

**BUREAU OF ENVIRONMENT
CONFERENCE REPORT**

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: September 20, 2023

LOCATION OF CONFERENCE: Virtual meeting held via Zoom

ATTENDED BY:

NHDOT

Matt Urban
Andrew O’Sullivan
Mark Hemmerlein
Joshua Brown
Jon Evans
Rebecca Martin
Kerry Ryan
Arin Mills
Samantha Fifield
Nancy Spaulding
Richard Dymant
Marc Laurin
Levi Byers

ACOE

Mike Hicks

USCG

Absent

EPA

Absent

NHDES

Karl Benedict
Maryann Tilton

NHB

Absent

NH Fish & Game

Kevin Newton
Mike Dionne

Federal Highway

Jamie Sikora

US Fish & Wildlife

Absent

The Nature Conservancy

Absent

**NH Transportation &
Wildlife Workgroup**

Absent

**Consultants/ Public
Participants**

Jennifer Riordan
Marv Everson
Robert Faulkner
Matt Lundstead
Ellen Moshier

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

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Finalize Meeting Minutes

Finalized and approved the August 16, 2023 meeting minutes.

Bridgewater, 2020-M324-2 (Non-fed):

Arin described that the project would replace a culvert that conveys Great Brook under River Road (state road) in Bridgewater. Great Brook flows approximately 3 miles from its headwaters to the crossing, and further flows approximately 0.2 miles downstream to convergence with Pemigewasset River (Pemi). The project area, and the area surrounding Great Brook, is rural and primarily undeveloped. River Road is a Tier 4 (Local Connector state road) with average daily traffic of 90 vehicles per day. Photos were shown of the project area, both upstream and downstream of the crossing.

Sam presented project details to replace the existing crossing (36" CMP with 36" RCP overflow pipe) with a precast concrete box that is 10' wide by 8.5' tall (sunk 2.5' with simulated streambed materials) by 80' long with precast concrete wingwalls. The proposed precast box will be installed skewed to the roadway to allow for the original alignment of Great Brook. Alternatives considered during design were as follows: 42' span bridge (60' along roadway centerline), 20' span 3-sided structure on abutments, 14' wide by 6.5' tall (sunk 2.5') box culvert and 10' wide by 8.5' tall (sunk 2.5') box (preferred). Slip-line was originally considered and ruled out due to the large watershed size. Sam showed the results of the hydraulic analysis for both the existing and preferred structure. The existing structure overtops the roadway at a 25-year storm event, while the proposed crossing will pass a 100-year storm event with freeboard to the roadway surface; flow velocities between the existing and proposed crossings were also tabulated and showed that the proposed crossing provides a reduction in velocity for all design storms.

Wetland impact plans were shown and illustrated that the alignment of the proposed crossing matches into the natural alignment of the stream; whereas the existing crossing caused the stream to move from its original location. Permanent impacts at the outlet are predominately for stream grading, while temporary impacts are for work area and replacement of the existing rip-rap along the banks. A small area (approximately 37sf) of permanent impacts to a Palustrine Scrub Shrub wetland are required for slope grading; however, no wetlands or flood capacity will be lost as a result. The steep embankment of the roadway slopes will be graded to match the proposed structure and streambed. Impacts along the inlet are primarily a result of the brook's restorative alignment through the proposed structure; the elevation of the natural overflow channel upstream of the original crossing will be low enough to allow for overland flows and will be graded towards the restorative stream channel. The proposed 8.5' tall structure will be sunken 2.5' to allow for the placement of stream simulation material that will be graded to accommodate wildlife passage through the structure. Preliminary wetland impact plans were shown where total permanent impacts are 4,062 sf and temporary impacts are 1,356 sf of permanent impacts totaling 5,418 sf of impacts.

Sam briefly described the construction sequence where River Rd will be closed, and traffic will be detoured. Temporary erosion control measures will be installed, and the existing 36" cmp will be used for the clean water bypass. The portions of the existing crossing (mostly the 36"

reinforced concrete overflow pipe) that are located within the footprint of the proposed structure will be removed and the box culvert and 3 wing walls will be installed. To construct the remaining wingwall, a secondary clean water bypass will be conveyed through the newly constructed box culvert and the remainder of the existing crossing must first be removed. Roadway slopes, pavement and guardrail will then be installed, and vegetation and permanent erosion control measures will be established.

Arin described the results of the Env review for the project: Great Brook is a 2nd order stream to convergence to Pemi with no SWQPA; per StreamStats, it is a Tier 3 crossing with watershed of 1,883 acres (2.94 sq mi); the project is located within Pemi River Designated River buffer, and PRLAC has been notified of project and sent plans with no comment; there have been no previous permits identified outside of the Spring 2023 EAV for emergency repair of damage to CMP; NWI data shows, and field surveys confirm, a riverine system upstream with a Palustrine scrub-shrub (PSS) further downstream; primary impacts from the project are to riverine system; the project lies within 100-year FEMA flood zone and permanent impacts to PRA total approximately 37 sf for grading with no flood or wetland loss; NHB23-1879 had no recorded occurrence of rare species; NOAA coordination for Essential Fish Habitat determined that there are no concerns due to numerous downstream passage restrictions for diadromous fish; both wildlife corridor and habitat ranking maps were shown, with the proposed project to improve both; the stream has documented Eastern Brook trout and NHF&G fisheries biologist J.Magee was consulted via a site visit and determined that the proposed design is an improvement to fish passage; a Time of Year (TOY) restriction for in-water work after October 1st for wild trout; Aquatic Restoration Mapper (ARM) data was shown where the existing crossing is listed as geomorphically mostly incompatible and reduced passage for aquatic organisms.

The project is located adjacent to the Martin Conservation Easement held by SPNHF, and they have been contacted with the proposed design. Impacts will extend outside the States 66' right-of-way and District 3 and the Bureau of ROW will work with the landowners for required easements prior to construction. Stream crossing data was shown and determined a compliant size structure is 42' span. Reference reach substrate is 60% gravel and 40% sand with a bankfull width of 19' with a meandering and mobile natural substrate. Downstream of impact area is a PSS wetland. A US Fish & Wildlife IPaC resulted in possible Northern Long-Eared bat, and determined the project to be no effect. Section 106 for cultural resources resulted in and determination of 'Minimal Potential to Cause Effect' under an Appendix B.

A wetlands permitting summary was provided; the crossing is Tier 3 (904.05) and the proposed design mostly meets the design criteria noted in 904.07; it accommodates the 100-year storm, will provide stream simulation and a wildlife shelf, and improvements to sediment transport. The project will be an Alternative design under 904.10 as it does not meet the design criteria under stream crossing guidelines for a 3-sided structure with a 42' span as it is cost prohibitive. A PE certification will be provided with the application. Mitigation is not required under 904.05(f) as the project is self-mitigating by eliminating the perch, restoring the natural stream alignment, providing stream simulation and a wildlife shelf, improve hydraulic capacity, passes the 100-year storm, and vegetated streambanks (see table in slides). The stream classification is Type 'C' with a bankfull width of 19' in reach. A compliant 42' span (60' along roadway centerline) is cost prohibitive, a 10'W by 8.5' H with 2.5' of stream simulation and wildlife shelf is proposed. The project meets design requirements of 904.01.

Andy O asked for clarification on TOY restrictions for fish. Arin clarified J. Magee recommended in-water construction between June 1st and September 30th (Arin clarified dates from email correspondence, this is slight change to what was stated in meeting).

Karl B asked bypass pipe details be provided with application, showing it can pass a 2-year storm event. He also asked details of the wildlife shelf and grading changes (existing/proposed) be shown in application plans. Karl asked if the existing rip rap was vegetated, and Arin showed a photo showing the existing stone/vegetation along the outlet banks. He asked that the proposed banks be vegetated and that the banks tie in with the wildlife shelf for connectivity through structure. Karl asked that all impacts, temp/perm, be shown, and that the provided wildlife connectivity was also shown. The project would meet self-mitigating requirements so long as the proposed banks are vegetated and that the proposed crossing accommodates wildlife to traverse through the structure onto the banks.

Mike D, Kevin N and Mary-Ann T had no comments.

Laconia Municipal Airport, SBG-09-20-2022 (Non-fed):

Jenn Riordan (GM2) provided an overview of the project, environmental resources, and anticipated impacts. The project involves the installing the remaining segment of perimeter/wildlife fence at Laconia Municipal Airport (LCI) in Gilford. Approximately 7,400 linear feet of fence would be installed around the eastern portion of the airfield. This rest of the airfield currently has a perimeter fence. Addition of the proposed fence would result in the goal being met to completely enclose the airfield.

Two gates would be installed (one on each side of the runway). The fence would cross Meadow Brook twice (north and south of the runway). The proposed fence would be 8 feet high with barbed wire on top and a wildlife deterrent skirt on the bottom that is buried.

The purpose of the project is to enclose the airfield to prevent large mammals from accessing the airfield and crossing the runway. In 2011, USDA Wildlife Services completed a Wildlife Hazard Assessment for the airport. The most critical recommendation was to finish installing a perimeter fence to enclose the airfield. There is wildlife present in and around the airfield and there was a near miss between a deer and an aircraft a couple years ago.

Environmental resources in the project area include prime and non-prime wetlands and Meadow Brook. The wetlands near the runway and taxiway are periodically mowed. Further from the runway, the wetlands are scrub-shrub and forested. There is a conservation easement on a parcel located south of the runway (known as the Howe Property). The easement is held by the Society for the Protection of NH Forests. The NHB report had no recorded occurrences. A No Effect determination was received for northern long-eared bat. It was determined that there will be no impacts to historic or archaeological resources.

LCI previously applied for a NHDES Wetlands Permit to install the remaining perimeter fence but the application was denied in 2013. The permit was denied for several reasons, including concerns with impacts to the wildlife habitat function of the prime wetlands and conflicts with the conservation easement on the Howe property. In addition, a waiver request for the 20-foot

property line setback was denied. In 2014, LCI received a Wetlands Permit for the partial installation of the perimeter fence at the northern and southern edges of the airfield, but the fence ended at the wetland areas.

When the current project was being scoped in 2021-2022, the project team met with NHDES, the Gilford Conservation Commission, and NHDOT District 3 to discuss the proposed layout and get their feedback. The current layout is similar to the 2013 layout, however several changes were made to address the concerns from 2013:

- The current layout avoids the conservation property south of the runway.
- Wildlife access to the prime wetland on the south side of the runway will be maintained.
- There will be a wildlife corridor along Route 11 and the Gunstock River, outside the fence, so that north-south wildlife movement isn't restricted. Compared to the 2013 layout, the current alignment locates the fence further from Route 11 in several areas.

There are several constraints that dictate where the fence can be located:

- There are extensive wetlands northeast of the runway. Moving the fence further northeast would minimize impacts but would decrease the wildlife corridor and potentially restrict wildlife movement. This would also require the fence to be located off airport property.
- The fence can't be installed in front of the localizer (within the localizer critical area)
- The fence should be located outside of the Runway Object Free Area (ROFA) to comply with FAA design standards. The current layout proposes to place the fence inside the ROFA south of the runway. This will be allowed due to topography in the area, however a Modification of Standard from NHDOT Bureau of Aeronautics is required.

The Gilford Conservation Commission recommended having a wildlife biologist look at wildlife movement in the project area. In 2022, USDA Wildlife Services completed a study to evaluate existing wildlife movement and potential impacts from the proposed fence. They did several site visits, night surveys, and set up trail cameras around the airport. Observations included deer, coyote, turkey, and bobcat. Some animals were observed crossing the airfield from north to south, others were at the edges of the airfield. USDA Wildlife Services provided several recommendations including:

- Completing the perimeter fence is still recommended due to wildlife hazards on the airfield.
- Once installed, the fence should be monitored for holes and gaps.
- Once the fence is installed, monitor Route 11 for mammal sightings. Wildlife quickly learns to adapt to changes and should find another route around the airfield. USDA felt that the corridor to the east of the fence along the Gunstock River should provide enough width for wildlife to travel through this area.
- Consider creating an alternate wildlife corridor on the southern side of Route 11 with a crossing at the Gunstock River. This is off airport property and beyond the scope of the project.

Total wetland impacts are estimated at approximately 43,546 square feet. This includes 26,606 square feet of prime wetland impact and 16,940 square feet of non-prime wetland impact. Bank

impacts are estimated at 130 linear feet. No channel impacts are anticipated since the fence would span the stream. These impacts include a 20-foot wide corridor along the proposed fence line. Only a portion of this corridor would be directly impacted for fence installation. The 20 feet includes enough width to allow for construction access, clearing and grubbing, and fence installation (includes burying the wildlife skirt). The area would be restored to pre-existing grades once construction is complete, however vegetation along the fence would be periodically mowed to allow for fence maintenance. Preliminary plans showing the proposed fence layout were presented.

The meeting was then opened for comments and discussion.

Karl Benedict (NHDES)

- Asked for a copy of the 2014 permit and minutes from the previous meeting with NHDES during the scoping phase. Jenn R. said she will provide these.
- Suggested having another pre-application meeting with NHDES and USACE
- The project will need to address everything that was previously denied.
- A public hearing will be required due to the prime wetland impacts.
- Since LCI has other active permits (obstruction clearing project) any permanent impacts will require mitigation.

Mike Dionne (NH Fish & Game)

- No comments

Kevin Newton (NH Fish & Game)

- Asked if turtle access could be provided under the fence.
- Jenn R. responded that coyotes can dig under the fence so the recommendation on airport wildlife fencing is to bury the bottom of the fence. Providing turtle access could allow other, larger animals to cross through.
- Kevin asked and Jenn R. confirmed that the proposed fence would be the same as airport fence previously installed in other airports of the airport.

Mary Ann Tilton (NHDES)

- Agreed with Karl's comments.
- The project will need to result in no significant loss of prime wetland functions.
- Should look at why the Town designated that area as prime wetland and look at the functions and values.
- Need to meet clear and convincing evidence standard for prime wetlands.

Jenn R. asked if any consideration is given to changes in land use and wetland condition over time. The Gilford prime wetlands were designated in the 1980's and the area has changed since then. The prime wetlands within the project area are located on airport property and some are within the airfield. Karl responded that the Town's prime wetland study is still what is used for determining prime wetland designation.

Keene, 41590 (X-A004(686)):

Robert Faulkner (Faulkner) provided a project introduction and presented several slides: He noted that this was the first Natural Resource Agency Meeting presentation for the Keene 41590 project and that the project is currently in the Preliminary Engineering and Environmental Documentation phase. He continued that the purpose of the meeting was to provide a general overview of the project and the natural resource assessments conducted to date and findings of those assessments. Faulkner described the project limits and purpose: The project begins east of Optical Avenue and continues east along NH Route 101 approximately 1 mile to Branch Road. The purpose of the project is: pavement rehabilitation, drainage improvements, improve bicycle and pedestrian accommodations, address the NH Route 101 Bridge over the Branch River, and address safety issues at the Swanzey Factory Road Intersection. He further noted the need of the project as follows: Route 101 is 1 of 2 major east-west routes in southern NH which is vital to commerce, commuting and tourism; It is a gateway to City of Keene; the pavement condition is poor and there is poor drainage with no water quality treatment; the Branch River bridge is on the State's Red List; there are safety concerns at the Swanzey Factory Road intersection and; the corridor is challenging for pedestrians and bicyclists.

Faulkner continued the presentation noting that improvements to Route 101 would include providing 12-foot travel lanes and widening the shoulders to 5 feet. There are no significant changes to the Route 101 alignment anticipated as part of this project and all attempts will be made to avoid slope impacts to the Branch River. He continued to describe initial concepts to address the safety concerns at the Swanzey Factory Road intersection. These include looking at improving the sight distance at the existing intersection as well as possibly relocating the intersection at locations to the west, which would require a new bridge over the Branch River, as well as to the east, along the abandon railroad spur corridor behind the Fastener Mill buildings. Faulkner noted that the project area was within the regulated floodway / floodplain of the Branch River and that CHA was in the process of replicating the existing FEMA model. Hydraulic analysis related to the alternatives will be performed and any unavoidable impacts to the floodplain will be mitigated via compensatory storage. Faulkner continued to present that the water quality goals of the project include providing on-site and potentially off-site BMPs to meet NHDES requirements, while also striving to meet the City of Keene's water quality standards. He also noted that the flow of the existing tier 1 stream near Thompson Road is proposed to be separated from the closed drainage system prior to outletting towards the Branch River.

Jenn Riordan (Riordan) continued the presentation noting that the wetland resources delineated in May and June 2023 included The Branch, Minnewawa Brook, intermittent streams, and various wetlands, some of which are priority resource areas. Most of the wetlands are associated with The Branch or are connected via culverts. There are also a few small and isolated wetlands. Riordan continued providing an overview of the USFWS IPaC results which indicated that the northern long-eared bat and monarch butterfly may be present in the corridor. She also noted that the team was aware of the potential listing of the tricolored bat and that an acoustic survey will be completed if needed. A bat bridge assessment will also be completed.

Matt Lundsted (Lundsted) presented additional resource assessments and noted that the NH Natural Heritage Bureau inquiry (NHB23-1316) found no recorded occurrences for sensitive species near the project area. Lundsted continued, providing an overview of the fisheries and

stream crossing assessments. He noted that stream crossing assessments will occur in the near future and noted that the Otter Brook, which flows into the Branch River, is flood controlled via the Otter Brook Dam. Stream States predicts a 98 foot bank-full width of the Branch, which has an 89 square mile watershed. However due to the dam and the nearby confluence of Otter and Minnewawa Brooks, the stream assessment will rely on the downstream for reference reach. Lundsted also presented the NOAA Fisheries' Essential Fish Habitat Mapper which indicated that there is no Essential Fish Habitat (EFH) in the Branch River in the project area, this will be confirmed with NOAA. He noted that the NHDES One-Stop Environmental Database indicated that there were several potential contaminated sites identified in the project corridor, including old Keene landfill beyond Optical Ave. Lundsted continued noting that much of the project corridor falls within the Protected Shoreland of the Branch River and that the invasive plant species assessments identified NHDOT Type I and II species in the project corridor. Lundsted also presented the findings of the 4(f) and 6(f) resource inquiries: 4(f) resources include the Cheshire Rail Trail and Stone Arch Bridge; and there are potential historic properties along Swanzey Factory Road and Route 101 which are currently being evaluated. LCHIP has funded work on the Stone Arch Bridge. He further noted that there are no 6(f) LWCF resources in the area.

Faulkner continued the presentation and provided an overview of the public outreach efforts anticipated which included outreach letters already sent to nearly 50 entities. He concluded the presentation noting that the Preliminary Engineering and NEPA phase is to be completed by 2025 which will culminate with a Public Hearing and that Final Design is anticipated to be completed between 2026 and 2028.

The following questions and comments were made:

- Karl Benedict NHDES: Noted that stream crossing assessments will need to be performed. He would like to review the NEPA alternative determination to confirm that the future Swanzey Factory Road alignment is the right alternative. He recommended early coordination with the City of Keene regarding flood storage mitigation. The City has been doing a lot of work with compensatory flood storage recently.
- Mike Dionne – NH Fish and Game: He was unsure if there would be any time restrictions for in-water work as there may be Brook Trout. This would need to be confirmed with NHF&G's Fisheries Program. The team responded that they would follow up on this and report back as alternatives are developed.
- Kevin Newton – NH Fish and Game: The area looks like it may have wood turtle habitat. Recommend including wood turtle information in the contract materials so the contractor is aware of the potential presence of this species. The design should consider open drainage.
- Mike Hicks – USACOE: No comments.
- Mary Ann Tilton – NHDES: Deferred to Karl's comments.
- Jamie Sikora - FHWA: It looks like curbing may be proposed which can be worked out with local agencies for drainage. He also had a question about the existing rail trail and noted that the existing Industrial Heritage Trail comes down Marlboro St. and that there is a gap at Route 101. There is an active rail trail on either side of Route 101. He did note that if the rail corridor segment being considered for the relocated Swanzey Factory Road alignment used any TE funds, that there will be an additional cumbersome process to extend the rail trail. Faulkner noted that the alternatives being considered near the Stone

Arch Bridge would not be directly impacted. The rail corridor by the Swanzey Factory Road intersection is abandoned and is not part of the existing rail-trail system.

New Hampton, 44297 (Non-fed):

Kerry Ryan, NHDOT Environmental Manager, gave an overview of the location of the proposed state funded bridge maintenance project, located at bridge 130/048 which carries NH Route 132 over an unnamed stream. The existing structure is a multiplate, single span metal culvert and was constructed in 1977. This is a Tier 3 crossing. Photos were shown of the surrounding area and outlet and inlet sides of the pipe. The New Hampton Fish Hatchery was described in relation to the project area. The onsite meeting with NHFG personnel John Magee and Scott Phinney, which concluded in no concerns by NHFG, was discussed.

Levi Byers, NHDOT Bridge Maintenance Engineer, described the purpose of the proposed project which is to rehabilitate a deteriorated corrugated metal pipe and proposed work which will include installation of a concrete invert inside the existing corrugated metal pipe. Draft impact plans were discussed which show riverine temporary impacts. A longitudinal profile, construction sequence, and hydraulics were also discussed.

K. Ryan described the resources in the area.

Karl Benedict, NHDES, said adding a six inch invert to the existing structure would make a perched condition and even though the area is already impacted by the dam, the six inch invert/perch would make this project an alternative design as it doesn't meet 904.09 as maintain, improve, or enhance. He asked if there was a time of year (TOY) restriction. Andy O'Sullivan said there was not since the area was impassible due to the dam. Karl asked for this information to be included in the application.

Mike Dion, NHFG, had no additional comments since the hatchery staff and John Magee have already been consulted with. He did verify that John Magee has did not request a TOY restriction because of how impacted the system already is.

Kevin Newton, NHFG, had no comments.

Mike Hicks, ACOE, had no comments.

Mary Ann Tilton, NHDES, had no comments.