

STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

DATE: October 24, 2019

FROM: *A.S.* Andrew O'Sullivan
Wetlands Program Manager

AT (OFFICE): Department of
Transportation

SUBJECT Dredge & Fill Application
Wakefield, M312-13

Bureau of
Environment

TO Craig Rennie,
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT District 3 for the subject Major impact project. This project is classified as major per Env-Wt 303.02(p). The project is located on NH Route 153 in the Town of Wakefield, NH. The proposed work consists of replacing the existing 28"x 20" squash twin metal pipes with an 8'x4' concrete box.

This project was reviewed at the Natural Resource Agency Coordination Meeting on August 15th 2018. A copy of the minutes has been included with this application package. A copy of this application and plans can be accessed on the Departments website via the following link: <http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm>

Mitigation is not proposed for this project as described in the mitigation narrative included within this application package.

The lead people to contact for this project are William Rollins, Highway Maintenance District 3 (448-2654 or william.rollins@dot.nh.gov) or Matt Urban, Chief Operations Management Section (271-3226 or matt.urban@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #585162) in the amount of \$200.

If and when this application meets with the approval of the Bureau, please send the permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

AMO:mru
Enclosures

cc:
BOE Original
Town of Wakefield (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Mark Kern, US Environmental Protection Agency (via electronic notification)
Michael Hicks, US Army Corp of Engineers (via electronic notification)
Kevin Nyhan, BOE (via electronic notification)



WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management



Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: [RSA 482-A/ Env-Wt 100-900](#)

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to [Guidance Document A](#) for instructions.

Standard Review (Minimum, Minor or Major Impact) Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:
If mitigation is required, a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if mitigation is required, please refer to the [Determine if Mitigation is Required Frequently Asked Questions](#).

Mitigation Pre-Application Meeting Date: Month: ___ Day: ___ Year: ____

N/A - Mitigation is not required

3. PROJECT LOCATION:
Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: **NH Route 153** TOWN/CITY: **Wakefield**

TAX MAP: **NA** BLOCK: **NA** LOT: **NA** UNIT: **NA**

USGS TOPO MAP WATERBODY NAME: **Province Lake** NA STREAM WATERSHED SIZE: **948 acres** NA

LOCATION COORDINATES (if known): **N 43 40'58.70" W 70 58'53.19"** Latitude/Longitude UTM State Plane

4. PROJECT DESCRIPTION:
Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

Work to consist of the removal of twin 28"x20"x50' corrugated metal arch pipes and replacing them with a 8' x 4' concrete box culvert at the same elevation.

5. SHORELINE FRONTAGE:

N/A This does not have shoreline frontage. SHORELINE FRONTAGE: **40 feet**

Shoreline Frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line ([Env-Wt 101.89](#)).

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:
Please indicate if any of the following permit applications are required and, if required, the status of the application.
To determine if other Land Resources Management Permits are required, refer to the [Land Resources Management Webpage](#).

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Individual Sewerage Disposal per RSA 485-A:2	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Subdivision Approval Per RSA 485-A	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED
Shoreland Permit Per RSA 483-B	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	_____	<input type="checkbox"/> APPROVED <input type="checkbox"/> PENDING <input type="checkbox"/> DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:
See the [Instructions & Required Attachments](#) document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **18** - **1237**


b. This project is within a [Designated River](#) corridor. The project is within ¼ mile of: _____; and date a copy of the application was sent to the [Local River Management Advisory Committee](#): Month: ___ Day: ___ Year: ____

N/A – This project is not within a Designated River corridor.

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

8. APPLICANT INFORMATION (Desired permit holder)			
LAST NAME, FIRST NAME, M.I.: NH Dept. of Transportation			
TRUST / COMPANY NAME: NH Dept. of Transportation		MAILING ADDRESS: PO Box 483	
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03302
EMAIL or FAX:		PHONE:	
ELECTRONIC COMMUNICATION: By initialing here: _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
9. PROPERTY OWNER INFORMATION (If different than applicant)			
LAST NAME, FIRST NAME, M.I.: NH Dept. of Transportation			
TRUST / COMPANY NAME: NH Dept. of Transportation		MAILING ADDRESS: PO BOX 483	
TOWN/CITY: Concord		STATE: NH	ZIP CODE: 03302
EMAIL or FAX:		PHONE:	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
10. AUTHORIZED AGENT INFORMATION			
LAST NAME, FIRST NAME, M.I.: Alan G. Hanscom		COMPANY NAME: NH Department of Transportation	
MAILING ADDRESS: 2 Sawmill Road			
TOWN/CITY: Gilford		STATE: NH	ZIP CODE: 03249
EMAIL or FAX: alan.hanscom@dot.nh.gov		PHONE: 603-524-6667	
ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.			
11. PROPERTY OWNER SIGNATURE:			
See the Instructions & Required Attachments document for clarification of the below statements			
By signing the application, I am certifying that:			
<ol style="list-style-type: none"> I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for National Historic Preservation Act (NHPA) 106 compliance. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate. I understand that the willful submission of falsified or misrepresented information to the NHDES is a criminal act, which may result in legal action. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned 			
 Property Owner Signature		Alan G. Hanscom Print name legibly	/ / 4/15/2019 Date

lrn@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

www.des.nh.gov

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name legibly	Date
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DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
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DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact.

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.

Intermittent Streams: linear footage distance of disturbance is measured along the thread of the channel.

Perennial Streams/ Rivers: the total linear footage distance is calculated by summing the lengths of disturbance to the channel and each bank.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Scrub-shrub wetland	<input type="checkbox"/> ATF	100 <input type="checkbox"/> ATF
Emergent wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Wet meadow	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Intermittent stream channel	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Perennial Stream / River channel	/ <input type="checkbox"/> ATF	50 / 25 <input type="checkbox"/> ATF
Lake / Pond	/ <input type="checkbox"/> ATF	250 / 40 <input type="checkbox"/> ATF
Bank - Intermittent stream	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Perennial stream / River	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Lake / Pond	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Tidal water	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Salt marsh	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Sand dune	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Prime wetland buffer	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Previously-developed upland in TBZ	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Lake / Pond	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Docking - Tidal Water	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Vernal Pool	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
TOTAL	/	400 / 65

15. APPLICATION FEE: See the [Instructions & Required Attachments](#) document for further instruction

Minimum Impact Fee: Flat fee of \$ 200

Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 400 sq. ft. X \$0.20 = \$ 80.00

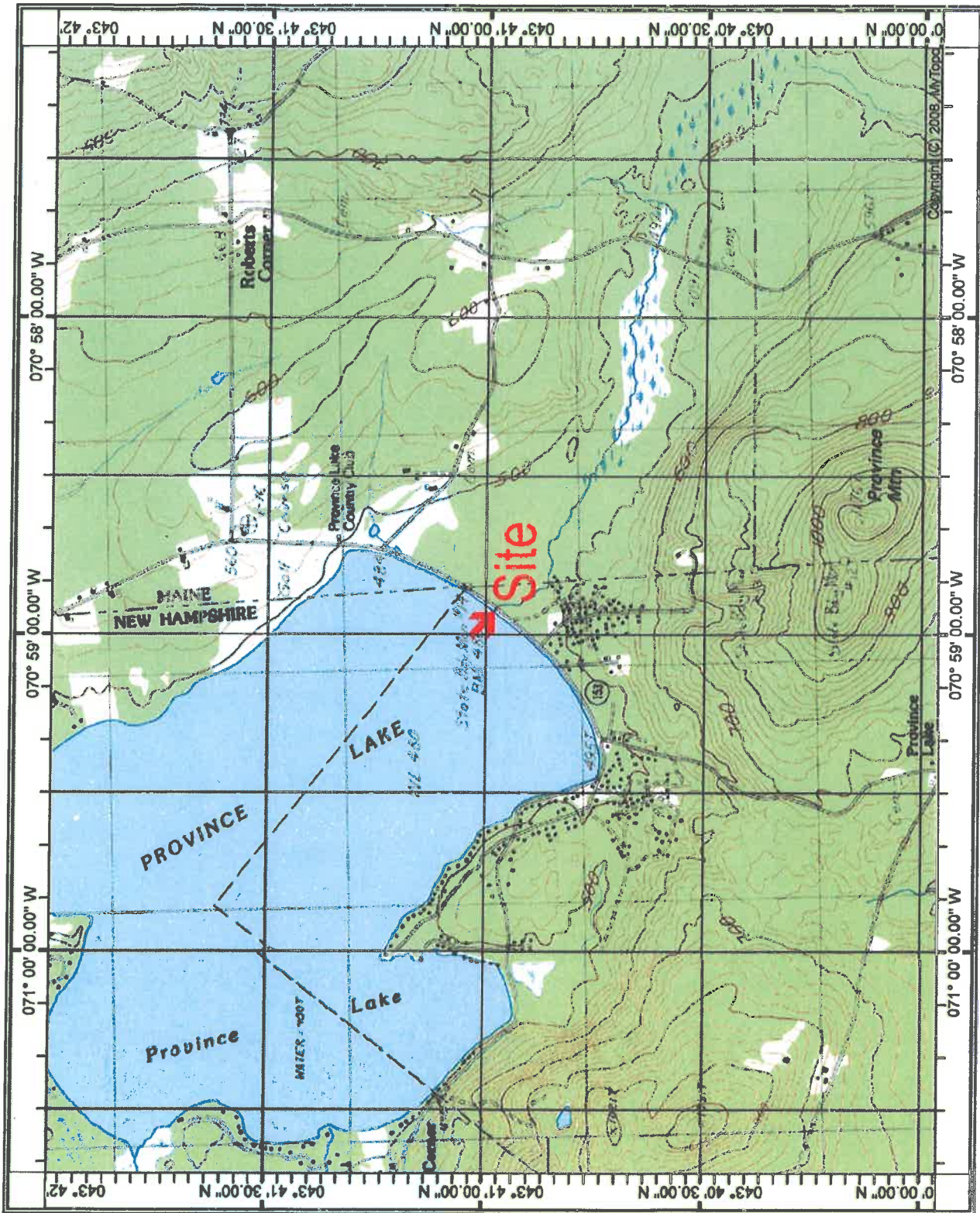
Temporary (seasonal) docking structure: sq. ft. X \$1.00 = \$

Permanent docking structure: sq. ft. X \$2.00 = \$

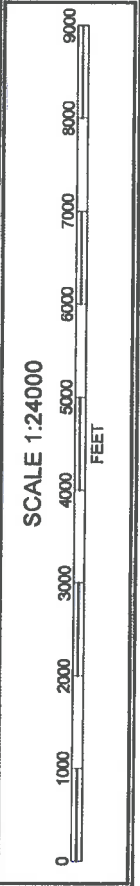
Projects proposing shoreline structures (including docks) add \$200 = \$

Total = \$

The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 200.00



M312-13
 Rte 153, Wakefield
 Pipe replacement





0 30 60 120 Feet

1:700



**WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS**
Land Resources Management
Wetlands Bureau



Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing pipes are failing. Replacement of the pipes are required to maintain the safety and integrity of the roadway and maintain the water way between Province Lake and South River within the un-named wetland complex on the east side of the State owned roadway.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

There were no alternative plans considered. We did consider several different types of culvert materials to be used, replacing these pipes will provide the least impacts to the environment.

These corrugated metal pipes were replaced approximately 10 years ago, but the inlet end of the culverts are showing significant signs of wear and rot. There is not enough cover for a High Density Polyethylene (HDPE) Culvert.

We propose to change the material of the culverts from corrugated metal to reinforced concrete arch pipes, which have a longer life span. The work will be a replacement in kind; there will only be temporary impacts to the South River and Province Lake.

irm@des.nh.gov or (603) 271-2147

NHDES Wetlands Bureau, 29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

3. The type and classification of the wetlands involved.

L2UB2 - Lacustrine, Littoral, Unconsolidated Bottom, Sand

R2UB2 - Riverine, Lower Perennial, Unconsolidated Bottom, Sand

PSS1E- Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated

PFO1E- Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

The South River (within the un named wetland) flows westerly through the pipes into Province Lake.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Province Lake has not been identified as a rare surface water of the State.

6. The surface area of the wetlands that will be impacted.

100 sq feet of PSS1E - Temporary Impacts

250 sq feet of L2UB2 - Temporary Impacts

50 linear feet of Bank - Temporary Impacts

7. The impact on plants, fish and wildlife including, but not limited to:
- a. Rare, special concern species;
 - b. State and federally listed threatened and endangered species;
 - c. Species at the extremities of their ranges;
 - d. Migratory fish and wildlife;
 - e. Exemplary natural communities identified by the DRED-NHB; and
 - f. Vernal pools.

There is a record for the threatened rare coastal plain grass-leaved-goldenrod (*Euthamia carolinia*) in the immediate vicinity of the project. We have communicated with NHB to coordinate flagging of this threatened plant prior to the start of the project. Through the NHB search no other State or Federally listed threatened or endangered species were identified within the vicinity of the project, however through a US Fish & Wildlife Service IPaC search a hit for Northern Long-eared bat (NLEB) (*Myotis septentrionalis*) and Small whorled pogonia (*Isotria medeoloides*) were found. No tree clearing is needed for the proposed work; a 4(d) Streamline Consultation form has been submitted to US ACOE for coordination with US Fish and Wildlife for the NLEB. Further coordination with NH DRED on the Small whorled pogonia has determined that the habitat within the project area is not suitable for Small whorled pogonia and that there is a very low likelihood that the plant would be present in the area. Therefore there is a very low likelihood of affecting the plant with the proposed limits of work. (Both coordination emails with NH DRED have been attached after either the NHB or IPaC search results.)

There are no species known to be at the extremities of their ranges located in the project area.

There will be temporary/ short term disruption for migratory fish and wildlife using the twin pipes to move from the river and wetland to the lake. The pipes will be replaced within a day. The pipes will be reinstalled at the same invert elevations as the existing pipes.

There were no exemplary natural communities identified by DRED-NHB.

There were no vernal pools identified and/or delineated within the project area.

8. The impact of the proposed project on public commerce, navigation and recreation.

There will be minimal impact to public commerce as the project will be completed in approximately 8-hours with alternating two way traffic through the work zone. There will be no impact to navigation and recreation.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

There will be minimal impact to public commerce as the project will be completed in approximately 8-hours with alternating two way traffic through the work zone. There will be no impact to navigation and recreation.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project will not have an impact on abutting landowners. This project will better serve the abutting properties if they need to travel on the road.

12. The benefit of a project to the health, safety, and well being of the general public.

The project will provide a safer, longer lasting conduit between the large marsh and Province Lake. The pipe repair will maintain the safety and integrity of the state roadway.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

The surface water currently runs off the road, over natural vegetation, and into the lake and river & wetland. Upon completion of the project, surface water will drain in the same manner. No additional impervious surface will be added within the limits of work. A Shoreland PBN has been submitted to NHDES Shoreland Program to permit the earth disturbance to access and replace the pipes. New road surface will be replaced within the existing roadway footprint. The proposed work will have no adverse effects on the quality or quantity of surface and ground water. Best Management Practices will be used to prevent any adverse effect to water quality during construction.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

There is no record of flooding in this area and no potential for increased flooding as a result of the project. We will be replacing the existing pipes with slightly increased openings in the proposed concrete arch pipes. The proposed pipes will be installed at the same invert elevations. The twin pipes are designed to perpetuate the existing flow conditions. Even though the pipes will be smoother, the energy through the pipe will remain the same resulting in similar sedimentation as the existing condition and will not change erosion characteristics at the project site.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface waters will not be reflected or redirected as a result of this project. South River, the wetland, nor Province Lake have enough surface water for wave energy to be an issue. The Department's choice to use concrete arch pipes for the replacement of the existing pipes is in order to extend the life span of the crossing.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of replacing twin culverts in kind, there are no similar structures in the vicinity owned by other parties that require repair.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The function of the culverts is to carry water from a higher elevation to a lower elevation. This project will not interfere with that function. The project will be constructed during low flow season utilizing best management practices. The value of the wetland as a habitat for living organisms will be not be altered as result of this project.

18. The impact upon the value of the sites included in the latest published edition of the National Register of **Natural Landmarks**, or sites eligible for such publication.

This project is not located in or near any Natural Landmarks listed on the National Register.

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

There are no areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, or national lakeshores that will be impacted as a result of this project.

20. The degree to which a project redirects water from one watershed to another.

The project as proposed will not redirect water from one watershed to another.

Additional comments

There are no additional comments at this time.

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: August 15, 2018

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Sarah Large
Ron Crickard
Mark Hemmerlein
Brian Lombard
Meli Dube
Nancy Spaulding
Kirk Mudgett
Ron Kleiner
Chris Carucci
Bob Landry
Jennifer Reczek
Marc Laurin
Samantha Fifield
Kevin Nyhan
Bob Hudson
Maggie Baldwin

ACOE

Mike Hicks

NHDES

Gino Infascelli
Lori Sommer

NHF&G

Carol Henderson

NHB

Amy Lamb

**Consultants/Public
Participants**

Mike Croteau
Sean Sweeney
Jennifer Riordan
Brent Williams
Christine Perron
Brian Colburn
Darren Benoit
Jim Murphy
Stephanie Dyer-Carroll
Dan Hageman
Johanna Lyons
Eric Feldbaum

(When viewing these minutes online, click on an attendee to send an e-mail)

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH: *(minutes on subsequent pages)*

Finalize July 18, 2018 Minutes	2
Windham, #41632	2
Walpole, #41624A.....	4
Wakefield, M312-13	5
Gilford, #41655 (X-A004(710)).....	7
Lebanon-Hartford, #16148 (A001(154)).....	9
Lebanon TAP, #41366 (X-A004(617))	11
Seabrook-Hampton, #15904 (X-A001(026))	12

(When viewing these minutes online, click on a project to zoom to the minutes for that project)

Dube confirmed that the USFWS Information for Planning and Conservation Tool identified the project area as being in the range of the northern long-eared bat (NLEB) and the northeastern bulrush. M. Dube will complete a survey for NLEB during the wetland delineation scheduled for late summer/early fall. M. Hicks asked if there is a known NLEB hibernacula in Walpole and M. Dube responded that there is not but she will confirm with USFWS and NHFG. Amy Lamb, NH Division of Natural and Cultural Resources Natural Heritage Bureau (NHB), noted that it is unlikely for northeastern bulrush to occur in the project area due to lack of preferred habitat. M. Dube will work with M. Hicks to complete necessary USFWS consultation for NLEB and northeastern bulrush, "no effect" findings for both species are anticipated.

Amy Lamb expressed concern for impacts to NHB resources on the RR embankment due to access to the culvert and B. Lombard confirmed that the access road which was constructed for the 2014 emergency repair efforts is still in place and will be used for this work. A. Lamb confirmed that there is no further concern for the species and habitats noted on the NHB DataCheck Response Memo (NHB18-2540) including Loesel's wide-lipped orchid (historic record), red maple-black ash swamp, and sycamore floodplain forest.

Sarah Large, NHDOT Bureau of Environment, noted that all permanent impacts through the culvert are necessary for the maintenance of existing infrastructure and Lori Sommer, NHDES Wetlands Bureau, confirmed that no mitigation would be required for this work. S. Large noted that the US Coast Guard has been consulted and has no concern for impacts to navigable waters as a result of this work.

This project has not previously been reviewed at a Natural Resource Agency Meeting.

Wakefield, M312-13

Nancy Spaulding presented on the project and project history. She described the project location as being approximately 500 feet SW of the Maine border on NH 153 along Province Lake. The tier 3 crossing carries the South River under NH 153. The river starts in the hills of Maine and makes its way down gradient to Province Lake. There is a large marshy wetland area to the east of the crossing at the inlet of the pipes where the South River flows through. The project scope is to replace the deteriorating twin metal pipes. The Department is proposing to replace the twin 28" corrugated metal pipes with twin 34" reinforced concrete arch pipes. N. Spaulding showed images of the crossing and surrounding landscape. Images showed the expansive marsh at the inlet side of the crossing and Province Lake at the outlet.

N. Spaulding summarized the impacts for the project: 650 sq. ft. temporary impacts, 300 sq. ft. of permanent wetland impacts. The project is necessary and needed to maintain the integrity of NH 153 in this area. This will ensure vehicle access to the roadway system is maintained. The alternatives for this pipe crossing included a 20' span concrete box structure to accommodate the upstream drainage area calculated by Streamstats. The 20' span box however, is not practicable at this location; the vertical alignment of the road would have to be raised for a substantial distance of NH 153 in both directions due to the limited cover depth. With the current Highway Maintenance budget the costs associated with this alternative would be cost prohibitive. NHDOT Project Development's Culvert Improvement Program would be more equipped to design and construct a larger span structure; however, the program may not be able to work on the project until 2021.

The project was previously submitted as a minimum impact project with DES file number 2017-01738 and was denied as a major impact project. The project team plans to resubmit for the replacement as a major impact project and to address the stream crossing rules for this crossing.

Mike Hicks asked how the project would address the sedimentation throughout construction and specifically the sedimentation at the outlet of the crossing at the confluence with Province Lake. N. Spaulding agreed with M. Hicks that the sedimentation at this location is a challenge. She advised that during construction they will use a sandbag cofferdam at the outlet and will de-water the system by pumping the water to a sediment bag to treat any of the water that was collected in the project site. However even after construction the outlet at the confluence of Province Lake will look similar to the way it does today. It will be cleaner.

Carol Henderson asked if we could shorten the pipes any? Lori Sommer indicated that the water level looks to be low in the photo shown. N. Spaulding indicated that the photo was taken the day before (8/14/2018). N. Spaulding advised that they could look into shortening the pipes up some and how that would impact the shoreline of Province Lake. S. Large asked Gino Infascelli if he liked the idea of shortening the proposed pipes. G. Infascelli said no. He added that the project team needs to really look at the stream crossing rules and review the entire stream rule checklist and actually address them. Since this is a Tier 3 crossing, the rules require an open span structure. S. Large said, with the crossing inletting into a lake, the low clearance of the road, and diffuse marshy habitat upstream the location is a difficult site to meet the stream crossing rules and that the proposed replacement is proposed as an alternative design and within the application will address 904.09 rules to the maximum extent practicable with the constructability constraints. G. Infascelli said that it should be shown in some sort of an alternative plan how the 20' or larger structure would influence the roadway elevation. Show what you really considered; show why other alternatives can't be done. S. Large added that this location is a very difficult location to address due to the resources; the wetlands at the upstream side and immediately inletting into the shoreline of a lake. The group agrees that it is a tough location. N. Spaulding indicated that the water levels are essentially the same on both sides. G. Infascelli articulated that there are other examples that are similar and that other Districts have put in larger structures and that we should look into it further.

S. Large indicated that the project team will look into the cover depth and constructability constraints further and how those related to design alternatives. She indicated that further information about the system / stream and wetland complex is needed. G. Infascelli stated that a stream assessment was needed. L. Sommer asked if the crossing had been assessed through the SADES protocol. S. Large indicated that the crossing has not been assessed through the SADES protocol and a stream crossing assessment has not been completed at this location since the upstream resource does not align with the intent of the stream crossing guidelines: wetland upstream lake downstream. S. Large indicated that the inlet type would be classified as a wetland under the Stream Crossing Assessment Initiative / SADES protocol. South River doesn't have defined channel banks. S. Large stated that the wetted channel width or in other words the primary channel where water flows through the wetland complex could be measured, along with sediment type at the inlet and outlet, vegetation, and signs of erosion. However, the bankfull width measurements might not be achievable due to the type of resource upstream (scrub-shrub wetland?).

Mark Kern indicated that it might be helpful to look at the pros and cons of waiting to put the crossing into the Culvert Improvement Program and do it right. N. Spaulding advised that the concern is with timing. The culverts are vulnerable and at risk currently and if the designs that are feasible for District to construct can't be permitted and it has to be designed by Project Development, the culvert's may fail between now and then, so District is trying to replace them before that happens.

N. Spaulding indicated that it is a heavily used road, especially in the summer time due to its proximity to the lake.

C. Henderson asked if the roadway has ever flooded. N. Spaulding indicated that the water has never overtopped the road at the crossing but that the road has been flooded to the north near the golf course up that way.

M. Hicks asked how old the pipes were. N. Spaulding indicated that she thought that the roadway was last improved in the 50s / early 60s. They have been there over 50s years.

Amy Lamb indicated that there is a rare plant species growing along the shoreline of the lake near the culvert: coastal plain grass-leaved goldenrod (*Euthamia caroliniana*). This species was previously surveyed at the site to assess for potential impacts from the proposed replacement of the concrete pipes. At the time, NHB had no concerns. Since DES has requested that the design be revised to address the Stream Crossing Rules, NHB requests that this species be considered and factored into the new design to reduce the risk of impacts.

N. Spaulding advised that when they come back she will advise what the timeline of projects are for the culvert improvement program area and where this would fall in.

This project has not been previously discussed at the Monthly Natural Resource Agency Coordination Meeting.

Gilford, #41655 (X-A004(710))

Chris Carucci gave an overview of the project, which involves the rehabilitation of an existing culvert that carries an unnamed perennial tributary to Jewett Brook under the US Route 3 Bypass Southbound On Ramp from NH Route 11A. The project is funded under the Federal Culvert Rehabilitation Program. The proposed advertising date is November 27, 2018, with construction anticipated in the summer of 2019. There are two 84" pipes just upstream that are in the process of being added to the culvert rehabilitation program but no further information is currently available.

The existing culvert is 84" in diameter and 132 feet long and was constructed in 1964. The culvert slope is approximately 1.9% with about 20 feet of cover and has mitered ends. There is severe corrosion along the invert, substantial portions of missing invert, and some changes in shape. A sinkhole is forming above the inlet end.

The culvert has performed well for over 50 years, with no reports of flooding or damage. The USGS StreamStats drainage area is 1.34 square miles (857.6 acres). As a result, the stream crossing is classified as Tier 3.

Design flows will be based on StreamStats Q100 of 328 cfs. Headwater depth required to pass the Q100 is around 8.2'. The inlet area is contained within the roadway slopes and there is no bypass. The headwater would eventually backup through existing pipes and overtop Route 11A, however the road is over 25 feet above the pipe invert.

Project alternatives considered included culvert rehabilitation, replacement in-kind, and replacement with an 8' wide by 7' high embedded box culvert. Based on NH Regional Curves, the bankfull width should be around 14', suggesting a span of about 19'.

Rehabilitation is the preferred option due to the height of fill. Replacing in-kind or with a larger structure by open cut would involve an excavation depth of at least 27', removal and reconstruction of about 200 linear feet of ramp, 3,000 to 5,000 cubic yards of excavation, and closure of the ramp for at least a month.

Wakefield - M312-13

Mitigation Narrative

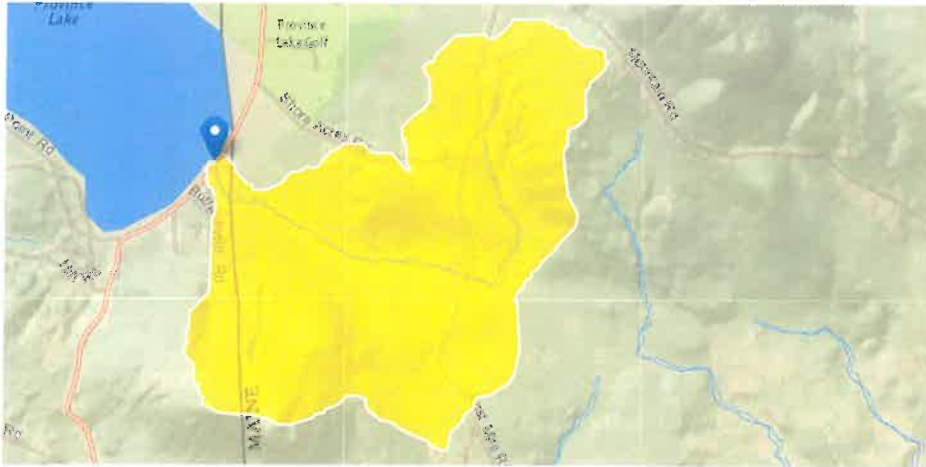
The NHDOT is proposing to remove a failed twin 28"x20"x50' corrugated metal arch pipe and replacing them with a 8' x 4' x 34' long concrete box culvert. The elevation of inverts will remain the same but the new 8'x 4' box culvert will be installed adjacent to the existing twin pipes to enable the Department to utilize the existing structure as a cleanwater bypass during construction. The structure's length will be able to be reduced a total of 16 linear feet. Additionally, proposing to install the new structure adjacent to the existing pipes the Department is able to proposed this work with no permanent impacts proposed as shown in the plans.

The Department met with NHDES Wetlands Mitigation Staff (Lori Sommer) on September 6th in the NHDES lobby to specifically discuss this project. At that meeting it was determined that since there were no permanent impacts and since the length of proposed pipe would be less than the existing that mitigation would not be required for this project .

The Department also discussed the proposed relocation of Coastal Plain Grassleaved Goldenrod which was being coordinated through with DNCR (NHB's Amy Lamb). This effort has been further documented elsewhere in this wetlands application. See the Coastal Plain Grassleaved Goldenrod Plant Relocation Narrative for more details pertaining to that effort.

Wakefiled, M312-13

Region ID: NH
Workspace ID: NH20180720143806503000
Clicked Point (Latitude, Longitude): 43.68310, -70.98151
Time: 2018-07-20 10:38:20 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.45	square miles
CONIF	Percentage of land surface covered by coniferous forest	13.9677	percent
PREBC0103	Mean annual precipitation of basin centroid for January 1 to March 15 winter period	8.66	inches
BSLDEM30M	Mean basin slope computed from 30 m DEM	10.712	percent
MIXFOR	Percentage of land area covered by mixed deciduous and coniferous forest	41.1839	percent
PREG_03_05	Mean precipitation at gaging station location for March 16 to May 31 spring period	9.8	inches
TEMP	Mean Annual Temperature	43.999	degrees F
TEMP_06_10	Basinwide average temperature for June to October summer period	60.397	degrees F
PREG_06_10	Mean precipitation at gaging station location for June to October summer period	18.5	inches
ELEVMAX	Maximum basin elevation	1165.542	feet

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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Application Version: 4.2.1

**NH Department of Transportation
Bureau of Highway Maintenance
Project, #M312-13
Env-Wt 904.09 Alternative Design
TECHNICAL REPORT**

Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as *available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.*)

The South River has a drainage area of approximately 928 acres qualifying this crossing as a Tier 3 Crossing. A compliant structure would necessitate a span of over 20 feet. Such a structure is detrimental to sustaining the large marsh area on the upstream side of the culverts. Increasing the waterway opening will potentially lower the water elevation and create a less habitable environment for the existing wetland ecosystem and aquatic habitat.

The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the maximum extent practicable, as specified below.

Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

- (a) In accordance with the NH Stream Crossing Guidelines.

The proposed improvements have been developed in accordance with the NH Stream Crossing Guidelines. The Department has considered design alternatives based on the general consideration that take the geomorphic conditions of the stream into account as it relates to the crossing. The Department has collected data from the field, and in the office, to aid in the design of the proposed crossing. Using information that was available, the Department has determined that a full bridge replacement would not be practical. As such, the Department has proposed an alternate design that meets the intent of the Stream Crossing Guidelines to the extent possible.

An 8'x 4' concrete box will maintain the flow depths found in the existing twin culverts.

The existing slope and alignment will be matched.

The existing stream bed bottom is currently deteriorated metal arch pipes and the proposed streambed will be concrete.

- (b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

The existing crossing is a metal closed bottom structure. With the proposed concrete box the bed forms and stream bed characteristics will not match the natural channel found upstream and downstream of the structure. The material proposed for the twin pipes will allow for a more sustainable crossing.

Water depths within the crossing will be comparable to the existing depths. The velocities within the concrete crossing at a variety of flows may be higher than the existing metal corrugated pipes. With the large marsh area adjacent to the stream channel, the flows in the concrete pipes are comparable to those found in the natural channel upstream and downstream of the stream crossing.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

There is currently a vegetated bank on both sides of the stream crossing to allow for wildlife passage. The existing twin pipes do not allow for wildlife passage through the structure. The replacement of the twin metal pipes with a concrete box will not alter the vegetated bank on either side of the stream crossing. All disturbed bank areas will be reestablished using seeded and stabilized humus.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The concrete box will be installed at the same elevation and slope to preserve water elevations so as to accommodate natural flow regimes. The current crossings slope is 0%.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

The proposed concrete box is an improvement to the existing twin 28" metal pipes. The concrete box is designed to perpetuate the existing flow condition in order to avoid impacts to Province Lake. The slight increase in hydraulic opening will make flow and sediment transport be more efficient. There is no history of water overtopping the roadway at this location.

(f) To simulate a natural stream channel.

The limitations of the existing crossing with the twin metal pipes preclude the construction of an open bottom structure. A natural channel through the structures is not achievable. The natural stream channel will be perpetuated on both the upstream and downstream sides of the crossing and natural fine sediment will settle and deposit within the box over time. Since this crossing will always have water within due to its location within the hydraulic system.

(g) So as not to alter sediment transport competence.

The installation of a smooth bottom concrete box will improve the sediment transport competency. Increasing the pipe size from 28" to a 8' by 4' opening will improve sediment transport conditions.

Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:

Env-Wt 904.01

(a) Not be a barrier to sediment transport;

The installation of the concrete box to replace the existing twin metal pipes will not be a barrier to sediment transport.

(b) Prevent the restriction of high flows and maintain existing low flows;

The proposed concrete box will provide improved hydraulic capacity to that of the existing twin metal pipes. This project will not further restrict high flows and will maintain existing low flows. The existing pipe inverts will be maintained.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

The installation of the concrete box will not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to Province Lake beyond the actual duration of construction. Aquatic life currently using the existing crossing will continue to be accommodated through the new crossing.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The installation of the concrete box will not cause an increase in the frequency of flooding or overtopping of banks. There is no history of water overtopping the road at this location.

(e) Preserve watercourse connectivity where it currently exists;

The installation of a concrete box will maintain connectivity between the upstream and downstream sides of the crossing.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

The installation of a concrete box will maintain connectivity between the upstream and downstream sides of the crossing. There is no existing issue with connectivity. Restoration is not necessary at this location.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

This project will not cause erosion, degradation or scouring upstream or downstream of the crossing. The concrete box replacement is designed to allow for the water to flow across the 8 foot opening into the same area the existing twin culverts discharge to.

(h) Not cause water quality degradation.

This project will not cause water quality degradation. BMP's will be used during construction to protect against water quality degradation.

*****Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable*.**

CONFIDENTIAL – NH Dept. of Environmental Services review

Memo



NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Matt Urban, NH Department of Transportation
7 Hazen Dr.
Concord, NH 03301

From: Amy Lamb, NH Natural Heritage Bureau

Date: 10/21/2019 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau

NHB File ID: NHB19-3315

Town: Wakefield

Location: NH Route 153

Description: Replace twin 28" x 20" CMP with an 8'x4 concrete box at the same elevation.

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: NHB and NHDOT are coordinating to minimize impacts, and transplant and monitor unavoidable portions of the coastal plain grass-leaved-goldenrod population at this site. Coordination is ongoing.

Plant species	State ¹	Federal	Notes
coastal plain grass-leaved-goldenrod (<i>Euthamia caroliniana</i>)	T	--	Threats include water level manipulations of ponds, pond shore development, heavy recreational use, and herbiciding. Increased nutrient levels, e.g., from septic runoff, is also a threat.

¹Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

CONFIDENTIAL – NH Dept. of Environmental Services review

NHB19-3315



Urban, Matt

From: Lamb, Amy
Sent: Friday, October 11, 2019 4:16 PM
To: Urban, Matt
Subject: RE: Wakefield M312-13

Hi Matt,

This looks good to me. The high water line in the photo was tricking me at first (it looked like the northerly transplant area was mapped too close to the water) but I think this is accurate due to the lower water levels at the time of the visit.

What tools will we have at our disposal during the relocation effort? I want to be sure that we can adequately and efficiently dig up intact root systems of the goldenrod.

Thanks,
Amy

Amy Lamb
Ecological Information Specialist
(603) 271-2834
amy.lamb@dncr.nh.gov

NH Natural Heritage Bureau
DNCR - Forests & Lands
172 Pembroke Rd
Concord, NH 03301

From: Urban, Matt <Matt.Urban@dot.nh.gov>
Sent: Friday, October 04, 2019 11:52 AM
To: Lamb, Amy <Amy.Lamb@dncr.nh.gov>
Subject: Wakefield M312-13

Hi Amy,

In anticipation of our Coastal Plain Grass-Leaved Goldenrod Plant Relocation effort scheduled for October 18th. I have prepared the attached GIS relocation plan using the GPS data we collected during our Plant Identification Site visit earlier last month in September.

Please review this map and let me know if you have any concerns moving forward with the plan to move plants found in the green zone and relocating them to areas within the pink zones.

We have a team of folks who are prepared to assist with the relocation effort on the 18th. We currently have myself, Arin Mills, and Heidi Stortz from Bureau of Environment assisting. We have Barbra Rollins who is the DOT Landscape Specialist Supervisor. And we also have Bill Rollins, Sam Fifield, and Todd Nason from District 3 who will be there to let us know exactly where the work will or will not be occurring.

We look forward to your acknowledgement that this is an acceptable relocation plan.

This communication and your concurrence will be used to move forward and submit our wetlands permit application.

Thank you,
Matt Urban

Wakefield M312-13 Coastal Plain Grass-Leaved Goldenrod Relocation Plan



Wakefield, M312-13
Coastal Plain Grass-leaved-goldenrod (*Euthamia caroliniana*)



Wakefield, M312-13

Coastal Plain Grass-leaved-goldenrod (*Euthamia caroliniana*)





United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:

February 06, 2019

Consultation Code: 05E1NE00-2017-SLI-1416

Event Code: 05E1NE00-2019-E-01885

Project Name: Wakefield M312-13

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1416

Event Code: 05E1NE00-2019-E-01885

Project Name: Wakefield M312-13

Project Type: TRANSPORTATION

Project Description: Removing failing twin 28"x20"x50' corrugated metal arch pipes and replace with an 8'x5' concrete box embedded one foot at the same invert elevation.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/43.68301868456135N70.98146931302283W>



Counties: Carroll, NH

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/9045>

Flowering Plants

NAME

STATUS

Small Whorled Pogonia *Isotria medeoloides*

Threatened

No critical habitat has been designated for this species.

Species profile: <https://ecos.fws.gov/ecp/species/1890>

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

IPaC Official Species List Consultation Code: 05E1NE00-2017-SLI-1416

Information to Determine 4(d) Rule Compliance:	YES	NO
1. Does the project occur wholly outside of the WNS Zone ¹ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Could the project alter the entrance or interior environment of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

You are eligible to use this form if you have answered yes to question #1 or yes to question #2 and no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.): NH DOT, Sarah Large, Sarah.Large@dot.nh.gov

Project Name: Wakefield M312-13

Project Location (include coordinates if known): Wakefield, NH
Province Lake outlet (43° 40' 58.70" N)
(70° 58' 53.19" W)

Basic Project Description (provide narrative below or attach additional information):
work consists of the replacement of twin 28" x 20" x 50' corrugated metal arch pipes with twin 28" x 20" x 50' polymer coated steel arch pipes at the same invert elevation between a wetland and Province Lake.

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>
² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>
³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the project occur within 150 feet of a known maternity roost tree?	<input type="checkbox"/>	<input type="checkbox"/>
Does the project include forest conversion ⁴ ? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of forest conversion		
If known, estimated acres ⁵ of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31 ⁶		
Does the project include timber harvest? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Sarah E. Leage

Date Submitted: June 9, 2017

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

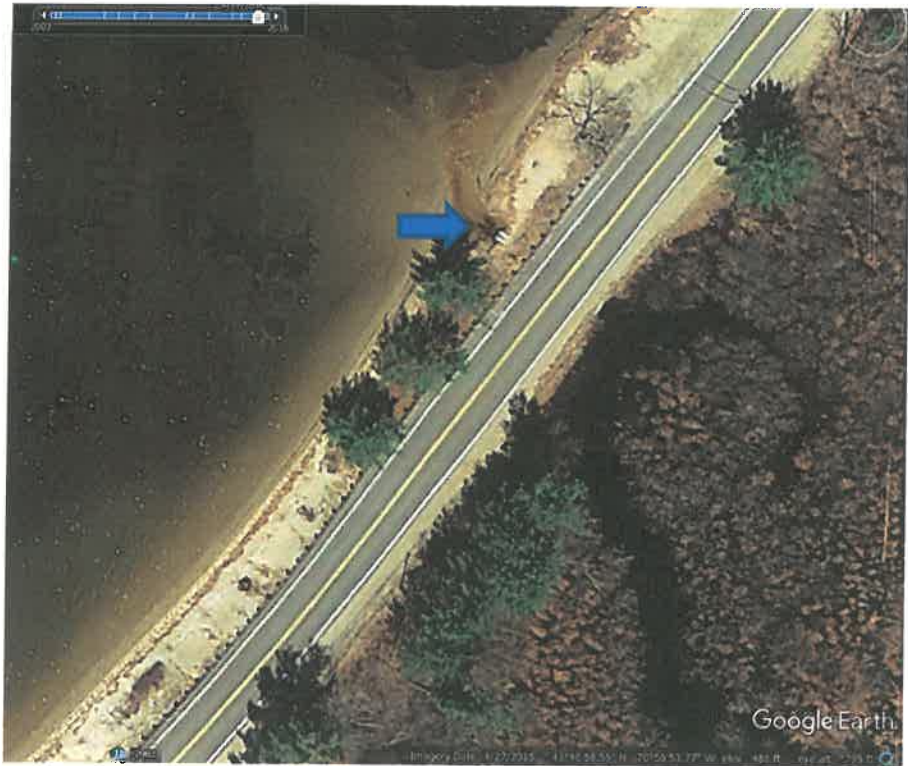
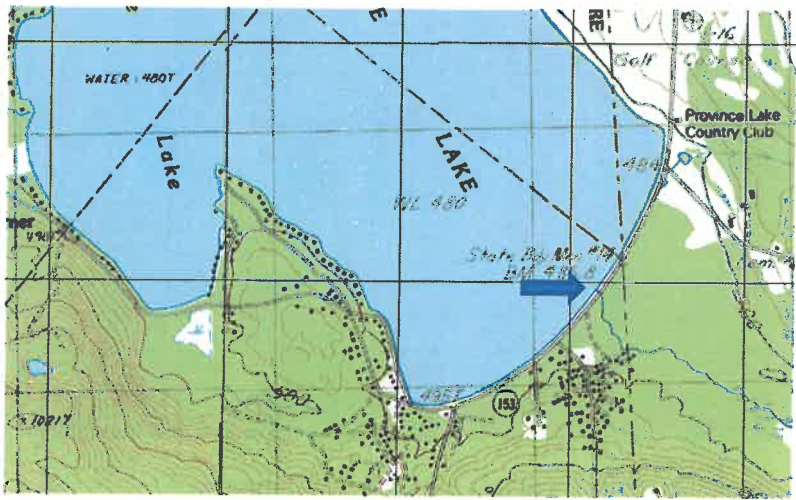
⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.

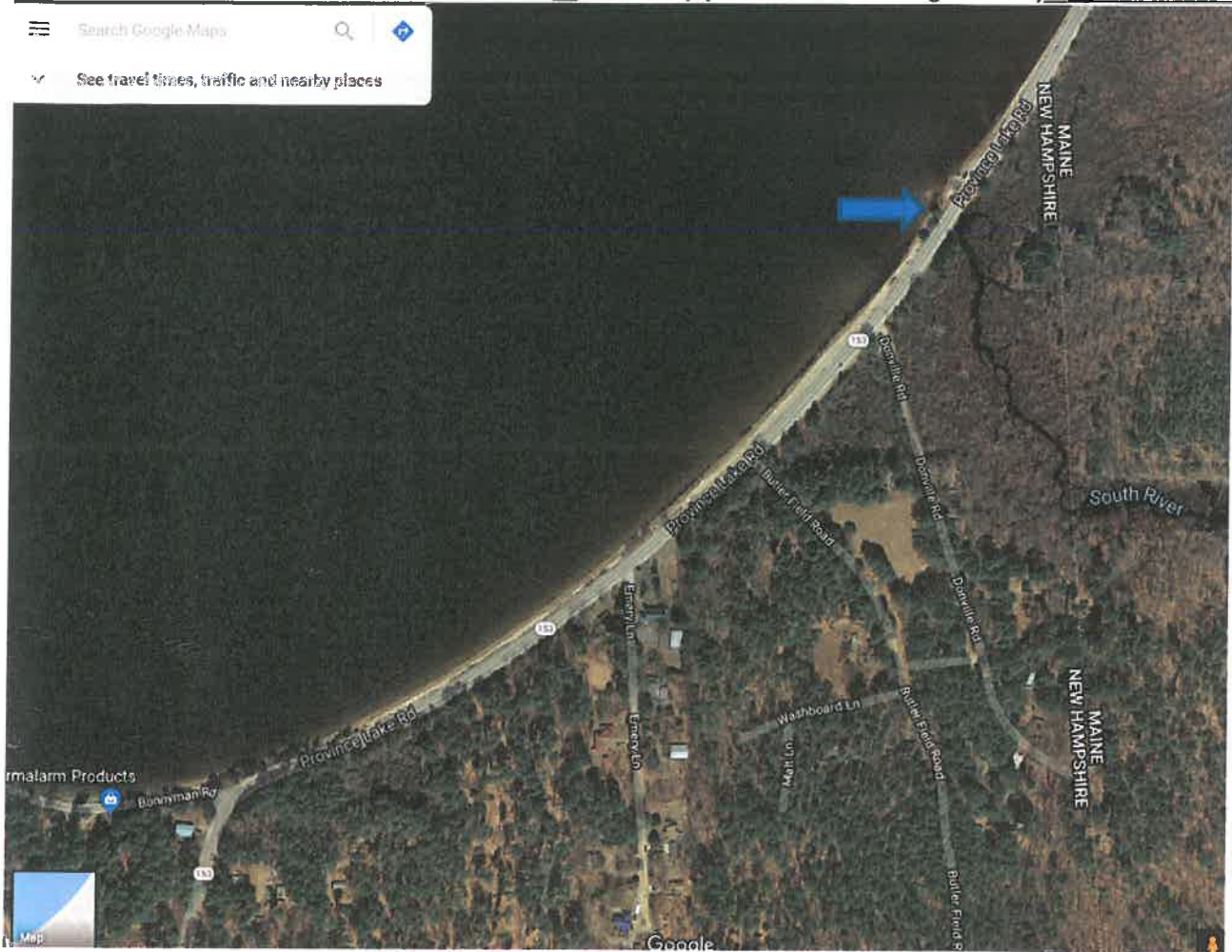
Project__Wakefield M312-13 __District 3 (updated 2019 from original 2017)
Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the enclosed Standard Dredge and Fill Application for potential impacts to historic properties.

Proposed Project: The project location is situated along NH Route 153 (Province Lake Road) over the South River. This location is west of the Maine/New Hampshire border and east of Donville Road. The goal is to maintain the water way between Province Lake and South River. The South River within an unnamed wetland flows westerly through the pipes into Province Lake. Proposed activities include removing failing twin 28" X 20" X 50' corrugated metal arch pipe culverts, which replaced former drainage features approximately 10 years ago. The 2017 proposed design called for replacement with same size polymer coated steel arch pipes at same invert elevation. The 2019 update to project design includes replacing the twin culverts with a smooth bottom 8' x 4' concrete box culvert at the same elevation with a shift to the south from the original culvert location.



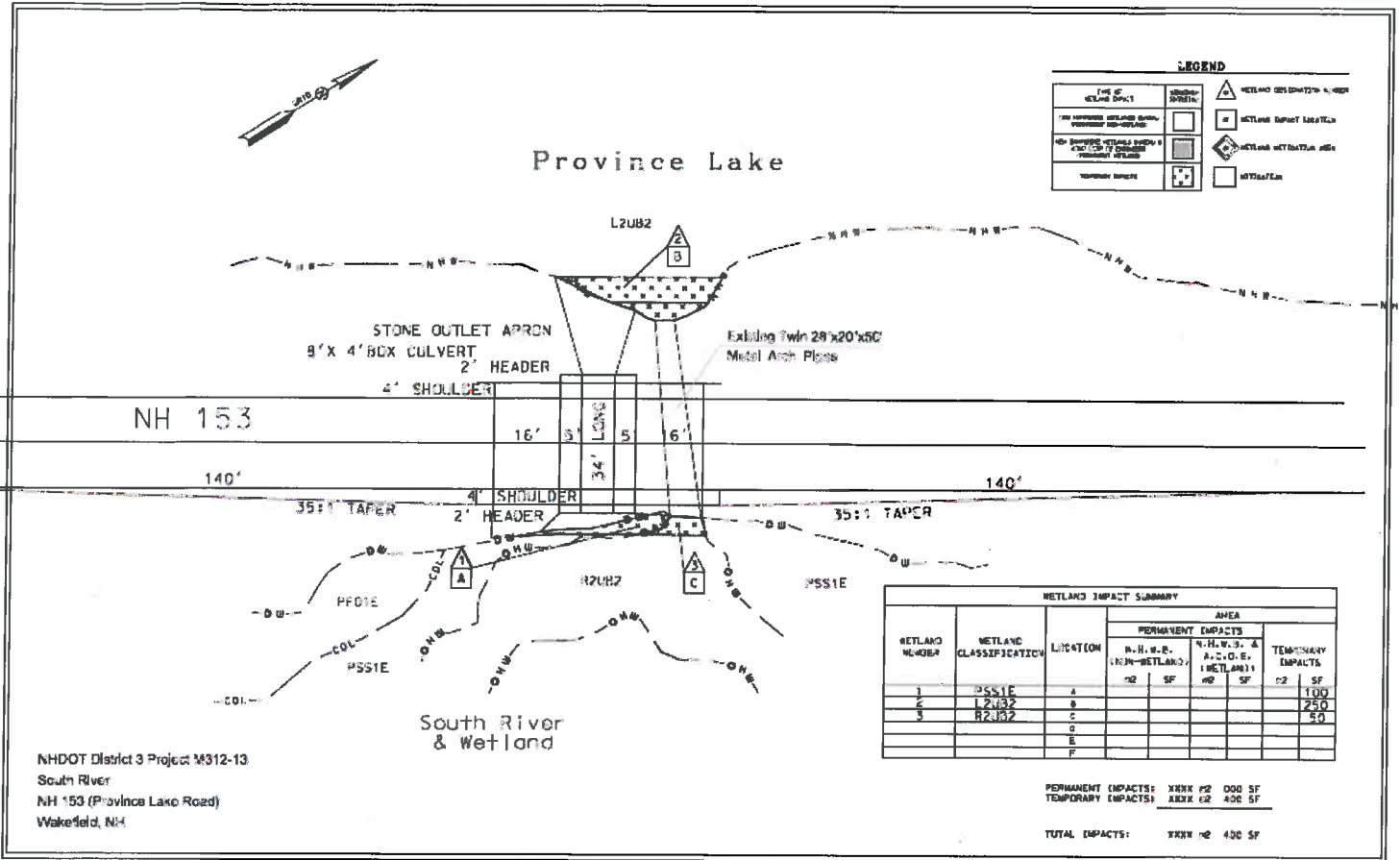
Project_Wakefield M312-13_District 3 (updated 2019 from original 2017)



Google Map, October 2008



Project_Wakefield M312-13 __District 3 (updated 2019 from original 2017)



Above Ground Review

Known/approximate age of structure:
 Twin 28" X 20" X50' corrugated metal arch pipe culverts replaced former drainage features approximately 10 years ago (c.2009)

No Potential to Cause Effect/No Concerns

Modern metal pipes

Concerns:

Below Ground Review

Recorded Archaeological site: Yes No

Nearest Recorded Archaeological Site Name & Number: 27-CA-0168 Campbell

Pre-Contact Post-Contact

Distance from Project Area: 2.79 miles (4.5 km) south of project location

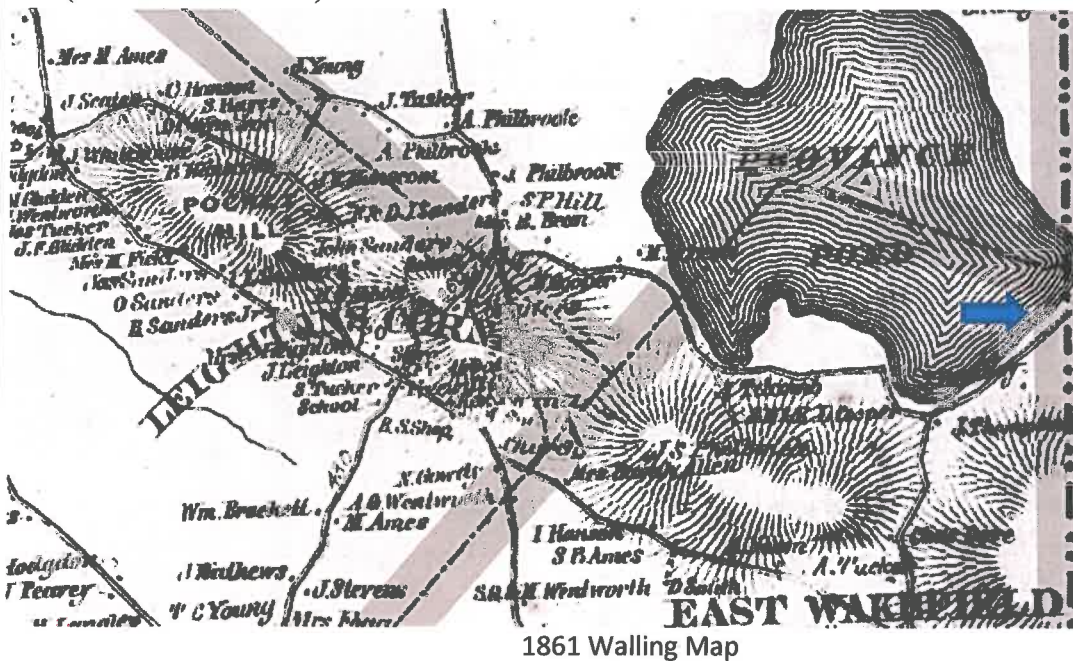
Below Ground Review

☒ No Potential to Cause Effect/No Concerns

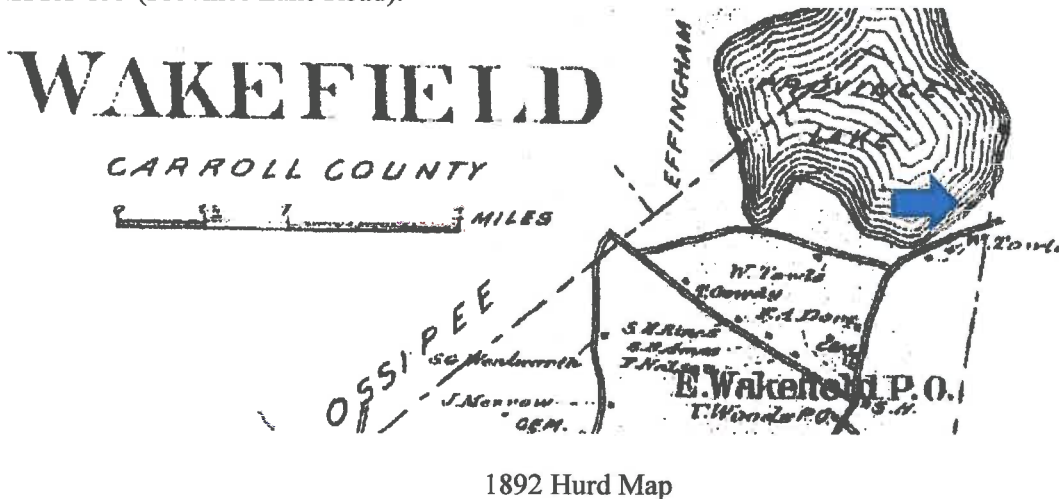
Desk top review indicated there is no record of cultural resources in the project area. While shorelines are often considered archaeologically sensitive, review of the photographs and documentation associated with the project reveal the sides of the road where the extant corrugated metal pipes are exposed appear to be comprised of somewhat unconsolidated sands and mud. The existing culverts, constructed approximately 10 years ago, inlet within a scrub shrub wetland shoreline and outlet along a sandy lake shoreline. Previous impacts are associated with the road and culvert construction. No evidence of encountering Pre-Contact or Post-Contact cultural resources are likely. **There are no concerns with the proposed replacement.**

Cartographic Research

The 1861 Walling Map of Wakefield does not depict the course of South River. The nearest occupant, S. Bradley, is associated with a structures situated southwest of the project on the south side of NH RT 153 (Province Lake Road).



Similarly, the 1892 Hurd map does not depict the South River course. The nearest occupant to the project area is W. Towle, who is associated with two structures situated southwest of the project on the south side of NH RT 153 (Province Lake Road).





Outlet end (Looking southeast)



Inlet end (Looking east)

Reviewed by:

Sheila Charles

5/20/2019

NHDOT Cultural Resources Staff

Date:



**US Army Corps
of Engineers**[®]
New England District

**New Hampshire General Permits (GPs)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to “work” include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www2.des.state.nh.us/nhb_datacheck/ . The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?	NA	
2.7 What is the area of the proposed fill in wetlands?	400 SQ. FT	
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?	NA	
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www2.des.state.nh.us/nhb_datacheck/ / USFWS IPAC website: https://ecos.fws.gov/ipac/location/index	X	

3.2 Would work occur in any area identified as either “Highest Ranked Habitat in N.H.” or “Highest Ranked Habitat in Ecological Region”? (These areas are colored magenta and green, respectively, on NH Fish and Game’s map, “2010 Highest Ranked Wildlife Habitat by Ecological Condition.”) Map information can be found at: <ul style="list-style-type: none"> • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html. 	X	
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 21?	X	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?	X	
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

STANDARD DREDGE AND FILL APPLICATION – PHOTOGRAPHS

Applicant: NHDOT Maintenance District 3

Location: Wakefield



Inlet – Looking Upstream 10/17/2018

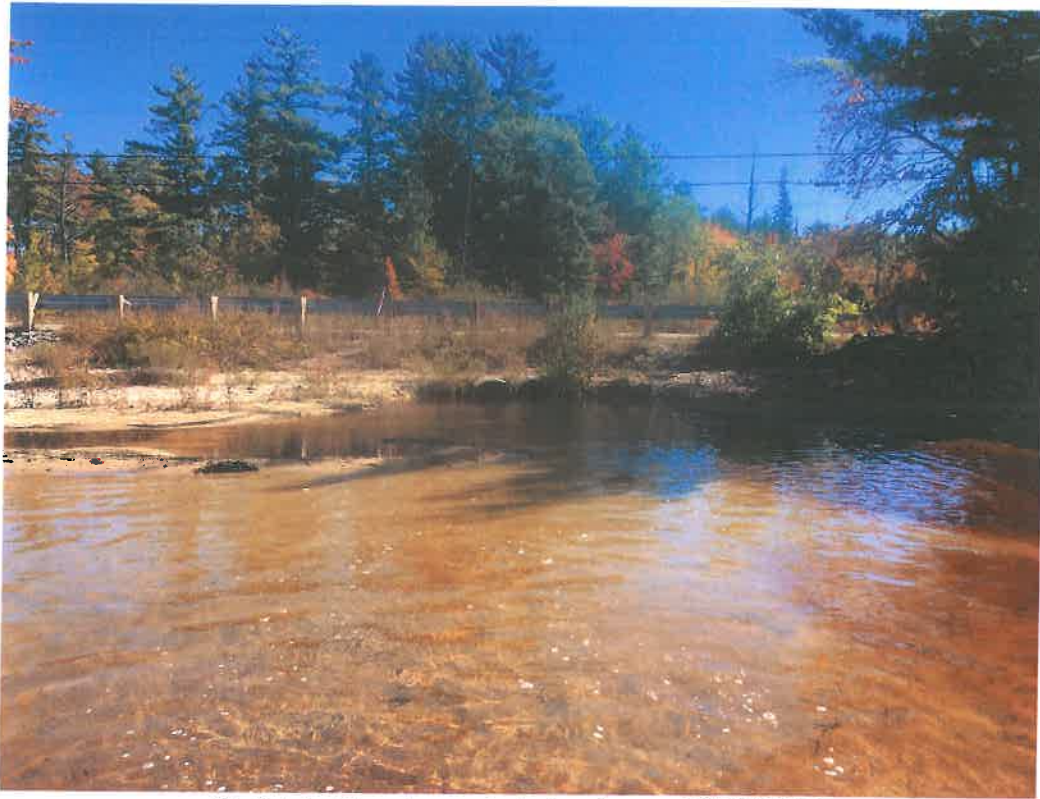


Inlet – Looking upstream 10/17/2018

STANDARD DREDGE AND FILL APPLICATION – PHOTOGRAPHS

Applicant: NHDOT Maintenance District 3

Location: Wakefield



Outlet looking towards twin pipes – 10/17/2018



Outlet view from road looking out towards Province Lake 10/17/2018

STANDARD DREDGE AND FILL APPLICATION – PHOTOGRAPHS

Applicant: NHDOT Maintenance District 3

Location: Wakefield



View from upstream looking at inlet – 10/17/2018



View of Inlet from roadway – 10/17/2018

STANDARD DREDGE AND FILL APPLICATION – PHOTOGRAPHS

Applicant: NHDOT Maintenance District 3

Location: Wakefield



View from inlet looking upstream 10/17/2018



View of outlet looking towards Province Lake 10/17/2018

STANDARD DREDGE AND FILL APPLICATION – PHOTOGRAPHS

Applicant: NHDOT Maintenance District 3

Location: Wakefield



View of land adjacent to outlet where new box will be located. 10/17/2018

CONSTRUCTION SEQUENCE

1. Work will take place during low flow conditions. Best Management Practices will be installed before any work commences.
2. A turbidity curtain with hay bales and silt fence shall be used in and along the lake on the outlet side to contain any sedimentation during excavation.
3. The existing twin metal pipes will remain in place and maintain flow during the construction of the concrete box.
4. A sandbag cofferdam will be placed on the inlet end of the concrete box, allowing dewatering. In the event dewatering is required the following will be conducted:
 - a. Water will be pumped to a sediment bag placed 20 feet from jurisdictional wetland, on the east shoulder of the road.
 - b. Water will be allowed to filter through the bag, through vegetation along the side of the road and back into the wetland.
 - c. A turbidity curtain and silt fence shall be used in and along the lake on the outlet side to contain any sedimentation during excavation
5. The Box Culvert will be buried with excavated materials, compacted and then allowed to settle.
6. Excavated area of NH 153 will then be compacted and hot topped (Asphalt)
7. Existing twin metal pipes will be excavated and removed.
8. All BMPs will remain in place, with the exception of the sandbag cofferdam at the inlet, until disturbed areas have stabilized.
9. Once stable removal of BMPs will take place.

Note:

Project will use and maintain DES Best Management Practices during all stages of construction.

Wakefield, M312-13 Field Assessment Summary

October 5, 2018

A delineation was complete as well as a survey of the surrounding vegetation, sediment characteristics, signs of erosion, water depth measurements, and a longitudinal profile were taken.

Upstream of the structure is a scrub-shrub (PSS1E) forested (PFO1E) wetland complex. The South River flows through this wetland complex. Downstream of the structure is Province Lake. The upstream drainage area of the crossing is 1.45 sq. mi. and was calculated using USGS's StreamStats tool. The dominant species at the inlet within the scrub-shrub wetland complex were: Common buttonbush (*Cephalanthus occidentalis*), meadowsweet (*spirea alba*), sweetgale (*Myrica gale*), speckled alder (*Alnus incana*), red maple (*Acer rubrum*), sensitive fern (*Onoclea sensibilis*), marsh fern (*Thelypteris palustris*), yellow pond lily (*Nuphar variegata*), *carex sp.*, floating pondweed (*Potamogeton natans*).

The crossing was measured to be 73' long. The white line of the road closest to Province Lake (the outlet) was used as relative elevation 100' for the longitudinal profile. The inlet invert elevation was 95.2' and the outlet invert elevation was 95.8'. There was 1.2' of water at the inlet and 0.7' of water at the outlet. The pipe's slope is approximately 0.8%, where the outlet was at a higher elevation than the inlet. It is believed that the pipe was originally set at a 0% grade, but over time the deteriorated pipes must have settled and sank causing the pipes to be at a lower elevation at the inlet. Water continues to flow from the inlet to the outlet. Province Lake's water elevation functions as the "tailwater" control of this system. There is a large scour pool at the inlet (20'W x 60'L). The dominant streambed channel material upstream and downstream is sand. There are no signs of erosion at the inlet. There were signs of erosion at the outlet most likely caused by wave action of Province Lake.

The field survey team attempted to walk up the main channel of the South River to access and measure the upstream wetted width. The survey team was unsuccessful in measuring upstream wetted channel widths due to the channel depth and water levels; they would have breached their chest waders. The survey team also tried to access the upstream channel through the scrub-shrub wetland, however the water was still too deep to safely collect the data. Based on aerial imagery on average the wetted width of the South River is 19'. Based on the crossing's upstream drainage area and the hydraulic curve calculation a compliant sized structure would require a span of 20'.

Upstream flood prone width measurements were prohibitive to collect. The entire scrub-shrub wetland complex along the eastern side of NH Route 153 functions as flood storage for the South River. Based on aerial imagery the wetland borders NH Route 153 for approximately 0.2 mile. Since bankfull width and flood prone width measurements were not obtainable we are not able to calculate the entrenchment ratio and sinuosity of South River.



Upstream Scrub-Shrub Wetland & South River

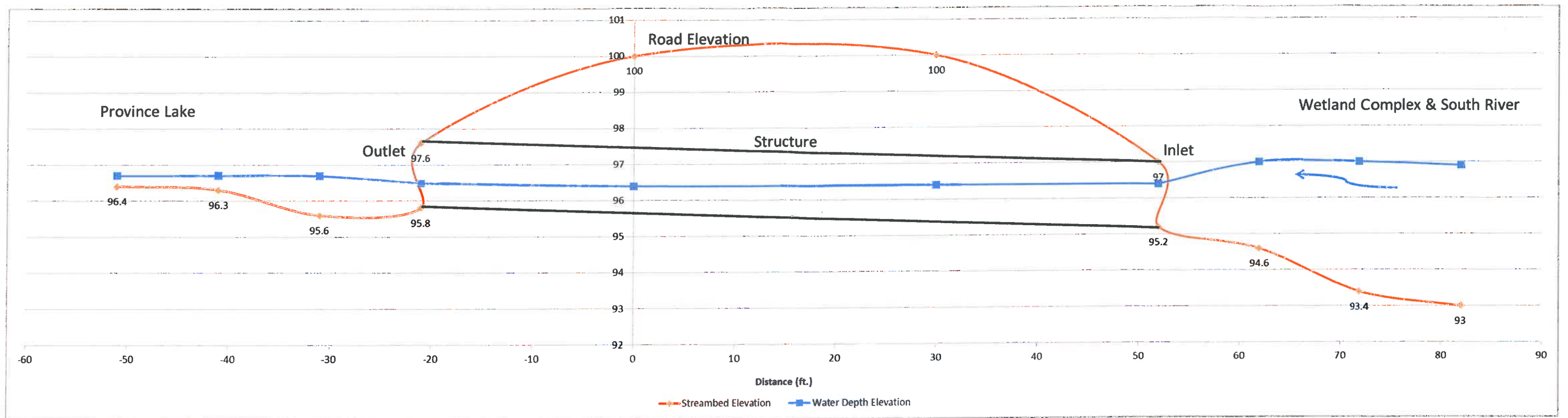


Wakefield, M312-13



0 15 30 60 Feet

1 in = 30 ft

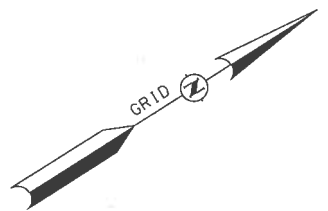


Streambed Channel Elevation and Water Depth Profile Data Collection

Location: Wakefield, M312-13
Date: 10/5/2018

Elevation ID to ID & Notes <small>(IE) us elev #, ds elev #, Invert, etc</small>	Distance (ft.)	Shooting From	Shooting To	Difference (+ / -)		Elevation (ft.)	Water Depth (ft.)	Water Depth Elevation
Inlet: Top of Right Pipe to US #3b	82	6	- 10	= 4	(+ / -)	93	3.9	96.9
Inlet: Top of Right Pipe to US #2b (with main channel)	72	6	- 9.6	= 3.6	(+ / -)	93.4	3.6	97
Inlet: Top of Right Pipe to US #1	62	6	- 8.4	= 2.4	(+ / -)	94.6	2.4	97
Inlet: White Line to Right Pipe Invert	52	5	- 9.8	= 4.8	(+ / -)	95.2	1.2	96.4
Inlet: White Line to Top of Right Pipe	52	5	- 8	= 3	(+ / -)	97	0	96.4
	30					100		96.4
White Line (Lake Side)	0				(+ / -)	100	0	96.4
Outlet: White Line to Top of Right Pipe	-21	5	- 7.4	= 2.4	(+ / -)	97.5	0	96.5
Outlet: White Line to Right Pipe Invert	-21	5	- 9.2	= 4.2	(+ / -)	95.8	0.7	96.5
Outlet: Top of Right Pipe to DS #1	-31	5	- 7	= 2	(+ / -)	95.6	1.1	96.7
Outlet: Top of Right Pipe to DS #2	-41	5	- 6.3	= 1.3	(+ / -)	96.3	0.4	96.7
Outlet: Top of Right Pipe to DS #3	-51	5	- 6.2	= 1.2	(+ / -)	96.4	0.3	96.7

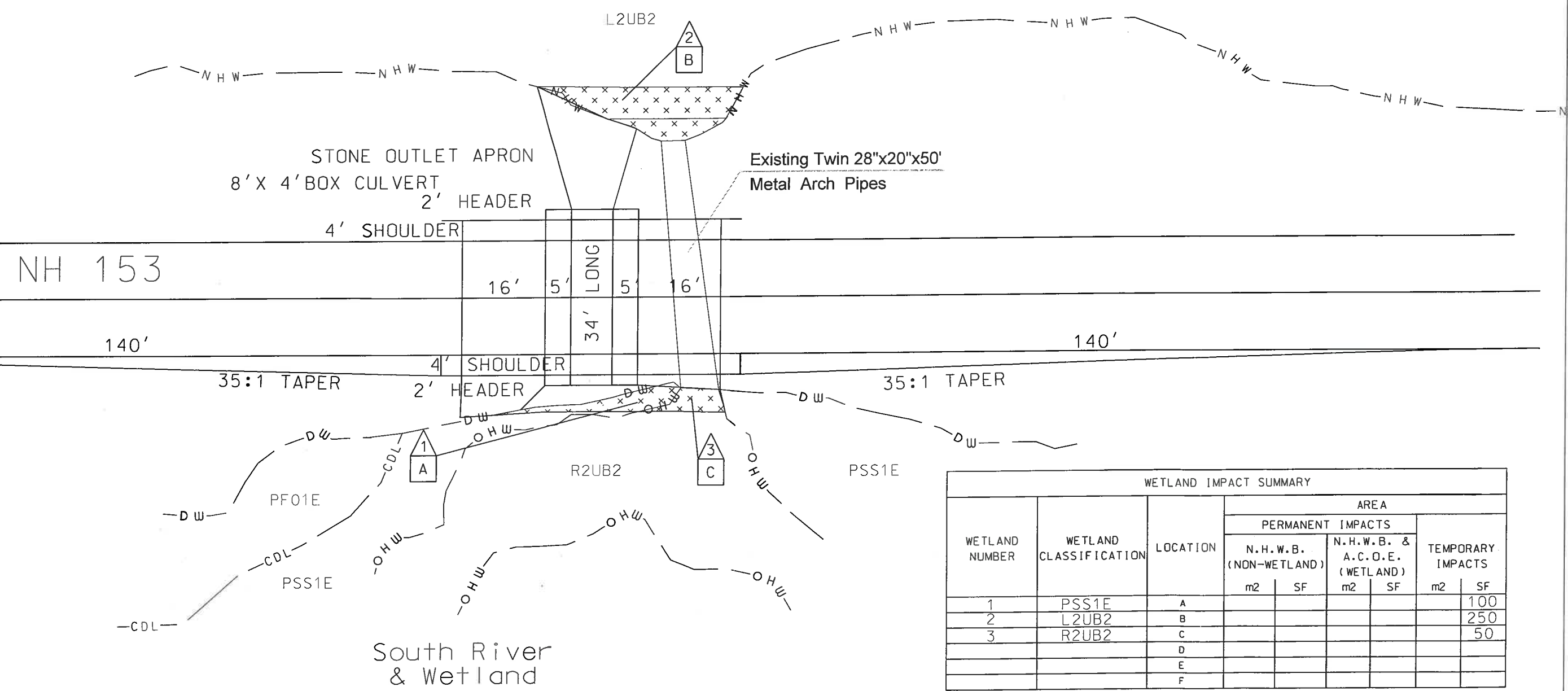
In General:
Shooting downstream subtract rod difference
Shooting upstream add rod difference



Province Lake

LEGEND

TYPE OF WETLAND IMPACT	SHADING/HATCHING	#	WETLAND DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	[White Box]	#	WETLAND IMPACT LOCATION
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	[Grey Box]	#	WETLAND MITIGATION AREA
TEMPORARY IMPACTS	[Box with 'x' marks]	[White Box]	MITIGATION



WETLAND IMPACT SUMMARY							
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA				
			PERMANENT IMPACTS				TEMPORARY IMPACTS
			N.H.W.B. (NON-WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)		
m2	SF	m2	SF	m2	SF		
1	PSS1E	A					100
2	L2UB2	B					250
3	R2UB2	C					50
		D					
		E					
		F					

NHDOT District 3 Project M312-13
 South River
 NH 153 (Province Lake Road)
 Wakefield, NH
 8-12-2019

NOT TO SCALE - SEE DIMENSIONS

Wetlands Delineated By: Sarah Large & MATT URBAN - October, 2018.

PERMANENT IMPACTS: XXXX m2 000 SF
 TEMPORARY IMPACTS: XXXX m2 400 SF
 TOTAL IMPACTS: XXXX m2 400 SF

