Office Use Only	
Project#	
Address:	
MBL:	

Minimum Requirements for Submission of Application to Inland Wetlands and Watercourses Agency

This form must be submitted with your application

Please check all that are being submitted:

- x Completed Application Form (4 Pages)
- ___ Fee Paid
- x Site Plan (Showing project location, extent of wetlands, dimensions, etc) – PDF & 4 Copies of 11 x 17s
- x PDF & 4 CopiesProject Narrative – PDF & 4 Copies of 11 x 17s
- x Soils Report (As Required)
- ___ Stormwater Report (As Required)
- x Completed Application Checklist (Page 3 of Application)
- ___ Schedule a Site Visit with Planning & Zoning Official at time of Application

Date of Site Visit: _____

I certify that this application is complete:

Signature of Applicant: _____ **Date:** _____

The Agency reserves the right to add additional requirements in accordance with the Regulations.

Only Complete Application Packages Will Be Accepted

Office Use Only
Fee Paid_____ Date Approved_____ Permit Number _____
Public Hearing: YES NO Agent Approval: YES NO

TOWN OF EAST HAMPTON
INLAND WETLANDS & WATERCOURSES AGENCY

Date: 02/26/24

1. Name of Applicant* Town of East Hampton Email: dcox@easthamptonct.gov (Contact David Cox, Town Manager)
Phone Numbers: Home_____, Business 860 267-4468, Cell _____
Home Address: Street_____ Town_____ State/Zip _____
Business Address: Street 1 Community Drive Town East Hampton State/Zip 06424
* All applications MUST list contact phone numbers. If the applicant is a Limited Liability Corporation or a Corporation, provide the managing member's or responsible corporate officer's name, address, and telephone number.

2. Name of Property Owner (if different from Applicant):_____ Phone _____
Address: Street_____ Town_____ State/Zip _____
As the legal owner of the property listed on this application I hereby consent to the proposed activities. I hereby authorize the members and agents of the Agency to inspect the subject land, at reasonable times, during the pendency of the application and for the life of the permit.
Printed Name:_____, Signature:_____, Date:_____

3. Provide the applicant's interest in the land. Applicant and owner are the same

4. Site Location and Description: Assessor's Map 22, Block 52/54, Lot Town owned right of way
Address: Street Wopowog Rd over Safstrom Brook (near #205/206) Town East Hampton State/Zip CT, 06424
Note: It is the applicant's responsibility to provide the correct site address, map, block, and lot number for the legal notice.
Provide a description of the land in sufficient detail to allow identification of the inland wetlands and watercourses, the area(s) (in acres or square feet) of wetlands or watercourses to be disturbed, soil type(s), and wetland vegetation.

Area of Wetland to be disturbed: 851 sq. ft. acres or sq. ft.
Area of Watercourse to be disturbed 365 sq. ft. acres or sq. ft.
Area of Upland Review Area to be disturbed: 6,700 sq. ft. acres or sq. ft.(Area within 100' of wetland)
TOTAL AREA OF DISTURBANCE 7,916 sq. ft. **acres or sq. ft.**

Will fill be needed on site? Yes No If yes, how much fill is needed? 60* cubic yards
*Permanent fill in the wetlands: wingwalls, riprap, natural channel material
The property contains (circle one or more)
WETLANDS, BROOK, RIVER, INTERMITTANT STREAM, VERNAL POOL, SWAMP, OTHER _____
Description of soil types on site: _____
Description of wetland vegetation: _
Name of Soil Scientist and date of survey: Mr. Richard Snarski, 01/19/24

5. Attach a written narrative of the purpose and description of the proposed activity and proposed erosion and sedimentation controls, best management practices, and mitigation measures which may be considered as a condition of issuing a permit for the proposed regulated activity including but not limited to; measures to:
(1) prevent or minimize pollution or other environmental damage, (2) maintain or enhance existing environmental quality, or (3) in the following order of priority: restore, enhance or create productive wetland or watercourse resources. Depending on the complexity of the project, include the following: sequence of operations, drainage computations with pre and post construction runoff quantities and runoff rates, plans clearly showing the drainage areas corresponding to the drainage computations, existing wetland inventory and functional assessment, soils report, construction plans signed by a certified soils scientist, licensed surveyor, and licensed professional engineer. Include a construction schedule, impacts to vegetation, and pictures that clearly show the existing conditions of all areas to be disturbed and/or cleared of vegetation.
6. Provide information of all alternatives considered. List all alternatives which would cause less or no environmental impact to wetlands or watercourses and state why the alternative as set forth in the application was chosen. All such alternatives shall be diagramed on a site plan or drawing.

Attach plans showing all alternatives considered.

7. Attach a site plan showing the proposed activity and existing and proposed conditions in relation to wetlands and watercourses and identifying any further activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses. Include a colored grading plan showing areas to be filled (green) and areas to be excavated (brown) that clearly shows existing and proposed contours and proposed limits of disturbance.

8. Attach the names and mailing addresses of adjacent landowners. Attach additional sheets if necessary.
Name Heil, Norbert J Jr Address 196 Wopowog Road
Name Burdick, Daniel P + Patti A Address 206 Wopowog Road
Name McGuire, Michael Address 205 Wopowog Road

9. Attach a completed DEEP reporting form.
The Agency shall revise or correct the information provided by the applicant and submit the form to the Commissioner of Environmental Protection in accordance with section 22a-39-14 of the Regulations of Connecticut State Agencies.

10. Attach the appropriate filing fee based on the fee schedule in Section 19 of the regulations.
Fee: _ (Make check payable to "The Town of East Hampton")

11. Name of Erosion Control Agent (Person Responsible for Compliance): ____ _____ Phone Numbers: Home_____, Business_____, Cell _____ Address: Street_____Town_____ ___State/Zip _____

12. Are you aware of any wetland violations (past or present) on this property? YES NO
If yes, explain _____

13. Are you aware of any vernal pools located on or adjacent (within 500')to the property? YES NO

14. For projects that do not fall under the ACOE Category 1 general permit – Have you contacted the Army Corps of Engineers? YES NO An SV (Self-Verification) Form has been submitted for the project.

15. . Is this project within a public water supply aquifer protection area or a public water supply watershed area? YES NO
If so, have you notified the Commissioner of the Connecticut Department of Public Health and the East Hampton WPCA? YES NO
(Proof of notification must be submitted with your application.)

16. PUBLIC HEARINGS ONLY. The applicant must provide proof of mailing notices to the abutters prior to the hearing date.

17. ***As the applicant I am familiar with all the information provided in the application and I am aware of the penalties for obtaining a permit through deception or through inaccurate or misleading information.***
Printed name:_____, Signature:_____, Date: _____
Please Note: You or a representative must attend the Inland Wetlands meeting to present you application.

CHECKLIST FOR A COMPLETE APPLICATION

- ■ A narrative of the purpose and description and methodology of all proposed activities;
- ❑ Alternatives considered by the applicant, reasons for leaving less than a 10' buffer between clearing and the wetlands. Such alternatives to be diagrammed on a site plan or drawing and submitted to the commission as part of the application;
- ■ Names and mailing addresses of abutting property owners;
- ❑ Three copies of approximately l"=40' scale plans
- ■ Locations of existing and proposed land uses
- ■ Locations of existing and proposed buildings
- ❑ Locations of existing and proposed subsurface sewage disposal systems, and test hole descriptions
- ■ Existing and proposed topographical and man-made features including roads and driveways, on and adjacent to the site. Include a colored grading plan showing areas to be filled (green) and areas to be excavated (brown) that clearly shows existing and proposed contours and proposed limits of disturbance.
- ■ Location and diagrams of proposed erosion control structures
- ■ Pictures of existing conditions clearly showing all areas to be disturbed, and/or cleared of vegetation.
- ■ Assessor map, block and lot number
- ■ Key or inset map
- ■ North arrow

N/A ❑ Flood zone classification and delineation

- ❑ Use of wetland and watercourse markers where appropriate.
- ❑ Soil types classification and boundary delineation (flagged and numbered boundary), Soil Scientist's original signature and certification on plans
- ❑ Soil Scientist's (or other wetland scientist) report on the function of the wetlands
- ■ Watercourse channel location and flow direction, where appropriate
- ■ 100 ft. regulated area depicted on plans
- ❑ Conservation easements where appropriate
- ■ A detailed erosion and sediment control plan which meets requirements set forth in the most recent revision of the *Connecticut Guidelines for Soil Erosion and Sediment Control*, published by the Connecticut Council on Soil and Water Conservation, including:
- ❑ Location of areas to be stripped of vegetation and other unprotected areas
- ■ Schedule of operations including starting and completion dates for major development phases
- ■ Seeding, sodding, or re-vegetation plans for all unprotected or un-vegetated areas
- ■ Location and design of structural sediment control measures
- ■ Timing of planned sediment control measures
- ❑ Use of wetland and watercourse markers
- ❑ Proper certification on the application documents and plans

In the case of filling in wetlands, watercourses, or regulated upland areas, the following items are necessary:

- ❑ Area to be filled
- ❑ Volume of requested fill
- ■ Finished slopes of filled areas
- ■ Containment and stabilization measures
- ■ Proposed finished contours

N/A ❑ Evaluation of the effect of filling the wetlands with respect to storage volume and its impact downstream showing before and after development flows, and the evaluation of storm water detention including the existing need for flood control downstream

Other required items:

- ❑ Proof of adjoining Town notification, where required;
- ❑ All application fees required by Section 19 of these regulations;
- ❑ A written narrative detailing how the effects of the applicant's proposed activities upon wetlands and watercourses shall be mitigated.
- ❑ A written description of any and all future plans which may be linked to the activities proposed in the current application.
- ❑ Address the potential to enhance the current buffer area.
- ❑ Review drainage information with Town Engineering
- ❑ Mailing requirements for abutters (public hearing only)

Wopowog Road Bridge over Safstrom Brook
Project Description

APPLICANT:

Town of East Hampton
Mr. David E. Cox, Town Manager
1 Community Drive
East Hampton, CT 06424

PROJECT CONTACT:

Barton and Loguidice, LLC
Kim Fletcher, P.E., Managing Engineer
41 Sequin Drive
Glastonbury, CT 06033
Phone: (860) 933-5166

PROJECT LOCATION:

Wopowog Road over Safstrom Brook is located approximately 1.13 miles north of Route 196 in East Hampton, CT. See attached Location Map.

PROJECT DESCRIPTION:

Existing Conditions:

The Wopowog Road Bridge over Safstrom Brook was constructed in 1975. It consists of double corrugated metal pipes (CMP), each with a diameter of approximately 6 feet and an overall length of 40 feet, with a roadway width of approximately 23.5 feet. The bridge is skewed at 30 degrees, and it features concrete headwalls and wingwalls. The roadway surface is a bituminous overlay, and wood posts serve as the approach rail.

During a storm event(s) on January 8th and 9th, 2024, the CMPs failed, resulting in the roadway being washed away. The CMP broke in at least one location, rendering repair impossible. Currently, the roadway is closed to traffic.

Proposed Conditions:

The proposed plan involves replacing the two CMPs with a 12'x6' box culvert. The new structure will include concrete cutoff walls and return walls, accompanied by concrete wingwalls and headwalls. The roadway will be 22 feet in width, and a Metal Beam Rail R-B 350 (Type II) will be installed as the approach rail. There will be a riparian shelf to assist with wildlife passage.

Funding

This project is being funded through the Town of East Hampton.

ENVIRONMENTAL RESOURCES & IMPACTS:

Floodplain

The bridge is located within designated FEMA Zone X which indicates an "Area of Minimal Flood Hazard." The proposed bridge meets minimum freeboard design criteria with a Hw/D ratio of 1.33 at the 100-yr design flood frequency.

Natural Resources

The project site is located within an NDDB area per the DEEP ezFile portal dated 01/31/24. We received a response on 02/23/24 informing us that three animals that are a State Special Concern may be affected within our project limits: Wood Turtle, Eastern Pearlshell, and Tidewater Mucket. The precautions and considerations listed within the report will be added to the project specifications.

Inland Wetland & Watercourses

Approximately 741 square feet of temporary and 475 square feet of permanent delineated wetlands & watercourses are proposed to be disturbed during the construction project for the construction of the wingwalls, headwalls, and placement of the box culvert. The temporary disturbances include the installation of cofferdams, temporary brook bypass pipe, and sedimentation control devices. The temporary disturbance area will be restored after installations are complete.

ENGINEERING INFORMATION:

The proposed design includes the replacement of four wingwalls, two headwalls, and the addition of a concrete culvert.

- Project will be completed in one construction season.
- The stream modification is limited only to the minimum necessary to complete replacement of the serviceable structure.
- Appropriate measures to maintain downstream flows will be taken.
- All temporary fill will be removed and existing conditions will be restored.
- Project activities will not occur within a designated FEMA floodplain or floodway.

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

GIS CODE #: ___ ___ ___ ___ ___ ___ ___ ___ ___
For DEEP Use Only

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions.
If completing by hand - please print and use the pdf version.
Incomplete or incomprehensible forms will be mailed back to the municipal inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: **Click Here for Year** month: **Click Here for Month**
2. CHOOSE ACTION TAKEN (see instructions for code): **Click Here to Choose a Code**
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

   (type name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (type name): **East Hampton, CT**
   does this project cross municipal boundaries (check one)? yes ☐ no ☒
   if yes, list the other town(s) in which the activity is occurring (type name(s)): _____, _____
6. LOCATION (click on hyperlinks for information): USGS quad map name: **69** or quad number: _____
   subregional drainage basin number: _____
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (type name): **Town of East Hampton**
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (type information): **Wopowog Road over Safstrom Brook**
   briefly describe the action/project/activity (check and type information): temporary ☒ permanent ☒ description: **Replace two CMP's with a 12'x6' box culvert and wingwalls. Temporary disturbance include installation of cofferdam, bypass pipe, and sedimentation control devices. Temporary disturbance will restored.**
9. ACTIVITY *PURPOSE* CODE (see instructions for code): **E**
10. ACTIVITY *TYPE* CODE(S) (see instructions for codes): **1, 2, 9, 12**
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, type acres or linear feet as indicated):
    wetlands: **0.02** acres open water body: _____ acres stream: **44** linear feet
12. UPLAND AREA ALTERED (type acres as indicated): **0.15** acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (type acres as indicated): **0.01** acres

PART III: To Be Completed By The DEEP

DATE RECEIVED: DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO FORM CORRECTED / COMPLETED: YES NO

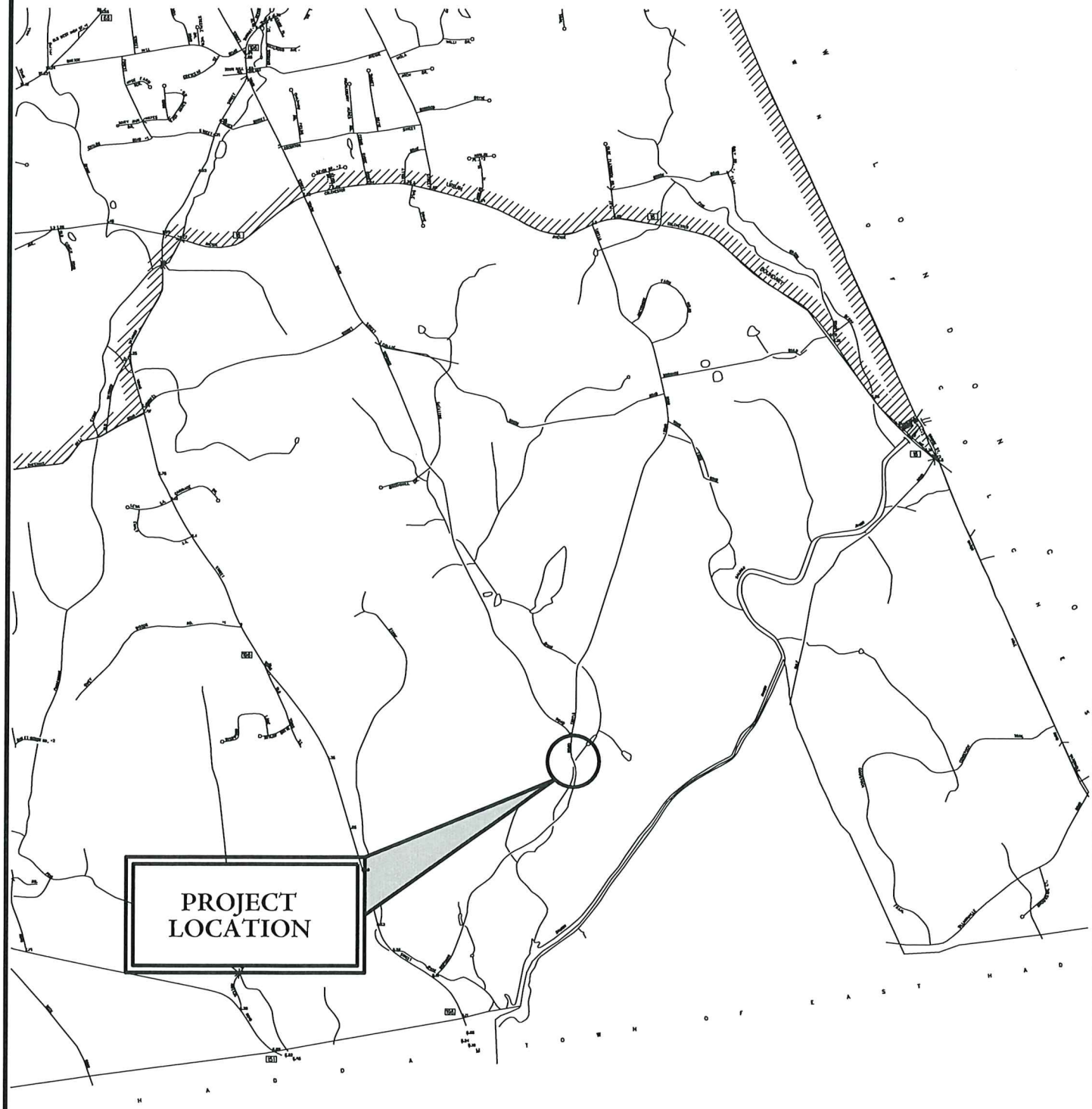
Barton & Loguidice
41 Sequin Drive
Glastonbury, CT 06033
Phone: (860) 633-8770
Fax: (860) 633-5971
www.bartonandloguidice.com
Civil Engineering • Environmental Consulting • Land Surveying • Construction Management

LOCATION MAP

PREPARED FOR TOWN OF EAST HAMPTON
WOPOWOG ROAD OVER SAFSTROM BROOK

FIGURE 1

PROJECT	DATE
3129.024	01/31/24



PHOTOGRAPHS

PHOTO NO: 1

Looking north across Wopowog Road bridge.

PHOTO NO: 2

Looking south from Wopowog Road bridge.

PHOTOGRAPHS

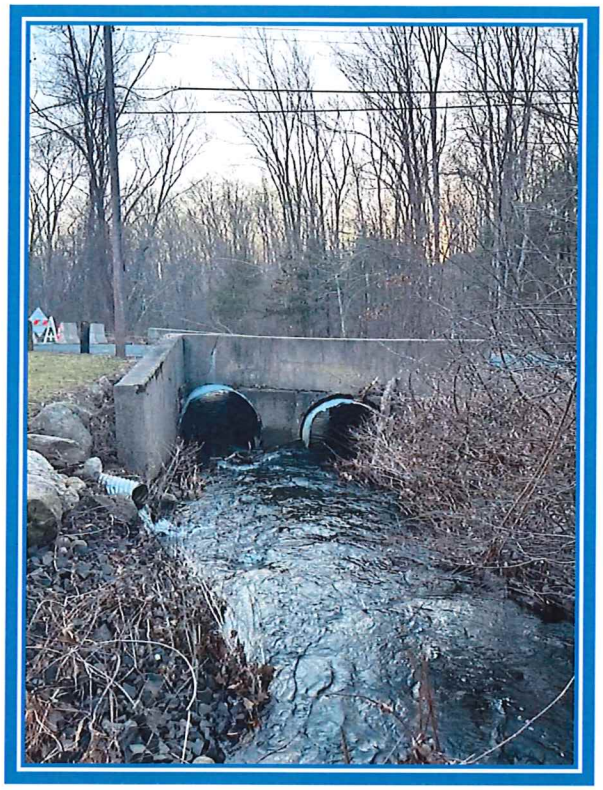


PHOTO NO: 3

Upstream Elevation

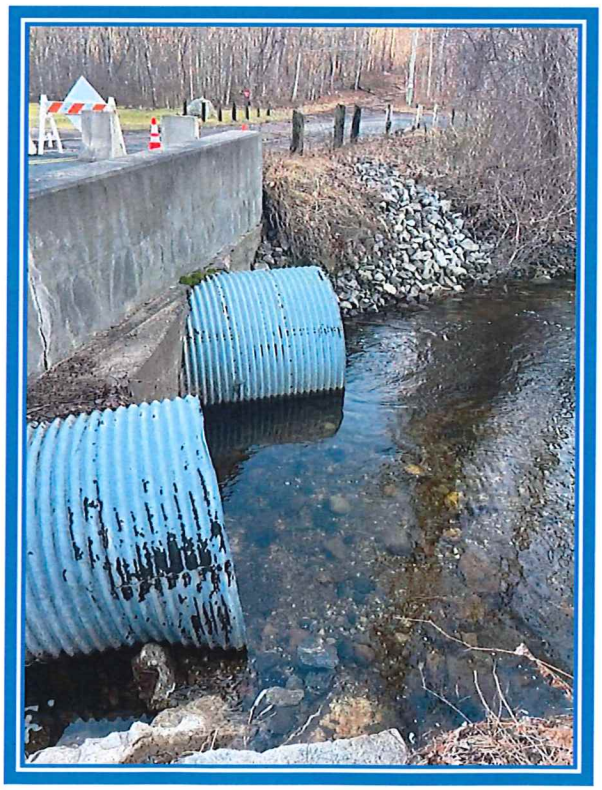


PHOTO NO: 4

Downstream headwall and CMP pipes.

PHOTOGRAPHS

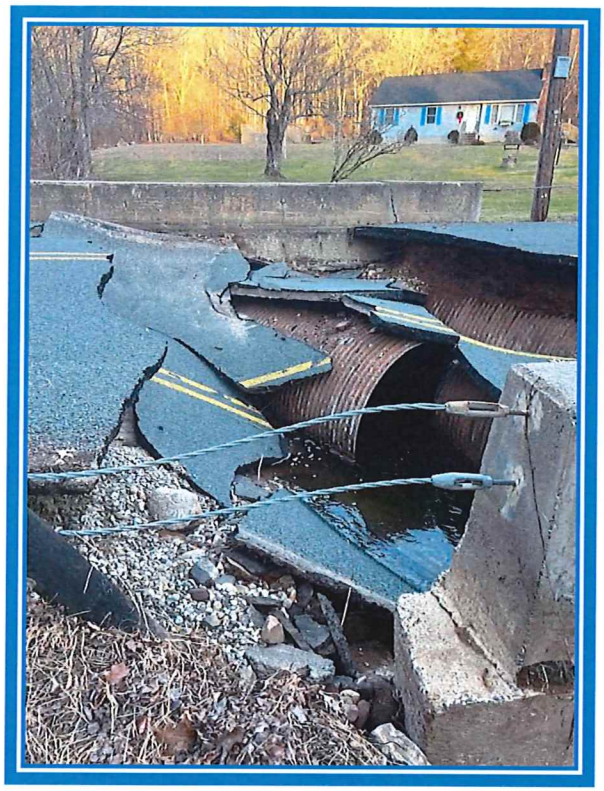


PHOTO NO: 5

Failed CMP's and roadway surface.

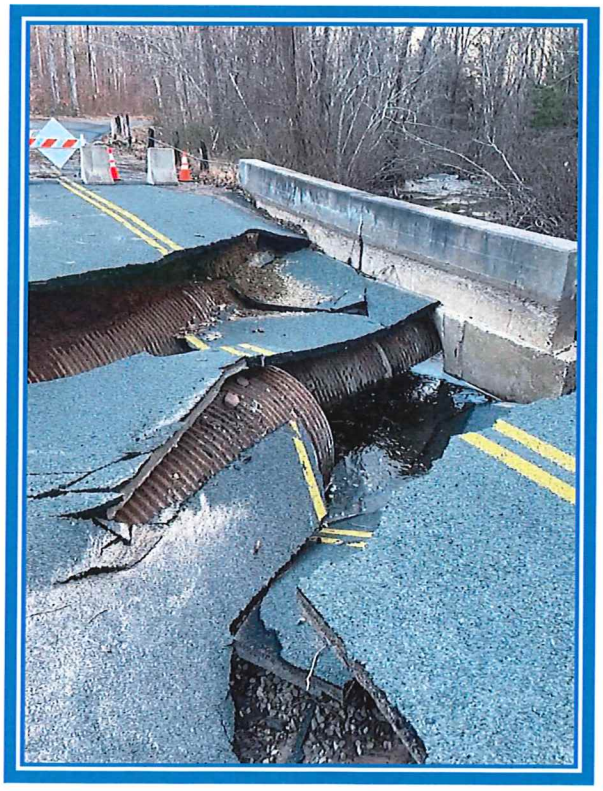


PHOTO NO: 6

Failed CMP's and roadway

National Flood Hazard Layer FIRMette

FEMA

72°28'52"W 41°32'14"N

72°28'15"W 41°31'47"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

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

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

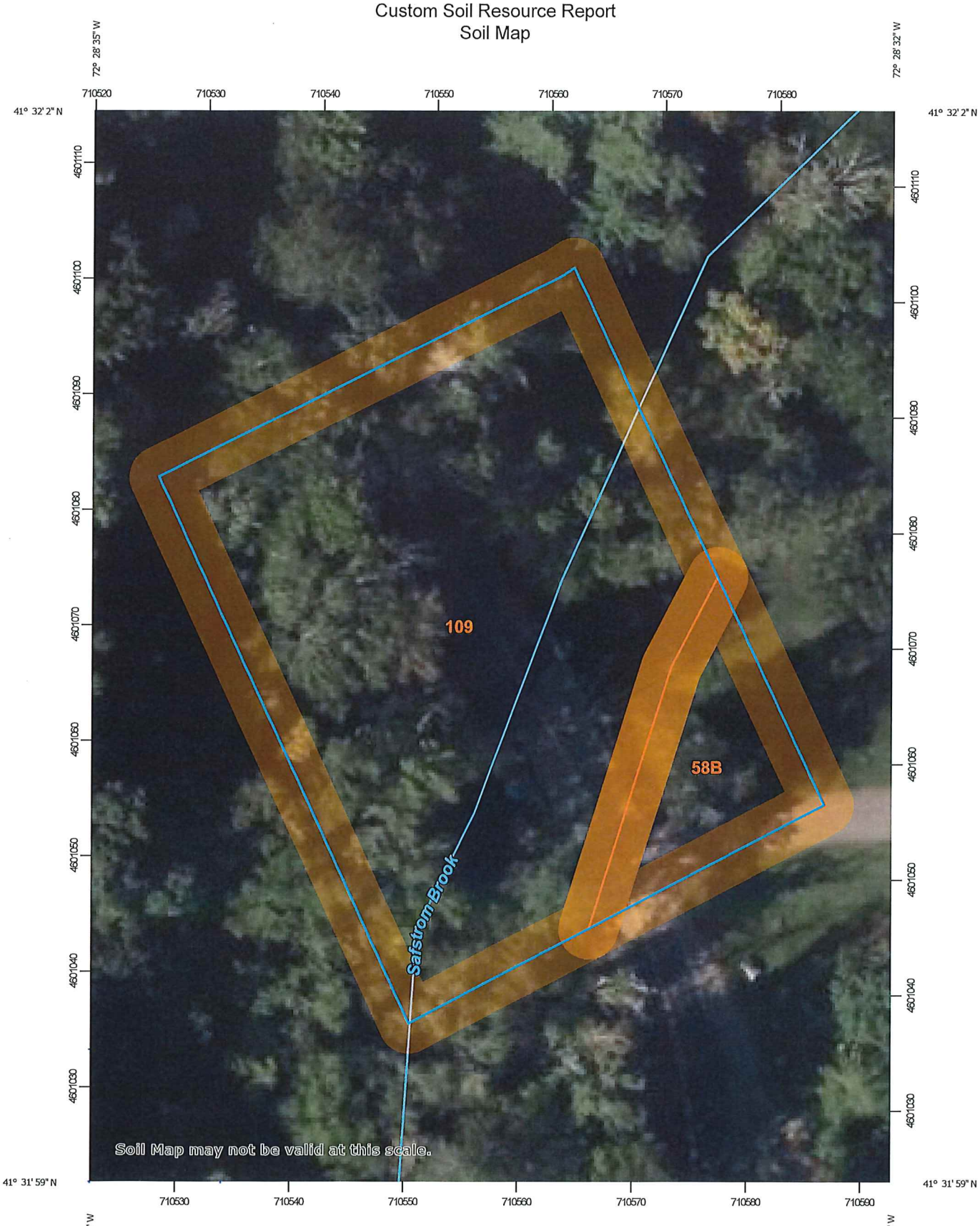
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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 2/26/2024 at 12:16 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.

Custom Soil Resource Report
Soil Map



Map Scale: 1:452 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 20 40 80 120

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- 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
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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: State of Connecticut, Eastern Part
Survey Area Data: Version 1, Sep 15, 2023

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

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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
58B	Gloucester gravelly sandy loam, 3 to 8 percent slopes, very stony	0.1	12.9%
109	Fluvaquents-Udifluvents complex, frequently flooded	0.5	87.1%
Totals for Area of Interest		**0.5**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut, Eastern Part

58B—Gloucester gravelly sandy loam, 3 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 9lph
Elevation: 0 to 1,200 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gloucester and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gloucester

Setting

Landform: Hills
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and gravelly melt-out till derived from granite and/or schist and/or gneiss

Typical profile

Ap - 0 to 4 inches: gravelly sandy loam
Bw1 - 4 to 12 inches: gravelly sandy loam
Bw2 - 12 to 25 inches: very gravelly loamy sand
C1 - 25 to 35 inches: very gravelly loamy coarse sand
C2 - 35 to 60 inches: very gravelly loamy coarse sand

Properties and qualities

Slope: 3 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F144AY032NH - Dry Till Uplands
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Terraces, outwash plains, kames, eskers
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Canton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Paxton

Percent of map unit: 3 percent
Landform: Till plains, hills, drumlins
Down-slope shape: Linear
Across-slope shape: Convex
Hydric soil rating: No

Charlton

Percent of map unit: 3 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Sutton, very stony

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Leicester

Percent of map unit: 2 percent
Landform: Drainageways, depressions
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

109—Fluvaquents-Udifluvents complex, frequently flooded

Map Unit Setting

National map unit symbol: 9ljw
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 45 to 55 degrees F

Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Fluvaquents, frequently flooded, and similar soils: 50 percent
Udifluvents, frequently flooded, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fluvaquents, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Alluvium

Typical profile

A - 0 to 4 inches: silt loam
Cg1 - 4 to 14 inches: fine sand
Cg2 - 14 to 21 inches: very fine sand
Ab1 - 21 to 38 inches: silt loam
Ab2 - 38 to 45 inches: fine sandy loam
C'g3 - 45 to 55 inches: sand
A'b3 - 55 to 60 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Udifluvents, Frequently Flooded

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 2 inches: fine sandy loam
C - 2 to 4 inches: loamy fine sand
Ap - 4 to 12 inches: fine sandy loam
AC - 12 to 18 inches: fine sandy loam

C1 - 18 to 35 inches: loamy sand
C2 - 35 to 38 inches: very gravelly loamy sand
C3 - 38 to 60 inches: very gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (0.57 to 35.99 in/hr)
Depth to water table: About 72 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Riverwash

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Rippowam

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Saco

Percent of map unit: 3 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Occum

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Pootatuck

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No