has been a significant amount of snow. An inspection during the growing season or in the early fall is also recommended to check on the health of vegetation.

SW 1. Drainage Area

Description: The drainage area sends runoff to and is uphill from the swale. When it rains, water runs off and flows to and along the swale.

Instruction: Look for areas that are uphill from the swale. Consult **Table 2.5.1** below.

Table 2.5.1 SW Drainage Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Bare soil, erosion of the ground (rills washing out the dirt)	☐ Seed and mulch or sod areas of bare soil to establish vegetation. ☐ Fill in erosion areas with soil, compact, and add seed and straw to establish vegetation. ☐ If a rill or small channel is forming, try to redirect water flowing to this area by creating a small berm or adding topsoil to areas that are heavily compacted. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Large areas of soil have been eroded, or larger channels are forming. May require rerouting of flow paths
 ☐ Piles of grass clippings, mulch, dirt, salt, or other materials	☐ Remove or cover piles of grass clippings, mulch, dirt, etc. ☐ Other:
☐ Open containers of oil, grease, paint, or other substances	☐ Cover or properly dispose of materials; consult your local solid waste authority for guidance on materials that may be toxic or hazardous.
	Kick-Out to Level 2 Inspection: Grass on edge of pavement continues to die off for unknown reasons. Swale edge may need to be replaced with other materials (e.g., stone diaphragm).
☐ Grass dying at edge of road	☐ Seed and mulch; add topsoil or compost if needed. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Grass on edge of pavement continues to die off for unknown reasons. Swale edge may need to be replaced with other materials (e.g., stone diaphragm).

SW 2. Inlets

Description: The inlets to a swale are where water flows in. Depending on the design, water can flow in through:

- Ditch, pipe, or curb opening at top of swale: This is the most common approach, where water enters the swale at the top.
- Along the entire edge of the swale: If the swale is along a roadway or parking lot, water may enter along the long side of the swale through defined curb openings or simply by water flowing into the swale from the pavement edge (known as “sheetflow”).

Instruction: Stand in the swale and look for all the places where water flows in. Consult **Table 2.5.2** below for possible problems.

Table 2.5.2 SW Inlets

Problem (Check if Present)	Follow-Up Actions
☐ Inlets or the swale edge are collecting grit, grass clippings, or debris or have grass/weeds growing. Some water may not be getting into the swale. The objective is to have a clear pathway for water to flow into the swale.	☐ Use a flat shovel to remove grit and debris (especially at curb inlets or opening). Parking lots will generate fine grit that will accumulate at these spots. ☐ Pull out clumps of growing grass or weeds, and scoop out the soil or grit that the plants are growing in. ☐ Remove any grass clippings, leaves, sticks, and other debris that is collecting at inlets or along the edge of the swale where water is supposed to enter. ☐ For pipes and ditches, remove sediment and debris that is partially blocking the pipe or ditch opening where it enters the swale. ☐ Dispose of all material properly in an area where it will not re-enter the swale. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Inlets are blocked to the extent that most of the water does not seem to be entering the swale.
 ☐ Some or all of the inlets are eroding so that rills, gullies, and other erosion are present, or there is bare dirt that is washing into the swale.	☐ For small areas of erosion, smooth out the eroded part and apply rock or stone (e.g., river cobble) to prevent further erosion. Usually, filter fabric is placed under the rock or stone. ☐ In some cases, reseeding and applying an erosion control matting can be used to prevent further erosion. Some of these materials may be available at a garden center, but it may be best to consult a landscape contractor. ☐ Other: ☐ Level 2 Inspection: Erosion is occurring at most of the inlets or along much of the swale edge. The inlet design may have to be modified.

SW 3. Swale Surface Area

Description: The swale surface area is the vegetated area where water flows during a storm and also the side slopes that slope down into the swale bottom. Depending on the design, the swale may also contain “check dams,” which are small dams made out of earth, stone, wood, or other materials. The check dams slow down and temporarily pond water as it flows down the swale.

Instruction: Examine the entire swale surface and side slopes. Consult **Table 2.5.3** below for possible problems.

Table 2.5.3 SW Surface Area

Problem (Check if Present)	Follow-Up Actions
☐ Minor areas of sediment, grit, trash, or other debris are accumulating in the swale.	☐ Use a shovel to scoop out minor areas of sediment or grit, especially in the spring after winter sanding materials may wash in and accumulate. Dispose of the material where it cannot re-enter the swale. ☐ If removing the material creates a hole or low area, fill with good topsoil and add seed and straw to re-vegetate. ☐ Remove trash, vegetative debris, and other undesirable materials. ☐ If the swale is densely vegetated, it may be difficult to do the maintenance; check for excessive ponding or other issues described in this section to see if the accumulated material is causing a problem. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Sediment has accumulated more than 3 inches deep and covers 25% or more of the swale surface. ☐ The source of sediment is unknown or cannot be controlled with simple measures.
 ☐ There is erosion in the bottom or on the side slopes. Water seems to be carving out rills as it flows through the swale or on the slopes.	☐ Try filling the eroded areas with clean topsoil, and then seed and mulch to establish vegetation. ☐ If the problem recurs, you may have to use some type of matting, stone (e.g., river cobble), or other material to fill in eroded areas. ☐ If the erosion is on a side slope, fill with soil and cover with erosion-control matting or at least straw mulch after re-seeding. ☐ Kick-Out to Level 2 Inspection: The problem persists or the erosion is more than 3 inches deep and seems to be an issue with how water enters and moves through the swale. ☐ Kick-Out to Level 2 Inspection: The problem does not seem to be caused by flowing water, but a collapse or sinking of the surface (e.g., “sinkhole”) due to some underground problem.
☐ Water does not flow evenly down the length of the swale, but ponds in certain areas for long periods of time (e.g., 72 hours after a storm). The swale does not seem to have “positive drainage.” Check during or immediately after a rain storm.	☐ If the problem is minor (just small, isolated areas), try using a metal rake or other tools to create a more even flow path; remove excessive vegetative growth, sediment, or other debris that may be blocking the flow. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Water ponds in more than 25% of the swale for three days or more after a storm. The issue may be with the underlying soil or the grade of the swale. ☐ Water ponds behind check dams for three days or more after a storm. Check dams may be clogged or not functioning properly.

Table 2.5.3 SW Surface Area

Problem (Check if Present)	Follow-Up Actions
 ☐ Check dams (if present): water is flowing around the edges of check dams, creating erosion or sinkholes on the uphill or downhill side, or the check dams are breaking apart or breaching.	☐ If the problem is isolated to just a few check dams, try simple repairs. ☐ It is very important for the center of each check dam (where most of the water flows) to be lower (by at least several inches) than the edges of the check dams where they meet the side slopes. Also, the check dams should be keyed into side slopes so water does not flow between the check dam and side slope. ☐ Use a level to check the right check-dam configuration, as noted above. Repair by moving around stone, filling and compacting soil, or adding new material so that water will be directed to the center of the check dam instead of the edges. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Many check dams are impacted and/or the problem seems to be a design issue with height, spacing, shape, or materials used to construct them.

SW 4. Vegetation

Description: The health of vegetation within the swale is perhaps the most critical maintenance item for the property owner or responsible party. Many vegetated swales become overgrown, and “desirable” vegetation becomes choked out by weeds and invasive plants. It is important to know what the swale is supposed to look like and what plants seem to be thriving or doing poorly. Periodic maintenance of vegetation will prevent larger problems that are more difficult and costly to manage.

Instruction: Examine the swale vegetation. Consult **Table 2.5.4** below for possible problems.

Table 2.5.4 SW Vegetation

Problem (Check if Present)	Follow-Up Actions
 ☐ Vegetation is too overgrown to access swale for maintenance activities	☐ Mow or bush-hog the path. ☐ Other:
 ☐ Vegetation requires regular maintenance: pulling weeds, removing dead and diseased plants, adding plants to fill in areas that are not well vegetated, etc.	☐ If you can identify which plants are weeds or not intended to be part of the planting plan, eliminate these, preferably by hand pulling. ☐ If weeds are widespread, check with the local stormwater authority and/or Extension Office about proper use of herbicides for areas connected with the flow of water. ☐ Even vegetation that is intended to be present can become large, overgrown, block flow, and/or crowd out surrounding plants. Prune and thin accordingly. ☐ If weeds or invasive plants have overtaken the whole swale, bush-hog the entire area before seed heads form in the spring. It will be necessary to remove the root mat manually or with appropriate herbicides, as noted above. ☐ Replant with species that are aesthetically pleasing and seem to be doing well in the swale. ☐ Other:
☐ Vegetation is too thin, is not healthy, and there are many spots that are not well vegetated.	☐ Kick-Out to Level 2 Inspection: You are unsure of the original planting design or the vegetation maintenance task is beyond your capabilities of time, expertise, or resources. If you are unsure of the health of the vegetation (e.g. salt damage, invasives, which plants are undesirable) or the appropriate season to conduct vegetation management, consult a landscape professional before undertaking any cutting, pruning, mowing, or brush hogging.
	☐ The original plants are likely not suited for the actual conditions within the swale. If you are knowledgeable about plants, select and plant more appropriate vegetation (preferably native plants) so that almost the entire surface area will be covered by the end of the second growing season. ☐ Other:
	☐ Kick-Out to Level 2 Inspection: For all but small practices (e.g., in residential yards), this task will likely require a landscape design professional or horticulturalist.

SW 5. Outlets

Description: These are where water leaves the swale when it fills up or where water reaches the downstream end of the swale. There may be a small stone apron or rock dam here or even an outlet grate.

Instruction: Examine outlets that release water out of the swale. Consult **Table 2.5.5** below for possible problems.

Table 2.5.5 SW Outlets

Problem (Check if Present)	Follow-Up Actions
☐ Outlet is obstructed with mulch, sediment, debris, trash, etc.	☐ Remove the debris and dispose of it where it cannot re-enter the swale. ☐ Other: ☐ Kick-Out to Level 2 Inspection: Outlet is completely clogged or obstructed; there is too much material to remove by hand or with simple hand tools.

2.6. Tree Planting

Tree Planting Actions for Maintenance

Key actions to take for tree planting maintenance include the following:

- TP1. Watering
- TP2. Mulch
- TP3. Pruning
- TP4. Disease or pests

Note: This is a simple, “non-structural” practice and, as such, maintenance tasks are similar to any landscape maintenance. Tree planting can involve individual trees or more, such as reforesting a riparian buffer.

For this type of practice, inspection is part of maintenance to check on the health of the trees.

Tree Planting Level 1 Inspection

The Level 1 Inspection goes hand in hand with active maintenance and includes watering (TP1), mulching (TP2), and Pruning (TP3). Watering should occur during the growing season. Mulching and pruning occurs once a year in the spring and early spring, respectively.

TP 1. Watering

Description: Proper water management is perhaps the most crucial maintenance activity to ensure survival of newly planted trees. Watering is essential during periods of drought, while over watering can be fatal. Watering options include regular or soaker hoses, sprinklers, buckets, drip irrigation, or installation of larger capacity watering tanks for irrigation systems. Consult the maintenance plan for instructions on the timing, volume, and method of watering that is appropriate for the specific species of trees.

Instruction: Inspect the trees to determine whether they need watering. Consult **Table 2.6.1** below.

Table 2.6.1 TP Watering

Problem (Check if Present)	Follow-Up Actions
☐ Soil is not moist to the touch and/or it has not rained in a week, and leaves/needles are starting to appear wilted/dry.	☐ Water trees deeply and slowly near the base. Soaker hoses and drip irrigation work best for deep watering of trees and shrubs. ☐ Other:



Figure 2.6.1. Key Areas for Inspection and Maintenance for Tree Planting

3.5. Swales – Level 2 Inspections and Triggers for Level 3

The most likely triggers for a Level 3 Inspection for Swales are:

- Standing water, swale not draining properly (not applicable to wet swales)
- Severe erosion around or under check dams
- Large area of vegetation overrun with weeds and/or invasive species
- Severe erosion at outlet that requires redesign

Table 3.5.1 Level 2 Inspection: SWALE

Recommended Repairs	Triggers for Level 3 Inspection
<i>Observed Condition: Water Stands on Surface for More than 72 Hours after Storm</i>	
Condition 1: Small pockets of standing water Use a soil probe or auger to examine the soil profile. If isolated areas have accumulated grit, fines, or vegetative debris or have compacted soil, try scraping off top 3 to 6 inches of soil and replacing with clean material. Also check to see that surface is level and water is not ponding selectively in certain areas. Condition 2: Standing water is widespread or covers entire surface Requires diagnosis and resolution of problem: Bad or compacted soil Filter fabric on the swale bottom Too much sediment/grit washing in from drainage area? Too much ponding depth? Longitudinal slope is too flat?	• Soil is overly compacted or clogged and problem is not evident from Level 2 inspection. • Level 2 inspection identifies problem, but it cannot be resolved easily or is associated with the original design of the practice (e.g., not enough slope down through the swale).
<i>Observed Condition: Vegetation is predominantly weeds and invasive species</i>	
For a small area, weed and dig up invasive plants. Replant with natives or plants from original planting plan. If longer than 100 feet, develop a new planting plan and have it professionally reviewed.	• Vegetation deviates significantly from original planting plan; swale has been neglected and suffered from deferred maintenance. • Owner/responsible party does not know how to maintain the practice. • For large area, hire a professional to develop a grading plan and develop a planting plan.

Observed Condition: Severe erosion of check dams, inlets, swale bottom, or side slopes

	• Erosion (rills, gullies) is more than 12-inches deep at inlets or the swale bottom or more than 3-inches deep on side slopes. • Flow paths from the drainage area are higher than expected, such that the swale needs to be redesigned to handle higher flow rates and velocities.
--	--

Observed Condition: Significant sediment accumulation, indicating an uncontrolled source of sediment

Condition 1: Isolated areas of sediment accumulation, generally less than 3-inches deep. Sediment source may be from a one-time or isolated event. Remove accumulated sediment and top 2 to 3 inches of swale soil media; replace with clean material. Check drainage area for any ongoing sources of sediment. Condition 2: Majority of the surface is caked with “hard pan” (thin layer of clogging material) or accumulated sediment that is 3-inches deep or more. This can be caused by improper construction sequence (drainage area not fully stabilized prior to installation of the swale) or another chronic source of sediment in the drainage area. Augering several holes down along the swale can indicate how severe the problem is; often the damage is confined to the first several inches of soil. Removing and replacing this top layer (or to the depth where sediment incursion is seen in auger holes) can be adequate, as long the problem does not recur.	• More than 2 inches of accumulated sediment cover 25% or more of the swale surface area. • “Hard pan” of thin, crusty layer covers majority of swale surface area and seems to be impeding flow of water along the swale. • New sources of sediment seem to be accumulating with each significant rainfall event.
---	--

APPENDIX J

Notice of Intent (NOI) / SPDES Permit GP-0-25-001)



Construction General Permit (CGP) Electronic Notice of Intent (eNOI) GP-0-25-001

version 1.19

(Submission #: HQP-QGC6-RCDPA, version 1)

Details

Originally Started By Jackson Ordway

Alternate Identifier Carson Power Renaissance Battery Energy Storage Systems
Project—Region 9

Submission ID HQP-QGC6-RCDPA

Status Draft

Form Input

Eligibility

Disturbance Threshold

1. Will the construction activity involve soil disturbances listed in Part I.A.1 of GP-0-25-001?

Yes

1.a. Will any runoff from the site enter a sewer system classified as a combined sewer?

No

1.b. Is this a remediation project being done under a Department approved work plan (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.) with a SWPPP which meets the substantive requirements of GP-0-25-001?

No

1.c. Is the construction activity related to a stormwater discharge that does not require a permit as described in 40 CFR 122.3(e), e.g. non-point source agriculture or silviculture activities?

No

Other SPDES Permits

2. Will the discharge from the construction activity meet all conditions listed in Part I.A.2 of GP-0-25-001?

Yes

Threatened and Endangered Species

3. Will the construction activity potentially adversely affect a species that is endangered or threatened per Part I.A.3.?

No

State Historic Preservation Act (SHPA)

4. Is the construction activity designated by the Commissioner of the Office of Parks, Recreation and Historic Preservation (OPRHP), pursuant to 9 NYCRR §§428.12 or 428.13 as exempt from the SHPA review (see Attachment 2 of the Letter of Resolution between NYSDEC and OPRHP, dated January 9, 2015)?

No

4.a. Will the construction activity:

- a) occur within an archeologically sensitive area indicated on the sensitivity map, or
- b) have the potential to affect a property that is listed or determined to be eligible for listing on the National or State Registers of Historic Places, or
- c) include a new permanent building on the construction site within the following distances from a building, structure, or object that is more than 50 years old and OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined is a historically/archeologically significant building, structure, or object:
 - 1-5 acres of disturbance—20 feet
 - 5-20 acres of disturbance—50 feet
 - 20+ acres of disturbance—100 feet?

No

4.b. Is there documentation at the construction site demonstrating:

a) that the construction activity is not within an archeologically sensitive area indicated on the sensitivity map, and that the construction activity is not immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and

b) that there is no new permanent building to be built on the construction site within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the construction site within those parameters that OPRHP, a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:

- 1-5 acres of disturbance – 20 feet
- 5-20 acres of disturbance – 50 feet
- 20+ acres of disturbance – 100 feet?

Yes

State Environmental Quality Review (SEQR)

5. Is the construction activity subject to SEQR (Part I.A.5.), or the equivalent environmental review from another NYS or federal agency (Part I.A.6.)?

Yes

5.a. Has the owner/operator obtained documentation that the project review pursuant to SEQR, or the equivalent, has been satisfied per Part I.A.5. or I.A.6. of GP-0-25-001?

Yes

Uniform Procedures Act (UPA) Permits

6. Has the owner/operator obtained all necessary UPA permits from NYSDEC, or the equivalent from another NYS or federal agency per Part I.A.7.a. of GP-0-25-001?

Select "Yes" if no UPA permits, or the equivalent, are required for this construction activity.

Yes

Steep Slope

7. Is the construction activity within the watershed of surface waters of the State classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website?

No

Owner/Operator Information

8. Owner/Operator Name

RQC, Ltd.

9. Owner/Operator Contact Person Information

First and Last Name	Phone	E-mail
Christopher Groff	800-828-7840	christopher@rembrandtcharms.com

10. Owner/Operator Mailing Address

370 S YOUNGS RD
WILLIAMSVILLE, NY 14221-7092
USA

11. Is the billing contact different from the Owner/Operator Contact?

No

12. What type of organization is the owner/operator?

Corporation

12.b. Is the owner/operator registered with the Department of State to do business in New York State?

Yes

12.b.i. Department of State ID #

NONE PROVIDED

The Department of State ID can be found using the following link:

[Department of State | Division of Corporations](#)

Site Information**13. Project/Site Name**

Carson Power Renaissance Battery Energy Storage Systems Project

14. Site Address

370 S YOUNGS RD
WILLIAMSVILLE, NY 14221-7092
Erie

DEC Region

9

15. Site Latitude & Longitude

42.955794,-78.72407969999999

Project Details

16. This eNOI submission is for:

A construction activity not part of a common plan of development or sale in accordance with Part I.D.1.a.

17. Does the project type fall under Table 1 or Table 2 of Appendix B of GP-0-25-001? If any portion of the construction activity falls under Table 2, regardless of the size of the disturbance, select "Table 2".

Table 2

18. Consistent with Part III.B.1.c.i. of GP-0-25-001, provide a concise overview of the project. Describe existing and proposed conditions, and include any other relevant information.

The project proposes constructing four 5 MW battery storage systems on pervious gravel areas and conventional gravel areas, as well as dry swales for stormwater management. The porous gravel areas will contain stone sections which NYSDEC have reviewed and approved as an alternative stormwater management practice for National Grid substations. SMPs and ESC measures will be implemented in compliance with NYSDEC regulations.

Enter the total project site acreage, the acreage to be disturbed, and the future impervious area (acreage) within the disturbed area, rounded to the nearest tenth of an acre.

19. Total Site Area (acres)

3.9

20. Total Area to be Disturbed (acres)

2.0

21. Existing Impervious Area to be Disturbed (acres)

0.1

22. Future Impervious Area Within Disturbed Area (acres)

0.6

Nature of the project:

Redevelopment with increase in impervious area

23. Do you plan to disturb more than 5 acres of soil at any one time?

No

24. Indicate the percentage (%) of each Hydrologic Soil Group(HSG) at the site.

A (%)

0

B (%)

0

C (%)

13

D (%)

87

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

Start Date

10/01/2026

End Date

12/31/2026

26. Identify the nearest surface waterbody(ies) to which construction site runoff will discharge.

Ellicott Creek, Lower, and tribs - 0102-0018

27. Type of waterbody identified in question 26?

Stream/Creek Off Site

28. Has the surface waterbody in question 26 been identified as a 303(d) segment in Appendix D of GP-0-25-001?

Yes

29. Is this project located in one of the Watersheds identified in Appendix C of GP-0-25-001?

No

30. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent area?

No

31. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?

Yes

31.a. What is the name of the municipality/entity that owns the separate storm sewer system? If the separate sewer system is owned by an MS4 Operator, enter the MS4 Operator name.

Town of Amherst

32. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?

No

33. Is this property owned by a state authority, state agency, federal government or local government?
No

Required SWPPP Components

General SWPPP Requirements

34. Has a SWPPP been developed in conformance with the requirements in Part III. of GP-0-25-001?
Yes

35. Does the SWPPP demonstrate consideration of the future physical risks due to climate change pursuant to the CRRA, 6 NYCRR Part 490, and associated guidance per Part III.A.2. of GP-0-25-001?
Yes

36. 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

37. Which version of the NYS Stormwater Management Design Manual was used to develop the SWPPP?
2024

37.a. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the NYS Stormwater Management Design Manual?
Yes

SWPPP Preparer

39. The Stormwater Pollution Prevention Plan (SWPPP) was prepared by:
Professional Engineer (P.E.)

40. Name of the person who prepared the SWPPP
Joseph P. Romano

41. SWPPP Preparer Organization Name
CHA Consulting, Inc.

42. SWPPP Preparer Contact Information

First and Last Name	Phone	E-mail
Joe Romano	518-453-4750	jromano@chasolutions.com

43. SWPPP Preparer Address

3 Winners Cir
3 Winners Cir
Albany, NY 12205

Download SWPPP Preparer Certification Form

Please take the following steps to prepare and upload your preparer certification form:

- 1) Click on the link below to download a blank certification form
- 2) The certified SWPPP preparer should sign this form
- 3) Upload the completed form

[Download SWPPP Preparer Certification Form](#)

44. Please upload the SWPPP Preparer Certification

NONE PROVIDED

Comment

NONE PROVIDED

44.a. Has the SWPPP Preparer Certification Form been signed by the SWPPP preparer in accordance with Part VII.J of GP-0-25-001?

Yes

Erosion & Sediment Control Criteria

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

Yes

Post-Construction Criteria

Site Planning and Soil Restoration

46. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

Roadway Reduction

47. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6 ("Soil Restoration") of the Design Manual.

All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).

Water Quality Criteria

49. Water Quality Sizing Criteria

Total WQv required (acre-feet)	Total RRV provided (acre-feet)	Minimum RRV (acre-feet)	Total WQv provided (acre-feet)	Sum of RRV and WQv provided
0.049	0.022	0.009	0.027	0.049

Water Quantity Criteria

50. Per Section 9.2.1.C.VI and VII of the 2024 Design Manual, is there 0% change to hydrology that increases the discharge rate and volume from the project site?

No

51. Does one of the waiver conditions apply to the channel protection for this construction activity?

Yes

51.a. The need to provide channel protection has been waived because:

Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems.

52. Does one of the waiver conditions apply to the Qp and Qf for this construction activity?

No

Overbank Flood Control Criteria (Qp)

52.b.i. Pre-Development (CFS)

5.46

52.b.ii. Post-Development (CFS)

2.82

Total Extreme Flood Control Criteria (Qf)

52.b.iii. Pre-Development (CFS)

10.81

52.b.iv. Post-Development (CFS)

8.38

Operation and Maintenance

53. Has a long-term Operation and Maintenance Plan for the post-construction stormwater management practice(s) been developed?

Yes

53.a. Identify the entity responsible for the long-term Operation and Maintenance.

RQC, Ltd.

Post-Construction SMP Identification

54. Post-Construction RR Techniques and Standard SMPs

RR Techniques and SMPs	Contributing Impervious Area (acres)	Total Contributing Area (acres)
Dry Swale (O-1)	0.37	
Sheet Flow to Riparian Buffers or Filter Strips (RR-2)	0.18	0.43

55. Alternative SMPs

Type of Alternative SMP	Manufacturer of the Alternative SMP	Name of the Alternative SMP	Contributing Impervious Area (acres)
Other: Porous Gravel Section	N/A	Porous Gravel Section	0.18

Other Permits

56. Identify other permits, existing and new, that are required for this project/facility.

None

57. Is this NOI for a change in owner/operator per Part I.G.?

No

MS4 SWPPP Acceptance

59. Will the construction activities be within the municipal boundary(ies) of Traditional Land Use Control MS4 Operator(s) and discharge to the MS4(s)?

Yes

59.a. Which form is required per Part I.D.2.b.ii.?

MS4 SWPPP Acceptance Form

MS4 SWPPP Acceptance Form Download

Download the MS4 SWPPP Acceptance Form from the link below.

[MS4 SWPPP Acceptance Form](#)

60. MS4 Acceptance or No Jurisdiction Form Upload

NONE PROVIDED

Comment

NONE PROVIDED

60.a. Has the form been signed by the principal executive officer or ranking elected official—or duly authorized representative of that person—in accordance with Part VII.J. and submitted along with this NOI?

Yes

Owner/Operator Certification

Owner/Operator Certification Form Download

Download the Owner/Operator Certification Form by clicking the link below.

[Owner/Operator Certification Form](#)

61. Upload Owner/Operator Certification Form

NONE PROVIDED

Comment

NONE PROVIDED

61.a. Has the Owner/Operator Certification Form from Appendix J been signed by the owner/operator, or a representative of the owner/operator in accordance with Part VII.J of GP-0-25-001 and uploaded to the eNOI?

Yes

Additional Project Information

62. Enter any additional pertinent project information in the text box below.

NONE PROVIDED



SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

Carson Power Renaissance Battery Energy Storage Systems Project

eNOI Submission ID:

HQP-QGC6-RCDPA

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Joseph

P.

Romano

SWPPP Preparer First Name

MI

SWPPP Preparer Last Name

Signature

9-18-26

Date

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.)

Project/Site Name: Carson Power Renaissance Battery Energy Storage Systems Project

eNOI Submission ID: HQP-QGC6-RCDPA

eNOI Submitted by: ☐ Owner/Operator ☒ SWPPP Preparer ☐ Other

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name

MI

Owner/Operator Last Name

Signature

Date



Department of
Environmental
Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

1. Owner/Operator Name: RQC, Ltd.

2. Contact Person:

3. Street Address: 370 S YOUNGS RD

4. City/State/Zip: WILLIAMSVILLE, NY 14221

II. Project Site Information

5. Project/Site Name: Carson Power Renaissance Battery Energy Storage Systems Project

6. Street Address: 370 S YOUNGS RD

7. City/State/Zip: WILLIAMSVILLE, NY 14221

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4 Operator:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Street Address:

14. City/State/Zip:

15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name¹:

Title/Position:

Signature:

Date:

VI. Additional Information

¹ Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.



Department of
Environmental
Conservation

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (NYSDEC)

SPDES GENERAL PERMIT
FOR STORMWATER DISCHARGES

From

CONSTRUCTION ACTIVITY

Permit No. GP-0-25-001

Construction General Permit (CGP)

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

Effective Date: January 29, 2025

Expiration Date: January 28, 2030

Scott E. Sheeley

Chief Permit Administrator

A handwritten signature in blue ink that reads "Scott E. Sheeley". The signature is written in a cursive style with a long, sweeping underline.

Authorized Signature

JAN. 29, 2025

Date

Address: NYSDEC
Division of Environmental Permits
625 Broadway, 4th Floor
Albany, N.Y. 12233-1750

PREFACE

Pursuant to Section 402 of the Clean Water Act (CWA), and 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), *stormwater discharges* from certain *construction activities* are unlawful unless they are authorized by a National Pollutant Discharge Elimination System (NPDES) permit or by a state permit program. New York State administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7 and 8, and Article 70, as well as 6 NYCRR Parts 621 and 750.

Construction activities constitute construction of a *point source* and, therefore, pursuant to ECL sections 17-0505, 17-0701, and 17-0803, the *owner or operator* must have coverage under a SPDES permit prior to *commencement of construction activities*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

***Note: The italicized words/phrases within this permit are defined in Appendix A.**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPDES CONSTRUCTION GENERAL PERMIT (CGP) GP-0-25-001
FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES**

Table of Contents

Part I. How to Obtain Coverage and General Requirements	5
A. Eligibility Requirements	5
B. Types of <i>Discharges</i> Authorized	9
C. Prohibited <i>Discharges</i>	10
D. Electronic Notice of Intent (eNOI) Submittal.....	10
E. General Requirements for <i>Owners or Operators</i> with Permit Coverage	14
F. Permit Coverage for <i>Discharges</i> Authorized Under GP-0-20-001	18
G. Change of <i>Owner or Operator</i>	19
Part II. Water Quality-Based Effluent Limitations	20
A. Maintaining Water Quality	20
B. Effluent Limitations Applicable to <i>Discharges</i> from <i>Construction Activities</i>	20
C. Post-Construction Stormwater Management Practice (SMP) Requirements ...	23
Part III. Stormwater Pollution Prevention Plan (SWPPP)	28
A. General SWPPP Requirements	28
B. Required SWPPP Contents	32
C. Required SWPPP Components by Project Type.....	37
Part IV. Inspection and Maintenance Requirements	37
A. General Construction Site Inspection and Maintenance Requirements	37
B. Contractor Maintenance Inspection Requirements	37
C. <i>Qualified Inspector</i> Inspection Requirements.....	38
Part V. How to Terminate CGP Coverage.....	43
A. Electronic Notice of Termination (eNOT) Submittal.....	43
Part VI. Record Retention and Reporting.....	45
A. Record Retention	46
B. Reporting	46
Part VII. Standard Permit Requirements	46
A. Duty to Comply.....	46
B. Need to Halt or Reduce Activity Not a Defense.....	46
C. Penalties	46
D. False Statements	47
E. Re-Opener Clause	47
F. Duty to Mitigate	47
G. Requiring Another General Permit or Individual SPDES Permit.....	47
H. Duty to Provide Information.....	49
I. Extension	49
J. Signatories and Certification	50
K. Inspection and Entry	52
L. Confidentiality of Information.....	53
M. Other Permits May Be Required	53

N.	NYSDEC Orders or Civil Decrees/Judgments.....	53
O.	Property Rights	53
P.	Compliance with Interstate Standards.....	53
Q.	Oil and Hazardous Substance Liability.....	54
R.	Severability.....	54
S.	NYSDEC Approved Forms.....	54
APPENDIX A – Abbreviations and Definitions.....		55
	Abbreviations.....	55
	Definitions.....	56
APPENDIX B – Required SWPPP Components by Project Type.....		64
	Table 1.....	64
	Table 2.....	66
APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal.....		68
APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)		74
APPENDIX E – List of NYSDEC Regional Offices.....		80
APPENDIX F – SWPPP Preparer Certification Form		81
APPENDIX G – MS4 SWPPP Acceptance Form		83
APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form		86
APPENDIX I – MS4 No Jurisdiction Form.....		89
APPENDIX J – Owner/Operator Certification Form		91

Part I. How to Obtain Coverage and General Requirements

To be covered under this permit, the *owner or operator* must meet all eligibility requirements in Part I.A. and follow the requirements for obtaining permit coverage in Part I.D., F., or G.

A. Eligibility Requirements

For a *common plan of development or sale*, the *phase(s)* that meet the eligibility requirements in Part I.A. may obtain coverage under this permit even if other *phase(s)* of the same *common plan of development or sale* do not meet the eligibility requirements and require an individual SPDES permit.

1. The *owner's or operator's construction activities* involve soil disturbances of:
 - a. one or more acres; or
 - b. less than one acre which are part of a *common plan of development or sale* that will ultimately disturb one or more acres; or
 - c. less than one acre where NYSDEC has determined that a SPDES permit is required for *stormwater discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of pollutants to *surface waters of the State*.
 - i. 5,000 square feet or more, but less than one acre, and are in the New York City Watershed located east of the Hudson River, Appendix C Figure 1; or
 - ii. 20,000 square feet or more, but less than one acre, within the municipal boundaries of the City of New York (NYC); or
 - iii. less than 20,000 square feet which are part of a *common plan of development or sale* that will ultimately disturb 20,000 square feet or more, but less than one acre, within the municipal boundaries of NYC; or
 - iv. that creates 5,000 square feet or more of *impervious area* within the municipal boundaries of NYC.

2. *Discharges from the owner's or operator's construction activities* are/were not:

- a. already covered by a different SPDES permit; or
- b. covered under a different SPDES permit that was denied, terminated, or revoked; or
- c. identified in an expired individual SPDES permit that was not renewed; or
- d. required to obtain an individual SPDES permit or another general SPDES permit in accordance with Part VII.K.

3. If *construction activities* may adversely affect a species that is endangered or threatened, the *owner or operator* must obtain a:

- a. permit issued pursuant to 6 NYCRR Part 182 for the project; or
- b. letter issued by NYSDEC of non-jurisdiction pursuant to 6 NYCRR Part 182 for the project.

4. If *construction activities* have the potential to affect an *historic property*, the *owner or operator* must obtain one of the following:

- a. documentation that the *construction activity* is not within an archeological buffer area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant:
 - i. 1-5 acres of disturbance - 20 feet; or
 - ii. 5-20 acres of disturbance - 50 feet; or

- iii. 20+ acres of disturbance - 100 feet.
- b. NYSDEC consultation form sent to OPRHP,¹ and copied to NYSDEC's Agency Historic Preservation Officer (APO), and
 - i. the State Environmental Quality Review Act (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
 - ii. documentation from OPRHP that the *construction activity* will result in No Impact; or
 - iii. documentation from OPRHP providing a determination of No Adverse Impact; or
 - iv. a Letter of Resolution signed by the *owner or operator*, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA).
- c. documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:
 - i. No Affect; or
 - ii. No Adverse Affect; or
 - iii. Executed Memorandum of Agreement.
- d. documentation that SHPA Section 14.09 has been completed by NYSDEC or another state agency.
- 5. If *construction activities* are subject to SEQR, the *owner or operator* must obtain documentation that SEQR has been satisfied.
- 6. If *construction activities* are not subject to SEQR, but subject to the equivalent environmental review from another New York State or federal agency, the

¹ The consultation form can be submitted, along with other project information, through OPRHP's Cultural Resource Information System (CRIS) portal. If submitted through CRIS, paper copies of the consultation form need not be mailed.

Part I.A.6.

owner or operator must obtain documentation that project review, pursuant to a process equivalent to SEQR from another New York State or federal agency, has been satisfied.

7. If *construction activities* require Uniform Procedures Act (UPA) Permits (see 6 NYCRR Part 621) from NYSDEC, or the equivalent from another New York State or federal agency, the *owner or operator* must:
 - a. obtain all such necessary permits; or
 - b. receive notification from NYSDEC pursuant to 6 NYCRR 621.3(a)(4) excepting Part I.A.7.a.
8. *Construction activities* are not eligible if they meet the following criteria in Part I.A.8.a. or b.:
 - a. For linear transportation and linear utility project types, the *construction activities*:
 - i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
 - ii. are undertaken on land with no existing *impervious cover*; and
 - iii. disturb two or more acres of *steep slope*.
 - b. For all other project types, the *construction activities*:
 - i. are within the watershed of *surface waters of the State* classified as AA or AA-S identified utilizing the Stormwater Interactive Map on NYSDEC's website; and
 - ii. are undertaken on land with no existing *impervious cover*; and
 - iii. disturb one or more acres of *steep slope*.

B. Types of *Discharges* Authorized

1. The following *stormwater discharges* are authorized under this permit:
 - a. *Stormwater discharges*, including *stormwater* runoff, snowmelt runoff, and surface runoff and drainage, associated with *construction activity*, are authorized under this permit provided that appropriate *stormwater* controls are designed, installed, and maintained in accordance with Part II. and Part III.
 - b. *Stormwater discharges* from construction support activities at the *construction site* (including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, and borrow areas) if the following requirements are met:
 - i. The support activity is directly related to the *construction site* required to have permit coverage for *stormwater discharges*; and
 - ii. The support activity is not a commercial operation, nor does it serve multiple unrelated *construction sites*; and
 - iii. The support activity does not continue to operate beyond the completion of the *construction activity* at the site it supports; and
 - iv. *Stormwater* controls are implemented in accordance with Part II. and Part III. for *discharges* from the support activity areas.
2. The following non-*stormwater discharges* associated with *construction activity* are authorized under this permit:
 - a. Non-*stormwater discharges* listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “*Discharges* from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; and
 - b. Non-*stormwater discharges* of waters to which other components have not been added that are used in accordance with the *SWPPP* to control dust or irrigate vegetation in stabilized areas; and
 - c. Uncontaminated *discharges* from *dewatering* operations

3. Authorized *discharges of stormwater* or authorized *discharges* of non-*stormwater*, commingled with a *discharge* authorized by a different SPDES permit and/or a *discharge* that does not require SPDES permit authorization, are also authorized under this permit.

C. Prohibited *Discharges*

1. Non-*stormwater discharges* prohibited under this permit include but are not limited to:
 - a. Wastewater from washout of concrete; and
 - b. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials; and
 - c. Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance; and
 - d. Soaps, solvents, or detergents used in vehicle and equipment washing or external building washdown; and
 - e. Toxic or hazardous substances from a spill or other release.

D. Electronic Notice of Intent (eNOI) Submittal

To receive authorization in accordance with Part I.D.3.b., the *owner or operator* must submit a complete eNOI in accordance with the requirements in Part I.D. The eNOI contains questions to: ensure eligibility requirements in Part I.A. have been met; obtain *owner or operator* contact information; obtain the total area to be disturbed and the existing/future *impervious areas* (rounded to the nearest tenth of an acre); confirm *Traditional Land Use Control MS4 Operator* jurisdiction over construction projects; satisfy the EPA eRule requirements; confirm that the Water Quality-Based Effluent Limitations in Part II. have been met; demonstrate consideration of the future risks due to climate change in accordance with Part III.A.2.; and confirm that the other *Stormwater Pollution Prevention Plan (SWPPP)* requirements in Part III. have been met.

1. An eNOI may be submitted for:
 - a. *construction activities* that are not part of a *common plan of development or sale*; or

- b. an entire *common plan of development or sale*; or
 - c. separate *phase(s)* of a *common plan of development or sale* if the following requirements are met:
 - i. the *common plan of development or sale* meets the eligibility requirements of Part I.A.5. or 6.; and
 - ii. the *phase(s)* meet(s) all other eligibility requirements of Part I.A.; and
 - iii. Part III.C. Required *SWPPP* Components by Project Type is based on the *common plan of development or sale*, not the *phase(s)*; or
 - d. *tree clearing* that is associated with, or will support, a *renewable energy* generation, transmission, or storage project that meets Part I.A.5. and 6., if the *tree clearing*:
 - i. meets all other eligibility requirements of Part I.A.; and
 - ii. will occur in NYSDEC's Regions 3-9; and
 - iii. is not within ¼ mile of a bat hibernaculum protected pursuant to 6 NYCRR Part 182; and
 - iv. will occur between November 1st and March 31st.
2. As prerequisites for submitting an eNOI, the *owner or operator* must:
- a. prepare a *SWPPP* for Part I.D.1.a., b., c., or d. in accordance with Part III.; and
 - b. based on the following criteria, upload the following signature forms signed in accordance with Part VII.J. to the eNOI prior to submission:
 - i. for all eNOIs:
 - 1. the *SWPPP* Preparer Certification Form, Appendix F, signed by the *SWPPP* preparer; and

2. the Owner/Operator Certification Form, Appendix J, signed by the *owner or operator*; and
- ii. if an eNOI includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that will *discharge* to the *MS4(s)*:
 1. determine if the *Traditional Land Use Control MS4 Operator(s)* have review authority. A *Traditional Land Use Control MS4 Operator* does not have review authority where:
 - a. the *owner or operator* of the *construction activities* in Part I.D.2.b.ii. is the same entity as the *Traditional Land Use Control MS4 Operator* identified in Part I.D.2.b.ii.; or
 - b. there is a statute exempting the *owner or operator* from zoning review by the *Traditional Land Use Control MS4 Operator*; or
 - c. there is no such statute per Part I.D.2.b.ii.1.b., the *Traditional Land Use Control MS4 Operator* concludes, after public hearing, that it does not have zoning review authority in accordance with Legal Memorandum LU14 Updated January 2020 “Governmental Immunity from Zoning and Other Legislation”; and
 2. if the *Traditional Land Use Control MS4 Operator(s)* have review authority, submit the *SWPPP* to the *Traditional Land Use Control MS4 Operator(s)* for review and have:
 - a. if outside the municipal boundaries of NYC: the *MS4 SWPPP Acceptance Form*, Appendix G, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator*, or by a duly authorized representative of that person in accordance with Part VII.J.2.; or

- b. if within the municipal boundaries of NYC: The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval Form, Appendix H, signed by the principal executive officer or ranking elected official from the Traditional Land Use Control MS4 Operator, or by a duly authorized representative of that person in accordance with Part VII.J.2.; and
 - 3. if the *Traditional Land Use Control MS4 Operator* does not have review authority, have the MS4 No Jurisdiction Form, Appendix I, signed by the principal executive officer or ranking elected official from the *Traditional Land Use Control MS4 Operator*, or by a duly authorized representative of that person in accordance with Part VII.J.2.
3. Submitting an eNOI:
- a. The *owner or operator* must submit a complete Notice of Intent electronically using a NYSDEC approved form.²
 - b. The *owner or operator* is authorized to *commence construction activity* as of the authorization date indicated in the Letter of Authorization (LOA), which is sent by NYSDEC after a complete eNOI is submitted.
 - i. If an eNOI is received for a *SWPPP* that deviates from one of the technical standards but demonstrates *equivalence* in accordance with Part III.B.1.a.ii. or Part III.B.2.b.ii., if the *SWPPP* includes *construction activities* that are not within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)*, and/or if the *SWPPP* includes *construction activities* within the municipal boundary(ies) of *Traditional Land Use Control MS4 Operator(s)* that do not have review authority in accordance with Part I.D.2.b.ii.1., the authorization date indicated in the LOA will be 60 business days after the eNOI submission date.

² Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

- c. If *Traditional Land Use Control MS4 Operator(s)* have review authority in accordance with Part I.D.2.b.ii.2., the *owner or operator* must, within five business days of receipt of the LOA, send an electronic copy of the LOA to the *Traditional Land Use Control MS4 Operator(s)* with review authority.

E. General Requirements for Owners or Operators with Permit Coverage

1. As of the date the LOA is received, the *owner or operator* must make the eNOI, *SWPPP*, and LOA available for review and copying in accordance with the requirements in Part VII.H. When applicable, as of the date an updated LOA is received, the *owner or operator* must make the updated LOA available for review and copying in accordance with the requirements in Part VII.H.
2. The *owner or operator* must ensure compliance with all requirements of this permit and that the provisions of the *SWPPP*, including any changes made to the *SWPPP* in accordance with Part III.A.5., are properly implemented and maintained from the *commencement of construction activity* until:
 - a. all areas of disturbance have achieved *final stabilization*; and
 - b. the owner's or operator's coverage under this permit is terminated in accordance with Part V.A.5.a.
3. As of the date of the *commencement of construction activities* until Part I.E.2.a. and b. have been met, the *owner or operator* must maintain at the *construction site*, a copy of:
 - a. all documentation necessary to demonstrate eligibility with this permit; and
 - b. this permit; and
 - c. the *SWPPP*; and
 - d. the signed *SWPPP Preparer Certification Form*; and
 - e. the signed *MS4 SWPPP Acceptance Form* or signed *NYCDEP SWPPP Acceptance/Approval Form* or signed *MS4 No Jurisdiction Form* (when applicable); and
 - f. the signed *Owner/Operator Certification Form*; and

- g. the eNOI; and
 - h. the LOA; and
 - i. the LOA transmittal to the Traditional Land Use Control MS4 Operator in accordance with Part I.D.3.c. (when applicable).
4. The *owner or operator* must maintain at the *construction site*, until Part I.E.2.a. and b. have been met, as of the date the documents become final or are received, a copy of the:
- a. responsible contractor's or subcontractor's certification statement(s) in accordance with Part III.A.7.; and
 - b. inspection reports in accordance with Part IV.C.4. and 6.; and
 - c. Request to Disturb Greater Than Five Acres and the Authorization Letter to Disturb Greater Than Five Acres in accordance with Part I.E.6. (when applicable); and
 - d. Request to Continue Coverage and the Letter of Continued Coverage (LOCC) in accordance with Part I.F.2. and 4. (when applicable); and
 - e. The updated LOA(s) in accordance with Part I.E.9. (when applicable).
5. The *owner or operator* must maintain the documents in Part I.E.3. and 4. in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection. The documents must be paper documents unless electronic documents are accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be. If electronic documents are kept on site, the *owner or operator* must maintain functional equipment on site available to an inspector during normal hours of operation such that an inspector may view the electronic documents in a format that can be read in a similar manner as a paper record and in a legally dependable format with no less evidentiary value than their paper equivalent.
6. The *owner or operator* must meet the following requirements prior to disturbing greater than five acres of soil at any one time:
- a. The *owner or operator* must submit a written Request to Disturb Greater Than Five Acres to:

Part I.E.6.a.i.

- i. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, if a *Traditional Land Use Control MS4 Operator* does not have review authority in accordance with Part I.D.2.b.ii.1.; or
 - ii. the *Traditional Land Use Control MS4 Operator*, if a *Traditional Land Use Control MS4 Operator* has review authority in accordance with Part I.D.2.b.ii.1.; or
 - iii. NYSDEC's Regional Office Division of Water staff based on the project location, Appendix E, and each involved *Traditional Land Use Control MS4 Operator*, if the project spans multiple municipalities with more than one *Traditional Land Use Control MS4 Operator* involved with review authority in accordance with Part I.D.2.b.ii.1.
- b. The written Request to Disturb Greater Than Five Acres must include:
- i. The SPDES permit identification number (Permit ID); and
 - ii. Full technical justification demonstrating why alternative methods of construction that would result in five acres of soil disturbance or less at any one time are not feasible; and
 - iii. The phasing plan for the project and sequencing plans for all *phases* from the *SWPPP* in accordance with Part III.B.1.d.; and
 - iv. Plans with locations and details of erosion and sediment control practices such that the heightened concern for erosion when disturbing greater than five acres at one time has been addressed; and
 - v. Acknowledgment that "the *owner or operator* will comply with the requirements in Part IV.C.2.b."; and
 - vi. Acknowledgment that "the *owner or operator* will comply with the requirements in Part II.B.1.b."
- c. The *owner or operator* must be in receipt of an Authorization Letter to Disturb Greater Than Five Acres, which will include when the

authorization begins and ends and indicate a maximum area (acres) of soil disturbance allowed at any one time, from:

- i. NYSDEC, if Part I.E.6.a.i. or iii. apply; or
 - ii. the *Traditional Land Use Control MS4 Operator*, if Part I.E.6.a.ii. applies.
7. Upon a finding of significant non-compliance with the practices described in the *SWPPP* or violation of this permit, NYSDEC may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order must be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
8. If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE).³ *Construction activity* shall not resume until written permission to do so has been received from the RWE.
9. To be authorized to implement modifications to the information previously submitted in the eNOI, the *owner or operator* must:
 - a. notify NYSDEC via email at Stormwater_info@dec.ny.gov requesting access to update the eNOI; and
 - b. update the eNOI to reflect the modifications and resubmit the eNOI in accordance with Part I.D.; and
 - c. receive an updated LOA.
10. The eNOI, *SWPPP*, LOA, updated LOAs (when applicable), and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

³ The Regional Water Manager where a DEC Region does not have a RWE.

F. Permit Coverage for *Discharges* Authorized Under GP-0-20-001

When applicable:

1. Upon the effective date of this permit, an *owner or operator* of a *construction activity*, with coverage under GP-0-20-001, will have interim coverage under GP-0-25-001 for 45 calendar days starting on the effective date of GP-0-25-001 so long as the *owner or operator* maintains compliance with all applicable requirements of this permit.
2. Within 30 calendar days of the effective date of this permit, the *owner or operator*, with coverage under GP-0-20-001, must submit a complete Request to Continue Coverage electronically using a NYSDEC approved form,⁴ which contains the information identified in Part I.F.3. below, if:
 - a. the *owner or operator* continues to implement the SMP component in conformance with the technical standards in place at the time of initial project authorization; and
 - b. the *owner or operator* will comply with all non-design requirements of GP-0-25-001.
3. The Request to Continue Coverage form contains questions to: ensure eligibility requirements in Part I.A. have been met; verify *owner or operator* contact information; verify the permit identification number; verify the original eNOI submission ID, if applicable; verify Part I.F.2.a. and b.; verify the version of the Design Manual that the technical/design components conform to; and receive an updated Owner/Operator Certification Form, Appendix I.
4. The *owner or operator* has obtained continued coverage under GP-0-25-001 as of the date indicated in the LOCC, which is sent by NYSDEC after a complete Request to Continue Coverage form is submitted.
5. If the owner or operator does not submit the Request to Continue Coverage form in accordance with Part I.F.2. and 3., coverage under this permit is automatically terminated after interim coverage expires.

⁴ Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

G. Change of *Owner or Operator*

When applicable:

1. When property ownership changes, or when there is a change in operational control over the construction plans and specifications, the following process applies:
 - a. The new *owner or operator* must meet the applicable prerequisites for submitting an eNOI in accordance with Part I.D.2.; and
 - b. The new *owner or operator* must submit an eNOI in accordance with Part I.D.3.; and
 - c. Permit coverage for the new *owner or operator* will be effective upon receipt of the LOA in accordance with Part I.D.3.b.; and
 - d. The new *owner or operator*, upon receipt of their LOA, must provide their Permit ID to the original *owner or operator*; and
 - e. If the original *owner or operator* will no longer be the *owner or operator* of the *construction activity* identified in the original *owner's or operator's* eNOI, the original *owner or operator*, upon receipt of the new *owner's or operator's* Permit ID in accordance with Part I.G.1.d., must submit to NYSDEC a completed eNOT in accordance with Part V. that includes the name and Permit ID of the new *owner or operator*; or
 - f. If the original *owner or operator* maintains ownership of a portion of the *construction activity*, the original *owner or operator* must maintain their coverage under the permit by modifying their eNOI; modifications to the eNOI must include:
 - i. the revised area of disturbance and/or *impervious area(s)*; and
 - ii. the revised SMP information, if applicable; and
 - iii. a narrative description of what has changed; and
 - iv. the new *owner's or operator's* Permit ID for the portion of the project removed from the eNOI.

Owners or operators must follow Part I.E.9. to modify the eNOI.

Part II. Water Quality-Based Effluent Limitations

A. Maintaining Water Quality

NYSDEC expects that compliance with the requirements of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any *discharge* to either cause or contribute to a violation of the following *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York:

1. There must be no increase in turbidity that will cause a substantial visible contrast to natural conditions; and
2. There must be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There must be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the *stormwater discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standard*, the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this permit and document in accordance with Part IV.C.4. of this permit. To address the *water quality standard* violation the *owner or operator* must include and implement appropriate controls in the *SWPPP* to correct the problem or obtain an individual SPDES permit.

If, despite compliance with the requirements of this permit, it is demonstrated that the *stormwater discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if NYSDEC determines that a modification of this permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit, and the *owner or operator* must obtain an individual SPDES permit prior to further *discharges* from the *construction site*.

B. Effluent Limitations Applicable to *Discharges* from *Construction Activities*

Discharges authorized by this permit must achieve, at a minimum, the effluent limitations in Part II.B.1.a., b., c., d., and e. These limitations represent the

degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement, and maintain control measures to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part II.B.1.a., b., c., d., and e. and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (BB), dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in *SWPPP* the reason(s) for the deviation, or alternative design, and provide information in the *SWPPP* demonstrating that the deviation or alternative design is *equivalent* to the technical standard.

- a. **Erosion and Sediment Controls.** At a minimum, erosion and sediment controls must be selected, designed, installed, implemented, and maintained to:
 - i. *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*; and
 - ii. Control *stormwater discharges*, including both peak flow rates and total *stormwater* volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points; and
 - iii. *Minimize* the amount of soil exposed during *construction activity*; and
 - iv. *Minimize* the disturbance of *steep slope*; and
 - v. *Minimize* sediment *discharges* from the site; and
 - vi. Provide and maintain *natural buffers* around surface waters, direct *stormwater* to vegetated areas and maximize *stormwater* infiltration to reduce *pollutant discharges*, unless *infeasible*; and
 - vii. *Minimize* soil compaction. *Minimizing* soil compaction is not required

where the intended function of a specific area of the site dictates that it be compacted; and

- viii. Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
 - ix. *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of *pollutants* that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has ceased, whether permanently or *temporarily ceased*, the application of soil stabilization measures must be initiated by the end of the next business day and completed within 14 calendar days from the date the current soil disturbance activity ceased. For *construction sites* that *directly discharge* to one of the 303(d) segments listed in Appendix D, or are located in one of the watersheds listed in Appendix C, or are authorized to disturb greater than five acres in accordance with Part I.E.5.a.viii., the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven calendar days from the date the soil disturbance activity ceased.
- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.
- d. **Pollution Prevention Measures.** Select, design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge of pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be selected, designed, installed, implemented, and maintained to:
- i. *Minimize* the *discharge of pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. Soaps, detergents and solvents cannot be used; and
 - ii. *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation

and to *stormwater*. *Minimization* of exposure is not required in cases where the exposure to precipitation and to *stormwater* will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of *stormwater* contamination (such as final products and materials intended for outdoor use); and

- iii. Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.

- e. **Surface Outlets.** When discharging from basins and impoundments, the surface outlets must be designed, constructed, and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

C. Post-Construction Stormwater Management Practice (SMP) Requirements

1. The *owner or operator* of a *construction activity* that requires post-construction SMPs, in accordance with Part III.C., must select, design, install, implement, and maintain the SMPs to meet the *performance criteria* in the New York State Stormwater Management Design Manual, dated July 31, 2024 (DM), using sound engineering judgment. Where SMPs are not designed in conformance with the *performance criteria* in the DM, the *owner or operator* must include in the *SWPPP* the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator* of a *construction activity*, that requires SMPs in accordance with Part III.C., must design the practices to meet the applicable *sizing criteria* in Part II.C.2.a., b., c., or d.

a. Sizing Criteria for New Development

- i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):
 1. Reduce the total WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv must be calculated in accordance with the criteria in Section 4.2 of the DM; or

2. Minimum RRV and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the requirements in Part II.C.2.a.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRV capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRV capacity, the *SWPPP* must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRV as calculated using the criteria in Section 4.4 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

- ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:
 1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or
 2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs without detention or velocity controls; or
 3. The site *directly discharges* into a fifth order or larger water body (stream, river, or lake), or tidal waters, where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.

- iii. **Overbank Flood Control Criteria (Qp):** Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams, or
 - 2. A downstream analysis reveals that *overbank* control is not required.
- iv. **Extreme Flood Control Criteria (Qf):** Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams, or
 - 2. A downstream analysis reveals that *overbank* control is not required.

b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watersheds

- i. Runoff Reduction Volume (RRv) and Water Quality Volume (WQv):
 - 1. Reduce the WQv by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24-hour design storm over the post-developed watershed and must be calculated in accordance with the criteria in Section 4.3 of the DM; or
 - 2. Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part II.C.2.b.i.1. due to *site limitations* must direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv must be documented in the *SWPPP*. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the *SWPPP* must include

documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 4.5 of the DM. The remaining portion of the total WQv that cannot be reduced must be treated by application of standard SMPs.

- ii. Channel Protection Volume (CPv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event, remaining after runoff reduction. Where a CPv control orifice is provided, the minimum orifice size must be 3 inches, with acceptable external trash rack or orifice protection. The CPv requirement does not apply when:
 - 1. Reduction of the entire CPv is achieved by application of runoff reduction techniques or infiltration systems; or
 - 2. The 1-year post-development peak *discharge* is less than or equal to 2.0 cfs; or
 - 3. The site *directly discharges* to tidal waters, or a fifth order or larger water body (stream, river, or lake) where the increase in smaller flows will not impact the stream bank or channel integrity. However, the point of *discharge* must be adequately protected against scour and erosion by the increased peak *discharge*.
- iii. *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams; or
 - 2. A downstream analysis reveals that *overbank* control is not required.

- iv. Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
 - 1. the site *directly discharges* to tidal waters or fifth order or larger streams; or
 - 2. A downstream analysis reveals that *overbank* control is not required.

c. Sizing Criteria for Redevelopment Activity

- i. Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* must be addressed by one of the following options, as outlined in Section 9.2.1. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C) must calculate the WQv in accordance with Section 4.3 of the DM. All other *redevelopment activities* must calculate the WQv in accordance with Section 4.2 of the DM.
 - 1. Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the DM must be applied to all newly created pervious areas; or
 - 2. Capture and treat 100% of the required WQv, for a minimum of 25% of the disturbed redevelopment *impervious area*, by implementation of standard SMPs or reduced by application of runoff reduction techniques; or
 - 3. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a volume-based alternative SMP, as defined in Section 9.4 of the DM; or
 - 4. Capture and treat 100% of the required WQv, for a minimum of 75% of the disturbed redevelopment *impervious area*, by implementation of a flow-through alternative SMP sized to treat the peak rate of runoff from the WQv design storm; or

5. Application of a combination of 1 through 4 above that provide a weighted average of at least two of the above methods. Application of this method must be in accordance with the criteria in Section 9.2.1(A)(V) of the DM; or
 6. If there is an existing SMP located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 through 5 above.
- ii. Channel Protection Volume (CPv) is not required if there is 0% change to hydrology that increases the *discharge* rate and volume from the project site.
 - iii. *Overbank* Flood Control (Qp) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.
 - iv. Extreme Flood Control (Qf) is not required if there is 0% change to hydrology that increases the *discharge* rate from the project site.

d. *Sizing Criteria for Combination of Redevelopment Activity and New Development*

Construction projects, that include both *new development* and *redevelopment activity*, must use SMPs that meet the *sizing criteria* calculated as an aggregate of the *sizing criteria* in Part II.C.2.a. or b. for the *new development* portion of the project and Part II.C.2.c. for the *redevelopment activity* portion of the project.

Part III. Stormwater Pollution Prevention Plan (SWPPP)

A. General SWPPP Requirements

1. A SWPPP must be prepared and implemented by the *owner or operator* of all *construction activity* covered by this permit. All authorized *discharges* must be identified in the SWPPP. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and

practices that will be used to meet the effluent limitations in Part II.B. and, where applicable, the SMP requirements in Part II.C.

2. The *SWPPP* must demonstrate consideration in narrative format of the future physical risks due to climate change pursuant to the Community Risk and Resiliency Act (CRRA), 6 NYCRR Part 490, and associated guidance.
 - a. The owner or operator must consider:
 - i. the following physical risks due to climate change:
 - (i) increasing temperature; and
 - (ii) increasing precipitation; and
 - (iii) increasing variability in precipitation, including chance of drought; and
 - (iv) increasing frequency and severity of flooding; and
 - (v) rising sea level; and
 - (vi) increasing storm surge; and
 - (vii) shifting ecology.
 - ii. for each of the following:
 - (i) overall site planning; and
 - (ii) location, elevation, and sizing of:
 - a. control measures and practices; and
 - b. conveyance system(s); and
 - c. detention system(s).
3. The *SWPPP* must describe the erosion and sediment control practices and where required, SMPs that will be used and/or constructed to reduce the *pollutants* in *stormwater discharges* and to assure compliance with the

requirements of this permit. In addition, the *SWPPP* must identify potential sources of pollution which may reasonably be expected to affect the quality of *stormwater discharges*.

4. All *SWPPPs*, that require the SMP component in accordance with Part III.B.2., must be prepared by a *qualified professional*.
5. The *owner or operator* must keep the *SWPPP* current so that, at all times, it accurately documents the erosion and sediment control practices that are being used or will be used during construction, and all SMPs that will be constructed on the site. At a minimum, the *owner or operator* must modify the *SWPPP*, including construction drawings:
 - a. whenever the current provisions prove to be ineffective in *minimizing pollutants* in *stormwater discharges* from the site; and
 - b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge of pollutants*; and
 - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, NYSDEC, or other regulatory authority; and
 - d. to document the final construction conditions in an as-built drawing.
6. NYSDEC may notify the *owner or operator* at any time that the *SWPPP* does not meet one or more of the minimum requirements of this permit. The notification must be in writing and identify the provisions of the *SWPPP* that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by NYSDEC, the *owner or operator* must make the required changes to the *SWPPP* and submit written notification to NYSDEC that the changes have been made. If the *owner or operator* does not respond to NYSDEC's comments in the specified time frame, NYSDEC may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4.
7. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting, and maintaining the erosion and sediment control practices included in the *SWPPP* and the

contractor(s) and subcontractor(s) that will be responsible for constructing the SMPs included in the *SWPPP*. The *owner or operator* must have each of the contractors and subcontractors identify at least one person from their company to be *trained contractor* that will be responsible for implementation of the *SWPPP*. The *owner or operator* must ensure that at least one *trained contractor* is on site daily when soil disturbance activities are being performed.

The *owner or operator* must have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before the *commencement of construction activities*:

"I hereby certify under penalty of law that I understand and agree to comply with the requirements of the *SWPPP* and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with the requirements of the most current version of the New York State Pollutant Discharge Elimination System (SPDES) Construction General Permit (CGP) for Stormwater Discharges from Construction Activities and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the *SWPPP* that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for *SWPPP* implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* must attach the certification statement(s) to the copy of the *SWPPP* that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the *SWPPP* after the *commencement of construction activities*, they must also sign the certification statement and provide the information listed above prior to performing *construction activities*.

B. Required *SWPPP* Contents

1. Erosion and sediment control component - The *owner or operator* must prepare a *SWPPP* that includes erosion and sediment control practices.
 - a. Erosion and sediment control practices must be designed:
 - i. in conformance with the BB; or
 - ii. *equivalent* to the BB if deviating from Part III.B.1.a.i.
 - b. If the erosion and sediment control practices are designed in conformance with Part III.B.1.a.ii., the *SWPPP* must include a demonstration of *equivalence* to the BB.
 - c. At a minimum, the erosion and sediment control component of the *SWPPP* must include the following:
 - i. Background information about the scope of the project, including the location, type and size of project; and
 - ii. A site map/construction drawing(s) with north arrows for the project, including a general location map. At a minimum, the site map must show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the *stormwater discharge(s)* and receiving surface water(s); and
 - iii. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG); and
 - iv. A phasing plan for the project and sequencing plans for all *phases*, both of which must address clearing and grubbing, excavation and grading, utility and infrastructure installation, *final stabilization*,

and any other *construction activity* at the site that will result in soil disturbance.

1. The phasing plan must include:
 - a. a map delineating and labeling the limits of soil disturbance for all *phases* of a project; and
 - b. a table identifying the order and intended schedule of when each *phase* will begin and end its sequencing plan. The table must identify the total disturbed area for each *phase* at any one time and the total disturbed area for the overall project at any one time all on one timeline showing all overlapping quantities of disturbed area at any one time; and
2. A sequencing plan for a specific *phase* must include:
 - a. a table indicating the order and intended schedule of *construction activities* within a *phase*, and corresponding construction drawings with a description of the work to be performed; and
 - b. all permanent and *temporary stabilization* measures; and
- v. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented; and
- vi. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice; and
- vii. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any

temporary sediment basins and structural practices that will be used to divert flows from exposed soils; and

- viii. A maintenance inspection schedule for the contractor(s) and subcontractor(s) identified in Part III.A.7. to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection schedule must be in accordance with the requirements in the BB technical standard; and
 - ix. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the *stormwater discharges*; and
 - x. A description and location of any *stormwater discharges* associated with industrial activity other than construction at the site, including, but not limited to, *stormwater discharges* from asphalt plants and concrete plants located on the *construction site*; and
 - xi. Identification of any elements of the design that are not in conformance with the design criteria in the BB technical standard. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. SMP component – The *owner or operator of construction activity* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs.
- a. SMPs must be designed in conformance with the applicable *sizing criteria* in Part II.C.2.a., c., or d.; and
 - b. SMPs must be designed in conformance with the *performance criteria*:
 - i. in the DM; or
 - ii. *equivalent* to the DM if deviating from Part III.B.2.b.i.; or
 - iii. in the New York State Stormwater Management Design Manual, dated January 2015 (2015 Design Manual), or *equivalent* to it, if the following criteria are met:

1. The eNOI is submitted in accordance with Part I.D. before January 29, 2027 for *construction activities* that are either:
 - a. subject to governmental review and approval:
 - i. where the *owner or operator* made any application to that governmental entity prior to the effective date of this permit; and
 - ii. such application included a *SWPPP* developed using the 2015 Design Manual or *equivalent* to it; or
 - b. not subject to governmental review and approval:
 - i. where a fiscal allocation for the *construction activities* has been developed and approved by a governmental entity; and
 - ii. the *SWPPP* was developed using the 2015 Design Manual or *equivalent* to it; and
 - c. If SMPs are designed in conformance with Part III.B.2.b.ii., the *SWPPP* must include the reason(s) for the deviation or alternative design and a demonstration of *equivalence* to the DM; and
 - d. If SMPs are designed in conformance with Part III.B.2.b.iii., the *SWPPP* must include supporting information or documentation demonstrating that Part III.B.2.b.iii.1.a. or b. apply; and
 - e. The SMP component of the *SWPPP* must include the following:
 - i. Identification of all SMPs to be constructed as part of the project, including which option the SMP designs conform to, either Part III.B.2.b.i., ii., or iii. Include the dimensions, material specifications and installation details for each SMP; and
 - ii. A site map/construction drawing(s) showing the specific location and size of each SMP; and

- iii. A Stormwater Modeling and Analysis Report that includes:
 - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points; and
 - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and SMPs; and
 - (iii) Results of *stormwater* modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre- and post-development runoff rates and volumes for the different storm events; and
 - (iv) Summary table, with supporting calculations, which demonstrates that each SMP has been designed in conformance with the *sizing criteria* included in the DM; and
 - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part II.C.; and
 - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the DM. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the DM.
- iv. Soil testing results and locations (test pits, borings); and
- v. Infiltration test results, when required in accordance with Part III.B.2.a.; and
- vi. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each SMP. The plan must identify the entity

that will be responsible for the long-term operation and maintenance of each practice; and

3. Enhanced Phosphorus Removal Standards - The *owner or operator* of *construction activity* identified in Table 2 of Appendix B that is located in a watershed identified in Appendix C must prepare a *SWPPP* that includes SMPs designed in conformance with the applicable *sizing criteria* in Part II.C.2.b., c., or d. and the *performance criteria* Enhanced Phosphorus Removal Standards included in the DM. At a minimum, the SMP component of the *SWPPP* must meet the requirements of Part III.B.2.

C. Required *SWPPP* Components by Project Type

Owners or operators of *construction activities*, identified in Table 1 of Appendix B, are required to prepare a *SWPPP* that only includes erosion and sediment control practices designed in accordance with Part III.B.1. *Owners or operators* of the *construction activities*, identified in Table 2 of Appendix B, must prepare a *SWPPP* that also includes SMPs designed in accordance with Part III.B.2 or 3.

For the entire area of disturbance, including the entire *common plan of development or sale* if applicable, the owner or operator must evaluate every bullet from Appendix B Table 1 and Table 2 separately. If bullets from both Table 1 and Table 2 apply, the *SWPPP* must include erosion and sediment control practices for all *construction activities* but SMPs for only those portions of the *construction activities* that fall under Table 2 bullet(s).

Part IV. Inspection and Maintenance Requirements

A. General Construction Site Inspection and Maintenance Requirements

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures), and all SMPs identified in the *SWPPP*, are inspected and maintained in accordance with Part IV.B. and C.

B. Contractor Maintenance Inspection Requirements

1. The *owner or operator* of each *construction activity*, identified in Tables 1 and 2 of Appendix B, must have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being

implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor must:

- a. if the corrective action does not require engineering design:
 - i. begin implementing corrective actions within one business day; and
 - ii. complete the corrective actions within five business days; or
 - b. if the corrective action requires engineering design:
 - i. begin the engineering design process within five business days; and
 - ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.
2. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. The *trained contractor* must begin conducting the maintenance inspections in accordance with Part IV.B.1. as soon as soil disturbance activities resume.
 3. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections in accordance with Part IV.B.1. if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational.

C. Qualified Inspector Inspection Requirements

1. With the exception of the following *construction activities* identified in Tables 1 and 2 of Appendix B, a *qualified inspector* must conduct site inspections for all other *construction activities* identified in Tables 1 and 2 of Appendix B:
 - a. the construction of a single-family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than or equal to five (5) acres and is

not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D; and

- b. the construction of a single-family home that involves soil disturbances of one (1) or more acres but less than or equal to five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D; and
 - c. construction on *agricultural property* that involves soil disturbances of one (1) or more acres but less than five (5) acres; and
 - d. *construction activities* located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances of 5,000 square feet or more, but less than one acre.
2. The *qualified inspector* must conduct site inspections in accordance with the following timetable:
- a. For *construction sites* where soil disturbance activities are on-going, the *qualified inspector* must conduct a site inspection at least once every seven (7) calendar days; or
 - b. For *construction sites* where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part I.E.6. to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days; or
 - c. For *construction sites* where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* must conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas under the jurisdiction of a *Traditional Land Use Control MS4 Operator*, the *Traditional Land Use Control MS4 Operator* (provided the *Traditional Land Use Control MS4 Operator* is not the *owner or operator* of the *construction activity*) by hard copy or email prior to reducing the inspections to this frequency and again by hard copy or email prior to re-commencing construction; or

- d. For *construction sites* where soil disturbance activities have been shut down with partial project completion, the requirement to have the *qualified inspector* conduct inspections ceases if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational. The *owner or operator* must notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix E) or, in areas subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1., the *Traditional Land Use Control MS4 Operator(s)* (provided the *Traditional Land Use Control MS4 Operator(s)* are not the *owners or operators* of the *construction activity*) in writing prior to the shutdown and again in writing prior to resuming *construction activity*. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* must terminate coverage by meeting the requirements of Part V; or
 - e. For *construction sites* involving soil disturbance of one (1) or more acres that *directly discharge* to one of the 303(d) segments listed in Appendix D or is located in one of the watersheds listed in Appendix C, the *qualified inspector* must conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections must be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* must inspect:
- a. all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness; and
 - b. all SMPs under construction to ensure that they are constructed in conformance with the *SWPPP*; and
 - c. all areas of disturbance that have not achieved *final stabilization*; and
 - d. all points of *discharge to surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site*; and
 - e. all points of *discharge* from the *construction site*.

4. The *qualified inspector* must prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report must include and/or address all of the following, for all *construction activities* except those listed in Part IV.C.1.:
 - a. Permit identification number; and
 - b. Date and time of inspection; and
 - c. Name and title of person(s) performing inspection; and
 - d. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection, including the temperature at the time of the inspection; and
 - e. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This must include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow; and
 - f. A description of the condition of all *surface waters of the State* located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This must include identification of any *discharges* of sediment to the *surface waters of the State*; and
 - g. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance; and
 - h. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced; and
 - i. Description and sketch (map) of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection; and
 - j. Estimates, in square feet or acres, of the following areas:

- i. Total area with active soil disturbance (not requiring either *temporary stabilization* or *final stabilization*); and
 - ii. Total area with inactive soil disturbance (requiring either *temporary stabilization* or *final stabilization*); and
 - iii. Total area that has achieved *temporary stabilization*; and
 - iv. Total area that has achieved *final stabilization*; and
- k. Current stage of construction of all SMPs and identification of all *construction activity* on site that is not in conformance with the *SWPPP* and technical standards; and
- l. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the SMP(s); and
- m. Identification and status of all corrective actions that were required by previous inspection; and
- n. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* must attach color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* must also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* must attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* must notify the *owner or operator*, and appropriate contractor or subcontractor identified in Part III.A.7., of any corrective actions that need to be taken. The contractor or subcontractor must:
- a. if the corrective action does not require engineering design:

- i. begin implementing corrective actions within one business day; and
 - ii. complete the corrective actions within five business days; or
 - b. if the corrective action requires engineering design:
 - i. begin the engineering design process within five business days; and
 - ii. complete the corrective action in a reasonable time frame but no later than within 60 calendar days.
6. All inspection reports must be signed by the *qualified inspector*. In accordance with Part I.E.3., the inspection reports must be maintained on site with the *SWPPP*.

Part V. How to Terminate CGP Coverage

A. Electronic Notice of Termination (eNOT) Submittal

The eNOT contains questions to ensure requirements in Part V.A. have been met.

1. An *owner or operator* must terminate coverage when one or more of the following requirements have been met:
 - a. Total project completion:
 - i. all *construction activity* identified in the *SWPPP* has been completed; and
 - ii. all areas of disturbance have achieved *final stabilization*; and
 - iii. all temporary, structural erosion and sediment control measures have been removed; and
 - iv. all SMPs have been constructed in conformance with the *SWPPP* and are operational; and
 - v. an as-built drawing has been prepared; or

- b. Planned shutdown with partial project completion:
 - i. all soil disturbance activities have ceased; and
 - ii. all areas disturbed as of the project shutdown date have achieved *final stabilization*; and
 - iii. all temporary, structural erosion and sediment control measures have been removed; and
 - iv. all SMPs required for the completed portion of the project have been constructed in conformance with the *SWPPP* and are operational; and
 - v. an as-built drawing has been prepared; or
 - c. In accordance with Part I.G. Change of Owner or Operator; or
 - d. The *owner or operator* has obtained coverage under an alternative general SPDES permit or an individual SPDES permit.
2. For *construction activities* that require *qualified inspector* inspections in accordance with Part IV.C.1. and have met Part V.A.1.a. or b., the *owner or operator* must have the *qualified inspector* perform a final site inspection prior to submitting the eNOT. The *qualified inspector* must, by signing the “Final Stabilization” and “Post-Construction Stormwater Management Practice(s)” certification statements on the eNOT, certify that all the requirements in Part V.A.1.a. or b. have been achieved.
3. For *construction activities* that are subject to the review authority of *Traditional Land Use Control MS4 Operator(s)* in accordance with Part I.D.2.b.ii.1. and meet Part V.A.1.a. or b., the *owner or operator* must have the *Traditional Land Use Control MS4 Operator(s)* sign the “MS4 Acceptance” statement on the eNOT in accordance with the requirements in Part VII.J. A *Traditional Land Use Control MS4 Operator* official, by signing this statement, determined that it is acceptable for the *owner or operator* to submit the eNOT in accordance with the requirements of this Part. A *Traditional Land Use Control MS4 Operator* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) when required in Part V.A.2.

Part V.A.4.

4. For *construction activities* that require SMPs and meet Part V.A.1.a. or b., the *owner or operator* must, prior to submitting the eNOT, ensure one of the following:
 - a. for SMP(s) that were constructed by a private entity, but will be owned, operated, and maintained by a public entity, the SMP(s) and any right-of-way(s) needed to operate and maintain such practice(s) have been deeded to the municipality in which the practice(s) is located; or
 - b. for SMP(s) that are privately owned, but will be operated and maintained by a public entity, an executed operation and maintenance agreement is in place with the municipality that will operate and maintain the SMP(s); or
 - c. for SMP(s) that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record; or
 - d. for SMP(s) that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility, the *owner or operator* has policies and procedures in place that ensure operation and maintenance of the practices in accordance with the operation and maintenance plan.
5. An *owner or operator* that has met the requirements of Part V.A.1., 2., 3., and 4. must request termination of coverage under this permit by submitting a complete Notice of Termination form electronically using a NYSDEC approved form.⁵
 - a. The owner's or operator's coverage is terminated as of the termination date indicated in the Letter of Termination (LOT), which is sent by NYSDEC after a complete eNOT is submitted.

⁵ Unless NYSDEC grants a waiver in accordance with 40 CFR 127.15(c) or (d). All waiver requests must be submitted to Stormwater_info@dec.ny.gov or NYSDEC, Bureau of Water Permits, 625 Broadway, 4th Floor, Albany, New York 12233-3505.

Part VI. Record Retention and Reporting

A. Record Retention

The *owner or operator* must retain a copy of the documents listed in Part I.E.3. and a copy of the LOT for a period of at least five years from the date that NYSDEC accepts a complete NOT submitted in accordance with Part V.

B. Reporting

Except for the eNOI, the signature forms associated with the eNOI, and the eNOT, all other written correspondence requested by NYSDEC, including individual permit applications, must be sent to the address of the appropriate DOW (SPDES) Program contact at the Regional Office listed in Appendix E.

Part VII. Standard Permit Requirements

For the purposes of this permit, examples of contractors and subcontractors include: third-party maintenance and construction contractors.

A. Duty to Comply

The *owner or operator*, and all contractors or subcontractors, must comply with all requirements of this permit. Any non-compliance with the requirements of this permit constitutes a violation of the New York State Environmental Conservation Law (ECL), and its implementing regulations, and is grounds for enforcement action. Filing of a request for termination of coverage under this permit, or a notification of planned changes or anticipated non-compliance, does not limit, diminish or stay compliance with any requirements of this permit.

B. Need to Halt or Reduce Activity Not a Defense

The necessity to halt or reduce the *construction activity* regulated by this permit, in order to maintain compliance with the requirements of this permit, must not be a defense in an enforcement action.

C. Penalties

There are substantial criminal, civil, and administrative penalties associated with violating the requirements of this permit. Fines of up to \$37,500 per day for each

violation and imprisonment for up to 15 years may be assessed depending upon the nature and degree of the offense.

D. False Statements

Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance must, upon conviction, be punished in accordance with ECL §71-1933 and or New York State Penal Law Articles 175 and 210.

E. Re-Opener Clause

Upon issuance of this permit, a determination has been made on the basis of a submitted Notice of Intent, plans, or other available information, that compliance with the specified permit requirements will reasonably protect classified water use and assure compliance with applicable *water quality standards*. Satisfaction of the requirements of this permit notwithstanding, if operation pursuant to this permit causes or contributes to a condition in contravention of State *water quality standards* or guidance values, or if NYSDEC determines that a modification is necessary to prevent impairment of the best use of the waters or to assure maintenance of *water quality standards* or compliance with other provisions of ECL Article 17 or the Clean Water Act (CWA), or any regulations adopted pursuant thereto, NYSDEC may require such modification and the Commissioner may require abatement action to be taken by the *owner or operator* and may also prohibit such operation until the modification has been implemented.

F. Duty to Mitigate

The *owner or operator*, and its contractors and subcontractors, must take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

G. Requiring Another General Permit or Individual SPDES Permit

NYSDEC may require any *owner or operator* authorized to *discharge* in accordance with this permit to apply for and obtain an individual SPDES permit or apply for authorization to *discharge* in accordance with another general SPDES permit.

1. Cases where an individual SPDES permit or authorization to discharge in accordance with another general SPDES permit may be required include, but is not limited to the following:

Part VII.G.1.a.

- a. the *owner or operator* is not in compliance with the conditions of this permit or does not meet the requirements for coverage under this permit; and
 - b. a change has occurred in the availability of demonstrated technology or practices for the control or abatement of *pollutants* applicable to the *point source*; and
 - c. new effluent limitation guidelines or new source performance standards are promulgated that are applicable to *point sources* authorized to *discharge* in accordance with this permit; and
 - d. existing effluent limitation guidelines or new source performance standards that are applicable to *point sources* authorized to *discharge* in accordance with this permit are modified; and
 - e. a water quality management plan containing requirements applicable to such *point sources* is approved by NYSDEC; and
 - f. circumstances have changed since the time of the request to be covered so that the *owner or operator* is no longer appropriately controlled under this permit, or either a temporary or permanent reduction or elimination of the authorized *discharge* is necessary; and
 - g. the *discharge* is in violation of section 17-0501 of the ECL; and
 - h. the *discharge(s)* is a significant contributor of *pollutants*. In making this determination, NYSDEC may consider the following factors:
 - i. the location of the *discharge(s)* with respect to *surface waters of the State*; and
 - ii. the size of the *discharge(s)*; and
 - iii. the quantity and nature of the *pollutants discharged* to *surface waters of the State*; and
 - iv. other relevant factors including compliance with other provisions of ECL Article 17, or the CWA.
2. When NYSDEC requires any *owner or operator* authorized by this permit to apply for an individual SPDES permit as provided for in this subdivision, it must notify the *owner or operator* in writing that a permit application is required. This notice must include a brief statement of the reasons for this decision, an application

form, a statement setting a time for the *owner or operator* to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from the *owner's or operator's* receipt of the notification letter, whereby the authorization to *discharge* under this permit must be terminated. NYSDEC may grant additional time upon demonstration, to the satisfaction of the RWE,⁶ that additional time to apply for an alternative authorization is necessary or where NYSDEC has not provided a permit determination in accordance with 6 NYCRR Part 621.

3. When an individual SPDES permit is issued to an *owner or operator* authorized to *discharge* under this permit for the same *discharge(s)*, this permit authorization for *construction activities* authorized under the individual SPDES permit is automatically terminated on the effective date of the individual SPDES permit unless termination is earlier in accordance with 6 NYCRR Part 750.

H. Duty to Provide Information

The *owner or operator* must furnish to NYSDEC, within five business days, unless otherwise set forth by NYSDEC, any information that NYSDEC may request to determine whether cause exists to determine compliance with this permit or to determine whether cause exists for requiring an individual SPDES permit in accordance with 6 NYCRR 750-1.21(e) (see Part VII.G. Requiring Another General Permit or Individual Permit).

The *owner or operator* must make available to NYSDEC, for inspection and copying, or furnish to NYSDEC within 25 business days of receipt of a NYSDEC request for such information, any information retained in accordance with this permit.

Except for Part I.D.4. and 5. and Part I.G., the following applies: where the *owner or operator* becomes aware that it failed to submit any relevant facts on the Notice of Intent, or submitted incorrect information in a Notice of Intent or in any report to NYSDEC, the *owner or operator* must submit such facts or corrected information to NYSDEC within five business days.

I. Extension

In the event a new permit is not issued and effective prior to the expiration of this permit, and this permit is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, then the *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the requirements of this permit until a new permit is issued and effective.

⁶ The Regional Water Manager where a DEC Region does not have a RWE.

J. Signatories and Certification

The Notice of Intent, Notice of Termination, and reports required by this permit must be signed as provided in 40 CFR §122.22.

1. All Notices of Intent and Notices of Termination must be signed as follows:

a. For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
- (ii) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for Notice of Intent or Notice of Termination requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

Note: NYSDEC does not require specific assignments or delegations of authority to responsible corporate officers identified in 40 CFR §122.22(a)(1)(i). NYSDEC will presume that these responsible corporate officers have the requisite authority to sign the Notice of Intent or Notice of Termination unless the corporation has notified NYSDEC to the contrary. Corporate procedures governing authority to sign a Notice of Intent or Notice of Termination may provide for assignment or delegation to applicable corporate positions under 40 CFR §122.22(a)(1)(ii) rather than to specific individuals.

b. For a partnership or sole proprietorship. By a general partner or the proprietor, respectively.

- c. For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - 1. the chief executive officer of the agency; or
 - 2. a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- 2. All reports required by this permit, and other information requested by NYSDEC, must be signed by a person described in Part VII.J.1., or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part VII.J.1. or using the Duly Authorized Form, found on the DEC website; and
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to NYSDEC.
- 3. Changes to authorization. If an authorization under Part VII.J.2. is no longer accurate because a different individual or position has responsibility for the overall operation of the *construction activity*, a new authorization satisfying the requirements of Part VII.J.2. must be submitted to NYSDEC prior to or together with any reports, information, or applications to be signed by an authorized representative.
- 4. Certification. Any person signing a document under Part VII.J.1. or 2. must make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who

manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

5. Electronic reporting. If documents described in Part VII.J.1. or 2. are submitted electronically by or on behalf of the *construction activity* with coverage under this permit, any person providing the electronic signature for such documents must meet all relevant requirements of this section, and must ensure that all of the relevant requirements of 40 CFR Part 3 (including, in all cases, subpart D to Part 3) (Cross-Media Electronic Reporting) and 40 CFR Part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

K. Inspection and Entry

The *owner or operator* must allow NYSDEC, the USEPA Regional Administrator, the applicable county health department, or any authorized representatives of those entities, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the *discharge*, upon the presentation of credentials and other documents as may be required by law, to:

1. enter upon the *owner's or operator's* premises where a regulated facility or activity is located or conducted or where records must be kept under the requirements of this permit; and
2. have access to and copy at reasonable times, any records that must be kept under the requirements of this permit, including records required to be maintained for purposes of operation and maintenance; and
3. inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and
4. sample or monitor at reasonable times, for the purposes of assuring general SPDES permit compliance or as otherwise authorized by the CWA or ECL, any substances or parameters at any location; and
5. enter upon the property of any contributor to the regulated facility or activity under authority of the *owner or operator*.

L. Confidentiality of Information

The following must not be held confidential: this permit, the fact sheet for this permit, the name and address of any *owner or operator*, effluent data, the Notice of Intent, and information regarding the need to obtain an individual permit or an alternative general SPDES permit. This includes information submitted on forms themselves and any attachments used to supply information required by the forms (except information submitted on usage of substances). Upon the request of the *owner or operator*, NYSDEC must make determinations of confidentiality in accordance with 6 NYCRR Part 616, except as set forth in the previous sentence. Any information accorded confidential status must be disclosed to the Regional Administrator upon his or her written request. Prior to disclosing such information to the Regional Administrator, NYSDEC will notify the Regional Administrator of the confidential status of such information.

M. Other Permits May Be Required

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

N. NYSDEC Orders or Civil Decrees/Judgments

The issuance of this permit by the NYSDEC, and the coverage under this permit by the *owner or operator*, does not supersede, revoke, or rescind any existing order on consent or civil Decree/Judgment, or modification to any such documents or to any order issued by the Commissioner, or any of the terms, conditions, or requirements contained in such order or modification therefore, unless expressly noted.

O. Property Rights

Coverage under this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations, nor does it obviate the necessity of obtaining the assent of any other jurisdiction as required by law for the *discharge* authorized.

P. Compliance with Interstate Standards

If the *construction activity* covered by this permit originates within the jurisdiction of an interstate water pollution control agency, then the *construction activity* must also comply with any applicable effluent standards or *water quality standards* promulgated by that interstate agency and as set forth in this permit for such *construction activities*.

Q. Oil and Hazardous Substance Liability

Coverage under this permit does not affect the imposition of responsibilities upon, or the institution of any legal action against, the *owner or operator* under section 311 of the CWA, which must be in conformance with regulations promulgated pursuant to section 311 governing the applicability of section 311 of the CWA to *discharges* from facilities with *NPDES* permits, nor must such issuance preclude the institution of any legal action or relieve the *owner or operator* from any responsibilities, liabilities, or penalties to which the *owner or operator* is or may be subject pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. section 9601 et seq. (CERCLA).

R. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, must not be affected thereby.

S. NYSDEC Approved Forms

The *owner or operator* must provide all relevant information that is requested by NYSDEC, and required by this permit, on all NYSDEC approved forms.

APPENDIX A – Abbreviations and Definitions

Abbreviations

APO – Agency Preservation Officer
BB – New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), dated November 2016
BMP – Best Management Practice
CPESC – Certified Professional in Erosion and Sediment Control
CPv – Channel Protection Volume
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)
DM – New York State Stormwater Management Design Manual (Design Manual), dated July 31, 2024
DOW – Division of Water
EAF – Environmental Assessment Form
ECL – chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law
EPA – U.S. Environmental Protection Agency
HSG – Hydrologic Soil Group
MS4 – Municipal Separate Storm Sewer System
NOI – Notice of Intent
NOT – Notice of Termination
NPDES – National Pollutant Discharge Elimination System
NYC – The City of New York
NYCDEP – The City of New York Department of Environmental Protection
NYSDEC – The New York State Department of Environmental Conservation
OPRHP – Office of Parks, Recreation and Historic Places
Qf – Extreme Flood
Qp – Overbank Flood
RR – Runoff Reduction
RRv – Runoff Reduction Volume
RWE – Regional Water Engineer
SEQR – State Environmental Quality Review Act
SHPA – State Historic Preservation Act
SMP – Post-Construction Stormwater Management Practice
SPDES – State Pollutant Discharge Elimination System
SWPPP – Stormwater Pollution Prevention Plan
TMDL – Total Maximum Daily Load
UPA – Uniform Procedures Act
USDA – United States Department of Agriculture
WQv – Water Quality Volume

Definitions

All definitions in this section are solely for the purposes of this permit. If a word is not italicized in the permit, use its common definition.

Agricultural Building – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

Agricultural Property – the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023).

Alter Hydrology from Pre- to Post-Development Conditions – the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

Combined Sewer System – a sewer system which conveys sewage and *stormwater* through a single pipe system to a publicly owned treatment works.

Commence (Commencement of) Construction Activities – the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the *SWPPP*. See definition for “*Construction Activity(ies)*” also.

Common Plan of Development or Sale – a contiguous area where multiple separate and distinct *construction activities* are occurring, or may occur, under one plan. The “common plan” of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQR) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating *construction activities* may occur on a specific plot. A *common plan of development or sale* is comprised of two or more *phases*.

Common plan of development or sale does not include separate and distinct *construction activities* that are occurring, or may occur, under one plan that are at least 1/4 mile apart provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

Construction Activity(ies) – identified within 40 CFR 122.26(b)(14)(x), 122.26(b)(15)(i), and 122.26(b)(15)(ii), any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, mechanized logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal.

Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, which is excluded from the calculation of the soil disturbance for a project. Routine maintenance includes, but is not limited to:

- Re-grading of gravel roads or parking lots; and
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of the ditch; and
- Replacement of existing culverts that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity of a ditch; and
- Replacement of existing bridges that maintains the approximate original line and grade, and maintains or improves the hydraulic capacity beneath the bridges; and
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch); and
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*; and
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material; and
- Long-term use of equipment storage areas at or near highway maintenance facilities; and
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*; and
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts; and
- Maintenance of ski trails including brush hog use and mowing; and
- Above ground snowmaking pipe replacement; and
- Replacement of existing utility poles; etc.

Construction Site – the land area where *construction activity(ies)* will occur. See also the definitions for “*Commence (Commencement of) Construction Activities*” and “*Common Plan of Development or Sale.*”

Dewatering – the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

Directly Discharge(s)(ing) (to a specific surface waterbody) – runoff flows from a *construction site* by overland flow and the first point of *discharge* is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system and the first point of *discharge* from the separate storm sewer system is the specific surface waterbody.

Discharge(s)(d) – any addition of any *pollutant* to waters of the State through an outlet or *point source*.

Embankment – an earthen or rock slope that supports a road/highway.

Equivalent (Equivalence) – the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

Final Stabilization – all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other *equivalent* stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

Historic Property – any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

Impervious Area (Cover) – all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and compacted gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

Infeasible – not technologically possible, or not economically practicable and achievable considering best industry practices.

Minimize(ing)(ation) – reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. owned or operated by a State, city, town, village, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, *stormwater*, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA, that *discharges to surface waters of the State*; and
2. designed or used for collecting or conveying *stormwater*; and
3. which is not a *combined sewer system*; and
4. which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Natural Buffer(s) – an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

New Development – any land disturbance that does not meet the definition of *Redevelopment Activity* included in this appendix.

New York State Erosion and Sediment Control Certificate Program – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

Nonpoint Source(s) – any source of water pollution or *pollutants* which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

Overbank – flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

Owner or Operator – the person, persons, or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit requirements.

Performance Criteria – the six performance criteria for each group of SMPs in Chapters 5 and 6 of the technical standard, New York State Stormwater Management Design Manual (DM), dated July 31, 2024. These include feasibility, conveyance, pretreatment, treatment, landscaping, and maintenance. It does not include the *Sizing Criteria* (i.e. WQv, RRV, CPv, Qp and Qf) in Part I.C.2. of the permit.

Phase – a defined area in which *construction activities* are occurring or will occur separate from other defined area(s).

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be *discharged*.

Pollutant(s) – dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast *discharged* into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq.

Qualified Inspector – a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder or other NYSDEC endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any SMPs that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

Qualified Professional – a person that is knowledgeable in the principles and practices of *stormwater* management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other NYSDEC endorsed individual(s). Individuals preparing *SWPPPs* that require the SMP component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the *SWPPP* that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

Redevelopment Activity(ies) – the disturbance and reconstruction of existing *impervious area*, including *impervious areas* that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

Renewable Energy – electricity or thermal energy generated by renewable energy systems through use of the following technologies: solar thermal, photovoltaics, on land and offshore wind, hydroelectric, geothermal electric, geothermal ground source heat, tidal energy, wave energy, ocean thermal, and fuel cells which do not utilize a fossil fuel resource in the process of generating electricity.

Site Limitations – site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical *site limitations* include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of *site limitations* shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

Sizing Criteria – the criteria included in Part I.C.2 of the permit that are used to size SMPs. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and Extreme Flood (Qf).

Steep Slope – land area designated on the current United States Department of Agriculture (USDA) Soil Survey as Soil Slope Phase D, (provided the map unit name or description is inclusive of slopes greater than 25%), or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

Stormwater – that portion of precipitation that, once having fallen to the ground, is in excess of the evaporative or infiltrative capacity of soils, or the retentive capacity of surface features, which flows or will flow off the land by surface runoff to waters of the State.

Streambank – the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

Stormwater Pollution Prevention Plan (SWPPP) – a project specific report, including construction drawings, that among other things: describes the *construction activity(ies)*, identifies the potential sources of pollution at the *construction site*; describes and shows the *stormwater* controls that will be used to control the *pollutants* (i.e. erosion and sediment controls; for many projects, includes SMPs); and identifies procedures the *owner or operator* will implement to comply with the requirements of the permit. See Part III of the permit for a complete description of the information that must be included in the *SWPPP*.

Surface Waters of the State – shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

Temporarily Ceased – an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

Temporary Stabilization – exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

Total Maximum Daily Load (TMDL) – the sum of the allowable loads of a single *pollutant* from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a *pollutant* that a waterbody can receive and still meet *water quality standards*, and an allocation of that amount to the *pollutant's* sources. A TMDL stipulates Waste Load Allocations (WLA) for *point source discharges*, Load Allocations (LA) for *nonpoint sources*, and a margin of safety (MOS).

Traditional Land Use Control MS4 Operator – a city, town, or village with land use control authority that is authorized to *discharge* under New York State DEC's SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

Trained Contractor – an employee from the contracting (construction) company, identified in Part III.A.7., that has received four (4) hours of NYSDEC endorsed training

in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.7., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, *New York State Erosion and Sediment Control Certificate Program* holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of NYSDEC endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other NYSDEC endorsed entity).

The *trained contractor* is responsible for the day-to-day implementation of the *SWPPP*.

Tree Clearing – *construction activities* limited to felling and removal of trees.

Tree clearing does not include hand felling and leaving the trees in place with no support from mechanized equipment, which is not considered *construction activity* requiring coverage under this permit.

Water Quality Standard – such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.

APPENDIX B – Required SWPPP Components by Project Type

Table 1
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities* that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:

- Single-family home not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions with 25% or less *impervious cover* at total site build-out and not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix D
- Construction of a barn or other *agricultural building*, silo, stock yard or pen.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that include construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.

The following *construction activities* that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:

- All construction activities located in the New York City Watershed located east of the Hudson River, see Appendix C Figure 1, that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

Within the municipal boundaries of NYC:

- Stand-alone road reconstruction, where the total soil disturbance from only that road construction, is less than one (1) acre of land.

The following *construction activities*:

- Installation of underground linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains
- Environmental enhancement projects, such as wetland mitigation, *stormwater* retrofits, stream restoration, and resiliency projects that reconstruct shoreline areas to address sea level rise
- Pond construction
- Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an *impervious cover*
- Cross-country ski trails, walking/hiking trails, and mountain biking trails, including a de minimis parking lot (maximum 10 spaces total, sized for passenger cars) with 35 feet minimum preservation of undisturbed area downgradient from the parking lot
- Dam rehabilitation (the structure of the dam itself)
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are not part of residential, commercial, or institutional development;
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path, or walking path.

Table 1 (Continued)
CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP
THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS

The following *construction activities*:

- Slope stabilization
- Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics
- Spoil areas that will be covered with vegetation
- Vegetated open space (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) that do not *alter hydrology from pre- to post-development* conditions
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions
- Demolition where vegetation will be established, and no *redevelopment activity* is planned¹
- Installation or replacement of either an overhead electric transmission line or a ski lift tower that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*.
- Solar array field areas that have tables elevated off the ground, spaced one table width apart, do not *alter hydrology from pre- to post-development conditions*, and address water quality volume and runoff reduction volume by maintaining sheet flow on slopes less than 8%.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that do not include construction or reconstruction of *impervious area* and do not *alter hydrology from pre- to post-development* conditions.
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary *impervious areas* that will be restored to pre-construction conditions once the *construction activity* is complete (in this context, “temporary” means the *impervious area* will be in place for two years or less)
- Other *construction activities* that do not include the construction or reconstruction of *impervious area*, and do not *alter hydrology from pre- to post-development* conditions, and are not listed in Table 2.

1. If the site is redeveloped in the future, a new eNOI must be submitted.

Table 2

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)

The following *construction activities*:

- Single-family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family home that disturbs five (5) or more acres of land
- Single-family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix D
- Single-family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of between 20,000 square feet and one (1) acre of land within the municipal boundaries of NYC with greater than 25% *impervious cover* at total site build-out
- Single-family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single-family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a *common plan of development or sale* that will ultimately disturb five (5) or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Creation of 5,000 square feet or more of *impervious area* in the municipal boundaries of NYC
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) that involves soil disturbance greater than five acres.
- Structural agricultural conservation practices as identified in Table II in the “Agricultural Best Management Practice Systems Catalogue” (dated June 2023) that involves soil disturbance greater than five acres and include the construction or reconstruction of *impervious area* or *alter hydrology from pre- to post-development* conditions.
- Facility buildings, including ski lodges, restroom buildings, pumphouses, ski lift terminals, and maintenance and groomer garages
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills; including creation of landfills or capping landfills.
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTWs, water treatment plants, and water storage tanks
- Golf courses
- Office complexes

Table 2 (Continued)

CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A *SWPPP* THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES (SMPs)

The following *construction activities*:

- Permanent laydown yards and equipment storage lots
- Playgrounds that include the construction or reconstruction of *impervious area*
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surfaces
- Road construction or reconstruction, outside the municipal boundaries of NYC
- Road construction within the municipal boundaries of NYC
- Stand-alone road reconstruction, within the municipal boundaries of NYC where the total soil disturbance from that road reconstruction involves soil disturbance of one (1) acre or more of land
- Parking lot construction or reconstruction (as with all Table 2 bullets, this includes parking lots constructed as part of the *construction activities* listed in Table 1, unless a Table 1 bullet specifies otherwise)
- Athletic fields (natural grass) that include the construction or reconstruction of *impervious area* (>5% of disturbed area) or *alter the hydrology from pre- to post-development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations, and well drilling pads, surfaced with *impervious cover*, and constructed as part of an overhead electric transmission line, wind-power, cell tower, oil or gas well drilling, sewer or water main, ski lift, or other linear utility project
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of a residential, commercial or institutional development
- Sidewalks, bike paths, or walking paths, surfaced with an *impervious cover*, that are part of highway construction or reconstruction
- Solar array field areas on slopes greater than 8% that cannot maintain sheet flow using management practices identified in the BB or the DM
- Solar array field areas on slopes less than 8% that will *alter the hydrology from pre- to post-development* conditions
- Solar array field areas with tables that are not elevated high enough to achieve *final stabilization* beneath the tables
- Traditional *impervious areas* associated with solar development (e.g. roads, buildings, transformers)
- Utility pads surfaced with *impervious cover*, including electric vehicle charging stations
- All other *construction activities* that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre- to post-development* conditions, and are not listed in Table 1

APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

Watersheds where *owners or operators of construction activities* identified in Table 2 of Appendix B must prepare a *SWPPP* that includes SMPs designed in conformance with the Enhanced Phosphorus Removal Standards included in the DM technical standard.

- Entire New York City Watershed located east of the Hudson River – Figure 1
- Onondaga Lake Watershed – Figure 2
- Greenwood Lake Watershed – Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

Figure 1 - New York City Watershed East of the Hudson

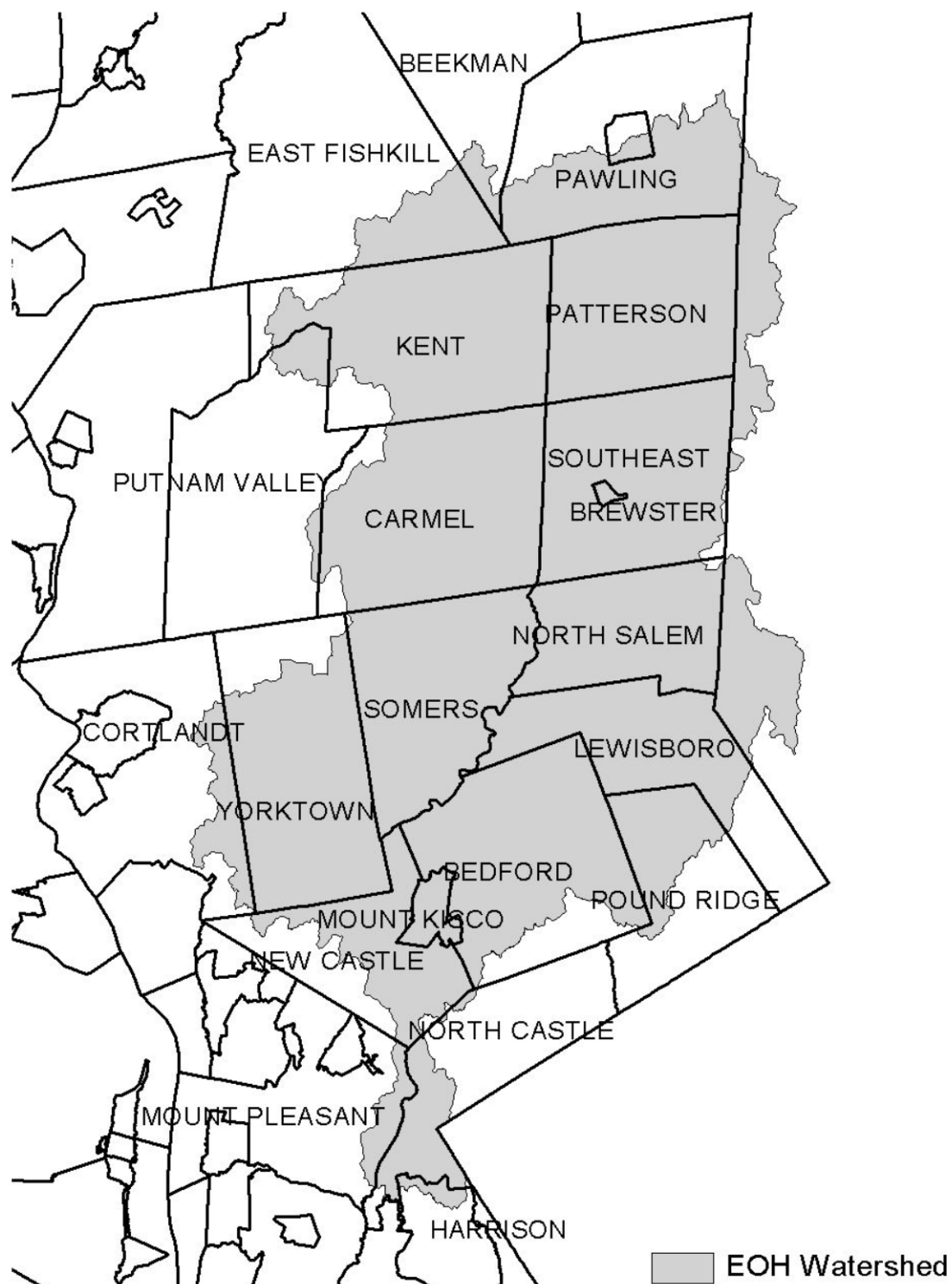


Figure 2 - Onondaga Lake Watershed



Figure 3 - Greenwood Lake Watershed

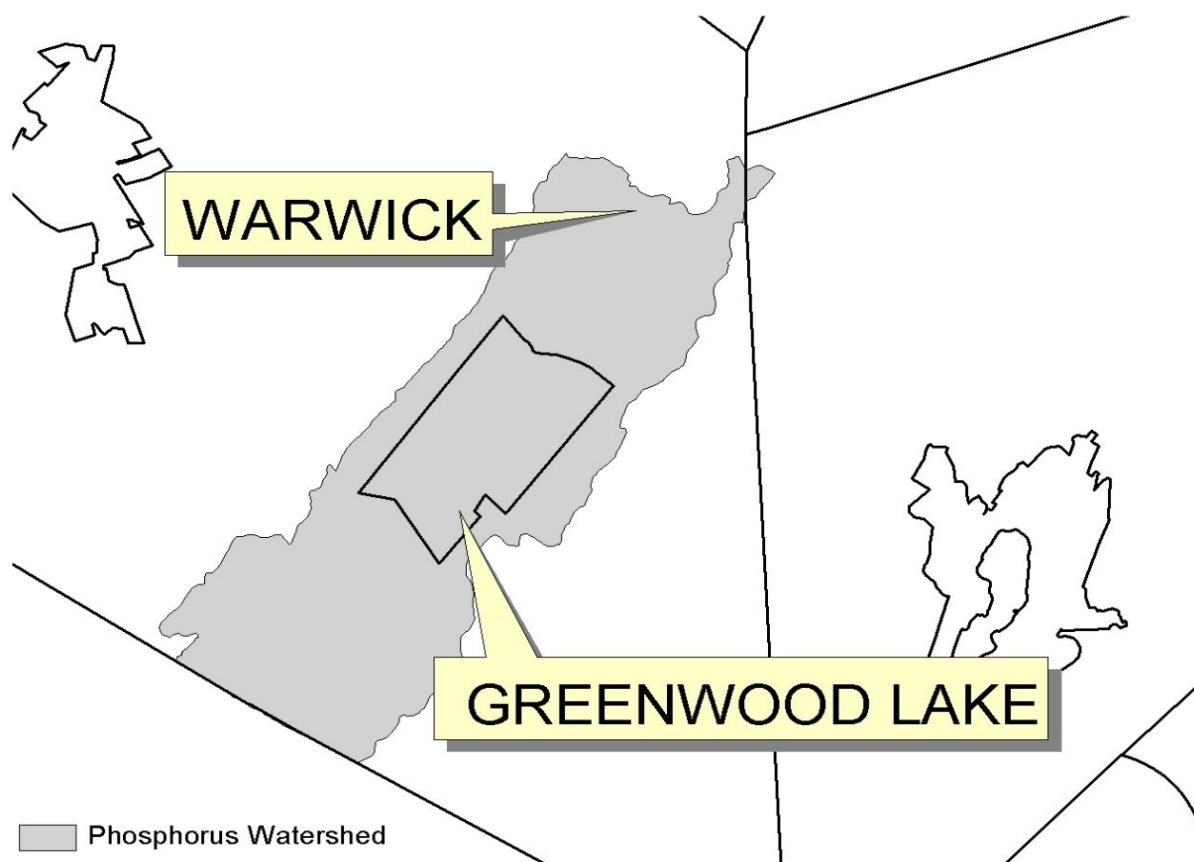


Figure 4 - Oscawana Lake Watershed

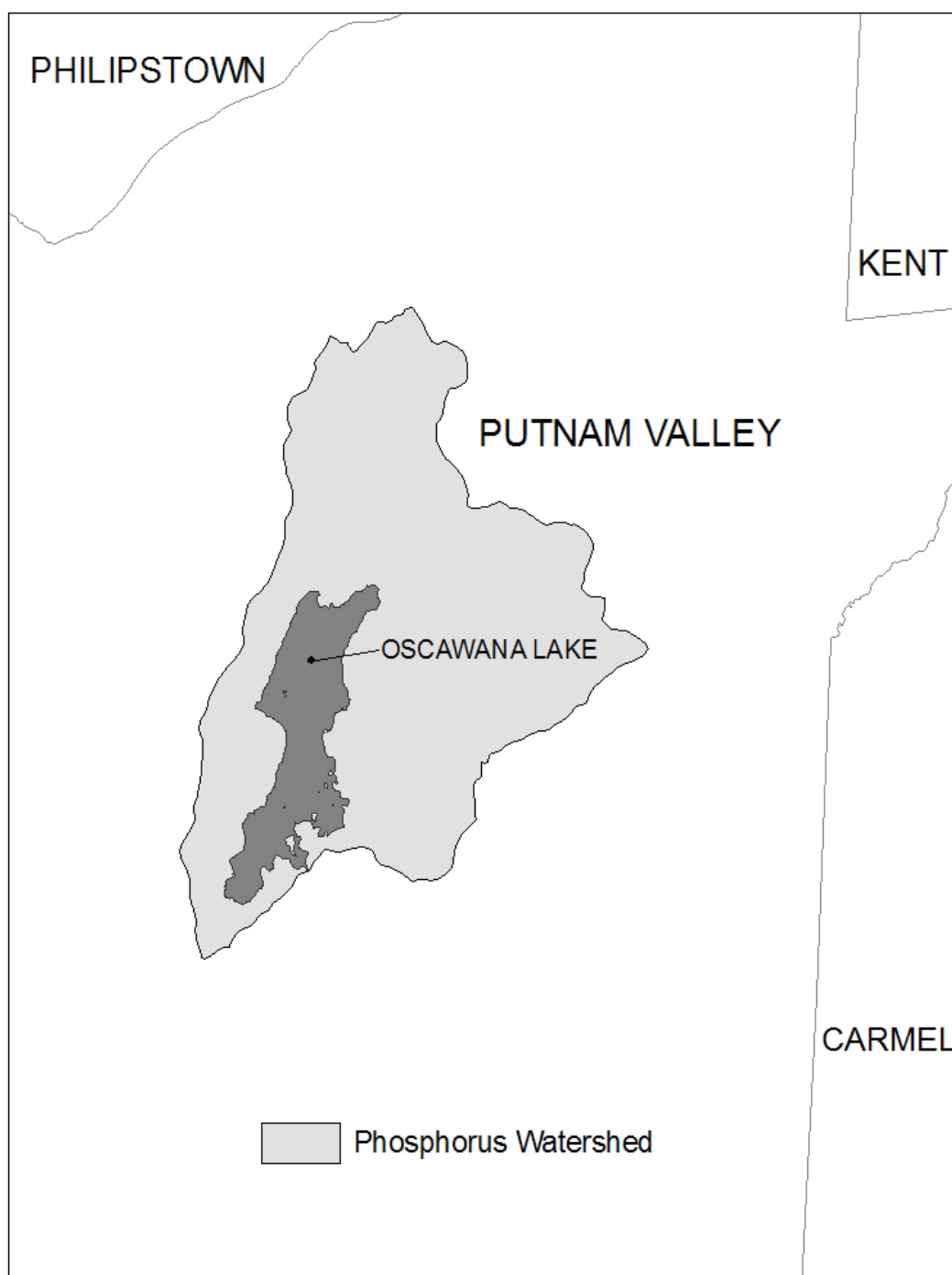
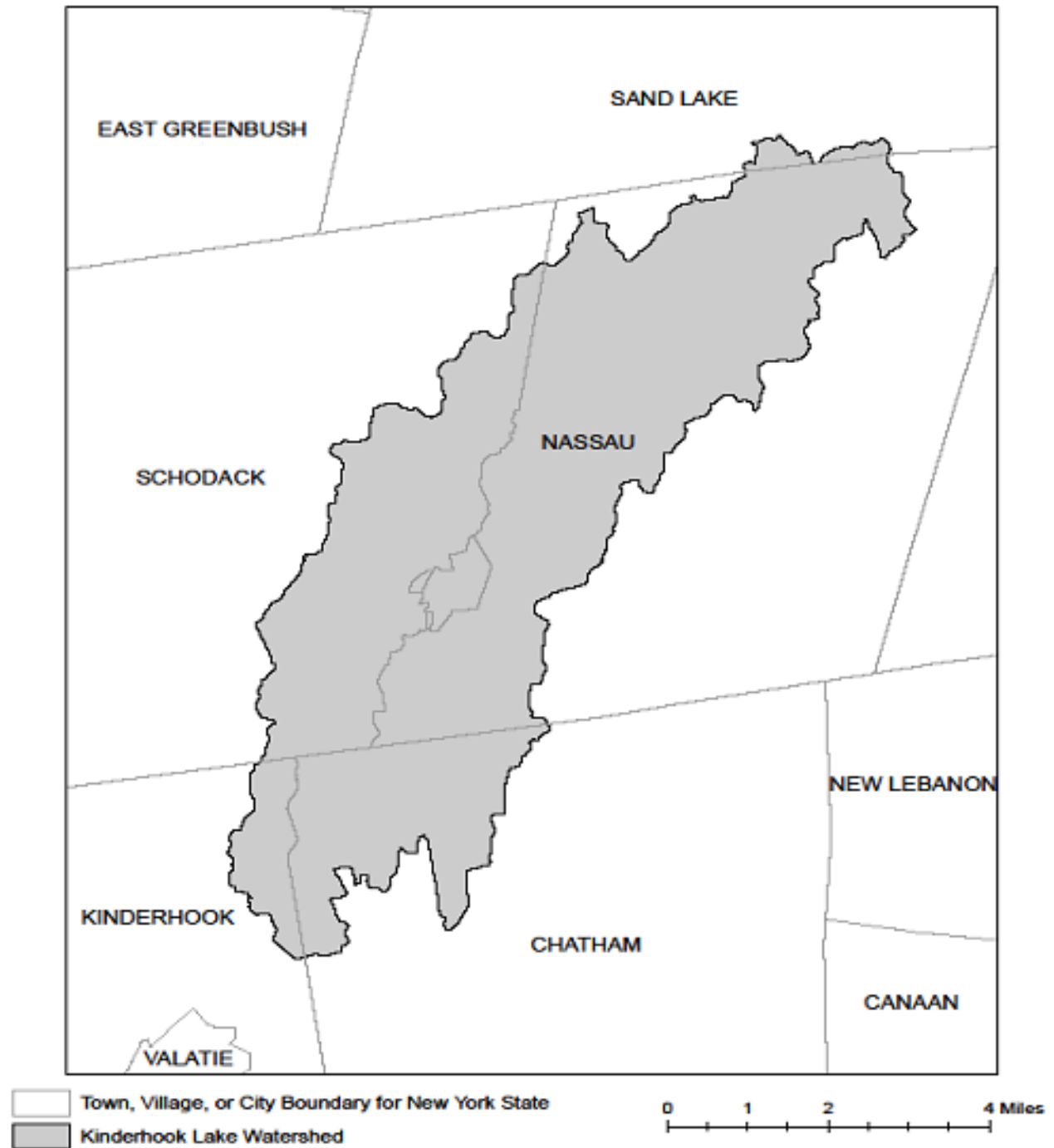


Figure 5 - Kinderhook Lake Watershed



APPENDIX D – Impaired Waterbodies (by Construction Related Pollutants)

List of waterbodies impaired by *pollutants* related to *construction activity*, including turbidity, silt/sediment, and nutrients (e.g. nitrogen, phosphorus). This list is a subset of “The Final New York State 2018 Section 303(d) List of Impaired Waters Requiring a TMDL” dated June 2020.

County	Waterbody	Pollutant
Albany	Ann Lee (Shakers) Pond, Stump Pond (1201-0096)	Phosphorus
Albany	Lawsons Lake (1301-0235)	Phosphorus
Allegany	Amity Lake, Saunders Pond (0403-0054)	Phosphorus
Allegany	Andover Pond (0403-0056)	Phosphorus
Bronx	Reservoir No.1/Lake Isle (1702-0075)	Phosphorus
Bronx	Van Cortlandt Lake (1702-0008)	Phosphorus
Broome	Blueberry, Laurel Lakes (1404-0033)	Phosphorus
Broome	Fly Pond, Deer Lake (1404-0038)	Phosphorus
Broome	Minor Tribs to Lower Susquehanna (0603-0044)	Phosphorus
Broome	Whitney Point Lake/Reservoir (0602-0004)	Phosphorus
Cattaraugus	Allegheny River/Reservoir (0201-0023)	Phosphorus
Cattaraugus	Beaver Lake/Alma Pond (0201-0073)	Phosphorus
Cattaraugus	Case Lake (0201-0020)	Phosphorus
Cattaraugus	Linlyco/Club Pond (0201-0035)	Phosphorus
Cayuga	Duck Lake (0704-0025)	Phosphorus
Cayuga	Owasco Inlet, Upper, and tribs (0706-0014)	Nutrients
Chautauqua	Chadakoin River and tribs (0202-0018)	Phosphorus
Chautauqua	Hulburt/Clymer Pond (0202-0079)	Phosphorus
Chautauqua	Middle Cassadaga Lake (0202-0002)	Phosphorus
Clinton	Great Chazy River, Lower, Main Stem (1002-0001)	Silt/Sediment
Columbia	Robinson Pond (1308-0003)	Phosphorus
Cortland	Dean Pond (0602-0077)	Phosphorus
Dutchess	Fallkill Creek (1301-0087)	Phosphorus
Dutchess	Hillside Lake (1304-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Phosphorus
Dutchess	Wappingers Lake (1305-0001)	Silt/Sediment
Erie	Beeman Creek and tribs (0102-0030)	Phosphorus
Erie	Delaware Park Pond (0101-0026)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Phosphorus
Erie	Ellicott Creek, Lower, and tribs (0102-0018)	Silt/Sediment
Erie	Green Lake (0101-0038)	Phosphorus
Erie	Little Sister Creek, Lower, and tribs (0104-0045)	Phosphorus
Erie	Murder Creek, Lower, and tribs (0102-0031)	Phosphorus

Erie	Rush Creek and tribs (0104-0018)	Phosphorus
Erie	Scajaquada Creek, Lower, and tribs (0101-0023)	Phosphorus
Erie	Scajaquada Creek, Middle, and tribs (0101-0033)	Phosphorus
Erie	Scajaquada Creek, Upper, and tribs (0101-0034)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Phosphorus
Erie	South Branch Smoke Cr, Lower, and tribs (0101-0036)	Silt/Sediment
Genesee	Bigelow Creek and tribs (0402-0016)	Phosphorus
Genesee	Black Creek, Middle, and minor tribs (0402-0028)	Phosphorus
Genesee	Black Creek, Upper, and minor tribs (0402-0048)	Phosphorus
Genesee	Bowen Brook and tribs (0102-0036)	Phosphorus
Genesee	LeRoy Reservoir (0402-0003)	Phosphorus
Genesee	Mill Pond (0402-0050)	Phosphorus
Genesee	Oak Orchard Cr, Upper, and tribs (0301-0014)	Phosphorus
Genesee	Oatka Creek, Middle, and minor tribs (0402-0031)	Phosphorus
Genesee	Tonawanda Cr, Middle, Main Stem (0102-0002)	Phosphorus
Greene	Schoharie Reservoir (1202-0012)	Silt/Sediment
Greene	Sleepy Hollow Lake (1301-0059)	Silt/Sediment
Herkimer	Steele Creek tribs (1201-0197)	Phosphorus
Herkimer	Steele Creek tribs (1201-0197)	Silt/Sediment
Kings	Hendrix Creek (1701-0006) 18	Nitrogen
Kings	Prospect Park Lake (1701-0196)	Phosphorus
Lewis	Mill Creek/South Branch, and tribs (0801-0200)	Nutrients
Livingston	Christie Creek and tribs (0402-0060)	Phosphorus
Livingston	Conesus Lake (0402-0004)	Phosphorus
Livingston	Mill Creek and minor tribs (0404-0011)	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs (0402-0033)	Phosphorus
Monroe	Buck Pond (0301-0017)	Phosphorus
Monroe	Cranberry Pond (0301-0016)	Phosphorus
Monroe	Durand, Eastman Lakes (0302-0037)	Phosphorus
Monroe	Lake Ontario Shoreline, Western (0301-0069) 9	Phosphorus
Monroe	Long Pond (0301-0015)	Phosphorus
Monroe	Mill Creek and tribs (0302-0025)	Phosphorus 2
Monroe	Mill Creek/Blue Pond Outlet and tribs (0402-0049)	Phosphorus
Monroe	Minor Tribs to Irondequoit Bay (0302-0038)	Phosphorus
Monroe	Rochester Embayment - East (0302-0002) [9]	Phosphorus
Monroe	Rochester Embayment - West (0301-0068) 9	Phosphorus
Monroe	Shipbuilders Creek and tribs (0302-0026)	Phosphorus 2
Monroe	Thomas Creek/White Brook and tribs (0302-0023)	Phosphorus

Nassau	Bannister Creek/Bay (1701-0380)	Nitrogen
Nassau	Beaver Lake (1702-0152)	Phosphorus
Nassau	Browswere Bay (1701-0383)	Nitrogen
Nassau	Camaans Pond (1701-0052)	Phosphorus
Nassau	East Meadow Brook, Upper, and tribs (1701-0211)	Silt/Sediment
Nassau	East Rockaway Channel (1701-0381)	Nitrogen
Nassau	Glen Cove Creek, Lower, and tribs (1702-0146)	Silt/Sediment
Nassau	Grant Park Pond (1701-0054)	Phosphorus
Nassau	Hempstead Bay, Broad Channel (1701-0032)	Nitrogen
Nassau	Hempstead Lake (1701-0015)	Phosphorus
Nassau	Hewlett Bay (1701-0382)	Nitrogen
Nassau	Hog Island Channel (1701-0220)	Nitrogen
Nassau	Massapequa Creek, Upper, and tribs (1701-0174)	Phosphorus
Nassau	Milburn/Parsonage Creeks, Upp, and tribs (1701-0212)	Phosphorus
Nassau	Reynolds Channel, East (1701-0215) [12]	Nitrogen
Nassau	Reynolds Channel, West (1701-0216) 12	Nitrogen
Nassau	Tidal Tribs to Hempstead Bay (1701-0218)	Nitrogen
Nassau	Tribs (fresh) to East Bay (1701-0204)	Silt/Sediment
Nassau	Tribs (fresh) to East Bay (1701-0204)	Phosphorus
Nassau	Tribs to Smith Pond/Halls Pond (1701-0221)	Phosphorus
Nassau	Woodmere Channel (1701-0219)	Nitrogen
New York	Harlem Meer (1702-0103)	Phosphorus
New York	The Lake in Central Park (1702-0105)	Phosphorus
Niagara	Bergholtz Creek and tribs (0101-0004)	Phosphorus
Niagara	Hyde Park Lake (0101-0030)	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0053) 9	Phosphorus
Niagara	Lake Ontario Shoreline, Western (0301-0072) 9	Phosphorus
Oneida	Ballou, Nail Creeks (1201-0203)	Phosphorus
Onondaga	Ley Creek and tribs (0702-0001) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nutrients (phosphorus)
Onondaga	Minor Tribs to Onondaga Lake (0702-0022) 10	Nitrogen (NH ₃ , NO ₂)
Onondaga	Onondaga Creek, Lower (0702-0023) 10	Nutrients (phosphorus)
Onondaga	Onondaga Creek, Lower, and tribs (0702-0023)	Turbidity
Onondaga	Onondaga Creek, Middle, and tribs (0702-0004)	Turbidity
Onondaga	Onondaga Creek, Upper, and tribs (0702-0024)	Turbidity
Ontario	Great Brook and minor tribs (0704-0034)	Phosphorus 2
Ontario	Great Brook and minor tribs (0704-0034)	Silt/Sediment

Ontario	Hemlock Lake Outlet and minor tribs (0402-0013)	Phosphorus
Ontario	Honeoye Lake (0402-0032)	Phosphorus
Orange	Brown Pond Reservoir (1303-0013)	Phosphorus
Orange	Lake Washington (1303-0012)	Phosphorus
Orange	Minor Tribs to Middle Wallkill (1306-0061)	Phosphorus
Orange	Monhagen Brook and tribs (1306-0074)	Phosphorus
Orange	Orange Lake (1301-0008) [16]	Phosphorus
Orange	Quaker Creek and tribs (1306-0025)	Phosphorus
Orange	Wallkill River, Middle, Main Stem (1306-0038)	Phosphorus
Orange	Wallkill River, Upper, and Minor tribs (1306-0017)	Phosphorus
Orleans	Glenwood Lake (0301-0041)	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0070) 9	Phosphorus
Orleans	Lake Ontario Shoreline, Western (0301-0071) 9	Phosphorus
Oswego	Lake Neatahwanta (0701-0018)	Nutrients (phosphorus)
Oswego	Pleasant Lake (0703-0047)	Phosphorus
Putnam	Lost Lake, Putnam Lake (1302-0053)	Phosphorus
Putnam	Minor Tribs to Croton Falls Reservoir (1302-0001)	Phosphorus
Queens	Bergen Basin (1701-0009) 18	Nitrogen
Queens	Jamaica Bay, Eastern, and tribs, Queens (1701-0005) 18	Nitrogen
Queens	Kissena Lake (1702-0258)	Phosphorus
Queens	Meadow Lake (1702-0030)	Phosphorus
Queens	Shellbank Basin (1701-0001) 18	Nitrogen
Queens	Willow Lake (1702-0031)	Phosphorus
Rensselaer	Nassau Lake (1310-0001)	Phosphorus
Rensselaer	Snyders Lake (1301-0043)	Phosphorus
Richmond	Grassmere Lake/Bradys Pond (1701-0357)	Phosphorus
Rockland	Congers Lake, Swartout Lake (1501-0019)	Phosphorus
Rockland	Rockland Lake (1501-0021)	Phosphorus
Saratoga	Ballston Lake (1101-0036)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Phosphorus
Saratoga	Dwaas Kill and tribs (1101-0007)	Silt/Sediment
Saratoga	Lake Lonely (1101-0034)	Phosphorus
Saratoga	Round Lake (1101-0060)	Phosphorus
Saratoga	Tribs to Lake Lonely (1101-0001)	Phosphorus
Schenectady	Collins Lake (1201-0077)	Phosphorus
Schenectady	Duane Lake (1311-0006)	Phosphorus
Schenectady Lake	Mariaville Lake (1201-0113)	Phosphorus
Schuyler	Cayuta Lake (0603-0005)	Phosphorus

Seneca	Reeder Creek and tribs (0705-0074)	Phosphorus
St.Lawrence	Black Lake Outlet, Black Lake (0906-0001)	Phosphorus
St.Lawrence	Fish Creek and minor tribs (0906-0026)	Phosphorus
Steuben	Smith Pond (0502-0012)	Phosphorus
Suffolk	Agawam Lake (1701-0117)	Phosphorus
Suffolk	Big/Little Fresh Ponds (1701-0125)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Phosphorus
Suffolk	Canaan Lake (1701-0018)	Silt/Sediment
Suffolk	Fresh Pond (1701-0241)	Phosphorus
Suffolk	Great South Bay, East (1701-0039)	Nitrogen
Suffolk	Great South Bay, Middle (1701-0040)	Nitrogen
Suffolk	Great South Bay, West (1701-0173)	Nitrogen
Suffolk	Lake Ronkonkoma (1701-0020)	Phosphorus
Suffolk	Mattituck/Marratooka Pond (1701-0129)	Phosphorus
Suffolk	Mill and Seven Ponds (1701-0113)	Phosphorus
Suffolk	Millers Pond (1702-0013)	Phosphorus
Suffolk	Moriches Bay, East (1701-0305)	Nitrogen
Suffolk	Moriches Bay, West (1701-0038)	Nitrogen
Suffolk	Quantuck Bay (1701-0042)	Nitrogen
Suffolk	Shinnecock Bay and Inlet (1701-0033)	Nitrogen
Suffolk	Tidal Tribs to West Moriches Bay (1701-0312)	Nitrogen
Sullivan	Bodine, Montgomery Lakes (1401-0091)	Phosphorus
Sullivan	Davies Lake (1402-0047)	Phosphorus
Sullivan	Evens Lake (1402-0004)	Phosphorus
Sullivan	Pleasure Lake (1402-0055)	Phosphorus
Sullivan	Swan Lake (1401-0063)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Phosphorus
Tompkins	Cayuga Lake, Southern End (0705-0040)	Silt/Sediment
Ulster	Ashokan Reservoir (1307-0004)	Silt/Sediment
Ulster	Esopus Creek, Lower, Main Stem (1307-0010) [17]	Turbidity
Ulster	Esopus Creek, Middle, Main Stem (1307-0003) 17	Turbidity
Ulster	Esopus Creek, Upper, and minor tribs (1307-0007)[3]	Silt/Sediment
Ulster	Wallkill River, Lower, Main Stem (1306-0027)	Phosphorus
Warren	Hague Brook and tribs (1006-0006)	Silt/Sediment
Warren	Huddle/Finkle Brooks and tribs (1006-0003)	Silt/Sediment
Warren	Indian Brook and tribs (1006-0002)	Silt/Sediment
Warren	Lake George (1006-0016) and tribs	Silt/Sediment
Warren	Tribs to Lake George, East Shore (1006-0020)	Silt/Sediment
Warren	Tribs to Lake George, Lk.George Village (1006-0008)	Silt/Sediment

Washington	Wood Cr/Champlain Canal and tribs (1005-0036)	Phosphorus
Westchester	Lake Katonah (1302-0136)	Phosphorus
Westchester	Lake Lincolndale (1302-0089)	Phosphorus
Westchester	Lake Meahagh (1301-0053)	Phosphorus
Westchester	Lake Mohegan (1301-0149)	Phosphorus
Westchester	Lake Shenorock (1302-0083)	Phosphorus
Westchester	Mamaroneck River, Lower (1702-0071)	Silt/Sediment
Westchester	Mamaroneck River, Upp, & minor tribs (1702-0123)	Silt/Sediment
Westchester	Saw Mill River (1301-0007)	Phosphorus
Westchester	Saw Mill River, Middle, and tribs (1301-0100)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Phosphorus
Westchester	Sheldrake River (1702-0069)	Silt/Sedimnt
Westchester	Silver Lake (1702-0040)	Phosphorus
Westchester	Teatown Lake (1302-0150)	Phosphorus
Westchester	Truesdale Lake (1302-0054)	Phosphorus
Westchester	Wallace Pond (1301-0140)	Phosphorus

APPENDIX E – List of NYSDEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	220 WHITE PLAINS ROAD, SUITE 110 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7438	5786 WIDEWATERS PARKWAY SYRACUSE, NY 13214-1867 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7165	700 DELAWARE AVENUE BUFFALO, NY 14209-2999 TEL. (716) 851-7070

APPENDIX F – SWPPP Preparer Certification Form

The SWPPP Preparer Certification Form required by this permit begins on the following page.



SWPPP Preparer Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

Project/Site Name:

eNOI Submission ID:

Owner/Operator Name:

Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) has been prepared in accordance with the requirements of GP-0-25-001. I certify under penalty of law that the SWPPP and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SWPPP Preparer First Name

MI

SWPPP Preparer Last Name

Signature

Date

APPENDIX G – MS4 SWPPP Acceptance Form

The MS4 SWPPP Acceptance Form required by this permit begins on the following page.



Department of
Environmental
Conservation

MS4 SWPPP Acceptance Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information

8. SWPPP Reviewed by:

9. Title/Position:

10. Date Final SWPPP Reviewed and Accepted:

IV. Regulated MS4 Information

11. Name of MS4 Operator:

12. MS4 SPDES Permit Identification Number: NYR20A

13. Street Address:

14. City/State/Zip:

15. Telephone Number:

MS4 SWPPP Acceptance Form - continued

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in section II. of this form has been reviewed and meets the substantive requirements in the SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP). Note: The MS4 Operator, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 Operator does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name¹:

Title/Position:

Signature:

Date:

VI. Additional Information

¹ Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.

APPENDIX H – NYCDEP SWPPP Acceptance/Approval Form

The City of New York Department of Environmental Protection (NYCDEP) SWPPP Acceptance/Approval form required by this permit begins on the following page.



THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

SWPPP Acceptance/Approval

Application Number:

I. Project Owner/Operator Information

1. Owner/Operator Name:

2. Contact Person:

3. Street Address:

4. City/State/Zip:

II. Project Site Information

5. Project/Site Name:

6. Street Address:

7. City/State/Zip:

III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance/Approval

8. SWPPP Reviewed by:

9. Title/Position: /

10. Date Final SWPPP Reviewed and Accepted:

11. Acceptance/Approval Expiration Date:

IV. Regulated MS4 Information for projects that require coverage under the NY State Pollution Discharge Elimination System General Permit for Stormwater Discharges from Construction Activity

12. Name of MS4: *CITY OF NEW YORK*

13. MS4 SPDES Permit Identification Number: *NY-0287890*

14. Contact Person:

15. Street Address: *59-17 Junction Blvd. 9th Floor*

16. City/State/Zip: *Flushing, NY 11373*

17. Telephone Number:



Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.



THE CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Environmental Planning and Analysis
59-17 Junction Blvd., 9th Floor; Flushing, NY 11373

V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).

Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name:

Title/Position:

Signature:

Date:

VI. Conditions of Acceptance/Approval and Additional Information



Projects in the MS4 area must submit a copy of this SWPPP Acceptance with a Notice of Intent for coverage under the NY SPDES General Permit for Stormwater Discharges from Construction Activity to: NYS Department of Environmental Conservation, Division of Water; 625 Broadway, 4th Floor; Albany, New York 12233-3505.

APPENDIX I – MS4 No Jurisdiction Form

The MS4 No Jurisdiction Form required by this permit begins on the following page.



Department of
Environmental
Conservation

MS4 No Jurisdiction Form

for construction activities seeking authorization under the

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b., the completed form must be attached to the eNOI and submitted to NYSDEC electronically.)

I. Project Owner/Operator Information

- a. Owner/Operator Name:
- b. Contact Person:
- c. Street Address:
- d. City/State/Zip:

II. Project Site Information

- a. Project/Site Name:
- b. Street Address:
- c. City/State/Zip:
- d. eNOI Submission ID:

III. Traditional Land Use Control MS4 Operator Information

- a. Name of MS4 Operator:
- b. MS4 SPDES Permit ID Number: NYR20A
- c. Street Address:
- d. City/State/Zip:
- e. Telephone Number:

IV. Certification Statement

In accordance with CGP Part I.D.2.b.ii.3., I hereby certify that the Traditional Land Use Control MS4 Operator identified in section III. of this form does not have review authority over the construction project identified in section II. of this form, which is owned/operated by the entity identified in section I. of this form. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- a. Printed name of the principal executive officer or ranking elected official for the MS4 Operator or their duly authorized representative in accordance with CGP Part VII.J.2.:
- b. Title/Position:
- c. Signature:
- d. Date:

APPENDIX J – Owner/Operator Certification Form

The Owner/Operator Certification Form required by this permit begins on the following page.

Owner/Operator Certification Form

SPDES General Permit for Stormwater Discharges from Construction Activity, GP-0-25-001 (CGP)

(In accordance with CGP Part I.D.2.b. or Part I.F.2. and 3., the completed form must be attached to the eNOI or the Request to Continue Coverage, and submitted to NYSDEC electronically.)

Project/Site Name: _____

eNOI Submission ID: _____

eNOI Submitted by: ☐ Owner/Operator ☐ SWPPP Preparer ☐ Other

Certification Statement - Owner/Operator

I hereby certify that I read, and will comply with, the GP-0-25-001 permit requirements. I understand that authorization to discharge under the permit for the project/site named above is dependent on receipt of a Letter of Authorization (LOA) or a Letter of Continued Coverage (LOCC) from the New York State Department of Environmental Conservation (NYSDEC) in accordance with CGP Part I.D.3.b. or Part I.F.4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner/Operator First Name

MI

Owner/Operator Last Name

Signature

Date

www.chasolutions.com

