

BUREAU OF ENVIRONMENT CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting

DATE OF CONFERENCE: February 18th 2015

LOCATION OF CONFERENCE: John O. Morton Building

ATTENDED BY:

NHDOT

Matt Urban
Christine Perron
Ron Crickard
Marc Laurin
Keith Cota
Michael Hazlett
C.R. Willeke
Kirk Mudgett
Joe Adams
John Butler
Ralph Sanders

**Federal Highway
Administration**

Jamie Sikora

Army Corps of Engineers

Michael Hicks

EPA

Mark Kern

NHDES

Gino Infascelli
Lori Sommer
Karl Benedict
Chris Williams

NH Fish & Game

Carol Henderson

City of Lebanon

Christina Hall

Hoyle, Tanner & Assoc.

Matt Low
Aaron Lachance
Kimberly Peace

GM2

Darren Blood
Tom Levins

Normandeau

Adele Fiorillo

McFarland Johnson

Jed Merrow
Brian Colburn

FST

David McNamara

Smart Associates

Jennifer Riordan

PRESENTATIONS/ PROJECTS REVIEWED THIS MONTH:

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NOTES ON CONFERENCE:

Finalization of January 21st 2015 Meeting Minutes

The January 21st 2015 meeting minutes were finalized.

Lebanon, 10034B, X-A003(703)

David McNamara (FST) provided an overview of the project, which involves the reconstruction of Mechanic Street (US Route 4) between the I-89 Exit 19 interchange and the High Street intersection. The project corridor is mostly commercial with some residential properties. There are currently traffic issues and some difficult intersections. The City is looking to improve streetscape elements. The end result will be a 3-lane roadway with sidewalks through the project corridor. A roundabout is proposed at the Slayton Hill Road intersection. The High Street intersection will probably be a signalized intersection, but this is still being studied.

The project will increase impervious surface and stormwater treatment options are being evaluated. There is an existing crossing of the Mascoma River at the western end of the project, but no work to the existing bridge is proposed. An emergent wetland is located near a golf course west of Slayton Hill Road and the project is anticipated to result in a few hundred square feet of impact to this wetland. Wetland impacts will be further evaluated as the design progresses. Floodplains are present near the Mascoma River, but no impacts are anticipated. The project will likely involve the construction or replacement of several retaining walls to reduce impacts.

Christina Hall (City of Lebanon) explained that the City is looking to improve traffic conditions and revitalize the project corridor. The City would also like to improve pedestrian and bicycle access within the corridor. Under a separate project, the City is proposing to convert an abandoned railroad bed, located north of Mechanic Street, into a bike path/greenway. The City also has a concurrent Combined Sewer Overflow (CSO) project that will involve drainage construction and should improve water quality in the Mascoma River.

Ron Crickard asked if the intersection improvements are part of the project. D. McNamara confirmed that they are.

D. McNamara mentioned that contamination issues are anticipated within the project corridor and are being reviewed. A historic district located north of the project is being documented.

The project will be constructed under several contracts. Jamie Sikora asked if the overall cost has been determined. D. McNamara replied that it is estimated to be \$12-15 million.

Lori Sommer asked if any drainage changes are proposed. D. McNamara replied that the design is not at that level of detail yet, but it is likely that drainage will change and stormwater treatment will be required. The project is expected to be over the threshold for requiring an Alteration of Terrain permit.

J. Sikora asked if easements will be needed during construction. D. McNamara stated that construction easements will be necessary and permanent easements and/or drainage easements will also likely be needed. One acquisition is also likely on the corner of Slayton Hill Road.

J. Sikora asked about the schedule for NEPA review. D. McNamara replied that a draft document is expected to be completed in the next month or so. NHDOT also needs to approve the project design, which will happen concurrently with NEPA.

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

Peterborough, 14772A/14933, X-A000(535)/X-A002(107)

The project consists of two (2) components, specifically, improvements to the US202 and Main Street intersection (14772A) and the reconstruction of the Main Street Bridge over the Contoocook River (NHDOT Bridge No. 092/089) (14933). Project 14772A will also include evaluation and development of reconstruction / rehabilitation options for the stacked stone retaining wall adjacent to US 202 and the Contoocook River.

US 202 Intersection / Retaining Wall 14772A – The two intersection improvement concepts that were evaluated in the Engineering Study phase were Concept 1, which included a slight intersection realignment which emulates the existing situation with some safety improvement but no vehicular traffic flow capacity improvement, and Concept 2, which is an oval roundabout, intended to improve intersection capacity performance. Investigation and analysis of the retaining wall conclude it is marginally stable and requires reinforcement.

Main Street Bridge 14933 – The Main Street Bridge was constructed in 1940 to replace a pre-existing two (2) span stone arch structure. Testing of the existing concrete was performed in November and December 2009 and revealed acceptable strength in some locations, however, chloride-ion content was extremely high and the bridge was found to have been affected by Alkali-Silica Reactivity (ASR). Cracking caused by the ASR has allowed salt-laden water to penetrate the concrete leading to the high amount of observable efflorescence on the underside. Rehabilitation and replacement were evaluated as part of the Engineering Study evaluations.

This project was introduced at a Natural Resource Agency Coordination meeting on May 19, 2010 during the Engineering Study phase of the project. The project is now in the Preliminary Design / NEPA phase of development.

The purpose of this meeting is to update the attendees with the status of the project. The last time this project was presented, the Selectboard had voted to replace the bridge with a new concrete rigid frame built utilizing phased construction and Roadway Concept 2 (Roundabout). Due to continued public input as well as many meetings with state and federal agencies, the preferred alternative is now as follows:

- Replacement of the bridge in the existing location utilizing a traffic detour eliminating the need for over-widening of the bridge.
- Roadway Concept 1.
- A pedestrian bridge located downstream of the replacement bridge to allow for three lanes of traffic on the bridge with 11' or 12' lanes as opposed to the existing 10' lanes.

The Selectboard has voted to move forward with this as the preferred alternative.

This project has also been presented to Cultural Resources five times (4/1/10, 10/7/10, 6/9/11, 7/14/11 and 12/11/14).

After introductions of all attendees, M. Low provided a general summary of the project and the current status. He noted the bridge will be designed to look similar to the existing bridge. The stones on the existing bridge will be mapped and reused on the new bridge. The intersection improvements will improve the safety of the existing intersection for pedestrians and vehicular traffic.

K. Peace introduced the environmental issues for the project, including:

- the Contoocook River is a Designated River;
- NHDES has stated the stream “bank” resource extends from the OHW to the walls upstream within the project area;
- there will be temporary and permanent wetland/stream impacts to the bank and channel;
- there will be fill in the bank to stabilize the retaining wall;
- the pedestrian bridge will span the river, requiring a new abutment or extension of the existing abutment on the west bank;
- the Contoocook River has water quality impairments, but the project would not add to those;
- a NHNH B Datacheck revealed Wood Turtle habitat downstream of the project, coordination with NHF&G will be required and the project is not expected to affect this habitat; and,
- Impacts/fill in the FEMA floodplain and potentially the floodway, potentially requiring mitigation.

A NEPA Categorical Exclusion is being prepared for the project. A Wetland Permit will be required from NHDES Wetlands Bureau and USACOE (PGP). An Essential Fish Habitat Assessment will be required from NOAA/NMFS because the Contoocook River is EFH for Atlantic salmon.

The project is located in a Historic District, and the bridge is eligible for listing on the national Register. An Effect Memo will be issued from NHSHPO, and an MOA will be developed for mitigation for resource impacts as part of the NEPA/Section 4(f) Evaluation process.

R. Crickard asked if there are two project numbers. M. Low responded yes.

J. Sikora asked about contract phasing. M. Low responded that a phasing plan is being developed but the projects will be bid as one project. Work on the wall may have to be done from above due to the lack of access to the riverbank areas below the wall. At this point it is believed that the wall would be constructed first, then the bridge after. The pedestrian bridge may need to be completed before the bridge in order to allow for continual pedestrian movement and utility accommodation.

L. Sommer asked about lane configuration. M. Kern asked why not place the pedestrian bridge directly alongside the new bridge. M. Low explained the need to widen the travel lanes means that the pedestrian bridge must be located off the bridge, and that there are utility constraints which can be resolved by using the pedestrian bridge to convey them across the river.

M. Hicks asked if the floodplain mitigation has been resolved. K. Peace replied that it would be resolved as the project progresses and impacts are more defined.

M. Hicks asked if the USFWS IPaC was reviewed for potential federally listed species or habitats in the area. K. Peace responded yes, there are none listed in the project area.

M. Hicks asked if locating the pedestrian bridge alongside/off the new bridge (cantilevering) was considered. M. Low responded that cantilevering the pedestrian bridge off the new bridge would not be feasible or cost-efficient and was not preferred by SHPO.

The project will return for another Natural Resource Agency meeting. Next steps for the project will be attending a Cultural Resources meeting (March/April 2015), holding a public hearing (April/May 2015) and finalizing preliminary design. A draft Cat Ex/Section 4(f) Evaluation should be completed by the end of summer, 2015.

This project was previously reviewed on the following dates: (5/19/2010)

Durham, 16236, X-A001(202)

Darren Blood, PE of GM2 presented a general project description.

The proposed project is the replacement of a deteriorated 15 foot single span bridge on US Route 4 over Bunker Creek in Durham, NH. The project design addresses 2 geometric deficiencies on the approach to the bridge related to sight distance:

1. Sag vertical curve on Route 4
2. Intersection Sight distance at Morgan Way (Profile raise is required to meet intersection sight distance at Morgan Way)

The Bridge is 2014 Bridge Priority #8 and has required repairs twice by DOT Bridge Maintenance in the last 3 years. US Route 4 is an urban arterial carrying 18,000 vehicles per day and is a major east-west trucking route and a well-travelled bicycle route. The project Limits extend 850' east and 750' west of the existing bridge. The project is currently funded for replacement in 2019 in the 10 year transportation funding plan. The construction period is dependent on the traffic control method employed. The proposed design is a Typical Roadway Section – 12' lanes and 5' shoulders (for bicycle traffic) and utilizes a 45 mph Design Speed (currently posted for 40 and existing conditions do not meet speed rating). Design attempts to maintain existing toe of slope but will increase slope steepness. Based on feedback from the Public and Natural Resource agencies, US Route 4 will remain in its current location on the existing centerline. This results in:

1. Reduced impacts to adjacent private properties
2. Less permanent impacts to the natural resources

There are two Traffic Control Options for the online alternative:

1. On-site Diversion to the north (which has additional temporary impacts, but were limited with 35 MPH Design Speed and reduced typical roadway section, 11'lanes and 4'shoulders).

The diversion comes off the existing alignment on the west of the bridge to limit impacts, provides approximately a 10' temporary fascia to proposed fascia, then comes back online before Morgan Way.

2. 14 Day US Route 4 closure with a detour

Lori Sommer of the NH DES Wetlands Bureau asked about the detour option and D. Blood explained that it is about 18 miles.

Mark Kern of the EPA asked what the likely hood of the detour might be and D. Blood stated that it is likely a 50/50 chance for either option.

Keith Cota of the NH DOT noted that there are many obstacles to the closure options such as emergency response and that the minimum closure is about 14 days.

L. Sommer asked what the timing of the closure would be and D. Blood responded that it is likely to be summer (construction season).

Carol Henderson of NH F&G asked why the change in proposed bridge clear span from 30 to 61 feet and D. Blood explained that the new design avoids the existing substructure and is expected to speed the construction window. He also stated that the wider opening is considered an environmental benefit with the increase tidal exchange. Strides taken toward reducing the footprint impact of this project include:

1. Reduced shoulders as compared to approaching roadway segments
2. Using 45mph design speed, thus minimizing the amount needed to raise US Route 4
3. Lengthening the bridge opening to 61 feet and removing a portion of the causeway
4. Proposing 1.5:1 engineered slopes on the causeway to limit resource impacts

Proposed Drainage/Water Quality:

Roadway improvements result in an increase of about 5% of the total impervious project area.
Also:

1. Existing drainage patterns to be maintained:
 - a. Sheet flow from pavement
 - b. No curbing (except brush curb on bridge)
 - c. Minimal closed drainage, only in sag vertical curve and on bridge approach
2. Improvements proposed include:
 - a. Catch Basins with sumps instead of drop inlets
 - b. Drainage outlets to slopes, not paved swales (which are existing)
 - c. Improve eroded area at the pipe outlets east of the Bunker Creek crossing (recommended as mitigation by Rich Roach of the Army Corps at last meeting)
3. Water quality enhancement:
 - a. Very limited opportunities due to site restrictions including terrain, private property, and natural resources.
 - b. Possible locations:
 - i. Fish & Game property with deeded restrictions, purchased with Federal funds
 - ii. Area on the north east quadrant, quite steep, difficult for enhancement

Adele Fiorillo of Normandeau Associates updated progress and presented anticipated natural resource impacts. Since the last meeting the Natural Heritage Bureau (NHB) data request was updated and identified additional communities:

1. Exemplary Communities
 - a. Brackish Marsh (upper reaches of Bunker Creek)
 - b. High Salt Marsh (present along roadway – predominately to the north)
 - c. Sparsely vegetated intertidal/sub-tidal system (present along roadway – predominately to the south)
2. Plant Species
 - a. crested sedge (*Carex cristatella*) (July 1, 2014 survey) Endangered
 - b. Rich Appalachian Oak rocky Woods
 - c. downy false foxglove (*Aureolaria virginica*) Endangered
 - d. green rockcress (*Boechera missouriensis*) Threatened.

Surveys were completed and none were present in the project area.

3. New England Cottontail:

April 2013 aerial photo review and site review Oct 2013 indicate little to no suitable habitat present in the project limits

C. Henderson asked for the updated NHB report number and A. Fiorillo provided NHB15-0235.

A. Fiorillo also explained that Normandeau completed an Essential Fish Habitat (EFH) assessment that identified 4 species

1. Mackerel
2. Atlantic Salmon
3. Bluefish
4. Winter Flounder

The EFH assessment concluded that there may be temporary construction impacts to habitat and that the widening of Bunker Creek channel may allow increased accessibility to habitat upstream of the project location, potentially resulting in a permanent positive effect on EFH.

Impaired Waters are present for both Bunker Creek and Oyster River:

1. There are no Total Maximum Daily Load (TMDL) limit's for Bunker Creek
2. The Only TMDL for Oyster River is Bacteria and this is not anticipated to be in issue related to the project construction

Anticipated Impacts:

1. Temporary – on-site diversion route during construction (temp bridge) to be restored
2. Permanent – slope grading
 - Tidal Wetland (Rip rap/Mudflat/Salt Marsh) ~10,000 sq. ft.
 - Freshwater Wetland 525 sq.ft.
 - 100 year flood plain 280 CY
 - 100ft TBZ (existing roadway) ~19,000 sq.ft.
 - Two intermittent streams to the east ~125 lin.ft. for drainage improvements

Mike Hicks of the Army Corps stated that an Individual Permit requirement should be anticipated.

L. Sommer asked how long the temporary on-site diversion route will need to be in place and D. Blood responded 2 years. L. Sommer added that similar to the Memorial Bridge project, when temporary impacts are in place long enough, mitigation is required and also suggested that the project initiate communication with National Marine Fisheries.

Mitigation Summary was discussed:

- Restoration of temporary impacts
- Outlet protection / repair of intermittent stream erosion
- Compensation for permanent – ARM fund
- Tier 3 Bunker Creek – self mitigating

M. Kern asked what the 10,000 sq. ft. of tidal wetland area consisted of. A. Fiorillo noted that there is existing rip rap slopes that are included in the impacts and D. Blood stated that the design attempts to hold existing toe of slope referring to the cross sections that were prepared by GM2.

Marc Laurin of the NH DOT asked if the agencies deemed ARM fund as an acceptable mitigation option and both L. Sommer and M. Kern agreed.

L. Sommer added that the community of Durham should be consulted as well for any mitigation preferences.

D. Blood added that there is a public hearing scheduled for May. There was a question about when construction advertisement is anticipated. D. Blood responded that the project is funded in 2019, so the project could advertise as early as fall 2018.

It was agreed that the project should return for another Natural Resource Coordination meeting.

This project was previously reviewed on the following dates:(11/20/2013)

Portsmouth, 13455E, X-A003(904)

Brian Colburn introduced the project, noting it is Contract E of the US 1 Bypass bridge projects and connects to the proposed Sarah Mildred Long (SML) Bridge. The Albacore Connector (now called Submarine Way) was constructed several years ago when the SML Bridge was temporarily closed. An emergency authorization was obtained to construct the Connector, and included an estimated 750 square feet of freshwater wetland impact. Prior to the Connector, there was 2.2 acres of impervious surface (pavement) within the current study area. The Connector's construction increased that to 2.5 acres. The Department proposes to reduce the impervious acreage to 2.1 acres. We also looked at possible stormwater treatment measures, including swales, infiltration, bioretention and other measures. Because of a combination of limited ROW width, low elevations, and high groundwater tables, none of the measures were feasible. NHDOT proposes to keep the drainage within the existing ROW and discharge it at a new outlet within the bank of the tidal wetland adjacent to the Connector. The ditch side slopes were lowered as much as possible (10:1) and extended laterally as much as possible to maximize treatment potential. There was discussion of the sizes, elevations and depths of drainage pipes. The application needs to clearly explain why no treatment is possible.

B. Colburn noted that the Department proposes to place an inlet at the edge of the wetland nearest the submarine, above the wetland elevation. This will prevent flooding of the submarine. This is not considered an impact.

Jed Merrow discussed wetland impacts. He noted that the location of the 750 square feet of wetland fill reported in the emergency authorization is not entirely clear but appears to be between the two wetlands on each side of the Connector at the junction with US 1. Mike Hicks asked how the impacts would be quantified and described, and whether the original delineation was done by a Certified Wetland Scientist. Marc Laurin stated that Normandeau Associates had identified and mapped the wetland but may not have formally delineated and surveyed it. However, it may be sufficient for the Army Corps' jurisdictional determination. Mark Kern thought that the impacts were more than 750 square feet. The Department will research this issue, looking for the original mapping and authorization paperwork.

The road widening and drainage system will affect tidal buffer zone and the bank of the tidal wetland. The road will be widened within the tidal buffer zone; this is considered permanent impact. A new drainage

pipe will also be installed along the road within the tidal buffer zone, and is considered temporary impact. The proposed drainage system will outlet within the bank of the tidal wetland (permanent impact). There will be no impact to salt marsh or mud flat.

Required permits include a major wetland dredge and fill permit; a Section 404 General Permit (Major category); a Shoreland Permit by Notification; a Section 106 MOA was previously signed; and possibly a re-evaluation of the Categorical Exclusion.

Mitigation would be required. Because of the extensive mitigation efforts for the SML Bridge project, we are assuming the in-lieu fee would be the appropriate form of mitigation. The impacts requiring mitigation would be the permanent impacts below top of bank (188 square feet) and the historical freshwater wetland impacts (750 square feet). M. Hicks will provide more feedback on specific Army Corps mitigation requirements.

There was a request to update the Natural Heritage database review, which last occurred in 2012. The project is scheduled to advertise in September of this year. It would be constructed during the closure of the SML Bridge, a 6-month window.

Various contract phases of the 13455 project were previously reviewed on the following dates: 5/16/2007, 5/18/2011, 11/16/2011, 12/19/2012, 6/20/2012

Loudon, 40078, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehabilitate the bridge that carries NH Route 106 over Gues Meadow Brook (Bridge 137/132). The existing structure is a double barrel pipe bridge with a masonry headwalls and wingwalls. The structure length is 14'-6" and the width is 54'-0". The SE masonry wingwall is leaning in towards the brook and is in danger of collapse. The purpose of this project is to replace the masonry wingwall with a concrete wingwall. The structure will be stabilized with riprap.

Carol Henderson asked when the project would take place and T. Weatherbee said that it would take place in October. C. Henderson asked that rip rap be minimized.

Lori Sommer said that no mitigation would be required.

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

Peterborough, 40082, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehabilitate the bridge that carries NH Route 136 over Bogle Brook (Bridge 121/127). The existing structure is a masonry arch bridge with a 17' span and is 27'-0" wide. The structure has been widened and faced on both sides of the arch. The southeast corner of the base/wing area is undermined and needs to have a toe wall installed to stabilize the structure. The metal pipe section has a rusted spring line and needs to have a concrete toe wall to stabilize it. Riprap will be placed in front of the toe walls to further stabilize the structure.

Lori Sommer asked if the toe wall would go the whole length of the abutment. T. Weatherbee said that it would and that it should help to facilitate critter crossing.

Mark Kern asked how old the structure was and Tony said that it was rebuilt in the 1980s.

C. Henderson asked if a cofferdam would be used and Tony said that it was likely that one would be used.

Lori Sommer asked if it passed the stream crossing rules. Tony said that the structure will pass the Q100 after the project is completed. Lori Sommer said that no mitigation would be required.

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

Rumney, 40080, Non-Federal

Tony Weatherbee provided an overview of the project. The scope of the project is to rehabilitate the bridge that carries Stinson Lake Road over Stinson Brook (Bridge 139/153). The existing structure is a concrete arch bridge with a 29' span and is 28' wide. The abutments are undermined and need toewalls installed to stabilize the structure. The purpose of this project is to stabilize the structure with the toewalls and then protect it from future undermining by installing riprap.

C. Henderson suggested that the toewalls be tapered so critters can easily crawl up on to them. Tony Weatherbee said that they will be tied into the surrounding bank so they do not create an abrupt edge.

Lori Sommer asked if the structure will pass the Q100 when the project is completed. T. Weatherbee said that it would pass the Q100 when completed.

Mark Kern asked how long the project would take to complete. T. Weatherbee said it would take a few weeks if everything goes according to plan.

C. Henderson asked when construction would take place and Tony said at the end of November.

Lori Sommer said that no mitigation would be required.

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

Portsmouth, 2015-M610-1, Non-Federal

Ralph Sanders opened the meeting by explaining that the landowner has asked the Department to install new drainage across the parking area to help with flooding and erosion issues. District Six has proposed to install a new catch basin, 15" culvert that will outlet to Sagamore Creek.

New crushed gravel may need to be placed on the parking area to provide cover over the culvert that will fall within the upland tidal buffer zone.

Lori Sommer asked if there is an existing culvert on the property in question. R. Sanders responded: yes, but did not know where the outlet is if there is one.

L. Sommer indicated that this project would likely require mitigation

R. Sanders noted that the NHB response had not been received after being submitted for 2 months.

Gino Infascelli asked if the new catch basin will pick up additional flows. R. Sanders answered with a no. R. Sanders commented that the landowner wants to connect to the culvert with another catch basin to drain another section of property. G. Infascelli and Mike Hicks from USACE said that would not be allowed.

M. Hicks indicated the project would likely be able to go as SPGP.

G. Infascelli also commented this will qualify a Major Impact and will have to be approved by Governor & Council.

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

Rye, 2015-M610-2, Non-Federal

Ralph Sanders opened the meeting by explaining a 30" RCP culvert that is located in NH Route 1A in Rye and needs to be lined because the joints of the culvert have separated. The separations of the joints cause seaweed to catch plugging the culvert and preventing the marsh to drain and flooding neighboring property. The existing culvert will be lined with a smooth liner. The liner is 3/4" wall thickness. The culvert extends 65 feet onto the shore. District 6 proposes to shorten the culvert 65' and regrade the riprap along the shore.

R. Sanders asked if a check valve system would be allowed to install on the ocean end of the culvert.

Chris Williams of NH DES Coastal Program said it would not be allowed because the marsh needed more salt water than it was currently receiving.

Mike Hicks of the USACE was okay with the proposed liner but C. Williams of NH DES Coastal Program commented that an earlier hydraulic study of the culvert revealed the culvert was under sized and C. Williams requested that the DOT complete hydraulic analysis to further analyze the effects of the proposed sliplining.

R. Sanders said that will be done.

C. Williams was also concerned with invasive species such as phragmites and thought removing some from this area could be considered mitigation.

Christine Perron indicated that was not something DOT would likely want to try and tackle as mitigation.

Matt Urban indicated that it was the Department's hope to consider this work self-mitigating if we can show via the hydraulic analysis that there will be no change and/or an improvement to the pipes ability to function hydraulically.

It was decided a follow up meeting was needed to further discuss the results of the hydraulic study.

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