BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting **DATE OF CONFERENCE:** December 15, 2021 **LOCATION OF CONFERENCE:** Virtual meeting held via Zoom

ATTENDED BY:

NHDOT

Andrew O'Sullivan Joshua Brown Matt Urban Jon Evans Mark Hemmerlein Kirk Mudgett Chris Carucci David Scott John Sargent Meli Dube Samantha Fifield Arin Mills Nancy Spaulding Marc Laurin Jason Ayotte Trent Zanes Tony King Kerry Ryan

Sarah Healey Dillan Schmidt

ACOE Mike Hicks

EPA Absent

NHDES

Karl Benedict Mary Ann Tilton

NHB Jessica Bouchard

NH Fish & Game Carol Henderson Federal Highway Absent

The Nature Conservancy Pete Steckler

Consultants/ Public Participants Stephen Hoffman Christine Perron Samuel White Chris Sargent Brenda Bhatti

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

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Finalize Meeting Minutes

Finalized and approved the November 17, 2021 meeting minutes.

Jackson, #43312

Presented by Matt Urban and Chris Carucci

Meeting Date: 12/15/2021

Matt Urban (Urban) provided a project introduction by presenting a few slides that shared the project area in relation to where it's located in the State for spatial context. He shared a few more additional slides Aerial and Topographical that provided an overview of the project area (project limits) at a more intimate scale so that the resource agencies members could see the project area in relation to the surrounding landscape such as nearby streams, roads, houses etc.

Urban continued by providing a rapid environmental summary of the site summarizing that the project area contained an unnamed brook that would be the location of a proposed culvert replacement. Other pieces of information he highlighted include:

- Tier 2 Stream (262 Acres)
- 1st Order Stream (No SWQPA)
- Approximately 1.5 miles to convergence with Ellis River
- No Designated River
- No Previous Permits
- NHB21-3282 (No Records in Area)
- No PRA's
- No Cold Water Fisheries
- IPAC NLEB (4d) consultation.

Urban then shared several photos of the project area looking in both directions of NH Route 16B in relation to the proposed culvert to be replaced. He also shared photos looking upstream and downstream of the crossing, and he shared photos of the existing armoring the could be seen on both sides of the structure. Lastly, Urban shared some photos of the Downstream Reference reach and he explained why the stream assessment could not be completed on the Upstream side due to all the influences by man (such as the channelized segment of stream) on the inlet side. He also shared a snapshot of the Stream Crossing Worksheet highlighting some of the data collected that would be included in the wetlands application.

Urban then passed the presentation over to Chris Carucci to go over the proposed project details by summarizing the plans, hydraulics, alternatives, and the proposed design.

Carruci described the funding source to be 100% State Funding, and explained that the anticipated construction date would be Fall of 2022.

Carucci explained that this culvert was in need of replacement due to the history of flooding and poor condition. He explained that this structure was reportedly overtopped twice in the past. Once by Hurricane Irene and then again during an October 2017 storm.

Carruci described the structure as a 48" CMP in poor structural condition with heavy rust along the bottom with some perforations, (as shown in a photo).

Carucci shared a plan view of the project area and then described the hydraulic modeling that he had completed. With the key findings being that the structure was undersized and that it first overtops the adjacent driveway and then overtops NH 16B, depending on the amount of flow. He also explained that when it does overtop there is only an approximate 2 to 3 minute time lag from when it overtops to when it then flows back into the stream where it meets the next downstream structure. Carucci shared several slides to help illustrate the modeling and flow path the water takes when it does overtop and noted that upsizing the existing 48" cmp would not cause a significant increase in flow arriving at the next downstream structure.

Carucci shared several design alternatives that were evaluated. One alternative was a 4' x 8' embedded box that was hydraulically sized. Another evaluated was a 5' x 12' span bridge, and a 16' span bridge. The larger spans were not selected due to constraints with constructability and cost. The preferred alternative was the 4' x 8' embedded box that met hydraulic needs. The replacement culvert will be constructed at the same location and streambed grade as the existing crossing. Concrete grade controls will be included inside the culvert to hold the streambed material in place and to create a V shaped streambed to maximize depth during low flows. He also noted that the V shaped bed would provide some terrestrial passage opportunity at low flows.

Carucci provided some general information relative to the construction sequence and proposed impacts as currently estimated. Carucci explained why the Department felt that mitigation would not be needed for the proposed work. Highlighting that the impacts were under 10,000 sf and under 200 lf. The proposed work was an improvement to hydraulics, and AOP. He explained how there would be no new rip-rap and that it would only be placed where existing Rip-Rap previously existed. Lastly, that there would be no permanent adverse effect on functions and values.

Carucci identified that the Department anticipates this design will be submitted as an alternative design under Env-Wt904.10 and that the proposed work will meet all of the general design criteria under Env-Wt 904.01 and will comply with all of the other Env-Wt 904.07 provisions to the maximum extent practicable.

Carucci then opened it up for comments from the Nat RES members.

Karl Benedict (Benedict) was appreciative of the detailed presentation. Benedict asked to clarify the length of the existing culvert. Carucci replied that it is 36' long. Benedict asked about the need for the grade controls inside the culvert. Carucci replied that they help to hold the streambed material and maintain the V shaped bed and eliminate the need for a stone armor layer under the simulated streambed material. The streambed material will be level with the grade controls. Benedict asked for some clarification on the extent of the armoring on the inlet side that was difficult to see due to the extent of vegetation. Carucci and Urban clarified that the limits of the stone were from the OHW up to the TOB and extended a great distance all the way upstream. Carucci noted that the existing stone armor would be reused and that the banks would be allowed to revegetate naturally.

Benedict indicated that he agreed this project did not appear that it would require any mitigation and he indicated that Lori Sommer (who was not in attendance) had also reviewed the project information provided prior to the presentation agreed that it appeared mitigation would not be needed. Benedict did indicate that he would anticipate the need for a possible 2 year monitoring condition to ensure the simulated streambed material stayed in place.

Carol Henderson reiterated that there were no NHB or F&G records identified on the NHB search. She also asked for clarification if the existing structure was perched and if the proposed work would eliminate that if so. Carucci was able to share a photo of the outlet to illustrate that the existing structure was flush with the streambed and not perched. He further explained that the proposed crossing would be embedded and that even with the internal grade controls the structure would not be perched and the stream bed would be flush through the structure.

Mike Hicks (ACOE) had no comments and Pete Steckler (Nature Conservancy) also had nothing to add that hadn't already been said.

Lee, #41322

PROJECT: Lee 41322 (MJ Project No: 18283.06) DATE OF MEETING: December 15, 2021

LOCATION: Remote - Zoom Video Meeting

SUBJECT: NHDOT Natural Resource Agency Coordination Meeting – DRAFT minutes

PROJECT REPRESENTATIVES:

NHDOT: Meli Dube, John Sargent, Jason Tremblay, David Scott

MJ: Stephen Hoffmann, Christine Perron, Sam White

NOTES ON MEETING:

Stephen Hoffmann reintroduced the Lee 41322 project involving the replacement of the structure carrying NH Route 125 over the Little River in Lee, NH. The project was previously presented at the October 2019 and August 2020 Resource Agency Meetings. The purpose of this meeting was to present the preferred alternative and obtain concurrence from the resource agencies before progressing into final design.

Updates from the prior resource agency meetings included: adding Sean Sweeney of Headwaters Consulting to assist with geomorphic channel design considerations; the project is not subject to the Shoreland Water Quality Protection Act as previously noted; the Rosgen stream channel classification has been determined to be a Type E channel rather than a Type C as previously reported; and the advertising date has been adjusted to June 2023.

The existing crossing structure consists of an 18' wide x 12' high corrugated metal pipe (CMP) that was installed in 1972 and was added to the State Red List in 2014. At the location of the crossing, the Little River has a watershed area of approximately 18.4 square miles making this a Tier 3 stream crossing. The average bankfull width of the river at this location is 32' and the design channel bankfull width of the reference reach is 34'. Additional resources located within the project area include wetlands, priority resource areas (PRAs) (floodplain wetlands adjacent to Tier 3 stream), 100-year floodplain (Zone A), designated rivers (Lamprey River Watershed), and rare plants and animals identified by NHB and USFWS. Rare plants identified by NHB and USFWS include tufted yellow loosestrife, American featherfoil, and small whorled pogonia. A rare plant survey was completed in August 2020 and no rare species were identified. Suitable habitat for small whorled pogonia was identified and consultation with NHB and USFWS will continue as impacts and limits of disturbance are refined. Rare wildlife species include American eel and Blanding's turtle. NHF&G made the following recommendations based on preliminary coordination: 1) Time of year restriction from April 15th through July 1st to protect anadromous fish spawning runs, particularly river herring which has been documented in the Little River downstream from the project area; 2) Wildlife friendly erosion control matting; and 3) Limiting riprap and avoiding armoring the entire river channel.

The conceptual design alternatives previously presented included an 80' span, 90' span, and 120' span with various stream alignment configurations. The 80' span was eliminated from further consideration based on the lack of geomorphic compatibility and wildlife shelves/floodplain benches. The 120' span was eliminated due to increased costs and impacts to right-of-way and adjacent wetlands.

Option 1 is the preferred alternative and involves replacing the existing culvert with a 90' single span bridge and realigning the channel on the upstream side and through the structure and maintaining the existing downstream channel alignment. This alternative provides minimum 3' wide wildlife shelves/floodplain benches on both sides and retains the existing scour hole. Option 3C was also evaluated and involves maintaining the existing upstream channel alignment and realigning the channel through the structure and at the outlet on the downstream side. Option 1 is preferred because it provides a smoother transition from the upstream and downstream

reaches, maintains a flatter channel bed slope, improved floodplain connectivity and grading, provides a shorter length of reconstructed channel, and minimizes the potential for impacts to sensitive banks on the downstream side.

Preliminary impacts for the bridge replacement include 142 LF of channel impacts, 213 LF of bank impacts, and 187 SF of wetland/PRA impacts. The proposed project will also provide 144 LF of newly constructed stream channel. These impact totals are for the proposed bridge replacement only. Additional wetland impacts associated with temporary roadway diversion are likely along the eastern side of the roadway, south of the existing crossing. These impacts will be further evaluated during final design and presented at a future Resource Agency Coordination Meeting prior to the wetland permit application submittal.

The proposed project is anticipated to require a Major Impact Standard Dredge and Fill Permit from NHDES. The proposed stream crossing is anticipated to be permitted as a Tier 3 alternative design. Mr. Hoffmann indicated that the project team was looking for input from NHDES on whether the stream channel impacts could be considered self-mitigating based on the proposed improvements. It is assumed that mitigation will be required for the PRA wetland impacts.

The next steps involve scheduling public meetings, obtaining LAC input, finalizing the NEPA document, completing final design and permitting. The permit application is anticipated to be submitted in mid- to late-2022.

John Sargent commented that wetland impacts from traffic diversion would be minimized as much as possible.

Karl Benedict indicated that he had received prior comments from Lori Sommer (not in attendance) and that he and Ms. Sommer's comments were consistent. Overall, both Mr. Benedict and Ms. Sommer are in support of Option 1. Mr. Benedict confirmed that the proposed stream crossing would be permitted as an alternative design and that the stream crossing replacement could be considered self-mitigating pending a review of the final planting plan and streambed materials. Mitigation would be required for impacts to the PRA wetland.

Carol Henderson appreciated the inclusion of the wildlife shelves through the structure and indicated that NHF&G's concerns and recommendations are being addressed.

Jessica Bouchard asked if the rare plant survey included surveys for small whorled pogonia. Mr. Hoffman indicated that his colleague completed the rare plant survey, and that small whorled pogonia was included, but he understands the challenges associated with surveying for this species. Ms. Bouchard requested that coordination regarding small whorled pogonia continue with herself and the US Fish & Wildlife Service as impacts are identified and refined further. Ms. Bouchard also referenced email correspondence from September 2020 between Amy Lamb and Christine Perron that stated additional surveys would be conducted in Spring 2021 for American featherfoil because the August 2020 survey was outside the survey window for this species. Ms. Perron explained that the additional survey for American featherfoil has not been completed at this time, but a condition can be included in the NEPA document regarding additional surveys and coordination with NHB prior to the start of construction. Ms. Perron asked about the appropriate

timeframe for surveys. Ms. Bouchard stated that American featherfoil should be surveyed for in May through June (no later than the end of June). Ms. Bouchard also clarified that the survey timeframes for American featherfoil and small whorled pogonia do not overlap, and that small whorled pogonia typically emerges later in the summer (after June).

Mike Hicks requested that the US Coast Guard be notified and coordinated with regarding the proposed project. Mr. Hicks also stated that the permit application should state that rare species have been surveyed and were not found within the area covered by the permit. Mr. Hicks also asked about Section 106 coordination. Mr. Hoffman indicated that the Effect Memo had been received, but later clarified that it had not but that coordination would continue.

Pete Steckler reiterated his comments from the prior meeting that the project is located in an area that is part of the Connect the Coast Initiative and is important for wildlife passage. Mr. Steckler also requested to see cross sections of the wildlife shelves at the next Resource Agency Coordination Meeting. Mr. Steckler also asked what, if anything, was going to be done to the scour hole. Mr. Hoffmann explained that nothing was currently proposed and that it was anticipated that the larger hydraulic opening would result in lower water velocities and that the scour hole would likely fill in over time as the river channel adjusts and reaches its equilibrium. Mr. Steckler suggested possibly looking at restoring the scour hole as potential mitigation for PRA impacts. Mr. Hoffmann stated that the project team could look into this but the potential for right-of-way impacts as well as additional stream channel impacts were a concern.

Submitted by:

Stephen Hoffmann McFarland Johnson, Inc.

Note: Finalized minutes and the complete list of attendees will be available in the Conference Report for the December 15, 2021, Natural Resource Agency Coordination Meeting.

Lebanon Municipal Airport, #TBD

D&K PRESENTATION MEETING MINUTES Lebanon Municipal Airport NEPA EA – Runway Safety Improvements 10:20-11:05*

10:20-10:40* Karl Benedict from NHDES opened up the presentation on behalf of the NHDOT agency review team. D&K team introduced themselves with Brenda Bhatti, Sr. Environmental Planner, leading the presentation and Chris Sargent, Planning Group Manager, facilitating the Powerpoint slideshow.

Brenda provided an overview of the project and described that D&K's role is to develop the NEPA Environmental Assessment (EA). The timeline began in June, and they are targeting June

18, 2022, as the final date for the EA completion. Brenda presented 13 slides that provided a high-level overview of the proposed airport runway safety improvements to Runway 18-36.

10:40-11:05 **Q/A Session**

Karl Bendict – NHDES

Carl asked about the status of the wetlands delineation, and Brenda indicated the delineation and rare species field surveys were completed this year between July and September. Carl also requested if any Alteration of Terrain (AOT) and Water Quality Certification (WQC) had or would be acquired and any cumulative impacts calculated and/or any mitigation had been designed yet. Brenda provided an overview of where the project was in the design process and that the City of Lebanon's other engineering firm in the project, Stantec, was currently in the process of working through the design of the layout and D&K was working with them to discuss and consider the design, impact calculations, and mitigation measures, but these would be ongoing in the near-term. The AOT and other permits would be outlined/listed in the NEPA Environmental Assessment (EA). Carl mentioned that there should be a quantification of the cutting and clearing (stump removal/grinding) and emphasized avoidance and minimization measures. Brenda indicated they are still working through the quantification efforts with Stantec. The EA will include an impact summary table.

Carol Henderson – NH Fish & Game

Carol mentioned that there had actually been an earlier presentation to the Natural Resource Agency review panel about the proposed Lebanon Municipal Airport Improvement EA on September 15, 2010. She suggested that D&K review the minutes from that meeting, as there were some agency concerns at that time that may still be relevant. She also suggested that D&K get in touch with Kim Tuttle and Melissa [last name uncertain] regarding threatened and endangered species. Also, Maria Turr from the US Fish and Wildlife Service (USFWS) had some relevant comments in 2010 that should be reviewed. Brenda described the rare species reviews that had been completed to date, included an inquiry to the New Hampshire Natural Heritage Bureau and subsequent field surveys for known species, as well as an inquiry to the USFWS regarding potential rare species. The 2010 notes also mention a comment by Lori Sommers regarding easements that had been used that shouldn't be used again.

Jessica Bouchard – New Hampshire Natural Heritage Bureau

Jessica mentioned that she had reached out to Grace Glynn, D&K Naturalist, regarding three rare species on the project site and that the state botanist has to verify any reports. Brenda described the efforts by D&K to date, stating that a formal inquiry had been made and subsequent field surveys have occurred. Jessica requested that the NHNHB be provided with plans to determine where the impacts may occur.

Mike Hicks – USACE

Mike asked who was the lead on the NEPA EA, and Brenda indicated the FAA was leading. Mike mentioned the need to coordinate with endangered species and historic agencies. Brenda described the efforts with both the NHNHB and New Hampshire Division of Historical Resources to date. Formal inquiries have occurred and responses received and integrated into the evaluation and EA document. Mike also reminded D&K that there would need to be a 404 analysis for any fill placed in wetlands and streams. This relates also to the tree clearing at the end of Runway 36. If the trees are simply cut at the base, it would not be considered fill. If the tree(s) is pulled out by the roots, that will be considered an impact.

Pete Steckler – The Nature Conservancy

No additional Comments

11:05 D&K Presentation End

Sandwich Culvert Replacement, #2021-M301-1

Arin Mills, NHDOT Senior Environmental Manager, and Samantha Fifield, District 3 Civil Engineer, presented on the proposed culvert replacement for two failed 15" corrugated metal pipes (CMP) under NH 113 (Beede Flats Road) in Sandwich. The pipes function as an equalizer for the large wetland complex, and does not carry stream flow. A USGS map depicting the project location was shown, with a large wetland complex surrounding the project which drains into Atwood Brook (to the south) and runs into the Bear Camp River, leading into the Cold River. An aerial image shows the project lies to the east of the stream crossing and is surrounded by undeveloped land and rural development. The project is adjacent to the Wyman Preserve, a Conservation Easement held by NH Audubon. Arin met with Phil Brown to determine any concerns and he mentioned the desire to maintain beaver in the wetland system and to continue coordination with NH Fish & Game for rare wildlife. Photos were shown of the site and the existing conditions. It was noted a steel plate was installed over the failed pipes (no impacts to wetlands) to maintain the travel way until a permit was issued and a pipe replacement could be completed.

Sam provided an overview of the project to include the replacement of two failed 15" CMP's that equalize the water elevation with two reinforced concrete pipes. The pipes will be approximately the same length as existing and constructed of concrete to avoid future pipe deterioration. It was explained that the proposed work could have been completed under the culvert maintainer program had it not been located adjacent to a prime wetland. Draft wetland impact plans were shown where ~ 78 sf of a palustrine scrub shrub (PSS) wetland is temporarily impacted on the north side of the roadway and ~ 88 sf of a prime wetland PSS is temporarily impacted on the south side of the roadway. All impacts are within the existing DOT prescriptive ROW, and to the east of the existing stream crossing. Sam further described the construction sequence to include the installation of a temporary sandbag cofferdam and sediment basins. Traffic will be restricted to single lane alternating and is anticipated to take 1-2 days to complete. Secondary erosion control measures, such as silt sock, will be placed around the sediment basins as they cannot be placed 20'+ from the wetland boundary due to space constraints.

Arin showed the National Wetlands Inventory (NWI) maps with adjacent PSS wetland to north/south, as well as adjacent 100-year floodplain. The Priority Resource Areas (PRA) identified are Peatland (bog), Floodplain wetland adjacent to Tier 3 stream and Prime Wetlands. A field review did not identify vegetation or soils consistent with a bog. No permanent impacts are proposed in the scrub-shrub swamp. A file review of the Prime wetlands report, from 1984, identified important elements of the wetland; the elements include flora and fauna, food chain production, aesthetics, recreation, educational opportunities and hydraulic value for floodwater retention. The proposed project will not negatively impact these values. The NHB file review (NHB21-2146) determined Smooth green snake and Blandings turtle. Coordination with NH Fish & Game requested additional light for turtle passage. The US Fish & Wildlife Service IPaC review predicted Northern long eared bat (NLEB) and Monarch butterfly (candidate). A 4(d)consistency letter was generated for the NLEB. Section 106 Cultural review is consistent with the programmatic agreement for culvert replacement.

Sam clarified that larger concrete culvert alternatives were considered, although none were suitable for this location, due to the limited clearance between the ground elevation next to the roadway and the top of the roadway (27 inches). At this location, a larger diameter concrete culvert will not allow for necessary roadway cover material, and precast box culvert manufacturers do not cast box culvert sizes small enough to maintain the existing roadway elevation. Sam also explained constructability issues associated with using a larger box culvert to construct a sunken concrete box. Sam also looked at raising the elevation of the roadway profile to allow for a larger culvert. This option is cost prohibited as it would require ~ 600 LF of roadway built up and would permanently impact approximately 1/2 acre of the wetlands located north and south of the roadway.

Karl B asked to confirm the proposed invert elevations were same as existing and Sam agreed that they would. It was asked if restoration of vegetation was proposed and Sam stated very little vegetation disturbance is proposed with installation of the cofferdam, and the project is anticipated to take approximately 1 day to complete. Karl confirmed the project classification is major under Env Wt-408.01, with no mitigation. He asked the functions and values assessment be summarized within the application to show no impacts functions and values of the prime wetland.

Carol H asked for clarification on the space between the pipes and the ability for turtle passage. Sam stated fill material is required along the length to maintain the structural integrity of the roadway. Carol said with the information provided the proposed project is reasonable and thanked Sam for the due diligence in researching alternatives. No further concerns as proposed. Mike H and Pete S had no comments.

New London, #42877 (X-A004(976))

Jason Ayotte introduced the project and stated that the alternatives previously presented to the natural resource agencies in July 2021 have been further refined. Two alternatives were previously presented to the north and south of the existing park and ride lot. The project is scheduled to advertise in July 2022 and will require a Dredge and Fill permit. The purpose of this presentation is to get concurrence on the Department's preferred alternative to move forward. Jason summarized the Purpose and Need of the project. The need is demonstrated with the 90% usage of the park and ride and this current usage leads to enforcement issues with illegally parked vehicles and maintenance difficulties. The 2020 NHDOT Strategic Transit Assessment identified that at least 47 new spaces would be required to address these issues. The project is CMAQ funded, and input has been received from the Town of New London, Dartmouth College and Dartmouth Coach who agree that this expansion is needed. The expansion will all be within I-89's Limited Access Right-of-Way and NH Route 103A's Right-of Way, with no impacts occurring outside state lands.

Marc Laurin briefly discussed the wetland resources located within the parcel. Marc identified the Functions and Values (F&V) of the three wetlands that could be impacted by either alternative. Wetland B is a small emergent pocket, fed by runoff from I-89 and was likely established during construction of I-89. Its Principal F&V would be for sediment trapping. Wetland D is a fairly small forested area that is separated into two sections by an old woods road, is upslope and drains into a larger emergent and scrub/shrub wetland (Wetland C), located in conservation land to the south. Its Principal F&V would be nutrient trapping and export, and wetland dependent wildlife habitat. Wetland E is a very small emergent pocket that receives runoff from the park and ride. Its Principle F&V is for sediment trapping. Marc also summarized the environmental resources within the project area.

Sarah Healy described the alternative analyses that were conducted. The budget for this CMAQ funded project is \$700,000. The North alternative would only add 44 spaces, would impact a tree buffer adjacent to NH Route 11, would add 18,900 square feet of impervious area and permanently impact about 300 square feet of wetlands with 150 square feet of temporary impacts. Stormwater treatment of the new pavement would be met through a treatment swale, however none of the existing pavement would be treated. The total cost is estimated at \$830,000. It does not meet the NHDOT Strategic Transit Assessment, the CMAQ goals of the project, nor the projects costs.

The South Alternative would add 51 spaces, would not impact the NH Route 11 tree buffer, would add 16,850 square feet of pavement and permanently impact about 1,700 square feet of wetlands with 150 square feet of temporary impacts. Water quality treatment would be with a treatment swale and likely porous pavement that could treat the new pavement as well as a portion of the existing impervious pavement. The total cost is estimated at \$630,000. DOT recommends the south alternative as the Proposed Action as it fully meet the NHDOT Strategic Transit Assessment, the CMAQ expansion goals of the project, is within the budgeted project costs, has less than 3,000 square feet of wetland impacts, provides for greater water quality treatment, and meets the Town and Project Sponsors' goals. Jason further mentioned that the southern alternative has less drainage work, no rock removal, would be constructed on fill, has

better parking layout, greater water quality treatment, and overall less construction would occur. The current design has minimized wetland impacts to the extent practicable from that previously shown by steepening the fill slopes.

Karl Benedict commented that as the southern alternative is not necessarily the least impacting, the wetland permit application will need to spell out the specific goals of DOT that necessitate DOT choosing this alternative as the Proposed Action. Karl asked if impacts to the east end of Wetland B could be adjusted to avoid impacting that wetland, and where the treatment swale would be located. Jason responded that minimizing or avoiding impacts will be looked into further as the design is finalized. The treatment swale would be located along the east side of NH Route 103A.

Carol Henderson supported Karl's comments.

Mike Hick sought for clarification about the wetland impacts of the alternatives. Sarah reiterated the impacts (North - 300 SF of permanent with 150 SF of temporary; South - 1,700 SF of permanent with 150 SF of temporary). She also clarified that DOT is only proposing to construct the Southern alternative. Mike responded that the impacts are probably non-reporting for the Corps and he has no issues.

Pete Steckler had no further comments.