

April 2, 2020

Tom Mocko, Environmental Planner  
Inland Wetlands & Watercourses Agency, Town of Glastonbury  
2155 Main Street  
Glastonbury, CT 06033

Subject: Stairway to Roaring Brook at Matson Hill Open Space  
Inland Wetlands & Watercourses Agency  
Application for Permit

Dear Mr. Mocko:

We respectfully submit the enclosed permit application to the Glastonbury Inland Wetlands & Watercourses Agency for the construction of the stairs as a part of the Slocomb Dam Removal and work to be completed on the Matson Hill Open Space. Princeton Hydro met with the applicant (Town of Glastonbury) and Tom Mocko, representing the Town of Glastonbury Inland Wetlands & Watercourses Agency (the Agency) on February 28, 2020. While CT DEEP takes full jurisdiction over the removal of the dam spillway, it was verified at this meeting that the Agency had jurisdiction over the construction of the stairway as a part of the larger Slocomb Dam Removal.

The Town of Glastonbury has done significant work to make the Matson Hill Open Space an inviting park and a benefit to the town. The town is trying to continue to improve the open space by 1) removing the Slocomb Pond Dam, 2) building the proposed stairway, and 3) installing a fence on the retaining wall. These improvements are for ecological benefits, public safety, and public enjoyment. For the design of this project, the Town of Glastonbury has contracted Princeton Hydro, who has communicated with CT DEEP Fisheries and the US Army Corps of Engineers.

Because the proposed stairway and railing do not extend into the channel beyond the existing retaining wall, this application includes Part 1 and Part 2 of the Inland Wetlands and Watercourses Application.

### Dam Removal

The construction of the stairway is part of the larger Slocomb Dam Removal Project. Separate permit applications for the Slocomb Dam Removal, which include the construction of the stairs, have been submitted to the US Army Corps of Engineers for a Connecticut GP10 Pre-Construction Notification (Aquatic Habitat Restoration, Establishment & Enhancement Activities) and the CT DEEP for a Dam Safety Permit GP-16 and a Section 401 Water Quality Certification. Through these review processes, CT DEEP and USACE regulate all direct and indirect impacts to Roaring Brook through the removal of the spillway.

The Slocomb Dam Removal Project proposes to remove the Ambursen spillway of the Slocomb Pond Dam to restore the natural free-flowing condition of Roaring Brook and remove a threat to public safety. Removal of the Slocomb Pond Dam will (i) remove a failing and obsolete dam (ii) reduce liability of property ownership for the Town of Glastonbury, and (iii) restore fish passage and in-stream habitat. Additionally, the dam removal will re-connect the upstream and downstream extents of Roaring Brook for American Eel migration and restore natural sediment transport.

## Stairs Project Description

The stairway, designed by Fuss and O'Neill, is meant to serve as a public feature that makes Roaring Brook more accessible from the Matson Hill Open Space. The design is proposed to replace 70 feet of the existing retaining wall on river left of Roaring Brook with a concrete stairway that is 20 feet wide at the top and expands to 60 feet wide at the bottom. The stairs extend 30 feet away from the river. The treads themselves are to be cast-in-place concrete with the stairway walls being made from a reused section of the masonry wall on river right. See the accompanying engineering planset for further details.

The bottom step of the stairway will be in the footprint of the existing retaining wall and will not extend into the watercourse beyond where the existing retaining wall forms the river left bank of Roaring Brook. The design of the stairs is such that each tread is 24 inches long, so that the public will be able to use the stairs for seating. The stairway is placed such that park users can step off the bottom step of the stairway onto the adjacent bedrock outcrop and remain dry or step directly into Roaring Brook to access the adjacent natural pool, which is maintained by a natural bedrock constriction.

In the wetland delineation report (Attachment E), the soil scientist delineated a perennial watercourse up to the base of the existing retaining wall which will become the bottom step of the proposed stairway. The proposed project will remove 70 feet of the existing retaining wall and replace it with the proposed stairway. Because the bottom step of the proposed stairway will occupy the same footprint as the existing retaining wall, there will be no impact to the delineated watercourse. Hydraulic modeling indicates that the stairway will result in minimal changes to site hydraulics (flow depth and velocity) and no negative impacts to flooding (see Attachment C).

## Construction Sequence

The existing parking lot, off Matson Hill Road, will be closed to the public during construction and used as a staging area for all construction activities. The removal of the dam and the construction of the stairway will not impact existing traffic patterns.

An estimated total of 800 CY of soil will need to be excavated for the construction of the stairs, but once stairs are constructed, previously-excavated soil will be used as backfill to complete the grades around the stairs. An estimated 550 CY of soil will be permanently relocated to upland areas onsite, as described in the engineering plans (Attachment B).

The stairway will be cast-in-place concrete. Masonry from the existing retaining wall will be reused to create the side walls of the stairway. All construction activity for the stairs will be conducted from upland area – no heavy machinery is to enter the watercourse (even temporarily) during the construction of the stairs.

## Wetland Impacts

As indicated in the accompanying application forms, regulated resources include the perennial watercourse of Roaring Brook as defined by the wetland limit on the planset (a total of 83,000 SF of watercourse was identified onsite). No associated wetlands were identified onsite and no floodplain soils were identified in the adjacent park land.

The Agency is not obligated to consider the impacts to wetlands and watercourses resulting from activity related to the removal of the Slocomb Pond Dam. Under Connecticut General Statutes Section 22a-403(b), this dam removal activity is subject to the jurisdiction of CT DEEP Dam Safety in accordance with the provisions of sections 22a-36 to

22a-45, which considers the impact of the proposed activities on the environment, public safety, and property and inland wetlands and watercourses of the state.

The stairway installation – which is under the jurisdiction of the Agency – will not result in any direct or indirect impacts to the watercourse – see Table 1, below.

Table 1. Table of Wetland Impact due to Stairway Construction

	Area of Direct Impact (SF)	Area of Indirect Impact (SF)	Total Area Onsite (SF)
Wetlands	0	0	0
Waters/Waterways/Watercourses	0	0	83,000

A filter sock shall be used as a diversion berm on the upland side of the stairway during construction to prevent any indirect impacts to the adjacent watercourse. ~~A filter sock as a diversion berm was the, as per~~ guidance for erosion and sedimentation controls received from the Agency in the meeting on February 28<sup>th</sup>.

#### Fence Installation

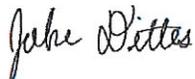
A metal fence is proposed to be installed along the full length of the existing retaining wall that forms the river left bank of Roaring Brook to improve public safety (see plans). The railing will be installed in earth adjacent to the retaining wall.

Enclosed, you will find the permit package, which includes the following documents:

- Attachment A: Adjacent Landowners;
- Attachment B: Engineering Design Plans;
- Attachment C: Engineering Design Memorandum, Including Appendices;
- Attachment D: Photographic Log; and,
- Attachment E: Wetlands Delineation Report.

Should you have any questions or need any additional information please do not hesitate to contact me at (860) 652-8911 or via email at [jdittes@princetonhydro.com](mailto:jdittes@princetonhydro.com).

Sincerely,



Jake Dittes  
Water Resources Engineer  
Princeton Hydro, LLC

cc: file/1036.042



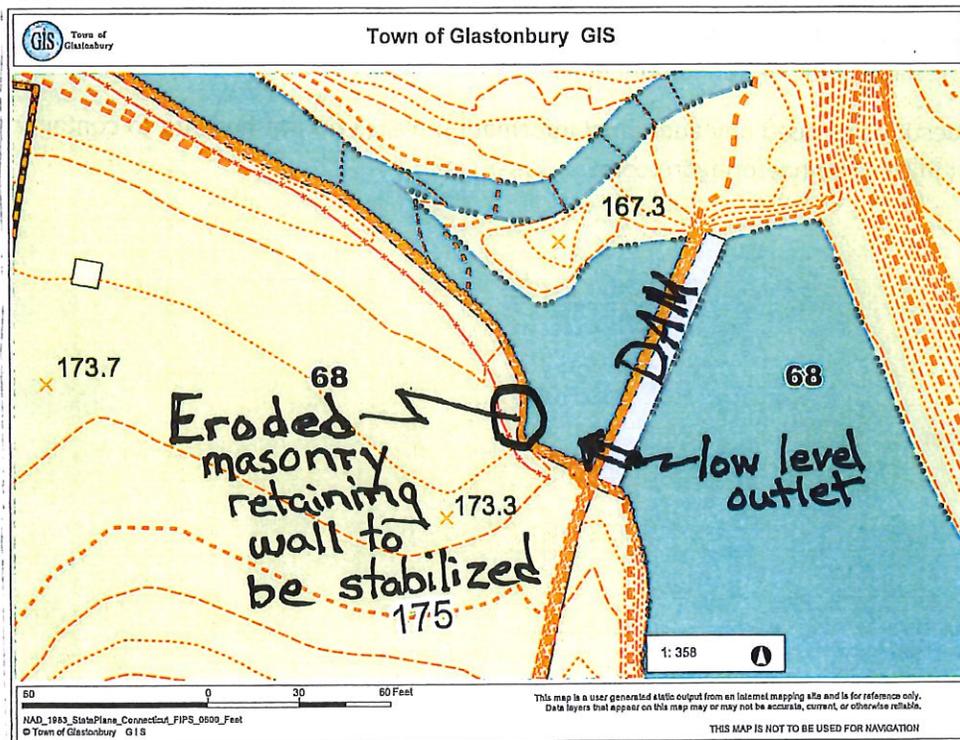
# APPLICATION AMENDMENT



6/4/20

On or around April 30, 2020 Town staff was made aware of an erosion problem at the Town owned Slocomb Mill Open Space. Upon inspection it became readily apparent that high volume/high velocity Roaring Brook flow rates had created a significant scour hole under the masonry wall located directly opposite the spillway low level outlet. This low level outlet is currently used to convey Brook flow in order to relieve pressure on the structurally deficient concrete spillway. The wall was constructed without a footing and the brook flow soon began to erode earth material behind the wall thereby transporting sediment downstream. Failure to immediately address the issue would have resulted in wall collapse and rapid transport of large sediment volumes. Discussion with the Environmental Planner yielded a decision to direct Town Highway Division staff to take immediate action to provide a means of temporary stabilization with the intent being to propose a more permanent solution as part of the Inland Wetlands Commission application for the larger planned project on the site. Accordingly, Town Highway staff placed a number of large rocks in front of the subject wall section in order to redirect flow energy and also backfilled the eroded area behind the wall with stone to prevent material transport. The temporary solution has performed well since installation.

Sheet 10 of 10 of the plan set submitted in conjunction with this application depicts proposed contract work to permanently address the situation described. The solution essentially formalizes the temporary work concept. Large stone will be strategically placed in front of the subject wall section. The smaller stone placed within the eroded area behind the wall will be removed and replaced with flowable fill that will serve to fill all voids below grade. The flowable fill will be formed such that slurry cannot run downstream and all work will be completed in the dry after the stream flow is directed away from the low level outlet. The situation described above was discovered subsequent to initial submittal of the Inland Wetlands application for this project. Thus, work to rectify is offered for Commission consideration as an amendment to the original application



**TOWN OF GLASTONBURY  
INLAND WETLANDS & WATERCOURSES AGENCY  
APPLICATION FOR PERMIT (revised March 2010)**

**Instructions:**

1. Be sure to refer to and review the current, in-force Inland Wetlands and Watercourses Regulations of the Town of Glastonbury (hereinafter referred to as “regulations”) before completing and submitting an application for an inland wetlands and watercourses permit. Such reference and review will provide you with further clarification and guidance with respect to the standards and criteria used for an evaluation and an ultimate decision on a submitted application. An informed understanding of the regulations will best guide you in fulfilling all of the requirements for such a submission.
2. The Agency and the applicant will likely hold a pre-application meeting to: examine the scope of a proposed regulated activity; and/or to determine whether or not the scope of a proposed regulated activity or an application involves a significant impact activity; and/or to examine a proposed activity that lies beyond the 100 and 150 foot upland review area for a potential determination that said activity is a regulated activity pursuant to subsection 4 of the definition of upland review area within Section 2 of the regulations.
3. The application shall: contain the information described in Section 7 of the regulations (and reiterated within this application form) and any other information the Agency may reasonably require; and comply with any required design goals and objectives identified in Section 7.7.1 of the regulations. All applications shall contain prescribed information as is necessary for a fair and informed determination thereon by the Agency.
4. Please note that there are four potential parts (Parts I, II, III & IV) of this application form that may be applicable to the application you are preparing. Based upon the specifics of your overall proposal, you may be required to complete and submit up to a maximum of three parts of this application form. Please note that a COVER SHEET (attached) shall be completed (including signature) and submitted as the cover sheet for any or all parts of the application you are submitting.
5. Most of the application requirements within Parts I, II, III and IV involve direct responses to the various information requested; however, within Parts I and II there are provisions related to: the Agency’s discretion to conduct a peer review (I.U.), how to establish the extent of the upland review area in special situations (II.C), goals and objectives (II.L), and the Agency’s discretion to require a water quality testing program (II.N). Your responses shall be: provided on 8 ½ “ x 11” sheets of paper with the application part (I through IV) and its upper case letter item clearly indicated, and expressed in such terms to be easily understood as to the information being provided in each response (remember to use units and use complete sentences where appropriate). In many cases, the required information for an upper case letter item will be referenced to a map, plan, sketch, written narrative, written report, written summary, etc; so state “refer to the attached/enclosed...” next to the applicable upper case letter item on your responses to the part(s) you must submit.

6. Be very mindful of and give serious consideration to developing and incorporating the appropriate (best) management practices and mitigation measures into your specific application. “Management practices” appears often within the regulations (Sections 2 – definition, 7.6.g, 7.6.i, 7.6.j, 7.7.g.iii, 7.7.j, 10.2.d, 11.1 & 11.10.d) and often can be very important factors in rendering a decision on your application. Important management practices include, but are not limited to, providing for: control measures for soil erosion and sediment transport on disturbed land areas, management practices that address the concerns of stormwater quantity and quality, mitigation of the potential non-point sources of pollution, and the utilization of Low Impact Development (LID) techniques and strategies, if not an entire LID approach to the land development process. Town staff serving the Agency can assist the applicant with identifying the management practices to consider for a specific project and application for an inland wetlands and watercourses permit. Suggested resources for the development of management practices include, but are not limited to: the 2002 Connecticut Guidelines For Soil Erosion and Sediment Control (Connecticut Council on Soil & Water Conservation and the Connecticut Department of Environmental Protection [CT DEP]), the 2004 Connecticut Stormwater Quality Manual (CT DEP), The NEMO Program’s (Nonpoint Education for Municipal Officials) website and links available at <http://nemo.uconn.edu/>, and the 2008 Design Manual for Low Impact Development, Storm Water Treatment Systems, Performance Requirements, Road Design & Stormwater Management of the Town of Tolland, Connecticut available at: <http://www.tolland.org/wp-content/uploads/2008/02/lid-design-effective-2-1-2008.pdf>.
7. Ten (10) copies of all application materials shall be submitted unless otherwise directed in writing by the Agency or its designated agent.
8. Remember to submit the appropriate application fee in accordance with the attached fee schedule that originates within the Town’s Code of Ordinances.
9. Remember that the State of Connecticut also requires an additional \$60.00 fee and a completed form (attached) to be submitted at the time of submitting an application for an inland wetlands and watercourses permit.

**COVER SHEET TO BE LEGIBLY COMPLETED AND SUBMITTED ALONG WITH ALL OTHER APPLICATION MATERIALS (Parts I, II, III and IV as applicable)**

1. **Applicant's name:** Town of Glastonbury
2. **Title of project:** Staircase to Roaring Brook at Slocomb Pond Dam Removal
3. **Address or descriptive location of proposed project or regulated activity:**  
Construction of a staircase from the Matson Hill Open Space to Roaring Brook as a part of the larger project - the removal of the Slocomb Pond Dam

4. **Please check/indicate all that apply with regard to the application being submitted:**

<b>Circumstance</b>	<b>check</b>	<b>requirements</b>
application for only a regulated activity	<u>  X  </u>	complete Part I
• application also involves a proposed subdivision, subdivision or planned area development	<u>  X  </u>	complete Part II
• application also involves a "significant" impact activity (see definition)	<u>      </u>	complete Part III
• application for renewal or time extension for or amendment to an issued permit	<u>      </u>	complete Part IV

5. **Certification by applicant**

By my signature I hereby certify that:

- i. the applicant is familiar with all of the information provided in the application and is aware of the penalties for obtaining a permit by deception or by inaccurate or misleading information; and
- ii. the Agency members and their designated agents are authorized to inspect the property, at reasonable times, both before and after a final decision has been issued, and after completion of the project.

**Signature(s) of Applicant(s):**

**Date:**

\_\_\_\_\_  
  
\_\_\_\_\_

\_\_\_\_\_  
  
\_\_\_\_\_

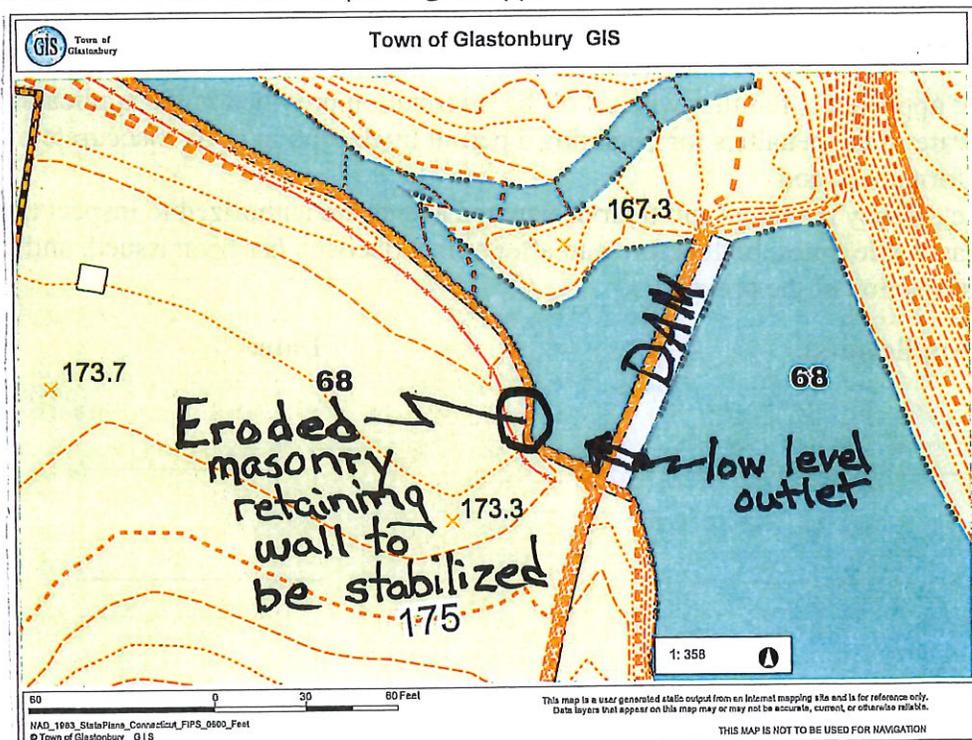


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## PART I

**All applications to authorize proposed regulated activities shall legibly include the following information in writing and on maps and plans or drawings:**

- A. The applicant's name, home and business mailing addresses and telephone numbers; if the applicant is a Limited Liability Corporation or a Corporation the managing member's or responsible corporate officer's name, address, and telephone number. **Applicant: Town of Glastonbury (Daniel A Pennington, PE); 2155 Main Street; Town of Glastonbury, CT 06033 - 860-652-7736**
- B. The landowner's name, mailing address and telephone number and a signed written consent letter from the landowner if the applicant is not the owner of the land upon which the subject activity is proposed. **See Applicant**
- C. The applicant's interest in the land. **The cover letter describes the applicant's interest in the land.**
- D. Using the appropriate United States Geological Survey quadrangle topographic map, a location map at a scale of 1 inch = 2,000 feet identifying the geographical location of the land which is the subject of the proposed activity. **The title sheet of the planset includes the USGS topographic map (Attachment B).**
- E. 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 by the proposed regulated activity, soil type(s), and wetland vegetation. **See the Wetland Delineation Report (Attachment E). Delineated Wetlands are also shown on the Planset (Attachment B)**
- F. A written narrative on the purpose and a description of the proposed regulated activity. **See the cover letter for the written narrative on purpose and description of proposed regulated activity**
- G. The proposed erosion and sedimentation controls and other management practices and mitigation measures, such as but not limited to, any measures to detain or retain stormwater runoff or recharge groundwater, any plantings for habitat improvements, and any other measures proposed to mitigate the potential environmental impacts, which may be considered as a condition of issuing a permit or license 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, and create productive, functional wetland or watercourse resources. **See cover letter and planset for erosion and sedimentation controls**
- H. A map at a scale of 1 inch equals 100 feet identifying the topographical features of the property to be affected by the proposed activity, adjacent lands, adjacent regulated areas, such as upstream and/or downstream areas as may be identified by the Agency or its designated agent, and other pertinent features including, but not limited to, existing and proposed property lines, roads, and drives, existing and proposed buildings and their utilities, topography, soil types, the limits of inland wetlands, watercourses and upland review areas, existing and proposed lands protected as open space or by conservation easements, and types of vegetative cover. **See planset**
- I. A site plan at a scale that provides sufficient detail showing existing and proposed measures to mitigate the potential environmental impacts, including, but not limited to dedicated open space areas, along with their computed land area(s), and areas protected by conservation easements or restrictions, along with their computed land area(s). **See planset**

- J. A site plan showing the existing and proposed impervious surfaces, along with their computed land area(s), and the existing and proposed management practices that serve to mitigate the hydrologic, thermal and other adverse effects caused by such impervious surfaces. [See planset](#)
- K. A site plan showing the proposed activity and existing and proposed conditions in relation to wetlands and watercourses and upland review area(s) 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. [See planset](#)
- L. A title block and legend of symbols used for each plan or map or drawing indicating the name of plan or map or drawing, date prepared and subsequent revision dates, and scale. [See planset](#)
- M. Names and addresses of abutting property owners as shown in the records of the tax assessor of the municipality as of a date no earlier than thirty (30) days before the date the application is submitted to the Agency. [See Attachment A - the list of abutters](#)
- N. Certification by the applicant that the applicant is familiar with all the information provided in the application and is aware of the penalties for obtaining a license or permit through deception or through inaccurate or misleading information. [See signature on the title sheet of this application.](#)
- O. An alternative to the submitted application which would cause less or no environmental impact to wetlands or watercourses and why the alternative as set forth in the submitted application was chosen; all such alternatives shall be diagramed on a site plan or drawing. [See cover letter](#)
- P. The calculated (1) total area (square feet) of wetlands and watercourses on the subject property and (2) total area (square feet) of regulated area that would be potentially disturbed by the proposed regulated activities. [See cover letter](#)
- Q. Authorization for the members and designated agent(s) of the Agency to inspect the subject land, at reasonable times, during the pendency of an application and for the life of the license or permit. [The town gives this permission](#)
- R. A completed CT DEP reporting form (such form and instructions provided with these forms) whereby the Agency or its designated agent 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. [Applications for the Slocomb Pond Dam Removal have been submitted to CT DEP](#)
- S. Submission of the appropriate filing fee based on the fee schedule established in Section 15-22 of Town Code of Ordinances (fee schedule attached).
- T. The applicant shall certify whether: [See plansets, all concerns are not applicable for this project](#)
- a. any portion of the property on which the regulated activity is proposed is located within 500 feet of the boundary of an adjoining municipality;
  - b. traffic attributable to the completed project on the site will use streets within the adjoining municipality to enter or exit the site;
  - c. sewer or water drainage from the project site will flow through and impact the sewage or drainage system within the adjoining municipality; or

d. water runoff from the improved site will impact streets or any other property within the adjoining municipality.

U. If the Agency deems that a peer review of any information submitted by the applicant is warranted, the applicant will be required to pay the cost of that peer review prior to a final decision. Pursuant to Section 22a-22a(e) of the Connecticut General Statutes, the Agency may require a filing fee to be deposited with the Agency in an amount sufficient to cover the reasonable cost of reviewing and acting upon the application including, but not limited to, the cost of peer reviews of information submitted by the applicant.

V. Any other information the Agency deems necessary to understand exactly what the applicant is proposing.

## PART II.

**Any application** involving a land use proposal subject to these regulations and **also subject to subdivision or special permit or planned area development** application shall be **required to contain the following additional information and to explain how the proposal meets the goals and objectives referenced in L and M within this Part II:**

- A. All wetland boundaries on the property shall be identified by a soil scientist using blue survey tape and located by a Licensed Land Surveyor; the soil scientist shall consecutively number the survey tapes that mark boundary lines of all wetlands on the subject property; the survey tape shall be located by a Licensed Land Surveyor using field survey techniques and each tape location and number shall be plotted onto the site plan. [See Wetland Delineation Report](#)
- B. All watercourses identified on the property shall be located and accurately identified on the site plan to the satisfaction of the Agency or its designated agent. [See planset/Wetland Delineation Report](#)
- C. In the situation where an upland review area may extend onto the subject property due to the likelihood of the presence of wetlands or watercourses on a neighboring property, then one of the following shall occur. [Not Applicable](#)
1. preferably, permission to identify and survey the wetlands boundary or watercourse limits from the neighboring landowner shall be sought by the applicant; in which case if permission is granted, then the wetlands boundary and/or watercourse identification processes as presented in A and B above shall apply; or
  2. alternatively, a best-educated approximation method utilizing resource maps and other interpretive techniques shall be taken to approximate the wetlands boundary or watercourse limits on the neighboring property and the limits of the regulated area on the subject property; the person responsible for approximating such boundaries and limits shall provide a report on the rationale used in approximating such boundaries and limits.
- D. A written report by the soil scientist that includes the names of the applicant and project, the location of and limits of the property investigated, the dates of the soil investigations, certification that the mapping of soil types is consistent with the categories established by the national Cooperative Soil Survey of the USDA Natural Resources Conservation Service, a description of each soil mapping unit investigated, the set of the consecutive numbers used on the survey tapes to identify the wetland boundaries, and a certified statement that the wetland boundaries and the mapping of soil types appearing on the site plan are, to the best of the soil scientist's knowledge, true and accurate. [See Wetland Delineation Report](#)
- E. A map of sufficient scale shall be submitted indicating each surficial drainage area influencing each distinct wetland area or watercourse on the property. [Not Applicable](#)
- F. A wetlands and/or watercourses report, prepared by a qualified person, that contains a written description for each distinct wetland area and watercourse on the subject property, including, but not limited to wetland and watercourse characteristics related to physical features, vegetation, wildlife, ecological communities, wetland/watercourse functions and values, its/their relationship to adjacent upland areas, and effects of the proposed activity on these wetlands and watercourse characteristics. [See Wetland Delineation Report](#)

- G. A site plan at a scale of 1 inch = 40 feet, or at a scale that exhibits greater detail, prepared by a professional engineer, land surveyor, architect or landscape architect licensed by the state or by such other qualified person indicating the following: [See planset](#)
1. the location and limits of all wetlands, watercourses and upland review areas;
  2. the proposed alterations and uses of wetlands, watercourses and upland review areas;
  3. all proposed activities on the property (e.g. grading, filling and excavation of the land, removal of vegetation, surface and subsurface measures to manage the drainage of water, construction or placement of structures, landscaping, outdoor lighting) and existing and proposed conditions in relation to wetlands and watercourses, including activities and/or conditions located outside of the regulated area(s) that may have an impact on wetlands and/or watercourses; the details of any proposed outdoor lighting shall be shown on a separate lighting plan which also represents the estimated levels of light extending beyond the proposed source(s) of light;
  4. the land contours;
  5. the locations of other prominent features such as bedrock outcrops, stone walls, old woods roads, existing structures and drives, and trees deemed by the Agency or its designated agent to be of noteworthy value; and
  6. the boundaries of land ownership for the subject land and for the abutting properties along with the names of all such landowners.
- H. A written description of the alternatives considered and subsequently rejected by the applicant and why the alternative set forth in the application was chosen with all such alternatives diagrammed on a separate plan or drawing. [See cover letter](#)
- I. A written description of how the applicant will change, diminish, or enhance the ecological communities and functions of the wetlands or watercourses involved in the application and for each alternative. [See cover letter](#)
- J. A written description of the management practices and other measures designed to mitigate the impact of the proposed activity. [See cover letter and planset](#)
- K. A written description of the intended or required physical and chemical characteristics of any fill material proposed within the regulated area. [See planset](#)
- L. Goals and objectives which shall be demonstrated in the application:
1. for just those targeted watersheds identified within subsection 1 under the definition of “upland review area” found within Section 2.1 of the regulations, the land use proposal related to the proposed regulated activity should not result in the effective impervious surface coverage exceeding ten (10) percent on the subject property; public road reconstruction projects within established public right-of-ways are exempt from the goal and objective within this subsection; and

2. the land use proposal should be brought into existence utilizing the following policy as expressed in the following hierarchy:

- a) avoid encroachment into all regulated areas; [See description - this project does not encroach on watercourses](#)
- b) avoid encroachment into all wetlands and watercourses;
- c) avoid encroachment into any wetland and watercourse that exhibits multiple wetland and watercourse functions that are of high value;
- d) avoid encroachment into any wetland and watercourse that exhibits multiple wetland and watercourse functions that are of moderate value;
- e) avoid encroachment into any wetland and watercourse that exhibits one wetland and watercourse function that is of high value;
- f) avoid encroachment into any wetland and watercourse that exhibits one wetland and watercourse function that is of moderate value;
- g) avoid encroachment into any wetland and watercourse that exhibits one wetland and watercourse function of low value; and
- h) encroachments that cannot be avoided must be minimized.

M. A written summary of how the proposal complies with the environmental policies contained within the Town of Glastonbury's adopted and in-force Plan of Conservation and Development.

[See cover letter](#)

N. The Agency may require applicants and/or Permittees to develop and implement a water quality testing program (before and after development) that assesses the impacts or affects on downgradient wetlands and/or watercourses from the land use associated with the regulated activity; the results from such a required water quality testing program are solely intended for the collection and analysis of data for educational and scientific purposes.



# **Martin Brogie, Inc.**

## **ENVIRONMENTAL SERVICES**

- Environmental Site Investigations
  - Building Contaminant Surveys
  - Wetlands Consulting
- Remediation Contract Management

October 8, 2019

Laura Wildman, PE  
Director, New England Regional Office  
PrincetonHydro  
931 Main Street  
Suite 2  
South Glastonbury, CT  
06073

RE: Wetlands Delineation  
Roaring Brook at Slocomb Pond Dam  
Matson Hill Road  
Glastonbury, CT

Dear Laura:

Martin Brogie, Inc. (MBI) is pleased to submit the following wetland delineation documentation for Roaring Brook in the area of the Slocomb Dam on Matson Hill Road in Glastonbury, Connecticut. The project wetland delineation area consists of approximately 5 acres including the “pond”, dam, stream and an area previously occupied by a mill complex. The delineated reach extended from just south of the “pond” area to the Matson Hill Road Bridge. The purpose of the delineation was to support permitting required for the removal of the dam. Excavation and re-location of sediment will likely require negotiation and approval from the US Army Corp of Engineers (USACE) as that activity is generally considered to be a direct impact to regulated resources.

### **Methodology**

The undersigned Soil Scientist reported to the site on August 20, 2019 to document existing conditions and identify the wetland boundaries. Wetland boundaries were assessed in terms of Connecticut General Statutes Section 22a-38 definitions (15) and (16) and USACE methodologies for assessing hydrology, vegetation and soils.

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Madison, CT 06443

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860-208-0360

Field assessment included identification of soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey; and, rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent. In addition, intermittent watercourses (IWC) are defined as having a permanent channel and bank and the occurrence of two or more of the following characteristics: evidence of scour or deposits of recent alluvium or detritus; the presence of standing or flowing water for a duration longer than a storm incident; and/or the presence of hydrophytic vegetation.

Assessment of the presence of Hydric Soils, types and abundance of Hydrophytic and Upland Vegetation, and Hydrologic Indicators per USACE Wetland Determination Data Forms was also conducted.

Identified wetland areas were flagged using numerically sequenced flagging tape affixed at the wetland boundary at minimum intervals of 50 feet.

### **Wetland Delineation**

The wetland delineation of the above-indicated areas resulted in the placement of 60 wetland flags marked as WF#1 through WF#60. The delineation captured the perennial watercourse channel including: the edge of the flowing stream channel along a man-made, stone retaining wall; and, banks up to the apparent seasonal high-water line as evidenced by scour, deposition, and drift lines. The Connecticut Regulated Wetland line and ACOE Wetland line were co-existent throughout the delineated reach.

South of the dam, in the area of former Hopewell Pond, the active stream channel splits around a gravel bank and then rejoins before passing through the low flow dam outlet. The area south of the dam consists largely of fine to coarse sediment built-up by the presence of the dam. Herbaceous vegetation is present over the majority of the impounded materials. The wetland boundaries along the east and west sides are steeply sloping and well-defined. A man-made dyke extends along the west side and joins to the dam on the west end to form the impoundment. Naturally steep sloping (Ravine Community) land forms the east side of the impoundment. The watercourse bends westward as it passes the dam.

The area along the south side of the watercourse was historically developed with a mill complex that utilized the dam/waterpower. The area is now predominantly grassed, contains remnants of former mill buildings, and is used as a Town Park. A vertical, stone-retaining wall extends from the dam along the south side of the watercourse and terminates approximately 100 feet from the Matson Hill Bridge where the bank is rip-rap armored. The wetland line followed the edge of the stone wall and the high-water line on the rip-rap slope.

The area along the north side of the watercourse consists of a steeply sloping *Hemlock Ravine Community*. The wetland line consisted of the high-water mark along this portion of the study area. An incised channel joins the watercourse boundary between Wetland Flags WF#31 and WF#32. This channel appears to be the result of flash storm flows and did not meet the Connecticut IWC definition. A seep area was identified along the steeply sloping Ravine bank between Wetland Flags WF#40 through WF#46. This pulled the wetland line associated with the river higher up the slope in this area by approximately 10 feet.

**Wetlands Delineation Report  
Glastonbury – Slocomb Pond Dam Removal  
October 8, 2019**

Site photographs are provided in Appendix A and ACOE Wetland Determination Data Forms are provided in Appendix B.

Thank you for the opportunity to provide these professional services to you. Please contact us if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Martin Brogie". The signature is stylized and written in a cursive-like font.

Martin Brogie, LEP  
President

w/attachments

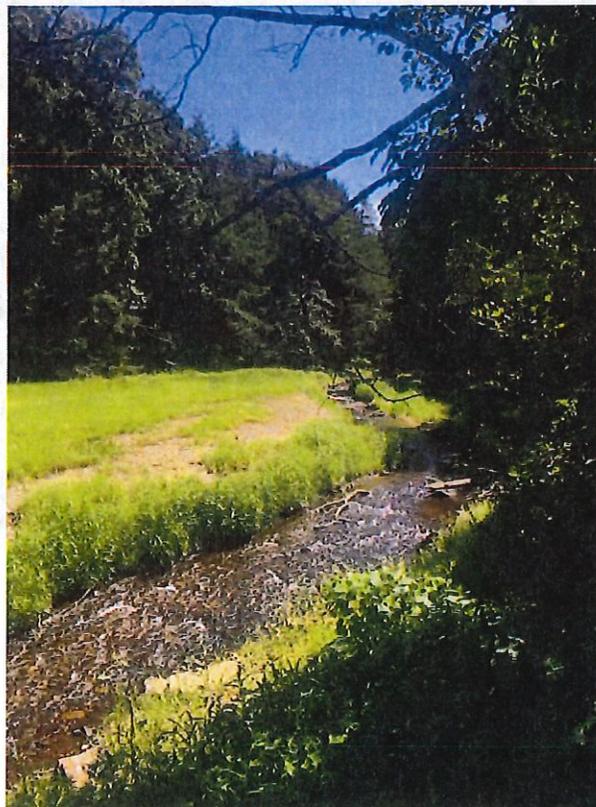
APPENDIX A  
PHOTOGRAPHS

**PHOTO LOG**  
**WETLAND DELINEATION**  
**Slocomb Dam**  
**Matson Hill Road – Glastonbury, CT**

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Area of former mill complex now utilized as a park. Located along south side of Roaring Brook.



Area south of dam showing impounded sediments.

**PHOTO LOG**  
**WETLAND DELINEATION**  
**Slocomb Dam**  
**Matson Hill Road – Glastonbury, CT**

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Area immediately down stream of dam showing stone retaining wall.

**PHOTO LOG**  
**WETLAND DELINEATION**  
**Slocomb Dam**  
**Matson Hill Road – Glastonbury, CT**

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Photo 11: High water line along north bank.

**PHOTO LOG**  
**WETLAND DELINEATION**  
**Slocomb Dam**  
**Matson Hill Road – Glastonbury, CT**

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Watercourse entering low flow outlet at dam.



## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#6 UPL  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): 40  
 Subregion (LRR or MLRA): 144A Lat: 41 39 47.08 Long: 72 34 45.00 Datum: NAD83  
 Soil Map Unit Name: Urban land NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <b>Location is along man-made dyke connected to a dam.</b>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#6 UPL

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Eastern Hemlock ( <i>Tsuga canadensis</i> )	30	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
30 = Total Cover			
50% of total cover: 15%      20% of total cover: 6%			

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
0 = Total Cover			
50% of total cover: _____      20% of total cover: _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Common Barberry ( <i>Berberis vulgaris</i> )	15	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
15 = Total Cover			
50% of total cover: 7.5%      20% of total cover: 3%			

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
0 = Total Cover			
50% of total cover: _____      20% of total cover: _____			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
0 = Total Cover			
50% of total cover: _____      20% of total cover: _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)

Prevalence Index = B/A = \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is <math>\leq 3.0^1</math>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (If observed, list morphological adaptations below).

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4"	10yr 3/3						fsl	
4-26"	10yr 8/1						fsis	coal, coal ash (fill) boulders

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: **Location is along man-made dyke, adjacent to perennial watercourse, above high water mark.**

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#6 WET  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): 20  
 Subregion (LRR or MLRA): 144A Lat: 41 39 47.08 Long: 72 34 45.00 Datum: NAD83  
 Soil Map Unit Name: Watercourse NWI classification: R3UBH\*

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Location is along perennial watercourse in frequently flooded area. * - PUBHh is shown in this area on NWI, but "pond" is no longer present behind dam.		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators (minimum of one is required; check all that apply)</b> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Location is within high water are adjacent to perennial watercourse.

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#6 WET

**Tree Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Sapling Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Shrub Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Herb Stratum** (Plot size: 20 s.f. )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Devils Beggartick ( <i>Bidens frondosa</i> )	85	Yes	FACW
2. Jewelweed ( <i>Impatiens capensis</i> Meerb.)	15	No	FACW
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

100 \_\_\_\_\_ = Total Cover

50% of total cover: 50 20% of total cover: 20

**Woody Vine Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18"	10yr 7/3	50					ms	interlayered
	10yr 2/2	50					fsl	interlayered
18-26"	10yr 2/1	60			C	M	fsl	interlayered
	10yr 7/1	40			D	M	ms	interlayered

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: **Floodplain soil with hydric indicators**

## WETLAND DETERMINATION DATA FORM -- Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#19 UPL  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): vertical wall  
 Subregion (LRR or MLRA): 144A Lat: 41 39 50.12 Long: 72 34 49.41 Datum: NAD83  
 Soil Map Unit Name: Urban Land NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS -- Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: <b>Location is in disturbed/filled area of former industrial mill complex.</b>	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#19 UPL

**Tree Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
0 = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Sapling Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
0 = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Shrub Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
0 = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Herb Stratum** (Plot size: 20 s.f. )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Knotweed ( <i>Fallopia Japonica</i> )	100	Yes	UPL
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
100 = Total Cover			
50% of total cover: <u>50%</u> 20% of total cover: <u>20%</u>			

**Woody Vine Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
0 = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 0 (A)	0 (B)
Prevalence Index = B/A = _____	

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8"	10yr 4/4	100					fsl	
8-26"	10yr4/3	100					frmsis	mixed fill with brick fragments

- <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.
- Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)   |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)  |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)  |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)   |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input type="checkbox"/> Other (Explain in Remarks)   |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |   |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |   |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |   |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |   |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |   |

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#19 WET  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): vertical wall  
 Subregion (LRR or MLRA): 144A Lat: 41 39 50.12 Long: 72 34 49.41 Datum: NAD83  
 Soil Map Unit Name: Urban Land NWI classification: R3UBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Location is in perennial watercourse adjacent to stone retaining wall. Watercourse was significantly disturbed as a result of historic dam and mill construction		

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	

Remarks:

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#19 WET

Tree Stratum (Plot size: <u>20 s.f.</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. Eastern Hemlock ( <i>Tsuga canadensis</i> )	15	Yes	FACU
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

15 = Total Cover  
50% of total cover: 7.5% 20% of total cover: 3%

Sapling Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

0 = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Shrub Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			

0 = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

0 = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: <u>0</u> (A)	<u>0</u> (B)

Prevalence Index = B/A = \_\_\_\_\_

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).  
**Ravine species on banks with overhanging branches at sample point.**

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-22"	10yr 7/3	100					MCS	with heavy gravel and boulders

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)   |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)  |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)  |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)   |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input checked="" type="checkbox"/> Other (Explain in Remarks)  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           |   |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |   |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |   |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |   |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |   |

Restrictive Layer (if observed):

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks: River bottom

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#27 UPL  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): vertical wall  
 Subregion (LRR or MLRA): 144A Lat: 41 39 50.90 Long: 72 34 53.16 Datum: NAD83  
 Soil Map Unit Name: Manchester Gravelly Sandy Loam NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	
Remarks:			

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#27 UPL

**Tree Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Black Oak ( <i>Quercus velutina</i> )	15	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

15 = Total Cover  
50% of total cover: 7.5%    20% of total cover: 3%

**Sapling Stratum** (Plot size: \_\_\_\_\_ )

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 = Total Cover  
50% of total cover: \_\_\_\_\_    20% of total cover: \_\_\_\_\_

**Shrub Stratum** (Plot size: \_\_\_\_\_ )

1. Common Barbery ( <i>Berberis vulgaris</i> )	10	Yes	FACU
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

10 = Total Cover  
50% of total cover: 5%    20% of total cover: 2%

**Herb Stratum** (Plot size: \_\_\_\_\_ )

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

0 = Total Cover  
50% of total cover: \_\_\_\_\_    20% of total cover: \_\_\_\_\_

**Woody Vine Stratum** (Plot size: \_\_\_\_\_ )

1. Bittersweet ( <i>Celastrus orbiculatus</i> )	20	Yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

20 = Total Cover  
50% of total cover: 10%    20% of total cover: 4%

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**    Yes     No

Remarks: (If observed, list morphological adaptations below).

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4"	10yr 4/4	100					fsl	
4-25"	10yr 6/8	100					fmsis	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)	<input type="checkbox"/> 1 cm Muck (A9) (LRR O)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)	<input type="checkbox"/> 2 cm Muck (A10) (LRR S)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)	<input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)
<input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Muck Presence (A8) (LRR U)	<input type="checkbox"/> Redox Depressions (F8)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)	<input type="checkbox"/> Marl (F10) (LRR U)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)	
<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A)	<input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)	<input type="checkbox"/> Delta Ochric (F17) (MLRA 151)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)	
<input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Slocomb Dam Pond/Roaring Brook City/County: Glastonbury/Hartford Sampling Date: 8/20/19  
 Applicant/Owner: Town of Glastonbury State: CT Sampling Point: WF#27 WET  
 Investigator(s): Martin Brogie Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ravine Local relief (concave, convex, none): concave Slope (%): 100  
 Subregion (LRR or MLRA): 144A Lat: 41 39 50.90 Long: 72 34 53.16 Datum: NAD83  
 Soil Map Unit Name: Manchester Gravelly Sandy Loam NWI classification: RSUBH  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <b>Location is along bank of perennial watercourse below high water mark. Location has been armored with rip rap and boulders. Bedrock outcropping present along bank.</b>	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <b>Sample point is within high water area of perennial watercourse, along stream bank.</b>	

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: WF#27 WET

**Tree Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Sapling Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Shrub Stratum** (Plot size: 40 s.f. \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Winterberry ( <i>Ilex verticillata</i> )	40	Yes	FACW
2. Speckled Alder ( <i>Ulnus rugosa</i> )	25	No	FACW
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

65 \_\_\_\_\_ = Total Cover

50% of total cover: 32.5% 20% of total cover: 13%

**Herb Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

0 \_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Woody Vine Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1. Bittersweet ( <i>Celastrus orbiculatus</i> )	20	Yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

20 \_\_\_\_\_ = Total Cover

50% of total cover: 10% 20% of total cover: 4%

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 0 (A)	0 (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes  No

Remarks: (If observed, list morphological adaptations below).

**SOIL**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4"	10yr 4/4	100					fsl	depth limited by rock bedrock, boulders and rip rap

- <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.
- Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**
- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                         | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U)                 | <input type="checkbox"/> 1 cm Muck (A9) (LRR O)   |
| <input type="checkbox"/> Histic Epipedon (A2)                  | <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U)                       | <input type="checkbox"/> 2 cm Muck (A10) (LRR S)  |
| <input type="checkbox"/> Black Histic (A3)                     | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O)                           | <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B)   |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                 | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                                   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T)  |
| <input type="checkbox"/> Stratified Layers (A5)                | <input type="checkbox"/> Depleted Matrix (F3)                                       | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B)   |
| <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U)     | <input type="checkbox"/> Redox Dark Surface (F6)                                    | <input type="checkbox"/> Red Parent Material (TF2)  |
| <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) | <input type="checkbox"/> Depleted Dark Surface (F7)                                 | <input type="checkbox"/> Very Shallow Dark Surface (TF12)   |
| <input type="checkbox"/> Muck Presence (A8) (LRR U)            | <input type="checkbox"/> Redox Depressions (F8)                                     | <input checked="" type="checkbox"/> Other (Explain in Remarks)  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T)             | <input type="checkbox"/> Marl (F10) (LRR U)   |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)     | <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151)                           | <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. |
| <input type="checkbox"/> Thick Dark Surface (A12)              | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T)                  |   |
| <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) | <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U)                         |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR O, S)   | <input type="checkbox"/> Delta Ochric (F17) (MLRA 151)                              |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)              | <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B)                     |   |
| <input type="checkbox"/> Sandy Redox (S5)                      | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A)                |   |
| <input type="checkbox"/> Stripped Matrix (S6)                  | <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D) |   |
| <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)    |   |   |

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present?    Yes     No

Remarks: Along bank of perennial watercourse.

**GLASTONBURY CONSERVATION COMMISSION  
(INLAND WETLANDS & WATERCOURSES AGENCY)  
SPECIAL MEETING MINUTES OF THURSDAY, NOVEMBER 14, 2019**

The Glastonbury Conservation Commission (Inland Wetlands & Watercourses Agency), along with Mr. Tom Mocko, Environmental Planner, in attendance held a Special Meeting in Town Council Chambers, second floor of Town Hall located at 2155 Main Street, Glastonbury, Connecticut at 5:00 P.M.

**ROLL CALL**

**Commission Members – Present**

Judy Harper, Chairman  
Dennis McInerney, Vice Chairman  
Kim McClain, Secretary  
William Shea  
Mark Temple  
Frank Kaputa  
Brian Davis (arrived at 7:15pm)

Chairman Harper called the meeting to order at 5:06 P.M.

**I. INFORMAL DISCUSSION**

**Consideration of the options for addressing the “unsatisfactory condition” assigned to the Town’s Slocomb Dam along Roaring Brook – 68 Matson Hill Road (east side) – Daniel A. Pennington, Town Engineer – Laura Wildman, P.E., Princeton Hydro, consultants**

Mr. Daniel Pennington discussed the options for addressing the “unsatisfactory condition” on the concrete spillway portion of the Town’s Slocomb Dam, which was historically constructed for the mill operation. He noted that the unsatisfactory rating does not require them to remove, replace, or repair the dam; simply to get it to a point where the site is no longer a hazard. He noted that this activity is regulated on the state level, nonetheless, they would still like to keep the Town informed.

Ms. Laura Wildman, P.E. at Princeton Hydro, presented on the existing conditions of the Slocomb Dam. She explained the site property boundaries and the high and low flow conditions. She showed the Commission some pictures that reflect the hazardous condition of the dam that needs immediate or emergency action. She noted that they have also gone out and done a set of impounded sediment testing. Ms. Wildman ran through the option of removing the dam and installing a fence (for safety reasons) and stairs (for access to the other features of the park), with optional placement of fill in watered areas to minimize any kind of impacts to the downstream area, and repairs to the retaining wall, as needed.

Chairman Harper asked if the wetlands would be more or less after the impoundment. Ms. Wildman replied that it will be very similar, but there will be less inundation under higher flows of the impoundment. Vice Chairman McInerney asked if all of the permitting activity relative to the dam is through state agencies. Mr. Mocko said yes. Mr. Pennington pointed out that this

application is very similar procedurally to the Blackledge River Pond Dam removal. Vice Chairman McInerney asked when the project is anticipated to begin. Ms. Wildman stated next year, and the project itself would take just a few weeks. She noted that the removal of this dam is a little more strategic, and shorter, than the Blackledge Dam removal. Commissioner Kaputa stated that the stairs seem unrelated to the dam removal project, and this fact makes the two dam projects dissimilar. Mr. Mocko stated there may be opportunity to declare the stairway construction is nonregulated by our wetland regulations; the Commission can revisit this once all of the stairway's construction details are known.

Vice Chairman McInerney asked if the applicant ever contemplated taking down the wall. Ms. Wildman stated that the time to do that would have been during the remediation phase, and it would have been more expensive. Mr. Pennington concurred, stating that they looked into that option, but decided against it, primarily for cost-related reasons. The Vice Chairman asked what the biggest risk on this project is. Ms. Wildman said that there is very little risk. Mr. Mocko replied that the biggest risk already occurred, when the previous landowner opened it up to drain the impoundment and created the channel. Ms. Wildman agreed; she noted that all of the sediment has now gone through the system and the cleanup is done. Commissioner Temple countered that the report suggests that there are low-level contaminants present in the sediments. Ms. Wildman stated that it is very low level; the soil meets the Remediation Standard Regulations (RSR) criteria for reuse on the property. Mr. Pennington stated that they can write an opinion for the Commission.

Mr. Mocko asked how much wider they have to open up the existing channel, in order to get to their designed cross-section. Ms. Wildman stated that they are taking out that full section, so they will have plenty of capacity for the flood flows to go through. Commissioner Shea inquired about the concrete spillway that will remain. Ms. Wildman explained that they will leave a portion for historic reasons, as well as to save some money. She noted that this was a request from the Town Council. The spillway will not act as a dam anymore; they will cover it up with sediment so that it does not become a falling hazard. Chairman Harper asked if there is an opportunity for the Beautification Commission to recommend planting. Ms. Wildman said yes, in a few years, once the impoundment area has stabilized, they can plant some trees there. She noted that, at one point, this river had many dams along it.

Chairman Harper asked what exactly is required of the Commission. Mr. Pennington explained that the State does not require anything from the Commission. This meeting is to inform the Commission of what is going on and what will happen. Chairman Harper asked if there are any educational opportunities. Ms. Wildman said yes, especially when the stairs go forward. She suggested the site would be a great opportunity for school field trips. Mr. Mocko added that the Connecticut River Academy might be interested, as an example. Commissioner Kaputa stated that he would like to reread the section on the regulations and give a little thought on the stairs because it is not related to the dam. Chairman Harper stated that this is a fascinating project, and she would like to be apprised when the activities start.

Chairman Harper opened the floor for public comment; there were none.

**END**

