

Solicitation 2022-01

REQUEST FOR PROPOSALS for Professional Engineering Services

Stormwater Retrofit Projects

PC-MB-1000 L-MU-1017 L-CR-1001

EOHWC Solicitation Issue Date: March 30, 2022

Questions Due Date: 4:00 p.m. on April 28, 2022

Proposal Due Date: 4:00 p.m. on May 5, 2022



2 Route 164 Patterson, NY 12563 Tel: 845-319-6349 Fax: 845-319-6391

1. OVERVIEW

1.1 General Information

The East of Hudson Watershed Corporation (EOHWC) is seeking Proposals to provide civil engineering services to the EOHWC for the design, permitting, and construction phase services (CPS) of stormwater retrofit projects (SRPs) for the Projects identified in this RFP. The successful Proposer will demonstrate the required expertise and experience to fulfill all requirements of this Solicitation and any Addenda or modifications to this Solicitation.

This Solicitation includes several attachments and refers to the EOHWC Stormwater Retrofit Project Design Manual (SRPDM). The SRPDM is available on the EOHWC web site (www.eohwc.org). All the information in this Solicitation and attachments, Addenda, and SRPDM shall be considered the Services. The Proposer shall consider the information in the attachments and the SRPDM when preparing their proposal.

All questions and inquires for additional information are to be submitted in writing by the deadline date and time specified on the cover page, as it may be modified by Addendum. Proposals for these projects must be received by the date specified in the cover page, as it may be modified by Addendum.

1.2 Definitions

Engineer: the engineering firm awarded a Contract from their proposal for the Services described in this Solicitation.

Host Municipality: the municipality in which the SRP is located.

Site Owner: If other than the Host Municipality, a School District, private owner, NYCDEP, Metro North, or other owner of the Site.

Proposer: the engineering firm preparing and submitting a proposal for the services described in this Solicitation.

Site: the physical location at which the stormwater retrofit will be constructed.

Solicitation: This document, including all of the items listed in the appendices, forms and exhibits, and any subsequent Addenda or clarifications issued by EOHWC.

Stormwater Retrofit Project or SRP: a stormwater management practice described in the stormwater retrofit plan prepared by either EOHWC, the Dutchess County MS4 Coordinating Committee, Putnam County MS4 Coordinating Committee, or Westchester County Croton-Kensico Watershed Intermunicipal Coalition, including modifications/revisions by EOHWC, and approved by the NYSDEC.



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Services: All of the information in this Solicitation and attachments, Addenda, and SRPDM.

1.3 EOHWC Contact:

Kevin Fitzpatrick, P.E., Director of Engineering East of Hudson Watershed Corporation 2 Route 164, Suite 2 Patterson, NY 12563
Kevin@EOHWC.org, (845) 319-6349

[Fax and email are provided for inquiries only; the response to this Solicitation may not be submitted via email]

2. SCOPE OF SERVICES

2.1. Year 6 through 10 Projects. EOHWC has caused to be prepared a preliminary report identifying SRP's that may be undertaken by EOHWC during the Years 6 through 10 funding period. A copy of such report may be found on the EOHWC website at www.eohwc.org. The Proposer must be a professional engineer or firm licensed to perform engineering services in the State of New York. EOHWC anticipates identifying one or more engineering firms capable of providing the requested services for one or more of such Year 6 through 10 SRP's and providing the best value to the EOHWC as determined by EOHWC in its discretion.

In this solicitation round EOHWC anticipates awarding one engineering services contract for the projects identified on the cover page and as more specifically set forth at **Appendix I.** Additional solicitation rounds may be undertaken at any time in EOHWC's discretion.

- 2.2. <u>SRP Design Requirements</u>. SRP engineering services will be consistent with the requirements of the EOHWC Stormwater Retrofit Project Design Manual (SRPDM). SRP design will be expected to take into account the requirements of the Policy for the EOHWC's Operation and Maintenance of Stormwater Retrofit Practices and the EOHWC's SRP Operations and Maintenance Manual (OMM) available on the EOHWC's website, in order to assist the EOHWC in the achieving a cost-effective balance of installation and maintenance costs.
- 2.3. <u>Terms and Conditions of Contract</u>. The EOHWC expects to enter into a contract with the selected Proposer(s) in substantially the form attached hereto at **Appendix II**. Submission of a proposal constitutes an acknowledgement that the proposer has thoroughly examined and become familiar with the Services required under this Solicitation, that it is capable of performing quality work to achieve the objectives of the EOHWC, and that it will accept those terms and conditions unless



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exceptions are specified in the proposer's submission as set forth in this section. Any objection to the terms and conditions must be expressly identified in a separate section of the respondent's proposal identified as "objections to terms and conditions" and with reference to the specific provisions objected to. EOHWC reserves the right to reject any objections as nonresponsive.

- 2.4. <u>SRP's.</u> The Scope of Services and schedules for the SRP's shall be authorized on a task order basis that identifies the schedule, Project and specific tasks for which the Engineer is authorized to commence work. All submittals and design milestones are required to meet the structure set forth in the SRPDM.
- 2.5. <u>Contract Term.</u> It is the intent to award one or more Contract(s) for a one-year period with the option for up to two one-year renewal(s), subject to EOHWC's right of early termination as provided in the Contract. Any decision to renew the Contract(s) will be at the sole discretion of EOHWC.

3. PROPOSAL SUBMITTAL

3.1. <u>Sealed Proposals</u>. Sealed proposals will be received at the EOHWC main office at either of the following:

Postal Delivery: Parcel Delivery Service:

EOHWC 2 Route 164 2 Route 164 Suite 2 Suite 2

Patterson, NY 12563 Patterson, NY 12563

Proposals must be received by the deadline time on the Proposal Due Date specified on the cover page of this Solicitation. The Proposer shall be responsible for actual delivery of the proposal to the required location before the deadline. Any proposal received after the deadline by any delivery method will not be accepted by EOHWC. All electronically transmitted Proposals will be disqualified by EOHWC. A Proposal may be withdrawn by the Proposer prior to the specified submittal time. No Proposal may be withdrawn by any party after the specified submittal time.

Each proposal shall include one (1) hard copy and one (1) digital (CD/USB Drive/SD Card) containing the required forms and/or certifications provided with this Solicitation including any Addenda, and shall be completed by the Proposer. The Proposer shall submit the required number of copies in one or more sealed opaque envelope(s). The outermost envelope shall include: Solicitation Number, "PROPOSAL ENCLOSED", the name and address of the Proposer; in a location and of sufficient size to be easily identified by any person receiving the envelope. The Proposal shall be written in a legible font style and size (e.g. arial 12 point, Times New Roman 12 point, etc.)



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Proposers are required to provide all of the information requested in this Solicitation, along with any additional information or alternates requested by EOHWC. It is the Proposer's responsibility to provide all requested information and to describe clearly the benefits of their service in meeting the needs of the EOHWC established in this Solicitation. The EOHWC will not be responsible for any omissions on the part of the Proposer, and is not required to notify the Proposer of omitted information, nor required to accept omitted information after the specified submittal time. Proposers are cautioned to read the Solicitation carefully and follow the response format, as any deviation from the format and requirements listed may be cause for rejection. No proposal will be accepted which contains any changes, additions, or erasures.

Proposals must be signed in ink by the Proposer. Proposals which are incomplete, conditioned or obscure, or which contain additions not called for (e.g. erasures, alterations, ambiguities or irregularities of any kind) may be rejected as incomplete.

3.2. <u>Site Visits.</u> Informational site visits, if available, will be conducted on the date or dates set forth on the cover page of this Solicitation. Site access to all projects may not be available at the time of this Solicitation.

3.3. Interpretation, Clarifications, and Addenda

Questions regarding this Solicitation must be in writing and must be received by the contact person identified above at the address set forth above no later than the date and time specified as the Questions Due Date specified on the cover page of this Solicitation. No oral modification will be binding.

Any and all such interpretations and any supplemental instructions will be in the form of a written Addendum to the Solicitation. If an Addendum is issued, it will be sent by email to Proposers who have received this Solicitation. Any Addenda so issued shall become part of this Solicitation.

Failure of any Proposer to receive any such Addendum or interpretation shall not relieve such Proposer from any obligation under his Proposal submitted.

4. PROPOSAL CONTENTS

- 4.1. Required Information. The Proposal shall include the following:
 - a. Cover Letter:
 - 1 Name, Address, and Telephone number of the licensed Professional Engineer to be assigned as project manager for the project or projects (include local office address if different)
 - 2 Acknowledgement of receipt of any Addenda
 - 3 Printed name and signature by an Officer authorized to bind the Proposer



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- b. Statement of Qualifications and Experience. Include the background, qualifications, credentials and experience of the Project Manager and other key project staff proposed to be assigned that would support its ability to do the proposed Services in a professional and timely manner.
- c. Design Approach. The proposal shall describe how the Proposer will provide the SRP design for the designated SRP or SRP's based on the criteria described in the EOWHC Stormwater Retrofit Project Design Manual, most recent edition.
- d. Statement of References (3 references). Describe recent projects similar to the type of Services requested. Include a detailed list of three projects with similar characteristics. For the projects listed, provide the name, title, and telephone number of the client official responsible for the project.
- e. Financial Proposal.
 - 1 A lump sum fee for each project (FORM B). The fee shall be inclusive of direct and indirect fees and/or costs and taxes. The fee shall not include any excise or sales taxes from which the municipalities are exempt. Any contingencies/uncertainties shall be clearly identified.
 - 2 Detailed hourly fee schedule showing the rates for each of the professional or clerical staff proposed to be used. The rate shall be the fully-loaded rate, inclusive of all overhead and profit markup.
 - 3 Identify Project manager, key staff and any proposed Subcontractors.
- f. Conflicts of Interest statement (FORM D): The Proposal shall include a statement describing any potential conflicts of interest the Proposer may have due to work being done for outside parties. Also the Proposal shall describe any business or family associations with any of the Board of Directors of the EOHWC, or of any persons employed by the EOHWC or any municipalities who are members of EOHWC. Refer to the EOHWC's Code of Ethics posted on its website, www.eohwc.org.
- g. Statement of Non-Collusion (FORM E)
- h. Statement of Insurance (FORM F)
- i. Confidentiality Notice (FORM G)
- j. Certification Regarding VENDEX and Value of All Contracts with New York City (Form H)
- k. Any other information that the Proposer may wish to provide to demonstrate that they can complete the Services described in this Proposal.
- 4.2. <u>Joint Proposals</u>. Where two or more Engineers desire to submit a single proposal in response to this Solicitation, they should do so on a prime-sub Consultant basis rather than as a joint venture.
- 4.3. <u>Exceptions and Deviations</u>. Any exceptions to the requirements in this Solicitation, including the insurance requirements and the contract terms and conditions, must be included as a separate element of the proposal under the heading "Exceptions



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and Deviations." EOHWC retains the right, in its sole discretion, to reject these requests for exception.

4.4. PASSPort

- a. The Proposal shall include certification and documentation that the Proposer and all subcontractors retained or to be retained by it have completed the applicable New York City Procurement and Sourcing Solutions Portal (PASSPort) questionnaire, submitted the completed questionnaire to New York City as required therein, and otherwise complied with all PASSPort requirements.
- b. If the Proposer's complete PASSPort submission is more than $2\frac{1}{2}$ years old, the Proposer shall submit documentation that it has completed new forms and returned them directly to New York City at the address provided therein. If there have been no changes in information requiring an update of the forms, the Proposer shall provide proof it has executed a Certification of No Change and submitted it to New York City. If there have been changes in information requiring an update of the forms, the Proposer shall submit proof that it has submitted full questionnaires using new forms to New York City.
- 4.5. <u>Duration of Proposal.</u> The Proposal shall remain effective for at least ninety (90) days from the submittal date defined in the Advertisement or Addenda.
- 4.6. <u>Statement of Insurance</u>. Attach evidence of <u>general liability</u>, <u>automobile liability</u>, <u>worker's compensation</u>, and <u>professional liability insurance</u> as set forth at **APPENDIX II**. By signing and submitting a proposal, the Respondent certifies that if awarded the contract, it will have the applicable coverage described at **APPENDIX II** in effect at the time of award and execution, and will maintain this coverage during the entire term of the contract.
- 4.7. Required Forms. All responses shall include the attached Forms, along with all supporting items. All blank spaces in the Forms must be filled in. Any items which are not applicable should be marked N/A (not applicable).

5. PROCEDURE FOR SELECTION

- 5.1. <u>Basis of Award.</u> EOHWC anticipates making the award to the proposer or proposers whose proposal represents the best value taking into account all facts and circumstances.
- 5.2. <u>Review Procedure.</u> A review committee consisting of the EOHWC Technical Committee and the Director of Engineering will review and evaluate proposals taking into account the following factors:



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- a. Professional qualifications and specific experience and competence in area needed: 30%
- b. Capacity to accomplish the Services in the required time, past performance on contracts with EOHWC and other agencies, familiarity with location and local regulations regarding project(s), and history of change orders required in construction: 30%

c. Bid price: 40%.

In reviewing the foregoing factors, EOHWC may further consider such information as it may deem material to the foregoing including: Financial and organizational capacity; legal authority to do business in the State of New York and the Counties of Dutchess, Putnam and Westchester; business integrity of the owners/officers/principals/members and contract managers, including compliance with New York City PASSPort procedures; past performance of the bidder on prior government contracts; sufficiency of proposer's personnel to meet the requirements deliverables of the specifications; ability to meet insurance requirements noted in the specifications; and record of compliance with NYS Labor Law requirements.

EOHWC's review committee may select one or more respondents for interviews based on the review of the responses, and will recommend one or more firms to the Executive Committee.

The Executive Committee will make the final selection and authorization of contract terms in its discretion based on its determination as to the best interests of EOHWC taking into account all facts and circumstances it deems material. Notwithstanding any other provisions of this Solicitation, EOHWC reserves the right to award a contract to the Proposer(s) that best meet the requirements of the Solicitation, and not necessarily to the lowest cost proposal.

5.3. Notice of Award and Contract. The EOHWC will select a firm by means of a Notice of Award issued pursuant to a resolution adopted by the Executive Committee. Neither the selection of a firm nor the issuance of a Notice of Award shall constitute a binding commitment on behalf of the EOHWC to enter into a services contract with the firm, as any binding arrangement must be set forth in definitive agreement signed by both parties and shall be subject to all requisite approvals.



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6. EOHWC's RESERVATION OF RIGHTS

- 6.1. Reserved Rights. The EOHWC in its sole discretion specifically reserves to itself the following rights:
 - a. Amend, withdraw or cancel this Solicitation, in whole or in part, at any time:
 - b. Award a contract to a Proposer, in whole or in part;
 - c. Disqualify any Proposer whose conduct and/or proposal fails to conform to the requirements of this solicitation;
 - d. Seek clarifications and revisions of Proposals;
 - e. Use proposal information obtained through site visits, management interviews and the EOHWC's investigation of a Proposer's qualifications, experience, ability or financial standing, and any material or information submitted by the Proposer in response to the EOHWC's request for clarifying information in the course of evaluation and/or selection under this solicitation:
 - f. Waive any informality or defect;
 - k. Negotiate with a Proposer, within the scope of the Solicitation in the best interests of the EOHWC;
 - m. Utilize any and all ideas submitted in the Proposals received.

6.2. No Liability for Errors

While the EOHWC has used considerable efforts to ensure an accurate representation of information in this Solicitation, EOHWC makes no representation as to the information provided. All Proposers are urged to conduct their own investigations into the material facts and the EOHWC shall not be held liable or accountable for any error, omission, or inconsistency in any part of this Solicitation. Proposer is solely responsible to establish, verify, and ensure that any and all information is correct, complete and necessary to provide a complete and informed proposal.

6.3. No EOHWC Obligation for Proposal Costs

Costs associated with the preparation of a proposal, including but not limited to any transportation costs to any subsequent interviews shall be the sole responsibility of the Proposer, with the express understanding that there will be no claim whatsoever for reimbursement from the EOHWC.

6.4. <u>Public Announcements.</u> News releases or other public announcements relating to this Solicitation shall not be made by any party without the prior written approval of the EOHWC.



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6.5. Freedom of Information Law. All proposals submitted to the EOHWC in response to this Solicitation may be disclosed in accordance with the standards specified in the Freedom of Information Law, Article 6 of the Public Officers Law of the State of New York ("FOIL"). A firm submitting a proposal may provide in writing, at the time of its submission, a detailed description of the specific information contained in its submission which it has determined is a trade secret and which, if disclosed, would cause substantial injury to such firm's competitive position, including completion of **FORM G.** This characterization shall not be determinative, but will be considered by the EOHWC when evaluating the applicability of any exemptions in response to a FOIL request. However, EOHWC assumes no responsibility for any disclosure or use of information submitted.

ATTACHMENTS TO THIS SOLICITATION:

APPENDIX I: Project Description for Projects Subject to this RFP

APPENDIX II: Form of Agreement for Professional Services (Engineering Services), including Insurance Requirements

APPENDIX III: Proposal Forms

The following forms must be completed and returned with the proposal:

FORM "A" Business Information

FORM "B" Lump Sum Fee Proposal

FORM "C" Hourly Fee Schedule

FORM "D" Conflict of Interest Affidavit

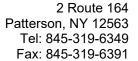
FORM "E" Statement of Non-Collusion

FORM "F" Statement of Insurance

FORM "G" Confidentiality Notice (FOIL)

FORM "H" Certification Regarding VENDEX and Value of All Contracts with New

York City





APPENDIX I

Initial Evaluations for SRPs



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INITIAL EVALUATION SUMMARY INFORMATION

Project ID: PC-MB-1000

<u>Location:</u> John Simpson Road, Carmel NY

Land Ownership: Municipal

Requested services: The proposed stormwater retrofit project includes the design and

construction administration services for installation of a tiered bioinfiltration system along municipally owned property in the town of Carmel. The project is located on the shoreline of the Middle Branch Reservoir. The Engineer is expected to confirm all

information provided within the Initial Evaluation.

<u>Schedule:</u> Engineer to provide documents ready for installation in November

2022.

INITIAL EVALUATION SUMMARY INFORMATION

Project ID: L-MU-1017

Location: Upper Lake Shore Drive, Katonah, NY

Land Ownership: Residential

Requested services: The proposed stormwater retrofit project includes the design and

construction administration services for the installation of a tiered bioinfiltration system within the existing drainage easement along Lake Katonah. The project will also include the replacement and stabilization of the existing piping along the easement. The

Engineer is expected to confirm all information provided within the

Initial Evaluation.

Schedule: Engineer to provide documents ready for installation in November

2022.



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INITIAL EVALUATION SUMMARY INFORMATION

Project ID: L-CR-1001

<u>Location:</u> Perch Bay Road, Waccabuc NY

<u>Land Ownership:</u> Private & Municipal

Requested services: The proposed stormwater retrofit project includes the design and

construction administration services for the installation of a tiered bioinfiltration system within the Lewisboro right-of-way on Perch Bay Road, and another along the entrance driveway to the

Waccabuc Country Club – Beach Club. The Engineer is expected to confirm all information provided within the Initial Evaluation.

Schedule: Engineer to provide documents ready for installation in November

2022.



John Simpson Road Retrofit (PC-MB-1000)

John Simpson Road, Carmel, NY 10512

Owner: Putnam County

Prepared by: East of Hudson Watershed Corporation

Date: 02/24/2022

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APPENDICIES

Appendix A

FIRM Map NYSDEC ERM Wetland Map NWI Wetland Map Soil Characterization and Delineation

Appendix B

Pipe Retrofit Plan View
Pipe Retrofit 3D View
Contributing Drainage Area Mapping
Project Area Mapping
Phosphorus Loading Calculation

1.0 INTRODUCTION

The East of Hudson Watershed Corporation (EOHWC) was created to oversee the design and installation of Stormwater Retrofit Projects (SRP's) within the New York City Department of Environmental Protection (NYCDEP) drinking water reservoir system located east of the Hudson River. The major focus of these projects is the reduction of phosphorus (P) from stormwater runoff prior to entering the reservoir system and is monitored and approved by the New York State Department of Environmental Conservation (NYSDEC).

The basis of design for the SRP program is the NYSDEC Stormwater Management Design Manual (SMDM), 2015. Both Water Quality Volume (WQv) calculation and stormwater management practice (SMP) selection follow all SMDM, 2015 regulations and requirements.

The engineering initial evaluation process begins with an estimation of the phosphorus concentration or "loading" within the stormwater runoff from a given drainage area. Once a phosphorus load (P-load) has been determined, an appropriate SMP is selected to remove as much of the P-load as the site constraints will allow.

1.1 Project Objectives

The proposed John Simpson Road Retrofit is an area which receives stormwater flow from the road and nearby neighborhood. This project proposes to capture and treat the stormwater runoff mainly running along John Simpson Road, prior to discharging into the Middle Branch Reservoir. This will be accomplished through the implementation of a FocalPoint bioinfiltration unit.

2.0 EXISTING CONDITIONS

2.1 Project Location

The John Simpson Road Retrofit area is located within the Town of Carmel, New York on John Simpson Road. The retrofit is proposed to be installed between the road and the shoreline of the reservoir, which is on Putnam County property.

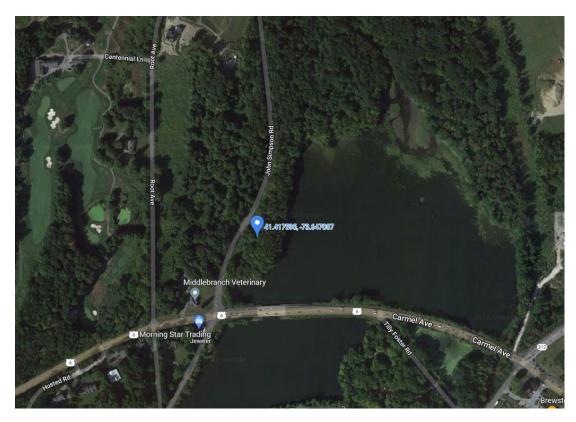


Figure 2.1 John Simpson Road Retrofit Location Map

2.2 Current Land Use

The drainage area consists of forest, residential and developed open space land use. Most of the land is covered in forest, except for large sections of impervious cover, mainly John Simpson Road. The mapping figures listed below verify the locations of any existing wetland areas managed by the NYSDEC and the USACOE, and those areas designated as flood plains by the Federal Emergency Management Agency (FEMA). The maps are shown in Appendix A and include the following:

- FIRM Mapping
- NYSDEC ERM Wetland Mapping
- National Wetland Inventory (NWI) Wetland Mapping

2.3 USGS Soil Classification

The Hydrologic Soil Group index is based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are assigned to four groups (A, B, C,

and D) and three dual classes (A/D, B/D, and C/D). Figure 2.2 below shows the soil types in the project area.



Figure 2.2 John Simpson Road Retrofit USGS Soil Types

2.4 Site Topography

Generally, the project drainage area flows southeast. Root Avenue in the northwest of the area is a high point from which the elevation lowers eastward toward the reservoir. The project location consists of steep slopes, starting from John Simpson Road and leading into the reservoir in the south east.

2.5 Stormwater Flow Path

Stormwater primarily flows along Root Avenue and John Simpson Road. Flows concentrate on Root Avenue and cross to the east via catch basins and outfall piping leading to the infrastructure on John Simpson Road. Water flows south along John Simpson Road where it likely outfalls in or near the project area.

2.6 Nearest Receiving Waterbody

The nearest receiving water body is the Middle Branch Reservoir to the southeast of the project area, which receives all the stormwater from the project drainage area, untreated. The ERM map is included in Appendix A.

3.0 ENGINEERING BASIS OF DESIGN

The SRP selected for this project utilizes the area as effectively as possible given the site constraints and provides treatment of the water quality volume prior to reaching the lake.

3.1 Design Considerations

Numerous design considerations were examined as part of this SMP selection. The site constraints noted below eliminate the use of many SMP's.

- 1) Steep slopes limit options for SRP type and location.
- 2) Restricted space for installation of an SRP
- 3) Desire to maintain natural habitat

3.2 Stormwater Management Practice (SMP)

The EOHWC has selected to install a FocalPoint bioinfiltration unit at this location as it can provide substantial treatment of the water quality volume and can be successful along the steep slopes of proposed location. The units will be installed in a terraced format to ensure entire treatment of the water quality volume. Dependent on site conditions, each unit may require different amount of cells to treat the stormflows. Site survey of the project area will be performed by the Engineering Firm selected to design this project.

3.3 Design Parameters

The total drainage area for the John Simpson Road Retrofit is approximately 44.7 acres. A Figure showing the drainage area is included in Appendix B. The drainage area calculations are provided in Appendix B along with a phosphorus analysis.

3.4 Phosphorus Loading Calculation

As noted above, the contributing drainage area was used to determine the runoff information for the WQv events for the proposed SRP. As part of this design, the simple method was used to calculate the WQv and the P-Loading Rate for the site. The WQv of the drainage area was determined to be approximately 30,765 ft³, with a P-load of 7.72 kg/yr. The installation of bioinfiltration units will provide a reduction of 100% if they are installed with an open bottom for full infiltration. The total anticipated P-Reduction is 7.72 kg/yr.

4.0 ANTICIPATED REGUALTORY APPROVAL AND PERMITS

It was determined that the following permits may be required by the Town of Carmel, NYS, NYCDEP, and the USACOEs. It is the responsibility of the design engineer to verify which permits are required.

•NYSDEC general permit for construction activity SPDES GP-0-15-002

Appendix A

FIRM Map

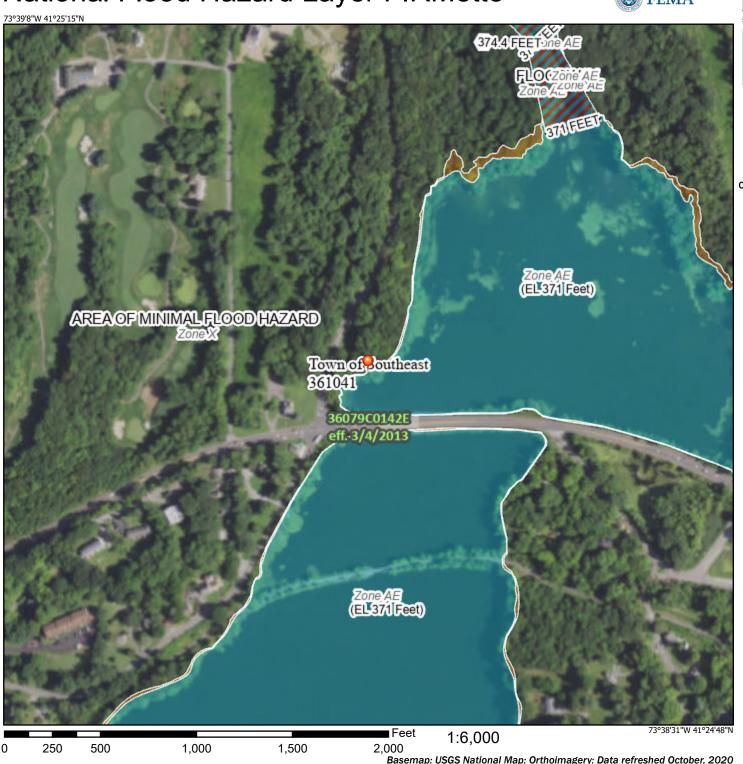
NYSDEC ERM Wetland Map

NWI Wetland Map

Soil Characteristics and Delineation

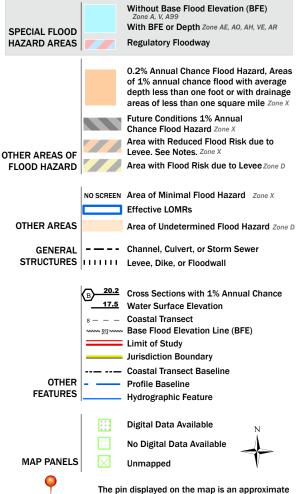
National Flood Hazard Layer FIRMette





Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

point selected by the user and does not represent

an authoritative property location.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/24/2022 at 11:52 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



John Simpson Road



February 24, 2022

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Other

Riverine

j Otriei

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



MAP LEGEND

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Water Features

Transportation

Background

Spoil Area

Stony Spot

Wet Spot

Other

Rails

US Routes

Major Roads

Local Roads

Very Stony Spot

Special Line Features

Streams and Canals

Interstate Highways

Aerial Photography

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

(o) Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

... Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot
Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Putnam County, New York Survey Area Data: Version 18, Sep 1, 2021

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

Date(s) aerial images were photographed: Oct 8, 2020—Oct 14, 2020

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



Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	11.0	5.9%
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	25.7	13.7%
CIB	Charlton fine sandy loam, 3 to 8 percent slopes, very stony	3.2	1.7%
CIC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	6.6	3.5%
CID	Charlton loam, 15 to 25 percent slopes, very stony	3.7	2.0%
CIE	Charlton loam, 25 to 35 percent slopes, very stony	0.1	0.0%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	36.3	19.4%
CuD	Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes	15.4	8.2%
NdA	Natchaug and Catden mucks, ponded, 0 to 2 percent slopes	1.7	0.9%
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	21.8	11.7%
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	5.7	3.0%
PnD	Paxton fine sandy loam, 15 to 25 percent slopes	1.9	1.0%
RdB	Ridgebury complex, 3 to 8 percent slopes	2.5	1.3%
RgB	Ridgebury complex, 0 to 8 percent slopes, very stony	6.9	3.7%
Sh	Sun loam	2.8	1.5%
SuB	Sutton loam, 3 to 8 percent slopes	12.2	6.5%
W	Water	0.3	0.2%
WdB	Woodbridge loam, 3 to 8 percent slopes	22.9	12.2%
WdC	Woodbridge loam, 8 to 15 percent slopes	6.5	3.5%
Totals for Area of Interest		187.1	100.0%

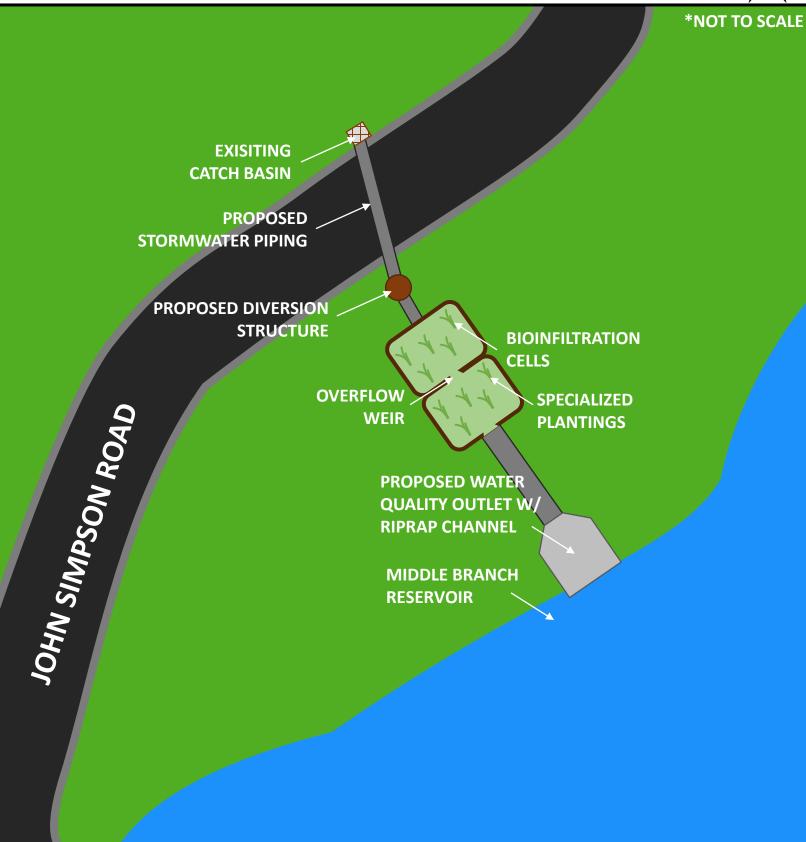
Appendix B

Pipe Retrofit Plan View
Pipe Retrofit 3D View
Contributing Drainage Area Mapping
Project Area Mapping
Phosphorus Loading Calculation

EAST OF HUDSON WATERSHED CORPORATION

John Simpson Road, Carmel, PC-MB-1000 - Bioinfiltration





ROUTE 6





EAST OF HUDSON WATERSHED CORPORATION John Simpson Road, Carmel, PC-MB-1000 - Bioinfiltration EXISTING CATCH BASIN **PROPOSED DIVERSION** JOHN SIMPSON ROAD **STRUCTURE PROPOSED BIO-INFILTRATION PRACTICE OVERFLOW WEIR** OVERFLOW WEIR RIPRAP CHANNEL OVERFLOW WEIR **PROPOSED WATER QUANTITY OUTLET** RIPRAP CHANNEL

EAST OF HUDSON WATERSHED CORPORATION

John Simpson Road, Carmel, PC-MB-1000 - Bioinfiltration





NOTES:

190

Provide treatment of the drainage area via implementation of a bioinfiltration.

1,140

1,520

760

Feet

Drainage Area = 44.7 acres Phosphorus Loading = 7.72 kg/yr Phosphorus Removal = 7.72 kg/yr Limit of Disturbance = 0.45 acres

Name: GCS North American 1983

380

Legend ☐ Catch Basins ☐ Drainage Area ☐ Retrofit ☐ Limit of Disturbance ☐ Outfall Channel ☐ Construction Entrance ☐ Stormwater Piping

EAST OF HUDSON WATERSHED CORPORATION

John Simpson Road, Carmel, PC-MB-1000 - Bioinfiltration







NOTES:

Provide treatment of the drainage area via implementation of a bioinfiltration.

Drainage Area = 44.7 acres Phosphorus Loading = 7.72 kg/yr Phosphorus Removal = 7.72 kg/yr Limit of Disturbance = 0.45 acres

Legend ☐ Catch Basins ☐ Drainage Area ☐ Retrofit ☐ Limit of Disturbance ☐ Outfall Channel ☐ Construction Entrance ☐ Stormwater Piping

Phosphorus Loading Calculation

Inputs

Depends on County
Depends on County

DA (acres)	44.7		Retrofit:		Bioinfiltration		
Impervious (acres and %)	5.364	12.00	Removal Eff	ficiency:		1	
P (in)	1.2		P Load	>		17.02	lb/yr
Total Annual Rainfall (in)	45					7.72	kg/yr
Pj	0.9		P Remov	al>		17.02	lb/yr
						7.72	kg/yr

Land Use	% of Total Area	
Residential	0.15	Weighted EMC
Commercial		0.26
Industrial		
Actively Grazed Pasture		
Forest	0.49	
Impervious	0.12	PERCENTAGE CHECK
Developed Open Space*	0.24	1.00
*i.e. golf course, parks, cen	neteries, single house	es with large lawns

Outputs

Water Quality V WQv (acre-ft) WQv (cu-ft)		Rv	
	0.706	30765	0.1580



Lake Katonah Pipe Retrofit (L-MU-1017)

Upper Lake Shore Drive, Katonah, NY 10536

Owner: David Adam Neuburger & Cheryl Rushton Neuburger

Prepared by: East of Hudson Watershed Corporation

Date: 02/17/2022

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FIRM Map NYSDEC ERM Wetland Map NWI Wetland Map Soil Characterization and Delineation

Appendix B

Lake Katonah Pipe Retrofit Plan View Lake Katonah Pipe Retrofit 3D View Contributing Drainage Area Mapping Lake Katonah Pipe Retrofit Phosphorus Loading Calculation

1.0 INTRODUCTION

The East of Hudson Watershed Corporation (EOHWC) was created to oversee the design and installation of Stormwater Retrofit Projects (SRP's) within the New York City Department of Environmental Protection (NYCDEP) drinking water reservoir system located east of the Hudson River. The major focus of these projects is the reduction of phosphorus (P) from stormwater runoff prior to entering the reservoir system and is monitored and approved by the New York State Department of Environmental Conservation (NYSDEC).

The basis of design for the SRP program is the NYSDEC Stormwater Management Design Manual (SMDM), 2015. Both Water Quality Volume (WQv) calculation and stormwater management practice (SMP) selection follow all SMDM, 2015 regulations and requirements.

The engineering initial evaluation process begins with an estimation of the phosphorus concentration or "loading" within the stormwater runoff from a given drainage area. Once a phosphorus load (P-load) has been determined, an appropriate SMP is selected to remove as much of the P-load as the site constraints will allow.

1.1 Project Objectives

The Lake Katonah Pipe Retrofit is an isolated area of stormwater flow. This project proposes to capture and treat the stormwater runoff from the neighborhood along Upper Lake Shore Drive and Sunnyridge Road, prior to discharging into Lake Katonah. This will be accomplished through the implementation of several bioinfiltration units.

2.0 EXISTING CONDITIONS

2.1 Project Location

The Lake Katonah Pipe Retrofit area is located within the Town of Katonah, New York on Upper Lake Shore Drive within the drainage easement between houses 66 and 78. Currently, there is a stormwater pipe along this drainage easement that is in a state of failure. It is expected that the pipe is collapsed and seeping in several different locations. The other stormwater pipe that outfalls to the lake is currently located underneath the house at 78 Upper Lake Shore Drive.

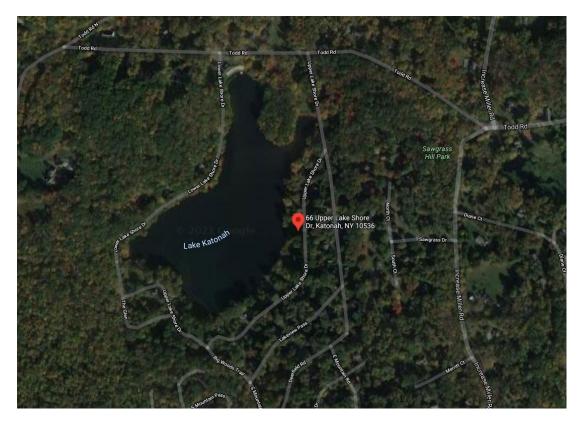


Figure 2.1 Lake Katonah Pipe Retrofit Location Map

2.2 Current Land Use

The drainage area consists of residential land use. Most of the land is covered in lawns, roads, roofs, and driveways with some forest coverage along the southern portion of Sunnyridge Road. The mapping figures listed below verify the locations of any existing wetland areas managed by the NYSDEC and the USACOE, and those areas designated as flood plains by the Federal Emergency Management Agency (FEMA). The maps are shown in Appendix A and include the following:

- FIRM Mapping
- NYSDEC ERM Wetland Mapping
- National Wetland Inventory (NWI) Wetland Mapping

2.3 USGS Soil Classification

The Hydrologic Soil Group index is based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). Figure 2.2 below shows the soil types in the project area.



Figure 2.2 USGS Soil Types

2.4 Site Topography

The drainage area cascades along the steep slopes, with the high point starting from North Court and South Court and decreasing in elevation until it reaches the lake shoreline. The project location consists of steep slopes from Upper Lake Shore Drive down to the lake.

2.5 Stormwater Flow Path

There are multiple stormwater flow paths of interest on the project site. Stormwater flows mostly by sheet flow across the landscape and by shallow concentrated flow to the individual catch basins. It then travels by channelized pipe flow to either CB02 or CB04.

2.6 Nearest Receiving Waterbody

The nearest receiving water body is Lake Katonah to the west of the project location, which currently receives all the stormwater from the surrounding neighborhoods, untreated. Lake Katonah is tributary to the Muscoot Reservoir. The ERM map is included in Appendix A.

3.0 ENGINEERING BASIS OF DESIGN

The SRPs selected for this project utilizes the area as effectively as possible given the site constraints and provides treatment of the water quality volume prior to reaching the lake.

3.1 Design Considerations

Numerous design considerations were examined as part of this SMP selection. The site constraints noted below eliminate the use of many SMP's.

- 1) Possible storm basin outfalls at too great of a depth.
- 2) Storm basins outfall to different locations along the existing easement.
- 3) Steep slopes limit options for SRP type and location.
- 4) Restricted space for installation of an SRP in available easement.
- 5) Infrastructure failure in pipes along easement.

3.2 Stormwater Management Practice (SMP)

The EOHWC has selected to install bioinfiltration units at this location as they can provide substantial treatment of the water quality volume and can be successful along the steep slopes of the drainage easement. The units will be installed in a terraced format to ensure entire treatment of the water quality volume. To achieve this, CB02 and CB04 will be redirected into a diversion structure near the curb at the top of the drainage easement. The existing outfall pipe from CB04 will need to be filled and replaced with a new pipe. The proposed biofilters will be installed using products that minimize the amount of infrastructure necessary while maximizing the aesthetic value of the project. The existing outfall pipe from CB02 will be replaced with a water quantity outfall pipe, which will pull overflow water from the diversion structure to the lake. Doing such will also stabilize the soils that are failing around the existing pipe. Site survey of the project area will be performed by the Engineering Firm selected to design this project.

3.3 Design Parameters

The total drainage area for the Lake Katonah Pipe Retrofit is approximately 13.29 acres. A Figure showing the drainage area is included in Appendix B. The drainage area calculations for each section are provided in Appendix B along with each respective phosphorus analysis.

3.4 Phosphorus Loading Calculation

As noted above, the contributing drainage area was used to determine the runoff information for the WQv events for the proposed SRP. As part of this design, the simple method was used to calculate the WQv and the P-Loading Rate for the site. The WQv of the drainage area was determined to be approximately 11,175 ft³, with a P-load of 4.41 Kg/yr. The installation of bioinfiltration units will provide a reduction of 100% if they are installed with an open bottom for full infiltration. The channel stabilization will also provide approximately 2.69 kg/yr of Phosphorus removal. The total anticipated P-Reduction is 7.10 kg/yr.

4.0 ANTICIPATED REGUALTORY APPROVAL AND PERMITS

It was determined that the following permits may be required by the Town of Lewisboro, NYS, NYCDEP, and the USACOEs. It is the responsibility of the design engineer to verify which permits are required.

- USACOE-Joint Permit Application for NWP 43-Stormwater Maintenance Facilities.
- NYSDEC general permit for construction activity SPDES GP-0-15-002

Appendix A

FIRM Map

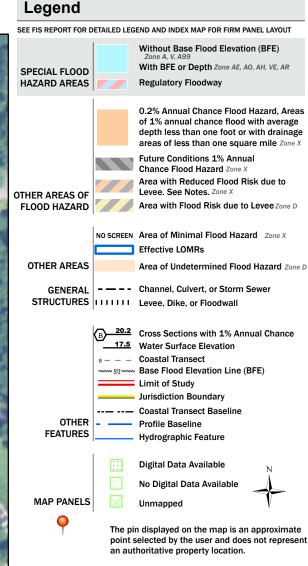
NYSDEC ERM Wetland Map

NWI Wetland Map

Soil Characteristics and Delineation

National Flood Hazard Layer FIRMette

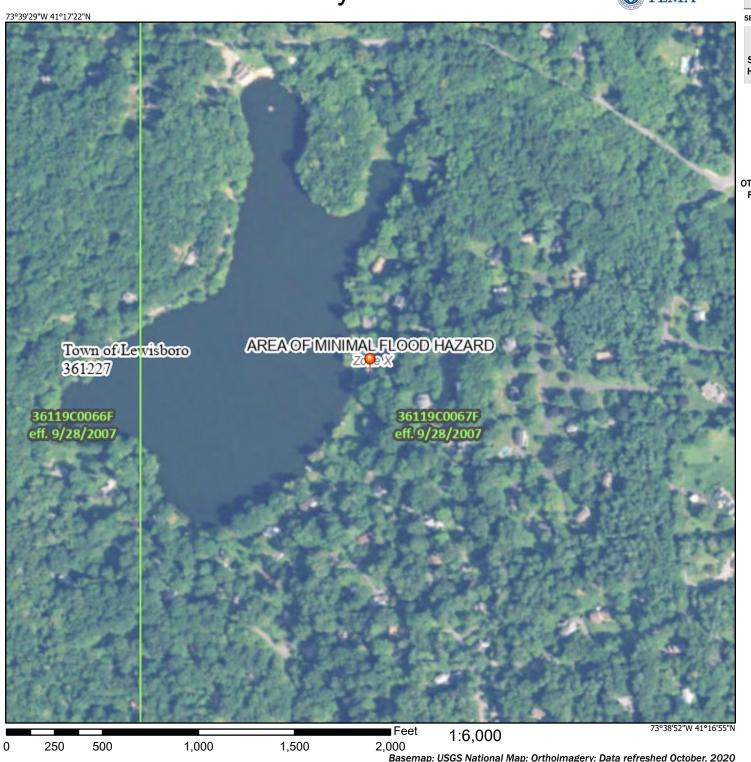




This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/30/2021 at 1:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

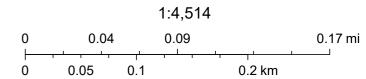
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Environmental Resource Mapper



August 20, 2021



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

U.S. Fish and Wildlife Service National Wetlands Inventory

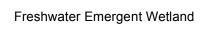
Lake Katonah



August 20, 2021

Wetlands Estuarine and Marine Deepwater

Estuarine and Marine Wetland



Freshwater Forested/Shrub Wetland

Freshwater Pond



Other

Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

→ Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Wery Stony Spot

Wet Spot
 Other
 Othe

Special Line Features

Water Features

Δ

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

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

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

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Westchester County, New York Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 16, 2017

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

Map Unit Legend

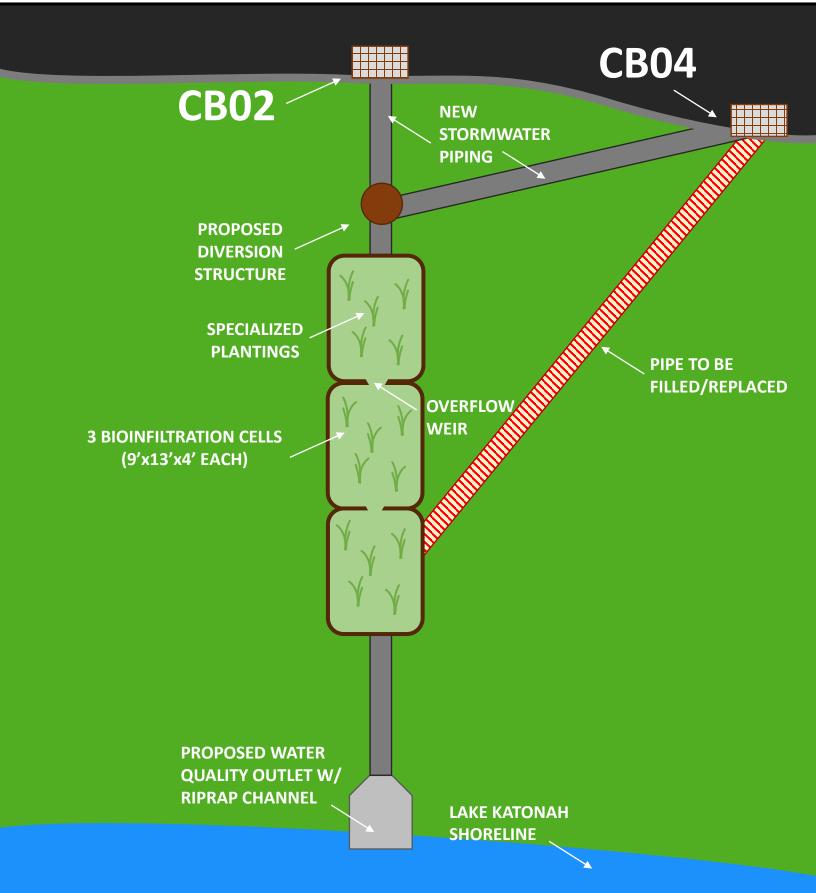
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
ChB	Charlton fine sandy loam, 3 to 8 percent slopes	4.1	9.2%			
ChC	Charlton fine sandy loam, 8 to 15 percent slopes	2.0	4.5%			
ChD	Charlton fine sandy loam, 15 to 25 percent slopes	3.1	6.9%			
ChE	Charlton loam, 25 to 35 percent slopes	20.8	46.6%			
CIE	Charlton loam, 25 to 35 percent slopes, very stony	0.0	0.1%			
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	2.6	5.9%			
SD Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky		4.4	9.8%			
W	Water	7.6	17.0%			
Totals for Area of Interest		44.7	100.0%			

Appendix B

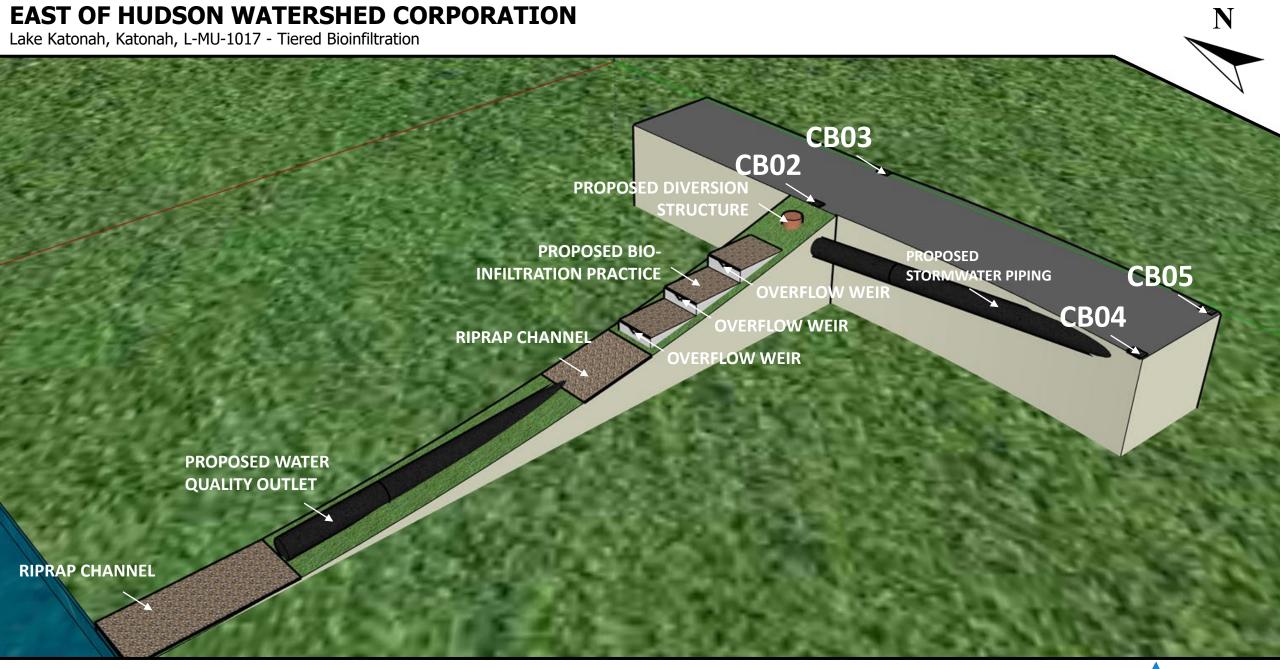
Pipe Retrofit Plan View
Pipe Retrofit 3D View
Contributing Drainage Area Mapping
Site Location Mapping
Phosphorus Loading Calculation

Lake Katonah, Katonah, L-MU-1017 - Tiered Bioinfiltration



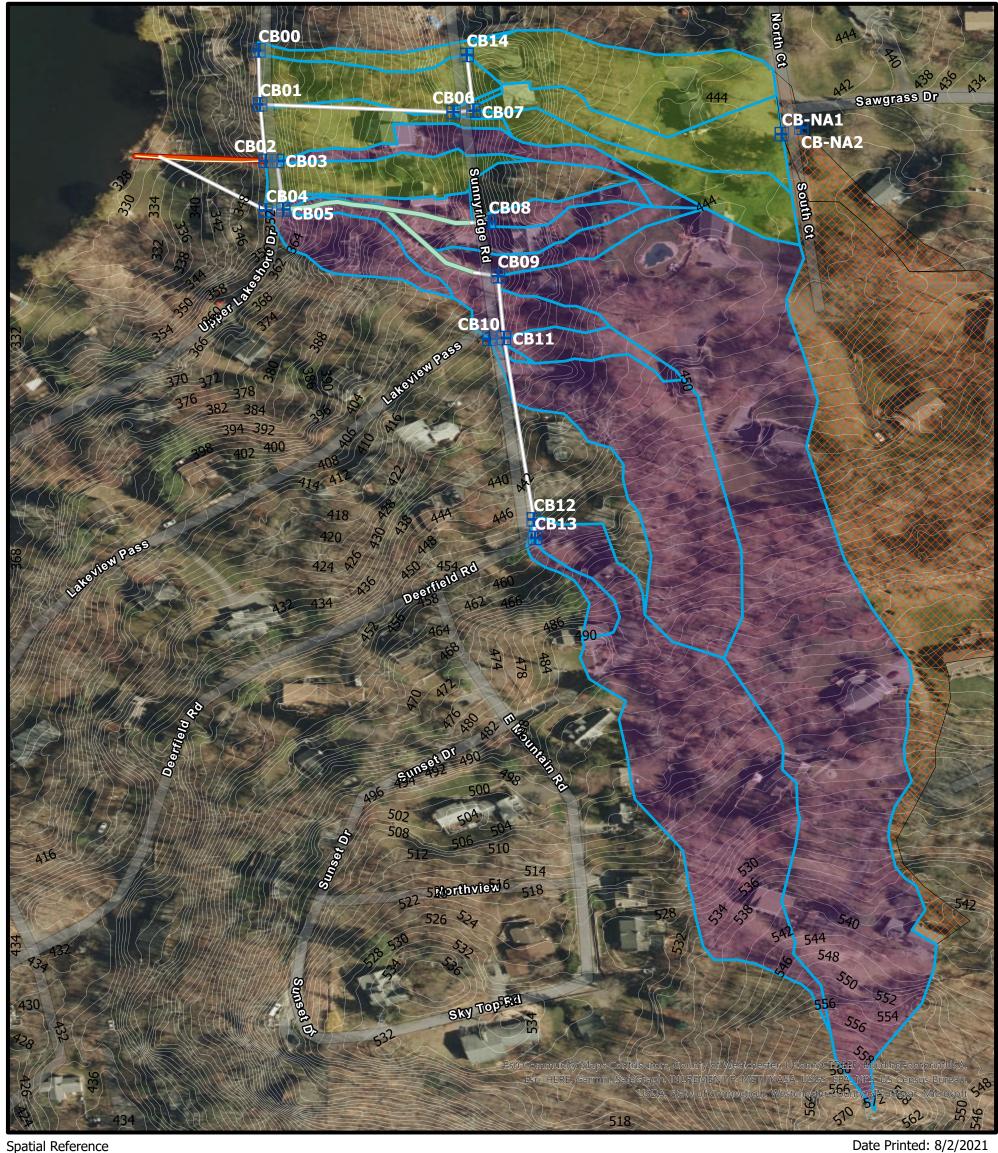










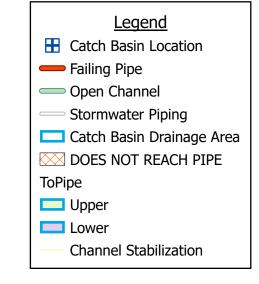




NOTES:

Provide treatment of the Lake Katonah neighborhood via implementation of tiered bioinfiltration.

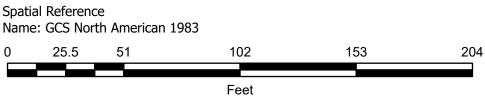
Drainage Area = 13.29 acres Phosphorus Loading = 7.10 kg/yr Phosphorus Removal = 7.10 kg/yr







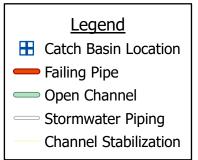




NOTES:

Provide treatment of the Lake Katonah neighborhood via implementation of tiered bioinfiltration.

Drainage Area = 13.29 acres Phosphorus Loading = 7.10 kg/yr Phosphorus Removal = 7.10 kg/yr



Phosphorus Loading

Land Use	P conc. (mg/l)
Residential	0.41
Commercial	0.34
Industrial	0.45
Actively Grazed Pasture	0.40
Forest	0.15
Impervious	0.50
Developed Open Space*	0.28

Calculate Phosphorus Loading from Land Usage

Label	Area (ac)	Impervious	Residental	Commericial	Industrial	Actively Grazed Pasture	Forest	t Impervious	Devloped Open Space	Percent	EMC	Rv	WQv (ac-ft)	WQv (cu-ft)	P Load (lb/yr)	P Load (kg/yr)
CB00	0.15	0.03	81.9					18.1		100	0.43	0.212837	0.003	146	0.13	0.06
CB01	0.42	0.17	60.9					39.1		100	0.45	0.402113	0.018	805	0.75	0.34
CB02	0.70	0.22	69.0					31.0		100	0.44	0.328886	0.025	1086	1.00	0.45
CB03	0.33	0.07	79.3					20.7		100	0.43	0.236424	0.008	369	0.33	0.15
CB04	0.67	0.17	74.6					25.4		100	0.43	0.278166	0.020	880	0.80	0.36
CB05	0.61	0.13	78.2					21.8		100	0.43	0.246525	0.016	706	0.64	0.29
CB06	0.45	0.03	93.2					6.8		100	0.42	0.111643	0.005	237	0.21	0.09
CB07	0.49	0.07	86.0					14.0		100	0.42	0.176285	0.009	409	0.36	0.16
CB08	0.12	0.00	98.4					1.6		100	0.41	0.064141	0.001	36	0.03	0.01
CB09	4.82	0.57	88.1					11.9		100	0.42	0.156715	0.082	3562	3.15	1.43
CB10	1.38	0.09	20.0				73.2	6.8		100	0.23	0.111077	0.017	724	0.34	0.16
CB11	0.18	0.01	97.2					2.8		100	0.41	0.075383	0.001	63	0.05	0.02
CB12	2.09	0.21	90.0					10.0		100	0.42	0.140298	0.032	1384	1.22	0.55
CB13	0.10	0.02	83.5					16.5		100	0.42	0.198115	0.002	91	0.08	0.04
CB14	0.79	0.12	85.4					14.6		100	0.42	0.181558	0.016	677	0.60	0.27



Waccabuc Country Club Waterfront Retrofit (L-CR-1001)

Perch Bay Road, Waccabuc, NY 10597

Owner: Waccabuc County Club

Prepared by: East of Hudson Watershed Corporation

Date: 02/22/2022

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	Site Topography 2.5 Stormwater Flow Path	
	2.6 Nearest Receiving Waterbody	3
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	3.1 Design Considerations	4
	3.3 Design Parameters 3.4 Phosphorus Loading Calculation	
4.	.0 ANTICIPATED REGUALTORY APPROVAL AND PERMITS	5
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APPENDICIES

Appendix A

FIRM Map NYSDEC ERM Wetland Map NWI Wetland Map Soil Characterization and Delineation

Appendix B

Retrofit Plan View Retrofit 3D View Contributing Drainage Area Mapping Phosphorus Loading Calculation

1.0 INTRODUCTION

The East of Hudson Watershed Corporation (EOHWC) was created to oversee the design and installation of Stormwater Retrofit Projects (SRP's) within the New York City Department of Environmental Protection (NYCDEP) drinking water reservoir system located east of the Hudson River. The major focus of these projects is the reduction of phosphorus (P) from stormwater runoff prior to entering the reservoir system and is monitored and approved by the New York State Department of Environmental Conservation (NYSDEC).

The basis of design for the SRP program is the NYSDEC Stormwater Management Design Manual (SMDM), 2015. Both Water Quality Volume (WQv) calculation and stormwater management practice (SMP) selection follow all SMDM, 2015 regulations and requirements.

The engineering initial evaluation process begins with an estimation of the phosphorus concentration or "loading" within the stormwater runoff from a given drainage area. Once a phosphorus load (P-load) has been determined, an appropriate SMP is selected to remove as much of the P-load as the site constraints will allow.

1.1 Project Objectives

The Waccabuc Country Club Waterfront Retrofit is an isolated area of stormwater flow. This project proposes to capture and treat the stormwater runoff mainly running along Perch Bay Road, prior to discharging into Lake Waccabuc. This will be accomplished through the implementation of several bioinfiltration units.

2.0 EXISTING CONDITIONS

2.1 Project Location

The Waccabuc Country Club Waterfront Retrofit area is located within the Town of Waccabuc, New York on Perch Bay Drive. Retrofits are proposed to be installed at the entrance to the Waccabuc Country Club Waterfront along Perch Bay Drive, with a second unit installed along the road for the County Club.

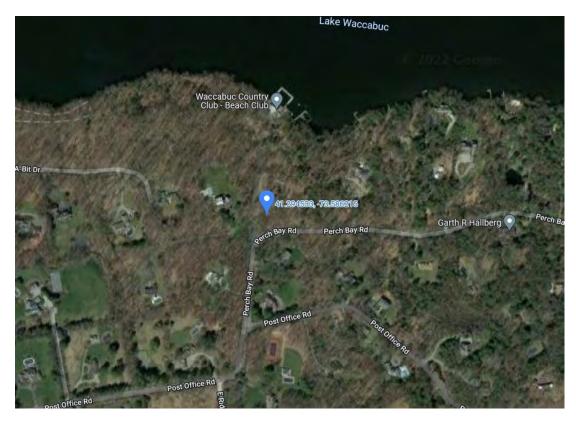


Figure 2.1 Waccabuc Country Club Waterfront Retrofit Location Map

2.2 Current Land Use

The drainage area consists of residential land use. Most of the land is covered in lawns, roads, roofs, and driveways with some forest. The mapping figures listed below verify the locations of any existing wetland areas managed by the NYSDEC and the USACOE, and those areas designated as flood plains by the Federal Emergency Management Agency (FEMA). The maps are shown in Appendix A and include the following:

- FIRM Mapping
- NYSDEC ERM Wetland Mapping
- National Wetland Inventory (NWI) Wetland Mapping

2.3 USGS Soil Classification

The Hydrologic Soil Group index is based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). Figure 2.2 below shows the soil types in the project area.



Figure 2.2 USGS Soil Types

2.4 Site Topography

The drainage area cascades along the Waccabuc Country Club Golf Course to the south on East Ridge Road, slopes, with the high point starting from North Court and South Court and decreasing in elevation until it reaches the lake shoreline. The entrance to the County Club is considerably steep from Perch Bay to the shoreline.

2.5 Stormwater Flow Path

There are two stormwater flow paths of interest on the project site. One path, from DA01, is a narrow and long flow path, mainly along the driveway for the Country Club. The second path, for DA02, collects stormwater from Perch Bay Road via shallow concentrated flow and deposits at the intersection of the driveway and Perch Bay Road.

2.6 Nearest Receiving Waterbody

The nearest receiving water body is Lake Waccabuc to the north of the project location, which currently receives all the stormwater from the surrounding neighborhoods, untreated. Lake Waccabuc is tributary to the Cross River Reservoir. The ERM map is included in Appendix A. - Page 3 -

3.0 ENGINEERING BASIS OF DESIGN

The SRPs selected for this project utilizes the area as effectively as possible given the site constraints and provides treatment of the water quality volume prior to reaching the lake.

3.1 Design Considerations

Numerous design considerations were examined as part of this SMP selection. The site constraints noted below eliminate the use of many SMP's.

- 1) Lack of existing infrastructure
- 2) Steep slopes limit options for SRP type and location.
- 3) Restricted space for installation of an SRP

3.2 Stormwater Management Practice (SMP)

The EOHWC has selected to install FocalPoint bioinfiltration units at this location as they can provide substantial treatment of the water quality volume and can be successful along the steep slopes of proposed locations. The units will be installed in a terraced format to ensure entire treatment of the water quality volume. Dependent on site conditions, each unit may require different amount of cells to treat the stormflows. Site survey of the project area will be performed by the Engineering Firm selected to design this project.

3.3 Design Parameters

The total drainage area for the Waccabuc Country Club Waterfront Retrofit is approximately 4.85 acres. A Figure showing the drainage area is included in Appendix B. The drainage area calculations for each section are provided in Appendix B along with each respective phosphorus analysis.

3.4 Phosphorus Loading Calculation

As noted above, the contributing drainage area was used to determine the runoff information for the WQv events for the proposed SRP. As part of this design, the simple method was used to calculate the WQv and the P-Loading Rate for the site. The WQv of the drainage area was determined to be approximately 6,253 ft³, with a P-load of 2.58 kg/yr. The installation of bioinfiltration units will provide a reduction of 100% if they are installed with an open bottom for full infiltration. The total anticipated P-Reduction is 2.58 kg/yr.

4.0 ANTICIPATED REGUALTORY APPROVAL AND PERMITS

It was determined that the following permits may be required by the Town of Lewisboro, NYS, NYCDEP, and the USACOEs.

It is the responsibility of the design engineer to verify which permits are required.

• NYSDEC general permit for construction activity SPDES GP-0-15-002

Appendix A

FIRM Map

NYSDEC ERM Wetland Map

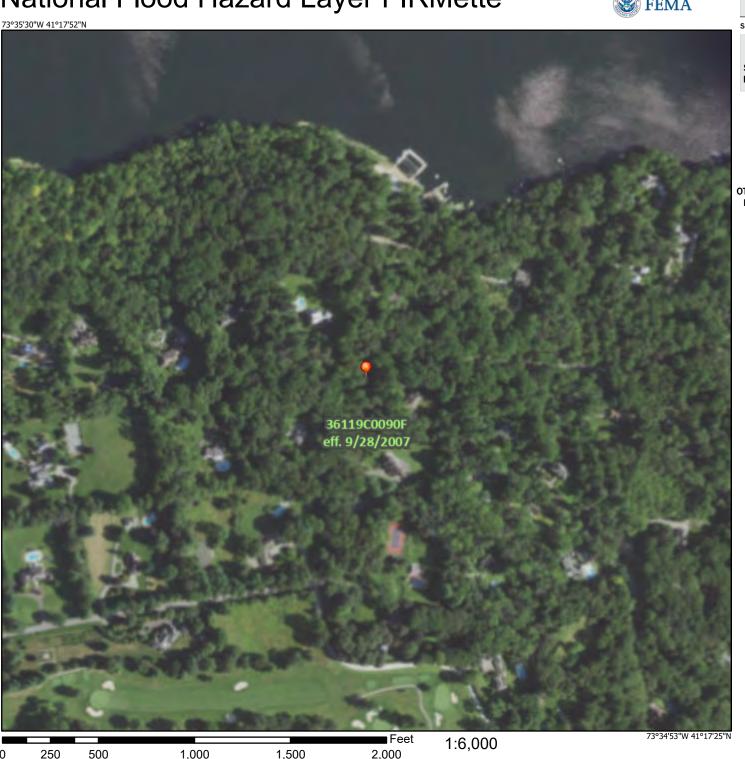
NWI Wetland Map

Soil Characteristics and Delineation

National Flood Hazard Layer FIRMette

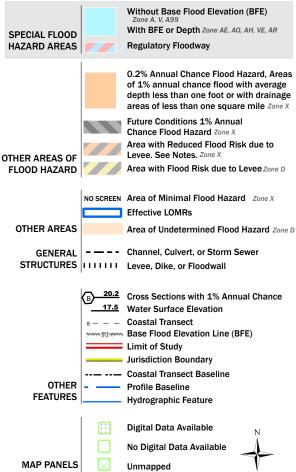


Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap

accuracy standards

The pin displayed on the map is an approximate point selected by the user and does not represent

an authoritative property location.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/23/2022 at 3:08 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Environmental Resource Mapper



The coordinates of the point you clicked on are:

UTM 18 Easting: 618408.6686433328 **Northing:** 4572528.496865505

Longitude/Latitude Longitude: -73.58575919870685 Latitude: 41.295533374646034

The approximate address of the point you clicked on is:

10597, Waccabuc, New York

County: Westchester **Town:** Lewisboro

USGS Quad: PEACH LAKE, NY-CONN

DEC Region

Region 3:

(Lower Hudson Valley) Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster and Westchester counties. For more information visit http://www.dec.ny.gov/about/607.html.

Rare Plants and Rare Animals

This location is in the vicinity of Rare Dragonflies and Damselflies – Not Listed by NYS

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

1 of 2 10/9/2020, 3:01 PM

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

2 of 2 10/9/2020, 3:01 PM

Waccabuc Country Club Waterfront



October 9, 2020

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Pond

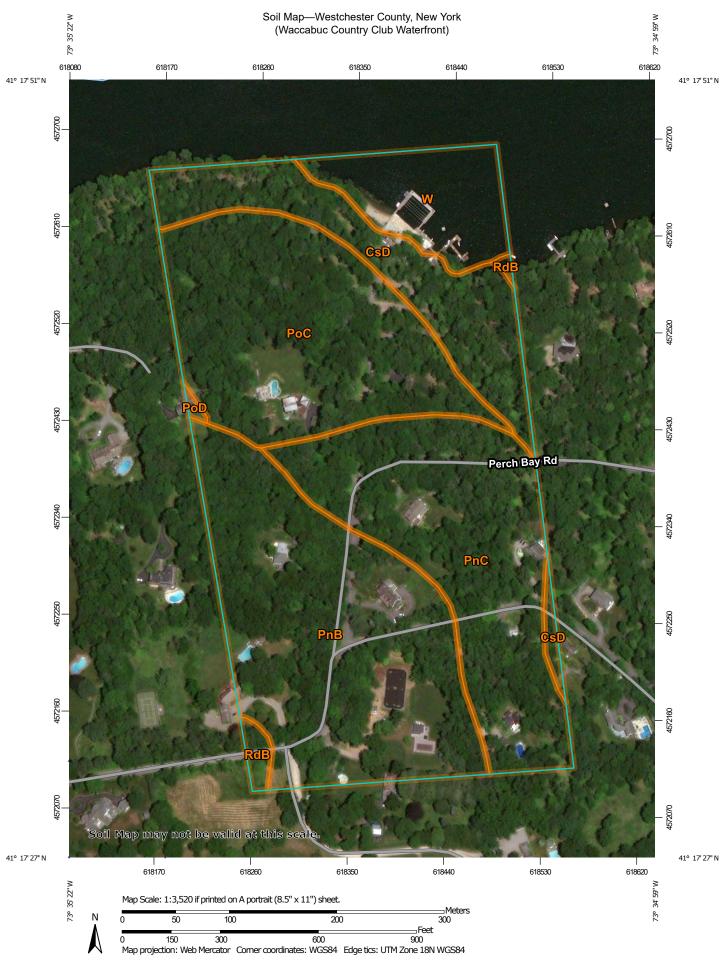
Freshwater Forested/Shrub Wetland

Lake

Other

Riverine

Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

* Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill ۵

Lava Flow Marsh or swamp

Mine or Quarry Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot 0

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area Stony Spot

0 Very Stony Spot

Wet Spot Other

Special Line Features

Water Features

â

Δ

Streams and Canals

Transportation

Rails ---

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12.000.

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

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

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

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Westchester County, New York Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 5. 2016

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI		
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	5.8	12.9%		
PnB	Paxton fine sandy loam, 3 to 8 percent slopes	13.7	30.3%		
PnC	Paxton fine sandy loam, 8 to 15 percent slopes	10.8	23.8%		
PoC	Paxton fine sandy loam, 8 to 15 percent slopes, very stony	10.9	24.2%		
PoD	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	0.1	0.2%		
RdB	Ridgebury complex, 3 to 8 percent slopes	0.4	0.9%		
W	Water	3.5	7.8%		
Totals for Area of Interest	·	45.2	100.0%		

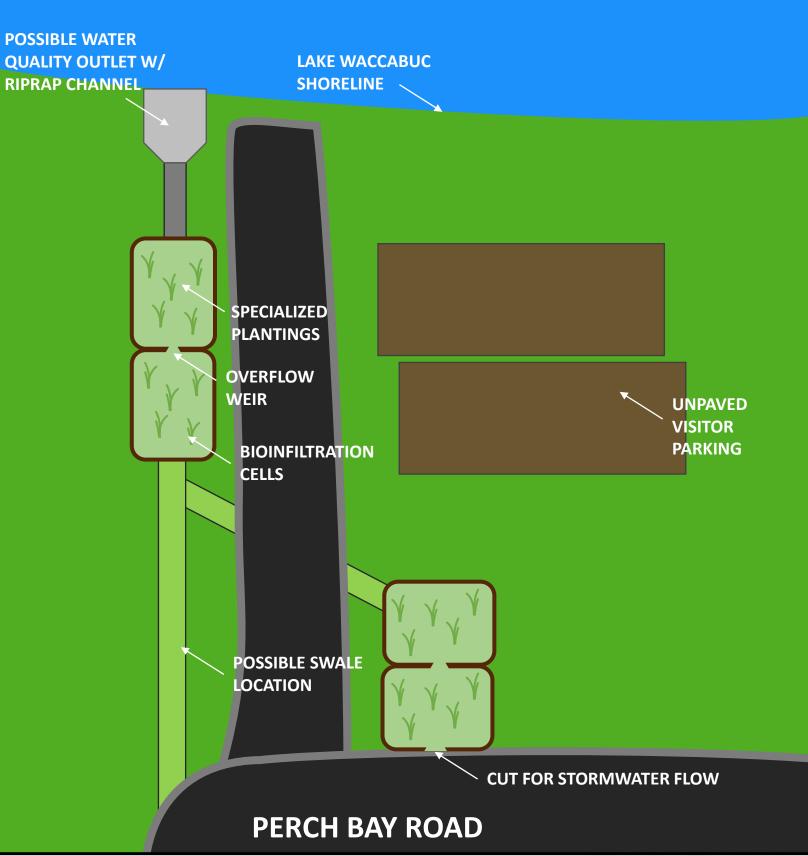
Appendix B

Pipe Retrofit Plan View
Pipe Retrofit 3D View
Contributing Drainage Area Mapping
Phosphorus Loading Calculation

Waccabuc CC Waterfront, Waccabuc, L-CR-1001 - Bioinfiltration



*NOT TO SCALE



PROPOSED SITE CONDITIONS

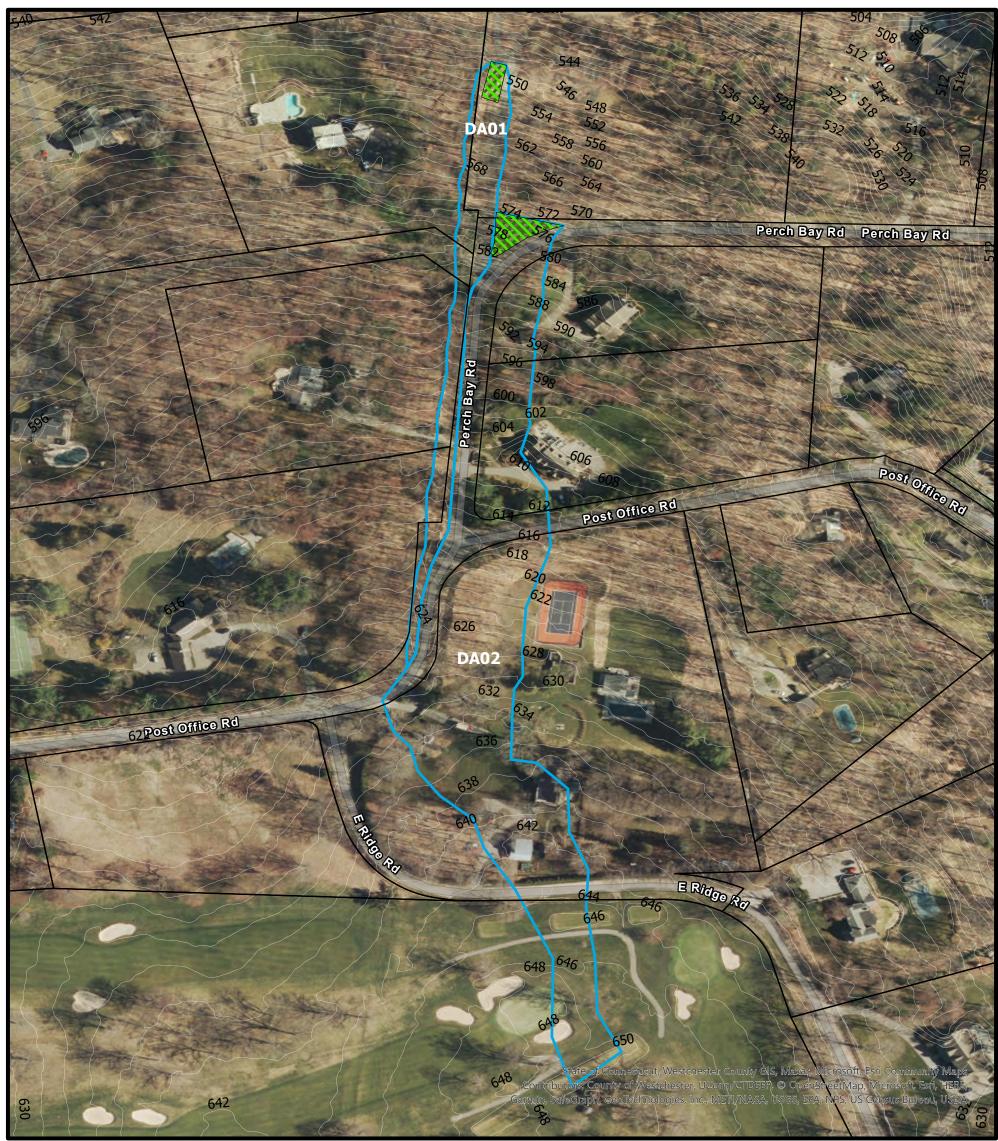


EAST OF HUDSON WATERSHED CORPORATION Waccabuc Country Club Waterfront, Waccabuc, L-CR-1001 - Bioinfiltration PERCH BAY ROAD PROPOSED BIO-**INFILTRATION PRACTICE OVERFLOW WEIR** OVERFLOW WEIR RIPRAP CHANNEL OVERFLOW WEIR PROPOSED WATER **QUANTITY OUTLET RIPRAP CHANNEL**





Waccabuc Country Club Waterfront, Waccabuc, L-CR-1001 - Bioinfiltration



Spatial Reference
Name: GCS North American 1983

0 105 210 420 630 840

Feet

NOTES:

Provide treatment of the Waccabuc Country Club Waterfront Property via implementation of bioinfiltration units.

Drainage Area = 4.85 acres Phosphorus Loading = 2.58 kg/yr Phosphorus Reduction = 2.58 kg/yr Legend

Date Printed: 2/23/2022

Drainage Area

Parcels

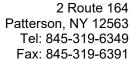
Stormwater Retrofits

Phosphorus Loading

Land Use	P conc. (mg/l)
Residential	0.41
Commercial	0.34
Industrial	0.45
Actively Grazed Pasture	0.40
Forest	0.15
Impervious	0.50
Developed Open Space*	0.28

Calculate Phosphorus Loading from Land Usage

Label	Area (ac)	Residental	Commericial	Industrial	Actively Grazed Pasture	Forest Impervious	Developed Open Space	Percent	EMC	Rv	WQv (ac-ft)	WQv (cu-ft)	P Load (lb/yr)	P Load (kg/yr)
DA01	0.80	82.8				17.2		100	0.43	0.204863	0.018	775	0.69	0.31
DA02	4.04	73.664688				26.3353116		100	0.43	0.287018	0.126	5477	5.00	2.27





APPENDIX II

Professional Service Agreement with Insurance Requirements

AGREEMENT FOR PROFESSIONAL SERVICES

(Engineering Services)

Contract No.:

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Ag	reement"), is made as of the day
of, 2019 by and between the East of Hudso	n Watershed Corporation, a not-
for-profit local development corporation with its offices at 2 R	Route 164, Suite 2, Patterson, New
York (the "EOHWC"), and	, an
organized under the laws of the State of	, with its offices at the
address specified on the execution page of this Agreement (herein	
WITNESSETH:	
WHEREAS, pursuant to a request for proposals datedauthorized by the Executive Committee of the Board of Director,, 201, the EOHWC has determined to enter into the	rs (the "Executive Committee") on
of the Engineer for the purposes set forth herein;	
NOW THEREFORE, in consideration of the mutual agreements levaluable consideration, receipt of which is hereby acknowledged	E

Section 1. SCOPE OF SERVICES

- a. The Engineer shall render the professional services ("Services") described in the RFP and at **Exhibit B** (hereinafter referred to collectively as the "Scope of Services").
- b. During the term of this Agreement, the Engineer shall perform such additional services as Engineer as may be requested in writing by the EOHWC, at the hourly rates and actual expenses specified in Exhibit A (such additional Services being referred to herein as "Additional Services"). Prior to undertaking any such Additional Services the Engineer shall propose a budget and schedule for in a written change order to be approved by the Executive Committee prior to commencing work. No work shall be considered Additional Services unless specifically agreed to in a written change order signed by the Engineer and approved by the Executive Committee.

Section 2. ENGINEER QUALIFICATIONS; REPRESENTATIONS; NO CONFLICTS

a. The Engineer represents and covenants that (i) it is an engineering firm meeting the qualifications set forth in the RFP; (ii) it is experienced in performing work of the types contemplated by the Scope of Services; (iii) at all times during the term of this Agreement the persons assigned to perform Services have and will have the experience, knowledge, and licenses necessary to perform the Services described herein; (iv) the Engineer is fully qualified to perform the Scope of Services, with capability to perform the Scope of Services and timely deliver a work product as required by this Agreement, (v) the Engineer will procure and maintain all licenses and permits necessary to perform the work described in this Agreement, and (vi) the Engineer will comply with the provisions of the Labor Law and all State laws and Federal and local statutes, ordinances and regulations that are applicable to the performance of this Agreement.

- b. Unless otherwise authorized in writing in advance by the EOHWC, the persons primarily responsible for performing work under this Agreement, including any subcontractors, shall be as set forth at **Exhibit A**. Any subcontractors shall be bound by the provisions of this Agreement and shall be subject to prior review and approval by the EOHWC as provided in Section 15 hereof.
- c. The Engineer represents and warrants that (i) the Engineer has all requisite power and authority to execute, deliver and perform this Agreement; (ii) this Agreement has been duly authorized by all necessary action on the part of the Engineer and has been duly executed and delivered by the Engineer and, assuming due execution and delivery by the EOHWC, constitutes a legal, valid, binding and enforceable obligation of the Engineer; and (iii) the execution and delivery of this Agreement, and compliance with the provisions hereof, do not and will not conflict with or constitute a violation of or default under the organization documents, or any statute, indenture, mortgage, deed of trust or other agreement or instrument to which the Engineer is bound, or to the knowledge of the Engineer, any order, rule or regulation of any court or governmental agency or body having jurisdiction over the Engineer or any of its activities or properties.
- d. The Engineer represents and warrants that it has not entered into any agreement for services with any other party with respect to any activities within or relating to the Scope of Services under this Agreement, other than such subcontracts as are specifically set forth at **Exhibit A**. The Engineer shall accept no other compensation, directly or indirectly, from any party, other than the EOHWC, for any services connected with the work described in the Scope of Services. The Engineer represents that it has read the Code of Ethics of EOHWC and will comply with its provisions.
- e. The Engineer represents and warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Engineer, to solicit or secure this Agreement, and that it has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift or any other consideration, contingent on or resulting from the award or making of this Agreement. The Engineer further represents and warrants that neither it nor any of its directors, officers, members, partners, associates or employees, has any interest, nor shall they acquire any interest, directly or indirectly, which would or may conflict in any manner or degree with the performance or rendering of the services. In the event of breach of this provision the EOHWC shall have the option to annul this Agreement without liability or deduct from the Agreement consideration, or otherwise recover, the full amount of any such fee, commission, percentage, brokerage fee, gift or other consideration. Such remedies shall be in addition to and not in limitation of any other remedies available at law or in equity.

Section 3. TERM AND COMPLETION SCHEDULE The Scope of Services shall commence upon the delivery by the EOHWC to Engineer of a notice to commence work under this Agreement (the "Commencement Date") and shall be completed within the term set forth at Exhibit C except as extended by the EOHWC in writing. Any extension granted shall be for work and payment purposes only and shall not result in any additional fees or expenses other than those agreed to herein. The Engineer acknowledges the importance to EOHWC that the work be completed in accordance with the project schedule and agrees to put forth every reasonable effort in performing the Scope of Services with due diligence in a manner consistent with that schedule.

Section 4. **REPORTS; RIGHT TO INSPECT** The Engineer shall report to the EOHWC as specified at **Exhibit A** and **Exhibit B**. The EOHWC staff and its duly authorized representatives shall have the right at all times to inspect and receive copies of the work of the Engineer without additional charge. At the request of EOHWC, plans, reports and other documentation shall be submitted in electronic format on a disc.

Section 5. **<u>DELIVERABLES</u>** The EOHWC staff will provide deliverables, if any, as specified in **Exhibit A**. In the event that such deliverables are not provided by the date set forth at **Exhibit B**, the Engineer may request an extension on the term of this Agreement.

Section 6. <u>FEES AND EXPENSES</u>

- a. As compensation for the Services performed pursuant to this Agreement, including all expenses, the EOHWC shall pay the Engineer its fees and expenses as set forth at **Exhibit A**, not to exceed the maximum amount set forth at **Exhibit A** ("Fees and Expenses").
- b. The expenses provided for herein shall be limited to the expenses actually and reasonably incurred in connection with the performance of the Scope of Services, of the types listed at **Exhibit A.** Unless otherwise approved in advance by the EOHWC, the EOHWC shall not pay for the following: (1) secretarial or word processing time (normal, temporary or overtime); (2) taxis or private cars, (3) meal charges, except for actual and reasonable expenses which are required for business purposes, such as expenses incurred while hosting working group meetings; or (4) time spent in preparing bills.

Any reimbursement for travel, meals and lodging shall be made at the actual cost paid, but such reimbursement shall not exceed the prevailing maximum rates established by the New York State Comptroller or, if less, the rates generally established by the EOHWC's policy for its own officials and staff. Any out-of-state travel must be approved in advance by the EOHWC. Disbursements and expenses shall be itemized by category. Unless otherwise agreed, expenses shall be billed at the same time as the services to which they relate.

All invoices shall include details showing name or class of worker, dates, task and work completed. Upon request, the Engineer shall provide the EOHWC with detailed documentation substantiating all reimbursable expenses and disbursements. This documentation shall be maintained by the Engineer(s) for a period of six years after the completion of the matter. During that period, the EOHWC shall have the right to audit the Engineer's charges.

Section 7. ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST If requested by EOHWC in accordance with Exhibit A and Exhibit B, the Engineer shall prepare an engineer's opinion of probable construction cost (the "EOPCC") for various project requirements. In requesting an EOPCC, EOHWC understands that the Engineer has no control over the actual cost or availability of labor, equipment or materials, or over market conditions or a contractor's method of pricing, and that the EOPCC is made based on the engineer's professional judgment, experience and knowledge of the work to be constructed.

Section 8. PAYMENT

a. Work within the Scope of Services shall be billed within thirty (30) days of services performed in accordance with the fees and expenses attached hereto at **Exhibit A** unless

otherwise agreed in writing by the EOHWC. Upon request, the Engineer shall provide statements with respect to accrued fees and disbursements for any matters subject to a periodic retainer or cap.

- b. For any Additional Services agreed by the EOHWC and the Engineer to be outside the Scope of Services, the EOHWC shall pay for services rendered in accordance with the schedule of hourly rates attached hereto at **Exhibit A**. Prior to undertaking any such Additional Services, the Engineer shall inform the EOHWC that such Services will be billed as Additional Services, shall provide an estimate of the total fees and expenses to be charged for such additional Services, and shall obtain the EOHWC's written authorization of a change order prior to commencing such work. For such other services, the Engineer shall submit invoices not more often than once a month.
- c. All statements shall provide (a) the name and position of each individual whose time is billed; (b) the billing rate for each individual; (c) the number of hours expended on behalf of the EOHWC on any day that the individual performed services for the EOHWC; (d) a brief description of the task(s) performed each day for which time is billed; and (e) the total number of hours billed for services rendered to the EOHWC by each individual during the billing period. Copies of detailed documentation substantiating all reimbursable expenses over \$25 shall be provided to the EOHWC. Reimbursable expenses shall be itemized by category. Unless otherwise agreed, any authorized expenses shall be billed at the same time as the services to which they relate. Invoices shall be submitted to the EOHWC at the address set forth above, to the attention of the Controller. The Engineer shall maintain separate billing records with respect to each matter undertaken by the Engineer. At the EOHWC's request, the Engineer shall submit invoices on forms provided by the EOHWC.
- d. A five percent retainage will be withheld by EOHWC from each invoice paid. The retainage will be released to the Engineer upon final acceptance of the work by EOHWC with payment of the final invoice. The acceptance by the Engineer of final payment under this Agreement shall operate as and be a release to the EOHWC from all claims and liability to the Engineer, its representatives and assigns for any and all things done, furnished for or relating to the services rendered by the Engineer under or in connection with this Agreement or for any part thereof.

Section 9. OWNERSHIP OF DOCUMENTS All documents, reports, opinions, plans, source code, system documentation, and other materials prepared for or relating to the Services provided hereunder shall be at all times the sole and exclusive property of the EOHWC, and shall be treated as confidential by the Engineer except as expressly authorized by the EOHWC. All work product created in connection with this Agreement, including working papers, data, maps, drafts, and other information in whatever form shall at all times be and remain the property of the EOHWC.

Section 10. INDEPENDENT STATUS; TAXES

a. The Engineer and its employees, agents, contractors, subcontractors and/or engineers, are independent contractors and not employees of the EOHWC. In accordance with their status as independent contractors, the Engineer covenants and agrees that neither the Engineer nor its employees or agents will hold themselves out as, nor claim to be, officers or employees of the EOHWC.

- b. Nothing in this agreement shall impose any liability or duty on the EOHWC for the acts, omissions, liabilities or obligations of the Engineer, or any person, firm, company, agency, association, expert, engineer, independent contractor, specialist, trainee, employee, servant, or agent of the Engineer for the payment of taxes of any nature including but not limited to sales tax, unemployment insurance, worker's compensation, disability benefits and social security, or, except as specifically stated in this Agreement, to any person, firm or corporation.
- c. To determine whether the Engineer must receive a form 1099 at year end and as a condition precedent to any payment by EOHWC hereunder, the Engineer shall submit to EOHWC a Form W-9 with the Engineer's correct taxpayer identification number.

Section 11. <u>INSURANCE</u>

- a. The Engineer shall at all times maintain in force during the term of this Agreement, and shall provide evidence satisfactory to EOHWC, of the policies of insurance set forth in **Exhibit D**.
- b. Any policy required to be maintained under this section shall be from a company rated at least A/X by Best's Rating Service and properly licensed in the State of New York, and shall provide that the policy shall not be canceled, materially changed, or not renewed without thirty (30) days' prior notice thereof to the EOHWC.
- c. Prior to the effective date of this Agreement, and as a condition precedent to this Agreement, the Engineer shall furnish the EOHWC with certificates of insurance listing the EOHWC as a certificate holder and, except for worker's compensation, additional insured, and upon demand, shall provide such policies to the EOHWC. At least thirty (30) days prior to expiration of any policy required by this Agreement, the Engineer shall furnish the EOHWC evidence satisfactory to the EOHWC of the continuation of such coverage in accordance with this Agreement.
- d. To the extent required pursuant to an applicable Installation Agreement, the Host Municipality shall be listed as certificate holder and, on policies other than worker's compensation, additional insured. The Engineer shall further comply with the requirements of **Exhibit E** required by the Funding Agreement with New York City.
- e. This contract shall be void and of no force and effect unless the Engineer shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

Section 12. <u>INDEMNIFICATION</u> The Engineer shall defend and indemnify the EOHWC, the Host Municipality (to the extent required pursuant to the applicable Installation Agreement defined herein), The City of New York (to the extent required pursuant to the Funding Agreement defined herein) and their respective directors, officers, employees and agents (the "Indemnified Parties"), and save the Indemnified Parties harmless from any liability, damage, claims, demands, costs or loss arising directly and indirectly out of the Engineer's or its officers', employees', agents', contractors', subcontractors' or engineers' respective negligent acts or omissions pursuant to this Agreement, including without limitation negligent performance of Services under this Agreement, and such indemnity may not be limited by reason or enumeration of any insurance coverage required. Negligent performance of services, within the meaning of this section, shall include, in addition to

negligence founded upon tort, negligence based upon Engineer's failure to meet professional standards and resulting in obvious or patent errors in the progression of its work.

Section 13. RIGHT TO AUDIT AND RECORDS

- a. The Engineer shall maintain accurate and complete records detailing the back-up documentation required by this Agreement, and shall maintain such documents for a period of six years from document generation and shall allow the EOHWC access thereto for inspection and photocopying at all reasonable times.
- b. All receipts and disbursements are subject to audit by the EOHWC, and the Engineer agrees to cooperate with any audit of this Agreement undertaken by the EOHWC or any entity with jurisdiction to audit the EOHWC.

Section 14. <u>SUBCONTRACTORS</u> The Engineer shall not employ subcontractors to perform the Scope of Services, without the express consent of the EOHWC. EOHWC reserves the right to approve all subcontractors in its discretion. The Engineer will notify the EOHWC of the name, address, scope of services, and schedule of a subcontractor it intends retaining, the portion of the work which it is to do and/or the material which it is to furnish, and any other information requested by EOHWC. EOHWC will use the requested information to verify that the subcontractor is reputable, reliable, and able to perform the work required in this Agreement. Subcontractors shall be subject to the terms and conditions of this Agreement. By use of a subcontractor, the Engineer shall not be released from any liability or obligation assigned from executing this Agreement. The Engineer shall be held wholly responsible for subcontractor's performance, and shall be responsible to remedy any deficiencies in the subcontractor's work or performance.

Section 15. <u>COMPLIANCE WITH LAW</u> The Engineer shall comply with all Federal, State and local laws, rules and regulations applicable to performing the Services herein.

Section 16. <u>DEFAULTS AND REMEDIES</u>

- a. If either party defaults in the observance or performance of any material term of this Agreement, and such default continues for more than thirty (30) days after written notice of such default is received by the defaulting party from the non-defaulting party, such non-defaulting party may take any action available at law or in equity to enforce the terms of this Agreement, and may suspend work or terminate this Agreement upon thirty (30) days written notice to the defaulting party. If the default is not capable of being cured within thirty (30) days and the defaulting party has commenced cure within thirty (30) days and is diligently pursuing efforts to cure, such thirty (30) day period shall be extended for a reasonable period of time.
- b. If either party is required to enforce the terms of this Agreement, the prevailing party will be entitled to recover its reasonable attorneys' fees and costs. No remedy herein conferred upon or reserved to the EOHWC is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under this Agreement or now or hereafter existing at law or in equity or by statute.
- c. No delay or omission in exercising any remedy shall impair any such remedy or construed to be a waiver thereof. It shall not be necessary to give any notice other than as expressly

required under this Agreement. In the event any provision contained in this Agreement should be breached and thereafter duly waived by the party or parties so empowered to act, such waiver shall be limited to the particular breach so waived and shall not be deemed to be a waiver of any other breach hereunder. No waiver, amendment, release or modification of this Agreement shall be established by conduct, custom or course of dealing.

Section 17. **EARLY TERMINATION** EOHWC shall have the right to postpone, suspend, abandon or terminate this Agreement with or without cause, and such action shall in no event be deemed a breach of contract. Upon termination by EOHWC without cause under this section, the Engineer shall be entitled to compensation for acceptable completed Services performed through the date of postponement, suspension, abandonment or termination, such Services to be verified by audit. In the event that this Agreement is terminated by the EOHWC for any reason, then within ten days after such termination, the Engineer shall make available to the EOHWC all records, documents and data pertaining to the Services rendered under this Agreement.

Section 18. STOP WORK If construction phase services ("CPS"), including construction observation, are requested of Engineer by EOHWC, the Engineer has no authority to stop work during construction, unless otherwise authorized in writing by EOHWC, provided that the Engineer may issue a stop work order to the contractor on behalf of EOHWC if 1) the Engineer observes a condition that compromises worker safety and/or 2) the Engineer observes a condition that presents immediate risk to immediately-adjacent structures or infrastructures. If the Engineer is authorized and issues a stop work order in accordance with this Agreement, the Engineer shall immediately notify the EOHWC Director of Engineering by telephone, and the Engineer shall fully document the condition causing the stop work order to be issued and provide documentation to EOHWC within 24 hours of the stop work order and the reason therefor. Such documentation shall include, but not be limited to field notes, sketches and photographs, and shall include names of individuals involved, company names, time, and date.

Section 19. NO MECHANIC'S LIEN The Engineer shall not permit or suffer any mechanic's lien filed by any subcontractor, employee, or material vendor of the Engineer to remain upon the premises of EOHWC or any EOHWC member municipality, provided such lien arises from the execution of work under this Agreement. Upon final payment due under this Agreement, the Engineer agrees, for himself and his subcontractors, that the Engineer will issue to EOHWC such certificate or certificates to the effect that no mechanic's lien or claims of the Engineer or its subcontractors have arisen or are outstanding with respect to this Agreement and that there is, to the best of the Engineer's knowledge, no basis for any future liens to be filed, but that if any such liens or claims are filed, the Engineer shall defend and hold EOHWC harmless against such liens.

Section 20. Procurement and Sourcing Soluions Portal ("PASSPort")

a. The Engineer hereby certifies that it and all subcontractors retained or to be retained by it under this Agreement have enrolled in the New York City PASSPort system and have completed the applicable vendor and principal questionnaires as required therein.

b. If during the term of this Agreement, the Engineer's completed PASSPort questionnaires are more than $2\frac{1}{2}$ years old, the Engineer shall update the questionnaires online prior to the expiration of three years from the initial questionnaire completion or last update. If there have been no changes in information requiring an update, the Engineer shall, if required, certify no change online prior to the expiration of three years from the initial questionnaire completion or last update..

c. The Engineer shall promptly submit to EOHWC upon request documentation of compliance with New York City's PASSPort system, including documentation of the submission of completed questionnaires and updates within the last $2\frac{1}{2}$ years.

Section 21. <u>NOTICES</u> Unless otherwise specified, all notices required or permitted for herein shall be in writing and sent by certified mail, postage prepaid, or by hand, by overnight courier, or by telecopy confirmed by any of the previous methods, addressed to the parties as indicated below or to such addresses as they may designate in writing from time to time:

To the Engineer: At the address specified on the execution page of this Agreement.

To the EOHWC: At the address specified at the beginning of this Agreement,

Attention: Director of Engineering

With a copy to:

Rodenhausen Chale LLP 20 Spring Brook Park Rhinebeck, NY 12572

Section 22. <u>FUNDING AGREEMENT</u> To the extent all or a portion of this Agreement is to be funded from moneys received by EOHWC directly or indirectly pursuant to a Funding Agreement with NYC Department of Environmental Protection ("Funding Agreement"), this agreement shall be subject to the supplemental provisions set forth at **Exhibit E.**

Section 23. MISCELLANEOUS

- a. <u>SEVERABILITY</u> In case any one or more of the provisions of this Agreement shall for any reason be held to be illegal or invalid, such illegality or invalidity shall not affect any other provision of this Agreement, but this Agreement shall be construed and enforced as if such illegal or invalid provision had not been contained therein.
- b. <u>AGREEMENT IS A LEGALLY BINDING CONTRACT</u> Each party hereto represents and warrants that this Agreement has been duly authorized and executed by it and constitutes its valid and binding agreement, and that any governmental approvals necessary for the performance of this Agreement have been obtained.
- c. <u>NON-ASSIGNMENT CLAUSE</u> This contract may not be assigned, and no part or portion may be subcontracted, by the Engineer nor may its right, title or interest therein be assigned, transferred, conveyed, sublet or otherwise disposed of without the previous consent, in writing, of the Municipality and any attempts to assign the contract without the Municipality's written consent are null and void.
- d. <u>NO THIRD PARTY BENEFICIARY</u> Nothing in this agreement shall act to confer third party beneficiary rights on any person or entity not a party to this Agreement, except as expressly provided in Section 12 as to Indemnity and 13 as to Insurance.
- e. <u>NO ARBITRATION</u> Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized) but must, instead, be heard in a court of competent jurisdiction of the State of New York.
- f. <u>SERVICE OF PROCESS</u> In addition to the methods of service allowed by the State Civil Practice Law & Rules, Engineer hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon

Engineer's actual receipt of process or upon the Municipality's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Engineer must promptly notify the Municipality, in writing, of each and every change of address to which service of process can be made. Service by the Municipality to the last known address shall be sufficient.

- g. <u>NO RECOURSE</u> All covenants, stipulations, promises, agreements and obligations of the EOHWC contained in this Agreement shall be deemed to be the covenants, stipulations, promises, agreements and obligations of the EOHWC, and not of any member, director, officer, employee or agent of the EOHWC in his individual capacity, and no recourse shall be had for the payment of any claim based under this Agreement against any member, director, officer, employee or agent of the EOHWC.
- h. <u>COUNTERPARTS</u> This Agreement may be executed in one or more counterparts, each of which shall be deemed an original.
- i. <u>NONDISCRIMINATION</u> During the term of this Agreement, the Engineer agrees as follows:
 - i) In accordance with Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Engineer will not discriminate against any employee or applicant for employment because of race, creed, color sex, national origin, age, disability or marital status.
 - ii) In accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public buildings or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this Agreement shall be performed within the State of New York, the Engineer agrees that neither it nor its subcontractors shall, by reason of race, creed, color, national origin, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this Agreement. The Engineer is subject to possible termination of this Agreement and forfeiture of all moneys due hereunder for a violation of this clause.
- j. <u>PUBLIC WORKS CONTRACTS</u> A portion of the funds for the work is or may be provided pursuant to the Funding Agreement or other public entity sources. Even if a project is located on private property, for purposes of this section such property may be treated as if it were public property.
 - i) If all or any portion of the Scope of Services constitutes a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Engineer's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the New York State Labor Department. Furthermore, Engineer and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the New York State Labor Department in accordance with the Labor Law. Additionally, if this is a public work contract covered by Article 8 of the Labor Law, the Engineer understands and agrees that the filing of payrolls in a manner consistent with subdivision 3-a of this Section 220 of the Labor Law shall be a condition precedent to payment by the EOHWC of any sums due and owing to any person for work done upon the project.
 - ii) OSHA 10 HOUR CONSTRUCTION SAFETY AND HEALTH COURSE. If all or a portion of the Scope of Services constitutes a public work contract covered by Article

8 of the New York State Labor Law, it shall be required that on all public work projects of at least \$250,000.00, all laborers, workers and mechanics working on the site be certified as having successfully completed A MINIMUM OF 10 HOURS OF CONSTRUCTION AND HEALTH SAFETY TRAINING, as approved by the United States Department of Labor's Occupational Safety and Health Administration (OSHA). The Engineer, subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the contract, shall provide proof of certification for successfully completing the course for each employee prior to performing any work on the project.

- k. NON-COLLUSIVE BIDDING REQUIREMENT In accordance with General Municipal Law § 103-d, if this contract was awarded based upon the submission of bids or proposals, Engineer warrants, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Engineer further warrants that, at the time Engineer submitted its bid, an authorized and responsible person executed and delivered to the Municipality a non-collusive bidding certification on Engineer's behalf.
- 1. <u>INTERNATIONAL BOYCOTT PROHIBITION</u> In accordance with Section 220-f of the Labor Law, if this contract exceeds \$5,000, the Engineer agrees, as a material condition of this Agreement, that neither the Engineer nor any substantially owned or affiliated person, firm, partnership, or corporation has participated, is participating, or shall participate in an international boycott in violation of the Federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Engineer, or any of the aforesaid affiliates of Engineer, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract amendment or modification thereto shall be rendered forfeit and void. The Engineer shall so notify the EOHWC within five (5) business days of such conviction, determination or disposition of appeal.
- m. NO INVESTMENT ACTIVITIES IN IRAN A person that is identified on a list created pursuant to paragraph (b) of subdivision three of section 165-a of the State Finance Law as a person engaging in investment activities in Iran as described in such section, shall not be deemed a responsible party for purposes of any RFP. By signing this Agreement, the Engineer and each person signing on behalf of the Engineer certifies, under penalty of perjury, that to the best of its knowledge and belief such Engineer is not on the list created pursuant to paragraph (b) of subdivision 3 of section 165-a of the State Finance Law.
- n. <u>SET-OFF RIGHTS</u> The EOHWC shall have rights of set-off. These rights shall include, but not be limited to, the EOHWC's option to withhold for the purposes of set-off any moneys due to the Engineer under this contract up to any amounts due and owing by the Engineer to the EOHWC with regard to this Agreement, or any other contract with the Municipality, including any contract for a term commencing prior to the term of this Agreement. This also includes amounts due and owing the EOHWC for any other reason including, without limitation, monetary penalties, adjustments, fees, or claims for damages by the EOHWC and third parties in connection therewith.
- o. <u>SERVICE OF PROCESS</u>. In addition to the methods of service allowed by the State Civil Practice Law & Rules, Engineer hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Engineer's actual receipt of process or upon the Municipality's receipt of the return thereof by the United States Postal Service as refused or undeliverable. Engineer must promptly notify the Municipality, in writing, of each and every change of address to which service of process can be made. Service by the Municipality to the last known address shall be sufficient.

p. ENTIRE AGREEMENT; GOVERNING LAW AND JURISDICTION; AMENDMENT This Agreement contains the entire understanding between the parties with respect to the subject matter herein and supersedes any prior agreements or understandings, either oral or written. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York. The parties agree that any dispute or controversy arising out of this Agreement shall be venued in the jurisdiction of the EOHWC's headquarters. This Agreement may be amended only upon mutual written agreement signed by both parties.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the EOHWC has caused this Agreement to be signed by its duly authorized officer, and the Engineer has caused this Agreement to be signed by its duly authorized officer, as of the day and year first above written.

EAST OF HUDSON WATERSHED CORPORATION, as **EOHWC**

	D. A. v. D. v. v. v.	
-	Peter Parsons	
Its:	President	
		, as ENGINEER
	Name:	
Title:	:	
ENG	INEER Address:	
Emai	1:	
Phon	e:	

This Agreement consists of the Agreement together with the following Exhibits:

EXHIBIT A FEES AND EXPENSES

EXHIBIT B SCOPE OF SERVICES

EXHIBIT C TERM AND COMPLETION DEADLINES

EXHIBIT D INSURANCE REQUIREMENTS

EXHIBIT E SUPPLEMENTAL PROVISIONS REQUIRED BY FUNDING AGREEMENT

EXHIBIT A

FEES AND EXPENSES

PURPOSE:	Engineering Services; CONTRACT NO.:	

Scope of Services

<u>I.</u> (See attached "Form B" as provided within the RFP response)

All such lump sum fees shall <u>include</u> all expenses in connection with the Services, including without limitation site transportation, analysis, results, data validation reports, expenses (telephone, meals, travel, computer time, fax costs, postage, Federal Express or other delivery service, overhead, profit, reproducing), and administrative costs.

<u>II.</u> <u>Additional Services</u>: All Additional Services require the advance written approval of the EOHWC Executive Committee by change order. Services performed without such authorization are at the Engineer's risk and under no circumstances shall the EOHWC be obligated for payment.

Agreement should certain personnel specifically named in the Engineer's proposal cease to be
employed by the Engineer and assigned to the Projects, unless the EOHWC has determined in its
discretion that alternate Project personnel are acceptable.
Project Manager:
Key Professional Staff:
Subcontractor(s), If Any, to Perform Services:

Project Manager and Key Professional Staff: EOHWC reserves the right to terminate this

*See attached

EXHIBIT B

SCOPE OF SERVICES

The Consultant will provide the following services for the Project or Projects indicated below based on the criteria described in the EOHWC Stormwater Retrofit Project Design Manual, most recent edition:

	RP Design	
	RP Construction Administration	
	dditional Services to the extent authorized as provided herein.	
Projec):	

The list of Projects included within the Scope of Services may be amended from time to time by addenda approved by the Executive Committee and executed by the President or Vice President on behalf of the EOHWC and by the Consultant by their duly authorized officer.

For purposes of this Agreement the owner of a project may be a Town, Village or County ("Host Municipality"), a school district ("School District"), or a private entity ("Private Owner"), as preliminarily identified in the Year 6 through 10 Stormwater Retrofit Report. EOHWC has or expects to enter into an installation agreement and/or easement and/or access agreement providing for access to and conditions to construction of the SRP. The Scope of Services includes the preparation of exhibits to such agreements.

EXHIBIT C

TERM AND COMPLETION DEADLINES PURPOSE: Engineering Services; CONTRACT NO.: _____

Commencement Date: TBD

Completion Date: TBD

Completion Deadlines for Deliverables: TBD

The Services shall be performed in two phases, of which the first phase shall be the initial project evaluation as defined in the EOHWC "Stormwater Retrofit Project Design Manual," available for review at www.EOHWC.org. The initial project evaluation shall include the estimated Phosphorus reduction from the stormwater retrofit project, the cost of the project, including both engineering and construction services, and a calculation of the cost per kilogram of Phosphorus reduction. Upon completion of the initial project evaluation, the Engineer shall provide same to EOHWC and stop work.

The Engineer is not authorized to proceed with work beyond the initial project evaluation without the express written approval of the EOHWC President or, where permitted by the EOHWC Fiscal Policy, the Director of Engineering.

Engineer shall inspect the stormwater retrofit project within one (1) year of the completion of construction to determine if EOHWC may release the contractor's maintenance bond. The term of the contract may be extended at EOHWC's option solely to permit the completion of this inspection, as part of the lump sum fee unless otherwise specifically provided specified at Exhibit A.

EXHIBIT D

INSURANCE REQUIREMENTS

Worker's Compensation Statutory per New York State law without regard to jurisdiction

Employer's Liability Statutory

Commercial General Liability CG 00 01 (ed. 10/02) or equivalent

Combined Single Limit - Bodily Injury and Property Damage

\$2,000,000 per occurrence

\$2,000,000 products/completed operations aggregate

\$4,000,000 general aggregate

\$25,000 maximum deductible

Automobile Liability: CA 00 01 (ed. 6/92) or equivalent.

Combined Single Limit - Bodily Injury and Property Damage

\$500,000 each occurrence

The following coverage must be provided:

Comprehensive Form, Owned, Hired, Non-Owned

Professional Errors and Omissions policy with a U.S. domiciled company, with extended reporting period or automatic coverage of not less than two years, providing limits of not less than:

\$1 Million per claim

\$1 Million aggregate

Deductible or self-insured retention not to exceed \$25,000 per claim.

Additional Insureds: East of Hudson Watershed Corporation; Town of (Name); and the City of New York and their respective directors, officers, employees and agents.

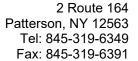
EXHIBIT E

SUPPLEMENTAL PROVISIONS REQUIRED BY FUNDING AGREEMENT

To the extent all or a portion of this Agreement or any subcontract thereof is to be funded from moneys received by EOHWC directly or indirectly pursuant to a Funding Agreement with NYC Department of Environmental Protection, this Agreement shall be subject to the following supplemental provisions.

- 1. Engineer shall perform all work in accordance with the terms of the Funding Agreement;
- 2. Engineer s h all perform all acts to be performed under this Agreement in compliance with all applicable federal, State and local laws, rules, regulations and orders, including that all projects, facilities or other measures funded with Stormwater Retrofit Funds requiring review and approval by NYCDEP under the Watershed Regulations or required to be designed, constructed or implemented in accordance with standards set forth in the Watershed Regulations, be submitted for such review and approval and be designed, constructed, and implemented in accordance with the Watershed Regulations;
- 3. [Intentionally Omitted]
- 4. Engineers shall have liability insurance in sufficient amount and scope to protect the interests of New York City and the EOHWC, as provided in Exhibit D of the Agreement and the Funding Agreement located on the EOHWC.org website at: http://eohwc.org/wp-content/uploads/2013/05/NYCDEP-CRO-522-Funding-Agreement.
- 5. Engineer agrees to indemnify The City of New York and assume liability for injuries as provided in Section 12.
- 6. Engineer shall comply with a budget, a scope of work, a progress schedule for completion of the work within specified milestones and payment schedule which is dependent upon completion of the work within the specified period of performance;
- 7. Engineer represents and warrants that no payment, gift or thing of monetary value was made, given or promised to a the EOHWC officer, director, or employee to obtain the Contract or any other agreement with The City of New York or the EOHWC;
- 8. Nothing contained in this Agreement shall impair the rights of The City of New York under the Funding Agreement or the Watershed MOA;

- 9. EOHWC or The City of New York shall have the right from time to time to conduct random, unannounced inspections of the work performed under this Agreement to determine whether such work is being performed in accordance with the terms of the Agreement, except that, where work is being performed on private property, the EOHWC and The City of New York shall provide reasonable notice of such inspections or conduct them during normal business hours;
- 10. Nothing contained in this Agreement shall create any contractual relationship between the Engineer and The City of New York; and
- 11. Engineer shall not engage in any unlawful discrimination in hiring employees under this Agreement based upon race, creed, color, national origin, sex, age, disability, marital status or sexual orientation.
- 12. Engineers performing public work within the meaning of Section 220 of the New York State Labor Law shall pay not less than the prevailing wage to laborers, workmen and mechanics performing such public work and comply with all other applicable provisions of Section 220 of the Labor Law. Such Engineers shall maintain records evidencing their compliance with this Subsection.





APPENDIX III

Proposal Forms

FORM A

Business Information

This form must be submitted along with all other forms included in this RFP package. All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized.

Fax number:

1.

2.

Entity Information

Legal Name of entity:

Federal Employer ID #:

Contact person regarding RFP: a. Telephone number:

Permanent main office address:

If proposer is a closely held corporation or partnership, list stockholder's or partnership information below: Name Legal Residence Office H	Name of Officer and Principals	Titles	Legal Resid State and C
information below:			
information below:			
information below:			
Name Legal Residence Office H			
		d corporation or partnership, list stoc	kholder's or partne
	information below:		Ckholder's or partner Office He
	information below:		
	information below:		

5.	Entity	organization

- a. Date organized (month, day, year):
- b. If a corporation, LLC, Partnership, or other organization, state of origin:
- c. Number of years entity in business:
- 6. List names of any affiliated corporation of proposer, business affiliation with respondent and specify relationship:

Name of affiliated corporation	Business Affiliation	Specify Relationship

7. Identify all subcontractors proposed to be used to fulfill any part of the obligations anticipated by this proposal:

Name of subcontractor	Address	Type of work to be performed

8. Current licenses, permits and certifications are listed on **Schedule A** and **copies of same are attached.**

9.	any inform	ation requests to the contract of the contract	ested by Eadson Water	zes and requests any person, firm or corporation to furnish ast of Hudson Watershed Corporation and/or his designee on shed Corporation in verification of the recitals comprising.
				(Name of Entity)
				By:(Principal)
				(Title)
State of N County of	•)) ss.		being duly sworn, deposes and says that he/she is
the forego	ing question	s and all s	oftatements t	and that the answers to herein contained are true and correct.
	d and swor			
day o	f		, 2019	
	Notary	Public		_

SCHEDULE A

Licenses, Permits & Certifications

[List Attached]

FORM B

LUMP SUM FEE PROPOSAL

SOLICITATION NUMBER:	
PROJECT ID:	
PROJECT TITLE:	

ITEM#	TITLE	TOTAL PRICE (IN WORDS)	TOTAL PRICE (\$)
1	30% Engineering Design		
2	60% Engineering Design		
3	100% Engineering Design and Bid Documents		
4	Construction Administration and Record Documents		
TOTAL PRICE			

*Must be completed for each individual project within any given Solicitation

All such lump sum fees shall <u>include</u> all expenses in connection with the Services, including without limitation site transportation, analysis, results, data validation reports, expenses (telephone, meals, travel, computer time, fax costs, postage, Federal Express or other delivery service, overhead, profit, reproducing), and administrative costs.

FORM C

HOURLY FEE SCHEDULES, PROJECT MANAGER, KEY STAFF AND SUBCONTRACTORS

<u>Additional Services</u>: Any approved Additional Services are to be billed at the Hourly Rates specified below. All Additional Services require the advance written approval of the EOHWC Executive Committee by change order. Services performed without such authorization are at the Engineer's risk and under no circumstances shall the EOHWC be obligated for payment.

Hourly Fees and Expenses for Other Services:

Services identified in the Scope of Services as hourly matters are to be billed at the Hourly Rates and Expenses specified below. Prior to performing such services the Engineer shall provide an estimate of the hourly fees and expenses for the specific task for approval by the EOHWC. Services performed without such authorization are at the Engineer's risk and under no circumstances shall the EOHWC be obligated for payment.

Name and Hourly Rate of all Employees to Perform Services:

(See attached Exhibit A-1 "Estimated Direct Labor")

<u>Applicable Overhead and Profit Percentages</u>: (See attached Exhibit A-2 "Fee Summary") <u>Expense Items and Rate</u>: (See attached Exhibit A-3 "Estimated Expenses")

<u>Project Manager and Key Professional Staff</u>: EOHWC reserves the right to terminate this Agreement should certain personnel specifically named in the Engineer's proposal cease to be employed by the Engineer and assigned to the Projects, unless the EOHWC has determined in its discretion that alternate Project personnel are acceptable.

Project Manager:	
Key Professional Staff:	
Subcontractor(s), If Any, to Perform Services:	

(If applicable, attach equivalent of A-1, A-2 and A-3 for Subcontractor).

FORM D

CIVIL ENGINEERING SERVICES

EAST OF HUDSON WATERSHED CORPORATION

AFFIDAVIT REGARDING REQUIRED DISCLOSURE OF RELATIONSHIPS TO THE EOHWC

Address:			
Telephone:		Fax:	
The Reporting Entity is: (Please check one):		
Individual	Corporation	Partnership	
A.) Related Employees:			
also an officer or en	ployees that you will use mployee of the EOHWC, or employee? Yes	, or the spouse, or the	e child or dependent of a
If yes, please provide deta	uils:		
B.) Related Owners:			
<u> </u>		•	an officer or employee of the

If yes,	plea	se provide details:
Interes emplo EOHV	st me yee, WC o	the following question, the following definition of the word "interest" shall be used. eans a direct or indirect pecuniary or material benefit accruing to a EOHWC officer or his or her spouse, child or dependent, whether as the result of a contract with the or otherwise. For the purpose of responding to these questions, an EOHWC officer or shall be deemed to have an "interest" in the contract of:
	a.	His/her spouse, children and dependents, except a contract of employment with the EOHWC;
	b.	A firm, partnership or association of which such officer or employee is a member or employee;
	c.	A corporation of which such officer or employee is an officer, director or employee; and
	d.	A corporation of which more than five (5) percent of the outstanding capital stock is owned by any of the aforesaid parties.
2)		any officers or employees of the EOHWC have an interest in the Contractor or in any econtractor that will be used for this contract? Yes No
If yes,	plea	se provide details:
I am thabove		(title or Office) of the reporting entity listed

Signature		Print Name and title	
STATE OF)		
COUNTY OF)		
S.S.			
Sworn to me before the	is	day of	2017.

I make this affirmation based upon my personal review of the books and records of the reporting entity. All of the foregoing information is true to the best of my knowledge, after inquiry. I make

these statements under penalty of perjury.

FORM E

CIVIL ENGINEERING SERVICES

EAST OF HUDSON WATERSHED CORPORATION

GENERAL MUNICIPAL LAW: Section 1039d) "NON-COLLUSIVE BIDDING CERTIFICATE"

- 1. By submission of his bid, each bidder and each person signing on behalf of any bidder, certifies, and in the case of a joint bid, each party thereto, certifies as to its own organization under penalty of perjury that to the best of their knowledge and belief:
 - a. The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder, with any competitor;
 - b. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder, and will not knowingly be disclosed by the bidder prior to opening, directly, to any other bidder or to any competitor; and
 - c. No attempt has been made or will be made by the bidder to include any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

	Name of Bidder
	By
	Address
Accepted	

FORM F

Statement of Insurance

PROPOSER		HAS
	[Name of]	
THE FOLLOWING POLICIES OF INS	SURANCE IN FULL FO	ORCE AND EFFECT:
[Attach certificates showing endorsements	& dates of coverage.	Copies of policies to be made
available upon request]		

FORM G

Confidentiality Notice

The data on page(s)
of this proposal, identified by an asterisk (*) or marked along the margin with a vertical line, contain
technical or financial information which are considered to be proprietary information or trade
secrets, the disclosure of which would cause substantial injury to the Proposer's competitive
positions. The Proposer requests that such data be used only for the evaluation of the proposal, bu
understands that such data may otherwise be disclosed to the extent that East of Hudson Watershed
Corporation determines is necessary or proper for compliance with any law, order or decree of any
court or agency of competent jurisdiction, or necessary or proper in East of Hudson Watershed
Corporation's view to show compliance with any law, order or decree of any court or agency or
competent jurisdiction.
Note:
Proposer is urged to only designate as confidential those materials which, in its opinion, clearly represent proprietary information or trade secrets. Cost proposal information and all proposed forms shall not be considered confidential.
Proposer
Signature of Authorized Official
Date

FORM H

CERTIFICATION REGARDING VENDEX AND VALUE OF ALL CONTRACTS WITH NEW YORK CITY

Name of Prop	oser/Bidder ("Contractor"):
Address of Pro	oposer/Bidder:
Project Name:	("Contract")
Date of this Co	ertification:
completed the and Sourcing S as New York	to certify to the East of Hudson Watershed Corporation that Contractor has appropriate VENDEX questionnaire on-line via New York City's Procurement Solutions Portal ("PASSPort"), or such revised standard VENDEX questionnaire City provides from time to time, and submitted the completed VENDEX to New York City Department of Environmental Protection electronically.
Please	check applicable box:
	This is to certify to the East of Hudson Watershed Corporation that the proposed Contract, when aggregated with the value of all other contracts funded with funds provided by the City of New York awarded to the same Contractor during the immediately preceding twelve-month period, is valued at less than \$250,000.
	This is to certify to the East of Hudson Watershed Corporation that the proposed Contract, when aggregated with the value of all other contracts funded with funds provided by the City of New York awarded to the same Contractor during the immediately preceding twelve-month period, is valued at \$250,000 or more.
	egoing information is true and complete to the best of my knowledge, after inquiry. statements on behalf of the Contractor under penalty of perjury.
Signature	Print Name and Title
Sworn to befo day of	re me this, 20
Notary Public	