

# BUREAU OF ENVIRONMENT CONFERENCE REPORT

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

**DATE OF CONFERENCE:** January 15, 2014

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

**ATTENDED BY:**

**NHDOT**

Christine Perron  
Ron Crickard  
Kevin Nyhan  
Marc Laurin  
Matt Urban  
Bob Landry  
Mike Dugas  
Meli Dube  
Bryan Lynch  
Andy Hall  
Doug Gosling  
Tony Weatherbee

**Federal Highway  
Administration**

Jamie Sikora  
Cassie Chase\*

**Army Corps of Engineers**

Rich Roach  
Charles (Norm) Ferris\*

**NH Fish & Game**

Carol Henderson

**NH Natural Heritage  
Bureau**

Melissa Coppola

**NHDES**

Gino Infascelli  
Lori Sommer  
Owen David  
Ted Diers

**NH Coastal Program**

Chris Williams

**National Marine Fisheries  
Service**

Mike Johnson

**UNH Jackson Estuarine  
Laboratory**

Gregg Moore  
David Burdick

**Maine DOT**

Richard Bostwick\*

**CHA Consulting**

Martin Risley

**Pathways Consulting**

Ann Kynor  
Rod Finley

**City of Keene**

James Donison

**City of Portsmouth**

Juliet Walker  
Peter Britz

**McFarland Johnson, Inc**

Vicki Chase

**Fitzgerald & Halliday, Inc**

Stephanie Dyer-Carroll  
Daniel Hageman

**HDR, Inc**

James Murphy

\*via conference call

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

**PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:**

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**NOTES ON CONFERENCE:**

**Finalization of December Meeting Minutes**

The December 18, 2013 meeting minutes were finalized.

**Keene, X-A003(625), 27790**

Martin Risley provided an overview of the project. The Roundhouse T Phase II project, also known as the “Missing Link” to many in the local bicycle and pedestrian groups, is the crux of the current trail system. In essence it is the core of the system, where three of the major trails, Cheshire Rail Trail, Ashuelot Rail Trail and Jonathan Daniels Trail converge. Added attention will be brought to this area due to the completion of the North Bridge Multi-use overpass project which now delivers trail users across the Route 9, 10, 12 bypass safely and directly via the Cheshire Rail Trail.

This project will be funded through the Transportation Enhancement (TE) Program. A maximum 80% Federal contribution is currently slated at \$584,960 with the City contribution being 20% at \$146,000 for a total project cost of \$731,200. The TE Program is coming to an end and all project money needs to be spent by June of 2015.

The project schedule calls for the following deadlines:

Approve Engineering Study	2/28/14
Acquire Easement Agreements	6/1/14
Complete Preliminary Design	6/6/14
Acquire Easements	7/15/14
Complete Final Design	8/1/14
Award Contract	9/26/14
Complete Construction	6/15/14

Typical trail cross sections will be 6’ to 8’ wide concrete surfaces where it abuts existing streets, and 10’ bituminous surface where it runs cross country. Design will be in accordance with AASHTO guidelines for Multi-Use Trails.

CHA is working on the Engineering Study portion of the project and there are currently 3 alternatives under consideration. Factors such as connectivity, safety, ROW and environmental impacts, and maintenance issues are being weighed to evaluate the merits of the following alternatives:

- Alternative A – This alternative would head west from the end of the trail on Gilbo Avenue and continue along Gilbo Avenue to West Street and over to Island Street. Along Gilbo Ave, in front of the Center at Keene, the path would be located within the ROW out in the existing street. Gilbo Avenue’s width would be reduced in this area to allow for the construction of the path. There would be 12’ through lanes and an 11’ turn lane.
- Alternative B – This alternative would also head west from the end of the trail on Gilbo Avenue similar to Alternative A but would continue through the Colony Mill parking lot. Like Alternative A, this option would be located within the ROW of Gilbo Avenue with the width being reduced in this area to allow for the construction of the path. There would be 12’ through lanes and an 11’ turn lane. The Colony Mill parking lot would be reconstructed to minimize the amount of conflict points between bicycles and vehicles as well as to create new parking spaces to replace those lost to the trail.

- Alternative C – This alternative would head west from the trail intersection on Emerald Street. Then through the PSNH property. This route would require construction of a short bridge to cross Mill Creek. The trail would run along the west side of Island Street until it joined the existing Cheshire Trail.

A Preliminary Alternatives Summary Matrix has been developed for the project:

ALTERNATIVES SUMMARY MATRIX

	Trail System	Environmental Impacts		Right-of-Way Impacts			Costs	
	Connectivity	Wetland Impacts	Cultural Impacts	Mayo Seven LLC Properties	Keene Propane Corporation Property	PSNH Properties	Total Project ROW Impacts	Project Cost
Alternative A West Street to Gilbo Avenue	Trail is adjacent to busy streets and furthest from Ashuelot Trail	None	Minimal	High	None	None	High	Minimal
Alternative B Through Colony Mill to Gilbo Street	Straight route from Main Street to Island Street	None	Minimal	High	Moderate	None	High	Moderate due to construction of parking lot
Alternative C Through PSNH property to Emerald Street	Creates good connectivity between Island St., Gilbo Ave, and the Ashuelot Trail	None	Minimal	None	None	Moderate	Moderate	Moderate due to construction of bridge

The following environmental resources have been reviewed:

Soils - Soils are mapped as fine sandy loams or loamy find sands.

One-Stop Data – There are a number of remediated sites and hazardous waste generators listed in the NHDES One-Stop system. None would be disturbed by any of the alternatives being considered.

NH Natural Heritage Bureau file ID NHB13-3613 – “It was determined that, although there was a NHB record present in the vicinity, we do not expect that it will be impacted by the proposed project.”

USFWS – After reviewing their database we submitted a written request for USFWS review in early December 2013. Susi Von Oettingen contacted CHA last week and after a short discussion she said she would send us a “no species present” letter. That letter has not yet arrived.

Wetlands – Alternative C appears to be emerging as the preferred alternative. If this route is selected, there is no practical way to avoid crossing Mill Creek. Two alternatives were considered to make the crossing, extend the existing large culvert or construct a pedestrian bridge to span from bank to bank. The costs for these two alternatives are close and both appear to be within the project budget. The City and the Public have voiced a preference for a bridge. We do not expect that the bridge would create any impact on the wetland.

Input was requested from those in attendance. Comments were that no impacts to natural resources were anticipated from the proposed work and that the plan as it was presented was a good one.

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

**New London, X-A001(111), 16051**

Ann Kynor provided an overview of the project. The project involves the construction of 2,800 linear feet of new sidewalk along Elkins Road, commencing at the Post Office at 349 Elkins Road, continuing to the intersection of Elkins Road and Wilmot Center Road, then continuing east along Elkins Road to the Wilmot town line. The project includes new curb and sidewalk, improvements to the intersection with Wilmot Center Road, drainage improvements, four crosswalks, and road reclamation and paving. The project timeline is to complete the design, permitting and construction in 2014.

A. Kynor noted that the initial environmental resource review has indicated the following:

Natural Heritage Bureau: There is a Natural Heritage Bureau record present in the vicinity of the project, but the Natural Heritage Bureau does not expect it to be impacted by the project.

Surface Water Impairments: The project is within a 2010 Surface Water Impairments 1-mile buffer for development projects. Impairments in Pleasant Lake are dissolved oxygen saturation and *E. coli*.

Floodplain: Much of Elkins Road is within the floodplain of the headwaters of the Blackwater River, and consequently the project is within the floodplain.

Wetland Impacts: It is anticipated that there would be less than 3,000 square feet of wetland impacts. Permanent impacts would occur to install drain systems near the Post Office, and to construct the sidewalk near a wetland located next to the Wilmot Town line. Temporary impacts may be necessary for construction staging to construct the new sidewalk and railings across the existing concrete box culverts/bridges that are along the alignment. There are potential impacts to the stream banks associated with new culvert discharges from proposed drain systems and from temporary construction staging at the bridge crossings.

Shoreland Protection: The project is within 250' of Pleasant Lake, which is a designated protected water body. This project could be considered "maintenance, repairs, and improvements of public utilities, public roads and public access facilities," and A. Kynor asked if the project would therefore qualify for the Shoreland Permit by Notification (PBN).

Alteration of Terrain (AOT): Disturbance for road reconstruction is approximately 75,000 square feet. Disturbance for the sidewalk is approximately 30,000 sf. A. Kynor asked if the project could be covered by the General Permit by Rule or if an AOT permit would be required. She also asked if Site Specific Soil Mapping could be waived.

Lori Summer inquired about the area of floodplain impact. A. Kynor said the impact volume has not yet been calculated.

Jamie Sikora asked if all the improvements are located within the existing right-of-way. A. Kynor replied yes, except for a small area at the intersection where most but not all of an existing right-of-way encroachment would be restored to the adjacent property.

J. Sikora inquired about impacts at the boat launch. A. Kynor replied that the sidewalk would be located on the opposite side of Elkins Road from the boat launch. The informal parking next to the boat launch would be removed and replaced with a paved pull-off area for boats with trailers as they wait to use the launch.

Carol Henderson said that Pleasant Lake is an important fishery. NH Fish & Game has an access program that could provide input on any improvements to the boat launch. It also has a leasing program where Fish & Game leases the land and builds the access.

C. Henderson commented that any proposed culvert/bridge work should avoid restricting fish passage.

Gino Infascelli noted that the project would need a Shoreland PBN. A wetlands permit would be needed for work in the stream banks and wetlands. Impacts to the banks of a perennial stream may not qualify as a minimum impact project and may be a minor project. He suggested talking to Ridge Mauck about AOT permit questions.

G. Infascelli asked if the new discharges to the stream would include treatment for water quality. He also commented that treatment would likely be needed particularly since the discharge is to an impaired surface water.

C. Henderson asked if there would be an overall increase in pavement. A. Kynor replied yes, and this would be addressed by the AOT process.

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

### **Portsmouth-Kittery, BH-1671(000), 15731**

Bob Landry introduced the proposed project. The replacement of the Sarah Mildred Long (SML) bridge will involve approximately 72,000 sf of permanent impact to the Piscataqua River and surrounding tidal wetlands. To satisfy the mitigation requirement for the proposed impact, DOT proposes to enhance and create approximately 216,000 sf of tidal wetlands.

Dave Burdick and Gregg Moore of Jackson Estuarine Lab at UNH introduced themselves. D. Burdick specializes in marine and coastal habitat and habitat restoration and G. Moore specializes in marine and estuarine plants. The proposed restoration area is north of Market Street, "Inner Cutts Cove", between Market Street and the existing Newington Branch rail line. A concept plan was prepared to show what might be constructed within this area. The proposed mitigation would include enhancement of the existing mudflat and riprapped bank to create salt marsh (50,000 sf), and enhancement of intertidal mudflat to create subtidal habitats (living shoreline creation, mudflat enhancement, and seagrass creation), totaling 216,000 sf.

The City of Portsmouth proposes to construct a waterfront park on the north side of Market Street, a several acre area of fill that was placed in the 1960s. The city has met with NHDOT, D. Burdick, and G. Moore, and approves of the restoration concept and its incorporation with the park. Carol Henderson suggested that a kiosk describing the restoration could be a feature of the park, and B. Landry agreed.

Eelgrass is important for providing habitat for a number of marine wildlife species, and eelgrass beds in the Piscataqua River estuary have diminished. UNH has had some success in the past with eelgrass planting, but in the Piscataqua River estuary, the successes have been wiped out. Given the sensitivity of eelgrass and the challenges of eelgrass restoration, the consensus was that a multi-pronged approach would have a better chance of success. D. Burdick and G. Moore have restored

salt marsh in many locations in New Hampshire with great success, so salt marsh creation would be part of the approach.

The area proposed for mitigation is currently mudflat, which is too shallow to support eelgrass. A portion of the area would be excavated to a depth sufficient to support eelgrass, which has to remain submerged or it will freeze. The source of the eelgrass would be from floating eelgrass shoots harvested in Great Bay that has been uprooted by boat engines. D. Burdick and G. Moore see many uprooted shoots on a daily basis. West of the eelgrass, they also propose to create intertidal shoreline (“living shoreline”), by placing empty shellfish shells on the mudflat substrate. This would promote habitat for oysters, ribbed mussels and blue mussels. The goal would be not to affect the tidal flow. There are currently no filter feeders in this location, and it’s not clear why.

Norm Farris asked if there was enough tidal exchange to support the eelgrass. D. Burdick responded that additional testing would need to be done during the design process, such as borings in the mudflat, to see if sediment at sufficient depth would be appropriate to support eelgrass, and testing of the biotic quality of the mudflat to see what it is currently supporting.

Rich Roach commented that the mitigation package should consider incorporating more salt marsh created from the made land north of Market Street.

Mike Johnson said that the Essential Fish Habitat (EFH) assessment has been in constant flux and difficult to review. B. Landry said design plans changed significantly after the preliminary (30%) plans were submitted because the cost was much higher than had been anticipated. The EFH has been modified and will be resubmitted soon when impacts have been nailed down.

M. Johnson wanted to know if the mitigation would be adjusted when impacts change. The response was that the mitigation design is flexible and could be adjusted (within reason) to meet increased impacts if necessary.

Lori Sommer suggests hedging bets by proposing more mitigation than necessary. D. Burdick said there are other areas that could be cleaned up (trash and debris in water), or portions of the park could be designed to create salt marsh within the park. This idea was rejected by the group and will not be pursued. The existing location does have additional area available for more creation if needed.

Ted Diers noted that the proposed mitigation plan provided water quality amelioration opportunities. He asked what would happen to dredged material from the project, and if beneficial reuse would be possible. D. Burdick replied that the elevation of the park is such that it could be under water in some number of years due to rising sea levels, and perhaps it would be possible that dredged material could be used to raise the elevation of the park.

R. Roach commented that the best place to propose mitigation was within the cove, where the estuarine habitat has been already compromised.

L. Sommer asked about ownership of the park. Peter Britz thinks it is owned in fee, but that additional research would need to be done. L. Sommer suggested that there should be restrictions

on the deed that spell out what has been done for the mitigation /restoration and what would be allowed for future use. A stewardship plan for the park should be included as part of the overall mitigation plan.

Freshwater drainage into the cove comes from various sources. M. Johnson noted that drainage and stormwater sources into the cove should be identified to ensure that the restoration would not be affected by sediment and pollutants entering the system from these sources. R. Roach suggested that stormwater improvements and retrofits could be part of the proposed mitigation.

M. Johnson commented that his greatest concern had been about harvesting live eelgrass, but was encouraged that it would be harvested from rafts of floating uprooted plants. He noted that eelgrass could be difficult to transplant. Therefore, he would like to see success criteria for eelgrass establishment defined in the mitigation plan, as well as a contingency plan in case the eelgrass fails to establish. N. Farris commented that the proposed mitigation would provide a net increase in habitat value, but the effort would need to be quantified to ensure that mitigation metrics are met. R. Roach commented that he understood the difficulty in transplanting eelgrass and that the effort would need to be monitored for some period of time, but success in perpetuity could not be a requirement.

D. Burdick suggested that they could also plant *Ruppia maritima* (widgeongrass) a more brackish species of seagrass, that they have had more success with than eelgrass. However, *Ruppia* is more difficult to come by, and is not as valuable for habitat as eelgrass since it's not as tall and does not provide as much structure. M. Johnson noted that *Ruppia* is not as valuable as eelgrass but would be better than nothing if eelgrass failed to establish. The *Ruppia* concept may be added to the plan after more consideration by D. Burdick and G. Moore.

It was agreed that it would be appropriate to move forward with the proposed mitigation concept. A more formal mitigation plan will be submitted with or following the application submittal, after impacts are finalized, and will include a more detailed mitigation and monitoring plan. The mitigation plan will detail all steps necessary for mitigation design, including testing and borings, and will also include a monitoring plan for the restoration area.

*This project was previously reviewed on the following dates: [6/19/2013](#); [9/18/2013](#).*

### **New Castle-Rye, X-A001(146), 16127**

Following a brief introduction by Bob Landry, Dan Hageman with FHI provided a summary of the environmental coordination and studies to date. Through consultation with several agencies, the project team has identified wetlands and threatened and endangered species in the vicinity of the bridge. In addition, a wetland delineation was undertaken the fall of 2012 and an eelgrass survey was completed in November 2013. Fieldwork was also undertaken to determine if the marsh elder, a state threatened plant, is present on the project site; the results indicate it is not on the site.

James Murphy, Project Manager with HDR, then outlined the four alternatives originally considered. He shared that the Raised Profile and Off-Alignment Alternatives were eliminated in the fall of 2013. Following extensive evaluation of the two remaining alternatives, the Replacement with Bascule and the Major Rehabilitation, the former was selected by NHDOT. This is due to the fact that the closure time

would be shorter and construction could be restricted to January through March; it would allow for a closed deck system and a sidewalk on the east side of the bridge; it would have lower life cycle costs and a longer service life; and it is favored by the public. He explained that the Replacement Alternative would be founded on drilled shafts, thereby minimizing silt and underwater noise impacts associated with steel pile driving activities. To avoid the use of cofferdams, the existing abutments would be demolished to grade, and precast pier caps and the bascule pier would be installed.

D. Hageman outlined the potential environmental impacts of the Replacement Alternative. There would be no direct impacts to tidal vegetated wetlands and minimal impacts to Estuarine wetland bottom habitat. Furthermore, there would be no direct impacts to the eelgrass bed. Field survey verified that there are no terrestrial threatened and endangered species on the project site. Due to the use of best management practices (BMPs), there would be no indirect impacts to water quality, and thus no anticipated impacts to the wetlands, eelgrass beds, and listed aquatic species. Most of the project is located within the Tidal Buffer Zone; however, all portions of the project within this zone have been previously disturbed and most consist of pavement and other areas with little habitat value.

Following the presentation, the members of the project team requested comments and input from attendees. Attendees provided the following questions and comments:

Rich Roach suggested that the project team check the appropriate height for the utility line that crosses the channel. He also suggested that the line may not have been permitted.

Mike Johnson indicated that November is late to be conducting an eelgrass survey and that sparser, deeper beds do tend to die back after October 1<sup>st</sup>. Stephanie Dyer-Carroll stated that the team had tried to get out to survey the area earlier, but that the fieldwork had to be rescheduled several times due to weather. M. Johnson also suggested that historically there was a bed located southwest of the bridge and that the project team should look for signs of eelgrass within this area in the springtime. B. Landry indicated that they would undertake additional survey, as necessary.

M. Johnson asked for the existing and replacement widths of the bridge. J. Murphy said that the new bridge would be 7-8 feet wider.

Chris Williams stated that the Corps completed an eelgrass survey in 2009. D. Hageman indicated that the project team has seen this data and corresponded with the Army Corps regarding their survey. The 2009 study only found an eelgrass bed to the southeast of the bridge, where FHI also verified a bed.

R. Roach asked how a silt curtain could be used in the vicinity of the bridge, due to the strong currents there. J. Murphy acknowledged that the curtains can be difficult to work with, and D. Hageman added that different designs can be used which can withstand stronger currents. M. Johnson said that turbidity curtains can cause problems in heavy current, especially with eelgrass, so caution should be used if installed during construction. Basic consensus was that the use of turbidity curtains should be avoided in the high currents.

B. Landry asked for input on potential time of year restrictions. M. Johnson said that in-water work should occur between November 15<sup>th</sup> and March 15<sup>th</sup>, as spawning for winter flounder occurs in April. Carol Henderson concurred with this window.

R. Roach asked if it would be possible to reduce the length of the causeway in order to increase the bridge opening. J. Murphy said that they would likely have to fully excavate the existing abutments in order to do this. R. Roach said this it is something that should be discussed in the alternatives analysis and asked whether a cost could be ascribed to reducing its length.

R. Roach asked if the existing piles would be removed. J. Murphy indicated that there are few ways to do this, but that pulling the piles partially out, cutting them, and then pushing them back down to refusal would cause the least turbidity. M. Johnson concurred. B. Landry added that pulling the piles out entirely would introduce additional sediment.

M. Johnson asked if NOAA had provided a time of year window for the sturgeon. S. Dyer-Carroll indicated that Section 7 consultation had not been undertaken yet, as NHDOT just selected the Replacement Alternative. M. Johnson said that he could not speak to the potential time of year restriction for that species and that the project team would need to consult the listed species group within NOAA. R. Roach indicated that the location of the New Castle-Rye Bridge may be too shallow for sturgeon.

M. Johnson said that the Winter Flounder is the primary managed species in the area. He also indicated that Alewife, Blueback Herring, and Rainbow Smelt migrate in April, but that the TOY restriction for winter flounder would also protect these species.

C. Henderson asked if the project team would return to a future coordination meeting once they've surveyed the eelgrass in the spring. B. Landry said that they would.

J. Murphy asked for mitigation recommendations. Lori Sommer said that the project team should check with the Rockingham County Conservation District, as they should be aware of what is in the area. R. Roach indicated that the project team should look in the vicinity of the project site to determine if there are any cultural modifications that could be undone as part of this project.

C. Henderson said that a map of the eelgrass should be provided to the barge operators during construction so that they do not anchor or travel through it.

*This project was previously reviewed on the following dates: [3/20/2013](#).*

### **Warren, non-federal, 23420**

Tony Weatherbee provided an overview of the project. The project involves the replacement of Bridge 102/092, which carries NH Route 25C over Black Brook. The Department proposes to replace the existing 10'-8" x 6'-11" metal pipe with a 12' x 8' concrete box with 1'-0" of embedment. The structure is a Tier 3 crossing based on watershed size. A concrete invert was considered but it was determined that the pipe is too small to accommodate concrete lining. A three sided structure was considered but it was determined that the foundation capacity is inadequate. To meet the DES Stream Crossing Rules, the replacement structure would need to be 36', based on bankfull width, which would cost \$3 million dollars. The proposed box would cost \$300,000.

Lori Sommer inquired about passage issues. T. Weatherbee said the proposed structure would pass the 100-year storm event.

Kevin Nyhan asked how many linear feet of permanent impacts there would be. T. Weatherbee responded that there would be approximately 50' to 60' of impact. L. Sommer said this project would require mitigation based on the linear feet of impact.

Gino Infascelli asked if any other structure sizes were considered, as the 12' span seemed small. He asked if an overflow pipe could be installed slightly higher than and next to the replacement box to accommodate wildlife passage since the current proposed design does not accommodate wildlife inside the structure. L. Sommer said that a second pipe could be considered mitigation. Carol Henderson commented that a

second pipe is not ideal for wildlife passage and something inside the box would be more beneficial. Doug Gosling asked if a ledge inside the box structure would be suitable. G Infascelli said something inside the structure could work, although the proposed structure doesn't seem large enough to accommodate a ledge. L. Sommer asked if the Bureau of Bridge Maintenance could look at an 18' box with a dry ledge inside. D. Gosling said that Bridge Maintenance crews are limited by what their equipment can lift. C. Henderson asked if we could buy or rent more equipment to install a larger box. Rich Roach asked what species would benefit from these efforts. He thought a separate tunnel would not be used. D. Gosling said installing a shelf inside the box would be considered.

L. Sommer asked that the project be brought back to another meeting once these suggestions were taken into consideration.

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

### **Jefferson, non-federal, 28973**

Tony Weatherbee provided an overview of the project. The project involves the rehabilitation of Bridge 089/090, which carries NH Route 115A over Cherry Mill Brook. The department proposes to replace the concrete deck and widen the structure approximately 6'-0". The bridge is a Tier 3 crossing based on watershed size. Widening was proposed so that one lane of traffic could be maintained during construction. Widening would entail extending the abutments and constructing new wingwalls on the downstream side of the bridge.

Lori Sommer asked about the age of the structure. Doug Gosling said that it was probably 1930s vintage. T. Weatherbee noted that it has been rehabilitated once.

T. Weatherbee explained that the span recommended by the DES Stream Crossing Rules would be 62' based on bankfull width. This would cost approximately 4 million dollars, and the proposed rehabilitation would cost approximately \$200,000. The other alternatives considered were replacing the deck without widening and patching the deck without replacing. The deck is too deteriorated to patch it successfully, and deck replacement without widening would require closing the bridge to traffic.

Rich Roach asked if a detour could be considered rather than widening. T. Weatherbee said the detour length is 20 miles and that the extra width also provides for a safer roadway. Kevin Nyhan suggested looking at traffic volumes to see if a detour is a viable option. R. Roach noted that this option needed to be explored and articulated in the application package. Christine Perron mentioned that emergency response would also need to be considered.

Carol Henderson asked if a temporary bridge could be installed to accommodate traffic. D. Gosling said that temporary bridges are occasionally considered but they do result in increased cost and impacts.

C. Henderson asked for more information about in-water work. T. Weatherbee explained that impacts in the channel would result from temporary scaffolding, temporary cofferdams, and the widening. C. Henderson noted that this is a brook trout stream and asked that an attempt be made to install the cofferdams before October 1<sup>st</sup> in order to avoid impacting spawning beds. T. Weatherbee commented that the cofferdams would be installed in half the channel at a time, or both sides could be installed while leaving the channel open in the middle. C. Henderson replied that either option would be fine as long as an attempt was made to minimize impacts to spawning brook trout.

L. Sommer asked about linear impacts. K. Nyhan said there would be about 60' of permanent impacts. L. Sommer said that this would require mitigation. C. Perron commented that the cost of mitigation should be taken into account when considering the bridge closure alternative.

It was agreed that there was no need to attend a future meeting but that an email update on the chosen alternative would be helpful.

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