STATE OF NEW HAMPSHIRE INTER-DEPARTMENT COMMUNICATION

44 0004

		DATE:	June 11, 2021
FROM:	Andrew O'Sullivan Wetlands Program Manager	AT (OFFICE):	Department of Transportation
SUBJECT:	Dredge & Fill Application Meredith, 42828		Bureau of Environment
TO:	Karl Benedict, Public Works Permitting O New Hampshire Wetlands Bureau 29 Hazen Drive, P.O. Box 95 Concord, NH 03302-0095	officer	

Forwarded herewith is the application package prepared by NHDOT Bureau of Bridge Maintenance for the subject major impact project. The project is located along NH Route 25 in the Town of Meredith, NH. Proposed work includes bridge repair to bridge 094/162 which carries NH 31 over Stony Brook. Work will include replacement in-kind of the "fly" wing walls at the outlet of the bridge. Subsequent work includes replacement of riprap within the lake bed along the wingwalls for structure protection.

This project was not reviewed at the Natural Resource Agency Coordination Meeting. However, a meeting was held with DES on April 22, 2021 for project review and coordination. Minutes are included within the application.

NHDOT anticipates and request that this project be reviewed and permitted by the Army Corp of Engineers through the State Programmatic General Permit process. A copy of the application has been sent to the Army Corp of Engineers electronically.

Mitigation is not required for the project. Additional mitigation details are included within the application.

The lead people to contact for this project are Tim Boodey, Bureau of Bridge Maintenance Engineer (603-271-3667or Timothy.Boodey@dot.nh.gov) or Sarah Large, Wetlands Program Analyst, Bureau of Environment (271-3226 or Sarah.Large@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #648159) in the amount of \$400.

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:sel

cc: BOE Original Town of Meredith (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) Beth Alafat & Jeanie Brochi, US Environmental Protection Agency (via electronic notification) Michael Hicks, US Army Corp of Engineers (via electronic notification) Kevin Nyhan, BOE (via electronic notification)

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STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

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

APPLICANT'S NAME: New Hampshire Department of Transportation TOWN NAME: Meredith

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

A person may request a waiver of the requirements in Rules Env-Wt 100-900 to accommodate situations where strict adherence to the requirements would not be in the best interest of the public or the environment but is still in compliance with RSA 482-A. A person may also request a waiver of the standards for existing dwellings over water pursuant to RSA 482-A:26, III(b). For more information, please consult the <u>Waiver Request Form</u>.

SEC	SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; RSA 482-A:3, I(d)(2))				
Plea <u>Res</u> pro	ase use the <u>Wetland Permit Planning Tool (WPPT)</u> , the Natural Heritage Bureau (NHB) <u>DataCheck Too</u> storation Mapper, or other sources to assist in identifying key features such as: <u>priority resource area</u> <u>tected species or habitats</u> , coastal areas, designated rivers, or designated prime wetlands.	ol, the <u>Aquatic</u> s (PRAs),			
Has	the required planning been completed?	🛛 Yes 🗌 No			
Doe	es the property contain a PRA? If yes, provide the following information:	🗌 Yes 🔀 No			
•	Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04.	🗌 Yes 🔀 No			
•	Protected species or habitat? If yes, species or habitat name(s): NHB Project ID #: NHB21-0797 	🗌 Yes 🔀 No			
•	Bog?	🗌 Yes 🔀 No			
•	Floodplain wetland contiguous to a tier 3 or higher watercourse?	🗌 Yes 🔀 No			
•	Designated prime wetland or duly-established 100-foot buffer?	🗌 Yes 🔀 No			
•	Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	🗌 Yes 🔀 No			
ls t	he property within a Designated River corridor? If yes, provide the following information:	🗌 Yes 🔀 No			
•	Name of Local River Management Advisory Committee (LAC):				
•	A copy of the application was sent to the LAC on Month: Day: Year:				

For dredging projects, is the subject property contaminated?If yes, list contaminant:	Yes No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	🗌 Yes 🔀 No

For stream crossing projects, provide watershed size (see <u>WPPT</u> or Stream Stats): 3.03 Sq Mi (1,939 Acres)

SECTION 2 - PROJECT DESCRIPTION (Env-Wt 311.04(i))

Provide a **brief** description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply "See attached"; please use the space provided below.

New Hampshire Department of Transportation (NHDOT) personnel performed an inspection of the Red Listed NH Route 25 Bridge over Hawkins Brook in Meredith, NH (NHDOT Bridge No. 189/150) on November 15, 2019. The results of the inspection revealed the southwest wing wall at the outlet into Lake Winnipesaukee has spalled and there is exposed rebar with undermining at the base of both outlet wing walls. The proposed repair work will address the specific areas of the bridge to keep it in service until a larger project can be planned. All work will be performed within the NHDOT ROW. Site access will be from the abutting parcel Map U07/Lot 124; written permission for this access has been granted to NHDOT by the owner.

The proposed project includes replacement of both south/outlet wing walls in their existing footprints, and replacement of riprap immediately in front of the wing walls that will be limited to locations where riprap was installed previously to prevent undermining the new infrastructure. It is important to this project to note that the existing and proposed wing walls are "flying wing walls" that are not embedded in the lake but sit directly onto the ground surface, therefore replacement of riprap in front of the wing walls is necessary to provide protection from any potential for scour that could erode beneath the wing walls and destabilize the bridge. Installing wing walls with dug footers or foundations would result in increased impacts to the lake resource in this location and is not economically feasible as a part of this project.

The photos provided in this application identify the location where riprap was installed during previous stabilization efforts; riprap will be placed and limited to within this footprint only, as shown on the plans provided and will not extend lakeward more than 2 feet along the face of the wing walls. Riprap will not be placed within the bridge or impact the stream.

Although there are vegetated areas of lakebed in the vicinity of the proposed work, as shown on the plans, the areas of resource impact for temporary work access, installation of water quality protection/erosion and sediment controls, and replacement of riprap have been classified as L2RBr, lacustrine, littoral, rock bottom, artificial. There will be no temporary or permanent impact to the adjacent lakebed nor aquatic beds that are classified as L1AB34, lacustrine, limnetic aquatic bed rooted and floating vascular. Further details about the existing environmental site conditions are included in a separate write up.

This project will not cause a violation to any water quality standard. To ensure protection of water quality, prior to removal of the existing wing walls, a single layer of floating turbidity curtains will be installed around the perimeter of each wing wall, and a second layer will be installed at the extent of the temporary impacts. Each curtain will be stabilized by sandbags. These measures will serve as the in-water water diversion and erosion control BMPs. After the wing walls are removed, concrete forms and sandbags around the perimeter of the forms will be installed. A combination of forms, plastic sheeting and caulking will be used to make the forms as watertight as possible. Submersible pumps will be used during concrete tremie placement; however, the work area will not be completely dewatered. Water from within the concrete forms and the water surface behind the turbidity curtain will be pumped into water tanks staged on site during concrete placement. Water pumped into these tanks will be removed from the site and discharged at a Department owned gravel pit in New Hampton. The turbidity curtains will be left in place until suspended particles have settled and the water in the work area has returned to normal clarity. All disturbed areas will be stabilized, and erosion control measures removed upon completion of work, and the site will be restored to its original quality.

Work has been limited such that the riprap will be installed at grade and will not create land in public waters past the Natural Mean High Water elevation of 504.32 ft (NGVD) posted in the NHDES Official List of Public Waters.

SECTION 3 - PROJECT LOCATION

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: NH Route 25

TOWN/CITY: Meredith

TAX MAP/BLOCK/LOT/UNIT: Tax Map U07 / Lot N/A

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME: Meredith Bay

🔲 N/A

(Optional) LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 44.65866° North

-71.49832° West

STATE: NH

STATE: NH

ZIP CODE: 03302

ZIP CODE: 03101

SECTION 4 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 311.04(a))

If the applicant is a trust or a company, then complete with the trust or company information.

NAME: NH Department of Transportation; Bridge Maintenance, Tim Boodey, PE

MAILING ADDRESS: 7 Hazen Drive / P.O. Box 483

TOWN/CITY: Concord

EMAIL ADDRESS: <u>Tim.Boodey@dot.nh.gov</u>

FAX:

PHONE: 603-271-3734

PHONE: 603.460.5205

ELECTRONIC COMMUNICATION: By initialing here: TMB, I hereby authorize NHDES to communicate all matters	
relative to this application electronically.	

SECTION 5 - AUTHORIZED AGENT INFORMATION (Env-Wt 311.04(c))

N/A

LAST NAME, FIRST NAME, M.I.: Peace, Kimberly R.

COMPANY NAME: Hoyle, Tanner & Associates, Inc.

MAILING ADDRESS: 150 Dow Street

TOWN/CITY: Manchester

EMAIL ADDRESS: kpeace@hoyletanner.com

FAX:

ELECTRONIC COMMUNICATION: By initialing here KRP, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 6 - PROPERTY OWNER INFORMATION (IF DIFFERENT THAN APPLICANT) (Env-Wt 311.04(b))

If the owner is a trust or a company, then complete with the trust or company information.

Same as applicant

NAME:			
MAILING ADDRESS:			
TOWN/CITY:		STATE:	ZIP CODE:
EMAIL ADDRESS:			
FAX:	PHONE:		
ELECTRONIC COMMUNICATION: By initialing here to this application electronically.	, I hereby authorize NHDES	to communicate	all matters relative

SECTION 7 - RESOURCE-SPECIFIC CRITERIA ESTABLISHED IN Env-Wt 400, Env-Wt 500, Env-Wt 600, Env-Wt 700, OR Env-Wt 900 HAVE BEEN MET (Env-Wt 313.01(a)(3))

Per RSA 310-A:79 – Exemption III, Sarah Large Wetlands Program Analyst of NHDOT, performed the wetland identification and delineation on August 6, 2019 according to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0, January 2012, US Army Corps of Engineers. The jurisdictional areas are shown on the attached plans.

The project is a stream crossing and, as such, has been designed in accordance with the resource-specific criteria established in Env-Wt 900. Project specific information is contained within this permit application.

SECTION 8 - AVOIDANCE AND MINIMIZATION

The Avoidance and Minimization Checklist is attached to this permit application.

SECTION 9 - MITIGATION REQUIREMENT (Env-Wt 311.02)

If unavoidable jurisdictional impacts require mitigation, a mitigation <u>pre-application meeting</u> must occur at least 30 days but not more than 90 days prior to submitting this Standard Dredge and Fill Permit Application.

Mitigation Pre-Application Meeting Date: Month: 3 Day: 23 Year: 2021

(N/A - Mitigation is not required per email attached from Karl Benedict on behalf of Lori Sommer dated 4/22/21

SECTION 10 - THE PROJECT MEETS COMPENSATORY MITIGATION REQUIREMENTS (Env-Wt 313.01(a)(1)c)

Confirm that you have submitted a compensatory mitigation proposal that meets the requirements of Env-Wt 800 for all permanent unavoidable impacts that will remain after avoidance and minimization techniques have been exercised to the maximum extent practicable: I confirm submittal.

 $(\boxtimes N/A - Compensatory mitigation is not required)$

SECTION 11 - IMPACT AREA (Env-Wt 311.04(g))

For each jurisdictional area that will be/has been impacted, provide square feet (SF) and, if applicable, linear feet (LF) of impact, and note whether the impact is after-the-fact (ATF; i.e., work was started or completed without a permit).

For intermittent and ephemeral streams, the linear footage of impact is measured along the thread of the channel. *Please note, installation of a stream crossing in an ephemeral stream may be undertaken without a permit per Rule Env-Wt* 309.02(d), however other dredge or fill impacts should be included below.

For perennial streams/rivers, the linear footage of impact is calculated by summing the lengths of disturbances to the channel and banks.

Permanent impacts are impacts that will remain after the project is complete (e.g., changes in grade or surface materials).

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

JURISDICTIONAL AREA		Р	ERMANEN	Г	TEMPORARY		
		SF	LF	ATF	SF	LF	ATF
	Forested Wetland						
	Scrub-shrub Wetland						
Wetlands	Emergent Wetland						
	Wet Meadow						
	Vernal Pool						
	Designated Prime Wetland						
	Duly-established 100-foot Prime Wetland Buffer						
Sur	Intermittent / Ephemeral Stream						
	Perennial Stream or River						

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				2.4		422	C.4	
	Lake /	Pond	33	24		422	64	
17	Dockin	g - Lake / Pond						
	Dockin	g - River						
	Bank -	Intermittent Stream						
nks	Bank -	Perennial Stream / River						
Ba	Bank /	Shoreline - Lake / Pond				18	14	
	Tidal W	/aters	i de la compañía					
- 1	Tidal M	larsh						
	Fond D			The shake			Cash Transis	
ida	Sand D							
	Undev	eloped Tidal Buffer Zone (TBZ)						
	Previou	usly-developed TBZ						
-	Dockin	g - Tidal Water	in the second					
12.1		TOTAL	33	24		440	78	
SEC	TION 12	2 - APPLICATION FEE (RSA 48	2-A:3, I)					
	MINIMI	IM IMPACT FEF: Flat fee of \$	400					
							TS REGAR	DIESSOE
		FORCEIVIENT RELATED, POB	CLICLY-FUNDED ANL	102 A.2 1/) for roctri	ctions)	CIS, REGAR	DLL33 OF
5	INIPAC	CLASSIFICATION: Flat fee of	\$400 (refer to RSA	482-A:5, 1(0	c) for restric	cuons).		
\boxtimes	MINOR	OR MAJOR IMPACT FEE: Cale	culate using the tab	le below:				
		Permanent and	l temporary (non-de	ocking): 47	'3 SF	×	\$0.40 =	\$ 189.20
		S	easonal docking str	ucture:	SF	×	\$2.00 =	\$
		Per	manent docking str	ucture:	SE	×	\$4.00 =	Ś
-			indirent docking sti					۲ ۲
-		Proj	ects proposing snor	eline structi	ures (includ	ing docks) add	a \$400 =	\$
							Total =	\$ 189.20
The	e applic	ation fee for minor or major i	mpact is the above o	alculated to	tal or \$400	whichever is	greater =	\$ 400.00
SEC	TION 1		(Env-)//t 306 05)					
SEC	11014 1.	- FROJECT CLASSIFICATION	(110-001 300.03)					
Indi	cate the	e project classification.						
	Ainimu	m Impact Project	Minor Project			Major Proje	ect	
					Ľ			
SECT	FION 14	- REQUIRED CERTIFICATION	S (Env-Wt 311.11)					
Initi	al each	box below to certify:						
		box below to certify.						
Ini k	tials:	To the best of the signer's kno	owledge and belief, a	all required r	notifications	have been pro	ovided.	
Ini	tials:	The information submitted or	or with the applica	tion is true. d	complete, a	nd not mislead	ling to the b	est of the
k	KBP A	signer's knowledge and belief					0	
	TMP							
		The signer understands that:	. in complete or mi	alaading info	rmation co	netitutos grou	nde for NHE	ES to:
		 The submission of fais 1 Deputies applicate 	ier incomplete, or mi	sleading into		institutes grou		15 10.
	1. Deny the application.							
		2. Revoke any appro	ortified wetland seio	ased on the	d curvovor	or profession:	al onginoor	iconsod to
Ini	tials:	5. If the signer is a C	er tilleu wetiallu scie	matter to th	o joint boor	d of liconcuro	and cortific	ation
k	KRP	practice in New H		matter to the	e joint boar	u of licensule		
T	mB	established by KS	a the negative energy	fied in New	Hampshire	law for falsifie	ation in offi	cial matters
, í		 The signer is subject t 	o the penalties spec	neumnew	nampsnire			siai matters,
- "		The signature shall as	netituto quthorizatio	n for the m	unicipal con	servation com	mission and	the
1 A		 The signature shall co Department to increase 	t the site of the pro-	and project	t ovcont fo	r minimum im	nact forestr	
		Department to inspec	a the site of the prop	oseu projec	i, except io	minimum im	pace intesti	y JEIN

NHDES-W-06-012

	projects and minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.					
Initials: N/A	If the applicant is not the owner of the pr the signer that he or she is aware of the a	operty, each prope application being fil	rty owner signature shall constitute c ed and does not object to the filing.	ertification by		
SECTION 15	- REQUIRED SIGNATURES (Env-Wt 311	.04(d); Env-Wt 31:	1.11)			
SIGNATURE	SIGNATURE (OWNER); PRINT NAME LEGIBLY: DATE: Time thy Boodey G/1/2021					
SIGNATURE	(APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:		DATE:		
SIGNATURE (AGENT, IF APPLICABLE): Kindbudg Peace		PRINT NAME LEGIBLY: Kimberly R. Peace		DATE: 5/30/2021		
SECTION 1	6 - TOWN / CITY CLERK SIGNATURE (Env	v-Wt 311.04(f))				
As require plans, and	d by RSA 482-A:3, I(a)(1), I hereby certify four USGS location maps with the town,	that the applicant city indicated belo	t has filed four application forms, fo ow.	ur detailed		
TOWN/CITY CLERK SIGNATURE:			PRINT NAME LEGIBLY: Please refer to RSA 482-A:3I(a)(1): The four (4) town copies have bee certified mail and filed directly wit accordance with the above regulat	n sent via h the town in ion.		
TOWN/CIT	Y: Town of Meredith		DATE:			

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3, I(a)(1)

- 1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
- 2. 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.
- 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.
- 4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

Submit the 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 at the address at the bottom of this page. Make check or money order payable to "Treasurer – State of NH".



Ho	yle, Tanner	150 Dow Street Manchester, NH 03101-1227 Tel 603-669-5555 Fax 603-669-4168 Web Page www.hoyletanner.com	NH 25 BRIDGE OVER HAWKINS BROOK MEREDITH, NH	APPENDIX
DR. BY dlc	DATE 3/12/2020	SCALE 1 inch = 2,000 feet	PROJECT LOCATION MAP	A





STANDARD DREDGE AND FILL WETLANDS PERMIT APPLICATION ATTACHMENT A: MINOR AND MAJOR PROJECTS Water Division/Land Resources Management Wetlands Bureau



Check the Status of your Application

RSA/ Rule: RSA 482-A/ Env-Wt 311.10; Env-Wt 313.01(a)(1); Env-Wt 313.03

APPLICANT'S NAME: New Hampshire Department of Transportation **TOWN NAME:** Meredith

Attachment A is required for all minor and major projects, and must be completed in addition to the Avoidance and Minimization Narrative or Checklist that is required by Env-Wt 307.11.

For projects involving construction or modification of non-tidal shoreline structures over areas of surface waters having an absence of wetland vegetation, only Sections I.X through I.XV are required to be completed.

PART I: AVOIDANCE AND MINIMIZATION

In accordance with Env-Wt 313.03(a), the Department shall not approve any alteration of any jurisdictional area unless the applicant demonstrates that the potential impacts to jurisdictional areas have been avoided to the maximum extent practicable and that any unavoidable impacts have been minimized, as described in the Wetlands Best Management Practice Techniques For Avoidance and Minimization.

SECTION I.I - ALTERNATIVES (Env-Wt 313.03(b)(1))

Describe how there is no practicable alternative that would have a less adverse impact on the area and environments under the Department's jurisdiction.

There is no other alternative that would have a less adverse impact on the area and environments under the Departments jurisdiction and meet the project goals of addressing the specific areas of the bridge to keep it in service until a larger project can be planned. The proposed project minimizes impacts to the greatest extent possible by replacing riprap only where riprap was installed during previous stabilization efforts and will not include placement of new structural components (riprap) in locations where none existed previously. Work will be limited to replacement of the wing walls and riprap and will not extend lakeward more than 2 feet from the extent of prior work done for installation and stabilization of the structure.

SECTION I.II - MARSHES (Env-Wt 313.03(b)(2))

Describe how the project avoids and minimizes impacts to tidal marshes and non-tidal marshes where documented to provide sources of nutrients for finfish, crustacean, shellfish, and wildlife of significant value.

N/A – This project is not located within tidal waters or marshes.

SECTION I.III - HYDROLOGIC CONNECTION (Env-Wt 313.03(b)(3))

Describe how the project maintains hydrologic connections between adjacent wetland or stream systems.

Due to the nature of the proposed project (substructure stabilization/repair) there will be no interruption of hydrologic connections between adjacent wetland or stream systems. The project will not result in placement of riprap or concrete repairs that would cause an interruption of the existing hydrologic connections.

SECTION I.IV - JURISDICTIONAL IMPACTS (Env-Wt 313.03(b)(4))

Describe how the project avoids and minimizes impacts to wetlands and other areas of jurisdiction under RSA 482-A, especially those in which there are exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern, or any combination thereof.

There are no exemplary natural communities, vernal pools, protected species and habitat, documented fisheries, and habitat and reproduction areas for species of concern within the project location.

SECTION I.V - PUBLIC COMMERCE, NAVIGATION, OR RECREATION (Env-Wt 313.03(b)(5))

Describe how the project avoids and minimizes impacts that eliminate, depreciate or obstruct public commerce, navigation, or recreation.

The project will have a positive effect on public commerce by repairing the substructure of the bridge allowing for continued safe passage of the traveling public until a larger project can be planned. The project is located within the Scenic/Clough Park of Meredith; unavoidable temporary closure of the park in the area of the repairs may occur, however, the public will be notified in advance of any closure. There will be no impact on navigation as a result of the project.

SECTION I.VI - FLOODPLAIN WETLANDS (Env-Wt 313.03(b)(6))

Describe how the project avoids and minimizes impacts to floodplain wetlands that provide flood storage.

There is no history of flooding or damage associated with this crossing. The proposed work will not change the hydraulic capacity of the crossing. In particular, the reconstruction of the downstream wing walls in kind and reestablishment of previously placed riprap will help keep this crossing in place and prevent potential erosion from storm events affecting the Lake. There will be no permanent impact on floodplain wetlands that provide flood storage.

SECTION I.VII - RIVERINE FORESTED WETLAND SYSTEMS AND SCRUB-SHRUB – MARSH COMPLEXES (Env-Wt 313.03(b)(7))

Describe how the project avoids and minimizes impacts to natural riverine forested wetland systems and scrub-shrub – marsh complexes of high ecological integrity.

NA- This project area does not contain natural riverine forested wetland systems or scrub-shrub marsh complexes of high ecological integrity.

SECTION I.VIII - DRINKING WATER SUPPLY AND GROUNDWATER AQUIFER LEVELS (Env-Wt 313.03(b)(8))

Describe how the project avoids and minimizes impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

N/A- There are no impacts to wetlands that would be detrimental to adjacent drinking water supply and groundwater aquifer levels.

SECTION I.IX - STREAM CHANNELS (Env-Wt 313.03(b)(9))

Describe how the project avoids and minimizes adverse impacts to stream channels and the ability of such channels to handle runoff of waters.

The project proposes to replace the south/outlet wing walls and reestablish previously placed riprap. As a result, there will be no adverse impacts to the stream channel or the ability of the channel to handle runoff of waters.

SECTION I.X - SHORELINE STRUCTURES - CONSTRUCTION SURFACE AREA (Env-Wt 313.03(c)(1))

Describe how the project has been designed to use the minimum construction surface area over surface waters necessary to meet the stated purpose of the structures.

N/A – This project does not include any shoreline structures.

SECTION I.XI - SHORELINE STRUCTURES - LEAST INTRUSIVE UPON PUBLIC TRUST (Env-Wt 313.03(c)(2))

Describe how the type of construction proposed is the least intrusive upon the public trust that will ensure safe docking on the frontage.

N/A – This project does not include any shoreline structures.

SECTION I.XII - SHORELINE STRUCTURES - ABUTTING PROPERTIES (Env-Wt 313.03(c)(3))

Describe how the structures have been designed to avoid and minimize impacts on ability of abutting owners to use and enjoy their properties.

N/A – This project does not include any shoreline structures.

SECTION I.XIII - SHORELINE STRUCTURES - COMMERCE AND RECREATION (Env-Wt 313.03(c)(4))

Describe how the structures have been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.

N/A – This project does not include any shoreline structures.

SECTION I.XIV - SHORELINE STRUCTURES – WATER QUALITY, AQUATIC VEGETATION, WILDLIFE AND FINFISH HABITAT (Env-Wt 313.03(c)(5))

Describe how the structures have been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.

N/A – This project does not include any shoreline structures.

SECTION I.XV - SHORELINE STRUCTURES – VEGETATION REMOVAL, ACCESS POINTS, AND SHORELINE STABILITY (Env-Wt 313.03(c)(6))

Describe how the structures have been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.

N/A – This project does not include any shoreline structures.

PART II: FUNCTIONAL ASSESSMENT

REQUIREMENTS

 \boxtimes

Ensure that project meets the requirements of Env-Wt 311.10 regarding functional assessment (Env-Wt 311.04(j); Env-Wt 311.10).

The lake provides many natural and human functions, values, and services such as wildlife habitat, recreation, sediment and nutrient trapping, as well as connectivity to and supporting the natural steam processes of Hawkins Brook. The proposed work will remain within the previously disturbed shoreline of the bay and will not impact the functions, values, and services of the lake system. Completing the proposed work is intended to stabilize and improve the structural integrity of the crossing which are vital in keeping the hydrologic and biological connection between Hawkins Brook and Lake Winnipesaukee.

NAME OF CERTIFIED WETLAND SCIENTIST (FOR NON-TIDAL PROJECTS) OR QUALIFIED COASTAL PROFESSIONAL (FOR TIDAL PROJECTS) WHO COMPLETED THE ASSESSMENT: SARAH LARGE

DATE OF ASSESSMENT: AUGUST 6, 2019

Check this box to confirm that the application includes a NARRATIVE ON FUNCTIONAL ASSESSMENT:

For minor or major projects requiring a standard permit without mitigation, the applicant shall submit a wetland evaluation report that includes completed checklists and information demonstrating the RELATIVE FUNCTIONS AND VALUES OF EACH WETLAND EVALUATED. Check this box to confirm that the application includes this information, if applicable:

Note: The Wetlands Functional Assessment worksheet can be used to compile the information needed to meet functional assessment requirements.

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES WETLAND PERMIT APPLICATION for

Repairs to the NH 25 Bridge over Hawkins Brook in Meredith, NH

Supplemental Narrative

The following information is offered as a supplement to the information provided in the Wetland Permit Application and Plans.

<u>Environmental Site Conditions and Functional Assessment Narrative</u> by Sarah Large, NHDOT-BOE Wetlands Program Analyst

The proposed project site is at the northern most point within Meredith Bay and at the confluence of Hawkins Brook and Lake Winnipesaukee. The shoreline is stabilized with exposed riprap, no vegetation is growing overtop, and is surrounded by a grassy landscaped park and abutted by a town dock. The lake is the tailwater control for the Hawkins Brook stream system. Scour within the lake bed was observed along the wing walls and riprapped shoreline.

Aquatic beds were observed beyond the area of anticipated impacts. As defined by Cowardin in the "Classification of Wetlands and Deepwater Habitats of the United States" "the class aquatic bed includes wetlands and deepwater habitats where plants that grow principally on or below the surface of the water (i.e., surface plants or submergents) are the uppermost life form layer with at least 30 percent areal coverage." Deepwater habitats can be defined as being 2.5 meters in depth or greater. The area of aquatic beds within Meredith Bay appeared to be approximately 40 feet or more from the shoreline. Some rooted and floating vegetation was observed closer along the shoreline however was not considered aquatic beds per Cowardin's definition; low density of vegetation in a shallow water habitat. The area of impact was anticipated to remain within close proximity of the crossing's outlet and the shoreline.

The lake provides many natural and human functions, values, and services such as wildlife habitat, recreation, sediment and nutrient trapping, as well as connectivity to and supporting the natural steam processes of Hawkins Brook. The proposed work will remain within the previously disturbed shoreline of the bay and will not impact the functions, values, and services of the lake system. Completing the proposed work is intended to stabilize and improve the structural integrity of the crossing which are vital in keeping the hydrologic and biological connection between Hawkins Brook and Lake Winnipesaukee.

Explanation as to methods, timing, and manner as to how the project will meet applicable standard permit conditions required in Env-Wt 307 (Env-Wt 311.03(b)(7))

Env-Wt 307.02 (US Army Corps of Engineers (USACE) Conditions). Appendix B is attached to this permit application. The NHDOT seeks and requests to receive review and approval by the Army Corps of Engineers through their General Permit and via submittal of this State wetlands permit application to NHDES.

Env-Wt 307.03 (Protection of Water Quality Required). Please refer to the attached Construction Sequence Narrative for details regarding water quality protection. NHDOT shall be responsible for implementing Erosion and Sediment control measures in accordance with the "New Hampshire Stormwater Manual, Volume 3 Erosion and Sediment Controls during Construction" by NHDES. Erosion and siltation control measures will be installed prior to start of any work and will be maintained during the duration of the construction activities. It is the NHDOT's responsibility to not cause violations of surface water quality standards. Upon completion of the project, the project will cause no adverse effects on the quality or quantity of surface or groundwater entering or exiting the project site.

Env-Wt 307.05 (Protection Against Invasive Species Required) The project areas were reviewed for plants on the NH List of Prohibited Invasive Species (AGR PART 3802.01) on 9/6/19. The following invasive species were noted in the project area; Japanese knotweed, purple loostrife, multiflora rose and oriental bittersweet. Also noted at the lake location were Japanese knotweed, Siberian elm, bittersweet nightshade. Invasive plant BMPs will be utilized during site work in accordance with the Department publication "Best Management Practices for the Control of Invasive and Noxious Plant Species". NHDOT will be aware of and conform with the requirements in Env-Wt 307.05 and will be required to prepare an Invasive Species Management Plan to be submitted for review and approval.

Env-Wt 307.06 (Protection of Rare, Threatened or Endangered Species and Critical Habitat) The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB21-0797, dated 3/8/2021). The database check determined there are no recorded occurrences for sensitive species near this project area.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool (Consultation Code 05E1NE00-2020-SLI-1938). The list includes the Federally-threatened Northern Long Eared Bat (*Myotis septentrionalis;* NLEB) and Small Whorled Pogonia (*Isotria medeoloides*).

There will be no tree removal, thus, the project will have no effect on NLEB individuals or habitat.

Coordination occurred with Susi von Oettingen with USFW Service, New England Division in regard to small whorled pogonia. A determination of No Effect for small whorled pogonia (*Isotria medeoloides*) was made based on information provided and lack of suitable habitat. Copies of all USF&W correspondence is included with this permit application.

Env-Wt 307.07 (Consistency Required with Shoreland Water Quality Protection Act). Hawkins Brook to Meredith Bay is not subject to the Shoreland Water Quality Protection Act (SWQPA) (NH RSA 483-B) nor is it a NHDES Designated River, however, Lake Winnipesaukee is within SWQPA jurisdiction. There will be no impacts to the shoreland outside of the impacts proposed with wetlands jurisdiction within this application, thus, no Shoreland Permit is required for the project.

Env-Wt 307.10 (Dredging Activity Conditions) There will be no dredging as a result of this project.

Env-Wt 307.11 (Filling Activity Conditions). All fill material shall conform to the requirements listed in 307.11.

Env-Wt 307.12 (Restoring Temporary Impacts: Site Stabilization) Upon completion of the project all temporary impact areas will be restored to the preconstruction condition per the requirements listed in Env-Wt 307.12.

Env-Wt 307.13 (Property Line Setbacks). Wetland impacts will not occur within 10' of an abutting property line.

Env-Wt 307.15 (Use of Heavy Equipment in Wetlands) There will be no heavy equipment in the wetlands for construction of this project.

Env-Wt 307.16 (Adherence to Approved Plans Required) All work shall be in accordance with the plans prepared by the New Hampshire Department of Transportation and approved by NHDES.

<u>Statement of whether the applicant has received comments from the local conservation commission and, if</u> so, how the applicant has addressed the comments (Env-Wt 311.06(h))

Initial coordination with a representative of the Town of Meredith Conservation Commission occurred in April 2020. This correspondence included information about the site and noted they would review the permit application when it is submitted NHDES. A copy of this correspondence is included with this permit application.

A copy of this wetland permit application was submitted to the Town of Meredith for distribution to the Meredith Conservation Commission concurrent with submittal of the application to NHDES.

Federal Agency Coordination

A USACE General Permit will be required for this project. Pre-application coordination with USACE was not completed during application development, as the GP conditions will be met. See section below for Appendix B and Checklist answers. Coordination with the US Fish and Wildlife Service (USFWS) occurred resulting in a determination No Effect for the potential to impact small whorled pogonia. Additionally, the project was cleared using the online IPAC system to generate a Verification letter regarding the potential to impact northern log-eared bats.

Riprap Installation

The area shown as permanent impact for riprap installation is necessary for protection of the substructure. Installation of riprap will be as shown on the plan and consists of replacement of riprap where riprap was installed during previous stabilization efforts and will not include placement of new structural components (riprap) in locations where none existed previously.

Hydraulic Analysis

There is no history of flooding or damage associated with this crossing. The proposed work will not change the hydraulic capacity of the crossing. In particular, the reconstruction of the downstream wings in kind and reestablishment of previously placed riprap will help keep this crossing in place and prevent potential erosion from storm events affecting the Lake. The level of Lake dictates the elevation and flow through the structure; this was reviewed as the Department we developed the erosion control plan for the proposed work. Due to the limited impact of the proposed work, a full analysis is not being provided. See attached PE certification of work.



AVOIDANCE AND MINIMIZATION CHECKLIST Water Division/Land Resources Management Wetlands Bureau <u>Check the Status of your Application</u>



RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in <u>Attachment A: Minor and Major Projects</u> (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for <u>Wetlands Best Management Practice Techniques for Avoidance and Minimization</u> dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION

APPLICANT LAST NAME, FIRST NAME, M.I.: NH Department of Transportation; Bridge Maintenance, Tim Boodey, PE

PROJECT STREET ADDRESS: NH Route 25

PROJECT TOWN: Meredith

TAX MAP/LOT NUMBER: U07

SECTION 2 - PRIMARY PURPOSE OF THE PROJECT

Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	🗌 Yes 🔀 No
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If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:

New Hampshire Department of Transportation (NHDOT) personnel performed an inspection of the red listed NH Route 25 Bridge over Hawkins Brook in Meredith, NH (NHDOT Bridge No. 189/150) on November 15, 2019. The results of the inspection revealed the southwest wing wall has spalled and there is exposed rebar with undermining at the base of both wing walls. The proposed repair work will address these portions of the bridge to keep it in service until a larger project can be planned.

SECTION 3 - A/M PROJECT DESIGN TECHNIQUES

Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.

Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	☐ Check ⊠ N/A
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NHDES-W-06-050

Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	Check
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	311.07(b)(4)The results of the functional assessment required by Env-Wt 311.03(b)(10)311.10(c)(1)were used to select the location and design for the proposed project that has311.10(c)(2)the least impact to wetland functions.	
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	🔀 Check 🔲 N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	Check
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	🔀 Check
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	🔀 Check 🔲 N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	Check
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	Check
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	Check
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	Check
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	Check
A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	Check
Env-Wt 500 Env-Wt 600 Env-Wt 900	Env-Wt 500 Env-Wt 600 Env-Wt 900 Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	Check

A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	
SECTION 4 - NON-TID	AL SHORELINE STRUCTURES	
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	☐ Check ⊠ N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	☐ Check ⊠ N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	Check
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	☐ Check ⊠ N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	☐ Check ⊠ N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	Check

Pre-Application Meeting Summary

A pre-application meeting was held to discuss the project on March 23, 2021 with Karl Benedict, Lori Sommer, Marc Hemmerlein of NHDES, Sarah Large and Tom Boodey of NHDOT and Kimberly Peace and Deb Coon of Hoyle, Tanner & Associates, Inc. The following was discussed:

- riprap placement in the streambed: DOT will not place riprap in the streambed where it has not been placed prior, and will provide better support of that fact, no riprap will be placed in the streambed.
- impacts to vegetated lakebed: there will be no impacts to the vegetated areas of lakebed, all impacts will remain in the areas of prior disturbance, no vegetation will be altered in the lake and no riprap will be placed in the aquatic vegetation bed of the lake.
- DOT stated the wing walls are "flying" which means that they sit on the lake bed instead of being embedded, which is support for the need to place riprap at the toe of the wall for scour protection.
- dewatering: DOT specified how the dewatering is proposed to occur using a tremi-pour and removal of any water from the work area into a tank to be discharged off-site. DOT understands the concrete forms will need to be watertight and that water quality of Lake Winnipesaukee is a concern for DES.
- DES will review the dewatering plan, revised narrative, additional photos identifying existing or historic riprap locations, and a plan differentiating the zones of resource impact in the lake bed between aquatic bed and disturbed.
- Because the only project resource impacts are to the lake, not the stream, the project does not fit easily into the classification of a stream crossing project. Data will be provided in the application sufficient to evaluate the impacts, thus, stream crossing metrics and details to address Env-Wt 903 and 904 will only be provided either on the plan or in narrative form if necessary, to add to the collective picture of the project for the reviewer.

Emails are attached that provide details regarding submission of the items discussed as requested by NHDES, and their response in support of the project as it has been revised from the initial submittal of a PBN application.

Mitigation

Per Env-Wt 313.04, mitigation is not required for the proposed project because:

- (1) There is no permanent impact to a PRA;
- (2) The total project impacts less than 10,000 SF of non-tidal wetlands or less than the threshold for tidal wetlands established in Env-Wt 600; and
- (3) The overall project:
- a. Is limited to bank stabilization using rip-rap, bio-engineering methods, or other bank stabilization techniques to protect existing infrastructure such as highways, bridges, dams, or buildings, or includes such work in combination with other qualifying criteria;

The permanent impacts proposed are necessary to stabilize the bank and protect the infrastructure.

Per an email dated April 22, 2021, NHDES Confirmed mitigation is not required for the project. A copy of this correspondence is included with this permit application.

Coon, Deb

From:	Benedict, Karl <karl.d.benedict@des.nh.gov></karl.d.benedict@des.nh.gov>
Sent:	Thursday, April 22, 2021 11:15 AM
То:	Peace, Kimberly R.; Sommer, Lori
Cc:	Large, Sarah; Boodey, Timothy; Coon, Deb; 092592.05 - NHDOT Statewide Env #41768 Bridge Maint
	Permitting
Subject:	[External] RE: Meredith 42828 Pre-application Review

Hi Kimberly,

Thanks for providing the revised plan and narrative information as discussed. This is helpful. Lori and I were able to quickly review and coordinate on this. Based on a review of the revised draft information the locations of proposed permanent impacts with comparison to locations of existing rip rap appear consistent and compensatory mitigation would not be required for these areas of impact. The revised dewatering and water diversion plans are improved and can be reviewed further for any associated conditions. Thank you,

Karl Benedict, Public Works Subsection Supervisor Land Resources Management Water Division, NH Department of Environmental Services 29 Hazen Drive, PO Box 95 Concord, NH 03302 Phone: (603) 271-4188 Fax: (603) 271-6588 Email: <u>Karl.Benedict@des.nh.gov</u>

Brollow us on Twitter!

We greatly appreciate your feedback, please take a moment to fill out our NHDES-LRM <u>customer satisfaction</u> <u>survey</u>

From: Peace, Kimberly R. <kpeace@hoyletanner.com>

Sent: Wednesday, April 21, 2021 1:18 PM

To: Benedict, Karl <Karl.D.Benedict@des.nh.gov>; Sommer, Lori <LORI.L.SOMMER@des.nh.gov>; Benedict, Karl <Karl.D.Benedict@des.nh.gov>

Cc: Large, Sarah <Sarah.E.Large@dot.nh.gov>; Boodey, Timothy <TIMOTHY.M.BOODEY@dot.nh.gov>; Coon, Deb <dcoon@hoyletanner.com>; 092592.05 - NHDOT Statewide Env #41768 Bridge Maint Permitting <092592.05-NHDOTStatewideEnv#41768BridgeMaintPermitting@hoyletanner.onmicrosoft.com>

Subject: RE: Meredith 42828 Pre-application Review

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

From: Peace, Kimberly R.

Sent: Monday, April 12, 2021 12:31 PM

To: Benedict, Karl <Karl.Benedict@des.nh.gov>; Sommer, Lori <LORI.L.SOMMER@des.nh.gov> Cc: Large, Sarah <Sarah.E.Large@dot.nh.gov>; Boodey, Timothy <TIMOTHY.M.BOODEY@dot.nh.gov>; Coon, Deb <dcoon@hoyletanner.com>; 092592.05 - NHDOT Statewide Env #41768 Bridge Maint Permitting <<u>092592.05-</u> NHDOTStatewideEnv#41768BridgeMaintPermitting@hoyletanner.onmicrosoft.com> Subject: Meredith 42828 Pre-application Review

Hello Karl and Lori, per the discussion at our meeting on March 23, we are providing for your review and comment the following documents in support of the proposed project comprising replacement of wingwalls and riprap in locations where riprap exists now or was placed previously. This information will be included in the permit application that is forthcoming. We have identified the placement of riprap on the plans as a permanent impact, per DES instructions, however, per our discussion during the meeting, NHDOT does not intend to provide mitigation for these impacts because there will be no change in the function or value of the resource (Lake Winnipesaukee).

We look forward to your comments- Thank you-

- 1) Revised project description
- 2) Description of the site existing conditions
- 3) Revised construction sequence detailing dewatering and water quality protection

- 4) Site photos, seen previously
- 5) Revised plan showing impacts and identifying the location of existing or historic riprap where riprap replacement is proposed.
- 6) Photos below as shown in the meeting PPT showing riprap in front of the wingwalls below the water line, left is west wingwall, right is east wingwall:



Kimberly R. Peace

Associate, Senior Environmental Coordinator



150 Dow Street | Manchester, NH 03101

Please note new office number: (603) 460-5205

Cell: (603)716-3343



NH Department of Transportation Bureau of Bridge Maintenance Project: Meredith 189/150, 42828

P.E. Certification in Accordance with Env-Wt 904.

Stream Crossing Rules for Standard Application Tier 3, repair/preservation/rehabilitation project

Crossing's Drainage Area: 3.03 square miles

Existing Conditions: The existing structure is a cast in place concrete box constructed in 1945. The roadway was widened in 1953 but did not change the size of the structure. The interior dimensions are 14'-0" clear span and 5'-2" rise. No changes or repairs to the structure were observed or documented other than routine maintenance headwalls. There are no reports of flooding or damage to roadway or private property related to this crossing. The level of the lake dictates the elevation and flow through the structure. The existing bridge deck and superstructure is in Poor condition and on the Department's Red List due to its condition. The existing wings at the outlet are deteriorated and undermined. They do not extend down to the existing stream bed. There is evidence of ledge in the area of the bridge and wings. From the existing plans, the invert elevation is 500.50' and the outlet 500.00.

Project Description: The proposed project includes replacement of both south/outlet wing walls in their existing footprints, and replacement of riprap immediately in front of the wing walls that will be limited to locations where riprap was installed previously to prevent undermining the new infrastructure. The proposed riprap will not be placed within the bridge or impact the stream with in the bridge. There are no changes anticipated to the hydraulic opening. The replacement in kind of the downstream wings will help keep this crossing in place and prevent potential erosion from storm events affecting the Lake.

Proposed Conditions: The installation of the rip rap and concrete wing replacement will not change the ability of the structure to pass water or sediment. There is no proposed change to the existing functions of the crossing due to this work. The inlet and outlet elevations of the bridge structure will not change due to the work. The water surface elevations, including the elevation of the 100-year event, will not change due to the work. Due to the limited impact of the proposed work we are not proving a full analysis.

*Included with this form is supporting analysis by way of photos and plans

Env-Wt 904.01 General Design Considerations Applicable to All Stream Crossings

- (a) All stream crossings, whether over tidal or non-tidal waters, shall be designed and constructed soas to:
 - 1) Not be a barrier to sediment transport;
 - 2) Not restrict high flows and maintain existing low flows;
 - 3) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;
 - 4) Not cause an increase in the frequency of flooding or overtopping of banks;
 - 5) Maintain or enhance geomorphic compatibility by:
 - a. Minimizing the potential for inlet obstruction by sediment, wood, or debris; and
 - b. Preserving the natural alignment of the stream channel;
 - 6) Preserve watercourse connectivity where it currently exists;
 - 7) Restore watercourse connectivity where:
 - a. Connectivity previously was disrupted as a result of human activity(ies); and
 - b. Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

NHDES-W-06-050

- 8) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and
- 9) Not cause water quality degradation.

(b) For stream crossing over tidal waters, the stream crossing shall be designed to:

- 1) Match the velocity, depth, cross-sectional area, and substrate of the natural stream: and
- 2) Be of sufficient size to not restrict bi-directional tidal flow over the natural tide range above, below, and through the crossing.

Env-Wt 904.09(a)- The repair, rehabilitation, or replacement of tier 3 stream crossings shall be limited to existing legal crossings where the tier classification is based only on the size of the contributing watershed.

Env-Wt 904.09(b)- Rehabilitation of a culvert or other closed-bottom stream crossing structure pursuant to this section may be accomplished by concrete repair, slip lining, cured-in place lining, or concrete invert lining, or any combination thereof, except that slip lining shall not occur more than once.

(Not applicable to repair)

Env-Wt 904.09(c) A project shall qualify under this section only if a professional engineer certifies, and provides supporting analyses to show, that:

- (1) The existing crossing does not have a history of causing or contributing to flooding thatdamages the crossing or other human infrastructure or protected species habitat;
- (2) The proposed stream crossing will:
 - a. Meet the general criteria specified in Env-Wt 904.01; (see page 2 of this form for Env-Wt 904.01)
 - b. Maintain or enhance the hydraulic capacity of the stream crossing;
 - c. Maintain or enhance the capacity of the crossing to accommodate aquatic organism passage;
 - d. Maintain or enhance the connectivity of the stream reaches upstream or downstream of the crossing; and
 - e. Not cause or contribute to the increase in the frequency of flooding or overtopping of the banks upstream or downstream of the crossing.

Env-Wt 904.09(d) Repair, rehabilitation, or replacement of a tier 4 stream crossing shall comply with Env-Wt 904.07(d). (*if non-tidal, N/A*)

I hereby certify that the above referenced project meets the criteria of Env-Wt 904.09(c).

6/1/2021 Date: Timothy M. Boodey Name:



To: Deb Coon 150 Dow Street Manchester, NH 03101

From: NH Natural Heritage Bureau

Date: 3/8/2021 (This letter is valid through 3/8/2022)

Re: Review by NH Natural Heritage Bureau of request dated 3/8/2021

Permit Types: Wetland Standard Dredge & Fill - Major General Permit

NHB ID: NHB21-0797

Applicant: Deb Coon

Location: Mere Tax Map: Tax Map U07, Tax Lot: N/A Address: NH Route 25

Proj. Description: Repairs to the NH Route 25 Bridge Over Hawkins Brook, Meredith, NH - The proposed repairs include replacement of rip rap in front of the wingwalls where undermining has occurred. The proposed repair will replace riprap where riprap was installed during previous stabilization efforts and will not include placement of new structural components (riprap) in locations where none existed previously. Concrete repairs will be performed within the same footprint of the existing wingwall by placing a wood frame around the wing and filling it with concrete to fill in the spalled areas and cover the exposed rebar.

The NH Natural Heritage database has been checked 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. We currently have no recorded occurrences for sensitive species near this project area.

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.



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: March Consultation Code: 05E1NE00-2020-SLI-1938 Event Code: 05E1NE00-2020-E-05801 Project Name: Repairs to the NH Route 25 Bridge Over Swamp Outlet, Meredith, NH

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.

March 31, 2020

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: 05E1NE00-2020-SLI-1938

Event Code: 05E1NE00-2020-E-05801

Project Name: Repairs to the NH Route 25 Bridge Over Swamp Outlet, Meredith, NH

Project Type: TRANSPORTATION

Project Description: Repairs to the NH Route 25 Bridge Over Swamp Outlet, Meredith, NH

Project Location:

Approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/place/43.6588278213099N71.49855281159998W</u>



Counties: Belknap, 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. <u>NOAA Fisheries</u>, 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 Small Whorled Pogonia *Isotria medeoloides* 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.

STATUS

Threatened

Coon, Deb

From:	vonOettingen, Susi <susi_vonoettingen@fws.gov></susi_vonoettingen@fws.gov>
Sent:	Tuesday, April 21, 2020 1:50 PM
То:	Peace, Kimberly R.
Cc:	Coon, Deb
Subject:	Re: [EXTERNAL] Meredith, Lake Winnipesaukee outlet, SWP habitat

Hi,

Thanks for the info and I totally agree with the no effect. The hit most likely came because there's a population within a 10 mile radius. In any event, if there's no habitat, we don't need any letters explaining such. I have already reviewed the NLEB verification form and marked the SWP as no effect in our biological conclusion section.

It would be easiest and most helpful for the review when species other than the NLEB pop up and there's no habitat, hence no effect on them, a sentence be added to the project description saying just that (no habitat/no effect). That way we see that the project was assessed for the other species and a no effect determination made. I just note that in our database and we're done. Ron doesn't need to reach out to me, can you let him know?

Susi

Susi von Oettingen Endangered Species Biologist New England Field Office 70 Commercial Street, Suite 300 Concord, NH 03301 (603) 227-6418 (direct line)

From: Peace, Kimberly R. <kpeace@hoyletanner.com>
Sent: Tuesday, April 21, 2020 1:34 PM
To: vonOettingen, Susi <susi_vonoettingen@fws.gov>
Cc: Coon, Deb <dcoon@hoyletanner.com>
Subject: [EXTERNAL] Meredith, Lake Winnipesaukee outlet, SWP habitat

HI Susi- I hope this finds you and your family doing well.

You mentioned at one point that we should send you IPAC reports that may not reflect current site conditions. We received a hit for small whorled pogonia habitat in the IPAC review attached, the project is a culvert and wingwall repair/stabilization for the culvert located at the small (decorative) lighthouse in the center of Meredith. The site is completely mowed lawn, park and roadway, see the attached photos. It may be possible that the hit comes from a buffer of the treed banks around the downstream swamp outlet on the other side of the street, you can see that in the aerial view, but I'm not sure this would be great habitat either, and that is easily over 200 feet away.

I believe Ron Crickard may send you a letter or email with a No Effect determination to ensure USFWS has the opportunity to concur, since we are undergoing DOT internal environmental review and will need a USACE wetland permit to complete the work. I don't intend to overstep that process, rather, I wanted to send this to you for your use in reviewing the SWP habitat polygon here.

Thank you-

Kimberly R. Peace Senior Environmental Coordinator



Responsive. Consistent. Competent.™

150 Dow Street | Manchester, NH 03101 (603) 669-5555, ext 151 | Cell: (603) 716-3343 kpeace@hoyletanner.com www.hoyletanner.com

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Section 106 Cultural Resources Effect Memo (Project NOT directly managed by NHDOT)

Project Town: Meredith

Date: 5/11/2020

State No.: 42828

BUREAU OF ENVIRONMENTFederal No. (as applicable): Click here to enter text.

RECEIVED

Lead Federal Agency: Federal Highway Admistration

Submitted by: Matt UrbanNH DEPARTMENTEmail address: Matt.Urban@dot.nh.gov(Project Manager/Sponsor)OF TRANSPORTATION

Pursuant to meetings on and/or the Request for Project Review signed on Click here to enter a date., and for the purpose of compliance with the regulations of National Historic Preservation Act and the Advisory Council on Historic Preservation's *procedures for the Protection of Historic Properties* (36 CFR 800), and NH RSA 227-C the NH Division of Historical Resources and, when applicable, the NH Division of the Federal Highway Administration or the US Army Corps of Engineers have coordinated the identification and evaluation of cultural resources relative to:

Scour repairs to the NH Route 25 bridge in Meredith, NH which include placement of rip rap in front of the wingwalls where undermining has occurred for the protection of the substructure. The stream will be diverted to one side by installing a cofferdam, the work zone area will be dewatered, and the water will be pumped to dewatering basins which will have a minimum of 20-foot vegetative buffer to any wetland or waterbody. Concrete repairs will be performed within the same footprint of the existing wing by placing a wood frame around the wing and filling it with concrete in order to fill in the spalled areas and cover the exposed rebar. Upon completion of the repair work all dewatering devices will be removed and the site will be restored to its original condition.

Please describe all public outreach efforts (see 36 CFR800.2-3) that have been done to-date. Identify Consulting Parties and include any public feedback (if applicable, attached pages if necessary):

Due to the minimal nature of the project and the lack of historic nature of the bridge, public outreach included a letters sent to the Town of Meredith, Board of Selectmen and Historical Society on April 13, 2020 and the Conservation Commission on April 22, 2020. To date no response has been received from the Board of Selectmen or Historical Society. The Conservation Commission did respond, however their response was not related to section 106 resources.

Based on a review of the project, as presented to date, it has been determined that:

	⊠ No Historic or Archaeological Properties will be Affected
	□ There will be No Adverse Effect on Historic or Archaeological Properties
Affect	□ There will be an Adverse Effect on Historic or Archaeological Properties or Resources
Section 106 H Determinatio	Additional comments, please explain <i>why</i> the undertaking has resulted in the above effect: A historic bridge inventory was performed on the bridge. The bridge was found to be not eligible for historic listing with the following comment "Extended in 1953. The original bridge is no longer visible from either elevation".

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

əq	There Will Be:	⊠ No 4(f);	□ Programmatic 4(f);	□ Full 4 (f); <u>or</u>
Section 4(f) (10 completed by FHWA)	□ A finding of <i>da</i> the above undertakin finding of <i>de minimi</i> and the <i>de minimis</i> f into account. There	<i>e minimis</i> 4(f) impact ng, and in accordance wa <i>is</i> impact. NHDHR's sig findings. Parties to the S fore, the requirements of	as stated: In addition, with NHD ith 23 CFR 774.3, FHWA intends to gnature represents concurrence with section 106 process have been consu f Section 4(f) have been satisfied.	HR concurrence of no adverse effect for , and by signature below, does make a both the no adverse effect determination lted and their concerns have been taken



 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: 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. 		х
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)?		Х
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		Х
3.5 Are stream crossings designed in accordance with the GC 21?		
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	Х	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		Х
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (<u>www.nh.gov/nhdhr/review</u>) 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**	Х	

*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.

U.S. Army Corps of Engineers New Hampshire Programmatic General Permit (PGP) Appendix B Corps Secondary Impacts Checklist (for inland wetland/waterway fill projects in New Hampshire)

Repairs to the NH 25 Bridge over Hawkins Brook Meredith, NH

Explanations for Checklist Answers

- 1.1 Hawkins Brook to Meredith Bay is marginally impaired for aquatic life due to pH and dissolved oxygen saturation and severely impaired due to dissolved oxygen. It is also marginally impaired for fish consumption due to mercury according to the 2018 Draft 303(d) list. The proposed project will not add to these impairments.
- 2.1 The project is to repair the substructure of the NH Route 25 Bridge until a larger project can be planned. There will be permanent and temporary impacts below Ordinary High Water of Lake Winnipesaukee.
- 3.1 The NH Natural Heritage Bureau was contacted regarding the proposed project (see attached letter NHB21-0797, dated 3/8/2021). The database check determined there are no recorded occurrences for sensitive species near this project area.

An official Federally-listed species list was obtained from the US Fish and Wildlife Service (USFWS) using the Information for Planning and Conservation (IPAC) online tool (Consultation Code 05E1NE00-2020-SLI-1938). The list includes the Federally-threatened Northern Long Eared Bat (*Myotis septentrionalis*; NLEB) and Small Whorled Pogonia (*Isotria medeoloides*).

There will be no tree removal, thus, the project will have no effect on NLEB individuals or habitat.

Coordination occurred with Susi von Oettingen with USFW Service, New England Division in regard to small whorled pogonia. A determination of No Effect for small whorled pogonia *(Isotria medeoloides)* was made based on information provided and lack of suitable habitat. Copies of all USF&W correspondence is included with this permit application.

4.1 The proposed bridge repair project is located within the 100-year floodplain of Hawkins Brook but will not result in a loss of flood storage. There will be no permanent impact on floodplain wetlands that provide flood storage. Effective stabilization of this crossing will improve the brook's ability to handle runoff waters.

NHDES-W-06-050

5. A Request for Project Review was submitted to the NHDOT Bureau of Environment and the NH Division of Historic Resources (NHDHR). The NHDOT and NHDHR concurred that the work as proposed would have no adverse effect on historic or archaeological resources in the Area of Potential Effects (APE) and have issued a No Adverse Effect memo for the project. A copy of the Section 106 Cultural Resources Effect Memo with a determination of "No Historic or Archaeological Properties will be Effected" is included with this application.

Site Photos



Downstream Elevation Repair Location (September 6, 2019)



Downstream Elevation Repair Location and Bay (September 6, 2019)

Site Photos



Downstream Elevation showing placement of riprap in location of currently proposed riprap (September 6, 2019)



Site Photos

Downstream Elevation showing placement of riprap in location of currently proposed riprap (September 6, 2019)



Existing Condition of Lake Bed (September 6, 2019)

Site Photos



Existing Condition of Lake Bed (September 6, 2019)

Construction Sequence and Dewatering Details

- 1. Install erosion control measures at the borders of the work areas and in the area of the top of bank.
- 2. Install floating turbidity curtain and sandbags to secure the bottom of the curtains at each of the wings on the downstream, lake side to separate the work around the wings from the outlet and lake.
- 3. Install a second floating silt boom at the extent of the shown temporary impacts to minimize the disturbance during work activities to the rest of the wetland.
- 4. Remove existing concrete wings. The existing wings will be removed. Place concrete forms and sandbags around the perimeter of the forms. A combination of forms, plastic sheeting and caulking will be used to make the forms as water tight as possible.
- 5. Submersible pumps will be used during concrete tremie placement but the work area will not be completely dewatered. Water from within the concrete forms and the water surface behind the turbidity curtain will be pumped in water tanks staged on site during concrete placement. Water pumped into these tanks will be removed from the site and discharged outside jurisdiction area at a Department owned gravel pit in New Hampton. The anticipated flow during construction is 85 CFS and we expect four feet of water in the work area. The work area will not be dewatered, no backwatering is expected. There are no planned sump locations, pumping will occur within the forms.
- 6. Concrete will be replaced within the same footprint of the existing wing to the top of the existing lake bed.
- 7. Riprap will be placed in front of the wing walls to protect the structure where previously placed. It will not be placed in front of the outlet and extend no further than two lake ward of the wing walls.
- 8. The turbidity curtains will be left in place until suspended particles have settled and the water in the work area has returned to normal clarity.
- 9. All disturbed areas will be stabilized and erosion control measures removed. The site will be restored to its original quality.

<u>Note</u>: The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.

Supplemental Information per Env-Wt 903.04

There is not a history of flooding or damage associated with this crossing. The proposed work will not change the hydraulic capacity of the crossing. In particular, the reconstruction of the downstream wings in kind and reestablishment of previously placed rip rap will help keep this crossing in place and prevent potential erosion from storm events affecting the Lake. The level of the lake dictates the elevation and flow through the structure and this was reviewed as we developed the erosion control plan for the proposed work. Due to the limited impact of the proposed work we are not providing a full analysis.

(d) Dewatering system:

- Estimated maximum flow anticipated during construction: DOT estimates the maximum flow during construction of 85 CFS
- The location, height, and width of the diversion dam: As shown on the plans, the work areas are confined to in front of and around the downstream concrete wings, there will be no need for the installation of a diversion dam. The stream will not be bypassed and there will be continual hydrologic connectivity between the Lake and the stream at all times during construction. Complete dewatering of the work area is not anticipated. Concrete work will be confined to within concrete forms inside turbidity curtains. It is anticipated there will be four feet of water in the area during the work.

- The location and capacity of each sump: There are no planned sumps. Any pumping to dewater the work areas that will take place will be from within the concrete forms, within the turbidity curtain, during some construction activities. Water from these activities will be discharged into a water tank that will be taken off site to be emptied outside of jurisdictional wetlands.
- Backwater prevention method: The work area will not be dewatered completely; no backwatering is expected.

(e) Erosion and pollution controls:

- The sediment treatment plan, including methods, release point(s), and extent: Any water that will be pumped from the dewatering areas inside the turbidity curtains that may include sediment will be discharged into a water tank and taken off site.
- Any additional methods proposed to control erosion: Natural buffer/perimeter controls will be installed in the area of the Top of Bank. Disturbed vegetated areas will be stabilized for vegetation growth.



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