# STORMWATER POLLUTION PREVENTION PLAN

**Prepared for** 



# **Proposed Convenience Store & Gas Station**

2632 & 2634 Genesee Street City of Utica, Oneida County, NY

11/11/2022

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#### I. Introduction

Stewart's Shops is proposing to redevelop two parcels located in the City of Utica, NY, to construction of a new 3,975 sq. ft. convenience store and fueling service. The project site is located at 2632 & 2634 Genesee Street.

This report will address the required components for a Stormwater Pollution Prevention Plan (SWPPP) as specified by the New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges from Construction Activity Permit No. GP-0-20-001.

#### II. <u>Background Information</u>

#### A. Existing Conditions:

The project includes the consolidation of two (2) parcels to form a 1.14+/acre parcel. The combined properties consist of a 5,300+/- sq. ft. commercial building formerly Raspberries Restaurant, a 1,100+/- sq. ft. 2-story dwelling, a 400+/- sq. ft. garage and associated paved parking and delivery areas with one access drive on Genesee Street and one access driveway on Woodlawn Avenue.

The site is bordered to the north by residential properties, to the east by Woodlawn Avenue, to the west by a retail commercial building currently Miami Smoke Shop and lands of the NYS&W Railway Corp. and to the south by Genesee Street.

#### B. Proposed Conditions:

The scope of the project includes the demolition of the restaurant, dwelling and garage and associated access drives and parking areas to incorporate the construction of a new 3,975 sq. ft. Stewart's Shop with a 2,000 sq. ft. canopy with four (4) fuel islands and underground fuel storage tanks. Proposed features will include new landscaping, lighting, paved parking, access drives and utility and storm water management improvements as shown on the Site Plan drawings prepared by Stewart's Shops.

Per the requirements set forth in the NYSDEC Stormwater Design Manual, this project classifies as a redevelopment activity with a decrease in impervious cover. Per Chapter 9 of the NYSDEC Stormwater Design Manual, Section 9.2.1 I, the Water Quality Volume WQv objective for a re-development activity can be achieved by proposing a reduction of existing impervious cover by a minimum of 25% of the total disturbed, impervious area. The proposed redevelopment plan exceeds the WQv requirement by providing a 27% reduction of existing impervious cover. In addition to the proposed impervious cover reduction, the project will include additional treatment measures including a First Defense Hydrodynamic Stormwater Treatment Unit and a Subsurface Infiltration System.

The proposed stormwater management system is discussed in greater detail in the Stormwater Management Report included in this SWPPP.

Stewarts Shops will be responsible for all construction activities, post construction operations and maintenance of the system and all responsibilities specified in the SWPPP.

## III. <u>Construction Drawings:</u>

Included in this report are the following drawings:

- Site Survey Existing condition for the parcel including all required existing information (watercourses, topography, vegetation, utilities, property boundaries, etc.)
- Site Plan Comprehensive plan of all proposed improvements and limits of disturbance.
- Grading and Drainage Plan Plan illustrates existing and proposed slopes, proposed stormwater quantity and quality mitigation measures and limits of disturbance.
- Utility Plan Plan includes detailed design information for the installation of all proposed utilities resulting in the disturbance of soil for this project.
- Erosion and Sediment Control Plan Erosion and sediment control measures to be in place and inspected, prior to commencement of construction. The proposed measures were designed in accordance with the New York Guidelines for Urban Erosion and Sediment Control. Proposed measures include inlet protection, concrete washout, silt fence along the project perimeter, stabilized construction entrance and construction sequencing.
- Erosion and Sediment Control Details Plan contains all notes, details and construction sequencing necessary for the construction of the erosion control practices as shown on the Erosion and Sediment Control Plan.
- Landscaping Plan Included is all proposed landscaping for the project.
- **Construction Details** Included are all details associated with the post-construction stormwater management system.

## IV. <u>Soil Description:</u>

Data supplied by the USDA Natural Resources Conservation Service (NRCS) indicates that site soils are primarily classified as Alton-Urban Land Complex. NRCS soil data can be found in the Stormwater Management Report included in the appendices.

## V. <u>Construction Phasing:</u>

Construction sequencing, limits of clearing and grading, utility and infrastructure installation and all other associated activities resulting in soil disturbance are detailed on the Erosion and Sediment Control, Grading and Drainage and Utility Plans. The following construction sequence is recommended:

- Install construction entrance.
- Clear required area.
- Install silt fence and grub area.
- Remove existing structures and utilities.
- Rough grade new building site area.
- Install building utilities, foundation, construct building.
- Install subbase for parking lot
- Finish grade around building.
- Rough grade proposed gas island area.
- Install utilities, U.G. tanks, piping, etc.
- Install remaining subbase and pave.
- Complete soil restoration.
- Finish grade area and seed greenspace areas.
- Install landscaping, mulch, etc.
- Remove temporary erosion control measures as order by qualified inspector.

## VI. <u>Pollution Prevention Measures:</u>

Pollution Prevention measures during construction are detailed on the SWPPP / Erosion and Sediment Control Plan. Construction waste will be disposed in on-site construction dumpsters immediately. Any materials or chemicals considered to be hazardous shall be covered or stored in construction trailers to insure no discharge to stormwater will occur.

## VII. Soil Stabilization Measures:

Initial clearing and grading will commence once the proposed erosion and sediment control practices are in place as detailed on the erosion and sediment control plan and approved by both the SWPPP Monitoring Professional. Erosion and sediment control practices to be installed during earthwork activities include a stabilized construction entrance, silt fence, concrete washout area, inlet protection, silt fence around base of any stockpile areas.

Mulch will be placed within landscaped areas as noted on the Landscaping Plan. Seeding will be placed on site where specified on the Landscaping Plan to establish a permanent vegetative cover. Topsoiling will be utilized in areas where soil disturbance occurs by placing 6 inches of topsoil to aid in establishing permanent vegetation cover. The permanent structural erosion and sediment control practice that will be utilized is land grading and establishment of turf. Land grading will occur in areas specified on the Grading Plan to ensure proper drainage and proper elevations for the proposed building and stormwater facilities.

#### VIII. Erosion and Sediment Control Practices:

Specific types, sizes, lengths and dimensions for all erosion control practices and sizing for temporary sediment basins are detailed on the Erosion and Sediment Control Plan and Detail Sheet. All temporary erosion control practices shall be in place prior to construction and shall remain until the limits of disturbed areas are stabilized.

Dust control will be implemented to prevent surface and air movement of dust from disturbed areas. Silt fence will be installed on the downslope of disturbed to intercept sediment runoff from small drainage areas of disturbed soils. A stabilized construction entrance will be provided with aggregate with geotextile where traffic will be entering/exiting the site.

#### IX. Maintenance Schedule and SWPPP Implementation:

Maintenance of the proposed erosion and sediment control practices are detailed on the Erosion and Sediment Control Plan. Included in this report are Construction Inspection and Operations and Maintenance Checklists. The operator is ultimately responsible for inspection and maintenance during construction. Stabilization must be achieved prior to removal of temporary erosion and sediment control devices and filing of the NYSDEC Notice of Termination (NOT). The SWPPP Monitoring Professional must inspect and approve final stabilization prior to filing of the NOT. Following the NOT filing, which terminates permit coverage, the Property Owner or any subsequent owner shall follow the guidelines set forth in this report and will be responsible for operations and maintenance over the lifetime of the facility.

Stewarts Shops as the operator, shall have each contractor and subcontractors identify at least one (1) person responsible for SWPPP Implementation. This person must be trained and certified by the NYSDEC as stated on Page 12, Part III.A.6 of the NYSDEC General Permit GP-0-20-001 included in the appendix of this report. Stewarts Shops, as the operator, shall designate an inspector meeting the qualifications as set forth on page 18, Part IV of the General Permit. The inspector shall be responsible for the construction phase of the project and the implementation of the pollution prevention measures set forth in this report. The designated individual shall have a complete understanding of all components of the stormwater management system. Delineation of SWPPP implementation responsibilities for the construction phase of the project are detailed in the Erosion and Sediment Control Plan. The plan details structural practices proposed to divert flows from exposed soils, store flows, and limit run-off and discharge of pollutants from exposed areas of the site during construction. Stewarts Shops shall also designate a qualified representative for the post development inspection and monitoring. The inspector

shall follow the guidelines of the Operations and Maintenance Checklists included in this report. The inspector shall keep a continuous record of all inspection checklists, maintenance and repairs and shall make them available to the Town and The NYSDEC at their request.

The owner or operator must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001.

The owner or operator of each construction activity shall 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 shall begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame. 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. The trained contractor shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001 as soon as soil disturbance activities resume. For construction sites where soil disturbance activities have been shut down with partial project completion, the trained contractor can stop conducting the maintenance 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.

The owner or operator shall have a qualified inspector conduct site inspections in conformance with the following requirements:

- 1. A qualified inspector shall conduct site inspections for all construction activities identified in Tables 1 and 2 of Appendix B of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001.
- Unless otherwise notified by the Department, the qualified inspector shall conduct site inspections in accordance with the following timetable:
   a. For construction sites where soil disturbance activities are on-going, the qualified inspector shall conduct a site inspection at least once every seven (7) calendar days.
- 3. b. For construction sites where soil disturbance activities are on-going and the owner or operator has received authorization in accordance with Part II.C.3 to disturb greater than five (5) acres of soil at any one time, the qualified inspector shall conduct at least two (2) site inspections every

seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.

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 shall conduct a site inspection at least once every thirty (30) calendar days. The owner or operator shall notify the Town of Glenville Stormwater Management Office or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity) in writing prior to reducing the frequency of inspections.

d. 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 required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The owner or operator shall notify the Town of Glenville Stormwater Management Office or, in areas under the jurisdiction of a regulated, traditional land use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the owner or operator shall have the qualified inspector perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed; and that all postconstruction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the NOT. The owner or operator shall then submit the completed NOT form to the address in Part II.A.1 of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001. e. For construction sites that directly discharge to one of the 303(d) segments listed in Appendix E of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001 or is located in one of the watersheds listed in Appendix C New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001, the qualified inspector shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full

calendar days.

- 4. At a minimum, the qualified inspector shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved final stabilization, all points of discharge to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site, and all points of discharge from the construction site.
- 5. The qualified inspector shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

a. Date and time of inspection;

b. Name and title of person(s) performing inspection;

c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;

d. A description of the condition of the runoff at all points of discharge from the construction site. This shall 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; e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;

f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;

g. 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;

h. Description and sketch 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;

i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;

j. 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 post-construction stormwater management practice(s);

k. Identification and status of all corrective actions that were required by previous inspection; and

1. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. 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. The qualified inspector shall 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.

- 6. Within one business day of the completion of an inspection, the qualified inspector shall notify the owner or operator and appropriate contractor or subcontractor identified in Part III.A.6. of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001 of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
- 7. All inspection reports shall be signed by the qualified inspector. Pursuant to Part II.C.2. of New York State Department of Environmental Conservation SPDES General Permit for Stormwater Discharges Permit number GP-0-20-001, the inspection reports shall be maintained on site with the SWPPP.

## X. <u>Receiving Waters:</u>

The proposed stormwater management system is designed to treat and release stormwater below the pre-development flow rate for all subject storm events. Stormwater from the project site is ultimately conveyed subsurfacely in drainage pipes through a series of drainage structures in an easterly direction in the Genesee Street ROW which ultimately discharges to the Mohawk River.

#### XI. <u>Stormwater Run-off Characteristics:</u>

Existing and proposed data describing stormwater run-off characteristics are included in the Stormwater Management Report, prepared by Stewarts Shops. This report is included in the Appendix.

## XII. <u>Construction Activities Meeting Conditions in Table 2 of Appendix B</u>

This project includes construction activities that involve soil disturbances of one (1) or more acres of land and meets the criteria under Table 2 described in the permit section referenced above. Therefore, the following information is provided:

1. Descriptions of each post-construction stormwater control practice are included in the Stormwater Management Report and are detailed on the Grading and Drainage Plan included in the Appendix of this report.

- 2. Hydrologic and hydraulic analyses for all structural components of the stormwater control system, for all applicable design storms, are included in the Stormwater Management Report.
- 3. Comparison of pre and post development stormwater run-off conditions is included in the Stormwater Management Report.
- 4. Dimensions, materials and installation details for all post construction strormwater control practices are specified on the enclosed Grading and Drainage Plan.
- 5. A maintenance schedule is detailed on the Erosion and Sediment Control Plan and in the Operations and Maintenance Checklists included in this report.

## XIII. <u>SWPPP Development – 6 Step Process:</u>

- 1. Site Planning Green Infrastructure
- 2. WQv Determination
- 3. Apply GI Practices and Standard SMP's with RRv Capacity
- 4. Determine minimum RRv
- 5. Apply Standard SMP's to address remaining WQv, if required
- 6. Apply volume and peak control

## <u>1. Site Planning – Green Infrastructure:</u>

A. Preservation of Natural Resources:

1. Preservation of Undisturbed Areas

Construction and/or silt fence shall be constructed along the perimeter of the limits of disturbance of the site. The operator and contractors shall be instructed not to disturb any soil or vegetation beyond the limits of construction as noted on the plans. The size of the site and undisturbed area does not justify the delineation of permanent conservation easements.

## 2. Preservation of Buffers

Existing vegetative and wooded buffers beyond the limits of the proposed redevelopment will be maintained as shown on the Site Development Plan for the project.

## 3. Reduction of Clearing and Grading

The limits of clearing and grading have been proposed at a minimum needed to construct the proposed facility.

## 4. Locating Development in Less Sensitive Areas

The proposed development will not result in adverse impact to sensitive resource areas such as floodplains, steep slopes, erodible soils, wetlands, mature forests and critical habitats.

## 5. Open Space Design

The proposed layout of this facility has been designed as conservatively as practical to reduce impervious coverage, preserve open space and protect water resources, while maintaining adequate space for access, parking and building area needed for the proposed use.

## 6. Soil Restoration / Preservation

Per Section 5.1.6 of the NYSDEC SEDM, soil restoration techniques shall be applied to this project. The specifications listed in this section, particularly in areas of cuts/fills and existing impervious areas that will be converted to pervious areas, shall be performed across the project site.

As the project is considered a Redevelopment Activity, Soil Restoration is required in areas where existing impervious areas will be converted to pervious surfaces. The following techniques shall be applied:

- Following removal of the impervious cover, three (3) inches of compost shall be applied over the subsoil surface. Compost shall be aged, from plant derived materials, free of viable weed seeds, have no visible free water or dust produced when handling, pass through a <sup>1</sup>/<sub>2</sub>" screen and have a suitable pH for plant growth.
- Compost shall be tilled into the subsoil to a depth of at least twelve (12) inches using a cat-mounted ripper, tractor-mounted disk or tiller.
- Any uplifted stone/rock material of four (4) inches or larger in size shall be removed.
- Six (6) inches of topsoil shall be applied and the areas shall be vegetated in accordance with the approved Plan.

#### B. Reduction of Impervious Cover

1. Roadway Reduction

Roadway reduction is not applicable to this project.

2. Sidewalk Reduction

The sidewalks have been designed at a minimum width and length to provide safe access through and around the site.

3. Driveway Reduction

The access drives have been designed at a minimum width and length to provide safe access through the site.

4. Cul-de-sac Reduction

Cul-de-sac reduction is not applicable to this project.

5. Building Footprint Reduction

The building footprint has been designed at a minimum footprint to meet the needs of the intended use.

6. Parking Reduction

The parking areas have been designed to provide the minimum number of spaces needed for the intended uses.

#### 2. Determining Water Quality Volume:

The Water Quality Volume (WQv) treatment objective has been achieved by providing a minimum of 25% reduction in impervious cover. The impervious cover reduction has been calculated and illustrated in the Impervious Cover Comparison Plan found in the Proposed Stormwater Conditions section of the Storm Water Management Report.

#### 3. Runoff Reduction:

The Runoff Reduction Volume Criteria is not required for this project as it is a redevelopment activity with a decrease in impervious cover.

#### 4. Minimum RRv:

The Minimum Runoff Reduction Volume Criteria is not required for this project as it is a redevelopment activity with a decrease in impervious cover.

## 5. Apply SMP's to Address remaining WQv:

The Water Quality Volume (WQv) treatment objective has been achieved by providing a minimum of 25% reduction in impervious cover.

#### 6. Apply volume and peak rate control practices:

The proposed reduction in impervious cover and the addition of a proposed infiltration system has resulted in a reduction in off-site peak flow rates for the 1, 10 and 100 year storm events.

## XIV. Flood Hazard:

The Flood Hazard Boundary Maps for the project area (36064C0734F) dated September 27, 2013 were reviewed (See Appendix F). The Federal Emergency Management Agency (FEMA) mapping indicates that the proposed project is located in Zone X which is determined to ne outside the 0.2% annual chance floodplain.

## XV. <u>Wetlands:</u>

The project area was reviewed utilizing the online Environmental Resources Mapper provided by the NYSDEC (See Appendix F). Based on the information provided by the NYSDEC Mapper, there are no state or federally regulated wetlands that will be impacted by the proposed project.

## XVI. Historic and Cultural Resources:

The project area was reviewed by the NYS Office of Parks, Recreation and Historic Preservation (OPRHP) and they have determined 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. (See Appendix F).

## XVII. Endangered Species:

The NYSDEC Environmental Resource Online Mapper was reviewed and it was determined that no threatened or endangered species will be impacted by this project (See Appendix F).

## XVIII. Materials and Substance Management:

The materials and substances listed below are expected to be on site during construction.

- 1. If construction vehicles are to be re-fueled on site, petroleum products will be stored in above ground storage tanks. The tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or Convault-type, concrete encased type with integral secondary storage. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- 2. Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.
- 3. Paints or other similar materials will be stored in their original containers and all empty containers will be disposed of in accordance with label directions.
- 4. Portable sanitary facilities, which contain chemical disinfectants (deodorants), will be located on site, with the disinfectants held in the tank of the toilet.

All waste materials generated during construction will be disposed of in a suitable landfill, transfer station or Construction & Demolition landfill. Any hazardous waste generated during demolition or construction operations will be disposed of by a licensed hazardous waste carrier at a suitable disposal facility. If unexpected hazardous waste is discovered during construction, the related work in that area will cease until the issue is resolved. Portable temporary sanitary facilities will be serviced regularly.

## XIX. <u>Best Management Practices:</u>

During construction, the following procedures and practices will be followed on site to reduce the risk of spill or other accidental exposure of materials and substances to stormwater runoff:

- 1. Equipment cleaning, maintenance and repair will be conducted in designated areas protected by berms.
- 2. Sediment and erosion controls will be inspected weekly for sediment build-up and failure. The controls will be cleaned at the discretion of the Qualified Inspector.
- 3. Cleared brush, debris and soils will be stockpiled up slope from and protected by erosion and sediment controls.
- 4. Materials brought on site shall be in the minimum quantities required.
- 5. All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- 6. Products will be kept in original containers with the original manufacturer's labels and safety data sheets will be retained.

- 7. Substances will not be mixed with one another unless recommended by the manufacturer.
- 8. Whenever possible, the entire product will be used up before container disposal. Recycle empty containers as applicable.
- 9. Manufacturer recommendations for proper use and disposal will be followed.
- 10. All above grade storage tanks are to be protected from vehicle damage by temporary barriers.

## XX. Spill Prevention Practices:

The following practices will be followed for spill prevention and cleanup. The site contractor responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. He/she will designate at least one other site personnel who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of responsible spill personnel will be posted in the material storage area and in the on-site construction office or trailer.

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two (2) gallons will be reported to the NYSDEC Regional Response Unit. Notification to the NYSDEC (1-800-457-7362) must be completed within <u>two hours</u> of the discovery of the spill. <u>This is a legal requirement that must be complied with.</u>
- 2. Materials and equipment necessary for spill cleanup will be kept in the material storage area on site. Equipment and materials will include, by not be limited to, absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activated clay, sand, sawdust and plastic and metal trash containers specifically for this purpose.
- 3. All spills will be cleaned up immediately after discovery.
- 4. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substances.
- 5. Spills of toxic or hazardous materials will be reported to the appropriate State of local government agency, regardless of size.
- 6. Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum water on site, except in areas specified.
- 7. Asphalt trucks shall not discharge surplus asphalt on site, except in areas specified.

A. NYSDEC SPEDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITY PERMIT NO GP-0-20-001

(THIS IS A PLACE HOLDER FOR GP-0-20-001 WHICH WILL BE INCLUDED IN THE FINAL VERISION OF THE SWPPP) B. NYSDEC NOTICE OF INTENT (NOI) NOTICE OF TERMINATION

## NOTICE OF INTENT



## New York State Department of Environmental Conservation

#### **Division of Water**

625 Broadway, 4th Floor



Albany, New York 12233-3505

Stormwater Discharges Associated with <u>Construction Activity</u> Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-15-002 All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

## -IMPORTANT-

## RETURN THIS FORM TO THE ADDRESS ABOVE

OWNER/OPERATOR MUST SIGN FORM

Owner/Operator Information	$\searrow$
Owner/Operator (Company Name/Private Owner Name/Municipality Name)	
S t e w a r t ' s S h o p s	
Owner/Operator Contact Person Last Name (NOT CONSULTANT)	
Gillespie	
Owner/Operator Contact Person First Name	
James	
Owner/Operator Mailing Address	
P O B o x 4 3 5	
City	
Saratoga Springs	
State Zip	
N Y 1 2 8 6 6 -	
Phone (Owner/Operator) Fax (Owner/Operator)	
5 1 8 - 5 8 1 - 1 2 0 1 5 1 8 - 5 8 1 - 1 2 0 9	
Email (Owner/Operator)	
jgillespieeeste jgileeeste wartsshops.com	
FED TAX ID	
1 4 - 1 3 2 3 6 0 7 (not required for individuals)	

Project Site Informa	tion
Project/Site         Name           S         T         E         W         A         R         T         '         S         S         H         O         P         S         -         S         O         U         T         H	U T I C A
Street Address (NOT P.O. BOX)           2         6         3         4         G         E         N         E         S         T         R         E         T         I         I	
Side of Street O North O South O East • West	
City/Town/Village (THAT ISSUES BUILDING PERMIT)	
State         Zip         County           N Y         1 3 5 0 2 -         0 N E I D A	DEC Region
Name of Nearest Cross Street $W \ O \ O \ D \ L \ A \ W \ N \ A \ V \ E \ N \ U \ E \ O \ O \ O \ O \ D \ L \ A \ W \ N \ A \ V \ E \ N \ U \ E \ O \ O \ O \ O \ O \ O \ D \ L \ A \ W \ N \ O \ O \ O \ O \ O \ D \ L \ O \ O \ O \ O \ O \ O \ O \ D \ L \ O \ O \ O \ O \ O \ O \ O \ O \ O$	
Distance to Nearest Cross Street (Feet)	Project In Relation to Cross Street O North O South
Tax Map Numbers Section-Block-Parcel 329.11-5	Tax Map Numbers

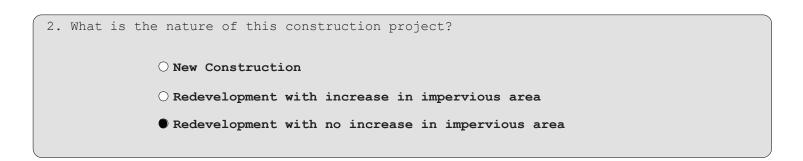
1. Provide the Geographic Coordinates for the project site in NYTM Units. To do this you **must** go to the NYSDEC Stormwater Interactive Map on the DEC website at:

#### www.dec.ny.gov/imsmaps/stormwater/viewer.htm

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located your project site, go to the tool boxes on the top and choose "i"(identify). Then click on the center of your site and a new window containing the X, Y coordinates in UTM will pop up. Transcribe these coordinates into the boxes below. For problems with the interactive map use the help function.

Х	Coo	rdi	nate	es (	Eas	ting	J
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ΥC	loor	dina	ates	(N	orth	ning	)
4	7	6	9	4	5	8	



3. Select the predominant land use for b <b>SELECT ONLY ONE CHOICE FOR EACH</b>	oth pre and post development conditions.
Pre-Development Existing Land Use	Post-Development Future Land Use
⊖ FOREST	O SINGLE FAMILY HOME Number of Lots
$\bigcirc$ PASTURE/OPEN LAND	○ SINGLE FAMILY SUBDIVISION
○ CULTIVATED LAND	○ TOWN HOME RESIDENTIAL
○ SINGLE FAMILY HOME	○ MULTIFAMILY RESIDENTIAL
$\bigcirc$ SINGLE FAMILY SUBDIVISION	○ INSTITUTIONAL/SCHOOL
$\bigcirc$ Town home residential	○ INDUSTRIAL
○ MULTIFAMILY RESIDENTIAL	• COMMERCIAL
○ INSTITUTIONAL/SCHOOL	○ MUNICIPAL
$\bigcirc$ INDUSTRIAL	○ ROAD/HIGHWAY
COMMERCIAL	○ RECREATIONAL/SPORTS FIELD
○ ROAD/HIGHWAY	⊖ BIKE PATH/TRAIL
○ RECREATIONAL/SPORTS FIELD	○ LINEAR UTILITY (water, sewer, gas, etc.)
⊖ BIKE PATH/TRAIL	O PARKING LOT
○ LINEAR UTILITY	○ CLEARING/GRADING ONLY
○ PARKING LOT	$\bigcirc$ DEMOLITION, NO REDEVELOPMENT
O OTHER	$\bigcirc$ WELL DRILLING ACTIVITY *(Oil, Gas, etc.)
	O OTHER

\*Note: for gas well drilling, non-high volume hydraulic fractured wells only

4.	In accordance with the larger common plan of development or sale, enter the total project site area; the total area to be disturbed; existing impervious area to be disturbed (for redevelopment activities); and the future impervious area constructed within the disturbed area. (Round to the nearest tenth of an acre.)	
	Total Site Total Area To Existing Impervious	Area Within Disturbed Area
5.	Do you plan to disturb more than 5 acres of soil at any one time?	○Yes ●No
6.	Indicate the percentage of each Hydrologic Soil Group(HSG) at the s	site.
	A         B         C         D           1 0 0 %         0 %         0 %         0 %         0 %	
7.	Is this a phased project?	O Yes 🔍 No
8.	Enter the planned start and end dates of the disturbance activities. $\begin{array}{c c} \text{Start Date} & \text{End D} \\ 0 & 4 & 1 & 0 & 1 & 1 & 2 & 0 & 2 & 3 & - & 1 & 0 \\ \end{array}$	ate / 0 1 / 2 0 2 3

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existing impervious cover and where the Soil Slope Phase is O Yes O No identified as an E or F on the USDA Soil Survey? If Yes, what is the acreage to be disturbed?

14. Will the project disturb soils within a State regulated wetland or the protected 100 foot adjacent O Yes ● No area?

15.	Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?														
16.	What is the name of the municipality/entity that owns the separate storm sewer system?														
Ci	tyof Utica														
17.	Does any runoff from the site enter a sewer classified O Yes • No O Unknown as a Combined Sewer?														
18.	Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law? O Yes • No														
19.	. Is this property owned by a state authority, state agency, O Yes • No federal government or local government?														
20.	rederal government or local government?														
21.	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)?														
22.															
23.	Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS <b>Yes</b> O <b>No</b> Stormwater Management Design Manual?														

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#### SWPPP Preparer Certification

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-15-002. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

First Name	MI
S C O T T	E
Last Name	
K I T C H N E R	
Signature	1
	Date

- 25. Has a construction sequence schedule for the planned management practices been prepared?
- 26. Select **all** of the erosion and sediment control practices that will be employed on the project site:

#### Temporary Structural

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

#### Biotechnical

- $\bigcirc$  Brush Matting
- $\bigcirc$  Wattling

Other

#### Vegetative Measures

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

#### Permanent Structural

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

	 	_																			
_										_										 	

#### Post-construction Stormwater Management Practice (SMP) Requirements

<u>Important</u>: Completion of Questions 27-39 is not required if response to Question 22 is No.

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

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- $\bigcirc$  Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction
- 27a. 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 (2010 version).
  - 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).
  - O Compacted areas were considered as impervious cover when calculating the WQv Required, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.
- 28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

et

Tota	al	WQ	v	Re	qui	re	d
		0	-	0	0		acre-fee

29. Identify the RR techniques (Area Reduction), RR techniques(Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required(#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

Note: Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

#### Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

	Total Contributing	<u>g</u> 1	otal	Cor	<u>itr</u> :	ibuting
RR Techniques (Area Reduction)	Area (acres)	Imp	ervi	ous	Are	ea (acre
Conservation of Natural Areas (RR-1)		and/or			-	
O Sheetflow to Riparian Buffers/Filters Strips (RR-2)		and/or				
○ Tree Planting/Tree Pit (RR-3)		and/or				
O Disconnection of Rooftop Runoff (RR-4)		and/or				
RR Techniques (Volume Reduction) O Vegetated Swale (RR-5)						
○ Rain Garden (RR-6)						
O Stormwater Planter (RR-7)						
O Rain Barrel/Cistern (RR-8)				+		
<ul> <li>Porous Pavement (RR-9)</li> </ul>				+		
				+		+
○ Green Roof (RR-10) Standard SMPs with RRv Capacity		• • • • • •			•	
				0	6	5 6
● Infiltration Trench (I-1) ·····				+		
$\bigcirc$ Infiltration Basin (I-2) $\cdots$				+	-	
$\bigcirc$ Dry Well (I-3)		••••		+	-	
$\bigcirc$ Underground Infiltration System (I-4)				+	•	
$\bigcirc$ Bioretention (F-5)		••••		+	•	
$\bigcirc$ Dry Swale (O-1) $\cdots$		••••			•	
Standard SMPs					. —	
$\bigcirc$ Micropool Extended Detention (P-1)					•	
$\bigcirc$ Wet Pond (P-2)					•	
$\bigcirc$ Wet Extended Detention (P-3) $\cdots \cdots \cdots$					•	
○ Multiple Pond System (P-4) ·····					•	
$\bigcirc$ Pocket Pond (P-5) ·····					•	
$\bigcirc$ Surface Sand Filter (F-1) $\cdots \cdots \cdots$					•	
$\bigcirc$ Underground Sand Filter (F-2) $\cdots \cdots \cdots$					•	
○ Perimeter Sand Filter (F-3) ·····					-	
○ Organic Filter (F-4)						
○ Shallow Wetland (W-1)					-	
O Extended Detention Wetland (W-2)				+		
					· L	

Pond/Wetland System (W-3)
 Pocket Wetland (W-4)
 Wet Swale (0-2)

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Table 2 -       Alternative SMPs         (DO NOT INCLUDE PRACTICES BEING         USED FOR PRETREATMENT ONLY)
Alternative SMP     Total Contributing       Impervious Area(acres)
O Hydrodynamic       .         O Wet Vault       .
O Media Filter         •
Provide the name and manufacturer of the Alternative SMPs (i.e. proprietary practice(s)) being used for WQv treatment. Name
Manufacturer
Note: Redevelopment projects which do not use RR techniques, shall use questions 28, 29, 33 and 33a to provide SMPs used, total WQv required and total WQv provided for the project.
30. Indicate the Total RRv provided by the RR techniques (Area/Volume Reduction) and Standard SMPs with RRv capacity identified in question 29.
Total RRv provided
31. Is the Total RRv provided (#30) greater than or equal to the total WQv required (#28).
If Yes, go to question 36. If No, go to question 32.
32. Provide the Minimum RRv required based on HSG. [Minimum RRv Required = (P)(0.95)(Ai)/12, Ai=(S)(Aic)]
Minimum RRv Required
32a. Is the Total RRv provided (#30) greater than or equal to the Minimum RRv Required (#32)?
<pre>If Yes, go to question 33. Note: Use the space provided in question #39 to summarize the specific site limitations and justification for not reducing 100% of WQv required (#28). A detailed evaluation of the specific site limitations and justification for not reducing 100% of the WQv required (#28) must also be included in the SWPPP.</pre>
If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.

33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv (=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total <u>impervious</u> area that contributes runoff to each practice selected.

Note: Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a.	Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.
	WQv Provided 0.0acre-feet
<u>Note</u> :	: For the standard SMPs with RRv capacity, the WQv provided by each practice = the WQv calculated using the contributing drainage area to the practice - RRv provided by the practice. (See Table 3.5 in Design Manual)
34.	Provide the sum of the Total RRv provided (#30) and the WQv provided (#33a).
35.	Is the sum of the RRv provided (#30) and the WQv provided (#33a) greater than or equal to the total WQv required (#28)? <b>• Yes</b> O <b>No</b>
	If Yes, go to question 36. If No, sizing criteria has not been met, so NOI can not be processed. SWPPP preparer must modify design to meet sizing criteria.
36.	Provide the total Channel Protection Storage Volume (CPv) required and provided or select waiver (36a), if applicable.
	CPv Required     CPv Provided       0     .     0     .     0     .     0     .     .     0     .     <
36a.	
36a.	0.0       acre-feet       0.0       acre-feet         The need to provide channel protection has been waived because:       O site discharges directly to tidal waters

37. Provide the Overbank Flood (Qp) and Extreme Flood (Qf) control criteria or select waiver (37a), if applicable.

#### Total Overbank Flood Control Criteria (Qp)

Pre-Development	Post-development
2.01 CFS	0.79 <sub>CFS</sub>
Total Extreme Flood Control	Criteria (Qf)
Pre-Development	Post-development
4 . 0 4 CFS	1.64 CFS

37a.	The need to meet the Qp and Qf criteria has been waived because
	$\bigcirc$ Site discharges directly to tidal waters
	or a fifth order or larger stream.
	$\bigcirc$ Downstream analysis reveals that the Qp and Qf
	controls are not required

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

• Yes 🛛 🔿 No

If Yes, Identify the entity responsible for the long term  $\ensuremath{\mathsf{Operation}}$  and Maintenance

S	Т	Е	W	Α	R	Т	I	S	S	Η	0	Ρ	S	Ι	Ν	С	•								

39. Use this space to summarize the specific site limitations and justification for not reducing 100% of WQv required(#28). (See question 32a) This space can also be used for other pertinent project information.

WQv and RRv are not provided as they are not required for this redevelopment activity due to the proposed redevelopment results in a greater than 25% reduction of impervious cover.

Cpv is not required for this redevelopment activity as there is a reduction in impervious cover are no changes to hydrology that increase the discharge rate from the project site.

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40.	Identify other DEC permits, existing and new, that are required for this project/facility.
	O Air Pollution Control
	O Coastal Erosion
	🔿 Hazardous Waste
	🔿 Long Island Wells
	○ Mined Land Reclamation
	🔿 Solid Waste
	O Navigable Waters Protection / Article 15
	○ Water Quality Certificate
	○ Dam Safety
	○ Water Supply
	○ Freshwater Wetlands/Article 24
	○ Tidal Wetlands
	○ Wild, Scenic and Recreational Rivers
	<pre>O Stream Bed or Bank Protection / Article 15</pre>
	○ Endangered or Threatened Species(Incidental Take Permit)
	○ Individual SPDES
	🔿 SPDES Multi-Sector GP 🛛 Y R
	O Other
	• None

41.	Does this project require a US Army Corps of Engineers Wetland Permit? If Yes, Indicate Size of Impact.	⊖ Yes	🖲 No
42.	Is this project subject to the requirements of a regulated, traditional land use control MS4? (If No, skip question 43)	○ Yes	• No
43.	Has the "MS4 SWPPP Acceptance" form been signed by the principal executive officer or ranking elected official and submitted along with this NOI?	• Yes	() No
44.	If this NOI is being submitted for the purpose of continuing or trans coverage under a general permit for stormwater runoff from constructi activities, please indicate the former SPDES number assigned. N Y R	2	

#### Owner/Operator Certification

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Print First Name	MI
James	R
Print Last Name	
G i l l e s p i e	
Owner/Operator Signature	
	Dete
	Date

New York State Department of Environmental Conservation Division of Water 625 Broadway, 4th Floor Albany, New York 12233-3505 *(NOTE: Submit completed form to address above)* NOTICE OF TERMINATION for Storm Water Discharges Authorized						
under the SPDES General Permit for Cor	nstruction Activity					
Please indicate your permit identification number: NYR	{					
I. Owner or Operator Information						
1. Owner/Operator Name: Stewart's Shops						
2. Street Address: PO Box 435						
3. City/State/Zip: Saratoga Springs, NY 128	66					
4. Contact Person: James Gillespie	4a.Telephone: 518-581-1201					
4b.Contact Person E-Mail: jgillespie@stewartsshops.com						
II. Project Site Information						
5. Project/Site Name: Stewart's Shops - Sout	h Utica					
6. Street Address: 2634 Genesee Street						
7.City/Zip: Utica, NY 13502						
8. County: Oneida						
III. Reason for Termination						
9a. XAll disturbed areas have achieved final stabilization in accor SWPPP. <b>*Date final stabilization completed</b> (month/year): _	rdance with the general permit and					
9b. □ Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR						
9c. □ Other (Explain on Page 2)						
IV. Final Site Information:						
10a. Did this construction activity require the development of a SN stormwater management practices? $\underline{X}$ yes $\Box$ no (If no,	WPPP that includes post-construction go to question 10f.)					
10b. Have all post-construction stormwater management practice constructed? X yes □ no (If no, explain on Page 2)	es included in the final SWPPP been					
10c. Identify the entity responsible for long-term operation and ma Stewart's Shops Corporation	aintenance of practice(s)?					

# **NOTICE OF TERMINATION** for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit? X yes  $\Box$  no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

□ Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.

□ Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).

To post-construction stormwater management practices that are privately owned, a mechanism is 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.

□ For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? 0.8 acres

(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4? X yes  $\Box$  no

(If Yes, complete section VI - "MS4 Acceptance" statement

## V. Additional Information/Explanation: (Use this section to answer questions 9c. and 10b., if applicable)

VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

## NOTICE OF TERMINATION for Storm Water Discharges Authorized under the SPDES General Permit for Construction Activity - continued

VII. Qualified Inspector Certification - Final Stabilization:							
I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. 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.							
Printed Name: James R. Gillespie							
Title/Position: Project Manager							
Signature:	Date:						
VIII. Qualified Inspector Certification - Post-construction Stormwat	ter Management Practice(s):						
I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. 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.							
Printed Name: James R. Gillespie							
Title/Position: Project Manager							
Signature:	Date:						
IX. Owner or Operator Certification							
I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. 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.							
Printed Name: James R. Gillespie							
Title/Position: Project Manager							

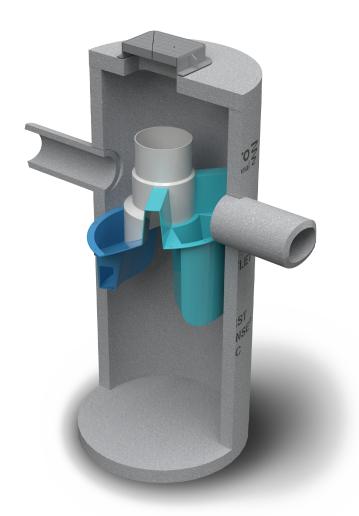
(NYS DEC Notice of Termination - January 2015)

Signature:

Date:

C. CONSTRUCTION / OPERATION AND MAINTENANCE / INSPECTION REPORT FORMS, INSPECTOR CERTIFICATION FORM, INSPECTION LOG, CORRECTIVE ACTION LOG SWPPP INSPECTION REPORT FORM





# **Operation and Maintenance Manual**

# First Defense® and First Defense® High Capacity

Vortex Separator for Stormwater Treatment

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**DISCLAIMER:** Information and data contained in this manual is exclusively for the purpose of assisting in the operation and maintenance of Hydro International plc's First Defense<sup>®</sup>. No warranty is given nor can liability be accepted for use of this information for any other purpose. Hydro International plc has a policy of continuous product development and reserves the right to amend specifications without notice.

# I. First Defense® by Hydro International

# Introduction

The First Defense<sup>®</sup> is an enhanced vortex separator that combines an effective and economical stormwater treatment chamber with an integral peak flow bypass. It efficiently removes total suspended solids (TSS), trash and hydrocarbons from stormwater runoff without washing out previously captured pollutants. The First Defense<sup>®</sup> is available in several model configurations (refer to *Section II. Model Sizes & Configurations*, page 4) to accommodate a wide range of pipe sizes, peak flows and depth constraints.

### Operation

The First Defense<sup>®</sup> operates on simple fluid hydraulics. It is selfactivating, has no moving parts, no external power requirement and is fabricated with durable non-corrosive components. No manual procedures are required to operate the unit and maintenance is limited to monitoring accumulations of stored pollutants and periodic clean-outs. The First Defense<sup>®</sup> has been designed to allow for easy and safe access for inspection, monitoring and clean-out procedures. Neither entry into the unit nor removal of the internal components is necessary for maintenance, thus safety concerns related to confined-spaceentry are avoided.

### Pollutant Capture and Retention

The internal components of the First Defense<sup>®</sup> have been designed to optimize pollutant capture. Sediment is captured and retained in the base of the unit, while oil and floatables are stored on the water surface in the inner volume (Fig.1).

The pollutant storage volumes are isolated from the built-in bypass chamber to prevent washout during high-flow storm events. The sump of the First Defense<sup>®</sup> retains a standing water level between storm events. This ensures a quiescent flow regime at the onset of a storm, preventing resuspension and washout of pollutants captured during previous events.

Accessories such as oil absorbent pads are available for enhanced oil removal and storage. Due to the separation of the oil and floatable storage volume from the outlet, the potential for washout of stored pollutants between clean-outs is minimized.

### Applications

- · Stormwater treatment at the point of entry into the drainage line
- Sites constrained by space, topography or drainage profiles with limited slope and depth of cover
- Retrofit installations where stormwater treatment is placed on or tied into an existing storm drain line
- · Pretreatment for filters, infiltration and storage

### Advantages

- · Inlet options include surface grate or multiple inlet pipes
- Integral high capacity bypass conveys large peak flows without the need for "offline" arrangements using separate junction manholes
- Proven to prevent pollutant washout at up to 500% of its treatment flow
- Long flow path through the device ensures a long residence time within the treatment chamber, enhancing pollutant settling
- Delivered to site pre-assembled and ready for installation

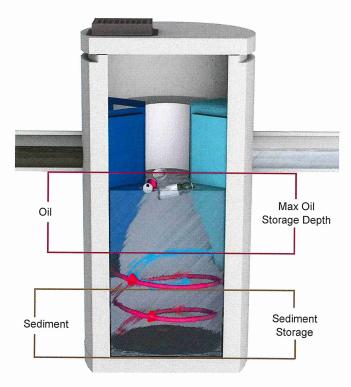


Fig.1 Pollutant storage volumes in the First Defense<sup>®</sup>.

# II. Model Sizes & Configurations

The First Defense<sup>®</sup> inlet and internal bypass arrangements are available in several model sizes and configurations. The components of the First Defense<sup>®</sup>-4HC and First Defense<sup>®</sup>-6HC have modified geometries as to allow greater design flexibility needed to accommodate various site constraints.

All First Defense<sup>®</sup> models include the internal components that are designed to remove and retain total suspended solids (TSS), gross solids, floatable trash and hydrocarbons (Fig.2a - 2b). First Defense<sup>®</sup> model parameters and design criteria are shown in Table 1.

### First Defense® Components

- 1. Built-In Bypass
- 4. Floatables Draw-off Port
- 2. Inlet Pipe
- 5. Outlet Pipe
- 3. Inlet Chute
- 6. Floatables Storage
- 7. Sediment Storage
- 8. Inlet Grate or Cover

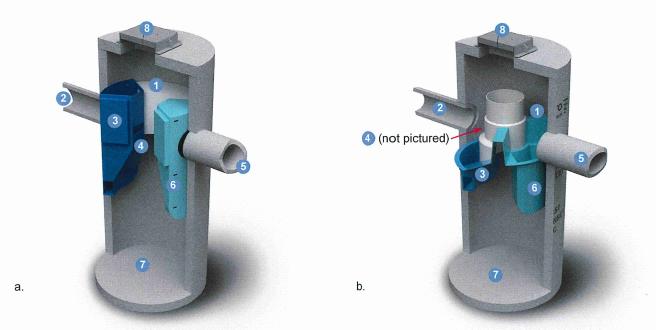


Fig.2a) First Defense<sup>®</sup>-4 and First Defense<sup>®</sup>-6; b) First Defense<sup>®</sup>-4HC and First Defense<sup>®</sup>-6HC, with higher capacity dual internal bypass and larger maximum pipe diameter.

First Defense® High Capacity Model Number	Diameter	Typical TSS Treatment Flow Rates NJDEP Certified	Peak Online Flow Rate	Maximum Pipe Diameter¹	Oil Storage Capacity	Typical Sediment Storage Capacity <sup>2</sup>	Minimum Distance from Outlet Invert to Top of Rim <sup>3</sup>	Chamber Depth
	(ft / m)	(cfs / L/s)	(cfs / L/s)	(in / mm)	(gal / L)	(yd³/ m³)	(ft / m)	(ft / m)
FD-3HC	3 / 0.9	0.85 / 24.0	15 / 424	18 / 457	125 / 473	0.4 / 0.3	2.0 - 3.5 / 0.6 - 1.0	3.75 / 1.14
FD-4HC	4 / 1.2	1.50 / 42.4	18 / 510	24 / 600	191 / 723	0.7 / 0.5	2.3 - 3.9 / 0.7 - 1.2	5.00 / 1.52
FD-5HC	5 / 1.5	2.35 / 66.2	20 / 566	24 / 609	300 / 1135	1.1 / .84	2.5 - 4.5 / 0.7 - 1.3	5.25 / 1.60
FD-6HC	6 / 1.8	3.38 / 95.7	32 / 906	30 / 750	496 / 1878	1.6 / 1.2	3.0 - 5.1 / 0.9 - 1.6	6.25 / 1.90
FD-7HC	7 / 2.1	4.60 / 130.2	40 / 1133	42 / 1067	750 / 2839	2.1 / 1.9	3.0 - 5.5 / 0.9 - 1.7	7.25 / 2.20
FD-8HC	8 / 2.4	6.00 / 169.9	50 / 1,415	48 / 1219	1120 / 4239	2.8 / 2.1	3.0 - 6.0 / 0.9 -1.8	8.00 / 2.43

<sup>1</sup>Contact Hydro International when larger pipe sizes are required.

<sup>2</sup>Contact Hydro International when custom sediment storage capacity is required.

<sup>3</sup>Minimum distance for models depends on pipe diameter.

# III. Maintenance

### Overview

The First Defense<sup>®</sup> protects the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captured pollutants is essential to the continuous, long-term functioning of the First Defense<sup>®</sup>. The First Defense<sup>®</sup> will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the First Defense<sup>®</sup> will no longer be able to store removed sediment and oil. Maximum pollutant storage capacities are provided in Table 1.

The First Defense<sup>®</sup> allows for easy and safe inspection, monitoring and clean-out procedures. A commercially or municipally owned sump-vac is used to remove captured sediment and floatables. Access ports are located in the top of the manhole.

Maintenance events may include Inspection, Oil & Floatables Removal, and Sediment Removal. Maintenance events do not require entry into the First Defense<sup>®</sup>, nor do they require the internal components of the First Defense<sup>®</sup> to be removed. In the case of inspection and floatables removal, a vactor truck is not required. However, a vactor truck is required if the maintenance event is to include oil removal and/or sediment removal.

### Maintenance Equipment Considerations

The internal components of the First Defense<sup>®</sup>-HC have a centrally located circular shaft through which the sediment storage sump can be accessed with a sump vac hose. The open diameter of this access shaft is 15 inches in diameter (Fig.3). Therefore, the nozzle fitting of any vactor hose used for maintenance should be less than 15 inches in diameter.

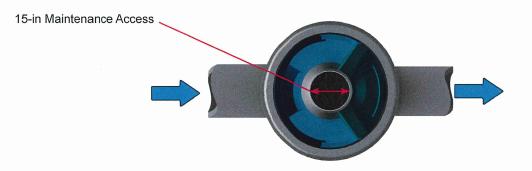


Fig.3 The central opening to the sump of the First Defense®-HC is 15 inches in diameter.

### **Determining Your Maintenance Schedule**

The frequency of clean out is determined in the field after installation. During the first year of operation, the unit should be inspected every six months to determine the rate of sediment and floatables accumulation. A simple probe such as a Sludge-Judge<sup>®</sup> can be used to determine the level of accumulated solids stored in the sump. This information can be recorded in the maintenance log (see page 9) to establish a routine maintenance schedule.

The vactor procedure, including both sediment and oil / flotables removal, for a 6-ft First Defense<sup>®</sup> typically takes less than 30 minutes and removes a combined water/oil volume of about 765 gallons.

### First Defense® Operation and Maintenance Manual

#### Inspection Procedures

- Set up any necessary safety equipment around the access port or grate of the First Defense<sup>®</sup> as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
- 2. Remove the grate or lid to the manhole.
- Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities. Fig.4 shows the standing water level that should be observed.
- **4.** Without entering the vessel, use the pole with the skimmer net to remove floatables and loose debris from the components and water surface.
- 5. Using a sediment probe such as a Sludge Judge<sup>®</sup>, measure the depth of sediment that has collected in the sump of the vessel.
- 6. On the Maintenance Log (see page 9), record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components or blockages.
- 7. Securely replace the grate or lid.
- 8. Take down safety equipment.
- Notify Hydro International of any irregularities noted during inspection.

#### Floatables and Sediment Clean Out

Floatables clean out is typically done in conjunction with sediment removal. A commercially or municipally owned sumpvac is used to remove captured sediment and floatables (Fig.5).

Floatables and loose debris can also be netted with a skimmer and pole. The access port located at the top of the manhole provides unobstructed access for a vactor hose and skimmer pole to be lowered to the base of the sump.

#### Scheduling

- Floatables and sump clean out are typically conducted once a year during any season.
- Floatables and sump clean out should occur as soon as possible following a spill in the contributing drainage area.



Fig.4 Floatables are removed with a vactor hose (First Defense model FD-4, shown).

#### Recommended Equipment

- Safety Equipment (traffic cones, etc)
- · Crow bar or other tool to remove grate or lid
- Pole with skimmer or net (if only floatables are being removed)
- Sediment probe (such as a Sludge Judge<sup>®</sup>)
- Vactor truck (flexible hose recommended)
- First Defense<sup>®</sup> Maintenance Log

#### Page | 6

# First Defense® Operation and Maintenance Manual

### Floatables and sediment Clean Out Procedures

- Set up any necessary safety equipment around the access port or grate of the First Defense<sup>®</sup> as stipulated by local ordinances. Safety equipment should notify passing pedestrian and road traffic that work is being done.
- 2. Remove the grate or lid to the manhole.
- **3.** Without entering the vessel, look down into the chamber to inspect the inside. Make note of any irregularities.
- Remove oil and floatables stored on the surface of the water with the vactor hose (Fig.5) or with the skimmer or net (not pictured).
- Using a sediment probe such as a Sludge Judge<sup>®</sup>, measure the depth of sediment that has collected in the sump of the vessel and record it in the Maintenance Log (page 9).
- Once all floatables have been removed, drop the vactor hose to the base of the sump. Vactor out the sediment and gross debris off the sump floor (Fig.5).
- 7. Retract the vactor hose from the vessel.
- 8. On the Maintenance Log provided by Hydro International, record the date, unit location, estimated volume of floatables and gross debris removed, and the depth of sediment measured. Also note any apparent irregularities such as damaged components, blockages, or irregularly high or low water levels.

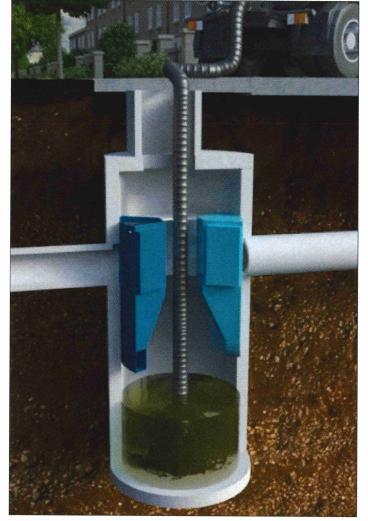


Fig.5 Sediment is removed with a vactor hose (First Defense model FD-4, shown).

9. Securely replace the grate or lid.

# Maintenance at a Glance

Inspection	- Regularly during first year of installation - Every ຍັ months after the first year of installation				
Oil and Floatables Removal	- Once per year, with sediment removal - Following a spill in the drainage area				
Sediment Removal	- Once per year or as needed - Following a spill in the drainage area				
NOTE: For most clean outs the entire volume of liquid does not need to be removed from the manhole. Only remove the first few inches of oils and floatables from the water surface to reduce the total volume of liquid removed during a clean out.					

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# First Defense® Installation Log

HYDRO INTERNATIONAL REFERENCE NUMBER:			
SITE NAME:			
SITE LOCATION:			
OWNER:	CONTRACTOR:		
CONTACT NAME:	CONTACT NAME:		
COMPANY NAME:	COMPANY NAME:		
ADDRESS:	ADDRESS:		
TELEPHONE:	TELEPHONE:		
FAX:	FAX:		

INSTALLATION DATE: / /

MODEL SIZE (CIRCLE ONE): FD-3HC FD-4 FD-4HC FD-5HC FD-6 FD-6HC

FD-7HC FI	D-8HC
-----------	-------

INLET (CIRCLE ALL THAT APPLY): GRATED INLET (CATCH BASIN) INLET PIPE (FLOW THROUGH)

**Hydro International** (Stormwater), 94 Hutchins Drive, Portland ME 04102 Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com



# First Defense® Inspection and Maintenance Log

Date	Initials	Depth of Floatables and Oils	Sediment Depth Measured	Volume of Sediment Removed	Site Activity and Comments

**Hydro International** (Stormwater), 94 Hutchins Drive, Portland ME 04102 Tel: (207) 756-6200 Fax: (207) 756-6212 Web: www.hydro-int.com

## **INSPECTION CERTIFICATION FORM**

Name

New York SPDES Permit number *(fill in when obtained)* 

## **Certification:**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature

Date

Title

SPDES GENERAL PERMIT GP-0-20-001 SWPPP CONSTRUCTION INSPECTION LOG				
DATE/TIME	REASON	WEATHER	SOIL CONDITIONS	ASSESSMENT
DATE:				
TIME:				NAMEITITLE/SIGNATURE OF INSPECTOR: I
DATE:				
TIME:				NAMEITITLE/SIGNATURE OF INSPECTOR: I
DATE:				
TIME:				NAMEITITLE/SIGNATURE OF INSPECTOR: 1
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DATE:				
TIME:				NAMEITITLE/SIGNATURE OF INSPECTOR: I

# **CORRECTIVE ACTION LOG**

<u>Description:</u>	Corrective Action:

# Site Assessment / Inspection Report SWPPP Construction Activities Stewart's Shops Corp. 2634 Genesee Street City of Utica, Oneida County, New York

General Permit: GP-0-20-001			
Permit ID: NYR			
Weather:	Temperature:		
Date:	Time:	a.m.	p.m.
Soil Condition:	Contractor:		

**Observation Instructions:** 

On a site map, indicate the extent of all disturbed areas and drainage pathways. Indicate site areas are expected to undergo initial disturbance or significant site work within the next 14-day period.

Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization.

Indicate on a site map all areas that have not undergone active work during the previous 14-day period.

Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume. Note if a substantial increase in turbidity in downstream water courses/bodies exist.

Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of sediment control barriers or diversion systems (i.e. silt fence, diversion swales, earthen berms, etc.) and containment systems (i.e. sediment basins and sediment traps, etc.).

Inspect all equipment, material handling or storage areas for evidence of apparent spills, leaks or deleterious materials.

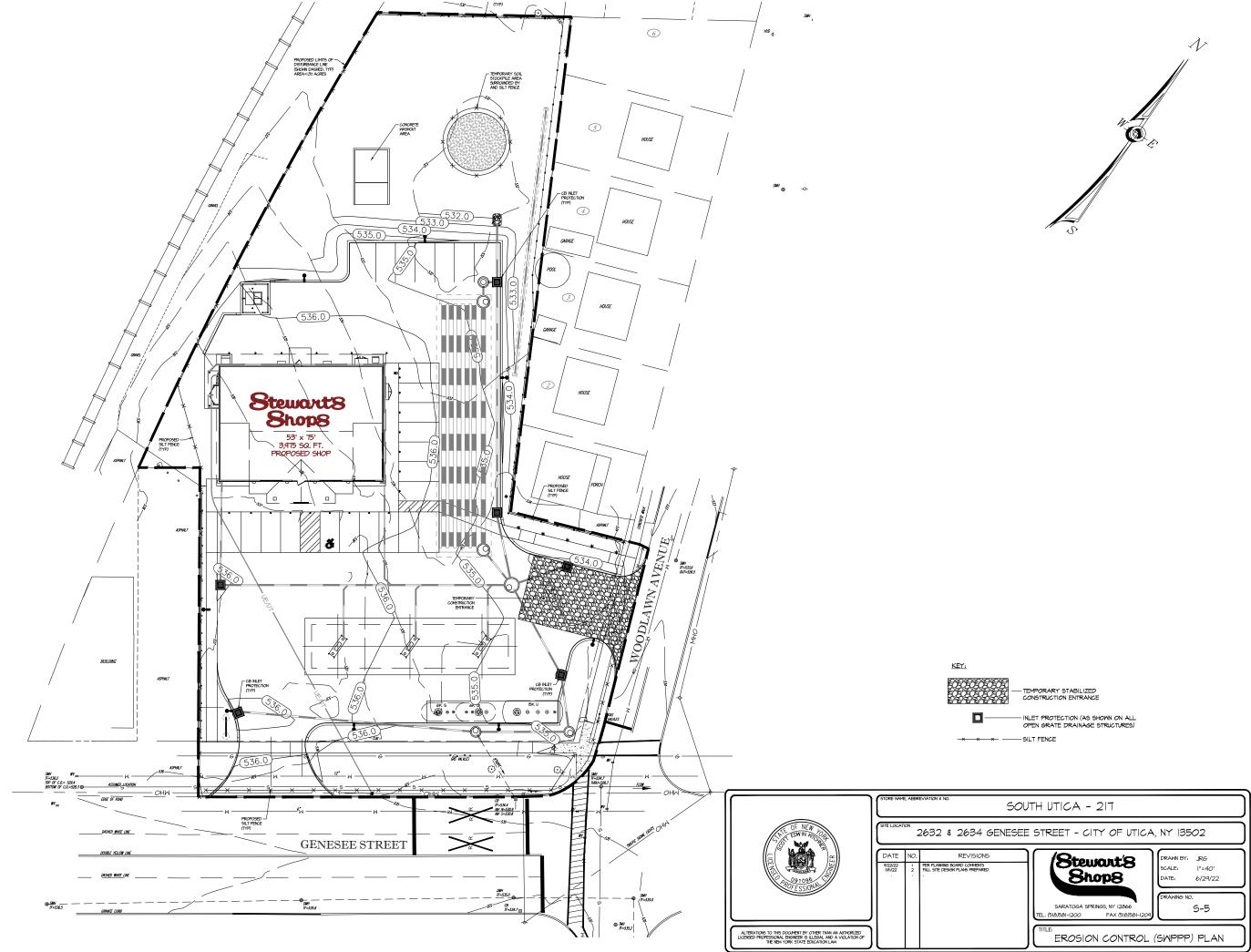
Practice	Condition	Comments
Stabilized Construction Entrance	Good / Fair / Poor / N/A	
Temporary Parking	Good / Fair / Poor / N/A	
Silt Fence	Good / Fair / Poor / N/A	
Temporary Swales & Berms	Good / Fair / Poor / N/A	
Check Dams (Stone)	Good / Fair / Poor / N/A	
Slope Protection	Good / Fair / Poor / N/A	
Dewatering Operations	Good / Fair / Poor / N/A	
Sediment Traps	Good / Fair / Poor / N/A	
Inlet Protection	Good / Fair / Poor / N/A	
Mulching / Seeding	Good / Fair / Poor / N/A	
Temporary Stockpiles	Good / Fair / Poor / N/A	
Dust Control	Good / Fair / Poor / N/A	
Sedimentation on Public Streets	Good / Fair / Poor / N/A	
Less Than 5 Acres of Disturbance	Good / Fair / Poor / N/A	
Other:	Good / Fair / Poor / N/A	
Other:	Good / Fair / Poor / N/A	

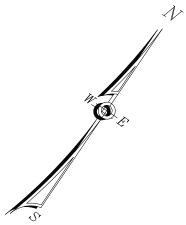
## Non-conforming work item still outstanding (list item number):

Inspection Notes:

Inspectors Signature: \_\_\_\_\_\_Date: \_\_\_\_\_\_

Inspectors Printed Name:









D. CONTRACTOR CERTIFICATION FORM CONSTRUCTION ACTIVITY FORM

# **CONTRACTOR CERTIFICATION FORM**

Proposed Convenience Store & Gas Station 2634 Genesee Street City of Utica, NY Oneida County, NY

## Contractor responsible for the implementation of the SWPPP:

Company Name	Business Telephone Number				
	Dusii	icss receptione	Number		
Business Address	City,	State,	Zip Code		
2 domeo bindar obb	0109,	is care,	lip couc		
Durain and Fassimila		E maail Addmaa			
Business Facsimile		E-mail Addres	ss		

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 most current version 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."

Signature		Date	
Printed Name		Title	
		THE	
Company Name	Business	s Telephone Nı	umber
Business Address	City,	State,	Zip Code

## **CONSTRUCTION ACTIVITY FORM**

**NOTE:** The contractor is responsible for maintaining an accurate and complete log of construction activities, including, but not limited to, commencement of stabilization, major grading activities, timeframes when construction ceases on a portion of site (temporary or permanent) until the Notice of Termination (NOT) is filed.

### MAJOR STABILIZATION AND GRADING ACTIVITIES

Construction Activity	Contractor Name	Start Date	End Date	Location

E. STORMWATER MANAGEMENT REPORT

# **STORMWATER MANAGEMENT REPORT**

**Prepared for** 



# **Proposed Convenience Store & Gas Station**

2632 & 2634 Genesee Street City of Utica, Oneida County, NY

11/11/2022

Prepared by: Scott E. Kitchner, PE Stewart's Shops PO Box 435 Saratoga Springs, NY 12866 Phone: (518) 581-1201 Ext. 4249 Fax: (518) 581-1209 skitchner@stewartsshops.com

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  - **b. EXISTING WATERSHED PLAN**
- III PROPOSED STORMWATER CONDITIONS
  - a. PROPOSED STORMWATER CONDITIONS SUMMARY
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  - c. IMPERVIOUS COVER COMPARISON PLAN
  - d. CONCLUSION
  - e. PRE AND POST DEVELOPMENT FLOW RATE COMPARISON TABLE
  - f. PRE AND POST DEVELOPMENT WATERSHED CALCULATIONS AND HYDROGRAPHS FOR THE 1, 10, AND 100 YEAR STORM EVENTS
  - g. NRCS SOIL DATA

### I. Introduction

Stewart's Shops is proposing to redevelop two parcels located in the City of Utica, NY, to construction of a new 3,975 sq. ft. convenience store and fueling service. The project site is located at 2632 & 2634 Genesee Street. The project includes the demolition of the former Raspberries Restaurant, a 2-story dwelling and garage to incorporate the construction of a new 3,975 sq. ft. convenience store, four (4) island fuel canopy and associated parking lot and access drives.

The site is located at 2632 & 2634 Genesee Street and includes the consolidation of the Raspberries Restaurant parcel and the 2-story dwelling parcel to form a 1.14+/- acre parcel. Proposed features include landscaping, lighting, paved parking and access drives, sidewalks, trash enclosure, utilities and stormwater management improvements as shown on the Site Plan drawings prepared by Stewart's Shops.

This report will briefly discuss the proposed site development and provide a detailed analysis of the existing and proposed site conditions and the proposed stormwater management system. Hydraulic calculations included in this report were generated for the 1, 10, and 100-year storm event utilizing the SCS TR-20 and HydroCad Stormwater modeling software.

## II. <u>Existing Stormwater Conditions:</u>

**Existing Conditions Summary:** 

The existing Raspberries Restaurant is located at 2634 Genesee Street and is situated on a 1.03+/- acre parcel located on the north side of Genesee Street just west of the intersection of Genesee Street and Woodlawn Avenue. The 2-story dwelling is located at 2632 Genesee Street and in situated on a 0.11+/- acre parcel east and adjacent to the Raspberries' parcel and located at the northwest corner of Genesee Street and Woodlawn Avenue. The project includes the consolidation of the two parcels to form a 1.14+/- acre lot. The combined parcels currently include a 5,300+/- sq. ft. commercial building formerly Raspberries Restaurant, a 1,100+/- sq. ft. 2-story dwelling, a 400+/- sq. ft. garage and associated paved parking and delivery areas with one (1) access drive on Genesee Street and one (1) access driveway on Woodlawn Avenue

There are five (5) primary existing watersheds on the site which have been designated Watershed E1, E2, E3, E4 and E5 in this report.

Watershed E1 includes the southern portion of the subject parcel along Genesee Street. Stormwater from this area is tributary to the Genesee Street ROW drainage system via an existing catch basin located at the northwest corner of Genesee Street and Woodlawn Avenue. This catch basin has been designated Design Point 1. Watershed E1 is further divided into two (2) sub-catchment areas designated Watershed Areas E1A and E1B. Watershed Area E1A includes areas within the site which sheet flow into two (2) on-site drainage structures. These structures are connected with drainage pipe and discharge to the Design Point 1 catch basin subsurfacely. Watershed Area E1B consists of a portion of the Raspberries' roof and areas along the property frontage which sheet flow stormwater into the ROW and into the open grate of the Design Point 1 catch basin. Stormwater from the project Design Point 1 catch basin is conveyed subsurfacely in drainage pipes through a series of drainage structures in an easterly direction along the Genesee Street ROW and ultimately discharges to the Mohawk River.

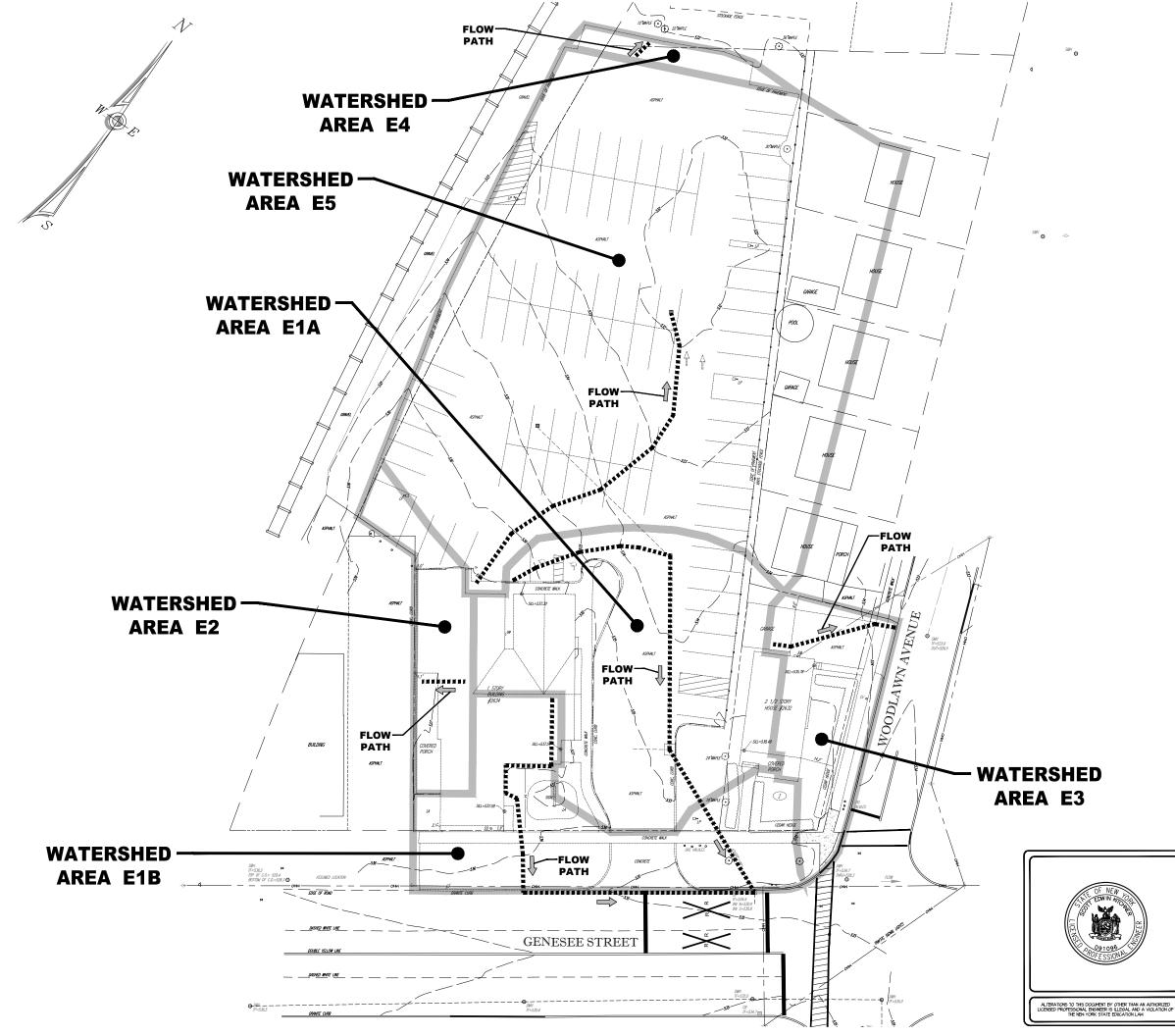
Watershed Area E2 includes a portion of the Raspberries' roof and a small portion of the existing paved parking lot along the western side of the property. Stormwater from this area sheet flows in a westerly direction to the adjoining lands of NYS&W Railway Corp.

Watershed Area E3 includes a portion of the 2-story dwelling roof, driveway, sidewalk and greenspace along the Woodlawn Avenue frontage. Stormwater from this area sheet flows in a northeasterly direction to Woodlawn Avenue and ultimately into the City drainage system in Woodlawn Avenue.

Watershed Area E4 includes a very small portion of the existing Raspberries' paved parking area and greenspace. Stormwater from this area sheet flows in a northerly direction to the adjoining property to the north.

Watershed Area E5 includes a portion of the residential properties to the east of the subject parcel and the northerly portion of the Raspberries' parking area. Stormwater from this area sheet flows to an existing drywell in the center of the Raspberries' parking lot. The drywell does not appear to have any outlet and infiltrates all stormwater from this watershed. For the purposes of this analysis, the drywell and stormwater from this watershed area is assumed to have no offsite discharge.

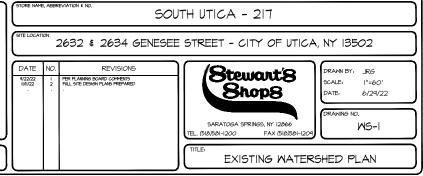
The existing watershed area and topography are illustrated on the Existing Watershed Plan included on the following pages of this report.



WATERSHED AREA E1A - 12,577 SQ. FT. BUILDING/ROOF -2.699 SQ. FT. GRASS — - 1,852 SQ. FT. WATERSHED AREA E1B-7,751 SQ. FT. BUILDING/ROOF PAVEMENT/CONC. \_\_\_\_\_\_ 1,797 SQ. FT. GRASS — -4,299 SQ. FT. WATERSHED AREA E2-3,151 SQ. FT. BUILDING/ROOF 2,251 SQ. FT. PAVEMENT/CONC. 900 SQ. FT. WATERSHED AREA E3-4,101 SQ. FT. BUILDING/ROOF -----— 817 SQ. FT. PAVEMENT/CONC. \_\_\_\_\_\_1,500 SQ. FT. GRASS--1,784 SQ. FT. WATERSHED AREA E4 - 930 SQ. FT. PAVEMENT/CONC. 801 SQ. FT. GRASS------WATERSHED AREA E5 - 34,631 SQ. FT. — 1,926 SQ. FT. BUILDING/ROOF -----PAVEMENT/CONC. \_\_\_\_\_ 27,525 SQ. FT.

- 5,180 SQ. FT.

GRASS-



### III. <u>Proposed Stormwater Conditions:</u>

Proposed Conditions Summary:

The proposed development is designed to mimic the existing drainage patterns and reduce the discharge flow rate from the pre-developed to postdeveloped condition. Per the requirements set forth in the NYSDEC Stormwater Design Manual, this project classifies as a redevelopment activity with a decrease in impervious cover. There is currently 47,969 sq. ft. of impervious coverage within the re-development area. The proposed re-development will consist of 34,921 sq. ft. of impervious cover resulting in an approximate 27% reduction in impervious cover as a result of this project. Per Chapter 9 of the NYSDEC Stormwater Design Manual, Section 9.2.1 I, the Water Quality Volume WQv objective for a re-development activity can be achieved by proposing a reduction of existing impervious cover by a minimum of 25% of the total disturbed, impervious area. The proposed stormwater management system exceeds this requirement and therefore meets the WQv objective. In addition to the reduction in impervious cover, a hydrodynamic First Defense Stormwater Treatment Unit and subsurface infiltration system has been proposed for the bulk of the redevelopment area. Per NYSDEC guidance, infiltration is permitted at a convenience store location if the tributary area to the infiltration system is not part of the fueling or petroleum storage areas. The infiltration system will not receive any stormwater runoff from these areas.

Consistent with the existing condition, there are five (5) primary watersheds in the proposed condition which have been designated Watershed P1, P2, P3, P4 and P5 in this report.

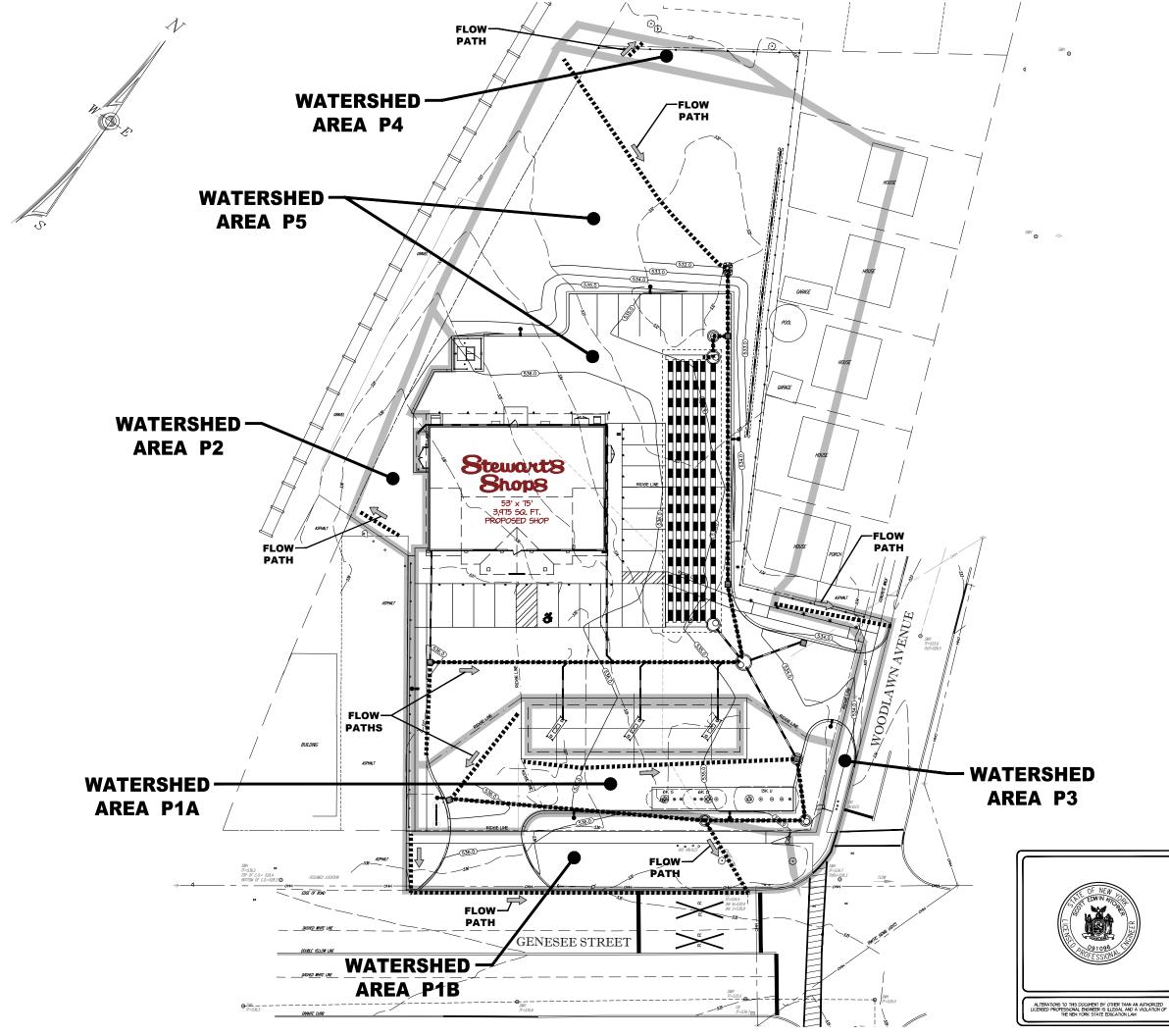
Watershed P1 includes the proposed re-development area along the Genesee Street frontage tributary to the existing catch basin designated Design Point 1 and as described in the existing condition summary above. Watershed P1 is further divided into two (2) sub-catchment areas designated Watershed Areas P1A and P1B. Watershed Area P1A consists of the southern portion of the property. Stormwater from this area is collected in two (2) on-site catch basins which are connected subsurfacely and discharge to the existing Design Point 1 catch basin described above. All proposed on-site open grate drainage structures will be equipped with deep sumps and the "Eliminator" oil and floating debris traps. These traps are designed to increase sediment removal and oil / water separation capabilities in each structure during storm events. Watershed Area P1B consists of greenspace and sidewalk along the Genesee Street frontage which sheet flows stormwater into the ROW and into the open grate of the existing Design Point 1 catch basin, similar to the existing condition. Stormwater flows from this area has been reduced due to the reduction of total area and impervious cover.

Watershed Area P2 includes a very small portion of the corner of the adjoining Miami Smoke Shop parking lot and a small portion of greenspace along the western side of the property. Stormwater from this area sheet will continue to flow in a westerly direction to the adjoining westerly lands, consistent with the existing condition. Flow from this area has been significantly reduced due to the reduction of total area, pavement and the elimination of the portion of the Raspberries' roof tributary to this area.

Watershed Area P3 includes a portion of sidewalk and greenspace along the Woodlawn Avenue frontage. Stormwater from this area will continue to sheet flows in a northeasterly direction to Woodlawn Avenue. Flow from this area has been significantly reduced due to the reduction of total area, pavement and the elimination of the portion of the 2-story dwelling and garage roof tributary to this area.

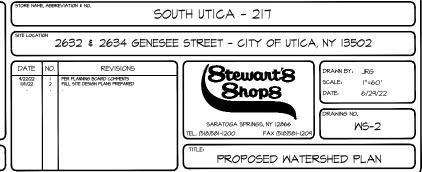
Watershed Area P4 includes the same small portion of the site described above in the existing Watershed E4 summary. Due to the existing land topography, stormwater from this area will continue to sheet flows in a northerly direction to the adjoining property to the north. Flow from this area has been significantly reduced due to the elimination of impervious area.

The proposed watershed area and topography are illustrated on the Proposed Watershed Plan included on the next page of this report.



WATERSHED AREA P1A - 6,145 SQ. FT. PAVEMENT/CONC. 4,982 SQ. FT. GRASS \_\_\_\_\_\_ 1,163 SQ. FT. WATERSHED AREA P1B-4,806 SQ. FT. PAVEMENT/CONC. 1,788 SQ. FT. — 3,018 SQ. FT. GRASS-WATERSHED AREA P2-2,050 SQ. FT. PAVEMENT/CONC. 368 SQ. FT. GRASS------WATERSHED AREA P3 - 1.473 SQ. FT. GRASS------ 591 SQ. FT. WATERSHED AREA P4 ---- 930 SQ. FT. GRASS------WATERSHED AREA P5-47.737 SQ. FT. BUILDING/CANOPY/ROOF-8,754 SQ. FT.

PAVEMENT/CONC. 20,073 SQ. FT. GRASS 18,910 SQ. FT.



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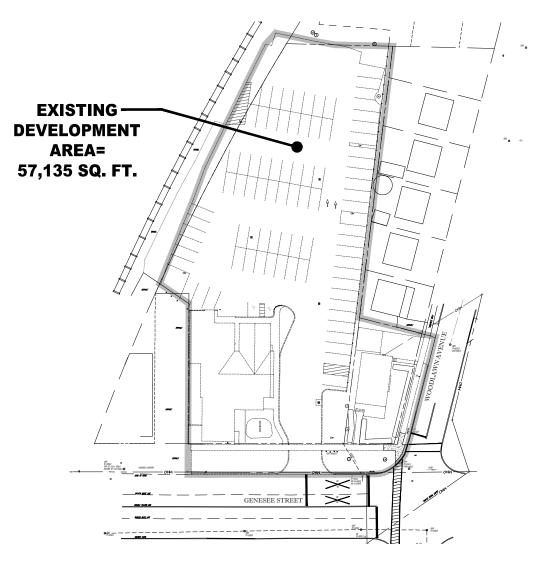
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EXISTING DEVELOPMENT AREA — 57,135 SQ. FT.

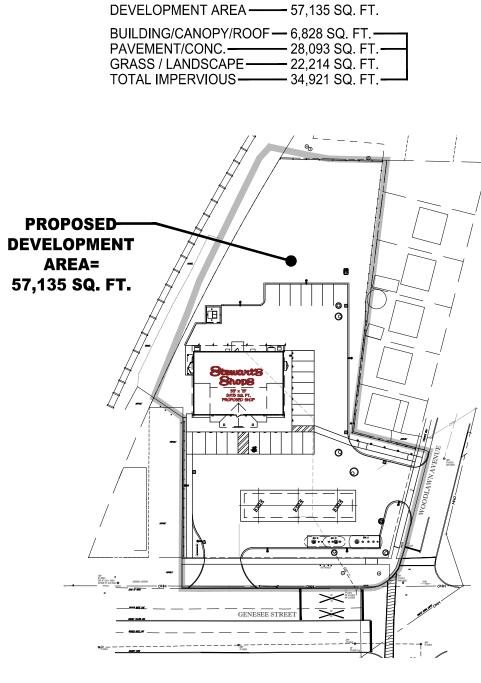
BUILDING/CANOPY/ROOF-	- 7,450 SQ. FT
PAVEMENT/CONC.	- 40,519 SQ. FT
GRASS / LANDSCAPE	– 9,166 SQ. FT.
TOTAL IMPERVIOUS	— 47,969 SQ. FT. ——

PROPOSED DEVELOPMENT AREA	57,135 \$
BUILDING/CANOPY/ROOF — PAVEMENT/CONC. — GRASS / LANDSCAPE — TOTAL IMPERVIOUS —	28,093 S 22,214 S

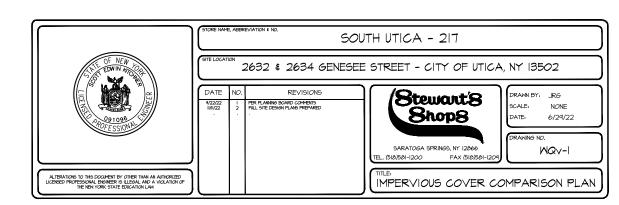


EXISTING IMPERVIOUS COVER PLAN

EXISTING IMPERVIOUS =	47,969 SQ. FT.
PROPOSED IMPERVIOUS =	34,921 SQ. FT.
REDUCTION =	13,048 SQ. FT.
% REDUCTION=	27%



PROPOSED IMPERVIOUS COVER PLAN



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## **Conclusion:**

The proposed development has been designed to release stormwater at a rate not to exceed the existing condition for all subject storm events. The facility is designed to provide stormwater discharge control and quality treatment.

The stormwater management system is designed to meet the objectives set forth in the NYSDEC Stormwater Management Design Manual. Uniform sizing criteria were calculated as follows:

- The 90% Rule Water Quality Volume (WQv) treatment is provided with impervious cover reduction of greater than 25%.
- The minimum Runoff Reduction Volume (RRv) is not required for redevelopment activities.
- Channel Protection (Cpv) is not required for this redevelopment activity as there are no changes to hydrology that increase the discharge rate from the project site.
- Overbank Flood (Qp) protection was designed to control the peak discharge from the 10-year storm to the 10-year predevelopment rates. These calculations can be found in the 10-year storm analysis for each watershed and the total site volume comparison included in the report.
- Extreme Storm (Qf) protection was designed to control the peak discharge from the 100-year storm to the 100-year predevelopment rates and safely pass the 100-year storm event. These calculations can be found in the 100-year storm analysis for each watershed and the total site volume comparison included in the report.

The proposed stormwater management system as designed will serve to mitigate the effects of the development of the parcel, such that the proposed use will not adversely affect any downstream or adjacent properties.

WATERSHED 1 - PRE-DEVELOPMENT AND POST DEVELOPMENT STORM WATER DISCHARGE COMPARISON TABLE							
STORM EVENT	PRE-DEVELOPMENTPOST-DEVELOPMENT% REDUCTIONPEAK DISCHARGE (CFS)PEAK DISCHARGE (CFS)PRE TO POST						
1 YEAR	0.60	0.34	43 %				
10 YEAR	1.38	0.72	48 %				
100 YEAR	2.82 1.39 51 %						

WATERSHED 2 - PRE-DEVELOPMENT AND POST DEVELOPMENT STORM WATER DISCHARGE COMPARISON TABLE							
STORM EVENT							
1 YEAR	0.21 0.00 100 %						
10 YEAR	0.36 0.00 100 %						
100 YEAR	0.59	0.07	88 %				

WATERSHED 3 - PRE-DEVELOPMENT AND POST DEVELOPMENT STORM WATER DISCHARGE COMPARISON TABLE							
STORM EVENT	PRE-DEVELOPMENTPOST-DEVELOPMENT% REDUCTIONPEAK DISCHARGE (CFS)PEAK DISCHARGE (CFS)PRE TO POST						
1 YEAR	0.05	0.02	60 %				
10 YEAR	0.18	0.07	61 %				
100 YEAR	0.47	0.18	62 %				

WATERSHED 4 - PRE-DEVELOPMENT AND POST DEVELOPMENT STORM WATER DISCHARGE COMPARISON TABLE							
STORM EVENT	PRE-DEVELOPMENTPOST-DEVELOPMENT% REDUCTIONPEAK DISCHARGE (CFS)PEAK DISCHARGE (CFS)PRE TO POST						
1 YEAR	0.05 0.00 100 %						
10 YEAR	0.09 0.00 100 %						
100 YEAR	0.16	0.00	100 %				

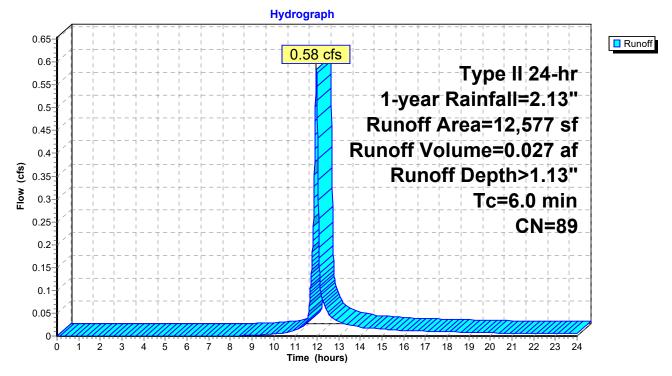
# Summary for Subcatchment E1A: Ex. Watershed 1A

Runoff = 0.58 cfs @ 11.97 hrs, Volume= 0.027 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Area (sf)	CN	Description						
*	2,699	98	Roofs						
*	8,026	98	Paved park	ing					
	1,852	39	>75% Gras	s cover, Go	ood, HSG A				
	12,577	89	Weighted Average						
	1,852		14.73% Pe	14.73% Pervious Area					
	10,725		85.27% Imp	pervious Ar	rea				
	To Lower		· · · ) / -   : tr ·	0	Description				
,	Tc Lengt			Capacity	Description				
(r	<u>min) (feet</u>	t) (ft/	ft) (ft/sec)	(cfs)					
	6.0				Direct Entry, Min Tc				

# Subcatchment E1A: Ex. Watershed 1A



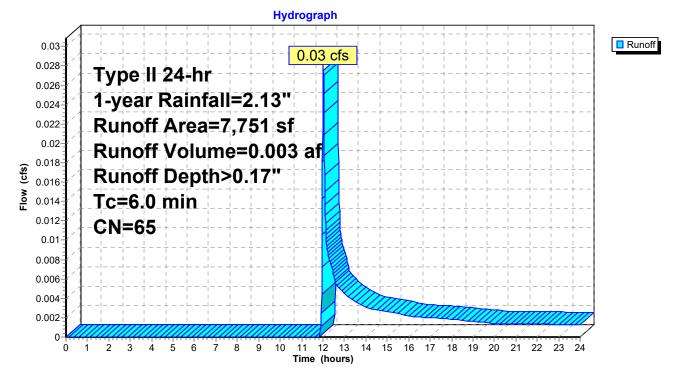
# Summary for Subcatchment E1B: Ex. Watershed 1B

Runoff = 0.03 cfs @ 12.02 hrs, Volume= 0.003 af, Depth> 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	A	rea (sf)	CN	Description						
*		1,655	98	Roofs						
*		1,797	98	Paved park	ing					
		4,299	39	>75% Gras	s cover, Go	bod, HSG A				
		7,751 4,299 3,452		Weighted Average 55.46% Pervious Area 44.54% Impervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft		Capacity (cfs)	Description				
	6.0					Direct Entry, Min Tc				

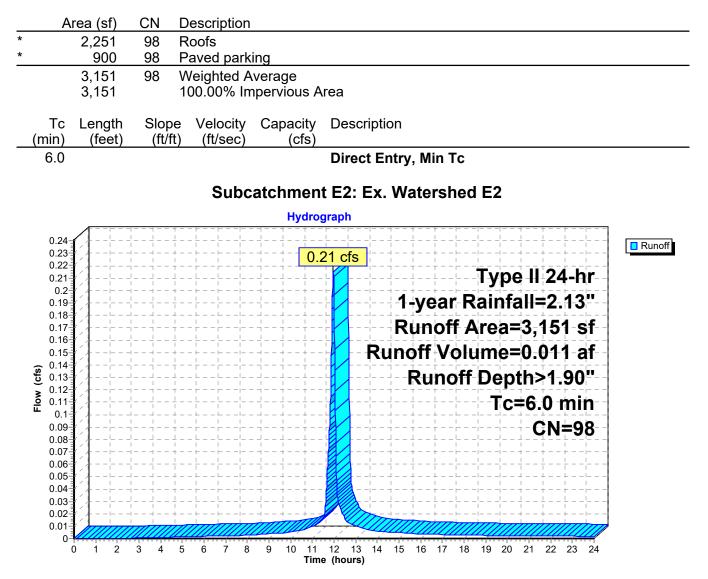
# Subcatchment E1B: Ex. Watershed 1B



# Summary for Subcatchment E2: Ex. Watershed E2

Runoff = 0.21 cfs @ 11.97 hrs, Volume= 0.011 af, Depth> 1.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"



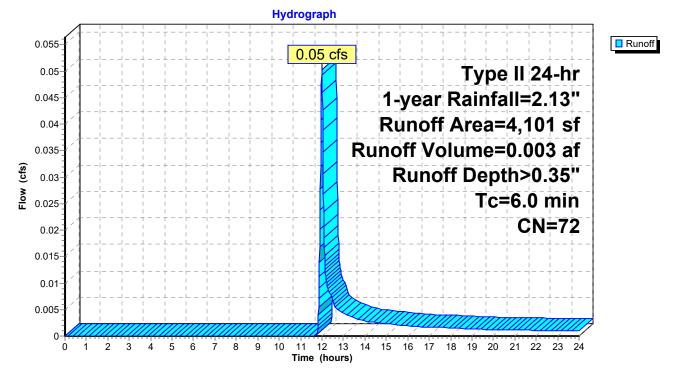
# Summary for Subcatchment E3: Ex. Watershed E3

Runoff = 0.05 cfs @ 11.99 hrs, Volume= 0.003 af, Depth> 0.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Area (s	sf) CN	D	Description						
*	8	17 98	R	oofs						
*	1,50	0 98	Р	aved park	ing					
	1,78	34 39	>	75% Ġras	s cover, Go	bod, HSG A				
	4,10	)1 72	V	Weighted Average						
	1,78	34	4	43.50% Pervious Area						
	2,37	17	5	56.50% Impervious Area						
	Tc Len	gth Slo	ре	Velocity	Capacity	Description				
(r	nin) (fe	et) (ft	t/ft)	(ft/sec)	(cfs)					
	6.0					Direct Entry, Min Tc				

# Subcatchment E3: Ex. Watershed E3



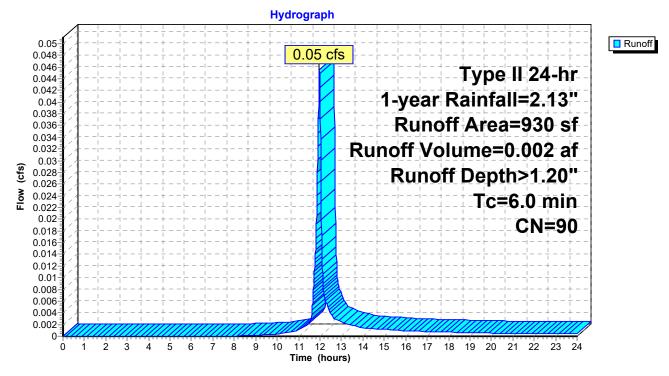
# Summary for Subcatchment E4: Ex. Watershed E4

0.05 cfs @ 11.97 hrs, Volume= 0.002 af, Depth> 1.20" Runoff =

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Area (sf)	CN	Description							
*	801	98	Paved parking							
	129	39	>75% Grass cover, Good, HSG A							
	930	90	Weighted Average							
	129		13.87% Pervious Area							
	801		86.13% Impervious Area							
٦	c Length	Slope	e Velocity	Capacity	Description					
(mii	n) (feet)	(ft/ft	) (ft/sec)	(cfs)						
6	.0				Direct Entry, Min Tc					

# Subcatchment E4: Ex. Watershed E4



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1 2 3 4 5 6 7 8 9 10

**CN=89** 

11 12 13 14 15 16 17 18 19 20 21 22 23 24 Time (hours)

# Summary for Subcatchment E5: Ex. Watershed E5

Runoff = 1.61 cfs @ 11.97 hrs, Volume= 0.075 af, Depth> 1.13"

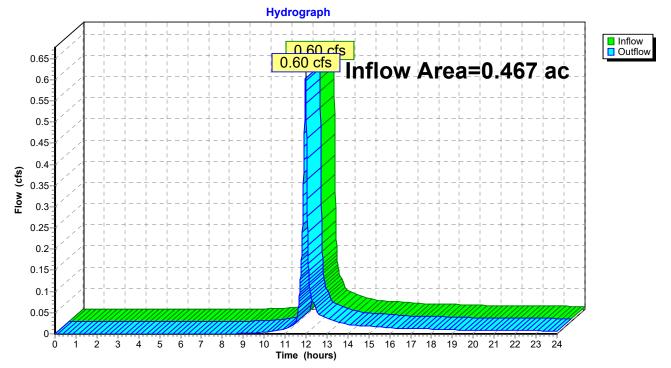
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Area (sf)	CN	Description						
*	1,926	98	Roofs						
*	27,525		Paved parki						
	5,180		>75% Grass	s cover, Go	bod, HSG A				
	34,631		Weighted A						
	5,180		14.96% Per						
	29,451		85.04% Imp	ervious Are	ea				
(m	Tc Length hin) (feet)	Slope (ft/ft)		Capacity (cfs)	Description				
	6.0				Direct Entry, Min Tc				
	Subcatchment E5: Ex. Watershed E5								
				Hydrog	graph				
Flow (cfs)					Type II 24-hr 1-year Rainfall=2.13" Runoff Area=34,631 sf Runoff Volume=0.075 af Runoff Depth>1.13" Tc=6.0 min				

## Summary for Reach E1: Total Site Discharge to Genesee St

Inflow Area	a =	0.467 ac, 69.74% Impervious, Inflow Depth > 0.77" for 1-year event	
Inflow	=	0.60 cfs @ 11.98 hrs, Volume= 0.030 af	
Outflow	=	0.60 cfs $\overline{@}$ 11.98 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# Reach E1: Total Site Discharge to Genesee St

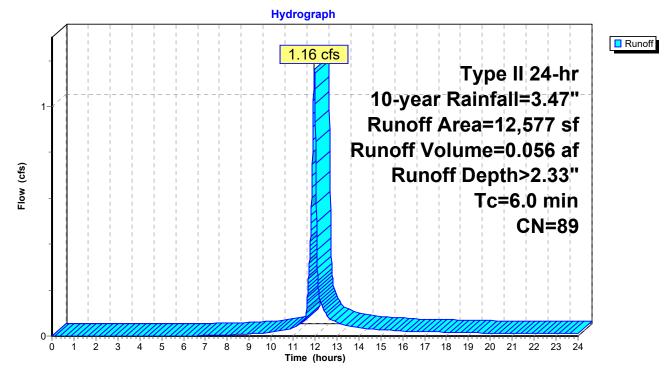
### Summary for Subcatchment E1A: Ex. Watershed 1A

Runoff = 1.16 cfs @ 11.97 hrs, Volume= 0.056 af, Depth> 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	Area (s	f) CN	D	escription		
*	2,69	9 98	R	loofs		
*	8,02	6 98	P	aved park	ing	
	1,85	2 39	>	75% Ġras	s cover, Go	bod, HSG A
	12,57	7 89	V	Veighted A	verage	
	1,85	2	1	4.73% Per	vious Area	
	10,72	5	8	5.27% Imp	pervious Ar	ea
	Tc Leng (min) (fe	•	ope ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
	6.0					Direct Entry, Min Tc

# Subcatchment E1A: Ex. Watershed 1A



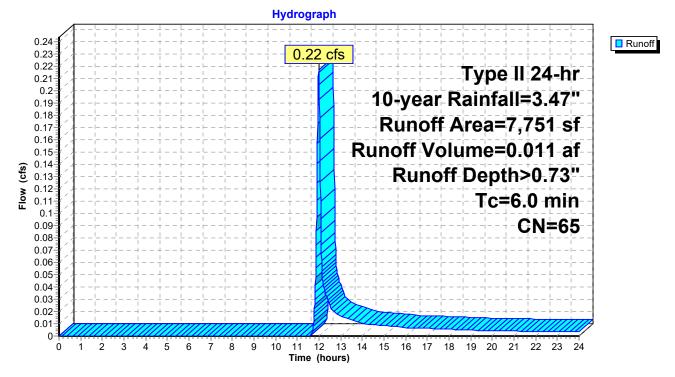
#### Summary for Subcatchment E1B: Ex. Watershed 1B

Runoff = 0.22 cfs @ 11.99 hrs, Volume= 0.011 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	Area (sf)	CN	Description				
*	1,655	98	Roofs				
*	1,797	98	Paved park	ing			
	4,299	39	>75% Gras	s cover, Go	ood, HSG A		
	7,751	65	Weighted A	verage			
	4,299		55.46% Pe	rvious Area	3		
	3,452		44.54% lmp	pervious Ar	rea		
	To Longth	Slope	Volocity	Consoity	Description		
(100	Tc Length	Slope	,	Capacity	Description		
	in) (feet)	(ft/ft	) (ft/sec)	(cfs)			
(	5.0				Direct Entry, Min Tc		

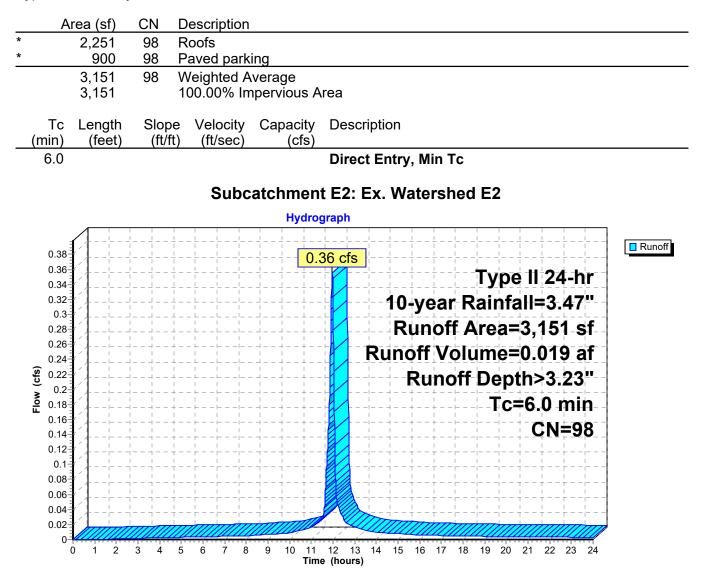
# Subcatchment E1B: Ex. Watershed 1B



#### Summary for Subcatchment E2: Ex. Watershed E2

Runoff = 0.36 cfs @ 11.97 hrs, Volume= 0.019 af, Depth> 3.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"



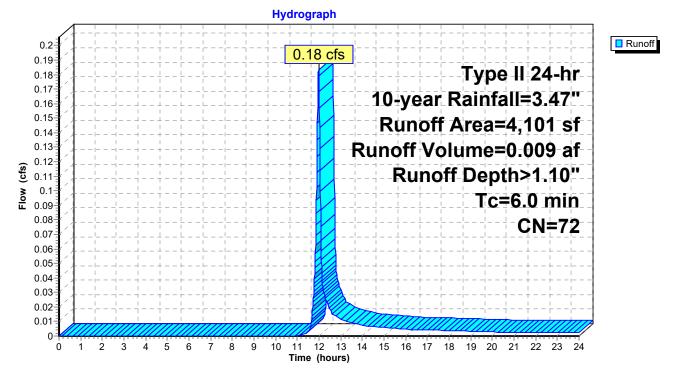
#### Summary for Subcatchment E3: Ex. Watershed E3

Runoff = 0.18 cfs @ 11.98 hrs, Volume= 0.009 af, Depth> 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	Area (sf)	CN	Description	Description					
*	817	98	Roofs						
*	1,500	98	Paved park	ing					
	1,784	39	>75% Gras	s cover, Go	pod, HSG A				
	4,101 1,784 2,317		Weighted Average 43.50% Pervious Area 56.50% Impervious Area						
(r	Tc Lengtl nin) (feet		,	Capacity (cfs)	Description				
	6.0				Direct Entry, Min Tc				

# Subcatchment E3: Ex. Watershed E3



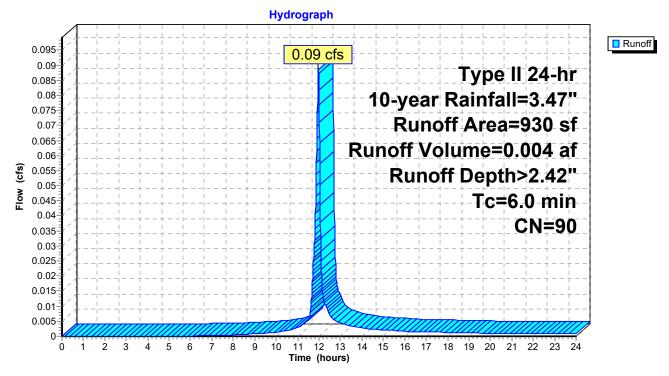
#### Summary for Subcatchment E4: Ex. Watershed E4

Runoff = 0.09 cfs @ 11.97 hrs, Volume= 0.004 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	A	rea (sf)	CN	Description						
*		801	98	Paved park	ing					
		129	39	>75% Gras	s cover, Go	bod, HSG A				
		930	90	Weighted A	Veighted Average					
		129		13.87% Per	vious Area					
		801		86.13% Imp	pervious Ar	ea				
	Тс	Length	Slope		Capacity	Description				
(r	min)	(feet)	(ft/ft	) (ft/sec)	(cfs)					
	6.0					Direct Entry, Min Tc				

## Subcatchment E4: Ex. Watershed E4



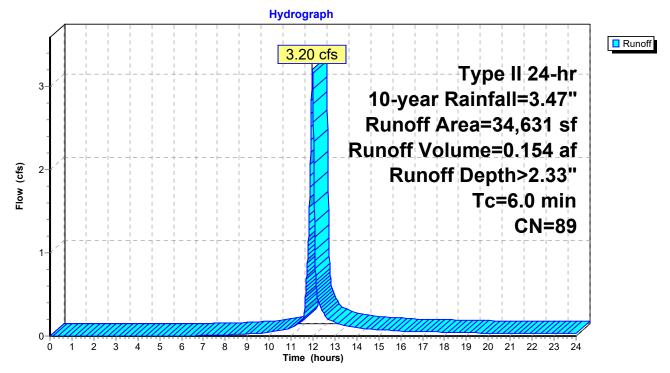
#### Summary for Subcatchment E5: Ex. Watershed E5

Runoff = 3.20 cfs @ 11.97 hrs, Volume= 0.154 af, Depth> 2.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	Ar	ea (sf)	CN	Description					
*		1,926	98	Roofs					
*		27,525	98	Paved park	ing				
		5,180	39	>75% Ġras	s cover, Go	bod, HSG A			
		34,631 5,180 29,451		Weighted Average 14.96% Pervious Area 85.04% Impervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft		Capacity (cfs)	Description			
	6.0					Direct Entry, Min Tc			

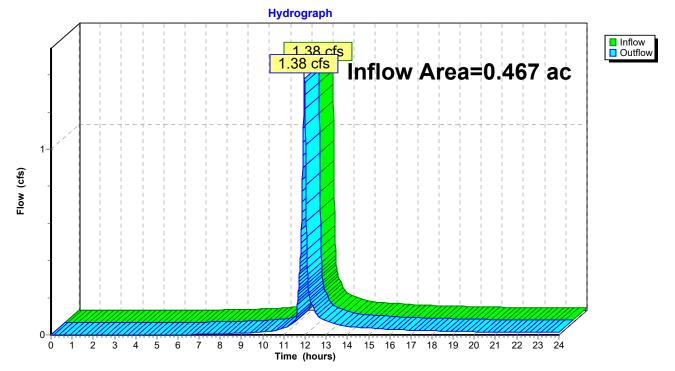
# Subcatchment E5: Ex. Watershed E5



## Summary for Reach E1: Total Site Discharge to Genesee St

Inflow Area =	0.467 ac, 69.74% Impervious, In	flow Depth > 1.72" for 10-year event	
Inflow =	1.38 cfs @ 11.97 hrs, Volume=	0.067 af	
Outflow =	1.38 cfs @ 11.97 hrs, Volume=	0.067 af, Atten= 0%, Lag= 0.0 mir	n

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# **Reach E1: Total Site Discharge to Genesee St**

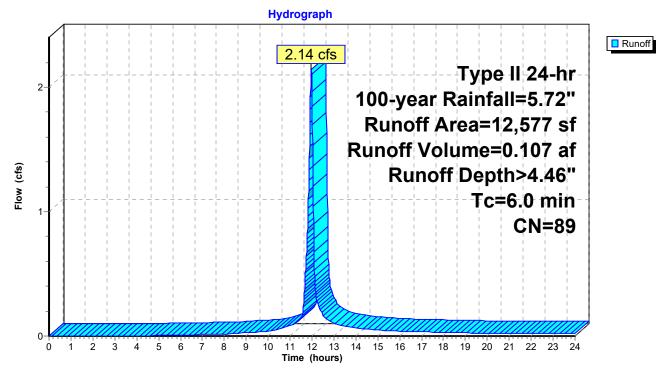
## Summary for Subcatchment E1A: Ex. Watershed 1A

Runoff = 2.14 cfs @ 11.97 hrs, Volume= 0.107 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	A	rea (sf)	CN	Description					
*		2,699	98	Roofs					
*		8,026	98	Paved park	ing				
		1,852	39	>75% Gras	s cover, Go	bod, HSG A			
		12,577 1,852 10,725	89	Weighted Average 14.73% Pervious Area 85.27% Impervious Area					
(	Tc min)	Length (feet)	Slop (ft/ft	,	Capacity (cfs)	Description			
	6.0					Direct Entry, Min Tc			

# Subcatchment E1A: Ex. Watershed 1A



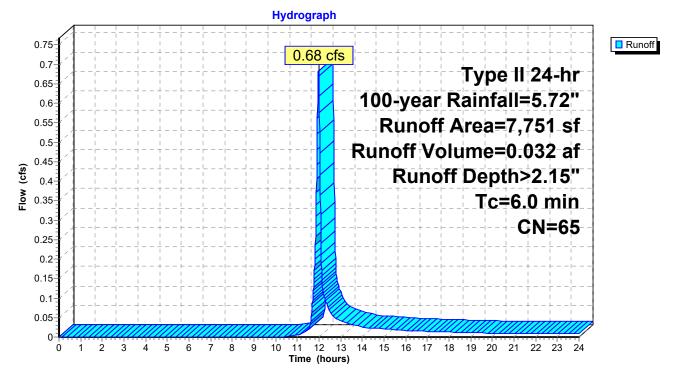
#### Summary for Subcatchment E1B: Ex. Watershed 1B

Runoff = 0.68 cfs @ 11.98 hrs, Volume= 0.032 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	Ar	ea (sf)	CN	Description				
*		1,655	98	Roofs				
*		1,797	98	Paved park	ing			
		4,299	39	>75% Ġras	s cover, Go	bod, HSG A		
		7,751	65	Weighted A	verage			
		4,299		55.46% Pei	rvious Area	a		
		3,452		44.54% lmp	pervious Ar	ea		
	Та	Longth	Clan	Valacity	Consoitu	Description		
1		Length	Slope		Capacity	Description		
(r	nin)	(feet)	(ft/ft	) (ft/sec)	(cfs)			
	6.0					Direct Entry, Min Tc		

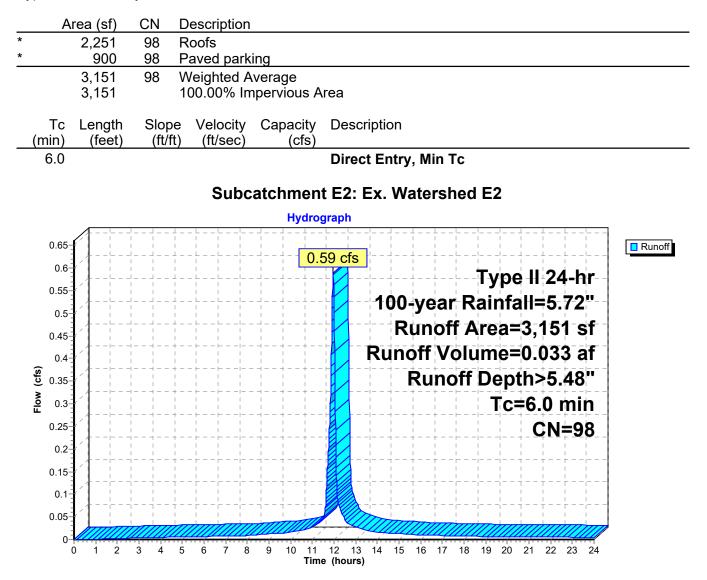
# Subcatchment E1B: Ex. Watershed 1B



#### Summary for Subcatchment E2: Ex. Watershed E2

Runoff = 0.59 cfs @ 11.97 hrs, Volume= 0.033 af, Depth> 5.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"



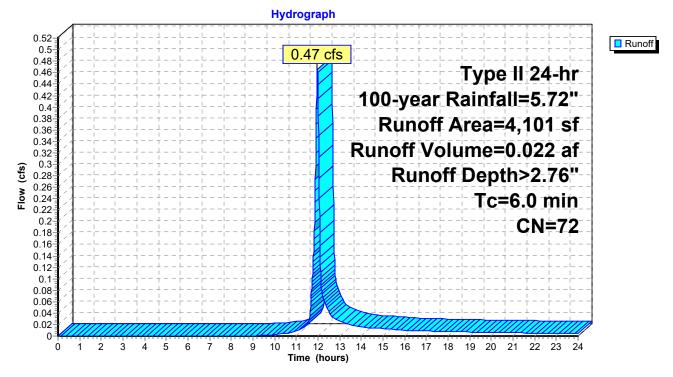
#### Summary for Subcatchment E3: Ex. Watershed E3

Runoff = 0.47 cfs @ 11.97 hrs, Volume= 0.022 af, Depth> 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	Ar	ea (sf)	CN	Description					
*		817	98	Roofs					
*		1,500	98	Paved park	ing				
		1,784	39	>75% Gras	s cover, Go	bod, HSG A			
		4,101 1,784 2,317		Weighted Average 43.50% Pervious Area 56.50% Impervious Area					
_(	Tc min)	Length (feet)	Slope (ft/ft		Capacity (cfs)	Description			
	6.0					Direct Entry, Min Tc			

# Subcatchment E3: Ex. Watershed E3



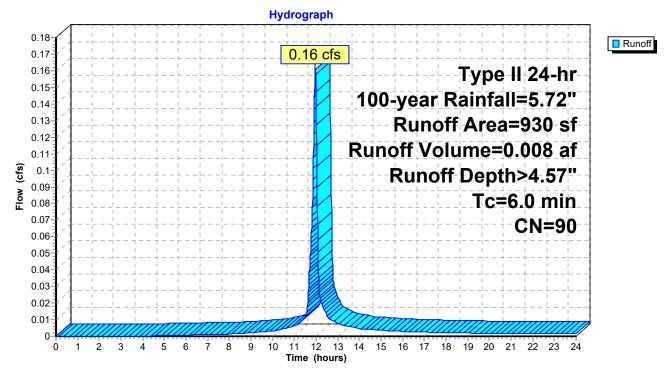
#### Summary for Subcatchment E4: Ex. Watershed E4

Runoff = 0.16 cfs @ 11.97 hrs, Volume= 0.008 af, Depth> 4.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	Area (sf)	CN	Description						
*	801	98	Paved park	ing					
	129	39	>75% Gras	s cover, Go	bod, HSG A				
	930	90	Weighted A	Weighted Average					
	129		13.87% Per	vious Area					
	801		86.13% Imp	pervious Ar	ea				
(mi	rc Length n) (feet)	Slope (ft/ft	,	Capacity (cfs)	Description				
6	.0				Direct Entry, Min Tc				

## Subcatchment E4: Ex. Watershed E4



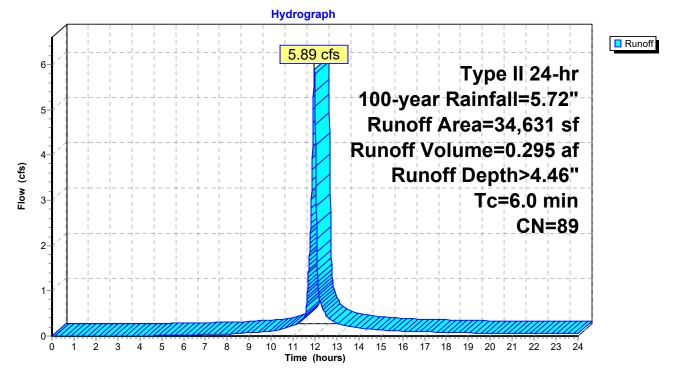
#### Summary for Subcatchment E5: Ex. Watershed E5

Runoff = 5.89 cfs @ 11.97 hrs, Volume= 0.295 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	A	rea (sf)	CN	Description					
*		1,926	98	Roofs					
*		27,525	98	Paved park	ing				
_		5,180	39	>75% Ġras	s cover, Go	bod, HSG A			
		34,631	89	Weighted A	verage				
		5,180		14.96% Per	vious Area	l de la constante de			
		29,451		85.04% Imp	pervious Ar	ea			
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description			
	6.0					Direct Entry, Min Tc			

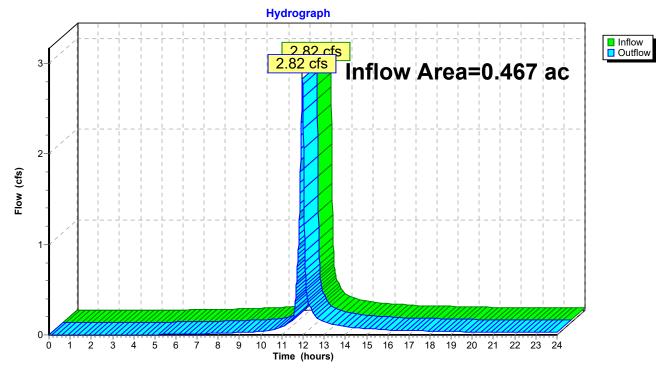
# Subcatchment E5: Ex. Watershed E5



## Summary for Reach E1: Total Site Discharge to Genesee St

Inflow Area =	0.467 ac, 69.74% Impervious, Inflow	/ Depth > 3.58" for 100-year ev	/ent
Inflow =	2.82 cfs @ 11.97 hrs, Volume=	0.139 af	
Outflow =	2.82 cfs @ 11.97 hrs, Volume=	0.139 af, Atten= 0%, Lag= 0.	0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# **Reach E1: Total Site Discharge to Genesee St**

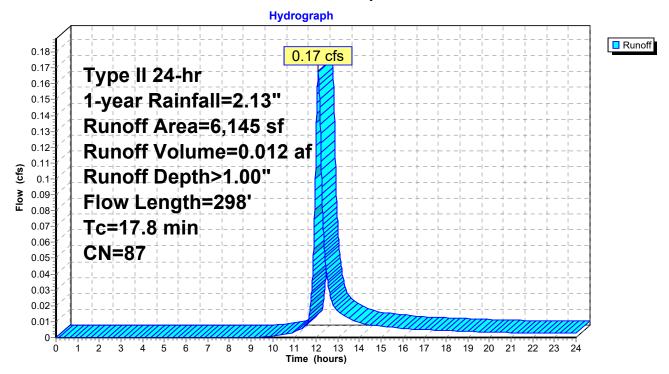
### Summary for Subcatchment P1A: Prop. Watershed 1A

Runoff = 0.17 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

A	Area (sf)	CN E	Description						
	4,982	98 F	aved park	ing, HSG A	N N N N N N N N N N N N N N N N N N N				
	1,163	39 >	75% Gras	s cover, Go	bod, HSG A				
	6,145	87 V	Veighted A	verage					
	1,163	1	8.93% Per	vious Area					
	4,982	8	1.07% Imp	pervious Ar	ea				
_				- ··					
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
0.6	25	0.0120	0.74		Sheet Flow,				
					Smooth surfaces n= 0.011 P2= 2.45"				
15.5	75	0.0050	0.08		Sheet Flow,				
					Grass: Short n= 0.150 P2= 2.45"				
1.7	198	0.0140	1.90		Shallow Concentrated Flow,				
					Unpaved Kv= 16.1 fps				
17.8	298	Total							

### Subcatchment P1A: Prop. Watershed 1A



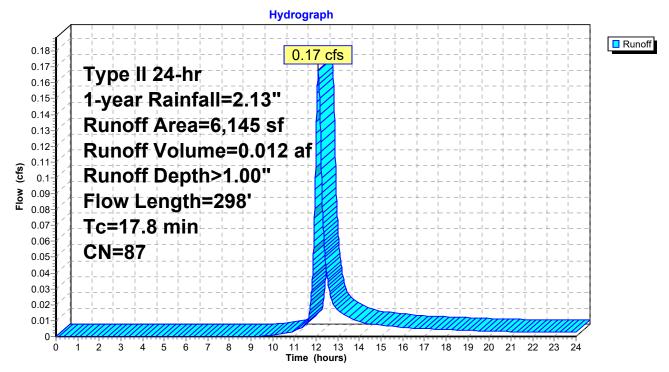
### Summary for Subcatchment P1B: Prop. Watershed 1A

Runoff = 0.17 cfs @ 12.10 hrs, Volume= 0.012 af, Depth> 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

Α	rea (sf)	CN E	N Description						
	4,982	98 F	98 Paved parking, HSG A						
	1,163	39 >	75% Gras	s cover, Go	bod, HSG A				
	6,145	87 V	Veighted A	verage					
	1,163	-		vious Area					
	4,982	8	1.07% Imp	pervious Ar	ea				
-				<b>o</b> "					
Tc	Length	Slope	Velocity	Capacity	Description				
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)					
0.6	25	0.0120	0.74		Sheet Flow,				
					Smooth surfaces n= 0.011 P2= 2.45"				
15.5	75	0.0050	0.08		Sheet Flow,				
					Grass: Short n= 0.150 P2= 2.45"				
1.7	198	0.0140	1.90		Shallow Concentrated Flow,				
					Unpaved Kv= 16.1 fps				
17.8	298	Total							

### Subcatchment P1B: Prop. Watershed 1A



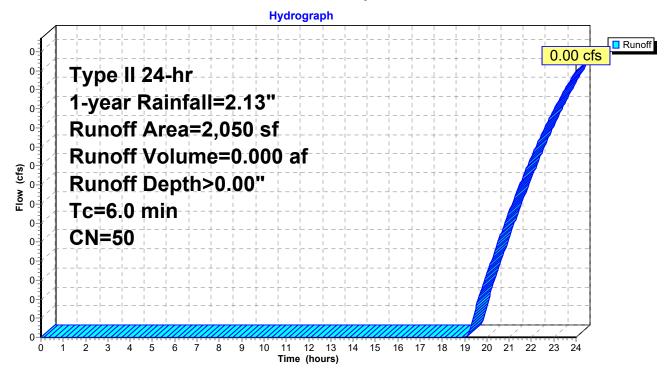
## Summary for Subcatchment P2: Prop. Watershed P2

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth> 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Ar	ea (sf)	CN	Description							
*		368	98	Paved parking							
		1,682	39	>75% Gras	>75% Grass cover, Good, HSG A						
		2,050	50		Veighted Average						
		1,682		82.05% Pe	82.05% Pervious Area						
		368		17.95% lmp	pervious Ar	ea					
	Тс	Length	Slope	e Velocity	Capacity	Description					
(n	nin)	(feet)	(ft/ft	) (ft/sec)	(cfs)						
	6.0					Direct Entry, Min Tc					

# Subcatchment P2: Prop. Watershed P2



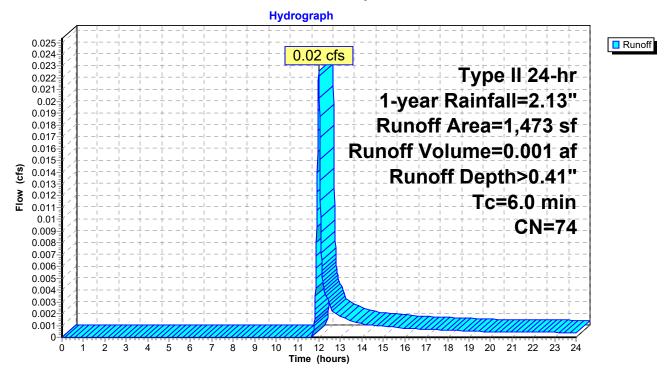
#### Summary for Subcatchment P3: Prop. Watershed P3

0.02 cfs @ 11.99 hrs, Volume= 0.001 af, Depth> 0.41" Runoff =

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	A	rea (sf)	CN	Description					
*		882	98	Paved parking					
		591	39	>75% Grass cover, Good, HSG A					
		1,473	74	Weighted A	Neighted Average				
		591		40.12% Pervious Area					
		882		59.88% Imp	pervious Ar	ea			
(r	Tc min)	Length (feet)	Slope (ft/ft		Capacity (cfs)	Description			
	6.0					Direct Entry, Min Tc			

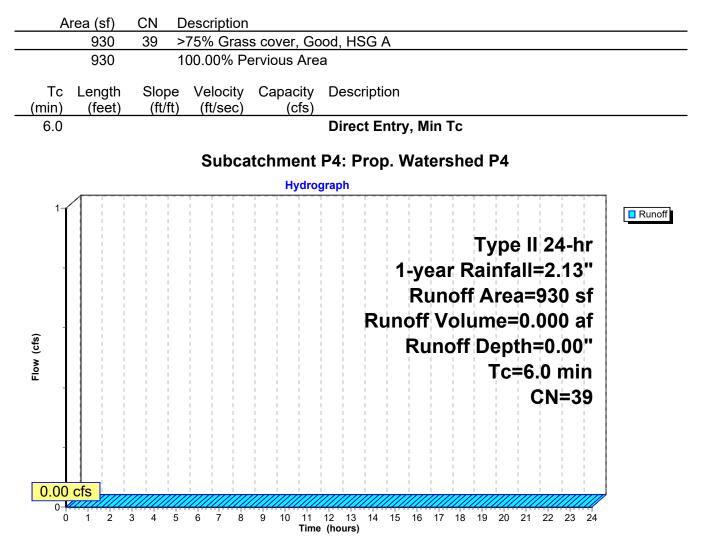
# Subcatchment P3: Prop. Watershed P3



#### Summary for Subcatchment P4: Prop. Watershed P4

Runoff = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"



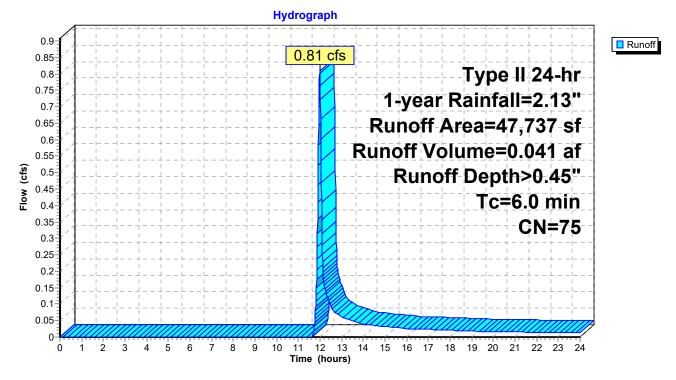
## Summary for Subcatchment P5: Prop. Watershed P5

Runoff = 0.81 cfs @ 11.99 hrs, Volume= 0.041 af, Depth> 0.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 1-year Rainfall=2.13"

	Area (sf)	CN	Description	Description				
*	8,754	98	Roofs					
*	20,073	98	Paved park	ing				
	18,910	39	>75% Gras	s cover, Go	bod, HSG A			
	47,737	75 Weighted Average						
	18,910		39.61% Per	vious Area	l de la constante de			
	28,827		60.39% Imp	pervious Ar	ea			
	Tc Length (min) (feet)	Slop (ft/f	,	Capacity (cfs)	Description			
	6.0				Direct Entry, Min Tc			

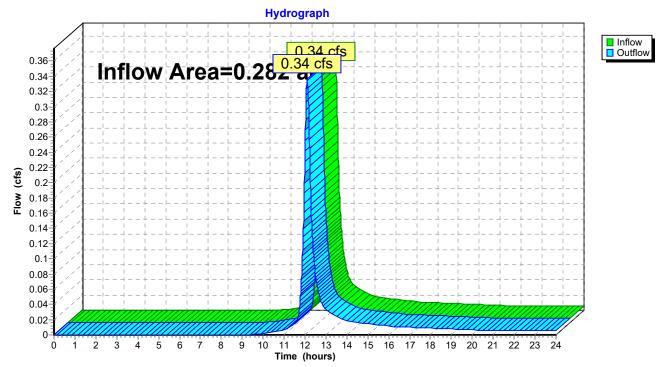
## Subcatchment P5: Prop. Watershed P5



## Summary for Reach P1: Total Site Discharge to Genesee St

Inflow Area	a =	0.282 ac, 81.07% Impervious, Inflow Depth > 1.00" for 1-year event	
Inflow	=	0.34 cfs @ 12.10 hrs, Volume= 0.024 af	
Outflow	=	0.34 cfs @ 12.10 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 mir	٦

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# **Reach P1: Total Site Discharge to Genesee St**

## Summary for Pond I-1: UG Infiltration

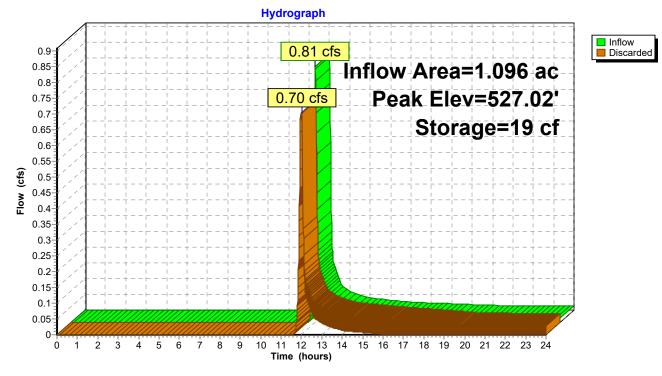
Inflow Area =	1.096 ac, 60.39% Impervious, Inflow De	epth > 0.45" for 1-year event
Inflow =	0.81 cfs @ 11.99 hrs, Volume=	0.041 af
Outflow =	0.70 cfs @ 12.04 hrs, Volume=	0.041 af, Atten= 13%, Lag= 3.2 min
Discarded =	0.70 cfs @ 12.04 hrs, Volume=	0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3 Peak Elev= 527.02' @ 12.02 hrs Surf.Area= 3,039 sf Storage= 19 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 0.1 min ( 884.6 - 884.5 )

Volume	Invert	Avail.Stor	age	Storage De	escription	
#1	527.00'	3,93	3 cf	Stone Tre	nch (Prismat	i <b>c)</b> Listed below (Recalc)
#2	E29 001	0.46	0 of			S cf Embedded = 9,832 cf x 40.0% Voids
#2	528.00'	2,16	0 01	<b>24.0</b> Rol L= 690.0'	and Pipe Stor	age inside #1
#3	527.00'	14	7 cf	5.00'D x 7	.50'H Vertical	Cone/Cylinder
#4	527.00'	14	7 cf	5.00'D x 7	.50'H Vertical	Cone/Cylinder
		6,39	5 cf	Total Avail	able Storage	
Elevatio	on Sui	rf.Area	Inc	.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubio	c-feet)	(cubic-feet)	
527.0	00	3,000		0	0	
531.0	00	3,000	1	2,000	12,000	
Device	Routing	Invert	Outle	et Devices		
#1	Discarded	527.00'	10.0	00 in/hr Ex	filtration over	· Surface area

**Discarded OutFlow** Max=0.70 cfs @ 12.04 hrs HW=527.01' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.70 cfs)



# Pond I-1: UG Infiltration

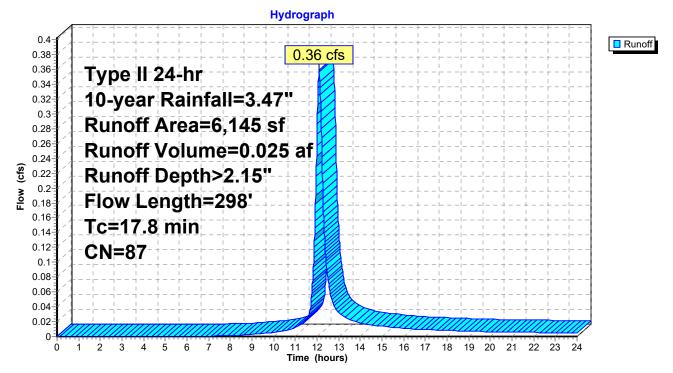
### Summary for Subcatchment P1A: Prop. Watershed 1A

Runoff = 0.36 cfs @ 12.10 hrs, Volume= 0.025 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

_	A	rea (sf)	CN	Description							
		4,982	98	98 Paved parking, HSG A							
_		1,163	39								
		6,145 1,163 4,982		Weighted A 18.93% Pei 81.07% Imp	rvious Area						
	Tc (min)	Length (feet)	Slope (ft/ft	•	Capacity (cfs)	Description					
	0.6	25	0.0120	) 0.74		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.45"					
	15.5	75	0.0050	0.08		Sheet Flow, Grass: Short n= 0.150 P2= 2.45"					
_	1.7	198	0.0140	) 1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps					
	17.8	298	Total								

### Subcatchment P1A: Prop. Watershed 1A



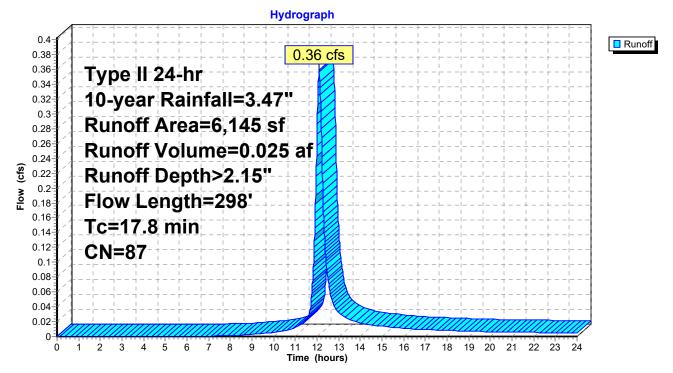
### Summary for Subcatchment P1B: Prop. Watershed 1A

Runoff = 0.36 cfs @ 12.10 hrs, Volume= 0.025 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

_	A	rea (sf)	CN	Description							
		4,982	98	98 Paved parking, HSG A							
_		1,163	39								
		6,145 1,163 4,982		Weighted A 18.93% Pei 81.07% Imp	rvious Area						
	Tc (min)	Length (feet)	Slope (ft/ft	•	Capacity (cfs)	Description					
	0.6	25	0.0120	) 0.74		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.45"					
	15.5	75	0.0050	0.08		Sheet Flow, Grass: Short n= 0.150 P2= 2.45"					
_	1.7	198	0.0140	) 1.90		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps					
	17.8	298	Total								

### Subcatchment P1B: Prop. Watershed 1A



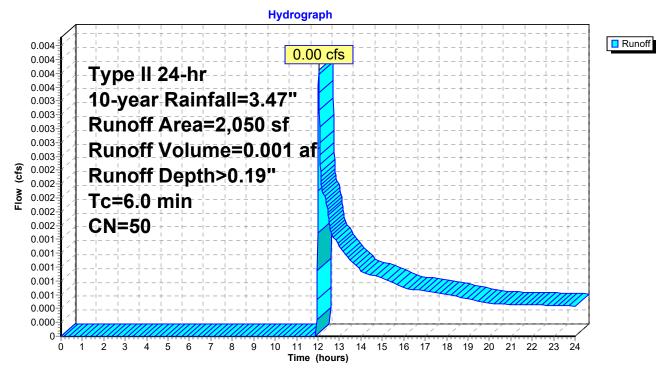
#### Summary for Subcatchment P2: Prop. Watershed P2

Runoff = 0.00 cfs @ 12.04 hrs, Volume= 0.001 af, Depth> 0.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	Area (sf)	CN	Description							
*	368	98	Paved parking							
	1,682	39	>75% Gras	>75% Grass cover, Good, HSG A						
	2,050	50	Weighted A	Neighted Average						
	1,682		82.05% Per	82.05% Pervious Area						
	368		17.95% lmp	pervious Ar	ea					
	Tc Length	Slope	e Velocity	Capacity	Description					
(mi	in) (feet)	(ft/ft	) (ft/sec)	(cfs)						
6	5.0				Direct Entry, Min Tc					

# Subcatchment P2: Prop. Watershed P2



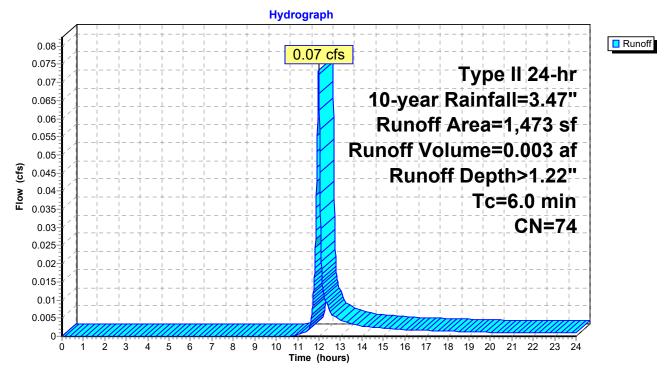
## Summary for Subcatchment P3: Prop. Watershed P3

Runoff = 0.07 cfs @ 11.98 hrs, Volume= 0.003 af, Depth> 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	A	rea (sf)	CN	Description							
*		882	98	Paved parking							
		591	39	>75% Grass cover, Good, HSG A							
		1,473	74	Weighted Average							
		591		40.12% Pervious Area							
		882		59.88% Imp	pervious Ar	ea					
	Тс	Length	Slope	e Velocity	Capacity	Description					
	(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)						
	6.0					Direct Entry, Min Tc					

# Subcatchment P3: Prop. Watershed P3



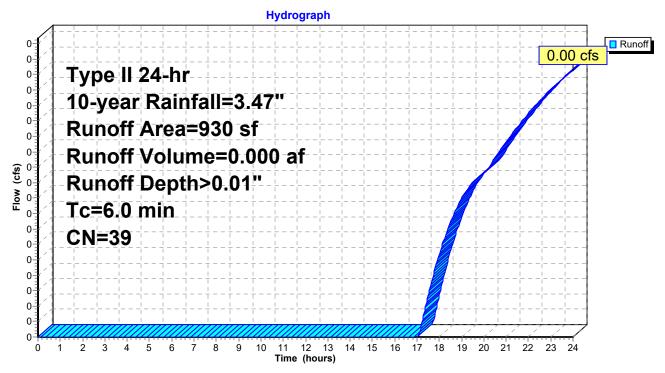
## Summary for Subcatchment P4: Prop. Watershed P4

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth> 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

Area (s	f) CN	CN Description						
93	0 39	39 >75% Grass cover, Good, HSG A						
93	0	100.00% Pervious Area						
Tc Leng (min) (fe			Capacity (cfs)	Description				
6.0				Direct Entry, Min Tc				

# Subcatchment P4: Prop. Watershed P4



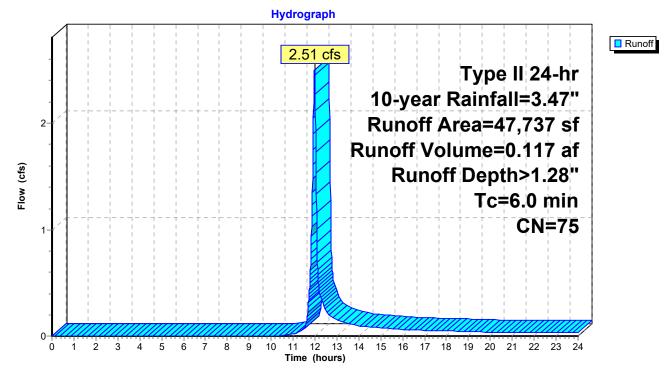
## Summary for Subcatchment P5: Prop. Watershed P5

Runoff = 2.51 cfs @ 11.98 hrs, Volume= 0.117 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 10-year Rainfall=3.47"

	A	rea (sf)	CN	Description						
*		8,754	98	Roofs						
*		20,073	98	Paved park	ing					
		18,910	39	>75% Gras	s cover, Go	bod, HSG A				
		47,737	75	Weighted A	verage					
		18,910		39.61% Pervious Area						
		28,827		60.39% Imp	pervious Ar	ea				
	т.	1	Olan	- \/_l!+.	0	Description				
	Tc	Length	Slop		Capacity	Description				
	(min)	(feet)	(ft/f	i) (ft/sec)	(cfs)					
	6.0					Direct Entry, Min Tc				
						-				

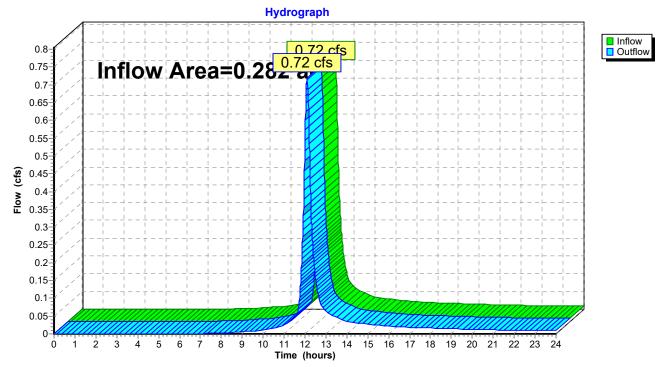
## Subcatchment P5: Prop. Watershed P5



## Summary for Reach P1: Total Site Discharge to Genesee St

Inflow Area	a =	0.282 ac, 81.07% Impervious, Inflow Depth > 2.15" for 10-year event	
Inflow	=	0.72 cfs @ 12.10 hrs, Volume= 0.050 af	
Outflow	=	0.72 cfs $ar{@}$ 12.10 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 n	nin

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# **Reach P1: Total Site Discharge to Genesee St**

## Summary for Pond I-1: UG Infiltration

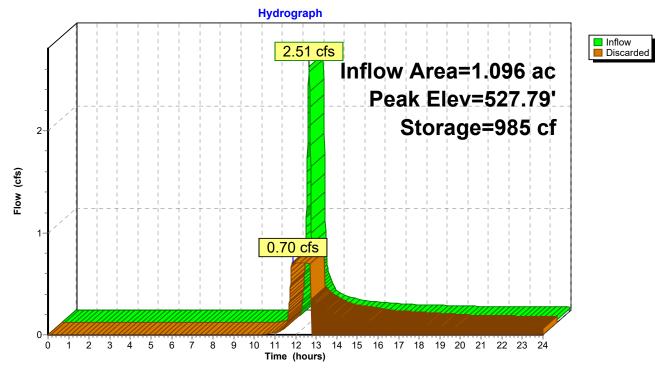
Inflow Area =	1.096 ac, 60.39% Impervious, Inflow Dep	th > 1.28" for 10-year event
Inflow =	2.51 cfs @ 11.98 hrs, Volume= 0	).117 af
Outflow =	0.70 cfs @ 11.89 hrs, Volume= 0	0.117 af, Atten= 72%, Lag= 0.0 min
Discarded =	0.70 cfs @ 11.89 hrs, Volume= 0	).117 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3 Peak Elev= 527.79' @ 12.11 hrs Surf.Area= 3,039 sf Storage= 985 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 6.1 min (855.7 - 849.6)

Volume	Invert	Avail.Stora	age	Storage De	escription	
#1	527.00'	3,93	3 cf	Stone Tree	nch (Prismat	ic)Listed below (Recalc)
	500.001	0.40	o (	,	,	$3 \text{ cf Embedded} = 9,832 \text{ cf } \times 40.0\% \text{ Voids}$
#2	528.00'	2,16	8 CT	<b>24.0</b> " Rou L= 690.0'	ind Pipe Stor	age Inside #1
#3	527.00'	14	7 cf		50'H Vertical	Cone/Cylinder
#4	527.00'	14	7 cf			Cone/Cylinder
		6,39	5 cf	Total Availa	able Storage	
Elevatio		f.Area	Inc	Store	Cum.Store	
fee				store (store)	(cubic-feet)	
`	1		Cubic	-		
527.0	00	3,000		0	0	
531.0	00	3,000	1	2,000	12,000	
Device	Routing	Invert	Outle	et Devices		
#1	Discarded		10.000 in/hr Exfiltration over Surface area			Surface area

**Discarded OutFlow** Max=0.70 cfs @ 11.89 hrs HW=527.08' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.70 cfs)



# Pond I-1: UG Infiltration

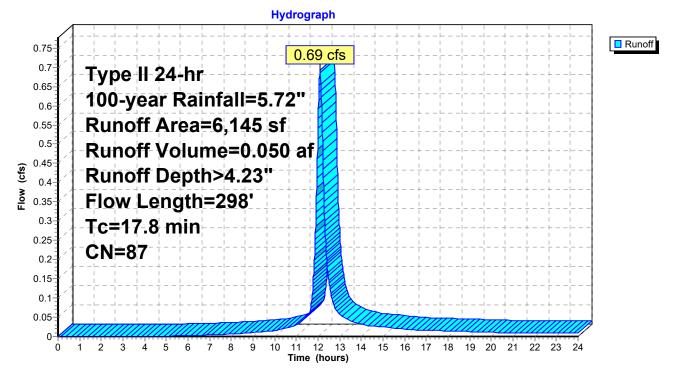
### Summary for Subcatchment P1A: Prop. Watershed 1A

Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

A	rea (sf)	CN [	Description							
	4,982	98 Paved parking, HSG A								
	1,163	39 >								
	6,145		Veighted A							
	1,163	1	8.93% Per	vious Area						
	4,982	8	1.07% Imp	pervious Ar	ea					
_		~		<b>•</b> •	-					
Тс	Length	Slope	Velocity	Capacity	Description					
<u>(min)</u>	(feet)	(ft/ft)	(ft/sec)	(cfs)						
0.6	25	0.0120	0.74		Sheet Flow,					
					Smooth surfaces n= 0.011 P2= 2.45"					
15.5	75	0.0050	0.08		Sheet Flow,					
					Grass: Short n= 0.150 P2= 2.45"					
1.7	198	0.0140	1.90		Shallow Concentrated Flow,					
					Unpaved Kv= 16.1 fps					
17.8	298	Total								

### Subcatchment P1A: Prop. Watershed 1A



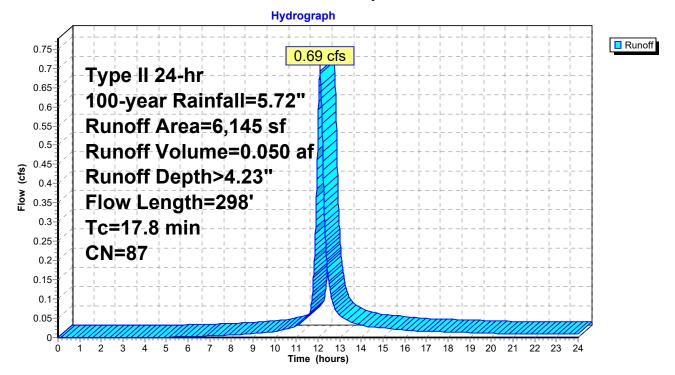
### Summary for Subcatchment P1B: Prop. Watershed 1A

Runoff = 0.69 cfs @ 12.09 hrs, Volume= 0.050 af, Depth> 4.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

A	rea (sf)	CN E	CN Description								
	4,982	98 Paved parking, HSG A									
	1,163	39 >	1 0;								
	6,145	87 V	87 Weighted Average								
	1,163	1	8.93% Per	vious Area							
	4,982	8	1.07% Imp	pervious Ar	ea						
-				0							
Tc	Length	Slope	Velocity	Capacity	Description						
(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)							
0.6	25	0.0120	0.74		Sheet Flow,						
					Smooth surfaces n= 0.011 P2= 2.45"						
15.5	75	0.0050	0.08		Sheet Flow,						
					Grass: Short n= 0.150 P2= 2.45"						
1.7	198	0.0140	1.90		Shallow Concentrated Flow,						
					Unpaved Kv= 16.1 fps						
17.8	298	Total									

### Subcatchment P1B: Prop. Watershed 1A



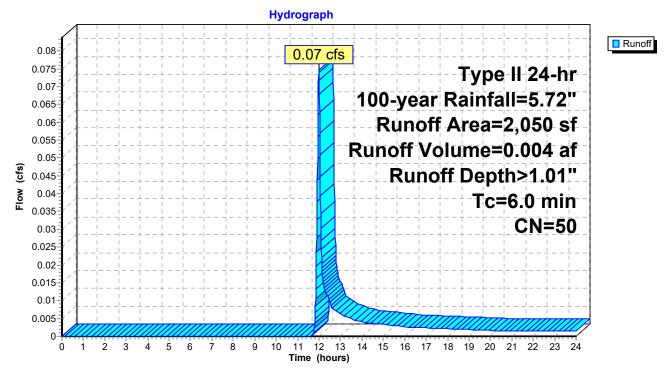
## Summary for Subcatchment P2: Prop. Watershed P2

Runoff = 0.07 cfs @ 11.99 hrs, Volume= 0.004 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	Area (sf)	CN	Description							
*	368	98	Paved parking							
	1,682	39	>75% Grass cover, Good, HSG A							
	2,050	50	Weighted Average							
	1,682		82.05% Pervious Area							
	368		17.95% lmp	pervious Ar	ea					
	c Length	Slope		Capacity	Description					
(mir	i) (feet)	(ft/ft	) (ft/sec)	(cfs)						
6.	0				Direct Entry, Min Tc					

# Subcatchment P2: Prop. Watershed P2



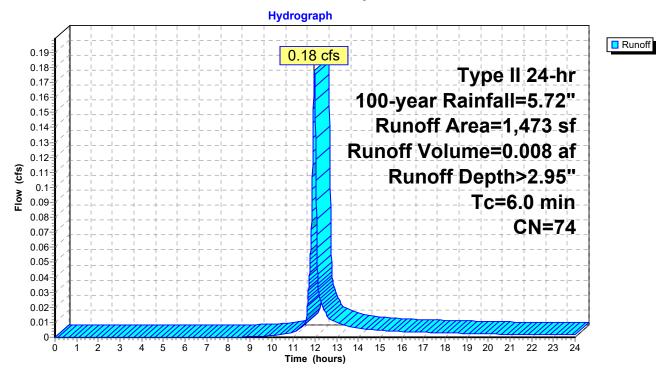
# Summary for Subcatchment P3: Prop. Watershed P3

Runoff = 0.18 cfs @ 11.97 hrs, Volume= 0.008 af, Depth> 2.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

	A	rea (sf)	CN	Description		
*		882	98	Paved park	ing	
		591	39	>75% Ġras	s cover, Go	bod, HSG A
		1,473	74	Weighted A	verage	
		591		40.12% Pei		
		882		59.88% Imp	pervious Ar	ea
	Tc (min)	Length (feet)	Slope (ft/ft	,	Capacity (cfs)	Description
	6.0					Direct Entry, Min Tc

# Subcatchment P3: Prop. Watershed P3

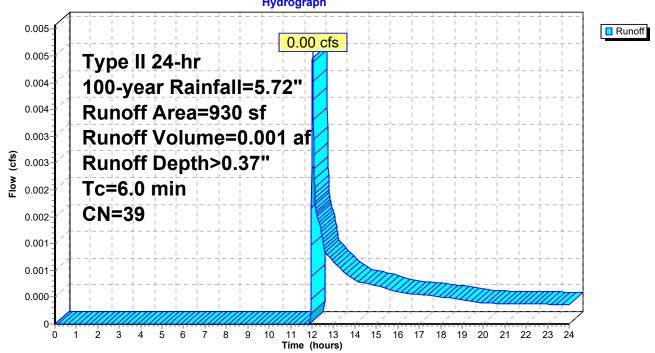


# Summary for Subcatchment P4: Prop. Watershed P4

Runoff = 0.00 cfs @ 12.03 hrs, Volume= 0.001 af, Depth> 0.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

A	rea (sf)	CN E	<b>Description</b>			
	930	39 >	75% Gras	s cover, Go	ood, HSG A	
	930 100.00% Pervious Area			ea		
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
6.0					Direct Entry, Min Tc	
	Subcatchment P4: Prop. Watershed P4					
	Hydrograph					



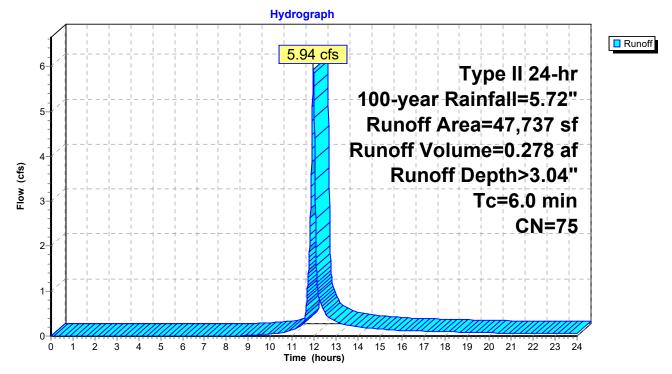
# Summary for Subcatchment P5: Prop. Watershed P5

Runoff = 5.94 cfs @ 11.97 hrs, Volume= 0.278 af, Depth> 3.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Type II 24-hr 100-year Rainfall=5.72"

_	A	rea (sf)	CN	Description					
*		8,754	98	Roofs					
*		20,073	98	Paved park	ing				
_		18,910	39	>75% Ġras	s cover, Go	bod, HSG A			
		47,737	75	Weighted A	verage				
		18,910		39.61% Pe	rvious Area	l de la constante de			
		28,827		60.39% Imp	pervious Ar	ea			
	Тс	Length	Slope		Capacity	Description			
_	(min)	(feet)	(ft/ft	) (ft/sec)	(cfs)				
	6.0					Direct Entry, Min Tc			

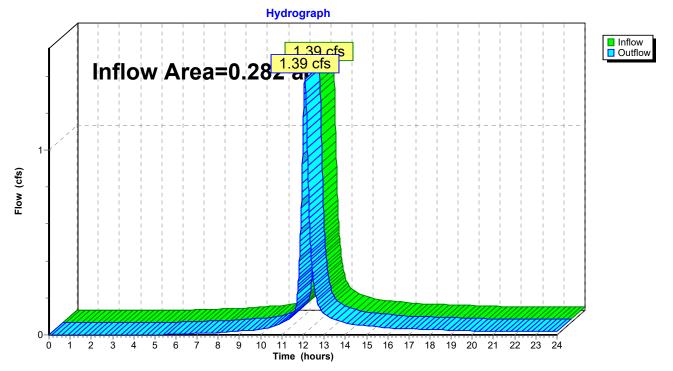
# Subcatchment P5: Prop. Watershed P5



# Summary for Reach P1: Total Site Discharge to Genesee St

Inflow Area	a =	0.282 ac, 81.07% Impervious, Inflow Depth > 4.23	" for 100-year event
Inflow	=	1.39 cfs @ 12.09 hrs, Volume= 0.100 af	
Outflow	=	1.39 cfs @ 12.09 hrs, Volume= 0.100 af, A	tten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3



# **Reach P1: Total Site Discharge to Genesee St**

## Summary for Pond I-1: UG Infiltration

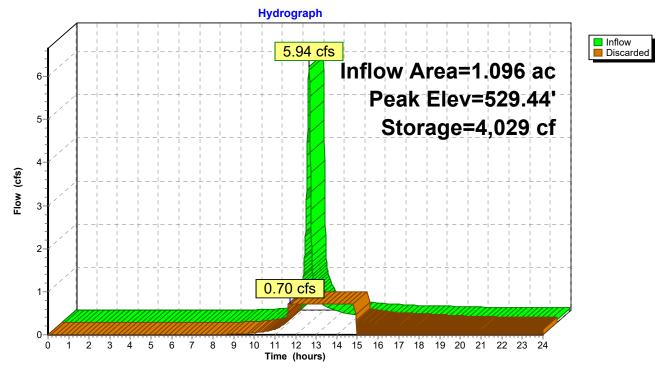
Inflow Area =	1.096 ac, 60.39% Impervious, Inflow D	epth > 3.04" for 100-year event
Inflow =	5.94 cfs @ 11.97 hrs, Volume=	0.278 af
Outflow =	0.70 cfs @ 11.74 hrs, Volume=	0.278 af, Atten= 88%, Lag= 0.0 min
Discarded =	0.70 cfs @ 11.74 hrs, Volume=	0.278 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 3 Peak Elev= 529.44' @ 12.32 hrs Surf.Area= 3,039 sf Storage= 4,029 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 37.4 min ( 861.9 - 824.5 )

Volume	Invert	Avail.Sto	rage	Storage D	Description	
#1	527.00'	3,93	33 cf	Stone Tre	ench (Prismat	ic)Listed below (Recalc)
				,	,	3  cf Embedded = 9,832  cf  x 40.0%  Voids
#2	528.00'	2,16	58 cf		und Pipe Stor	age Inside #1
#3	527.00'	1/	17 cf	L= 690.0'	7 50'H Vortical	Cone/Cylinder
#3 #4	527.00'		47 cf			Cone/Cylinder
	527.00					Cone/Cylinder
		6,39	95 cf	Total Ava	ilable Storage	
Elevatio	on Su	rf.Area	Inc	.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubi	c-feet)	(cubic-feet)	
527.0	00	3,000		0	0	
531.0	00	3,000	1	2,000	12,000	
Device	Routing	Invert	Outle	et Devices		
#1	Discarded	527.00'	10.0	00 in/hr Ex	diltration over	r Surface area

**Discarded OutFlow** Max=0.70 cfs @ 11.74 hrs HW=527.09' (Free Discharge) **1=Exfiltration** (Exfiltration Controls 0.70 cfs)



# Pond I-1: UG Infiltration



National Cooperative Soil Survey

**Conservation Service** 

MA	P LEGEND	MAP INFORMATION
Area of Interest (AOI)	Spoil Area	The soil surveys that comprise your AOI were mapped at
Area of Interest (AO	I) 👔 Stony Spot	1:24,000.
Soils	Very Stony Spot	Warning: Soil Map may not be valid at this scale.
Soil Map Unit Polyg	ons 🥎 Wet Spot	Enlargement of maps beyond the scale of mapping can cause
Soil Map Unit Lines	or other	misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of
Soil Map Unit Points		contrasting soils that could have been shown at a more detailed
Special Point Features	Water Features	scale.
Blowout	Streams and Canals	Please rely on the bar scale on each map sheet for map
Borrow Pit	Transportation	measurements.
💥 Clay Spot	Rails	Source of Map: Natural Resources Conservation Service
Closed Depression	nterstate Highways	Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)
Gravel Pit	JS Routes	Maps from the Web Soil Survey are based on the Web Mercato
Gravelly Spot	Major Roads	projection, which preserves direction and shape but distorts
🔕 Landfill	Local Roads	distance and area. A projection that preserves area, such as th Albers equal-area conic projection, should be used if more
Lava Flow	Background	accurate calculations of distance or area are required.
Marsh or swamp	Aerial Photography	This product is generated from the USDA-NRCS certified data of the version date(s) listed below.
Mine or Quarry		Soil Survey Area: Oneida County, New York
Miscellaneous Wate	r	Survey Area Data: Version 24, Sep 1, 2021
Perennial Water		Soil map units are labeled (as space allows) for map scales
Nock Outcrop		1:50,000 or larger.
Saline Spot		Date(s) aerial images were photographed: Jul 19, 2020—Nov 2020
Sandy Spot		
Severely Eroded Sp	ot	The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background
Sinkhole		imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.
Slide or Slip		sinting of map unit boundaries may be evident.
Sodic Spot		



# Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
33A	Alton-Urban land complex, 0 to 3 percent slopes	1.7	100.0%	
Totals for Area of Interest		1.7	100.0%	



# Oneida County, New York

### 33A—Alton-Urban land complex, 0 to 3 percent slopes

#### Map Unit Setting

National map unit symbol: 9v9h Elevation: 250 to 1,000 feet Mean annual precipitation: 30 to 46 inches Mean annual air temperature: 45 to 50 degrees F Frost-free period: 120 to 160 days Farmland classification: Not prime farmland

#### **Map Unit Composition**

Alton and similar soils: 40 percent Urban land: 30 percent Minor components: 30 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Alton**

#### Setting

Landform: Terraces, outwash plains, deltas Landform position (two-dimensional): Summit Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Convex Parent material: Gravelly loamy glaciofluvial deposits over sandy and gravelly glaciofluvial deposits, derived mainly from acidic rocks, with some limestone below 40 inches

#### **Typical profile**

*Ap - 0 to 9 inches:* gravelly loam *Bw1 - 9 to 24 inches:* very gravelly fine sandy loam *Bw2 - 24 to 40 inches:* very gravelly sandy loam *BC - 40 to 58 inches:* very gravelly sandy loam *2C - 58 to 72 inches:* very gravelly loamy sand

#### **Properties and qualities**

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

USDA

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2s Hydrologic Soil Group: A Ecological site: F101XY005NY - Dry Outwash Hydric soil rating: No

#### **Description of Urban Land**

#### **Properties and qualities**

*Slope:* 0 to 3 percent *Depth to restrictive feature:* 0 inches to manufactured layer

#### Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Hydric soil rating: Unranked

#### **Minor Components**

#### Udorthents

Percent of map unit: 10 percent Hydric soil rating: No

#### Castile

Percent of map unit: 8 percent Hydric soil rating: No

#### **Unnamed soils**

Percent of map unit: 7 percent Hydric soil rating: No

#### Fredon

Percent of map unit: 5 percent Hydric soil rating: No

# **Data Source Information**

Soil Survey Area: Oneida County, New York Survey Area Data: Version 24, Sep 1, 2021 F. NYSDEC ENVIRONMENTAL MAP AND FEMA MAP

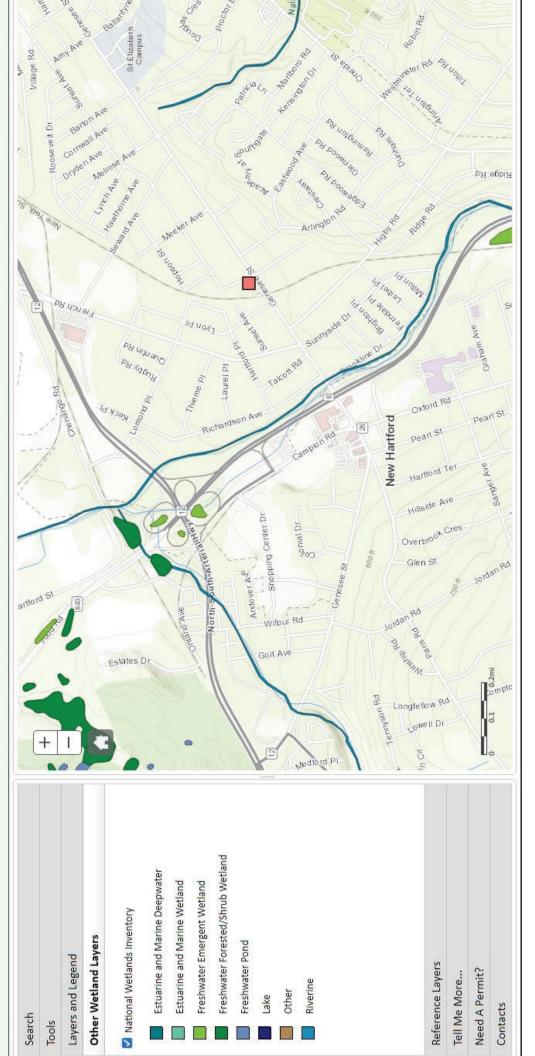


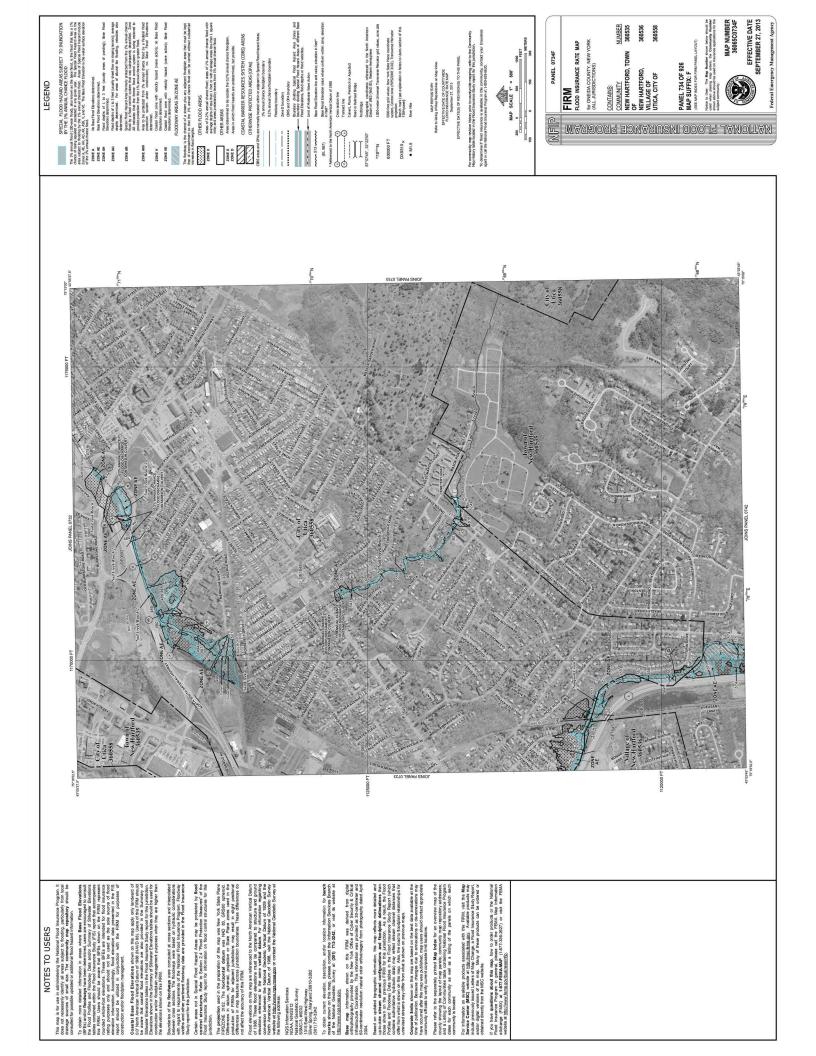
Services News Government COVID-19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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# Environmental Resource Mapper





NEW YORK STATE OF OPPORTUNITY.

# Parks, Recreation, and Historic Preservation

KATHY HOCHUL Governor ERIK KULLESEID Commissioner

September 30, 2022

Charles Marshall Stewart's Shops Corp. PO Box 435 Saratoga Springs, NY 12866

Re: DEC Proposed Stewart's construction 2632-2634 Genesee St, Utica, NY 13502 22PR07046

Dear Charles Marshall:

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. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

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.

Sincerely,

Daniel Mich

R. Daniel Mackay

Deputy Commissioner for Historic Preservation Division for Historic Preservation G. CONSTRUCTION DRAWINGS

H. SWPPP REVISIONS/UPDATES

# SWPPP REVISONS/UPDATES

Date:	Revision/Update Description: