BUREAU OF ENVIRONMENT
CONFERENCE REPORT

Final

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: February 15, 2023
LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT
Matt Urban
Andrew O'Sullivan
Jon Evans
Marc Laurin
Rebecca Martin
Arin Mills
Samantha Fifield
Jennifer Reczek
Meli Dube

ACOE
Mike Hicks

USCG
Gary Croot

EPA
Jean Brochi

NHDES
Karl Benedict
Mary Ann Tilton
Christian Williams

NHB
Ashley Litwinenko

NH Fish & Game
Mike Dionne

Federal Highway
Jamie Sikora

US Fish & Wildlife
Absent

The Nature Conservancy
Absent

NH Transportation & Wildlife Workgroup
Absent

Consultants/ Public Participants
Alanna Gerton
Michael Leach
Gerard Fortin
Megan Ooms
Bill McCloy
A Hubbard
Christine Perron
Noah Elwood
Geno Marconi
Michael Riccardi

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

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Finalize Meeting Minutes

Finalized and approved the January 18, 2023 meeting minutes.

Meredith Culvert Replacement, #44048

Arin introduced the project for replacement of a stone box culvert which carries Meredith Neck Road (MNR) over and un-named tributary to Lake Winnipesauke. This is a state funded betterment project which is designed in-house and will contracted for construction. The existing crossing is a 2.5' span by 5' rise stone box constructed about 1833 by local residents. The un-named stream is a Tier 2, 1st Order stream crossing, draining primarily undeveloped forestland. From the crossing the stream flows approx. 1,400 feet where it enters Lake Winnipesaukee. There is one additional town owned culvert downstream of the crossing. The structure has had limited work since construction, although has been looked at multiple times to address safety concerns due to the drop hazard and the narrow width of the crossing as it does not meet modern transportation needs. The area surrounding the crossing is mainly forested with residential development. Conservation lands are in the vicinity, although none immediately adjacent to the project. Photos were shown of the crossing and surrounding landscape.
The purpose and need of the project are to address safety concerns and structural deficiencies of the crossing, propose a design that meets both current safety and design standards, and meets current environmental requirements. Project design coordination to date has included the Town of Meredith, the Division of Historic Resources, US Army Corp of Engineers, and Lakes Region Conservation Trust. The structure is eligible for the National Historic Register and much of the coordination and alternatives analysis that have resulted in the proposed design presented are a result of comments and concerns received over the last few months.
Sam presented the considerations for the design include: MNR is a Tier 4 (low-traffic volume), Class II roadway that is non-eligible for Federal Transportation Funding (ie: state funded), no impact to adjacent Smith Cemetery, minimize impacts to the rock wall located perpendicular to the culvert inlet, minimize impacts to rock walls located parallel to Meredith Neck Road, protect the traveling public from drop hazards (18' at the outlet and 12.5' at the inlet) and upgrading existing closed drainage to improve stormwater management. Design constraints include improved stormwater treatment, meet current stream crossing rules, address downstream perch of 7' total from outlet invert to the bottom of the scour hole, alternative chosen should match, as much as practicable, existing aesthetics, constructability and Traffic Control of the proposed alternative, environmental permitting and agency approval, long term maintenance and cost (100% state funded project).
Sam further presented alternatives considered. No build, which would not address the structural deficiencies and current safety hazards. Borings determined there is little structural material below the roadway with 20" pavement. Repair to existing crossing with use of a moment slab design was reviewed and determined to result in a narrowing of the roadway. Replacement options include relocation of the walls 25' from centerline and install guardrail, which was not accepted through coordination with both the town or DHR due to the adverse effects to the historic elements of the crossing. Construction of a 4:1 slope without walls or guardrail was reviewed and determined to have an increase natural and cultural resource impact. The preferred alternative, presented today, is rebuild walls 35' from centerline and outside of the clear zone to eliminate guardrail.

The proposed project is to replace a 3.5'W (varies throughout) x 5'H x 34.5'L stone box with a 5'W x 4'H x 75.4'L concrete box with scour countermeasures at the outlet. DOT will construct upstream and downstream granite block retaining walls incorporating existing stones. The existing closed drainage running along Smith cemetery will be upgrades to improve draining and water quality. Preliminary wetland impact plans were shown to depict the proposed concrete box and scour countermeasures. Both temp and permanent impacts to the stream (R3RB12) and Palustrine forest (PFO1E) are anticipated for construction and installation of erosion control measures. A profile was shown to depict the existing and proposed structure and removal of the downstream perch and scour hole. A drawing of the scour countermeasures proposed at the outlet was shown, to include placement of streambed material layered within and over Class B stone.

Sam provided a construction sequence as follows: Full closure of Meredith Neck Road for an anticipated 2-week time; installation ofErosion controls (EC), and a Clean water bypass (CWB); removal of the existing stone culvert, headwall, and retaining wall: installation of the proposed concrete box culvert and downstream scour protection at which time the CWB can be removed. The culvert will be filled over, roadway granular materials will be placed, and temporary steep roadway slopes will be constructed. This will allow for single lane alternating two-way traffic to resume on MNR. The upstream and downstream stone block retaining walls and 4:1 roadway slopes will then be constructed. Once 4:1 roadway slopes are constructed, two-way traffic may be allowed on MNR during non-work hours. Next, the site will be revegetated,pavement will be placed, and pavement markings will be installed,. Finally, the site will be cleaned, and EC measures will be removed once site is permanently stabilized. MNR will be fully returned to 2-way traffic once all tasks are completed.

Hydraulic calculations were provided to show both the existing and proposed design will pass the 100-year storm with a reduction in velocities with the widened crossing.

Arin provided an overview of the environmental review for the project. The steam is a first order stream from headwater to lake, a Tier 2 crossing with watershed of 312 acres. The project is not located within ¼ mile of a Designated River and does not fall under Shoreland jurisdiction. A previous permit was identified (1996-00337), although work was not completed. The existing outlet has a 7.2' cascade with a 4.3' perch resulting in a 9.5'W x 10'L x 1.9' deep scour pool. Upstream of the stream crossing, a reference reach with 8% slope was identified; the proposed crossing's slope is 6.9% ; the existing crossing is 3.5' wide (the proposed crossing 5' wide), and a perch of 4.3' is proposed to be eliminated. NHB review NHB22-1888 had no known occurrence or rare species; the NH online fish survey mapper showed no recorded E. brook trout or protected species in stream. Results of the Wetland Permit Planning Tool (WWPT) show no predicted PRA; Fish and Games habitat ranking showed supporting landscape nearby, and showed no prioritized habitat. The Aquatic Restoration Mapper identified Page Pond Forest nearby, which is not hydrologically connected to this stream. Low Meadow Farm is near the outlet and the project is located outside of the limits of the Conservation Easement held by Lakes Region Conservation Trust (LRCT). The LRCT have been involved in alternatives analysis and proposed design. No impacts to conservation lands anticipated.

Arin provided an overview of applicable wetland rules and classified the project as a minor impact under Env-Wt 903.01(f)(1)(e) with no waivers. No mitigation is anticipated as the design meets Env-Wt 904.08 with PE certification that the proposed crossing :maintains hydraulic capacity; enhances aquatic organism passage; enhances connectivity by eliminating perch; does not promote degradation by installing scour protection (incorporating streambed material) at outlet; enhances the crossing's ability to handle flooding events. A review of Env-Wt 904.01

determined that the proposed design meets all general design considerations. The project timeline is to present to the residents of Meredith on March 1, 2023 under Section 106 of Historic Preservation Act, submit wetland permit application to DES in late March, received construction approval and permit by August 2023 (Advertise on September 12th) and construct late summer/fall 2024.
Karl B said we were on track with 904.08 with addressing perch and appreciated the additional coordination required for cultural concerns. He questioned the possible need for mitigation as the increased length of the box results in >200 lf of channel and bank impacts. Karl also asked if the topography change for grading of slopes could be reduced. Sam stated that the fill required in front of the downstream dry laid stone wall is necessary for global stability of the wall and Karl asked a narrative be included in the application. Karl B questioned the no required mitigation for permanent impacts to the bank and channel from the increased length and grading. Andy O stated the project qualified for a Project Type Exception (PTE) under the stream crossing rules (900). Andy further clarified that the increase in length is required to eliminate the perch and scour hole. Karl asked that justification be provided for the impacts that are required to eliminate the perch, allowing the project to fully be classified under the stream crossing (900) rules. Additional communication and information within the permit will be conducted and provided. Karl asked for native planting along the stream banks and Sam said that would be incorporated into the design. Karl lastly asked about the outlet of the closed drainage and Sam described new catch basins will be installed and outlet outside wetland resources.
Mike D (F&G) had no comments. Mike H had no comments and stated ACOE would be the lead federal agency. Jeanie B (EPA) had no comments. Gary C (CG) said the water is non-navigable and had no comment.

Portsmouth, 15731 (A000(909))

Christine Perron introduced the project, which involves the functional replacement of the barge wharf at the NH Port Authority Market Street Marine Terminal in Portsmouth to compensate for impacts caused by the new alignment of the Sarah Mildred Long Bridge carrying US Route 1 Bypass over the Piscataqua River. The project has been discussed at several monthly meetings and the purpose of today's discussion is to provide an update on the status of the permitting effort, proposed impacts, and mitigation.

An aerial view of existing conditions at the project site was reviewed to show the locations of the former and current bridge alignment, barge wharf, floating dock, and main pier. A separate project entails the rehabilitation of the main pier and infill of the open area of the main wharf. This project was previously permitted (NHDES Permit 2021-02950) and is currently under construction.

A plan view of the proposed improvements was reviewed. The key components of the project have not changed from when the project was last discussed:

- Construction of a new dock structure approximately 60 x 120 feet to extend the south end of the existing wharf.
- Construction of a new dock structure approximately 145 x 80 feet to extend the north end of the existing wharf.
- Dredging of approximately 55,000 square feet of the riverbed adjacent to the north end of the extended wharf.
- Relocation of the floating dock currently located off the north end of the wharf.
- Shoreside alterations, including soil and rock removal, grading, drainage, and paving within an 80,000-square foot area.

As the project progresses through final design, there have been a few design changes identified from what was previously discussed during preliminary design. These changes will be included in the upcoming permit applications:

- The Cape Arundel disposal site noted in preliminary design has closed. The alternative disposal site will be the Isle of Shoals North Disposal Site. The Corps requires a Sampling and Analysis Plan for the dredged material before it can be approved for off-shore disposal.
- The dredging depth will increase from -35' mllw to -36' mllw, which will slightly expand the footprint.
- The south wharf extension may not have a steel sheet pile wall along the shoreline as originally proposed, but instead have a grade beam with additional riprap. New riprap is anticipated to be added to existing riprap without expanding footprint.
- The proposed 40" steel piles for the north and south wharf extensions will be rock socketed into bedrock. Casing will be spun to the top of bedrock and the bedrock drilled to create the socket. The rock socket method reduces the amount of pile driving required and reduces underwater noise impacts. es require some pile driving that was not clearly defined in the original consultation.
- Removal of buried steel obstructions in locations of new piles (as needed to allow for pile driving).

The proposed dredging will require removing approximately 450 CY of bedrock and just over 18,000 CY of sediment. The dredge area is located at the former bridge alignment so it has never been dredged. A pier from the bridge is still in place and will be removed as part of this project. The south extension of the wharf will require a total of 30 piles, with a 40" diameter socket, and the north extension will require a total of 44 piles of the same diameter. The estimated area of direct impacts from the piles is approximately 600 square feet.

Environmental consultation and reviews were completed in 2019 during preliminary design in compliance with Section 7 (Endangered Species), Essential Fish Habitat, Section 106 (Historic Resources), and NEPA. Consultation under Section 7 and Essential Fish Habitat will be reinitiated to address the design changes noted above.

Now that the project is in final design, permit applications are being prepared and are expected to be submitted in March. The NHDES Dredge & Fill application was submitted last year to meet requirements for being reviewed under the old DES wetland rules. NHDES issued a Request for More Information (RFMI), and a response to the RFMI will be submitted concurrently with a request for an application amendment to address design changes. Required permits consist of the following:

- NHDES Dredge & Fill (Major impact)
- Army Corps Individual Permit
- Army Corps Section 408
- Section 401 Water Quality Certificate
- Coastal Zone Management Act Federal Consistency Finding
- NHDES Shoreland
- NHDES Alteration of Terrain

Minimization measures related to dredging and blasting are as follows:

- Dredging, blasting, and concrete demolition will occur between November 15 and March 15.
- A blasting plan will be submitted by the Contractor for approval prior to detonation of explosives.
- The following mitigation techniques will be implemented to reduce the sound pressure resulting from blasting:
    - Stemming and decking of individual charges;

- Staggered detonation of charges in a sequential blasting circuit;
- Blasting during periods of slack tide;
- Use of a fish detecting and startle system to avoid blasting when fish are present or transiting through the area;
- Require the use of sonar and the presence of a fisheries and marine mammal observer;
- Prohibiting blasting during the passage of schools of fish, or in the presence of marine mammals, unless human safety is a concern.

Turbidity considerations were reviewed. A sediment boom could be used for the water surface during construction; however, the currents make full turbidity curtains ineffective at this location. Cofferdams are not practicable given the depth of water, cost, and presence of the navigation channel. The Army Corps Piscataqua River turning basin project upstream of this project assumed that the majority of the sand and gravel to be dredged for that project would settle out within 1,000 feet of dredging. This assumption was based on prior monitoring conducted during Boston Harbor and other dredging operations while dredging silty material, which showed that the majority of resuspended material settled within 1,000 feet from the dredge. Given the coarse substrate at the SML and the high velocities, it is reasonable to assume that any turbidity plume would be less than 1,000 ft. Based on the strong currents (1.7 to 2 feet per second on average) and what has been observed during past construction projects in this area of the river, any turbidity is expected to dissipate sooner than 1,000 feet and would not extend across the river, which is approximately 1,600 feet wide.

Minimization measures related to pile driving are as follows:

- In-water pile driving will be completed outside of the window of anadromous fish spawning (April through June).
- A ‘startle noise’ will be implemented each day before any pile driving. This will consist of hitting the piles a couple times and then waiting 5-10 minutes prior to production driving.
- Piles will be installed using a vibratory hammer as much as possible and then impact driven using a cushion block.
- A safe unimpacted zone of passage of approx. 1,000 feet in width will be available for any sensitive species that may be foraging or migrating in the river during construction.

Jurisdictional impacts have not yet been finalized but are expected to consist of the following approximate totals:

IMPACT LOCATION	JURISDICTIONAL AREA	PROPOSED IMPACT	PERMANENT IMPACT (SQUARE FEET)	PERMANENT IMPACT (LINEAR FEET)
A	PISCATAQUA RIVER (E1UBL)	DREDGING	55,000	280
B	PISCATAQUA RIVER (E1UBL)	NORTH PIER EXTENSION	15,135	149
C	PISCATAQUA RIVER (E1UBL)	SOUTH PIER EXTENSION	10,370	90
D	PISCATAQUA RIVER (E1UBL)	FLOATING DOCK	1,363	136
E	TIDAL BUFFER ZONE (DEVELOPED)	GRADING	46,500	N/A
F	TIDAL BUFFER ZONE (DEVELOPED)	GRADING	4,100	N/A

The impacts shown for the wharf extensions account for the entire footprint of each extension. The actual direct impacts to the river bottom will be the piles only, which is approx. 600 SF.

When coordinating on mitigation during preliminary design, there was agreement on providing funding for the completion of the Cutts Cove living shoreline. However, in the last year or so, there have been concerns with the condition of what has been completed so far at Cutts Cove and, in talking with Lori Sommer last year, there seemed to be consensus that funding the completion of Cutts Cove no longer made sense. For this reason, mitigation will instead be via an in-lieu fee.

Input was requested on the most appropriate way to calculate an in-lieu fee. When originally discussed, mitigation was based on the 55,000 SF of dredge area, plus the 375 linear feet of impact to the river from the wharf extensions and floating dock. This approach results in a payment of more than $800,000. This approach results in an overlap in the dredge and linear feet of impacts from the north extension, which is seemingly double counting impacts for mitigation. This approach also doesn't account for the fact that, once the project is completed, there will still be riverine habitat in the dredge area and under the wharf. An alternative approach to calculating the in-lieu fee should be considered that is based on linear feet of impact alone, which would be consistent with how mitigation is typically calculated for stream and river impacts. This alternative approach would be based on 506 linear feet of impact, resulting in a payment of approximately $154,000.

The following is a summary of questions and comments from attendees:

Karl Benedict:

- Noted that he is taking a high-level approach in his comments given that there are other permit reviewers involved already.
- Should confirm that the amendment doesn't exceed 20% of additional impacts.
    - C. Perron noted that it would not exceed this threshold.
- The application should address dredge rules, PRA, TBZ, and account for TBZ mitigation.
    - C. Perron noted that the tidal buffer zone is developed and no mitigation is required.
- He will discuss the mitigation calculation internally and follow up.

Mike Dionne:

- Stated that he had previously coordinated with C. Perron on this project and NH Fish & Game's concerns are addressed in the minimization measures that were reviewed.

Mike Hicks:

- Was the need for an Individual Permit already confirmed?
    - C. Perron said that it was previously confirmed.
- Where would dredge spoils be taken?
    - C. Perron noted that spoils would be disposed of offshore, pending the results of the required sediment testing.
- The application will need to address Appendix B Section 6.
- Have historic resource concerns been addressed?
    - C. Perron stated that the project has a signed No Adverse Effect memo for Section 106 and there will be an archaeological monitor during construction in the location of archaeological sensitivity.
- Noted that the project has been reviewed at several meetings, including on site, and seems to be on track.

Jean Brochi (Due to technical issues, these comments were provided via email following the meeting):

- There was consensus that this project required an Individual Permit
- Recommend a separate mitigation meeting to discuss mitigation that includes DES, Corps, and EPA.

- Since the next submittal in March is an amendment, the Corps and DES may want to discuss what will need to be involved and included in the submittal.

Gary Croot:

- No bridge impacts involved so no Coast Guard permitting is required.
- If construction involved barges adjacent to/in channel, the Coast Guard will coordinate with the Port to issue notice to mariners.

Jamie Sikora:

- Noted that FHWA is the lead federal agency and approved the NEPA Categorical Exclusion document. Design changes will be reevaluated, which includes reinitiating consultation on EFH and ESA.

Chris Williams:

- Notification to mariners and the fishing industry will be required due to the dredging and increase in vessel traffic during construction.

Fremont #23793

This is the second presentation to the Natural Resources meeting. Alanna Gerton introduced the Stantec project team to the meeting attendees, and stated this project is being presented on behalf of the Town of Fremont. She then began the presentation regarding Fremont 23793 – Culvert Replacement Project at Martin Road over Brown Brook, and noted the primary focus is project mitigation. She reviewed the existing condition of the site:

• Located at the Eastern side of Fremont
• Brown Brook (Tier 3 Stream) crosses under existing bridge
• Existing bridge is a 1930 cast in place concrete deck on steel beams
• 10’ w x 4.5’ h x 18’ l
• Brown Brook is backwatered thru culvert to depth approximately 2 feet
• 9-10’ travel lanes along Martin Road
• 520 AADT (2020)
• The project is adjacent to Prime Wetland

Photos of the inlet and outlet were presented along with photos of the existing bridge. Alanna noted the existing bridge has been on the State’s Municipal Red List since 1992. The abutments are poorly aligned with the channel and the recent bridge inspection report dated December 21, 2021, notes the abutments are undermined and the north abutment has settled about 3 inches. The preferred alternative cross section was presented of a 22’ span x 7’ rise x 30’ long precast concrete box with simulated channel bottom. Alanna noted the gravel fill material beneath the culvert to address the unsuitable material found during the geotechnical survey conducted for the project. A profile of the preferred alternative along the stream channel was presented showing the limits of work. Per comments received at the January 18th meeting, Alanna indicated the limits of riprap had been reduced by about 15 LF on the downstream side. A typical channel cross section and plan view of the preferred alternative was presented on the next slides. Alanna noted the extent of the simulated streambed material was clarified on the plan view.
A color plan was presented of the entire work area that provided a visualization of the stream limits, wetland limits, roadway improvement limits, proposed riprap, and the 100’ prime wetland buffer line.

A construction phase plan view for the bridge replacement was presented. It showed a temporary 48" diversion pipe and temporary upstream and downstream coffer dams to be used during the removal of the existing structure, installation of the box culvert, and grading and installation of the stream channel material. Martin Road would be closed temporarily during the 2-3 weeks needed to complete the installation of the new box culvert.
Alanna turned the presentation over to Mike Leach to discuss the project wetland impacts. He noted the summation of temporary and permanent impacts to the stream, wetlands, prime wetlands, and 100' prime wetland buffer was reduced to 10,478 SF. A separate plan was presented showing the temporary and permanent impacts to the 100' prime wetland buffer.
Mike noted the permanent impacts to the downstream area was reduced as was requested at the January 18th meeting. In addition, he presented and noted the permanent impacts associated with the 100-ft Prime Wetland buffer are for the roadway widening and approach for the new bridge.
Mitigation for the project was presented and notes as:
• The culvert sizing is based on 1.2 x bank full width + 2' equal to 22 feet which is an increase in width of greater than 200%.
• The preferred alternative preserves the natural alignment of the stream channel.
• The proposed opening is 2.1 times greater than existing, which benefits aquatic passage, enhances stream conductivity and sediment transport, and minimizes the potential for inlet obstructions.
• A simulated stream bottom material will be provided as part of the preferred alternative.
• The design does not restrict high flows and maintains low flows.
• The preferred alternative will pass the 100-year storm for Brown Brook with more than 1' of freeboard.
• The project reduces the upstream 100-year floodplain elevation by approximately 1.5'.
• The project increases the 100-year flood volume storage by approximately 200 CF.
• The preferred alternative maintains approximately 2' of water through opening under normal flow conditions to promote aquatic passage.
• The design intent is to not cause erosion, aggregation, or scouring upstream or downstream of the crossing or water quality degradation.
• An alternative design report will be provided for the project.
• A waiver will be requested for the impacts to the Prime Wetland and 100-foot buffer.

Mike stated that for these reasons, he believes the project to be self-mitigating. At this point, the presentation was opened to questions.
Karl Benedict of NHDES stated this project overlaps two priority resource areas (PRA's) – the wetlands associated with the Tier 3 stream, and the 100' prime wetland buffer. He noted mitigation will be required for the permanent impacts associated with these PRA's. Mike said he would follow-up separately with Karl; Stantec will provide a color plan highlighting the permanent impacts within the PRA's for discussion regarding the mitigation fees.
Karl indicated the specification for the simulated streambed material should define a material similar to the existing reach streambed material; Mike acknowledged.
For the surface restoration identified as item 583.32 – Riprap, Class III Intermixed with Humus, Karl asked that Stantec consider using a native plantings for the banks; Mike acknowledged.
Andy O'Sullivan acknowledged the PRA areas require mitigation and noted impact areas D and E upstream and areas F, G, and H downstream will require mitigation.
Mike Leach noted the permanent 100-ft wetland buffer area impact for the roadways widening would also be included in the mitigation.

Michael Dionne of NH F&G had no comment on the presentation.
Michael Hicks of USACE asked if a historical assessment had been conducted for the project. Mike responded Stantec had completed the historical evaluation process in 2014; the bridge was determined to be not eligible and the NHDHR information would be included in the permit application.
Jean Brochi of the EPA had no comments on the presentation.
Gary Croot of the USCG had no comments on the presentation since Brown Brook is not a navigable waterway so the USCG has no jurisdiction.
Jamie Sikora of FHWA had no comment on the presentation.

Littleton-Waterford, #27711 (A003(594))

Today's NRACM meeting was a virtual meeting over Zoom. Megan Ooms (Dubois & King) and Bill McCloy (Normandeau) were present. Megan introduced the project team and summarized the existing bridge including its general location, surrounding landmarks and reviewed some photos of the site. Megan then summarized the details of the existing bridge, its deficiencies, and the project's purpose and need. The purpose of the project is to provide a safe and efficient highway crossing of the Connecticut River and to rehabilitate or replace the structurally deficient bridge thereby removing it from the State Bridge Red List and optimizing its remaining service life. The existing bridge exhibits substructure and steel superstructure deterioration and does not meet current width or railing standards. The bridge is a vital crossing for community. Megan discussed seven (7) alternatives currently under consideration in high-level detail: 1) Do Nothing (Does Not Meet Purpose & Need), 2) Deck Replacement, 3) Full Superstructure Replacement, 4) Full Superstructure Replacement & Widening, 5) Convert to Multi-Use Path (Does Not Meet Purpose & Need), 6) Full Replacement and 7) Demolition and Addition of New Ramps. A summary table of the alternatives was presented including the relative degree of impact to various factors including environmental impacts, traffic, historical resources, and others such as cost and service life.

Bill McCloy (Normandeau) summarized known natural resources and other related findings about the project site based on initial desktop due diligence and field investigations. Coordination with NHNHB indicated four known plant species, one wildlife species and no natural communities in the bridge vicinity. Follow up coordination with NHNHB and NHFG indicated that it was unlikely that the nearby rare plants would be present at the project site due to lack of appropriate habitat and that the wildlife species of concern was not utilizing the Route 18 bridge for nesting. Coordination with VTFW indicated three wildlife and one plant species of concern in the area of the bridge. VTFW is recommending a mussel survey in the river and review of the bank of the river on the VT shore for the rare plant known upstream of the site. Scattered invasive species were noted during the wetland delineation. VTANR reviewed the delineation boundaries and wetland classification pursuant to the VT Wetland Rules in 2022 and concurred. Coordination with USFWS IPaC indicated that the project falls within the range of the northern long-eared bat (NLEB), Canada lynx and monarch butterfly. A visual inspection of the bridge structure in Nov 2020 did not reveal any signs of bat utilization or roosting per the USFWS guidance and methodology at the time. An Essential Fish Habitat (EFH) study is not required at this time.

FEMA floodplains are present within the project area, and Normandeau has coordinated with the Floodplain Management Program. They hydraulics of the crossing are not anticipated to be altered. The Connecticut River is a 6th Order, designated waterway with a contributing watershed of 1,598 square miles (1,002,720 acres) which places the crossing squarely within Tier 3 criteria. Coordination with LCHIP/LCIP/LWCF was negative. Supporting habitat mapped by the NH Wildlife Action Plan is near the project area. Great River Hydro provided feedback during outreach efforts indicating that Much of land on NH and VT sides owned in fee and Rt 18/Bridge are within the FERC Hydroelectric Project Boundary of Fifteen Mile Falls Hydro Project (No 2077) and coordination may be needed with FERC if there would be impacts to those lands, or if easements were required to support the project.

The following questions and comments were made by participants in the meeting:

Karl Benedict (NHDES):

- Noted that wetlands in floodplains are Priority Resource Areas (PRA) along with Tier 3 river wetlands
- He acknowledged that coordination will likely be needed with the dam operators/owners and potentially with FERC
- He inquired about use of barge or trestle and it was discussed that barges have a few issues including required depth of water that may not work so trestle may be needed for at least a portion of work.

Mike Dionne (NHFG):

- Encouraged a mussel survey to determine if any protected species are present in the project area; this aligns with VTFW recommendations.

Ashley Litwinenko (NHNHB):

- Acknowledged prior coordination and indicated that if no work proposed in NH wetlands there should not be any concerns. There are very small wetlands present adjacent to a stream on the NH side of the river – those should be able to be avoided but will follow up as needed.

Mike Hicks (USACE):

- Mike H. asked if we had coordinated with Mike Adams of the Corps VT Project Office; Bill indicated limited coordination to date.
- Mike H. indicated he would reach out to Mike A. in VT
- Mike H. indicated he anticipated this would qualify for a General Permit
- Subsequent coordination with Mike A. and Mike H. indicate that the project will probably be evaluated under 2 GP's and that a site visit may be needed to review wetland delineations.

Jean Brochi (US EPA):

- Jean indicated she would reach out to Beth Alafat who is the US EPA representative covering VT

Jamie Sikora (FHWA)

- Indicated that two SHPO and FHWA offices would be involved and NH likely to lead the environmental studies/reviews

Gary Croot (USCG):

- Noted that the CT River is navigable and he assumed that the current bridge was permitted although the precise status of a USCG bridge permit is uncertain.
- Gary indicated that if the chosen alternative was repair or in-kind than it would be a simple process related to a repair and would not need much additional permitting or coordination effort with USCG; if the chosen alternative would alter the bridge more substantially, a CG Permit amendment would be needed AND in the case it was never permitted in the first place, it may still be able to be exempted based on the type of vessels using the river in that location (between two dams) and based on other existing bridges in that section of the river; a little more review needed here to determine the permit status of the current bridge.