

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting

**DATE OF CONFERENCE:** August 19<sup>th</sup> 2015

**LOCATION OF CONFERENCE:** John O. Morton Building

**ATTENDED BY:**

**NHDOT**

Matt Urban  
Ron Crickard  
Mark Hemmerlein  
Chris Turgeon  
Bob Landry  
Bob Juliano  
Marc Laurin  
Bill Saffian  
Jennifer Reczek  
Chris Carucci  
Rebeca Martin  
Stephanie Micucci  
Kirk Mudget  
Ron Kleiner  
Rita Hunt

**Federal Highway  
Administration**

Jamie Sikora

**Army Corps of Engineers**

Michael Hicks

**NHDES**

Jocelyn Degler  
Lori Sommer

**NH Fish & Game**

Carol Henderson

**NH Natural Heritage**

**Bureau**  
Amy Lamb

**CLD**

Kristen Rutter  
John Byatt

**MHT**

Richard Fixler  
Joan Hagopian  
Mike Venti

**Jacobs**

Sean Tiney

**Smart Associates**

Jennifer Riordan

**SPNHF**

Reagan Bissonnette

**VHB**

Julie Whitmore  
Pete Walker

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:**

*(minutes on subsequent pages)*

Finalization of May 20 <sup>th</sup> Meeting Minutes .....	3
Andover, 40486, Non-Federal .....	4
Canaan, 40493, Non-Federal .....	9
Lebanon, 40495, Non-Federal .....	13
Washington, 29761, Non-Federal.....	16
Hampton-Falls, 40502, Non-Federal .....	16
Piermont, Former12260, Non-Federal .....	29
Franconia, 24497, X-A002(984) .....	41
Stewartstown-Canaan, 15838, A000(152) .....	53
Concord, 28417, X-A003(741).....	59
Chichester-Epsom, 29533, X-A004(170).....	77
Farmington, 16146, X-A001(152).....	90
MHT Runway 35, TBD, Non-Federal.....	108

*(When viewing these minutes online, click on a project to zoom to the minutes for that project)*

**NOTES ON CONFERENCE:****Finalization of May 20<sup>th</sup> Meeting Minutes**

The meeting minutes were finalized. No comments were received.

**Andover, 40486, Non-Federal**

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the bridge that carries NH Rte. 11 over Pleasant Stream (044/088). The existing structure is a two span IB-C bridge that has a 49'-0" max span, 104' total length and 42'-6" deck width. Proposed work consists of repairing the undermined pier with a concrete toewall and installing riprap. There are locations where the pier is scoured 3' to 4'. The pier will be accessed from the north side of the structure where the streambed is naturally higher. There will be no permanent access required to access the pier.

Jocelyn Degler noted that Andover has Prime Wetlands and that this project may be located within the 100' buffer. She said that it should be noted on the plan.

Mike Hicks asked if any trees larger than 3" in diameter were going to be cut down. T. Weatherbee said that there may be a few around 3" in diameter. M. Hicks said that the presence of bats in the area will then have to be investigated. He said the clearing for bats is April to August 31. M. Hicks asked if there were any historic issues and T. Weatherbee said no.

Carol Henderson asked if riprap will be placed all around the pier and T. Weatherbee said yes. C. Henderson asked we had considered partially grouted riprap. Matt Urban said that there were issues with pH the last time PGR was used. C. Henderson asked what time of the year this project would take place and T. Weatherbee said summer of 2016.

Lori Sommer said that no mitigation would be required.

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

**Canaan, 40493, Non-Federal**

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the existing concrete rigid frame bridge that carries NH Route 118 over the Indian River. The existing structure is a concrete ridged frame bridge that has a 32'-0" clear span and 27'-11" deck width. Proposed work consists of replacing the concrete deck, widening the existing substructure and installing riprap. The centerline joint is leaking and it has caused the concrete to degrade. This location cannot be replaced while traffic is being maintained, so the bridge deck will have to be widened and replaced in two phases.

Lori Sommer asked if there was currently riprap in the north east area and T. Weatherbee said no. T. Weatherbee said that riprap would be added 5' in front of the existing and proposed substructure.

L. Sommer and Jocelyn Degler said that mitigation is required for the proposed portions of substructure on the eastern side and will not be required for the existing substructure.

Carol Henderson asked when the project would be done and T. Weatherbee said that the substructure will be done at the end of Fall in 2016 and then the superstructure will be completed that winter.

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

### **Lebanon, 40495, Non-Federal**

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the existing concrete box that carries I-89 over Stony Brook. The existing structure is a concrete box structure with a 17'-0" span. Proposed work consists of repairing concrete delaminations on the structure walls and wingwalls. The project would have been done by PBN however the structure is located in a Tier 3 watershed.

Mike Hicks asked if it was Class A water. T. Weatherbee said that he did not know.

Lori Sommer said that no mitigation would be required.

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

### **Washington, 29761, Non-Federal**

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the concrete slab bridge that carries NH Route 31 over Shedd Brook. The existing structure is a concrete slab bridge that has a 10'-0" clear span and a 28'-4" deck width. Proposed work consists of replacing the concrete deck, repairing the concrete substructure and toewall, and placing riprap. The deck will be replaced in two phases. The substructure will be faced with approximately 1' of concrete.

Jocelyn Degler asked what the width will be of the channel that is not to be impacted. T. Weatherbee said that it would be approximately 1' to 2'. Three feet of riprap is proposed in front of each abutment and it is not possible to do less than that because the channel is as narrow as it is. Matt Urban asked if the smaller toewalls that are in front of the larger toe walls could be removed in order to allow for more room. T. Weatherbee said that he thought removing the smaller toewalls was a possibility.

Carol Henderson asked what time of the year this project would take place and Tony said it would take place in the winter of 2016-2017.

Lori Sommer said that no mitigation would be required.

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

### **Hampton-Falls, 40502, Non-Federal**

Tony Weatherbee provided an overview of the project. The scope of the project is to rehab the metal pipe arch bridge that carries NH Route 84 over Hampton Falls River. The structure is 10'-3" wide and 6'-9" tall. Proposed work consists of replacing the metal pipe with a 12'x8' concrete box, and placing riprap.

T. Weatherbee said that typically a concrete invert would be installed to prolong the life of the structure but in this case the structure is too far degraded. The length of the proposed box will match the existing structure which is approximately 56'.

Lori Sommer asked if the box will be imbedded with natural material and T. Weatherbee said it will be embedded with 1' of natural material.

T. Weatherbee said that a temporary bypass pipe will be used to divert the water from the work zone. The new structure will be installed at a slight skew to better align the structure with the river. Riprap will be installed on both sides in order to protect the proposed headwalls and wingwalls.

Jocelyn Degler said that there are Prime Wetlands in the area and this structure is potentially within the 100' buffer. She mentioned that this location was previously permitted under DES2004-1208. She asked if this was in a coastal zone.

Tim Mallette said that this area is not coastal.

Carol Henderson asked if there was room for a critter shelf. T. Weatherbee said that the temporary pipe could be left in place as a critter crossing. C. Henderson said she would prefer the shelf in the box because it would be more open. She asked if riprap would match the stream bed elevation and T. Weatherbee said yes the riprap will match the streambed elevation.

Mike Hicks asked if the road would be changed at all and T. Weatherbee said nothing beyond repaving and changing guardrail.

C. Henderson said to determine the clearing limits in regards to bats that could potentially be in the area.

Lori Sommer said that mitigation would be required for the riprap. Matt Urban said that mitigation will be paid for by linear feet of the bank and channel. L. Sommer said that was OK. She said that straight lines could be used to come off of the pipe when calculating the impacts. M. Urban and L. Sommer will coordinate further to finalize the mitigation cost.

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

### **Piermont, Former 12260, Non-Federal**

Chris Turgeon and Timothy Mallette presented this project. Stream restoration for approximately 50 ft. of a no-name tributary to Bean Brook in Piermont. The present stream flow has cut into the embankments on both sides and causes them to be unstable and slough. Because of the unstable embankments, the west side of the stream is encroaching on to a driveway that runs parallel. The property owner has communicated concerns to District 2. This area of concern has a history of embankment failure. In 2008, the embankment on the western side was reinforced with riprap (small cobbles and small boulders) to prevent the encroachment of the stream toward the driveway. The driveway is part of the old highway alignment that leads to an historic stone abutment for the old bridge over Bean Brook. Part of the old alignment was discontinued by the town in the 1980s.

The history of the site from 1930 on was briefly described by T. Mallette. In his opinion the channel incising was initiated many years ago by a non-jurisdictional dam failure. Photos of the site were presented. The dam was likely constructed for agricultural purposes. The stream now flows on a route entirely different from the natural course as indicated on 1930 plans.

T. Mallette & C. Turgeon explained that the design goal is to restore a stable environment to the no-name tributary using Best Management Practices. They have been working with Noah Chinburg, a geotechnical engineer for NHDOT (M&R). T. Mallette provided a concept sketch with spot elevations and approximate proposed contours that will be refined into design cross sections for the next meeting. The concept contained the following features:

- Streambed will be built-up using on site burrow from failing slopes
- Driveway side (river right) to be hard embankment with adequate shoulder for safety.
- River left will be a “living wall”
- In-stream structures (log vanes, rock weirs, etc..) are conceptualized to direct stream to the side of the existing channel away from the driveway and to provide a gradual transition of stream energy down the steep grade to a point that is stable.

NHDES asked what the estimated flows are. C. Turgeon explained that surface runoff is minimal. T. Mallette said that the flow is metered by a 48” RCP under NH 10. The watershed is less than 200 acres. Estimated peak flow range for design frequency events 2 yr ~15 fps, 50 yr ~ 55 fps. Hydrologic estimates will be finalized for next meeting.

Carol Henderson asked if fixing the breached non-jurisdiction dam was considered to restore the channel to it’s original course that existed in the 1930s (under the driveway through a culvert). T. Mallette said that it is being considered as an alternative, but he does not believe it is likely to be practical now that the channel has redirected and incised for decades. There are significant topographic challenges. He stated that the state may not have flowage rights to redirect flow given the development and subdivision of property in the area.

Embankment stabilization and/or stream restoration is anticipated to be funded by betterment funds. This is not a concept in project development it is maintenance operation.

Jocelyn Degler agreed to look into the potential for compliance with deemed minimum 303.04(T) \$200 application fee (minimal impact). She will discuss with Gino Infascelli who reviewed a prior permit for the site.

Amy Lamb requested that Natural Heritage Inventory (DRED) be checked prior to the next meeting. The inventory includes documentation of any occurrences of endangered or threatened species or prime wetlands

The project will be brought back to a future Natural Resource Agency Coordination Meeting when the design is further along. This will be sooner rather than later given the driveway embankment hazard. *This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.*

*This project was previously reviewed on the following dates:*

#### **Franconia, 24497, X-A002(984)**

Pete Walker summarized the project, which involves the rehabilitation of a historic bridge in Franconia on NH 18 over Lafayette Brook. (See attached slides.) Lafayette Brook has its headwaters on the northwest slope of Mt Lafayette. Watershed is about 6.5 square miles. The Brook flows generally north to its confluence with Gale River near downtown Franconia. The existing bridge was constructed in 1932. It is a single span bridge with a deck about 52 feet long, with a hydraulic opening of 37 feet. It was added to the Red List in 2010. The deck and beams are in poor condition, but the abutments are in good condition. A Type-Span-Location (TSL) Report was issued in April 2015, and evaluated three alternatives: Bridge rehabilitation; Bridge rehabilitation with widening; and Complete replacement. Based on the TSL study and public feedback, the Bridge rehabilitation is the selected alternative: the bridge superstructure would be

replaced, but the abutments and wingwalls would be retained. The existing width of the bridge deck would be maintained, but the superstructure would be slightly shallower such that the hydraulic opening would be improved.

VHB completed a wetland delineation in 2014. Aside from the brook itself, there is a small man-made pond and a natural forested wetland in the study area. However, it is currently expected that only the banks of the brook would be impacted. Based on conceptual plans, less than 600 square feet of permanent wetland impacts anticipated (~85 linear feet along bank), which is required to stabilize to eroded stream bank along the north side of the stream using rip-rap. There may be additional temporary impacts for stream diversion during construction. Mike Hicks asked if impacts were above or below ordinary high water. P. Walker and Julie Whitmore replied that the design is not yet complete, but that rip-rap would almost certainly be keyed in below OHW. P. Walker reported that the USFWS IPaC system had flagged Canada Lynx, but based on the nature of the project, no actual impacts are anticipated. A check of the NH Natural Heritage Bureau database indicated that there were no known occurrences of state-listed rare species. Amy Lamb noted that the NHNH data check would need to be re-run since the results are more than one year old. The project is outside of important wildlife habitat (per the NH Wildlife Action Plan), and there would not be substantial permanent impacts in the stream (aside from minor rip-rap), so impacts to aquatic biota are not expected. There would be no tree clearing, and the bridge is not known to provide roosting opportunities, so impact to Northern Long-eared Bat is also not anticipated.

Project design is on-going, but compliance with the stream crossing rules (Env-Wt 900) is expected. Based on hydraulic analysis, the bankfull width is estimated to be 30 ft, which is subject to confirmation. The existing span of 37 feet provides 1.2 times the bankfull width plus 1 ft of width (which is just less than the 2 ft recommended in the UNH stream crossing guidelines). The rehabilitation would maintain an open bottom with the same slope, geometry and substrate, and the new rehabilitated structure would pass the 100-year flood with about 1.7 feet of freeboard.

M. Hicks asked about Section 106 coordination. P. Walker replied that coordination with DHR is ongoing. The bridge is eligible for listing and Lovett's Inn near the project is already listed. The project has been determined to result in an adverse effect on the bridge. An MOA must therefore be completed. NHDOT and VHB are working with the consulting party and discussing mitigation efforts. Julie pointed out that NHDOT is considering maintaining pilasters at abutments as part of mitigation. Carol Henderson asked how the project would improve the hydraulic opening if it is a rehabilitation. P. Walker and J. Whitmore clarified that the superstructure would be entirely replaced and the new beams would be shallower (i.e., eliminating the arch) which would increase the hydraulic opening slightly. Matt Urban asked Lori Sommer if mitigation would be required. L. Sommer replied that mitigation would not be needed for bank repair as there is already existing rip-rap. Mark Hemmerlein asked if there would be any changes in pavement surface or drainage patterns. Julie replied that there would be no substantial changes; there would only be minor improvement to shoulder drainage on southeast approach.

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

**Stewartstown-Canaan, 15838, A000(152)**

Jennifer Reczek discussed the proposed drainage improvements. The existing system outlets into the Connecticut River in two locations on either side of the Bridge Street bridge. An evaluation of a water treatment measure was conducted that would direct stormwater to a treatment swale located on the bank of the river along the west side of the bridge. There are several physical constraints in the area and a detention pond was found to not be practicable. . Due to the site constraints, the bank is steep with a 12 ½% slope at the swale location, the swale that could fit without impacting the river would be 3 feet wide, 32 feet long with a 3% slope. It would only provide 1 minute retention time, approximately 10% of the stormwater flows. Bill Saffian further discussed concerns with the steepness of the bank, the potential for flooding of the swale and drainage system, and that utilities located under Church Street may require that the swale be lowered further on the bank, providing even less treatment. He asked for concurrence from the Resource agencies that this treatment swale is not appropriate and could cause more environmental concerns.

Jocelyn Degler inquired about splitting the flows. J. Reczek stated that this would require a 3rd location to outlet water in areas with steep 1½ to 1 slopes, that are not presently disturbed. J. Degler inquired about deep sumps on the catch basins. J. Reczek stated that sumps will be provided at the basins. L. Sommer stated that the swale would likely cause more problems with not much benefits. All concurred that the swale not be constructed and the existing drainage should be perpetuated.

Mike Hicks inquired about the Vermont drainage. B. Saffian replied that the existing drainage outfall will be basically retained in its current location. M. Hicks asked that the Coast Guard be made aware of the project, specifically in regards to the temporary trestle.

Amy Lamb inquired about any satiny willow along the small wetland edge next to the Connecticut River. Marc Laurin replied that in his review of the vegetation in this area, he did not identify any willows located along the edge of the river.

*This project was previously reviewed on the following dates: 3/19/2014*

### **Concord, 28417, X-A003(741)**

Chris Carucci provided an overview of the project, which is to address the intermittent flooding that occurs at the intersection of I-393 and N. Main Street, usually during high intensity thunderstorms. Pondered water overtops the curb and sidewalks, spills over the adjacent retaining wall and onto the Kimball-Jenkins property, ponding in the lower parking lot also occurs due to surcharging of a manhole. HydroCAD modelling indicates that the existing system can handle about 2.3 inch rainfall in 24 hours (1 year storm) before flooding occurs in the lower parking lot. Significant flooding also occurs along the south side of N. Main Street at the US3/Bouton Street intersection. Storm water runoff from approximately 56 acres of City streets and 1 acre from I-393 converge on the existing basin located at the corner of N. Main Street and I-393, which is connected to an old 20 inch clay drainage pipe that runs down the Jenkins driveway, under the railroad tracks, under the I-393 railroad bridge abutment, and runs southeast about 3,500 feet under I-93 and Fort Eddy Road to an outfall on the Merrimack River, behind Fort Eddy Plaza. The current proposal is to construct a 36 inch diversion pipe from the area of the existing basin extending along N. Main Street and Horseshoe Pond Lane to outlet into Horseshoe Pond west of the railroad and through land under a conservation easement. Low flows would continue through the existing system. The project would also adjust I-393 westbound pavement cross slope, upsize a few existing metal pipes and add an ADA compliant sidewalk at the corner of I-393 with N. Main Street and at the Commercial Street intersection.

This option is basically the same as one presented at a Natural Resource Meeting in February of 2006. The project was progressed up to the ROW acquisition phase, but was put on hold in due to concerns from

adjacent property owners and impacts to the conservation easement held by the Society for the Protection of NH Forests (SPNHF) on the Horseshoe Pond property. Abutters were concerned that additional water would adversely impact the agricultural use of the land surrounding the Pond.

The project was re-initiated in 2012 after a serious flooding event. Numerous options have been studied and several meetings have been held with stakeholders, which found the current concept to be the only practicable alternative. Options considered: alternate routes for the overflow pipe; a small infiltration system that would remove I-393 drainage, which would not solve the flooding problem; piping the excess flow along Commercial Street bypassing the Pond, and; upsizing the existing outfall about halfway and constructing a detention pond (at a cost of \$1.8 million).

The proposal would increase the system capacity to accommodate a 10 year storm. A few pipes in the intersection will be upsized and a diversion structure built at each end of N. Main Street. Low flow pipes from these diversions will direct runoff from the first 1.8 inches of rain to the existing system. A 36 inch concrete diversion pipe will route the excess flow to the Pond. This excess would be the flow that typically bypasses treatment measures, so no additional treatment is proposed at the outfall. The drainage model predicts a 2.76 ac-ft runoff would be diverted to the Pond in a 10 year event. This equals an increase of approximately  $\frac{3}{4}$  inch of depth over the Pond's 47 acre surface area. The new outfall would operate during high flows and would be dry most of the time. The outfall will have a stone headwall and stone apron that outlets above the ordinary high water. Two new 24 inch concrete pipes are proposed under the existing Pond's causeway to supplement the existing 10 inch metal and 15 inch plastic pipes. Delineations in the vicinity of the outfall will need to be updated. Preliminary Bank impacts are expected to be around 2,000 sq ft with 20 linear feet of impacts to the shoreline of the Pond. Impacts below Ordinary High Water are expected to be temporary and less than 1,000 sq ft.

Jocelyn Degler commented that Horseshoe Pond is an impaired water body. Mark Hemmerlein stated that several options for treatment were evaluated. The design is such that only the high flows, which are less polluting, will be directed to the Pond. There is no additional treatment proposed. C. Carucci offered that the additional flows could provide dilution to the system.

There was general agreement from stakeholders that a comprehensive drainage study of the 990 acre Horseshoe Pond watershed will be done, which will also provide recommendations on long-term mitigation to improve the water quality of the Pond. Dredging of the Pond's two outlet channels was proposed by the abutters to alleviate flooding and lower groundwater levels. The abutters feel that due to the sedimentation of the Pond outlets, greater flooding of the agricultural fields would occur as the outlets are impeding flows out of the Pond. Dredging would involve removal of accumulated sediments from approximately 2,800 linear feet of these channel ending at the I-93 box culvert. Photographs from 1948 show clear, straight, well-established outlet channels from the Pond. J. Degler suggested scaling these and comparing them with existing aerials to determine how the channels were established. There are habitats of special concern downstream of I-93 which are not anticipated to be impacted by the dredging.

Reagan Bissonnette discussed the conservation easement that protects the Horseshoe Pond land. The easement states that impacts to these conservation lands need to be appropriate to agricultural uses. The SPNHF has concerns that diverting flows to the Pond would impact the agricultural nature of the land by increasing flooding. The easement on the Pond prohibits structures through the property unless it can be shown that they are necessary for agricultural uses of the property.

Lori Sommer inquired about any potential mitigation higher up in the watershed and stated that it seems that dredging the channels may be premature. Reduction of nutrients and impervious areas higher up in the watershed should be evaluated first. She recommended that the watershed management study be completed, as the study may show that there are better options than dredging the channels. C. Carucci

explained that the City of Concord is the lead for the project regarding consultants and construction. DOT will be doing the NEPA documentation. There is pressure from the abutters that something needs to be done to alleviate their flooding concerns. L. Sommer suggested that the UNH Stormwater Center could be contacted to assess upstream management efforts.

Amy Lamb expressed concerns with the sediments and nutrient runoff into the habitats of special concern and the Merrimack River if dredging were to occur. C. Carucci replied that the flows would remain the same after dredging.

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

*This project was previously reviewed on the following dates:*

### **Chichester-Epsom, 29533, X-A004(170)**

Stephanie Micucci described the 5.2-mile federal resurfacing project on U.S. Route 4 in Chichester from the Interstate 393 interchange to the Epsom traffic circle. The project is primarily a paving project with spot inlays and an overlay on the full project length. All pavement work will be within the existing roadway footprint.

S. Micucci described the ledge work that will be included in two areas on the western section of the project, in one area near the Interstate 393 interchange and in a second area near the intersection with King Road. The ledge work will include machine scaling, tree clearing, and replacement of the energy absorbing materials below the ledge areas. There will also be 5 runs of guardrail that will be re-set block and rail with potential clean up below the guard rail.

The project includes some drainage work on the eastern section of the project segment. Near the Cross Road intersection there is an existing 24 inch concrete pipe passing under Route 4. A small pipe extends from a pond on the south side of Route 4 to the catch basin inlet of the pipe underground on the south side of Route 4. S. Micucci explained that on the outlet side, the pipe will be extended by 10 feet because the outlet is currently not an adequate distance from the roadway. One foot of stone fill will be placed at the outlet of the pipe. An intermittent stream at the outlet of the pipe will be impacted by the extension and stone. Temporary impacts are also anticipated from water diversion during the work in this area.

Further east on Route 4, near Bill's R.V., a stone sluice will be replaced with a stone lined ditch. The current stone sluice is approximately 200 feet long and 3 feet wide at the western portion and widening to 6 feet wide near an intermittent stream. There is an intermittent stream south east of the area that will be avoided and no wetland impacts are expected in this area.

Further east, closer to Bill's R.V., another 24 inch concrete pipe will be improved by the project. S. Micucci explained that there will be impacts at the inlet side south of Route 4 and at the outlet north of Route 4. Currently a perennial stream travels through a metal pipe adjacent to the driveway for Bill's R.V., then an open channel for around 5 feet, and then the stream travels through the 24 inch concrete pipe across Route 4. The current condition at the inlet side will be improved with a catch basin or other special drainage structure. Some grading of the ditched area will also create permanent impacts in the area. On the outlet side, the pipe will be extended by 10 feet because the outlet is currently not an adequate distance from the roadway. One foot of stone fill will be placed at the outlet of the pipe. The perennial stream will be impacted by the extension and stone. Temporary impacts are also anticipated from water diversion during the work in this area.

S. Micucci also described work intended on the 36 inch pipe near the Epsom-Chichester town line. This pipe carries a perennial stream and is showing some joint separation. The current pipe is concrete and the

project proposes to slipline the pipe with plastic. An approximately 25 feet by 10 feet stone pad will be placed at both the inlet and outlet of the pipe. The stone is intended to be left in place for permanent erosion control. The plastic will have a similar roughness to the existing concrete and is not expected to lead to a significant increase in the velocity of the water. These impacts will be permanent. Some tree removal will also be necessary and temporary impacts are anticipated from water diversion during the work in this area.

S. Micucci mentioned that some of the work may be eligible for coverage under the Routine Roadway Maintenance Notification. The sliplining would not be eligible for the Routine Roadway Maintenance Notification. Jocelyn Degler commented that the catch basin proposed at the 24 inch pipe also would not be eligible. Lori Sommer commented that it would be simpler to include all aspects of the project in one Standard Dredge and Fill Wetland Permit Application.

Carol Henderson inquired about Northern Long-Eared Bats. Rebecca Martin explained that there was an acoustic survey conducted for the project area in the end of July. Coordination with USFWS will be completed as necessary depending on the monitoring results.

J. Degler commented that a catch basin is not ideal in the stream due to connectivity issues. Though the existing situation, two pipes separated, also poses connectivity concerns.

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

### **Farmington, 16146, X-A001(152)**

This is the fourth presentation to the Natural Resource Agency coordination meeting of this project. John Byatt gave a brief overview of the project and recap of the previous discussions. The NHDOT proposes to replace the bridge (Bridge No. 096/140) that carries NH Route 153 over the Cocheco River. The existing structure, a 48-foot two-span concrete girder bridge with a concrete deck, built in 1924. The bridge is considered eligible for the historic register. A levee was constructed along the west bank in the 1950s to alleviate river flooding in downtown Farmington. The Cocheco River at this location is a Designated River and is considered impaired.

The proposed structure will consist of a single 71-foot span bridge with a precast concrete NEXT beam superstructure. The east abutment will remain in the same location as the existing in order to match into an existing stone wall along the river. The west abutment will be moved back approximately 23 feet thereby increasing the hydraulic opening. The roadway over the bridge will be raised approximately 2 feet to also increase the hydraulic opening. The proposed bridge will meet the hydraulic criteria of 1-foot minimum of freeboard above the Q100 elevation. A water main currently located on top of the bridge will be relocated under the bridge. A 10-foot wildlife corridor is proposed along the west bank under the bridge. Ten feet is proposed on one side because a corridor could not be provided on the east side of the bridge, so double the typical width is provided on the west side. Due to temporary impacts to the levee, a DES dam permit and Army Corps Section 408 permit is required. The Town has asked that some dredging be included in the bridge project at the base of the levee as required by the Army Corps. The Department will include this assuming all permitting agencies agree and do not request mitigation for the impacts.

The primary reason for this presentation is to discuss storm water treatment as concerns about a lack of storm water treatment had been raised by DES. Kristen Rutter explained that the Town had requested that storm water be diverted from its existing drainage system to alleviate flooding behind the levee. CLD proposed a new drainage system that tied into the existing system at the western limit of the project and

empties into the river downstream of the bridge. The proposed drainage would divert the stormwater runoff collected by the closed system, but sheet flow runoff would still drain to the existing 30" RCP on the upstream side of the bridge. The proposed closed system will provide a 0.5% slope from the existing closed drainage system through the proposed system to the river. The outlet would only be approximately a foot above the river bed and would require a gate to keep high river flows from entering the system. Surface treatment could not be provided because the drainage pipes and manhole inverts would be approximately 8-feet below grade. However, the catch basins would have deep sumps to provide some treatment.

Lori Sommer asked how much bank impact there would be from the pipe coming through the levee and into the river. J. Byatt and K. Rutter did not know exact numbers but from looking at the plan it would be very little.

Ridge Mauck asked if the impervious area was being increased. J. Byatt replied that it was being increased only a small amount as the existing roadway alignment is being maintained with only minimal widening. R. Mauck asked if a deep open swale could be used. This could not be done as the swale could not go through the levee. Ridge agreed that there did not seem to be any opportunities for treatment at the western side. He did ask if the existing upstream catch basins could be replaced with deep sumps as sumps further upstream would provide more effective treatment than those downstream. Bob Landry said that although replacing catch basins upstream was outside the limit of the project, they will ask the Town if they have plans to upgrade the existing closed drainage system.

On the east side, K. Rutter explained that a swale with a pocket pond was proposed for treatment. Infiltration opportunities were not possible due to poor soils. The swale is approximately 200 feet long.

Mike Hicks asked what area of water gets into the treatment swale. K. Rutter pointed out on the plan the areas where storm water came from.

R. Mauck asked if storm water currently discharges directly into the river. K. Rutter said that it does. She also added that the abutter with the large commercial facility in the NE corner currently has flooding issues and has to pump the water to the river. This abutter also asked for drainage improvements which are being provided as much as possible.

R. Mauck asked if the pocket pond was permanently wet and at least 3-feet deep. K. Rutter replied that it stays wet but was only 1.75 feet deep. Ridge asked if the pond could be made deeper. B. Landry noted that if the pond is made deeper then the swale length would be reduced. B. Landry asked R. Mauck what was more important for treatment, the pond or the swale. R. Mauck replied that it would be good to at least get one to work. M. Hicks asked if the cut line for the pond shown was a constraint. It was responded that the cut could be expanded but would require more right-of-way taking. K. Rutter said CLD would look into increasing the depth of the pond. ***Since the meeting, CLD has evaluated updating the pond to meet the requirements for treatment by making it 3 feet deep and have found that it is feasible. In order to accomplish this, additional impacts and ROW are required.***

Lori Sommer asked about the extents of the temporary bridge impacts. J. Byatt pointed out the bridge and approach roadway area on the plan and noted that it is the intent to have the temporary bridge span from bank to bank.

Amy Lamb asked if an NHB report had been done. J. Byatt replied that one had been done a while ago for the categorical exclusion but another one would need to be done for the wetland permitting.

B. Landry mentioned the Town's request to include some dredging in the project that had been discussed at the previous NRA meeting. M. Hicks said he would look into if the Army Corps was asking the town to perform the dredging. He said he would also provide the contact info of Chris Hatfield who oversees the 408 permit applications. M. Hicks also said a 404 permit was not needed.

*This project was previously reviewed on the following dates:*

### **MHT Runway 35, TBD, Non-Federal**

#### Emergency Runway 35 Localizer Slope Repair

Rich Fixler (Manchester-Boston Regional Airport) introduced the project and discussed the importance of the Emergency Runway 35 Localizer Slope Repair to the safety of the Airport. The localizer is used by planes landing on the main runway at the Airport. It needs a clear surface to function correctly and large animals, such as deer, can disrupt the signal if they stand near the localizer. The existing wildlife fence, which keeps animals out of the localizer area, was damaged and needs to be repaired. This fence is located on a slope near Cohas Brook and there are several washouts along the slope that need to be repaired as well. Rich Fixler noted that if the localizer signal is disrupted four times, the FAA turns off the localizer and needs to go through a re-certification process. This would have a significant impact on the airport, so it is important to get the slope and fence repaired quickly.

Sean Tiney (Jacobs Engineering) provided an overview of the proposed work. The existing slope along Cohas Brook is 1:1 or 1.5:1. The proposed work will involve creating an 8-foot wide bench in the middle of the slope. The fence will be installed on this bench. The remainder of the slope will be 2:1 and will be stabilized with a conservation mix, such as crown vetch. No new riprap is proposed. A shallow swale will be constructed at the top of the slope and water will be piped into a small infiltration field. Two smaller washouts on the slope will also be repaired and vegetated. The fence is being installed in the middle of the slope because it needs to be located below the localizer and would interfere with the signal if it were located at the top of the slope.

Proposed bank disturbance is 3,000 square feet and approximately 300 linear feet. The total area of disturbance is 17,500 square feet. The existing riprap located within the disturbance area will be replaced with vegetation.

Carol Henderson asked what seed mix is proposed and if it will be strong enough to stabilize the slope. Sean Tiney replied that they are waiting for the geotechnical report to determine if additional measures are needed. Carol asked if low shrub vegetation could be considered. Sweet fern was mentioned as a possibility. The vegetation that is used should not be a wildlife attractant.

Michael Hicks asked if there is FAA involvement. Rich Fixler replied that the project is not being funded by FAA.

In regard to wetland mitigation, Lori Sommer said that the balance of riprap removed (linear footage) versus bank impact (linear footage) should be calculated. Mitigation will be required if the new bank impact is more than 200 linear feet.

Jenn Riordan asked if a Shoreland Permit is necessary. The amount of impact beyond the bank is approximately 14,000 square feet. This is a large enough impact to require a Shoreland Permit. Jocelyn Degler mentioned that if an Alteration of Terrain permit is required, no Shoreland Permit is needed. The project will have less than 50,000 square feet of total disturbance, although the threshold for impacts on slopes should be reviewed.

Jenn Riordan stated that the official Natural Heritage Bureau report hasn't been received yet, but other reports indicate that banded sunfish is present in Cohas Brook. Carol Henderson said that the project would not result in any permanent impacts to this species since it will only involve work in the bank.

#### Runway 35 Obstruction Removal Project

Sean Tiney provided an overview of the project. Originally, the Airport was looking to clear, grade, and grub the areas within the Runway 35 approach surface. This includes approximately 95 acres located in Londonderry, near Harvey Road. Ongoing maintenance of obstructions has been a concern for the Airport. There are currently no obstructions to the Runway 35 approach, but the Airport would like to easily be able to maintain this area to prevent future obstructions as trees grow. The project has since been revised to include mostly tree clearing and only a few areas are proposed to be grubbed. This change occurred because wetlands within the project area are more extensive than originally thought and there are also several endangered species within the project area.

Endangered species within the project area include New England cottontail, Eastern hognose snake, Blanding's turtle, and Northern long-eared bat. The Airport met with the NH Fish and Game Department and the US Fish and Wildlife Service in June. Heidi Holman had provided a proposed habitat management plan for New England Cottontail. Further coordination with these agencies will be needed as the project moves forward.

A DOT wildlife corridor is located within a portion of the project. Lori Sommer said that she would look into what is required for tree clearing in this area. The Airport currently has an avigation easement on this property. Lori asked if the Airport could provide the language of the deed for this property and also the acreage of the wildlife corridor to be disturbed.

Lori Sommer said that for tree clearing, generally 15 to 20 percent of the wetland area impacted needs to be mitigated. For intermittent streams, 50 feet on either side of the stream is counted toward mitigation. If this stream is within a wetland, this area is not double-counted.

Lori Sommer asked about project timing in regard to bat habitat. Tree clearing would likely occur in winter to avoid bat habitat impacts, although there may be conflict between bat and New England cottontail clearing restrictions. The Airport will work with the agencies to develop appropriate seasonal restrictions.

Michael Hicks said that no ACOE permit is required just for tree clearing. Any fill, temporary or permanent, would require an ACOE permit and secondary impacts from tree clearing would need to be considered. This includes fill from creating temporary roads to conduct the tree removal or any removal or grinding of tree stumps. Mark Kern from EPA was not present at the meeting, but Lori Sommer said she would contact him to see if EPA has any concerns or if they will require mitigation for secondary impacts. Sean Tiney said he would send a PDF showing the wetlands and proposed clearing areas.

Tree clearing likely won't occur until next winter (2016-2017).

Michael Hicks asked if the runway will be extended further in the future. Rich Fixler responded that all runway extensions are complete.

John Hagopian (Manchester-Boston Regional Airport) asked if the private landowners would be required to get a wetland permit for future tree clearing, if required by the avigation easement. Lori Sommer said that landowners would need to coordinate with NHDES. Rich Fixler mentioned that for this project, the Airport is doing the coordination for the landowners.

These projects have not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

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