



THE STATE OF NEW HAMPSHIRE
 DEPARTMENT OF ENVIRONMENTAL SERVICES
 LAND RESOURCES MANAGEMENT
WETLANDS BUREAU

29 Hazen Drive, PO Box 95, Concord, NH 03302-0095
 Phone: (603) 271-2147 Fax: (603) 271-6588
<http://des.nh.gov/organization/divisions/water/wetlands>



PERMIT APPLICATION

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

1. REVIEW TIME:
 Indicate your Review Time below. Refer to Guidance Document A for instructions.

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

2. PROJECT LOCATION:
 Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **Spur Road over Lake Gloriette Outlet** TOWN/CITY: **Dixville**

TAX MAP: BLOCK: LOT: UNIT:

USGS TOPO MAP WATERBODY NAME: **Lake Gloriette Outlet** NA STREAM WATERSHED SIZE: **2.73 mi2** NA

LOCATION COORDINATES (If known): **044°52'1.74" 071°18'27.51"** Latitude/Longitude
 UTM State Plane

3. 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.

Rehabilitate the bridge that carries Spur Road over Gloriette Lake Outlet (182/070). The existing structure is a multi-plate pipe arch. The pipe has a span of 11'-10" and a rise of 7'-7". The pipe is 76'-3" long. Proposed work consists of the following: place sandbag cofferdams, install a concrete invert and place riprap.

4. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC...

5. 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 16 - 2295**
- b. Designated River the project is in ¼ miles of: _____; and
 date a copy of the application was sent to Local River Advisory Committee: Month: ___ Day: ___ Year: ___
 NA

6. APPLICANT INFORMATION (Desired permit holder)LAST NAME, FIRST NAME, M.I.: **Johnson, Steve W**TRUST / COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **7 Hazen Drive**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **sjohnson@dot.state.nh.us**PHONE: **603 271 3667**ELECTRONIC COMMUNICATION: By initialing here: SW, I hereby authorize DES to communicate all matters relative to this application electronically**7. PROPERTY OWNER INFORMATION (If different than applicant)**

LAST NAME, FIRST NAME, M.I.:

TRUST / COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL or FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize DES to communicate all matters relative to this application electronically

8. AUTHORIZED AGENT INFORMATIONLAST NAME, FIRST NAME, M.I.: **Weatherbee, Anthony N**COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **7 Hazen Drive**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **aweatherbee@dot.state.nh.us**PHONE: **603-271-3667**ELECTRONIC COMMUNICATION: By initialing here ANW, I hereby authorize DES to communicate all matters relative to this application electronically**9. PROPERTY OWNER SIGNATURE:**

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. 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.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. 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.
7. I have submitted a copy of the application materials to the NH State Historic Preservation Officer.
8. I authorize DES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of DES correspondence. DES will not forward returned mail.



Property Owner Signature

STEVE W JOHNSON

Print name legibly

8/25/16

Date

MUNICIPAL SIGNATURES

10. 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.

Authorized Commission Signature	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. The Conservation Commission signature should be obtained prior to the submittal of the original application and four copies to the town/city clerk for mailing to the DES.
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 reviewed in the standard review time frame.

11. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 1991), I hereby certify that the applicant has filed five application forms, five detailed plans, and five USGS location maps with the town/city indicated below and I have received and retained certified postal receipts (or copies) for all abutters identified by the applicant.

Town/City Clerk Signature	Print name legibly	Town/City	Date
---------------------------	--------------------	-----------	------

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I(d):

1. For applications where "Expedited Review" is checked on page 1, accept the application for mailing only if the Conservation Commission signature has been sought;
2. Collect the postal receipts demonstrating that all abutters and the Local Advisory Committee were sent proper notice;
3. Collect any administrative fees, not to exceed \$10 plus the cost of postage by certified mail (RSA 482-A:3, I).
4. IMMEDIATELY sign the original application and four copies in the signature space provided above;
5. Retain one copy of the application form, one complete set of attachments and the postal receipts demonstrating that all abutters and the Local River Advisory Committee were notified and make them reasonably accessible to the public;
6. 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 in accordance with RSA 482-A:3, I; and
7. IMMEDIATELY send the ORIGINAL application form, one complete set of attachments and filing fee, by CERTIFIED MAIL to the NHDES Wetlands Bureau at the address indicated on page 1 of this application. (DO NOT HOLD FOR CONSERVATION COMMISSION SIGNATURE).

12. 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 complete.

After-the-fact (ATF): work completed prior to receipt of this application by DES. Check box to indicate ATF.

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	<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	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Perennial Stream / River	76 / 6 <input type="checkbox"/> ATF	111 / 10 <input type="checkbox"/> ATF
Lake / Pond	/ <input type="checkbox"/> ATF	166 / 38 <input type="checkbox"/> ATF
Bank - Intermittent stream	/ <input type="checkbox"/> ATF	/ <input type="checkbox"/> ATF
Bank - Perennial stream / River	/ <input type="checkbox"/> ATF	1510 / 58 <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
TOTAL	76 / 6	1787 / 106

13. 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) 1863 sq. ft. X \$0.20 = \$ 372.60

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

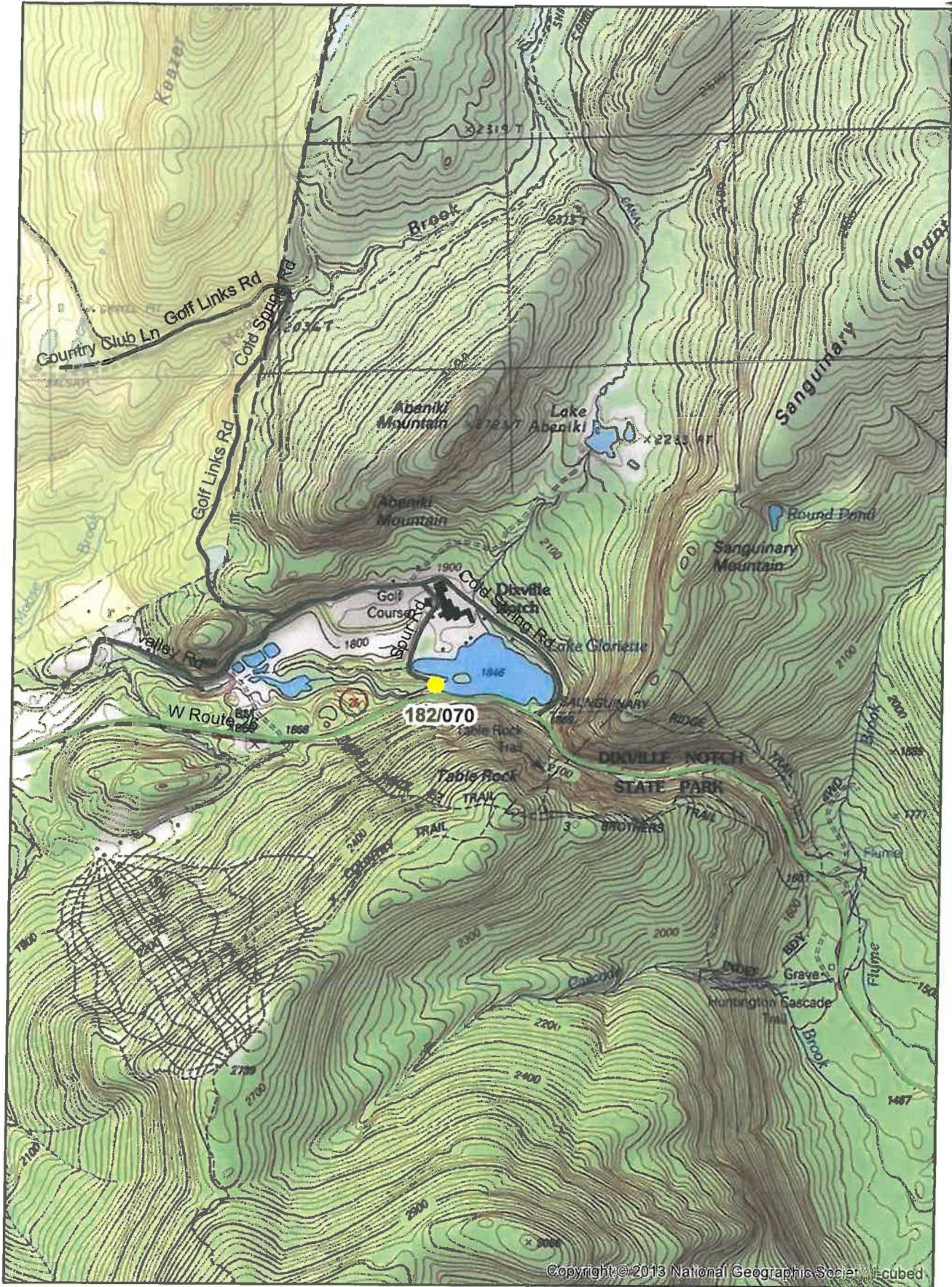
Permanent docking structure: _____ sq. ft. X \$2.00 = \$ _____

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

Total = \$ _____

The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 372.60

Location Map- Dixville Bridge 182/070



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0 0.25 0.5 1 Miles

1:24,000



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Permit Application Status: <http://des.nh.gov/onestop/index.htm>



PERMIT APPLICATION – ATTACHMENT A **MINOR & MAJOR 20 QUESTIONS**

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 metal pipe has moderate rust and pitting on the invert. There are distortions throughout the pipe and there are cracks at over 70 springline bolts on the south side. A concrete invert is required to prolong the life of the structure. A small amount of riprap is required to protect the outlet from scouring further. It is necessary to impact jurisdictional areas to provide for the repairs. The impacts are for the riprap and for temporary construction access. If the structure is not rehabilitated, the road will eventually be load posted or closed.

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

The alternatives considered are as follows:

Replace structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 26'-5". This structure also acts as a dam for Lake Gloriette. If a new structure were to be constructed, a new dam would also have to be incorporated with the project. Constructing a new compliant structure and dam that allowed wildlife passage is far beyond the scope of this project. Spending additional resources on new structures when the existing structure can be adequately preserved for approximately \$80,000 would not be a practicable use of resources. There would also be significant wetland impacts if a new structure and dam were to be installed due to the additional footprint and for construction.

Install concrete invert and riprap: This is the proposed alternative. The structure can be preserved by installing a concrete invert that will not increase the square footage of the structure. The temporary impacts for construction access are less than what would be required for a new and larger structure. The project as proposed has an estimated cost of \$80,000. This is the most cost-effective solution and also proposes the least amount of wetland impacts. The requirements for riprap for this alternative are less than a structure replacement. There will be no issues with the dam for this alternative.

In the August 17, 2016 Natural Resource Agency Coordination Meeting, issues with the dam were discussed. It was explained that a consultant would be conducting an emergency action plan and a hydraulics and hydrology analysis. Gino Infascelli said that it was OK to submit the permit application in order to get the review started, but that approval could not be granted until the consultant report was submitted at a later date. Gino asked that the invert elevations be noted in the application. The inlet is at elevation 1845' and the outlet elevation is at 1827'. The pipe length is 76'-3".

3. The type and classification of the wetlands involved.

R2UB1: Riverine, lower perennial, unconsolidated bottom, cobble gravel

L1UB1: Lacustrine, limnetic, unconsolidated bottom, cobble gravel

Bank



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1. The need for the proposed impact.

The existing metal pipe has moderate rust and pitting on the invert. There are distortions throughout the pipe and there are cracks at over 70 springline bolts on the south side. A concrete invert is required to prolong the life the structure. A small amount of riprap is required to protect the outlet from scouring further. It is necessary to impact jurisdictional areas to provide for the repairs. The impacts are for the riprap and for temporary construction access. If the structure is not rehabilitated, the road will eventually be load posted or closed.

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

The alternatives considered are as follows:

Replace structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 26'-5". This structure also acts as a dam for Lake Gloriette. If a new structure were to be constructed, a new dam would also have to be incorporated with the project. Constructing a new compliant structure and dam that allowed wildlife passage is far beyond the scope of this project. Spending additional resources on new structures when the existing structure can be adequately preserved for approximately \$80,000 would not be a practicable use of resources. There would also be significant wetland impacts if a new structure and dam were to be installed due to the additional footprint and for construction.

Install concrete invert and riprap: This is the proposed alternative. The structure can be preserved by installing a concrete invert that will not increase the square footage of the structure. The temporary impacts for construction access are less than what would be required for a new and larger structure. The project as proposed has an estimated cost of \$80,000. This is the most cost-effective solution and also proposes the least amount of wetland impacts. The requirements for riprap for this alternative are less than a structure replacement. There will be no issues with the dam for this alternative.

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R2UB1: Riverine, lower perennial, unconsolidated bottom, cobble gravel

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Bank

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

Lake Gloriette Outlet flows westerly toward Moose Brook.

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

Lake Gloriette Outlet has not been identified as a rare surface water of the state.

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

187ft² Riverine (111ft² temporary, 76ft² permanent)

166ft² Lacustrine (166ft² temporary, 0ft² permanent)

1510ft² Bank (1510ft² temporary, 0ft² permanent)

7. The impact on plants, fish, and wildlife, 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.

No rare or special concern species were identified within the proposed project area.

There were no State or Federally listed threatened or endangered species identified within the project limits by NHB. The USFWS IPaC identified the NLEB and Canada Lynx. The department submitted the 4d streamlined consultation form for the NLEB. As for the Canada Lynx the proposed project would not result in any loss of habitat for this species.

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

The existing pipe is at a slope of 23.6 degrees and has a length of 76'-3". At the top of the pipe is a dam structure. The outlet of the pipe is perched approximately 4 feet. Due to these reasons, this pipe has been deemed impassible according to "Evaluation of a Predictive Model for Upstream Fish Passage Through Culverts" by Joseph Seth Coffman. These conditions will not be changed as a result of this project.

The Department has coordinated with DRED and the results of the NHB review revealed no records in this area.

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

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

Spur Road is currently closed because the Balsams Resort is closed. The road will remain closed until the resort is open. Lake Gloriette Outlet is non-navigable water which makes it non-conducive to boaters. All recreation that takes place on Lake Gloriette can continue during and after project completion. During construction fishing and other activities from the banks of the brook will need to occur outside of the construction work zone. When construction is completed, the project as proposed will be a benefit to the public commerce.

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.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed improvements will be more pleasing to the eye than the structure in poor condition.

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. Spur Road is currently closed and will remain closed until the Balsams Resort reopens.

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

The project is expected to have a positive impact on abutting properties. The rehabilitated structure will better serve the abutting properties if they need to travel on the road. The riprap that is being installed will prevent the outlet from scouring further. The project as proposed will not alter the chance of flooding on abutting properties.

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 structure and roadway. The invert repair will also prolong the life of the dam. If the structure is not rehabilitated, the bridge and dam will eventually fail.

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 difference in the quality of water entering and exiting the site.

The surface water currently runs off the road, over natural vegetation, and then off the headwalls and wingwalls. Upon completion of the project surface will drain water in the same manner. This 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.

Flooding: Installing a concrete invert will have a negligible effect on floodwaters upstream and downstream of the structure. There is a dam upstream that holds Lake Gloriette which controls the flow through the structure.

Erosion: The riprap placed at the outlet will prevent further erosion and preserve the natural alignment and gradient of the stream channel.

Sedimentation: Nothing that will be a barrier to sediment transport will be installed in this project.

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. The brook does not have enough surface water for wave energy to be an issue. The project will not affect surface water at Lake Gloriette.

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 alternations 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 ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of the repair of an existing bridge and dam structure. There are no similar structures in the vicinity owned by other parties that would require repair.

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

The value of the wetland as a habitat for living organisms will be not be changed as result of this project. The project will be constructed outside the fish spawning season. A function of the brook is to carry water from a higher elevation to a lower elevation. This project will not interfere with that function.

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

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Dixville 182/070, non-federal, 41077

Tony Weatherbee presented the project. The bridge is a metal pipe over Lake Gloriette Outlet carrying Spur Road to the Balsams Resort. The road will be closed for the duration of the project. There are temporary impacts around the structure for access and permanent impacts downstream for riprap. The outlet is perched 3' to 4', but because the pipe is impassable due to the length and 24 degree angle, the perch will not be addressed. The pipe is cracked along the bolt line and the invert is rusted so the proposed project is to install a concrete invert.

Tony further explained that the structure also acts as a dam. The dam is owned by DOT and maintained by District One. An emergency action plan and a hydraulics and hydrology report is being conducted by a consultant that will determine whether or not the dam is adequate or deficient.

Carol Henderson asked if people live on the lake and Tony said no. She also asked if we have considered removing the dam. Tony said that it was discussed as an alternative of last resort, and the hydraulics and hydrology report would determine the outcome. The ideal situation is to be allowed by the report to install a concrete invert. Removing the dam would be a problem for the resort, as the pond is used for recreation.

Mike Hicks asked if removing the dam would lower the water level and Tony said yes. Mike said that this would be a problem for the Army Corp. Lori Sommer added that removing the dam would be problematic in obtaining a permit.

Gino asked that in the permit application the invert elevations be included. He noted that the structure does not meet the stream crossing rules. Matt Urban and Tony noted that the stream crossing rules do not apply to a bridge or dam structure at the outlet of a lake. Matt noted that the crossing cannot be evaluated based on the stream crossing rules because of the lake on the other side causing there to be no bankful width.

Tony said that he would like to submit the application to get the review process started. Gino said that that is OK, however he would not like to issue the permit until he sees the consultant's hydraulic report.

Mike asked if any tree cutting would be taking place. Tony said that it is possible for less than one acre to be cut. Mike asked to reevaluate whether or not this was truly necessary, as the photos look clear of trees.

Tony, Gino, and Lori agreed that there are no issues with the project as long as the dam's hydraulic report is OK and that no mitigation is required.

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

MITIGATION REPORT

This project is maintenance of an existing structure and therefore mitigation is not required. At the August 17, 2016 Natural Resources Agency Meeting it was determined that no mitigation would be required.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Tony Weatherbee
New Hampshire Department of Transportation
7 Hazen Drive
Concord, NH 03302

From: NH Natural Heritage Bureau

Date: 7/25/2016 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 7/21/2016

NHB File ID: NHB16-2295

Applicant: Tony Weatherbee

Location: Dixville

Metal pipe that carries Spur Road over Gloriette Lake Outlet

Project

Description: Rehabilitate the bridge that carries Spur Road over Gloriette Lake Outlet (182/070). The existing structure is a multi-plate pipe arch. The pipe has a span of 11'-10" and a rise of 7'-7". The pipe is 76'-3" long. Proposed work consists of the following: place sandbag cofferdams and install a concrete invert.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

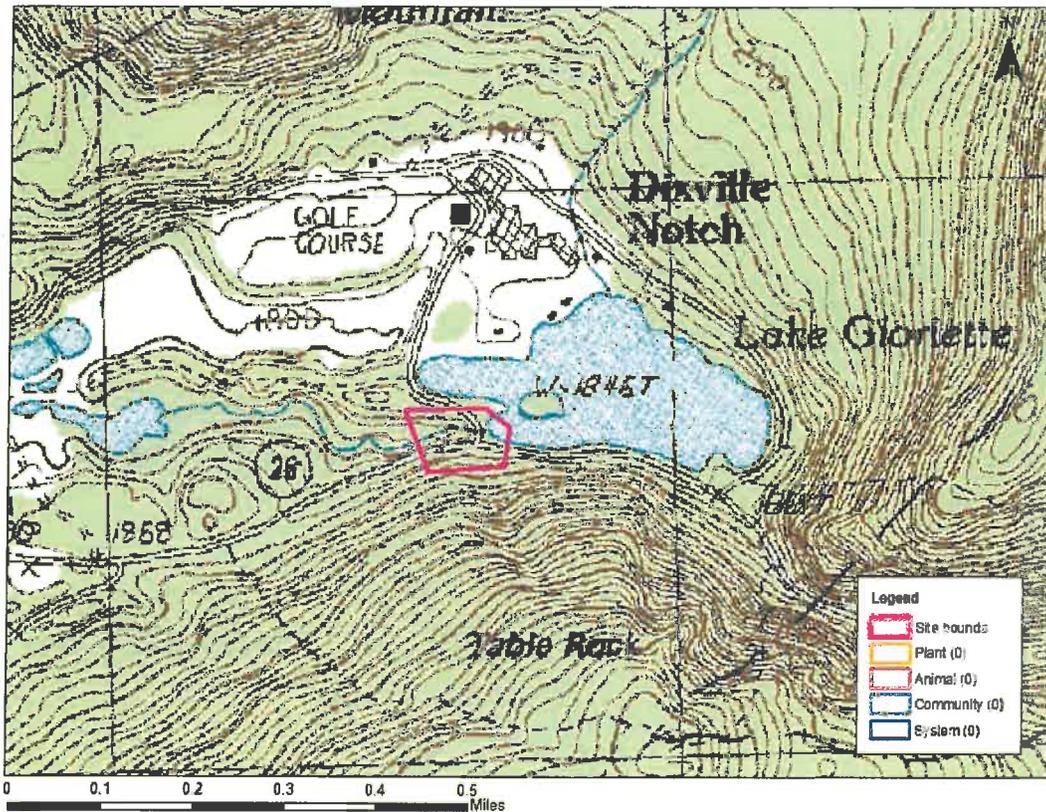
It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 7/21/2016, and cannot be used for any other project.



NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

MAP OF PROJECT BOUNDARIES FOR: NHB16-2295

NHB16-2295





United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-1911

July 21, 2016

Event Code: 05E1NE00-2016-E-02677

Project Name: Dixville 182/070

Subject: 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



United States Department of Interior
Fish and Wildlife Service

Project name: Dixville 182/070

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
<http://www.fws.gov/newengland>

Consultation Code: 05E1NE00-2016-SLI-1911

Event Code: 05E1NE00-2016-E-02677

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Name: Dixville 182/070

Project Description: Rehabilitate the bridge that carries Spur Road over Gloriette Lake Outlet (182/070). The existing structure is a multi-plate pipe arch. The pipe has a span of 11'-10" and a rise of 7'-7". The pipe is 76'-3" long. Proposed work consists of the following: place sandbag cofferdams and install a concrete invert.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior
Fish and Wildlife Service

Project name: Dixville 182/070

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-71.30918741226196 44.867732153956986, -71.3087797164917 44.86671321887434, -71.30702018737793 44.866728426993255, -71.30667686462402 44.867488827815386, -71.3076639175415 44.86774736180667, -71.30918741226196 44.867732153956986)))

Project Counties: Coos, NH



United States Department of Interior
Fish and Wildlife Service

Project name: Dixville 182/070

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your 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. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Canada Lynx (<i>Lynx canadensis</i>) Population: Contiguous U.S. DPS	Threatened	Final designated	
Northern long-eared Bat (<i>Myotis septentrionalis</i>)	Threatened		



United States Department of Interior
Fish and Wildlife Service

Project name: Dixville 182/070

Critical habitats that lie within your project area

There are no critical habitats within your project area.

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.

Above Ground Review

Known/approximate age of structure: 1968 Corrugated Metal multi-plate pipe arch

No Potential to Cause Effect/No Concerns

Proposed work includes repair of existing bridge and dam structure, by placing sandbag cofferdams, changing invert from metal pipe invert to concrete invert, placing riprap.

Concerns:

Below Ground Review

Recorded Archaeological site: Yes No

Nearest Recorded Archaeological Site Name & Number: **27-CO-0052 D.A. Homestead**

Pre-Contact Post-Contact

Distance from Project Area:

1.66 miles (2.68 km) west of project area

No Potential to Cause Effect/No Concerns

Proposed project has limited impacts as activities are to be undertaken in areas already disturbed. Existing bridge and dam structure are to be repaired, proposed structure will match existing slope and alignment.

Concerns:

Reviewed by:



9/22/2016

NHDOT Cultural Resources Staff

Date:



**US Army Corps
of Engineers**
New England District

**New Hampshire Programmatic General Permit (PGP)
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 PGP, 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, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org , specifically the book <u>Natural Community Systems of New Hampshire</u> .		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 size of the existing impervious surface area?	6165A ²	
2.7 What is the size of the proposed impervious surface area?	6165A ²	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	0%	
3. Wildlife	Yes	No
3.1 Has the NHB 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 a NHB determination.)		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 PGP, GC 21?		N/A
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?		N/A
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**		N/A

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

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



Figure 1: Spur Road over the structure towards the Balsams Resort (7/2016).



Figure 2: Spur Road over the structure towards Rte. 26 (7/2016).



Figure 3: Concrete dam at the outlet of Lake Gloriette and the inlet of the structure (7/2016).



Figure 4: Lake Gloriette (7/2016).



Figure 5: Metal pipe facing downstream (7/2016).



Figure 6: Facing downstream above structure (7/2016).

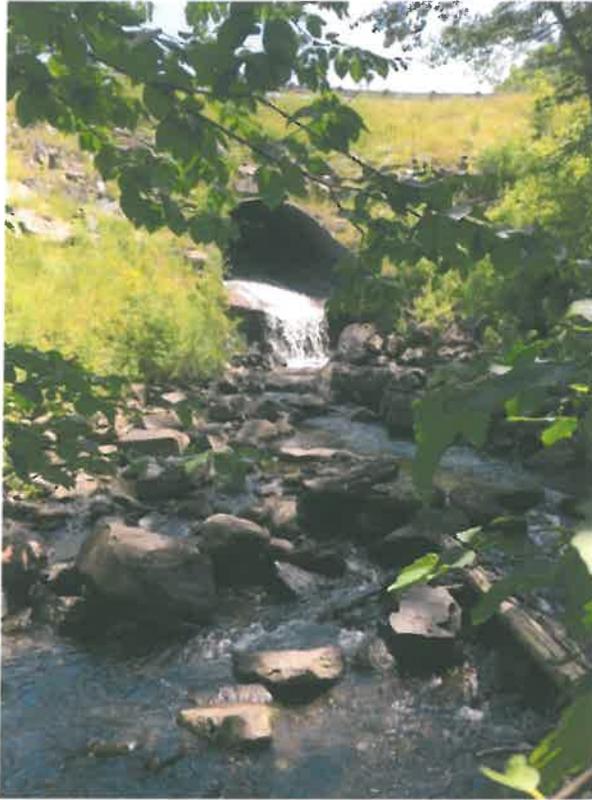


Figure 7: Structure outlet (7/2016).



Figure 8: Above structure facing downstream (7/2016).

CONSTRUCTION SEQUENCE

1. Sandbags will be placed in the dam structure at the inlet and in the brook at the outlet, and the work zone will be dewatered. Stream flow will be maintained through a temporary bypass pipe.
2. A concrete invert will be installed.
3. All dewatering devices will be removed and the site will be restored to its original quality.

Note:

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

PART Env-Wt 404 CRITERIA FOR SHORELINE STABILIZATION

The rehabilitation of the bridge that carries Spur Road over Lake Gloriette Outlet proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Lake Gloriette Outlet. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

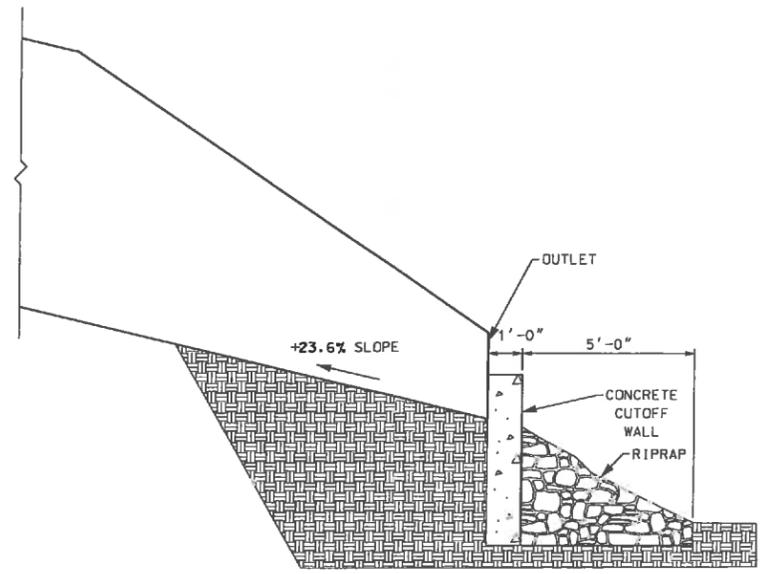
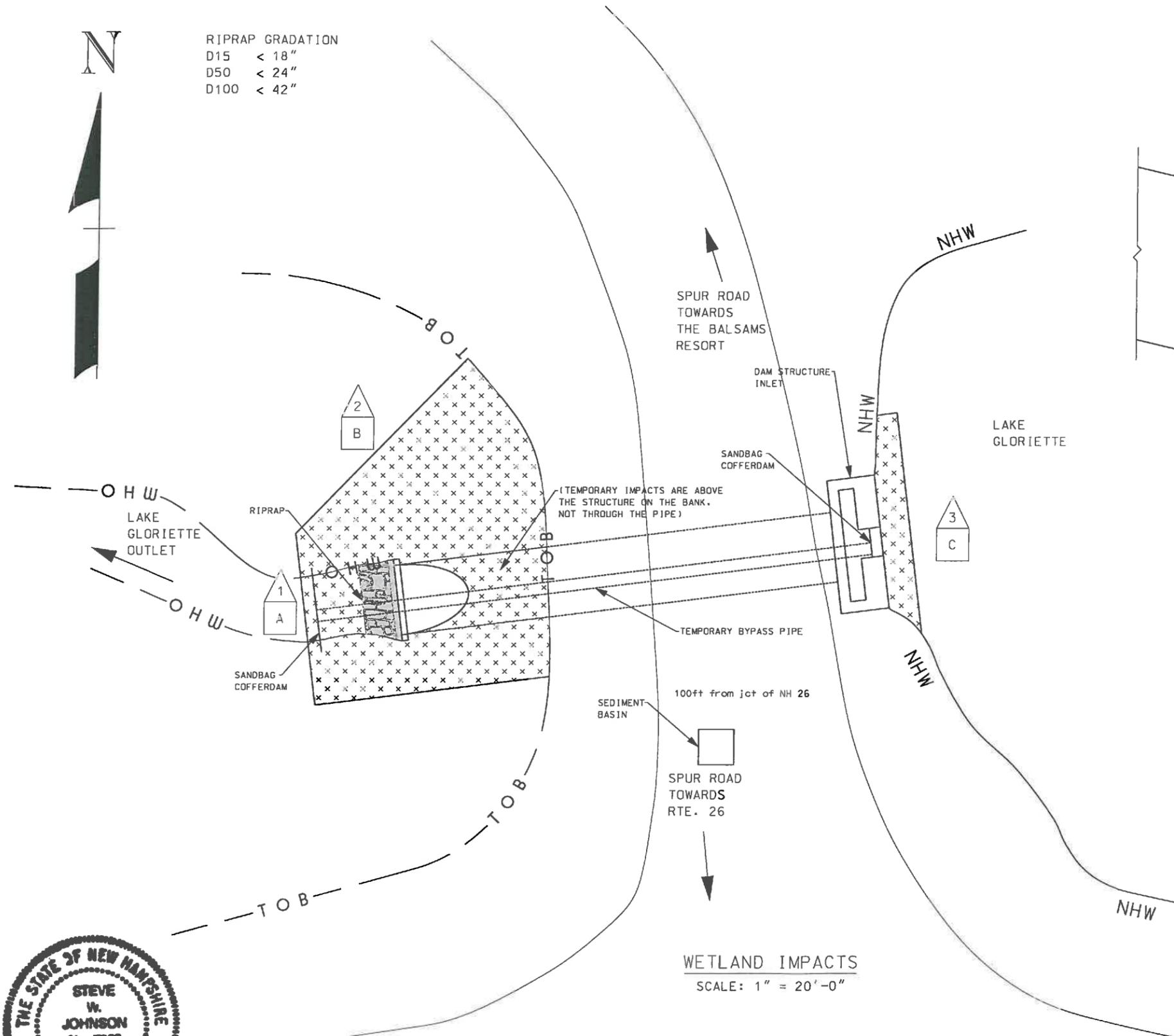
Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

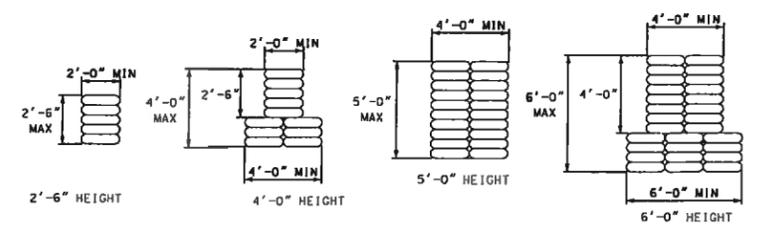
- (a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.
- (b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.
- (b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.
- (b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.
- (c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
- (d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
- (e) The enclosed plan has been stamped by a professional engineer.

N

RIPRAP GRADATION
D15 < 18"
D50 < 24"
D100 < 42"



INVERT CROSS SECTION B-B
NOT TO SCALE



COFFERDAM DETAILS
NOT TO SCALE

WETLAND IMPACTS
SCALE: 1" = 20'-0"

WETLANDS DELINEATED BY ANW ON 6/2016



STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE									
TOWN	DIXVILLE		BRIDGE NO.	182/070		STATE PROJECT	41077		
LOCATION SPUR ROAD OVER LAKE GLORiette OUTLET									
WETLAND IMPACTS									
REVISIONS AFTER PROPOSAL		BY	DATE	CHECKED	BY	DATE	BRIDGE SHEET		
		DESIGNED	ANW	8/5/16	CHECKED		1 OF 2		
		DRAWN	ANW	8/5/16	CHECKED		FILE NUMBER		
		QUANTITIES			CHECKED		DIXVILLE		
		ISSUE DATE		FISCAL YEAR	C&M	SHEET NO.	TOTAL SHEETS		
		REV. DATE		2016	01	1	2		
SHEET SCALE		AS NOTED							

WETLAND IMPACT SUMMARY

WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION		
			PERMANENT						PERMANENT		
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)		TEMPORARY		BANK LEFT	BANK RIGHT	CHANNEL
			SF	LF	SF	LF	SF	LF	LF	LF	LF
1	R2UB1	A			76	6	111	10			
2	BANK	B					1510	58			
3	L1UB1	C					166	38			
TOTAL			0	0	76	6	1787	106	0	0	0

LEGEND

WETLAND CLASSIFICATION CODES	
R2UB1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE GRAVEL
L1UB1	LACUSTRINE, LIMNETIC, UNCONSOLIDATED BOTTOM, COBBLE GRAVEL
BANK	

TYPE OF WETLAND IMPACT	SHADING/HATCHING	SYMBOL	DESCRIPTION
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	/ / / /	#	WETLAND DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	■	#	WETLAND IMPACT LOCATION
TEMPORARY IMPACTS	+ + + +	#	WETLAND MITIGATION AREA
	□	□	MITIGATION

STATE OF NEW HAMPSHIRE										
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE										
TOWN		DIXVILLE		BRIDGE NO.		182/070		STATE PROJECT		41077
LOCATION SPUR ROAD OVER LAKE GLORINETTE OUTLET										
WETLAND KEY AND SUMMARY										
REVISIONS AFTER PROPOSAL		BY		DATE		CHECKED		BY		DATE
		DESIGNED		ANW 8/5/16		CHECKED				
		DRAWN		ANW 8/5/16		CHECKED				
		QUANTITIES				CHECKED				
ISSUE DATE		FISCAL YEAR		CREW		SHEET NO.		TOTAL SHEETS		
AS NOTED		2016				2		2		