



December 15, 2021

Inland Wetlands and Watercourses Agency
Town of Chester
Chester, CT 06412

** EMAIL DELIVERED **

Re: **Addendum No. 1 Submission**
Inland Wetlands and Watercourses Agency
Applicant: Town of Chester
NRCS Grant
Chester, CT
NLJA #0010-0114

Dear Mr. Chairman:

On behalf of the Town of Chester, we are pleased to electronically submit the following Addendum No. 1 to the Inland Wetlands and Watercourses Agency (IWWA) to address comments regarding the subject project Application for Permit at the IWWA Regular Meeting held December 6, 2021.

Item 1: (1) copy of Addendum No. 1.

If there are any questions, feel free to contact me.

Very truly yours,

NATHAN L. JACOBSON & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'Matt D. Carroll'.

Matthew D. Carroll

MDC/mdc

Encl.

cc: Chester Planning and Zoning Commission, via email
Lauren Gister, First Selectwoman, via email
John Divis, Road Foreman, via email
Howard Pfrommer, P.E., via email
DocStar, w/encl.

L:\00100114 Sept 2018 Flooding\NRCS Grant\Permits\Chester IWWA\Addendum 1\00. IWWA Addendum letter.docx

ADDENDUM No. 1**INLAND WETLANDS AND WATERCOURSES AGENCY
APPLICATION FOR PERMIT****NRCS GRANT**

IWWA Regular Meeting held December 6, 2021, at 7:00 PM, at the Town Hall. The IWWA comments as follows:

1. All excavations to occur in the dry using a bypass pipe to convey brook flow.
2. Include specification that construction equipment entering the watercourse shall be operated with a vegetable based hydraulic fluid.
3. Provide documentation that a hydraulic analysis is not needed.
4. Provide documentation that a Dam Safety permit is not needed for Site 2 proposed work.

Response to Comment 1:

Per the New England District of the U.S. Army Corps of Engineers Department of the Army General Permits for the State of Connecticut states that *"Unconfined, in-stream work, not including installation and removal of cofferdams, is limited to the low-flow period, June 1 through September 30 unless CT DEEP requires different resource-driven time of year restriction"*. Per Connecticut Department of Energy and Environmental Protection (CTDEEP) Fisheries Consultation Form for this specific project, dated January 14, 2021, *"All unconfined in-stream work should be restricted to the period of June 1 to September 30, inclusive"*. It has been the intent of this project to conduct the proposed work during this timeframe, which we presented in the original IWWA Application for Permit dated November 4, 2021; specifically, the *Project Description* states, *"The proposed unconfined work is anticipated to be constructed during summer of 2022 starting on the 1st day of June and a completion date by the 30th day of September"*.

After the IWWA December 6, 2021, meeting, I contacted CTDEEP Fisheries requesting clarity on what type of work is included in unconfined in-stream work, their response is as follows:

"Many projects have some work that cannot be done in the dry behind cofferdams. Examples of these activities include installing fish habitat structures, rock weirs and vanes, and streambed grading. To minimize the impact on aquatic resources these types of unconfined in-water activities are usually restricted to the period from June 1 to September 30, inclusive. This means that the contractor can work in the stream with equipment, but only during this period. In some waterbodies which have spawning populations of diadromous American Shad, Blueback Herring, and Sea Lamprey the time-of year restriction may be extended to run from July 1 to September 30. Great Brook and Pattaconk Brook only have Alewife which spawn earlier in the spring, so the restriction only extends to June 1." See Appendix A for CTDEEP Fisheries correspondence.

Therefore, we respectfully request that the IWWA members reconsider the need for bypass pipes to allow excavations to occur in the dry.

Response to Comment 2:

The following has been added to Project Note 11 on drawings entitled NRCS Grant, Issued for Permitting, Sheet 23 Project Notes and Site Details:

CONSTRUCTION VEHICLES ENTERING WATERCOURSE(S) SHALL HAVE HYDRAULIC SYSTEMS OPERATED WITH A VEGETABLE BASED HYDRAULIC FLUID.

Response to Comment 3:

A hydraulic analysis has not been performed as the proposed removal of aggraded materials and Brook grading at Sites 1 through 6 is proposed to bring brook grades back to pre-storm conditions based on past bridge replacement design drawings and/or hydraulic analysis. Site 4 includes filling in a scour hole upstream of the culvert south barrel and placing a partially embedded rock weir downstream of the culvert. Site 6 includes a fisheries pool habitat downstream of the culvert center barrel. These proposed activities and implementation of CTDEEP Fisheries recommendations were discussed with CTDEEP Land and Water Resource Division (LWRD) which found them to not warrant a hydraulic analysis; see Appendix B for CTDEEP LWRD correspondence.

Response to Comment 4:

During the design phase we reached out to CTDEEP Dam Safety to notify them of the Site 2 proposed work in the Dam's discharge channel. CTDEEP Dam Safety reviewed the Site Plan provided and responded that the proposed work would not need Dam Safety permitting; see Appendix C for CTDEEP Dam Safety correspondence.

Appendix A

Correspondence with CTDEEP Fisheries.

- a. Email dated December 7, 2021, from CTDEEP Fisheries to Nathan L. Jacobson & Associated, Inc. stating types of unconfined in-stream work.
- b. CTDEEP Fisheries Consultation Form, dated January 14, 2021.

FISHERIES

Matt D. Carroll

From: Williams, Bruce <Bruce.Williams@ct.gov>
Sent: Tuesday, December 7, 2021 4:41 PM
To: Matt D. Carroll
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Matt,

Many projects have some work that cannot be done in the dry behind cofferdams. Examples of these activities include installing fish habitat structures, rock weirs and vanes, and streambed grading. To minimize the impact on aquatic resources these types of unconfined in-water activities are usually restricted to the period from June 1 to September 30, inclusive. This means that the contractor can work in the stream with equipment, but only during this period. In some waterbodies which have spawning populations of diadromous American Shad, Blueback Herring, and Sea Lamprey the time-of year restriction may be extended to run from July 1 to September 30. Great Brook and Pattaconk Brook only have Alewife which spawn earlier in the spring, so the restriction only extends to June 1.

If the project is receiving federal funds, it may require a NOAA Essential Fish Habitat (EFH) review. They tend to be more restrictive and require that all unconfined in-water work be restricted to the period from July 1 to September 30 for all waterbodies that have diadromous fish runs.

Bruce

Bruce Williams
Fisheries Biologist
Diadromous Fish and Habitat Conservation and Enhancement Programs
Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources – Fisheries Division
Marine Headquarters - P.O. Box 719 / 333 Ferry Rd.
Old Lyme, CT 06371
P: 860.447.4317 / C: 860.876.9140 / F: 860.434.6150 / E: bruce.williams@ct.gov



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***Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply***

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Tuesday, December 7, 2021 11:23 AM
To: Williams, Bruce <Bruce.Williams@ct.gov>
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Bruce,

Attached is the CTDEEP Fisheries recommendations provided for the NRCS project, recommendation 1 states “*All unconfined in-stream work should be restricted to the period from June 1 to September 30, inclusive*”. I’m looking for some clarity in what *unconfined in-stream work* includes, does this mean a contractor can enter the brook and excavate to remove aggraded materials, grade streambed, etc. in open water; i.e. this type of work does not need to happen in the dry behind a cofferdam?

Thanks,

Matt

Matt Carroll



Nathan L. Jacobson & Associates
Consulting Civil and Environmental Engineers Since 1972

86 Main Street, P.O. Box 337, Chester, Connecticut 06412-0337
Tel: 860.526.9591 • Fax: 860.526.5416
www.nlja.com • mattcarroll@nlja.com

From: Williams, Bruce <Bruce.Williams@ct.gov>
Sent: Friday, February 5, 2021 12:23 PM
To: Matt D. Carroll <mattcarroll@nlja.com>
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

Matt,
The boulders can be closer to the 3’ diameter size, but considering the nature of the stream I wouldn’t go much smaller.

Bruce

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Friday, February 5, 2021 10:24 AM
To: Williams, Bruce <Bruce.Williams@ct.gov>
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

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Glad I asked... the boulders are big.

Thanks for your assistance!

Matt

From: Williams, Bruce <Bruce.Williams@ct.gov>
Sent: Thursday, February 4, 2021 4:14 PM

To: Matt D. Carroll <mattcarroll@nlja.com>

Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

Matt,

Ideally, the weir should be composed of round stone approximately 3'-4' in diameter. In this situation I think a single row of boulders is fine, but at the apex the boulders should be set just slightly above water level and slope upward to tie into the streambanks. There should also be small gaps between the boulders at the apex to allow for fish passage at low flows. I might need to look at the site again to determine the exact placement of the weir, but my guess is that the upstream apex should be approximately 10' – 12' downstream of the culvert. When the weir is installed, I can be available to provide onsite guidance.

Bruce

From: Matt D. Carroll <mattcarroll@nlja.com>

Sent: Thursday, February 4, 2021 3:50 PM

To: Williams, Bruce <Bruce.Williams@ct.gov>

Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

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Thanks, Bruce.

I'll incorporate the rock weir into the proposed work. I do have a few questions, or rather looking for your recommendation:

1. Boulder size?
2. Type of boulder - angular or rounded?
3. How far downstream of the culvert should the weir be placed?

Thanks,

Matt

From: Williams, Bruce <Bruce.Williams@ct.gov>

Sent: Thursday, February 4, 2021 2:56 PM

To: Matt D. Carroll <mattcarroll@nlja.com>

Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

Hi Matt,

I still recommend installing a rock weir downstream of the site 4 culvert. I know the flood event that caused most of the problems at this site was rather catastrophic, but I think without a weir there is a high probability that this culvert could become perched again and/or lose the substrate placed within it. The rock weir will help backflood the entrance of the culvert, provide grade control, and help keep the substrate in the culvert channel. If I had reviewed the original culvert replacement project back in 1990, I probably would have asked for a rock weir. It may not have prevented all the scour that occurred, but it probably would have reduced it. There are no barriers to fish migration downstream of this site and the Fisheries Division would like to maintain passage at this culvert. I have also attached some general plans for rock weirs used for grade control.

Let me know if you have any more questions.

Thanks,

Bruce Williams
Fisheries Biologist
Diadromous Fish and Habitat Conservation and Enhancement Programs
Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources – Fisheries Division
Marine Headquarters - P.O. Box 719 / 333 Ferry Rd.
Old Lyme, CT 06371
P: 860.447.4317 / F: 860.434.6150 / E: bruce.williams@ct.gov



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Ensuring a clean, affordable, reliable, and sustainable energy supply***

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, February 4, 2021 11:33 AM
To: Williams, Bruce <Bruce.Williams@ct.gov>
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Bruce,

Please find attached Site 4 Plan and Cross Sections sheets and 1989 Profile for your review. FYI... the 1989 drawing is based on NGVD29 so invert elevations are $\approx +1.0$ difference of NAVD88 Site 4 drawings.

Site 4 culvert was replaced in 1990 with a twin precast box culvert; our office prepared the contract documents which called for 1' depth of natural brook bottom material placed on the culvert floors (invert applied at top of brook material), and the upstream and downstream channel graded with a uniform slope matching the box culvert inverts.

As you mentioned in the attached Fisheries Consultation, Site 4 has a scour hole upstream of the south culvert. My intent, as shown on the Site 4 drawings, is to remove aggraded materials and regrade the channel as constructed in 1990 with the addition of a low flow channel to maintain the thalweg through the south culvert as recommended.

Does the proposed regrading and low flow channel eliminate the need for a rock weir in the downstream channel as recommended in the Fisheries Consultation?

Thank you and feel free to call to discuss.

Matt Carroll

Matt Carroll



Nathan L. Jacobson & Associates
Consulting Civil and Environmental Engineers Since 1972

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Tel: 860.526.9591 · Fax: 860.526.5416
www.nlja.com · mcarroll@nlja.com

From: Williams, Bruce <Bruce.Williams@ct.gov>
Sent: Thursday, January 14, 2021 4:58 PM
To: Matt D. Carroll <mattcarroll@nlja.com>
Subject: RE: Fisheries Consultation Form_NRCS GRANT - Chester CT

Matt,
Please find attached the fisheries consultation for the proposed stream bank stabilization and debris removal project in Chester. Please contact me if you have any questions.

Thanks,

Bruce Williams
Fisheries Biologist
Diadromous Fish and Habitat Conservation and Enhancement Programs
Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources – Fisheries Division
Marine Headquarters - P.O. Box 719 / 333 Ferry Rd.
Old Lyme, CT 06371
P: 860.447.4317 / F: 860.434.6150 / E: bruce.williams@ct.gov



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Ensuring a clean, affordable, reliable, and sustainable energy supply*

From: Ortiz, Madeline <Madeline.Ortiz@ct.gov> **On Behalf Of** DEEP Inland Fisheries
Sent: Thursday, January 14, 2021 10:25 AM
To: Williams, Bruce <Bruce.Williams@ct.gov>
Subject: FW: Fisheries Consultation Form_NRCS GRANT - Chester CT

Hi Bruce,
Please see attached.
Maddie

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 9:07 AM

To: DEEP Inland Fisheries <DEEP.Inland.Fisheries@ct.gov>

Cc: 'firstselectman@chesterct.org' <firstselectman@chesterct.org>; Chester Administrative Assistant <adminassistant@chesterct.org>; J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>

Subject: Fisheries Consultation Form_NRCS GRANT - Chester CT

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Hi,

Please find attached a DEEP Fisheries Consultation Form for the NRCS Grant project located in Chester, Connecticut.

Feel free to contact me to discuss.

Matt

Matt Carroll



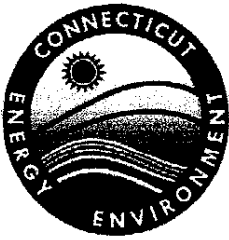
Nathan L. Jacobson & Associates

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**Connecticut Department of
Energy & Environmental Protection**
Bureau of Natural Resources
Fisheries Division

DEEP Fisheries Consultation Form

To the Applicant - Prior to the submission of your license application to the Connecticut Department of Energy & Environmental Protection (DEEP) Water Planning and Management Division (WPMD) or Land and Water Resources Division (LWRD), please complete Part I below and e-mail the following to deep.inland.fisheries@ct.gov:

1. this completed DEEP *Fisheries Consultation Form*;
2. a site location map,
3. a PDF version of the proposed project plans including a site survey of existing conditions (if available), and
4. photos of the site.

Fisheries Division staff will contact you if further details are needed. Once the Fisheries Division staff returns the completed form to you, please include the form, and any signed plans (if applicable) in your license application submittal to DEEP.

Part I: Applicant and Site Information (to be completed by APPLICANT)

1. Applicant/Registrant Information

Name: Town of Chester, c/o Lauren Gister

Mailing Address: 203 Middlesex avenue

City/Town: Chester

State: CT

Zip Code: 06412

Business Phone: 860-526-0013

Ext.: 202

Contact Person: Lauren Gister

Phone: 860-526-0013 Ext: 202

E-mail Address: firstselectman@chesterct.org

2. Engineer/Surveyor/Agent Information (list as applicable)

Name: Nathan L. Jacobson & Associates, Inc.

Mailing Address: 86 Main Street

City/Town: Chester

State: CT

Zip Code: 06412

Business Phone: 860-526-9591

Ext.: 240

Contact Person: Matt Carroll

Phone: 860-526-9591 Ext: 240

E-mail Address: mattcarroll@nlja.com

Service Provided: Engineering

3. Site Location:

Name of Site: Multiple - see Project Description

Address of Site or Location Description: Multiple - see Project Description

City/Town: Chester

State: CT

Zip Code: 06412

Parcel Location/Tax Assessor's Reference: Map _____ Block _____ Lot _____

Name of Stream or Waterbody: Pattaconk Brook & Great Brook

4. Activity: Check the box best describing your activity: (check all that apply):

- new public/fishing access;
- new docks and marinas on the Connecticut River;
- coastal/tidal dredging projects;
- activities in inland/non-tidal waterbodies and watercourses;
- withdrawal of water from a non-tidal/inland river, stream, pond or lake;
- withdrawal of water from a wetland, marsh, swamp, or bog hydrologically connected to a non-tidal/inland river, stream, pond or lake;
- withdrawal of groundwater from stratified drift deposits hydrologically connected to a non-tidal/inland river, stream, pond or lake.

Note: Fisheries consultation is **not required** for docks and marinas on Long Island Sound.

Part I: Applicant and Site Information (to be completed by APPLICANT) (continued)

5. DEEP Pre-application Contact: Indicate name of permit analyst or engineer, if applicable.
See attached Report of Meeting dated June 17, 2019 rev 6/18.

6. Project Description: Provide or attach a brief, but thorough, description of the project including any measures to protect, enhance or restore fish populations:
See attached Project Description.

Part II: Fisheries Determination (To be completed by DEEP Fisheries Staff only)

To Fisheries Staff - This completed consultation form is required to be submitted as part of an application to DEEP. The application has not yet been submitted to DEEP. Please review the enclosed materials and determine whether the project will significantly impact any fisheries or fisheries habitat. You may provide comments or recommendations regarding the proposal. Send this completed form to the applicant and copy the DEEP analyst, if known, or the applicable WPMD/LWRD Supervisor. If the proposed work **WILL** significantly impact any fisheries and/or habitat or if you have any comments or concerns regarding the regulatory review for this project, contact the DEEP analyst, if known, or the applicable WPMD/LWRD Supervisor.

DEEP FISHERIES DIVISION DETERMINATION

Date Consultation Form received: 01/14/21

Please check applicable boxes and return the completed Consultation Form to the applicant:

- I have determined that the work described in Part I of this form and attachments **WILL NOT** significantly impact any fisheries and/or habitat;
- I have determined that the work described in Part I of this form and attachments **WILL NOT** significantly impact any fisheries and/or habitat **if the below Recommendations are followed**; and/or,
- I have determined that the work described in Part I of this form and attachments **WILL NOT** significantly impact any fisheries and/or habitat **if the design features shown on the attached plans are incorporated**. Fisheries staff to sign and date plans and return to the applicant with the completed Consultation Form.

COMMENTS/RECOMMENDATIONS (or check here if these are attached following this page:):

_____ See attached sheet.

"By entering my name below, I agree that I am providing my legal signature, and am legally bound by the determination above."

<i>Bruce H Williams</i>	01/14/21
Signature of Fisheries Division Staff	Date
Bruce H Williams	E.P. Fisheries Biologist
Print Name of Fisheries Division Staff	Title

COMMENTS/RECOMMENDATIONS:

The Fisheries Division makes the following recommendations on the proposed Town of Chester stream bank stabilization and debris removal project on Great Brook and Pattaconk Brook in Chester:

1. All unconfined in-stream work should be restricted to the period from June 1 to September 30, inclusive. This timeframe coincides with historic low stream flows in Connecticut and will minimize the effects of unconfined in-stream work on aquatic habitat. The timeframe will also serve to protect seasonal migrations, spawning, egg incubation, and fry development of resident and migratory fish species.
2. At site #4 (Great Brook near 19 North Main Street), the substrate should be graded in such a manner that thalweg remains in the southern barrel of the culvert. Scour has also caused the southern barrel of the culvert to become perched. To back-flood the entrance of culvert for fish passage and prevent further scour, a rock weir should be constructed downstream of the culvert. The design of the culvert should be similar to the one in the attached plans and Fisheries Division staff should be onsite during installation.
3. At site #5 (Great Brook near 26 Water Street), the substrate should be graded in such a manner that the thalweg remains in the western barrel of the culvert.
4. At site #6 (Pattaconk Brook near the intersection of Bokum Road and West Main Street), the substrate should be graded in such a manner that the thalweg remains in the center barrel of the culvert.

Appendix B

Correspondence with CTDEEP LWRD.

- a. Email dated January 14, 2021, from CTDEEP Land and Water Resources Division to Nathan L. Jacobson & Associated, Inc. stating no hydraulic analysis needed for bank stabilization at Site 2 and 3.
- b. Email dated January 18, 2021, from CTDEEP Land and Water Resources Division to Nathan L. Jacobson & Associated, Inc. stating no hydraulic analysis needed for the rock weir at Site 4.
- c. Email dated February 4, 2021, from CTDEEP Land and Water Resources Division to Nathan L. Jacobson & Associated, Inc. stating no hydraulic analysis needed for brook regrading at Site 4.

Matt D. Carroll

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, January 14, 2021 11:09 AM
To: Matt D. Carroll
Cc: J. Howard Pfrommer, P.E.; Jacobson, Susan
Subject: RE: NRCS Grant - Chester CT

Provided you can demonstrate that the post construction elevations / topography will be at or below existing elevations, no hydraulic analysis will be required.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 11:06 AM
To: Clark, Colin <Colin.Clark@ct.gov>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Thank you for your quick response!

A quick follow up... the anticipated bank stabilization involves placing riprap above existing riprap where erosion has occurred, the intent is to "bury" the new riprap so to not change current bank elevations (see attached photo). Does this stabilization approach eliminate the need of a hydraulic analysis? Or does the introduction of riprap material warrant a hydraulic analysis?

Thanks,

Matt

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, January 14, 2021 10:45 AM
To: Matt D. Carroll <mattcarroll@nlja.com>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

Hello Matt,

If it is only removal of materials, then no analysis is required.

Colin.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 10:39 AM
To: Clark, Colin <Colin.Clark@ct.gov>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>
Subject: NRCS Grant - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Colin,

Looking for guidance with respect to the NRCS Grant project located in Chester, Connecticut. The project covers six individual sites, five along Great Brook and one along Pattaconk Brook.

Back in June 2019, a site meeting was held to discuss proposed work and CTDEEP permitting, attached is a report of meeting. At the meeting, it was said that a CTDEEP permit is not needed if only removing materials, but that a permit is needed if materials are to be placed in the channel or banks.

At this time, we are preparing an Army Corps of Engineers Pre-Construction Notification, which requires a CTDEEP LWRD License Application Form L, as we anticipate repairing some bank erosion at one of the sites.

From CTDEEP LWRD License Application Form L Part VI:

3. Is the proposed activity located in a FEMA-designated Floodway ✓ Yes No

If yes, the Engineering Report must include a statement signed by a registered professional engineer that there is no- rise. This documentation must be supported by technical data that is derived from a standard step-backwater computer model utilizing source data from the Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM). If a No-rise Certification form is available through the municipality, please include it in the Engineering Report. For further information on No-Rise Certification, see [No-Rise Certification for Floodways | FEMA.gov](https://www.fema.gov/no-rise-certification)

Does this mean that a hydraulic analysis is required for all six sites? We were under the impression that removal of material would not require a hydraulic analysis.

I also reviewed the CTDEEP Hydraulic Analysis Guidance Document (rev. 01/26/05) which states hydraulic analysis are required for “channel modifications including the placement of bank stabilization material, fill placed in a floodplain, excavation in a floodplain, or any combination of fill and excavation”. This statement leads me to believe all six sites will require a hydraulic analysis.

Thank you in advance for your time and feel free to call to discuss.

Matt Carroll

Matt Carroll



Nathan L. Jacobson & Associates

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86 Main Street, P.O. Box 337, Chester, Connecticut 06412-0337

Tel: 860.526.9591 • Fax: 860.526.5416

www.nlja.com • mcarroll@nlja.com

Matt D. Carroll

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Monday, January 18, 2021 1:26 PM
To: Matt D. Carroll
Cc: J. Howard Pfrommer, P.E.; Jacobson, Susan
Subject: Re: NRCS Grant - Chester CT

No, it will not trigger the need for an analysis.
Thanks,
Colin

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Monday, January 18, 2021 1:02 PM
To: Clark, Colin
Cc: J. Howard Pfrommer, P.E.; Jacobson, Susan
Subject: RE: NRCS Grant - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Colin,

We just received the attached rock weir detail from CTDEEP Fisheries, they would like us to incorporate a rock weir just downstream of the Site 4 box culvert (double barrel).

Will the placement of a rock weir like that shown in the attached drawing require a hydraulic analysis?

Thanks,

Matt

Matt Carroll



Nathan L. Jacobson & Associates
Consulting Civil and Environmental Engineers Since 1972

86 Main Street, P.O. Box 337, Chester, Connecticut 06412-0337
Tel: 860.526.9591 • Fax: 860.526.5416
www.nlja.com • mcarroll@nlja.com

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, January 14, 2021 11:09 AM
To: Matt D. Carroll <mattcarroll@nlja.com>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

Provided you can demonstrate that the post construction elevations / topography will be at or below existing elevations, no hydraulic analysis will be required.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 11:06 AM
To: Clark, Colin <Colin.Clark@ct.gov>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

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Thank you for your quick response!

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Thanks,

Matt

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, January 14, 2021 10:45 AM
To: Matt D. Carroll <mattcarroll@nlja.com>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

Hello Matt,

If it is only removal of materials, then no analysis is required.

Colin.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 10:39 AM
To: Clark, Colin <Colin.Clark@ct.gov>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>
Subject: NRCS Grant - Chester CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Colin,

Looking for guidance with respect to the NRCS Grant project located in Chester, Connecticut. The project covers six individual sites, five along Great Brook and one along Pattaconk Brook.

Back in June 2019, a site meeting was held to discuss proposed work and CTDEEP permitting, attached is a report of meeting. At the meeting, it was said that a CTDEEP permit is not needed if only removing materials, but that a permit is needed if materials are to be placed in the channel or banks.

At this time, we are preparing an Army Corps of Engineers Pre-Construction Notification, which requires a CTDEEP LWRD License Application Form L, as we anticipate repairing some bank erosion at one of the sites.

From CTDEEP LWRD License Application Form L Part VI:

3. Is the proposed activity located in a FEMA-designated Floodway ✓ Yes No

If yes, the Engineering Report must include a statement signed by a registered professional engineer that there is no- rise. This documentation must be supported by technical data that is derived from a standard step-backwater computer model utilizing source data from the Flood Insurance Rate Map (FIRM) or Flood Boundary and Floodway Map (FBFM). If a No-rise Certification form is available through the municipality, please include it in the Engineering Report. For further information on No-Rise Certification, see [No-Rise Certification for Floodways | FEMA.gov](#)

Does this mean that a hydraulic analysis is required for all six sites? We were under the impression that removal of material would not require a hydraulic analysis.

I also reviewed the CTDEEP Hydraulic Analysis Guidance Document (rev. 01/26/05) which states hydraulic analysis are required for “channel modifications including the placement of bank stabilization material, fill placed in a floodplain, excavation in a floodplain, or any combination of fill and excavation”. This statement leads me to believe all six sites will require a hydraulic analysis.

Thank you in advance for your time and feel free to call to discuss.

Matt Carroll

Matt Carroll



Nathan L. Jacobson & Associates
Consulting Civil and Environmental Engineers Since 1972

86 Main Street, P.O. Box 337, Chester, Connecticut 06412-0337

Tel: 860.526.9591 • Fax: 860.526.5416

www.nlja.com • mcarroll@nlja.com

Matt D. Carroll

From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, February 4, 2021 10:28 AM
To: Matt D. Carroll
Cc: J. Howard Pfrommer, P.E.; Jacobson, Susan
Subject: RE: NRCS Grant - Chester CT

Follow Up Flag: Follow up
Flag Status: Flagged

No I do not think Hydraulic Analysis should be required, provided you can demonstrate that you are converting conditions to pre-existing conditions.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, February 4, 2021 9:59 AM
To: Clark, Colin <Colin.Clark@ct.gov>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

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Hi Colin,

Please find attached Site 4 Plan and Cross Sections sheets and 1989 Profile for your review. FYI... the 1989 drawing is based on NGVD29 so invert elevations are $\approx +1.0$ difference of NAVD88 Site 4 drawings.

Site 4 culvert was replaced in 1990 with a twin precast box culvert; our office prepared the contract documents which called for 1' depth of natural brook bottom material placed on the culvert floors (invert applied at top of brook material), and the upstream and downstream channel graded with a uniform slope matching the box culvert inverts.

Currently, Site 4 has a scour hole upstream of the south culvert. My intent, as shown on the Site 4 drawings, is to remove aggraded materials and regrade the channel as constructed in 1990 with the addition of a low flow channel upstream and through the south culvert to maintain the thalweg as recommended by Fisheries.

My question is, will filling in the scour hole to regrade upstream channel to 1990 construction conditions trigger a hydraulic analysis? See attached cross section views B-B & C-C for reference.

Thank you and feel free to call to discuss.

Matt Carroll

Matt Carroll



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From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Monday, January 18, 2021 1:26 PM
To: Matt D. Carroll <mattcarroll@nlja.com>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: Re: NRCS Grant - Chester CT

No, it will not trigger the need for an analysis.
Thanks,
Colin

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Monday, January 18, 2021 1:02 PM
To: Clark, Colin
Cc: J. Howard Pfrommer, P.E.; Jacobson, Susan
Subject: RE: NRCS Grant - Chester CT

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Hi Colin,

We just received the attached rock weir detail from CTDEEP Fisheries, they would like us to incorporate a rock weir just downstream of the Site 4 box culvert (double barrel).

Will the placement of a rock weir like that shown in the attached drawing require a hydraulic analysis?

Thanks,

Matt

Matt Carroll



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From: Clark, Colin <Colin.Clark@ct.gov>
Sent: Thursday, January 14, 2021 11:09 AM
To: Matt D. Carroll <mattcarroll@nlja.com>
Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>
Subject: RE: NRCS Grant - Chester CT

Provided you can demonstrate that the post construction elevations / topography will be at or below existing elevations, no hydraulic analysis will be required.

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, January 14, 2021 11:06 AM
To: Clark, Colin <Colin.Clark@ct.gov>

Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>

Subject: RE: NRCS Grant - Chester CT

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Thank you for your quick response!

A quick follow up... the anticipated bank stabilization involves placing riprap above existing riprap where erosion has occurred, the intent is to "bury" the new riprap so to not change current bank elevations (see attached photo). Does this stabilization approach eliminate the need of a hydraulic analysis? Or does the introduction of riprap material warrant a hydraulic analysis?

Thanks,

Matt

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Sent: Thursday, January 14, 2021 10:45 AM

To: Matt D. Carroll <mattcarroll@nlja.com>

Cc: J. Howard Pfrommer, P.E. <hpfrommer@nlja.com>; Jacobson, Susan <Susan.Jacobson@ct.gov>

Subject: RE: NRCS Grant - Chester CT

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Matt Carroll

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Appendix C

Email correspondence with CTDEEP Dam Safety.

- a. Email dated February 4, 2021, from CTDEEP Dam Safety Regulatory Division to Nathan L. Jacobson & Associated, Inc. stating no Dam Safety permit needed at Site 2.

DAM SAFETY

Matt D. Carroll

From: Parekh, Kartik <Kartik.Parekh@ct.gov>
Sent: Thursday, February 4, 2021 1:44 PM
To: Matt D. Carroll
Cc: Hall, Ivonne
Subject: RE: Proposed Activity

Hello Matt,

Based on my review of the information you provided, it does not appear that the proposed work would need DEEP Dam Safety permitting, assuming the following is true:

- There is no alteration to the dam structure itself.
- No excavation is required at the dam. The work appears to be at the base of the spillway.
- No equipment is placed on the dam that may cause damage to the structure.

Be sure to check with the town's Inland Wetlands agency for any applicable permitting requirements.

Thanks.

Kartik Parekh
Dam Safety Section
Water Planning & Management Division
Bureau of Water Protection & Land Reuse
Connecticut Department of Energy and Environmental Protection
79 Elm Street, Hartford, CT 06106-5127
P: 860.424.3615 | F: 860.424.4075 | E: kartik.parekh@ct.gov



www.ct.gov/deep/dams

*Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.*

From: Matt D. Carroll <mattcarroll@nlja.com>
Sent: Thursday, February 4, 2021 11:13 AM
To: Parekh, Kartik <Kartik.Parekh@ct.gov>
Subject: Proposed Activity

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Kartik,

Hope all is well.

The Town of Chester has authorized our firm to prepare contract documents for a project involving the removal of aggraded material from Great Brook and Pattaconk Brook that occurred during a significant storm event. Site 2 of our drawings is North Main Street over Great Brook, this site is just 35'± downstream of CT DAM ID #2608; see attached site plan, location map, and photo for reference. Existing riprap has been displaced throughout and it is our intent to regrade

the channel between the dam and culvert back to pre-existing conditions. We do not anticipate the need to place new riprap.

Please let us know if a Dam Safety general permit is required to move displaced riprap to its original grades.

Thank you and feel free to contact me with any questions.

Matt

Matt Carroll



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