

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

**SUBJECT:** NHDOT Monthly Natural Resource Agency Coordination Meeting  
**DATE OF CONFERENCE:** September 15, 2010  
**LOCATION OF CONFERENCE:** John O. Morton Building  
**ATTENDED BY:**

**NHDOT**

Bob Aubrey  
Carol Niewola  
Christine Perron  
Dan Prehemo  
Don Lyford  
John Sargent  
Jon Evans  
Kevin Nyhan  
Marc Laurin  
Ron Grandmison  
Samantha Fifield  
Stephanie Micucci  
Wayne Brooks

**EPA**

Mark Kern

**US Fish and Wildlife  
Service**

Maria Tur

**NHDES**

Gino Infascelli  
Laura Weit-Marcum  
Lori Sommer

**NH OEP – CLS**

Steve Walker

**City of Concord**

Ed Roberge  
Michael Broas

**City of Lebanon**

Tracey Thibault

**Lebanon Airport**

Rick Dymment

**Louis Berger Group**

Chris Gajeski

**Fay Spofford & Thorndike**

David McNamara  
Tracey Tufts

**McFarland & Johnson**

Jed Merrow  
Vicki Chase

**Hoyle Tanner**

Nils Gonzalez

*(When viewing these minutes online, click on an attendee to send an e-mail)*

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:**

*(minutes on subsequent pages)*

Finalization of August 18, 2010 Meeting Minutes .....	2
Concord, BRF-X-5099(021), 12004 .....	2
Wentworth, X-A001(030), 15908 .....	3
Salem-Manchester, IM-IR-93-1(174)0, 10418C.....	4
Alstead, X-A000(425), 14540M .....	5
Lebanon Airport, AIP 3-33-0010-42-2009, 3-33-0010-42-2009 .....	6

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

## **NOTES ON CONFERENCE:**

### **Finalization of August 18, 2010 Meeting Minutes**

The August 18, 2010 meeting minutes were finalized.

### **Concord, BRF-X-5099(021), 12004**

This project involves the rehabilitation of the bridge that carries Sewalls Falls Road over the Merrimack River, and construction of a new bridge adjacent to it. John Butler indicated that at previous meetings the Department discussed alternatives, and ultimately the City decided upon the construction of a bridge adjacent to the existing bridge. Each bridge will carry one lane of traffic.

The work would include the rehabilitation/ reuse of the existing bridge for northbound traffic with the new bridge used for southbound traffic. New/ wider substructure would be constructed for both bridges. The flanking spans at the south abutment would be replaced with fill since there are no longer any flood issues due to the construction of a dam in Franklin. A pedestrian underpass would be constructed at the location of the old flanking spans.

Drainage treatment is proposed to the south of the bridge in the area between the road and the NH Fish and Game parking facility at the boat launch to the east. Drainage treatment to the north of the bridge is not feasible due to topographic constraints.

John discussed the environmental constraints associated with the proposed action. On the west side of the bridge is a 29 ac parcel of LCIP land (owned by NH Fish and Game). On the east side of the bridge is a 100 ac NH Fish and Game property which includes the boat launch and parking area near the bridge. The Department is working with NH Fish and Game and through the CORD process to secure the necessary acquisition and easements required on those two parcels.. It is anticipated that the land use would qualify for a de minimis 4(f) determination.

Maria Tur asked about the flanking spans. John replied that the 8 flanking spans would be replaced with fill. With the flanking spans no longer required for flood passage, it is much less expensive to construct an earth embankment rather than reconstructing the bridge spans, and an embankment will have far less long term maintenance costs. Maria indicated that the fill could block passage of animals under the bridge. John indicated that the pedestrian tunnel is proposed to be approximately 10-12' wide/ high. After discussion, including openness ratio to facilitate animal passage, it was determined that the Department would discuss this issue with the City and return to provide follow-up on what could be done to enhance wildlife passage, including evaluation of a larger structure through the fill.

Lori Sommer asked about wetland impacts and the width of the fill at the south approach. It is anticipated that there would be about 5,000 sf of permanent impacts, including work at the pier. Lori asked if there would be compensation for the LCIP impacts. The Department is determining what will happen with those impacts. Lori indicated that the permit may be conditional upon resolution of those issues since some of the wetland impacts are on the LCIP property.

Kevin indicated that since the bridges would essentially match what is there today, the Department is not anticipating that the design would comply with the recently-adopted stream crossing rules, including completing a fluvial geomorphic assessment. This information would not affect the design of the crossing and would only add time and expense to the project. Kevin also mentioned that a mussel survey was completed for pier work on this bridge several years ago. No mussels were identified. The Department acknowledged that another survey may be required prior to construction of this project.

Once the Department has had the opportunity to confer with the City, the project will be reviewed again relative to the animal underpass concerns at the south side.

*This project was previously reviewed on the following dates: 1/17/2001, & [8/15/2007](#).*

### **Wentworth, X-A001(030), 15908**

David McNamara of Fay, Spofford & Thorndike presented the project, which is located on NH Routes 25 & 118 over the Baker River (Br. No. 146/090) in Wentworth, NH. The roadway cross section consists of two 12 ft travel lanes and two 8 ft shoulders. The project involves the replacement of the bridge deck, bridge rail and girders. Construction of the superstructure will take place from the roadway above the Baker River. The original bridge had open deck grating, which since has been filled in with concrete. The girders were originally designed for the open grate shoulders, and are thus inadequate to handle a new solid deck. In addition, they have deteriorated after being in direct contact with runoff and salt before the steel grating was closed. Although the original intent was not to replace the piers, the structure is being reviewed to determine if the piers can be rehabilitated with the addition of mini-piles being driven from above, or if more extensive work will be required. If it is determined that pier work will be necessary FST plans to come back to a future meeting to discuss the impacts associated with this effort.

Approach work includes roadway reconstruction, guardrail replacement and the installation of catch basins with outlets and stone protection. In addition, riprap will be constructed along the slopes of the southern abutment within the footprint of the existing, eroded riprap. Existing asphalt sluices are located on either side of the roadway just south of the southern abutment, which has resulted in erosion along both sides of the abutment. Temporary construction access will be provided in the northeast quadrant of the project beyond the top of bank.

Gino Infascelli questioned if the riprap replacement was to be “in-kind” since the existing riprap in the photos consisted of granite blocks. D. McNamara responded that the riprap replacement would take place within the existing riprap footprint with a slightly larger Riprap C stone. J. Sargent explained that the existing granite blocks were taken from the old bridge located adjacent to the existing structure. He also explained that the original channel flowed in the center of the bridge between the two piers, but over time the alignment of the river has moved to the area between the southern abutment and pier. This has resulted in a bend in the river, causing erosion at the southern abutment.

Kevin Nyhan asked if the asphalt sluices would be removed. D. McNamara said that they would be removed and explained that the existing curb ends at the bridge. New curbing will be added along the length of approach rails and a bituminous berm will be constructed in the guardrail

locations along the northeast side of the roadway. Runoff from the bridge will be captured in catch basins and outlet at the toe of slope.

K. Nyhan questioned if a Shoreland permit would be required for the project and D. McNamara responded that it would. K. Nyhan then questioned the amount of wetlands impacts associated with the project. D. McNamara responded that the permanent and temporary wetland impacts associated with the placement of the riprap would be 1,215 sf and 1,180 s.f., respectively. G. Infascelli questioned if a shelf could be left in place adjacent to the ordinary high water in the area of the reconstructed riprap. D. McNamara responded that the proposed riprap ends at the ordinary high water, similar to the existing condition, and that the details of this installation would be shown on the drawings.

D. McNamara stated that initial coordination with NHDHR indicated that this bridge is unusual for its type and that further coordination will be necessary since the work to the superstructure may be more extensive than originally anticipated.

When asked by K. Nyhan, Mark Kern and Maria Tur stated they would not object to the Army Corps of Engineers covering the project under the NH Programmatic General Permit.

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

### **Salem-Manchester, IM-IR-93-1(174)0, 10418C**

This project involves widening Interstate 93 between Salem and Manchester. The Department will discuss mitigation and is seeking input on the design and preservation components of the Windham median mitigation site. Christopher Gajeski gave a brief overview of the mitigation creation design and preservation components of the Windham median mitigation site. A preliminary plan will be submitted to DOT in the next couple of weeks. This work will be incorporated into the 13933H construction contract.

C. Gajeski indicated that assumptions for the creation area design are the same as those outlined in the FEIS. Restoration of 3 acres will be achieved with the removal of the existing northbound barrel. Flood flow will be restored with the creation of emergent marsh with fringes of scrub/shrub and forested wetlands. The plantings will be similar to the Baggett mitigation in Salem. Due to a calculation error there is more upland preservation (about 34 acres) than was stated in the FEIS. The pavement of the existing northbound barrel will be removed and seeded with native vegetation. Drainage infrastructure will be removed or abandoned to restore stream connectivity as appropriate. Ditches will be established along the old road bed to convey the runoff. Access to the creation area will be through a storm water treatment area located south of the restoration area and along the roadbed of the existing northbound barrel.

Fencing will be placed along the ROW. Chain link fencing will need to be placed in the area of the treatment basin for safety/liability reasons and along West Shore road to deter ATV access from the nearby neighborhood. The remainder of the ROW will be fenced with a 4 foot woven wire fence as necessary and required by FHWA highway standards.

Gino Infascelli expressed concerns with purple loosestrife invading the restoration area. Marc Laurin stated that the Galerucella beetles were released several years ago into the nearby Windham-Salem mitigation site on West Shore Road. He noted that there is evidence that they have become well entrenched in the area. He opined that this would keep the loosestrife under control. G. Infascelli iterated that loosestrife invading the restoration area will need to be watched.

*([project website](#)) This project was previously reviewed on the following dates: 8/10/1995, 1/10/1999, 2/16/2000, 5/17/2000, 6/14/2000, 7/19/2000, 8/10/2000, 9/20/2000, 10/18/2000, 1/17/2001, 2/14/2001, 3/21/2001, 4/18/2001, 5/10/2001, 8/15/2001, 9/19/2001, 10/17/2001, 11/21/2001, 1/16/2002, 2/20/2002, 5/15/2002, 6/18/2003, 10/15/2003, 12/17/2003, 10/20/2004, 11/17/2004, [1/18/2006](#), [12/19/2007](#), [2/20/2008](#), [10/15/2008](#), [12/17/2008](#), [1/21/2009](#), [4/15/2009](#), [5/20/2009](#), [7/15/2009](#), [8/19/2009](#), [10/29/2009](#), [1/20/2010](#), [2/17/2010](#), [3/17/2010](#), & [5/19/2010](#).*

### **Alstead, X-A000(425), 14540M**

This project involves the rehabilitation of 2.4 miles of NH Route 123 which was damaged during the floods of October 2005. Jon Evans indicated that this project is the last of the NH Route 123 reconstruction projects and is intended to address any outstanding issues resulting from the floods. He noted that the project is split into two separate sections. The first section begins at the NH Route 123/Pine Cliff Road intersection and proceeds northwest approximately 1.6 miles to a point approximately 700 feet southeast of the NH Route 123/Cobb Hill Road intersection. The second section begins approximately 1,400 ft northwest of the NH Route 123/Cobb Hill Road intersection and proceeds northwest approximately 0.8 miles to a point approximately 1,000 ft southeast of the NH Route 123/NH Route 12A intersection. The total project length is approximately 2.4 miles.

Stephanie Micucci indicated that the proposed project involves the permanent reconstruction of the existing roadway, drainage improvements, installation of permanent guardrail and the replacement of one bridge and one culvert with updated bridge structures. An overflow/flood control structure will be installed adjacent to the existing 6-foot box culvert in the area of the Mill Hollow Dam. The invert of this structure will be placed at the 50-year flood elevation to allow water to bypass both the existing culvert and the Mill Hollow Dam during periods of high water.

Bob Aubrey indicated that the design for both of the proposed bridge structures (107/130 and 120/123) had not changed since they were last presented at the August 19, 2009 Natural Resource Agency Coordination meeting. He noted that Bridge # 107/130 (located approximately 1.1 miles west of the NH Route 123/Camp Brook Road intersection) would be replaced with a 24' wide, 8.5' tall, 33' long structure, and will be constructed of cast in place concrete abutments and a cast in place concrete deck. The second structure (120/123) is located approximately 1,050 feet west of the NH Route 123/Camp Brook Road intersection. This structure will be a 14' wide, 8' tall, 138' long precast concrete box culvert constructed with a system of baffles and deflectors on the bottom to help reduce the water velocities and prevent downstream scour.

J. Evans indicated that the project will require a total of approximately 54,616 s.f (1.25 acres) of wetland and bank impacts. Of these impacts, 38,507 (0.88 acres) will be permanent and 16,109 (0.37 acres) will be temporary. He reminded the agencies that subsequent to the 2005 flooding event, it was agreed by the NH Wetlands Bureau and the other resource agencies that any of the Departments reconstruction projects associated with this event would not require wetland

mitigation. As such, the Department has not proposed to mitigate for the above noted impacts. No objections or concerns were made regarding the proposed impacts or the plan to proceed without mitigation.

J. Evans also noted that the project will require work within the existing 100-year floodplain. The proposed effort will require approximately 132 c.y. of fill to be placed within the floodplain and 536 c.y. of fill to be removed from the floodplain at various locations throughout the project area. On September 6, 2006 the Department met with NH Office of Energy and Planning (NHOEP) Bureau of Emergency Management (BEM), the Federal Emergency Management Agency (FEMA), and the US Geological Survey (USGS) to determine the appropriate roadway design in floodplain areas given the devastation and changes that occurred during the flooding events. It was determined at this meeting that the Department would not be required to provide floodplain mitigation, however the information found in post-flood survey data from USGS should be used to determine the location of post-flood floodplains and the estimated fill required in floodplains. It was agreed that following design, the Department will provide USGS with the roadway design and flood information to incorporate into the flood model for a future update of the Flood Insurance Rate Maps. This information will be compiled and forwarded to USGS as soon as it is available.

J. Evans noted that the project has been in development since the 2005 floods and as a result is in the advanced stages of final design. Given the advanced project design, he asked if the project would be required to meet the recently instituted stream crossing rules, noting that substantial project changes at this point would be extremely difficult. Gino Infascelli indicated that given the advanced design he felt the project could be considered “vested” and that the stream crossing rules would not need to be addressed.

Mark Kern and Maria Tur indicated that neither the EPA nor the USF&WS would have any objections to the Army Corps of Engineers covering this project under the NH Programmatic General Permit.

(NHNHB File #: NHB10-2148) *This project was previously reviewed on the following dates: [3/15/2006](#), [11/15/2006](#), & [8/19/2009](#).*

### **Lebanon Airport, AIP 3-33-0010-42-2009, 3-33-0010-42-2009**

This project involves improvements to runways and safety areas to bring Lebanon Airport into compliance with Federal Aviation Administration (FAA) standards. McFarland Johnson, Inc. will review project alternatives and wetland impacts, and is seeking input on the alternatives screening process, and consensus on alternatives to study in detail in the Environmental Assessment (EA).

This project involves the environmental assessment (EA) of improvements to runways and safety areas to bring Lebanon Airport into compliance with Federal Aviation Administration (FAA) standards. Jed Merrow, from McFarland-Johnson (MJ), introduced the project, described the Purpose and Need of the project, and described the alternatives that had been identified in the Master Plan for further study.

The purpose of this project is to:

1. Improve safety by providing, to the extent practicable, runway safety areas that meet FAA standards for the design aircraft.
2. Improve safety by providing, to the extent practicable, full parallel taxiways.
3. Provide sufficient landing length on the primary runway to support the current design aircraft.
4. Improve the all-weather availability and reliability of the airport.
5. Improve safety by meeting, to the extent practicable, FAA obstruction clearance standards.

The design aircraft for both runways at the airport currently is C-II, or corporate jet. Because there is no room to extend safety areas for Runway 7-25 in order to meet FAA design standards, Runway 7-25 will be downgraded to a B-II, which requires a 300' safety area rather than a 1,000' safety area.

To meet the project purpose, two alternatives from the Master Plan were selected for further study. P10 involves extending Runway 18-36 by 300 feet, shifting it south 1,000 feet, constructing full safety areas on each runway end, removing obstructions in the south approach, and constructing a full parallel taxiway. P12 involves the same components with a realigned runway in order to obtain better approach conditions. Under both P10 and P12, the north-south runway would maintain its current classification (C-II or corporate jet aircraft). For Runway 7-25, the proposed alternative C14 involves shortening Runway 7-25 from 5,496 feet to 4,996 feet and reclassifying it as B-II (smaller aircraft). This would provide full runway end safety areas on Runway 7-25.

P10, designed to full FAA standards, would incur 33± acres of wetland impact and 3.6± million cubic yards of earthwork, while P12 would involve 44± acres of wetland impact and 5.1± million yards of earthwork. Because of the scale of wetland impacts and expected costs, these alternatives were deemed not practicable as presented. The alternatives were reviewed to see what modifications could be made to reduce impacts. P12 involves construction of a new runway, and therefore would have to be built to full FAA standards, so impacts could not be reduced substantially. For this reason, P12 was not considered practicable, and is proposed to be eliminated from further study.

Modifications were made to the P10 design, including reducing the RSA width to 400', grading the southern runway approach to 20:1 rather than 34:1, and allowing certain penetrations of aviation surfaces. With these modifications, proposed wetland impacts would be reduced to approximately 9.8 acres. There would be an additional 2.7± acres of tree clearing in wetlands, and 0.8± million cubic yards of earthwork.

A third Master Plan alternative, which had been previously eliminated from consideration, was reconsidered for screening. P11 would use an Engineered Materials Arresting System (EMAS) at the north end within a 600' runway-end safety area rather than a 1,000' safety area. This alternative would result in approximately 11 acres of wetland fill but less clearing impact. EMAS, however, requires substantially higher installation, maintenance, and replacement costs than a standard safety area, and also requires special snow removal equipment, making its life-cycle cost much higher than that of other alternatives.

Another resource of note within the study area is fringed gentian, *Gentianopsis crinita*, a state threatened plant species, which is found in several places on the airfield. MJ has coordinated with

New Hampshire Natural Heritage Bureau to report the occurrence and will continue to work with them on mitigation for proposed impacts.

Maria Tur asked how many acres of clearing overall would be required for the alternative. The consultant team later determined that P10 would involve approximately 41 acres of clearing. Maria asked if an alternative that incorporated modified P10 components and EMAS had been investigated. Jed said that is essentially what P11 is. Maria asked if P11 with EMAS at both the north and south ends had been looked at. Jed said that no, it had not, but agreed to look into it.

Mark Kern requested that tree clearing within 100' of wetlands and 250' of vernal pools be quantified. Mark also asked if stormwater treatment and its associated impacts had been addressed, and Jed responded that it had not yet.

Lori Sommer asked if the hill south of Runway 36 has been cleared. Vegetation on this hill is cleared every few years, and it supports small trees, shrubs, and grassy areas. Lori asked if there was a conservation easement in place, and Rick Dymont responded that the easement was further away from the airfield, to the south.

Gino Infascelli asked if more than one alternative would be studied. Jed responded that there would be at least two alternatives studied, the no-build and at least one build alternative. The airport would like to study the P10 modified alternative, and not P11, because of the high life-cycle cost of EMAS.

Lori asked whether the EA would include the efforts used to screen the discarded alternatives. Jed replied that these efforts would be included.

Maria suggested that the impacts from P11 could be summarized in a matrix, considering a broader range of resources, before moving forward with modified P10 as the only build alternative.

Maria asked if there would be a bird survey at the airport. Rick noted that there is an ongoing Wildlife Hazard Assessment (WHA), the results of which will be incorporated into the EA. The WHA includes sightings of birds and other wildlife.

Maria asked if the improvements would allow for or require airport expansion or more activity at the airport. Rick Dymont responded that the airport demand levels are well under capacity now for airport operations, and that there would be no change to the class of aircraft being accommodated.

### Wetland Mitigation

Mark asked at the beginning of the discussion if the mitigation for the South Apron project had been finalized. Rick said that yes, the easement had been finalized on the 108-acre Boston Lot north of the airport. The Society for the Protection of New Hampshire Forests holds the easement.

Because of the scale of wetland impacts for this project (on the order of ten acres), the airport will be looking for wetland mitigation. MJ and the airport will be actively looking for mitigation opportunities and will be discussing mitigation with the Lebanon Conservation Commission, local land trusts, NRCS, and others.

Mark pointed out that the mitigation ratios required by the federal government (via ACOE) may not match the ratios required under the in lieu fee program. Mark further suggested that the proposed mitigation should have some landscape context value, either by tying into other conservation parcels or achieving a goal expressed by a local conservation group. Lori noted that proposing a package of mitigation opportunities would be good, but if creation, restoration, or preservation don't work out, then an In Lieu Fee payment should be considered.

Maria asked if only on-site mitigation was being considered. Jed said that no, off-site mitigation would probably be necessary.

Lori suggested that the New Hampshire Fish and Game Wildlife Action Plan could be used to help find high value wildlife areas for proposed preservation. She also recommended carefully researching existing easements or restrictions on deeds before proposing mitigation, because many of the airport's previous efforts at acquiring an easement on parcels resulted in discarding the parcels since they were already preserved. Lori suggested that Jeanie McIntyre of the Upper Valley Land Trust would be a good resource.

Lori also requested that proposed wetland impacts be reported in terms of impacts to different wetland types.

Jed asked if looking across the river to Vermont would be acceptable or appropriate. Mark stated that he did not have a problem with this approach but that New Hampshire regulators or local interests might object.

#### Next Steps

The consultant team will screen the viability of modified P11, including an option with EMAS at both ends of the north-south runway. The list of alternatives to be studied in detail will then be finalized, and impacts of those alternatives will be determined. MJ will be setting up a public meeting in October or November 2010 to present the alternatives being studied and obtain feedback. MJ will continue to pursue mitigation options for the project. Lori asked what the permitting schedule would be, and Jed said that construction is programmed for 2013 at the earliest, so permitting will not commence soon. The EA will be completed in 2011. MJ will continue to coordinate and meet with the resource agencies to discuss proposed impacts and mitigation.

*This project was previously reviewed on the following dates: [9/17/2008](#), & [7/15/2009](#).*