STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: March 9, 2016

FROM: Melilotus M. Dube
Environmental Manager

AT (OFFICE): Department of Transportation
Bureau of Environment

SUBJECT Dredge & Fill Application
Seabrook-Hampton Falls-Hampton, 40424

TO Gino Infascelli, Public Works Permitting Officer
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Highway Design for the subject major impact project. This project is classified as major per Env-Wt 303.02(a). The project consists of pavement rehabilitation, guardrail replacement, slope stabilization and minor drainage repair on US Route 1 in the Towns of Seabrook, Hampton Falls and Hampton, NH. This work is necessary in order to increase the safety and longevity of the roadway for the traveling public.

The lead people to contact for this project are Tobey Reynolds, Highway Design (271-2171 or treynolds@dot.state.nh.us) or Meli Dube, Environmental Manager, Bureau of Environment (271-3226 or mdube@dot.state.nh.us).

This project was presented at Natural Resource Agency Meetings on October 21, 2015 and January 20, 2016, see enclosed minutes. Mitigation was discussed with Lori Sommer at the Department of Environmental Services on February 24, 2016 and will total $20,545.07, to be paid upon receipt of the permit approval notice.

A payment voucher has been processed for this application (Voucher #431368) in the amount of $10,000.00.

If and when this application meets with the approval of the Bureau, please send the permit directly to Meli Dube, Environmental Manager, Bureau of Environment.

MRU:mmd
Enclosures

cc:
BOE Original
Carol Henderson, NH Fish and Game
Michael Hicks, US Army Corps of Engineers
Maria Tur, US Fish and Wildlife Service
Mark Kern, Environmental Protection Agency
District Construction Engineer, NHDOT Bureau of Construction
Contract Administrator, NHDOT Bureau of Construction
Town of Hampton Falls (4 copies via certified mail)
Town of Hampton (4 copies via certified mail)
Edna Feighner, NH Division of Historical Resources

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

WETLANDS BUREAU PERMIT APPLICATION

for

SEABROOK-HAMPTON FALLS-HAMPTON US ROUTE 1 PAVEMENT REHABILITATION

NHDOT PROJECT NO. 40424

Prepared by: New Hampshire Department of Transportation
7 Hazen Drive
Concord, NH 03301

March 2016

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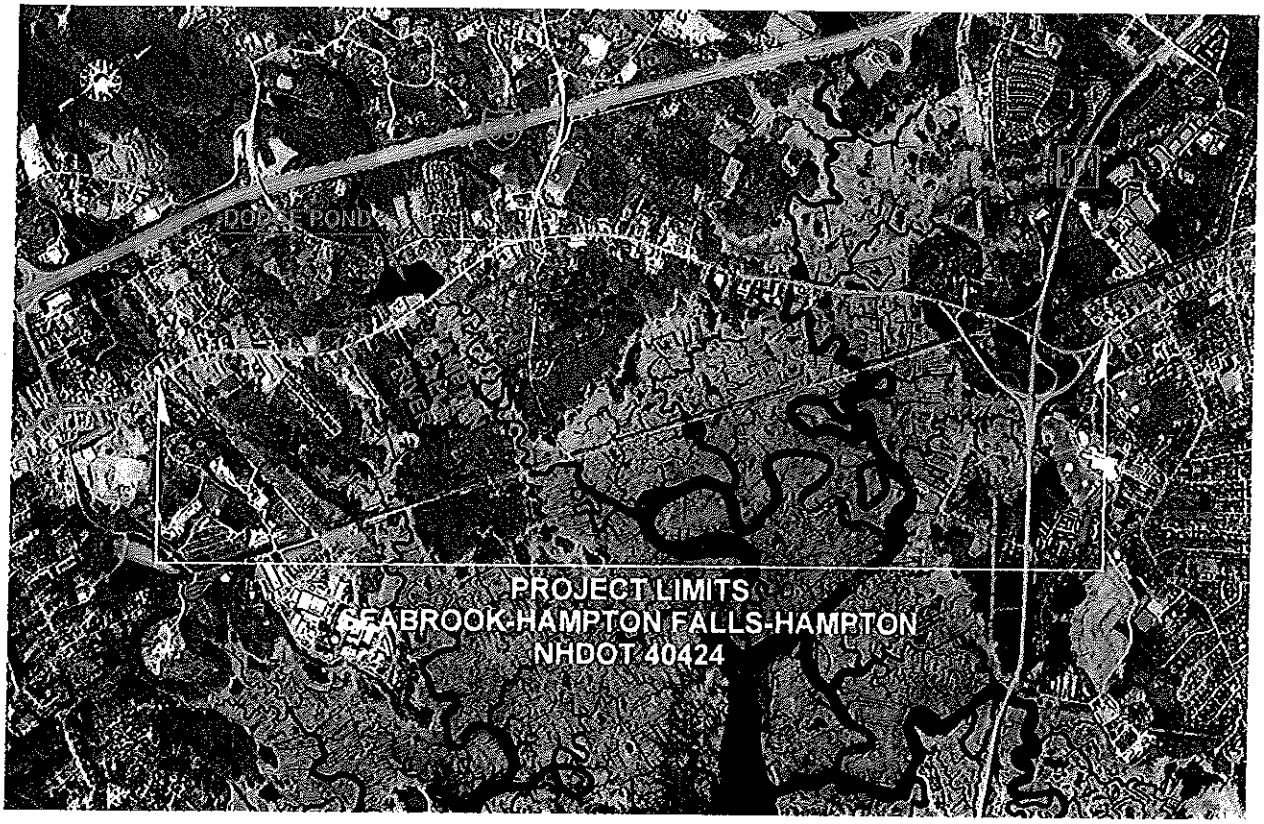
LOCATION MAP



US Route 1 Pavement Rehabilitation Seabrook-Hampton Falls-Hampton NHDOT Project No. 40424	Hoyle, Tanner & Associates, Inc.	**File Name:** 40424 Wetlands Permit	
		DATE: 1/16	

NHDES-W-06-012

WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-WT 100-900

1. REVIEW TIME:

Indicate your Review Time below. Refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact only)

2. PROJECT LOCATION:

Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **US Route 1**	TOWN/CITY: **Seabrook, Hampton Falls, & Hampton**		
TAX MAP: **Seabrook – Map 7, Hampton Falls – Maps 7, 8 & 9, Hampton – Maps 189, 202, 203, 204, 214, 215, 516, 217, 226, 227, 236**	BLOCK: **NA**	LOT: **NA**	UNIT: **NA**
USGS TOPO MAP WATERBODY NAME: **Taylor River, Hampton Falls River, Drakes River, Landing Brook** ☐ NA	STREAM WATERSHED SIZE: **0.16 sq mi Landing Brook (for the culvert impacts)** ☐ NA		
LOCATION COORDINATES (If known): **42° 54' 57.29 N 70° 51' 52.58" W** ☒ Latitude/Longitude ☐ UTM ☐ State Plane			

3. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The New Hampshire Department of Transportation is proposing to rehabilitate approximately 3.4 miles of pavement along US Route 1 beginning at Mile Marker (MM) 1.8 in Seabrook and ending at MM 5.2 in Hampton, including the US Route 1 and NH Route 101 interchange, for approximately 10 lane miles of roadway in the towns of Seabrook, Hampton Falls and Hampton.

The project will consist of the following activities: placement of a pavement overlay on the US Route 1 northbound, southbound, two-way left-turn lanes and interchange ramps; bridge deck maintenance and joint repairs; roadway safety improvements including guardrail upgrades to meet the 31" high standard and replacing cable guardrail; permanent erosion control and slope stabilization for a single slope failure; and one culvert with an inlet headwall repair and outlet headwall replacement. There will be no proposed road widening, and the pavement overlay will match the existing pavement width.

4. SHORELINE FRONTAGE

☒ NA This lot has no shoreline frontage. SHORELINE FRONTAGE:

Shoreline frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line.

5. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC...

A NHDES Shoreland Permit By Notification will be applied for concurrent to this application.

6. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:
See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: **NHB 16 - 0347 .**

b. ☐ Designated River the project is in ¼ miles of:_____ ; and
date a copy of the application was sent to Local River Advisory Committee: Month: _ Day: __ Year: _
☒ NA

7. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: (for NHDOT to provide) **Reynolds, Tobey**

TRUST / COMPANY NAME: **NH Department of Transportation** | MAILING ADDRESS: **7 Hazen Drive**

TOWN/CITY: **Concord** | STATE: **NH** | ZIP CODE:**03301**

EMAIL or FAX: **treynolds@dot.state.nh.us** | PHONE: **(603) 271-2171**

ELECTRONIC COMMUNICATION: By initialing here: TR, I hereby authorize DES to communicate all matters relative to this application electronically

8. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.:

TRUST / COMPANY NAME: | MAILING ADDRESS:

TOWN/CITY: | STATE: | ZIP CODE:

EMAIL or FAX: | PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize DES to communicate all matters relative to this application electronically

9. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: **Peace, Kimberly R.** | COMPANY NAME: **Hoyle, Tanner & Associates, Inc.**

MAILING ADDRESS: **150 Dow Street**

TOWN/CITY: **Manchester** | STATE: **NH** | ZIP CODE: **03101**

EMAIL or FAX: **kpeace@hoyletanner.com** | PHONE: **(603) 669-5555**

ELECTRONIC COMMUNICATION: By initialing here **KRP**, I hereby authorize DES to communicate all matters relative to this application electronically

10. PROPERTY OWNER SIGNATURE:
See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to be reviewed for the presence of historical/ archeological resources.
8. I authorize DES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of DES correspondence. DES will not forward returned mail.

Property Owner Signature	Print name legibly	Date
Tobey Reynolds	Tobey Reynolds	3/8/16

MUNICIPAL SIGNATURES

11. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

⇨	Print name legibly	Date

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

12. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

⇨ Town/City Clerk Signature	Print name legibly	Town/City	Date

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

13. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland	-	☐ ATF	-	☐ ATF
Scrub-shrub wetland	-	☐ ATF	-	☐ ATF
Emergent wetland	-	☐ ATF	**109**	☐ ATF
Wet meadow	-	☐ ATF	-	☐ ATF
Intermittent stream	-	☐ ATF	-	☐ ATF
Perennial Stream / River		☐ ATF		☐ ATF
Lake / Pond	- / -	☐ ATF	- / -	☐ ATF
Bank - Intermittent stream	- / -	☐ ATF	- / -	☐ ATF
Bank - Perennial stream / River		☐ ATF		☐ ATF
Bank - Lake / Pond	- / -	☐ ATF	- / -	☐ ATF
Tidal water	- / -	☐ ATF	- / -	☐ ATF
Salt marsh	-	☐ ATF	-	☐ ATF
Sand dune	-	☐ ATF	-	☐ ATF
Prime wetland	**2,128**	☐ ATF	**17,643**	☐ ATF
Prime wetland buffer	**23,517**	☐ ATF	**407,887**	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	-	☐ ATF		☐ ATF
Previously-developed upland in TBZ	**23**	☐ ATF	**1,217**	☐ ATF
Docking - Lake / Pond	-	☐ ATF	-	☐ ATF
Docking - River	-	☐ ATF	-	☐ ATF
Docking - Tidal Water	-	☐ ATF	-	☐ ATF
TOTAL	**25,668 / -**		**426,856 / -**	

14. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☒ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking)	**452,524** sq. ft.	X	$0.20 =	**$ 90,504.80**
Temporary (seasonal) docking structure:	**0** sq. ft.	X	$1.00 =	**$ 0**
Permanent docking structure:	**0** sq. ft.	X	$2.00 =	**$ 0**
Projects proposing shoreline structures (including docks) add $200 =				**$ 0**
Total =				**$ 90,504.80**
The Application Fee is the above calculated Total or $200, whichever is greater =				**$ 10,000.00 (NHDOT cap)**

WETLANDS PERMIT APPLICATION - ATTACHMENT A
MINOR & MAJOR 20 QUESTIONS

Water Division/ Wetlands Bureau/ Land Resources Management
Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The New Hampshire Department of Transportation is proposing to rehabilitate approximately 3.4 miles of pavement along US Route 1 beginning at Mile Marker (MM) 1.8 in Seabrook and ending at MM 5.2 in Hampton, including the US Route 1 and NH Route 101 interchange, for approximately 10 lane miles of roadway in the towns of Seabrook, Hampton Falls and Hampton.

The need for this project is to increase the stability, safety and functional lifespan of the existing roadway and appurtenances in order to provide a safer environment for the traveling public. The primary intention of this work is to apply a pavement preservation treatment. Guardrail replacement and/or extension and minor drainage work is also necessary to ensure that structures meet the most current safety standards and will not contribute to the deterioration of the roadway or the sensitive environment in this areas.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The project has been designed to avoid and minimize wetland impacts to the maximum extent practicable. The proposed work is needed to provide for a safe and sustainable road in this location. The project is limited only to those repairs and temporary erosion controls that are required in order to meet the project need.

3. The type and classification of the wetlands involved.

The project area includes temporary and permanent impacts to the following wetlands or their buffers, moving south to north through the project area, as depicted on the project plan. Note that the wetlands below, with the exception of the PEM1B* located at the US Route 1/US Route 101 Interchange, are classified as Prime Wetlands and are therefore tallied together under "Prime Wetland" in the Impact Area table (#13 of the Standard Dredge and Fill Application).

<u>Dodge Pond and associated wetlands:</u>
PUB1,2: Palustrine Unconsolidated Bottom Cobble Gravel, Sand
PEM1E: Palustrine Emergent Persistent Seasonally Flooded/Saturated
BANK

<u>Hampton Falls River and associated wetlands:</u>
E1UB1,2: Estuarine Subtidal Unconsolidated Bottom Cobble Gravel, Sand
E2US1,2: Estuarine Intertidal Unconsolidated Shore Cobble Gravel, Sand
E2EM1N: Estuarine Intertidal Emergent Persistent Regularly Flooded
E2EM1P: Estuarine Intertidal Emergent Persistent Irregularly Flooded

<u>Taylor and Drakes River and associated wetlands:</u>
E2EM1P: Estuarine Intertidal Emergent Persistent Irregularly Flooded
E2EM1N: Estuarine Intertidal Emergent Persistent Regularly Flooded
E2US1,2: Estuarine Intertidal Unconsolidated Shore Cobble Gravel, Sand
E1UB1,2: Estuarine Subtidal Unconsolidated Bottom Cobble Gravel, Sand

<u>Wetlands within US Route 1/US Route 101 Interchange:</u>
PEM1B: Palustrine Emergent Persistent Saturated*

<u>Landing Brook:</u>
R2UB1,2S Riverine Lower Perennial Unconsolidated Bottom Cobble-Gravel/Sand Temporary-Tidal
BANK
E1UB1,2: Estuarine Subtidal Unconsolidated Bottom Cobble-Gravel, Sand
E2EM1N: Estuarine Intertidal Emergent Persistent Regularly Flooded

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

It is anticipated that there will be no negative impact to the nearby wetlands and surface waters. Upstream and downstream wetlands will not be affected by this project. The majority of the impacts shown on the wetland plans are to previously disturbed prime wetland and tidal buffer zones and do not constitute any work within actual surface waters or wet areas. All appropriate erosion and sediment control BMPs shall be used for the duration of the project in areas of ground disturbance adjacent to or within wetlands.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

The wetlands associated with the Hampton Falls River, the Taylor River, Drakes River are tidally influenced, but are not rare in this coastal area of New Hampshire. The Taylor and Drake River areas are identified as Highest Ranked Habitat by the NH Wildlife Action Plan (2016) for their connection to and association with estuarine wildlife. The project will not lead to nor cause degradation to these wetlands.

6. The surface area of the wetlands that will be impacted.

The project will permanently impact 25,668 sq ft and temporarily impact 426,856 sq ft of jurisdictional resources as follows:

Permanent impacts to prime wetland: 2,128 sq ft
Temporary impacts to prime wetland: 17,643 sq ft
Permanent impacts to the prime wetland buffer: 23,517 sq ft
Temporary impacts to the prime wetland buffer: 407,887 sq ft
Permanent impacts to the previously developed upland in the tidal buffer zone: 23 sq ft
Temporary impacts to the previously developed upland in the tidal buffer zone: 1,217 sq ft
Temporary impacts to the emergent wetland (not within prime, prime buffer or tidal buffer zones) within the US1/NH101 interchange: 109 sq ft

7. The impact on plants, fish and wildlife including, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

The project area has been reviewed by the NH Natural Heritage Bureau (NHNHB) and the US Fish and Wildlife Service (USFWS).

a. **There are no rare species or species of special concern within the project area.**
b. **The USFWS Information for Planning and Conservation tool (Consultation Code 05E1NE00-2016-SLI-0843) identified the northern long-eared bat (NLEB) and the red knot, both federally threatened species, as having potential to be present in the project area. The USFWS Section 7 Online Review Tool indicated that no specific red knot habitat is present in the project area and there will be no impacts to this species as a result of the proposed work. See the attached Section 7 Online Review Tool "No Species Present" letter elsewhere in this application package. The project is being reviewed for potential impacts to NLEB due to required tree clearing during the summer roosting season. All necessary USFWS consultation will be completed prior to the start of work and agreed upon conservation measures maintained throughout construction. The NHNHB identified records of seven state endangered plant species within the project area including the dwarf glasswort, great bur-reed, one-glumed spikesedge, saltmarsh agalinis, slender blue iris, stout dotted smartweed and yellow thistle. Coordination with NHNHB indicated there are no concerns for impacts to dwarf glasswort, great bur-reed, one-glumed spikesedge, stout dotted smartweed and yellow thistle. Due to the historic presence and favorable habitat conditions of slender blue iris within the wetland ditch at Wetland Impact Location U, a survey shall take place prior to work in this area and subsequent coordination with NHNHB completed to avoid impacts to this species. Additionally, all work at the Landing Brook culvert inlet and outlet will be limited to those areas shown on the plans in order to avoid impacts to saltmarsh agalinis.**
c. **There are no species at the extremities of their ranges within the project area.**
d. **No migratory fish or wildlife will be impacted by the proposed work.**
e. **NHNHB identified five exemplary natural communities within the project area including brackish marsh, high salt marsh, low salt marsh, salt marsh system, subtidal system. Coordination with NHNHB indicated that while there are no direct impacts to these exemplary natural communities, it is recommended that areas requiring stabilization utilize weed-free mulch and native, non-aggressive seed.**
f. **There are no vernal pools within the project area.**

8. The impact of the proposed project on public commerce, navigation and recreation.

The project will have no effect on public commerce or recreation and will improve the ability for the public to navigate safely through this portion of New Hampshire.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will cause no interference with aesthetic interests of the public. There will be no change to the roadway alignment or permanent structures along the roadway except for guardrail work.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will cause no interference with the public rights of passage or access within Dodge Pond, Hampton Falls River, Taylor River, Drake's River or Landing Brook.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The proposed project will cause no adverse effects to upstream or downstream abutters.

12. The benefit of a project to the health, safety, and well being of the general public.

The project will benefit the public health, safety and well being by repairing the US Route 1 roadway surface and improving safety as a result of replacing guardrail and bridge maintenance.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

Upon completion of the project, the project will cause no adverse effects on the quality or quantity of surface or groundwater entering or exiting the project site. There will be no change in the drainage pattern or increase in the amount of stormwater runoff entering or exiting the site.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

The project will not cause an increase in flooding, erosion or sedimentation. The existing culvert carrying Landing Brook under NH Route 101 is being repaired and slopes are being stabilized in order to improve the existing conditions.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

The project will have no effect on currents or produce adverse wave energy which may cause damage or harm.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

This is a maintenance project and all impacts will be within previously disturbed and filled areas. Additionally, the general public does not typically propose wok similar to that carried out by the Department of Transportation, which is for the maintenance and safety of the roadway and traveling public. As such, the project will not add cumulatively to any potential future impacts.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

There will be no permanent impact on the value and function of the wetland areas as all work will be limited to previously disturbed areas.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

No such sites are located within the project area.

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

The Taylor and Hampton Falls Rivers are not named by an act of Congress or Presidential Proclamation as a national river, national wilderness area, or national lakeshore area.

20. The degree to which a project redirects water from one watershed to another.

The project does not redirect water from one watershed area to another.

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Seabrook-Hampton Falls-Hampton, US Route 1 Pavement Rehabilitation
NHDOT Project No. 40424

Env-Wt 904.06 Repair or Rehabilitation of Tier 1 or Tier 2 Existing Legal Crossings

- In order to qualify under this section, the crossing cannot have a history of causing or contributing to flooding that damages the crossing or other infrastructure. Does the crossing have a history of flooding?

  No

- Repair or rehabilitation pursuant to this section may be accomplished by concrete repair, slip lining, cured-in-place lining, or concrete invert lining. Please describe how this applies to the subject project.

  The project includes concrete repairs to the existing headwall on the inlet and outlet of the culvert conveying Landing Brook under NH Route 101/US Route 1.

If the above criteria do not apply to this project, the crossing does not qualify under this section and must be designed according to 904.02 (Tier 1 crossings) or 904.05 (Tier 2 crossings).

If the above criteria apply to this project, please provide the following information.

The project may qualify as a **minimum** impact project if:
The crossing does not diminish the hydraulic capacity of the crossing. **No**
The crossing does not diminish the capacity of the crossing to accommodate aquatic life passage. **No**
The crossing meets the general design criteria specified in Env-Wt 904.01, as follows:

Env-Wt 904.01
(a) Not be a barrier to sediment transport;

The project includes repairing the collapsing inlet headwall wing and replacing the outlet collapsed headwall and wings of the culvert conveying Landing Brook under NH Route 101/US Route 1. The culvert currently allows for adequate sediment transport. The project will not change this, nor modify or repair the culvert pipe.

(b) Prevent the restriction of high flows and maintain existing low flows;

The culvert currently conveys high flows and maintains existing low flows. The project will not change this.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the
waterbody beyond the actual duration of construction;

The culvert currently allows for adequate movement of aquatic life indigenous to the waterbody. The project will not change this with the exception of minimal and temporary disruption during construction.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The culvert currently does not overtop banks during flood events. The project will not change this.

(e) Preserve watercourse connectivity where it currently exists;

The culvert currently preserves the connectivity of the watercourse (Landing Brook). The project will not change this.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and(2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

The culvert currently preserves the connectivity of the watercourse (Landing Brook). The project will not change this or repair the culvert pipe.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

The existing situation does not cause erosion, aggradation or scouring upstream or downstream of the crossing. The project will not change this.

(h) Not cause water quality degradation.

The project will not cause water quality degradation. The Contractor shall be responsible for implementing Erosion and Sediment control measures in accordance with the "NHDOT Guidelines for Temporary Erosion and Sediment Control and Stormwater Management", and "New Hampshire Stormwater Manual, Volume 3 Erosion and Sediment Controls during Construction" by the NHDES.

Erosion and siltation control measures will be installed by the Contractor prior to start of any work and will be maintained during the duration of the construction activities. Such details will be provided by the Contractor as part of Item 645.7, Storm Water Pollution Prevention Plan. It is the Contractor's responsibility to not cause violations of surface water quality standards.

If the project does not qualify as a minimum impact project due to reasons stated above, it may qualify as a **minor** impact project if:

The crossing does not adversely impact the stability of the stream banks or stream bed upstream or downstream of the crossing.

The project will not adversely impact the stability of the stream banks or stream bed upstream od downstream of the crossing, and will improve on existing conditions by removing stones that have fallen from the headwall into the Landing Brook, and by preventing future such impacts.

The crossing does not cause an increase in the frequency of flooding or overtopping of banks.

The culvert currently does not overtop banks during flood events. The project will not change this.

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Seabrook-Hampton Falls-Hampton, US Route 1 Pavement Rehabilitation
NHDOT Project No. 40424

Part Env-Wt 404 Criteria for Shoreline Stabilization

Env-Wt 404.01 Least Intrusive Method.

The roadway embankment stabilization treatment proposed is the least intrusive construction method necessary in order to minimize the disruption to the existing shoreline and to limit work to previously filled areas. The stone treatment can be reasonably constructed utilizing general highway construction methods and Best Management Practices for sediment and erosion control.

Env-Wt 404.02 Diversion of Water.

Because the proposed stabilization is intended to return the roadway embankment to the original condition, roadway drainage patterns will not be altered and will continue to sheetflow onto vegetated and stone slopes within the work area. The stabilization will eliminate an area of scour and erosion from the tidal current in Drake's River and decrease sedimentation of the river.

Env-Wt 404.03 Vegetative Stabilization.

Natural vegetation will be left undisturbed to the maximum extent possible. The only shoreline locations being disturbed are shown on the plans and are necessary for stabilizing the roadway embankment to eliminate further erosion of the slope and sedimentation of Drake's River. Aside from the proposed riprap for slope armoring within previously disturbed areas, all newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help to stabilize the project area.

Env-Wt 404.04 Rip-rap.

(a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structure integrity of the roadway during all flow conditions.
(b) Stone rip-rap slope stabilization adjacent to the Drakes River is proposed in order to repair the guardrail, eroded slope and scoured stream embankment. The erosion is undermining the existing guardrail shoulder, shown in the Slope Stabilization detail Sheet 4 of 26 within the Wetlands Plans. The slope stabilization will utilize NHDOT Item Number 585.2, Stone Fill Class B, with the gradation and stone sizes included in the attached. The bedding, will utilize geotextile and existing roadway fill material. This slope stabilization alternative is a repair and extension of the as-built roadway constructed in 1964, which consisted of 1.5:1 stone slope armor protection along the Taylor and Drakes Rivers. The proposed stone rip–rap is of similar size and gradation as the as-built condition. Due to geotechnical design recommendations, existing stone riprap is removed to ensure proper compaction and overlap, and extended to eliminate future erosion by flow from channels within the salt marsh flats.
(c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
(d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
(e) The total length of slope stabilization is 65 linear feet and therefore does not require a stamp from a Professional Engineer.

US Army Corps of Engineers
New England District

New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire.	X	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	1,099,096 sf	
2.7 What is the size of the proposed impervious surface area?	1,099,096 sf	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	92%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)	X	
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.	X	

3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?	X	
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
5. Historic/Archaeological Resources		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Seabrook-Hampton Falls-Hampton, US Route 1 Pavement Rehabilitation
NHDOT Project No. 40424

U.S. Army Corps of Engineers NHPGP Appendix B Explanations For Checklist Answers

1.1 Almost the entire project is located within either the 1-mile buffer of the Taylor River or the Hampton Falls River. Per the Draft 2014 305(b)/303(d) Surface Water Assessment, both rivers are impaired as follows: marginally impaired (TMDL needed) for fish consumption due to atmospheric deposition of mercury, and PCBs from an unknown source; marginally impaired (TMDL needed) for shellfishing due to dioxins from an unknown source, mercury from atmospheric deposition, and PCBs from unknown sources; and severely impaired (TMDL completed) for shellfishing due to fecal coliform from unknown sources. The project has been designed to not add to these impairments, and will slightly improve project drainage conditions at the outlet on Landing Brook.

2.1 The project is located within the 200-feet of the following waterbodies jurisdictional to USACOE: Dodge Pond, an impoundment of the Hampton Falls River; the Taylor River; Drakes River; and Landing Brook.

2.2 This project passes through a salt marsh system, which is considered to be a Special Aquatic Site according to the US Army Corps of Engineers. However, all impacts to the salt marsh will remain within previously disturbed areas and are therefore allowed under the NH State Programmatic General Permit. Subtidal and intertidal systems are also present in the project area but will not be subject to any permanent impact. The NH Natural Heritage Bureau and US Fish and Wildlife Service have been consulted, see attached correspondence elsewhere in this application package.

2.3 The intent of this project is to address deficiencies in US Route 1, including one culvert with an inlet headwall repair and outlet headwall replacement crossing Landing Brook. The existing culvert dimensions, hydrology and aesthetics would be maintained; the culvert currently does not affect sediment transport & wildlife passage.

2.4 There will be temporary and permanent impacts to vegetation within the identified riparian areas to allow for ingress/egress of project contractors to work areas, guardrail replacement and slope stabilization. All areas of impact have been minimized to the extent practicable and are unavoidable in order to meet the project purpose and need. Temporary impact will be restored in place.

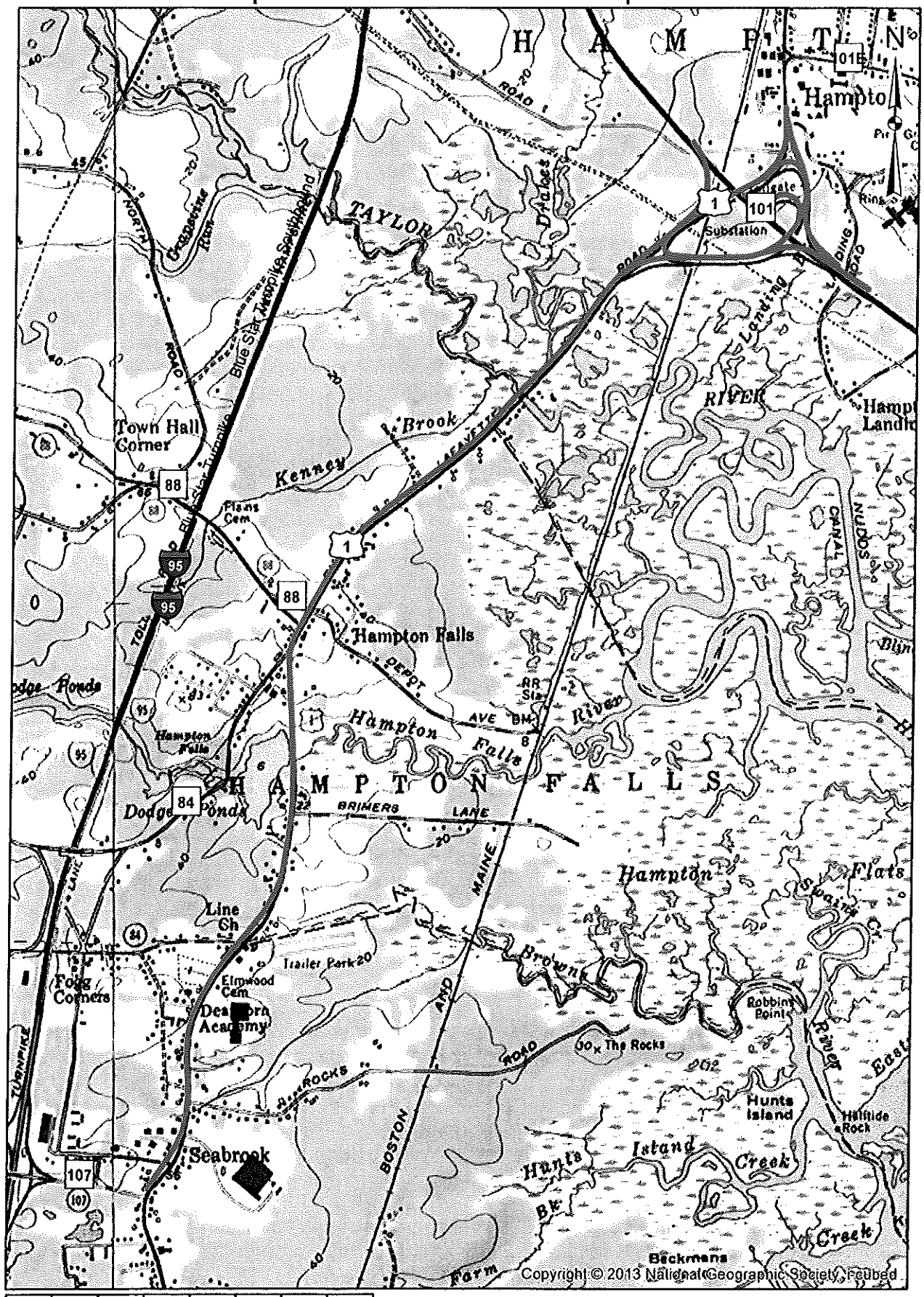
3.1 Please refer to the answers for 2.2 above.

3.2 The Taylor and Drakes Rivers and associated wetlands areas are identified as Highest Ranked Habitat in NH. The project has been designed to minimize impact to the extent that this classification will not be revised.

4.1 and 4.2 The project is located within the 100-year floodplain of the Hampton Falls River, the Taylor River, Drakes River and Landing Brook. The project will not place permanent fill in the floodplain, and there will be no loss of flood storage.

5.0 A Request for Project Review (RPR) Form was prepared and submitted to the NH Division of Historical Resources as required on December 4, 2015. A "No Historic Properties Affected" memo was issued for the project and signed into effect by FHWA and SHPO on January 28, 2016 (attached).

Seabrook-Hampton 40424 Location Map



Memo

NH Natural Heritage Bureau
NHB Datacheck Results Letter

To: Melilotus Dube, New Hampshire Department of Transportation
7 Hazen Drive
Concord, NH 03301

From: Amy Lamb, NH Natural Heritage Bureau
Date: 2/5/2016 (valid for one year from this date)
Re: Review by NH Natural Heritage Bureau
NHB File ID: NHB16-0347 Town: Seabrook, Hampton Falls, Hampton Location: US Route 1 from the intersection of New Zealand Rd in Seabrook to the NH Route 101 Interchange in Hampton

Description: NHDOT Seabrook-Hampton Falls-Hampton 40424, previously NHB15-3132. The primary scope involves pavement rehabilitation including 0.75" overlay and 1.5" inlay. Existing drainage grates and curbing will be reset accordingly. Guardrail will be repaired, replaced and extended where necessary. Guardrail work along the saltmarsh associated with Drakes River will require roadway embankment stabilization via placement of stone riprap to reclaim the previously constructed bank which was eroded away. Additional drainage work includes headwall repair and replacement at one location and installation of a new catch basin at one location in the NH Route 101 interchange. Work will also include minor bridge repairs at the Hampton Falls River and Taylor River bridges. Work at Hampton Falls River bridge will include partial to full depth deck repair and patching spalled concrete on the abutments. Work at the Taylor River bridge will include partial to full depth deck repair. There will be no widening of the roadway.

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: The original NHB memo for this project included only 2 rare plant species; due to the updated scope of work, we are now including 7 rare plant species (9 records) and the salt marsh communities/systems associated with the Taylor River / Hampton Harbor. The plants included are all located in areas where work will be done to bridges and culverts. Surveys to flag out rare plants may be warranted in areas where there will be impacts beyond the existing roadway. Please provide plans, when available, detailing proposed impact areas associated with bridges/culverts.

Natural Community	State[1]	Federal	Notes
Brackish marsh	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.
High salt marsh	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.
Low salt marsh	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland

			(such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.
Salt marsh system	--	--	Threats are primarily changes to the hydrology of the system, introduction of invasive species, and increased input of nutrients and pollutants.
Subtidal system	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as alterations that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.

Plant species	**State**[1]	**Federal**	**Notes**
Dwarf Glasswort (*Salicornia bigelovii*)	E	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
great bur-reed (*Sparganium eurycarpum*)*	T	--	Threats to aquatic species include changes in water quality, e.g., due to pollution and stormwater runoff, and significant changes in water level.
one-glumed spikesedge (*Eleocharis uniglumis*)*	T	--	Threats are primarily alterations to the hydrology of the wetland, such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat, activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
saltmarsh agalinis (*Agalinis maritima*)	E	--	A wildflower that grows in very shallow, briefly flooded forb pannes in the high salt marsh. Threats are primarily alterations to the hydrology of the wetland (such as ditching or tidal restrictions that might affect the sheet flow of tidal waters across the intertidal flat), activities that eliminate plants, and increased input of nutrients and pollutants in storm runoff.
slender blue iris (*Iris prismatica*)	E	--	Since this plant grows at wetland edges (marshes, wet meadows, seashore), it would be threatened by changes in local water levels or shoreside development.
stout dotted smartweed (*Persicaria robustior*)*	E	--	Threats include changes to local hydrology that would affect its habitat. It grows on river or streambanks, pond or lake shores, and in forested swamps.
Yellow Thistle (*Cirsium horridulum*)*	E	--	This species usually occurs on uplands adjacent to salt marshes and is threatened by habitat loss due to development.

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

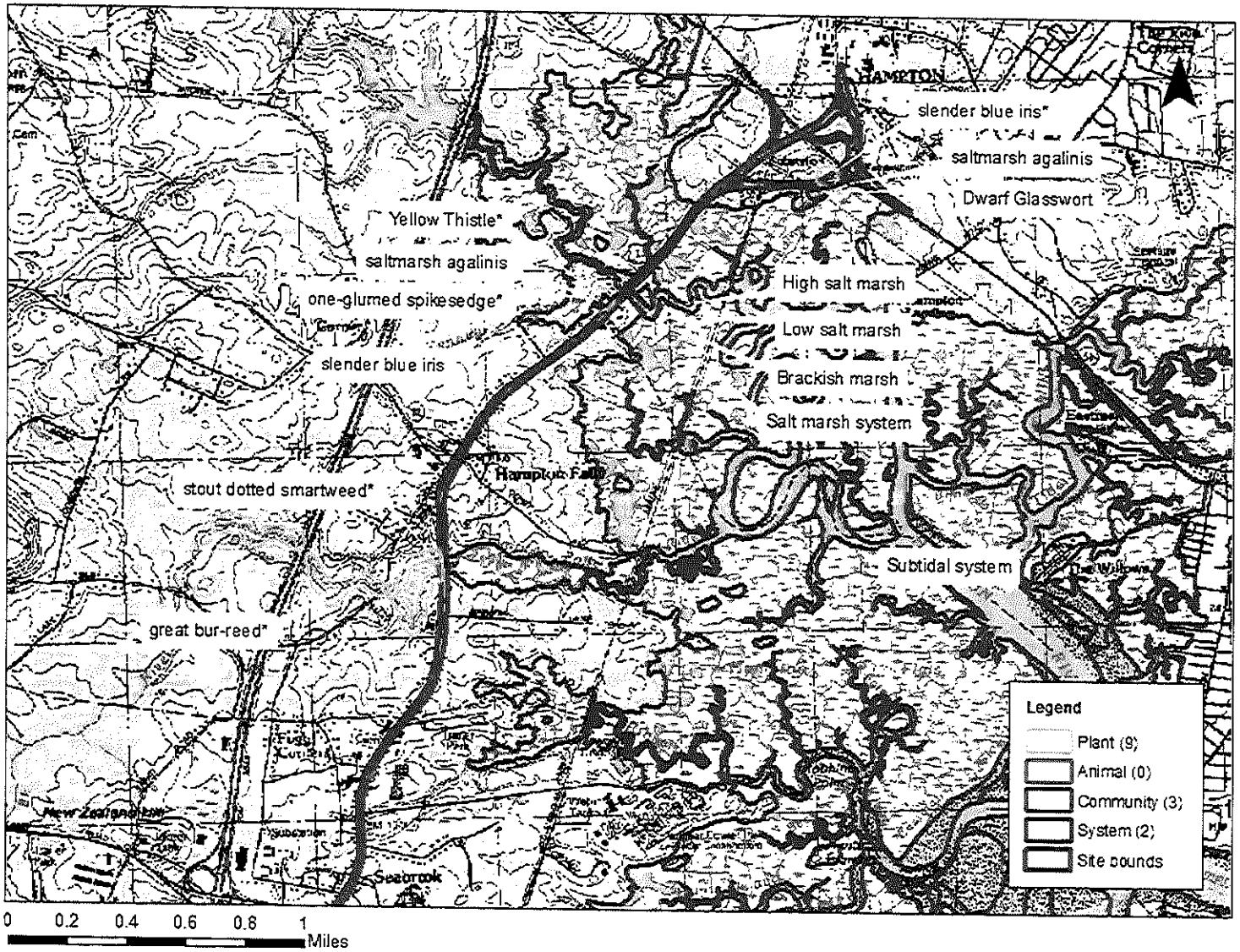
NH NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Department of Resources and Economic Development
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DRED/NHB
172 Pembroke Rd.
Concord, NH 03301

NHB16-0347


HAMPTON
slender blue ins*
saltmarsh agalinis
Dwarf Glasswort
Yellow Thistle*
saltmarsh agalinis
one-glumed spikesedge*
slender blue iris
High salt marsh
Low salt marsh
Brackish marsh
Salt marsh system
stout dotted smartweed*
Subtidal system
great bur-reed*
Legend
Plant (9)
Animal (0)
Community (3)
System (2)
Site bounds
0 0.2 0.4 0.6 0.8 1
Miles

New Hampshire Natural Heritage Bureau - Community Record

Brackish marsh

Legal Status	Conservation Status
Federal: Not listed	Global: Not ranked (need more information)
State: Not listed	State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Good quality, condition and landscape context ('B' on a scale of A-D).

Comments on Rank: Rank is for largest area visited (Taylor River). Others were B- (three sites) or C (Seabrook Salt Marsh).

Detailed Description: 1997: A characteristic mix of graminoids includes *Agrostis stolonifera* var. *palustris* (marsh creeping bent-grass), *Spartina patens* (salt-meadow cord-grass), *Juncus gerardii* (salt marsh rush), *Solidago sempervirens* (seaside goldenrod), *Distichlis spicata* (spike-grass), *Juncus arcticus* var. *littoralis* (shore rush), *Elytrigia repens* (quack-grass), *Spartina pectinata* (fresh-water cord-grass, slough-grass), *Carex paleacea* (chaffy salt sedge), *Hierochloe odorata* (sweet grass), *Aster novi-belgii* (New York aster), *Scirpus pungens* (three-square rush), and several other less frequent species. At the Seabrook School area, ephemeral runoff channel/stream entering from west; area dominated by *Lythrum salicaria* (purple loosestrife). Small elevated knoll in middle with *Quercus bicolor* (swamp white oak), *Toxicodendron radicans* (climbing poison ivy), and *Rosa virginiana* (Virginia rose).

General Area: 1997: The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Exemplary subtidal communities are ***tidal creek bottom*** and undifferentiated ***saline/brackish subtidal channel/bay bottom***. Exemplary intertidal communities are ***brackish marsh***, ***coastal shoreline strand/swale***, ***saline/brackish intertidal flat***, and high and ***low salt marsh***. Exemplary dry Appalachian oak-hickory forest occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments: 1997: Tidally flooded by salt water only during spring tides and storm surges. Supports a greater diversity of plants and generally flooded less frequently than the robust forb brackish marsh. Elevationally higher, received more freshwater input, and experienced less frequent tidal flooding than the high salt marsh. Occasionally occurs along the upper margins of the high salt marsh where sufficient fresh water runoff or groundwater discharge flows onto the marsh surface. This hydrologic regime supports brackish marsh species and other species most often found in fresh or salt marshes but tolerant of brackish conditions and able to successfully compete in this environment.

Management Comments:

Location

Survey Site Name: Hampton Harbor

Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham

Town(s): Hampton
Size: 3431.4 acres Elevation: 5 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. 1997: Five areas visited. Wrights Island (park at Seabrook Sewage Treatment Plant), Farm Brook (drive to east end of Depot Road and park in lot), two areas at Seabrook School Salt Marsh (park behind the Seabrook Elementary/Middle School off of Walton Road), and Taylor River (along the northern portions of the Taylor River Estuary from Drakes Creek to Tide Mill Creek).

Dates documented

First reported: 1997-07-05 Last reported: 1997-10-06

New Hampshire Natural Heritage Bureau - Community Record

High salt marsh

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Excellent quality, condition and landscape context ('A' on a scale of A-D).

Comments on Rank: These ranks are for the entire estuary.

Detailed Description: 2007: Community observed and photographed. 2006: Community observed and photographed. 1997: In addition to *Spartina patens* (salt meadow cordgrass) and *Juncus gerardii* (salt marsh rush), other common plants on the high marsh included smooth cordgrass (short form) and *Distichlis spicata* (spike-grass). *D. spicata* formed pure stands in wetter, more poorly drained areas, or mixed with *S. patens*, growing at similar elevations on the high marsh. *J. gerardii* dominated landward of salt meadow-grass in narrow vegetative zones with decreased tidal flooding and soil water salinity, beginning at about mean spring high water. This zone had the highest species richness within the high marsh and included *Solidago sempervirens* (seaside goldenrod), *Panicum virgatum* (switch-grass), *Hierochloe odorata* (sweet grass), *Carex hormathodes* (necklace sedge), *Festuca rubra* (red fescue), *Aster novi-belgii* (New York aster), *Elytrigia repens* (quack-grass), *Spartina pectinata* (freshwater cordgrass), and *Potentilla anserina* (silverweed).

General Area: 2007: Mostly borders a fringe of low salt marsh seaward, but occasionally transitions directly to ***intertidal flat*** and/or **subtidal system**. Borders upland forest and developed areas landward, as well as occasional patches of ***brackish marsh*** and **coastal sand dune system**. 1997: At Hampton Harbor, the mean tidal range is 8.3 feet with spring tides averaging 9.5 feet. Here, the high marsh rises from ca. 4 feet above mean sea level at its lower end to 5 feet above mean sea level at the landward limit of the salt marsh rush zone. The Blackwater - Hampton River Estuary contains the majority of the estimated 6,200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Subtidal communities include the undifferentiated ***saline/brackish subtidal channel/bay bottom*** and ***tidal creek bottom***. Other intertidal communities are ***brackish marsh***, ***coastal shoreline strand/swale***, ***saline/brackish intertidal flat***, and ***low salt marsh***. Exemplary ***dry Appalachian oak-hickory forest*** occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994).

General Comments:

Management Comments: 1997: Marsh ditched heavily; greenhead boxes present. In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

Location

Survey Site Name: Hampton Harbor

Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham

Town(s): Hampton

Size: 3431.4 acres Elevation: 4 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. Occurs behind barrier beaches, along inland bays, and other areas protected from high-energy wave action.

Dates documented

First reported:	1997-07-05	Last reported:	2006-08-17

New Hampshire Natural Heritage Bureau - Community Record

Low salt marsh

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank: These ranks are for the entire estuary.

Detailed Description: 1997: Community mostly occurs as a fringe around the seaward edge of the much more extensive ***high salt marsh***.

General Area: 1997: The Blackwater - Hampton River Estuary contains the majority of the estimated 6200 acres of salt marsh in the state. The Blackwater River portion of the estuary continues south into Salisbury, MA. The estuarine system extends seaward to an imaginary line drawn across Hampton Harbor Inlet and upstream and landward to where ocean-derived salts are less than or equal to 0.5 parts per thousand during the period of average annual low freshwater flow (Cowardin et al. 1979). This estuary is surrounded by moderate levels of residential and commercial development. Several exemplary subtidal and intertidal communities occur in this estuary. Subtidal communities include the undifferentiated ***saline/brackish subtidal channel/bay bottom*** and ***tidal creek bottom***. Other intertidal communities are ***brackish marsh***, ***coastal shoreline strand/swale***, ***saline/brackish intertidal flat***, and ***high salt marsh***. Exemplary dry Appalachian oak-hickory forest occurs at the site as "salt marsh islands", forested uplands surrounded by salt marsh. Most of the estuary is unaffected by restricted tidal flow. Other areas are described as having an adequate tidal inlet by the USDA Soil Conservation Service (1994). The largest portions of the estuary determined to have inadequate tidal inlets include the Meadow Pond area, the Taylor River - Drakes River area west of the rail road track, and the Browns River west of the rail road track (USDA Soil Conservation Service 1994). In the last four years, several salt marsh restoration projects have begun in this estuary (Ammann, A.P. pers. comm., 1997).

General Comments:
Management Comments:

Location

Survey Site Name: Hampton Harbor
Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham
Town(s): Hampton
Size: 3431.4 acres Elevation: 4 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Large area more or less framed by Rte. 1 to the west, Rte. 101 to the north, Rte. 1A to the east, and the Massachusetts state line to the south. Occurs behind barrier beaches, along inland bays, and other areas protected from high-energy wave action.

Dates documented

First reported: 1997-07-05 Last reported: 1997-10-08

New Hampshire Natural Heritage Bureau - System Record

Salt marsh system

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Fair quality, condition and/or landscape context ('C' on a scale of A-D).

Comments on Rank: Component communities are in fair condition. 2007 (A): Largest estuarine system in the state.

Detailed Description: 2013, 2012, 2011: This system supports an expected array of estuarine communities, all in fair condition. The marsh has a history of ditching (New Hampshire's salt marshes were ditched in an effort to control salt marsh mosquitoes and to improve salt marsh hay production). Brackish marshes have occasionally formed along the upland edge where wetlands and streams landward of the salt marsh drain freshwater onto the marsh. Several rare (S1 &2) and uncommon (S3) plant species have been documented in the marsh over the years. Surveys in 2011 and 2012 documented new occurrences of saltmarsh agalinis (*Agalinis maritima*), sea-milkwort (*Lysimachia maritima*), beach umbrella sedge (*Cyperus filicinus*), seaside crowfoot (*Ranunculus cymbalaria*), and many-seeded plantain (*Plantago intermedia*).2007: Photographs taken, from the air and the ground.1997: Dominated by ***high salt marsh*** with narrow fringes and patches of ***low salt marsh***, bordered in places by ***brackish marsh*** and with scattered ***salt pannes and pools*** throughout. This system contains the majority of the estimated 6,200 acres of salt marsh in the state. Most of the estuary has unrestricted tidal flow.

General Area: 2013: The system is bounded by heavy residential development on its east side. Elsewhere, it borders residential and commercial development or forest buffer.2007: Mostly borders **intertidal system** and **subtidal system** below, and upland forests and developed areas above. Also borders **coastal sand dune system** at The Sands. Includes several islands with ***dry Appalachian oak forest*** within.

General Comments:

Management Comments: 2013: Some stands of the invasive common reed (*Phragmites australis*) are being managed in the marsh, although resources to continue management may be nearing their end.

Location

Survey Site Name: Hampton Harbor

Managed By: ASNH to Properties, Inc. - Pelton

County: Rockingham

Town(s): Hampton

Size: 3431.4 acres Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 1997-2013: System occurs throughout the entire Hampton Marsh estuary.

Dates documented

First reported: 1997-07-05 Last reported: 2013-08-12

New Hampshire Natural Heritage Bureau - System Record

Subtidal system

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Not ranked (need more information)
State:	Not listed	State:	Rare or uncommon

Description at this Location

Conservation Rank: Good quality, condition and landscape context ('B' on a scale of A-D).
Comments on Rank:

Detailed Description: A relatively short main channel to Hampton Harbor that quickly branches into large and small tributaries, including the Hampton and Blackwater rivers.
General Area: Borders ***intertidal flat*** community and **salt marsh system** landward.
General Comments:
Management Comments:

Location

Survey Site Name: Hampton Harbor
Managed By: Hampton Beach State Park

County: Rockingham
Town(s): Hampton
Size: 870.6 acres Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Subtidal creeks and bay bottoms in the Hampton Marsh estuary.

Dates documented

First reported: 1997-07-05 Last reported: 2007-10-13

New Hampshire Natural Heritage Bureau - Plant Record

Dwarf Glasswort (*Salicornia bigelovii*)

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Listed Endangered	State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank: 1997 (NR): Sub-population of a large "A-" population.

Detailed Description: 2012: Area 2: 300+ stems, < 1% cover in a 25 x 40 m area.1997: Area 1: 101-1000 fruiting ramets in a 100-1000 square meter area.

General Area: 2012: Area 2: Forb panne. Associated species include 30% cover of saltmarsh arrow-grass (*Triglochin maritima*), 2% Carolina sea-lavender (*Limonium carolinianum*), and < 1% of saltmarsh agalinis (*Agalinis maritima*) and common glasswort (*Salicornia depressa*).1997: Area 1: Salt marsh. Associated plant species include *Spartina patens* (salt-meadow cord-grass), *Spartina alterniflora* (smooth cord-grass), and Sueada linearis. *Salicornia europaea* (common glasswort) also occurs at the site.

General Comments:
Management Comments:

Location

Survey Site Name: Hampton Landing
Managed By:

County: Rockingham
Town(s): Hampton
Size: 3.0 acres Elevation: 3 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2012: Area 2: South side of intersection of Rte. 1 and Rte. 51. 1997: Area 1: From Hampton Beach head northwest on Rte 101. Take Rte 1 south and park at Marsh Lane Conservation Preserve on the west side of Rte 1. Located near the confluence of Kenney Brook and the Taylor River.

Dates documented

First reported: 1997-09-12 Last reported: 2012-07-11

New Hampshire Natural Heritage Bureau - Plant Record

great bur-reed (*Sparganium eurycarpum*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Threatened	State:	Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1984: Between 11-50 fruiting plants in 10-100 square yards of population area. Normal vigor.

General Area: 1984: Peat-muck. Inundated with water early in year. Saturated after that. Associated species include Echinochloa pungens [muricata] (cockspur grass), *Leersia oryzoides* (rice cut-grass), *Spartina pectinata* (fresh-water cord-grass, slough-grass), Scirpus americanus [pungens] x cyperinus ([hybrid] three-square rush), *Cyperus strigosus* (straw-colored umbrella-sedge), *Carex scoparia* (broom sedge), *Dulichium arundinaceum* (three-way sedge), *Sagittaria latifolia* (common arrowhead), *Pontederia cordata* (pickerel-weed), *Polygonum robustius* (robust knotweed), *Morus alba* (white mulberry), *Hypericum canadense* x H. [Triadenum] virginicum ([hybrid?] Canada and marsh St. John's-wort), *Lythrum salicaria* (purple loosestrife), *Cicuta bulbifera* (bulbiliferous water-hemlock), Lycopus sp. (water horehound), Scutellaria epilobiifolia [galericulata] (marsh skullcap), *Myosotis scorpioides* (true forget-me-not), *Sambucus canadensis* (common elderberry), Aster simplex [lanceolatus var. simplex] (tall white aster), and *Cephalanthus occidentalis* (buttonbush).

General Comments:

Management Comments: 1984: Notify Town of Hampton Falls and NH Wetlands Board that parking lot gravel is encroaching on marsh border of pond.

Location

Survey Site Name: Dodge Ponds
Managed By: John Fosss Field

County: Rockingham
Town(s): Hampton Falls
Size: 39.7 acres Elevation: 20 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Dodge Ponds, along marshy border of large and small ponds.

Dates documented

First reported: 1984-08-21 Last reported: 1984-08-21

New Hampshire Natural Heritage Bureau - Plant Record

one-glumed spikesedge (*Eleocharis uniglumis*)

Legal Status	Conservation Status
Federal: Not listed	Global: Demonstrably widespread, abundant, and secure
State: Listed Threatened	State: Imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1989: No plants seen. 1983: 51-100 plants in 1 small stand. Mostly in shade.
General Area: Saltmarsh peat and mud. Associated species:*Spartina alterniflora.*
General Comments:
Management Comments:

Location

Survey Site Name: Taylor River Thistle Meadow
Managed By: Chase Lot

County: Rockingham
Town(s): Hampton Falls
Size: 2.8 acres Elevation: 5 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: . Hampton Falls. Taylor River thistle meadow. Side of Rte. 1 saltmarsh by Kenney Brook.

Dates documented

First reported: 1983 Last reported: 1983-09-22

New Hampshire Natural Heritage Bureau - Plant Record

saltmarsh agalinis (*Agalinis maritima*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Not ranked
Comments on Rank: Sub-population of a large "A-" population.

Detailed Description: 1997: 51-100 fruiting ramets in a 1-5 square meter area.
General Area: 1997: Salt marsh. Associated plant species include *Triglochin maritimum* (arrow-grass), *Juncus gerardii* (salt marsh rush), and *Salicornia europaea* (common glasswort).
General Comments:
Management Comments:

Location

Survey Site Name: Kenney Brook
Managed By: Chase Lot

County: Rockingham
Town(s): Hampton Falls
Size: 2.8 acres Elevation: 3 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: From Hampton Beach head northwest on Rte. 101. Take Rte. 1 south and park at Marsh Lane Conservation Preserve on the west side of Rte. 1. Located near the confluence of Kenney Brook and the Taylor River.

Dates documented

First reported: 1997-09-12 Last reported: 1997-09-12

New Hampshire Natural Heritage Bureau - Plant Record

saltmarsh agalinis (*Agalinis maritima*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Demonstrably widespread, abundant, and secure
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Excellent quality, condition and landscape context ('A' on a scale of A-D).
Comments on Rank:	1997 (NR): Sub-population of a large "A-" population.
Detailed Description:	Area 2: More than 2,000 stems, in 4 pannes separated by 50-75 m: >= 200 in a 10 x 3 m panne (WP 120); >= 500 in a 40 x 25 m panne (WP 121); >= 500 in a 50 x 15 m panne (WP 122-123); and >= 1,000 ini a 12 x 50 m panne (WP 125-126).Area 3: More than 400 stems, in 3 pannes separated by about 80m: >= 100 in a 20 x 8 m pan (WP 116); >= 200 in a 15 x 7 m panne (WP 117), and >= 100 in a 20 x 4 m panne (WP 118). 1997: Area 1: 1001-10000 fruiting ramets in ca. 0.5 acres of potential habitat.
General Area:	2012: Areas 2 &rb pannes.1997: Area 1: Salt marsh. Associated plant species include *Triglochin maritimum* (arrow-grass), *Limonium carolinianum* (sea lavendar), *Spartina patens* (salt-meadow cord-grass), *Juncus gerardii* (salt marsh rush), and *Spartina alterniflora* (smooth cord-grass).
General Comments:	
Management Comments:	

Location

Survey Site Name:	Hampton Landing
Managed By:	Landing Road Marsh
County:	Rockingham
Town(s):	Hampton
Size:	3.4 acres
Elevation:	3 feet
Precision:	Within (but not necessarily restricted to) the area indicated on the map.
Directions:	2012: Area 2: South side of intersection of Rte. 1 and Rte. 51. Area 3: North end of Landing Road.1997: Area 1: From Hampton Beach head north on Rte. 101 to the Tide Mill Creek Bridge. Located in the salt marsh to the west.

Dates documented

First reported:	1997-09-12	Last reported:	2012-07-11

New Hampshire Natural Heritage Bureau - Plant Record

slender blue iris (*Iris prismatica*)

Legal Status		Conservation Status	
Federal:	Not listed	Global:	Apparently secure but with cause for concern
State:	Listed Endangered	State:	Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank:	Good quality, condition and landscape context ('B' on a scale of A-D).
Comments on Rank:	Invasion of shrub and other species.
Detailed Description:	2002: 15-20 normal plants counted. 20% in leaf, 40% in bud, 10% in flower, and 30% with immature fruit. 1989: 100-200 maturing capsules, 100-150 vegetative stems in 60-70 sq yd population area.1983: 101-1000 plants in fruit. 1982: >500 plants found in area 150 yards by 75 yards, most with maturing capsules.1876: Specimen collected.
General Area:	2002: Buckthorn thicket or Bitterweet/poison ivy patch. Associated plant species in immediate vicinity include: Buckthorn, *Viburnum recognitum, Acer rubrum* (red maple), poison ivy, goldenrod, and oriental bittersweet. Dominant species include arrowood, poison ivy, and also Japanese knotwood. Unknown date: Peaty meadow with *Vaccinium, Cirsium horridulum, Gaylussacia. Habenaria. Lacera* also found. Flat, open and wet.
General Comments:	2002: Next year check closer to the Taylor River Bridge. Date unknown: Area very interesting and presence of both *Cirsium* and *Iris* make it valuable. Population is declining.
Management Comments:	2002: Heavily threatened by invasive species. What was once a sunny, open, upland meadow is now either a buckthorn thicket, or a bittersweet/poison ivy patch. Only a few small areas still open for now.Unknown date: Serious threat to site exists due to invasion by shrubs and other species.

Location

Survey Site Name: Taylor River Thistle Meadow
Managed By: Chase Lot

County: Rockingham
Town(s): Hampton Falls
Size: 2.8 acres Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls. Taylor River Thistle Meadow. 1/8 mile south of river on west side of Rte 1.

Dates documented

First reported: 1876 Last reported: 2002-06-24

New Hampshire Natural Heritage Bureau - Plant Record

slender blue iris (*Iris prismatica*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Apparently secure but with cause for concern
State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1995: Failed to locate. 1982: 7 individuals flowering. 1938: Specimen of Chandler at MO. 1929: Specimen of Beattie at MO indicates "damp field near seashore."
General Area: Flat, open, wet area.
General Comments:
Management Comments:

Location

Survey Site Name: Hampton Ditch
Managed By:

County: Rockingham
Town(s): Hampton
Size: 2.8 acres
Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Rte. 1 at interchange with Rte. 51, roadside ditch, very close to highway. Damp field near seashore (1929).

Dates documented

First reported: 1929
Last reported: 1982-06-29

New Hampshire Natural Heritage Bureau - Plant Record

stout dotted smartweed (*Persicaria robustior*)

Legal Status	Conservation Status
Federal: Not listed	Global: Apparently secure but with cause for concern
State: Listed Endangered	State: Critically imperiled due to rarity or vulnerability

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank:

Detailed Description: 1984: 1 flowering plant. Gravel from parking lot destroyed part of site. 1983: ca. 101-1000 plants, with flowers and fruit. Fairly extensive colony on emersed pond shore, at time of low water.

General Area: 1984: Peat and muck. Associated species include *Sparganium eurycarpum* (giant bur-reed), *Cyperus strigosus* (straw-colored umbrella-sedge), *Leersia oryzoides* (rice cut-grass), and several species of Juncus (rushes). 1983: Mud and gravel on pond shore. Associated species: *Eleocharis acicularis* (least spike-rush) and a second Eleocharis species.

General Comments:
Management Comments:

Location

Survey Site Name: Dodge Ponds
Managed By:

County: Rockingham
Town(s): Hampton Falls
Size: 2.5 acres Elevation: 15 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls. Dodge Ponds. West side of Rte 1 on margin of Dodge Pond, just beyond parking area. Also on east of Lafayette Road on smaller Dodge Ponds.

Dates documented

First reported: 1983-09-21 Last reported: 1984-08-21

New Hampshire Natural Heritage Bureau - Plant Record

Yellow Thistle (*Cirsium horridulum*)

Legal Status

Federal: Not listed
State: Listed Endangered

Conservation Status

Global: Demonstrably widespread, abundant, and secure
State: Not ranked (need more information)

Description at this Location

Conservation Rank: Historical records only - current condition unknown.
Comments on Rank: Wide-spread, large area.

Detailed Description: 1989: 150-200 plants, 35 percent dispersing seed, 65 percent basal leaves only. 1982: >50 plants scattered over an area ca. 50 by 100 yards. Many plants already set seed, some flowering or in bud, some with only basal leaves, no flowering stalks. Dunlop specimen at NHA.

General Area: Peaty meadow, 0-10 feet, flat, open and wet field, also containing *Vaccinium* spp., *Gaylusaccia* spp., *Iris prismatica, Viburnum recognitum.*

General Comments: Most significant population for the coastal zone. Search greater area, may be more plants.

Management Comments:

Location

Survey Site Name: Taylor River Thistle Meadow
Managed By: Chase Lot

County: Rockingham
Town(s): Hampton Falls
Size: 2.8 acres
Elevation: 10 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Hampton Falls. Taylor River thistle meadow, one-eighth of a mile south of the river on west side of Rte 1. Scattered above high tide ditch in open areas between Rte 1, Kenney Brook and First West Road south of river.

Dates documented

First reported: 1982
Last reported: 1989-08-18

NEW HAMPSHIRE NATURAL HERITAGE BUREAU
DRED - DIVISION OF FORESTS & LANDS
172 PEMBROKE ROAD, CONCORD, NH 03301
(603) 271-2214

To: Melilotus Dube, Environmental Manager, NHDOT

From: Amy Lamb, Ecological Information Specialist, NHB

Date: March 3, 2016

Subject: NHB16-0347; Seabrook-Hampton Falls-Hampton, 40424, X-A004(397)

This memo is to summarize NHB coordination for the above referenced project, which consists of resurfacing, drainage upgrades, bridge repair, and shoulder leveling. NHB16-0347 showed the presence of 7 rare plant species (9 NHB records) in the immediate vicinity of the project area, as well as exemplary salt marsh natural communities/system and an exemplary subtidal system. NHB's concerns focused on the areas where work would be occurring beyond the existing edge of pavement. Since the rare plant records occur in close proximity to the roadway, NHB requested plans and detailed work descriptions to determine the potential for impacts to these resources.

The first location of potential concern was the bridge over the Hampton Falls River and Dodge Pond. Wetland impact plans indicated a small impact area on the southeast side of the bridge where workers would access the underside of the bridge during low tide to patch concrete on bridge abutments. On Google Earth, this appears to be adjacent to a patch of the invasive plant *Phragmites australis* and is not likely to support rare plants.

The second location is the bridge over the Taylor River. All work will be contained within the existing roadway, and concrete will be patched using a snooper truck to access beneath the bridge. NHB does not have concerns at this location.

The third location of concern is at the interchange of Routes 1 and 101, near "Ramp H" (according to wetland plans). There is a historical record for the rare plant *Iris prismatica*, which is described as being located on "Rte. 1 at interchange with Rte. 51, roadside ditch, very close to highway." Sheet 10 of 23 of the wetland impact plans shows a small wetland impact (I) in what is presumably a roadside ditch, at the precise location described above. NHB recommends a brief survey for *Iris prismatica* prior to impacting and wetlands in this area.

Work in this area also consists of proposed headwall replacement of the culvert that carries Landing Brook under Route 101. *Agalinis maritima* is known to occur in salt pannes in the vicinity of the south end of the culvert. However, work appears to be restricted to the area immediately surrounding the culvert, an area which would not support this rare plant.

NHB does not expect this project to negatively impact rare plants. This determination is contingent upon the following:

- A survey for *Iris prismatica* should be done prior to working in the area noted above;
- All work at Landing Brook should be contained within the area immediately surrounding the culvert inlet and outlet to prevent impacts to *Agalinis maritima;*
- Any soil stabilization in the vicinity of rare plants should use weed-free mulches and should use native, non-aggressive seed. Since this entire area is adjacent to exemplary salt marsh areas, these would be good practices to follow throughout the project area.

Should you have any further questions or if the project should change, please contact me at 603-271-2215 ext. 323 or at Amy.Lamb@dred.nh.gov. Thank you for coordinating with NHB.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2016-SLI-0843
Event Code: 05E1NE00-2016-E-01119
Project Name: Seabrook-Hampton Falls-Hampton 40424

January 26, 2016

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Seabrook-Hampton Falls-Hampton 40424

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 03301
(603) 223-2541
http://www.fws.gov/newengland

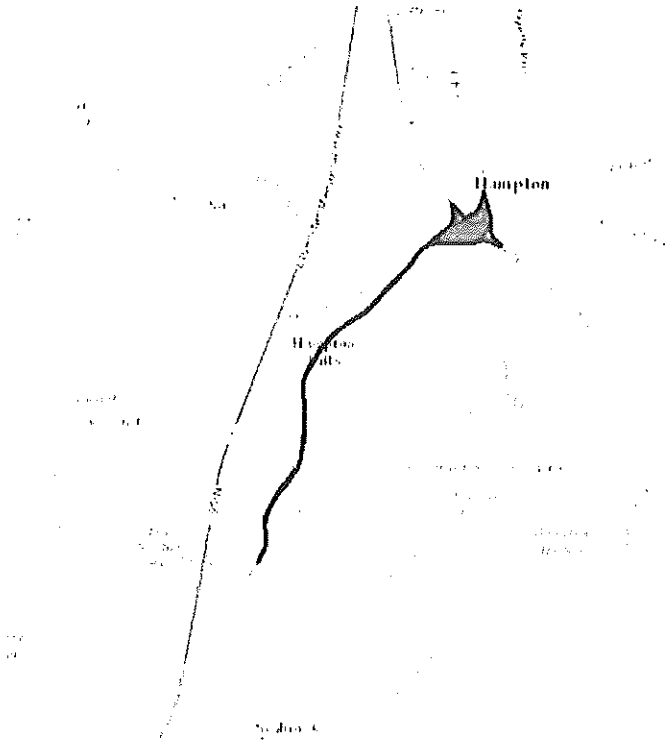
Consultation Code: 05E1NE00-2016-SLI-0843
Event Code: 05E1NE00-2016-E-01119

Project Type: TRANSPORTATION

Project Name: Seabrook-Hampton Falls-Hampton 40424
Project Description: Pavement rehabilitation on US Route 1 from New Zealand Road in Seabrook to the US Route 1/NH Route 101 interchange in Hampton. Work will also include drainage grate and curb resetting to match new pavement, guardrail updates including repair, replacement and extension. There will be some embankment stabilization adjacent to the saltmarsh required. Headwall repair and replacement will occur at one location within the US Route 1/NH Route 101 interchange.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:



Project Coordinates: The coordinates are too numerous to display here.

Project Counties: Rockingham, NH

United States Department of Interior
Fish and Wildlife Service

Project name: Seabrook-Hampton Falls-Hampton 40424

Endangered Species Act Species List

There are a total of 2 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Red Knot *(Calidris canutus rufa)*	Threatened		
Mammals			
Northern long-eared Bat *(Myotis septentrionalis)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 22, 2016

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2016)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: October 21st, 2015
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Matt Urban
Ron Crickard
Anthony Weatherbee
Mark Hemmerlien
Kerry Ryan
David Scott
Jim Kirouac
Cheryl Rasmussen
Matt Healey
Jennifer Reczek
Bob Landry
Ron Kliener
Meli Dube

Army Corps of Engineers
Micheal Hicks
Michael Wierbonks
Michael Kamnski
Chris Marron

NHDES
Gino Infascelli
Lori Sommer
(Gilford/Farmington only)
Corey Clark

NH Fish & Game
Carol Henderson

NH Natural Heritage Bureau
Amy Lamb

Stantec
Timothy Adams
Michael Hazelett

CLD
John Byatt

Town of Farmington
Dale Sprauge

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

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

Matt Urban commented that when he reviewed the plans he believed there might be opportunity to take some credit for the area directly under the bridge where impacts already exist. G. Infascelli thought this seemed possible and recommended a discussion with Lori Sommer.

Amy Lamb recommended comparing any new impact areas to the project area that was previously surveyed. If impacts are proposed outside of the original area surveyed, they should be evaluated for potential impacts to the rare roadside plants.

M. Urban clarified that the rip rap will be keyed in to the channel but will not represent a new restriction to the channel.

A discussion with Lori Sommer was held briefly during the meeting break. She asked for a set of plans to review the new impacts. L. Sommer thought that mitigation would likely be required for the new bank and channel impacts but not the other wetland impacts.

Seabrook-Hampton, 40424, X-A004(397)

Meli Dube, NHDOT, provided an overview of the project area and proposed scope of work. This project involves resurfacing US Route 1 from MM1.8 in Seabrook to MM5.2 in Hampton with potential curb and guardrail replacement, minor drainage work and minor repair work on two bridges carrying US1 over the Hampton Falls River and the Taylor River. Due to the lack of a set scope, the project was brought to the meeting for the purpose of an initial review of the sensitive resources in the area. These resources include tidal waters and tidal buffer zone, protected shoreland, rare plant species, flood zones and invasive species associated with Dodge Pond, Hampton Falls River and the Taylor River. M. Dube does not anticipate impacts to flood zones because no fill is anticipated as part of the project. M. Dube requested input on whether impacts associated with curb resetting, in kind guardrail replacement, guardrail extension, resurfacing and the bridge work within the tidal buffer zone would require a wetlands permit. Gino Infascelli , NHDES, indicated that any rail and curb work would require a permit and suggested reviewing a similar job on Interstate 95 in the Town of Hampton Falls as an example of how to permit earth disturbing work within a previously disturbed tidal buffer zone. Mike Hicks, ACOE, noted that the ACOE does not have jurisdiction in tidal uplands but that any fill below the highest observable tide line within the salt marsh would not qualify for a Standard Programmatic General Permit (SPGP) but would instead require an Individual Permit.

Jennifer Reczek, NHDOT, gave a description of the work proposed at the two bridges. The bridge over the Hampton Falls River would involve pavement and membrane removal and replacement and partial to full depth deck repair, as well as patching spalled concrete on the abutments. Work on the Taylor River bridge involves pavement and membrane removal and replacement patching and repairs to spalled concrete at the corner of the deck and abutment. Work at both structures would require access during several low tide windows to chip out the bad concrete and install the patching. Matt Urban, NHDOT, asked for confirmation that impacts associated with the bridge work constitute only temporary impacts and not permanent impacts to the wetlands. G. Infascelli agreed. M. Hicks indicated that this work would qualify under the ACOE SPGP but that there may be time of year restrictions associated with work in the channel due to conflicts with Essential Fish Habitat. Due to tidal buffer zone impacts, the permit will also need to be approved individually by the Governor and Council. M. Hicks also inquired about review of the Cultural Resources in the

area and M. Dube indicated that coordination with the BOE Cultural Resources Program is ongoing.

Amy Lamb, NHNHB, indicated that a new DataCheck review request should be submitted to include proposed bridge work and possible impacts to salt marshes, as these are exemplary natural communities. Lori Sommer, NHDES, agreed that no mitigation will be necessary for the work within jurisdictional wetland areas.

This project has not been previously reviewed at the Natural Resources Agency Meeting.

Gilford, 16297, X-A003(033)

Tobey Reynolds, NHDOT, gave a brief history of the project including a summary of the April 15, 2015 Natural Resource Agency Meeting at which a preferred alternative was decided upon for the design. The existing 9'x6' box culvert carries West Alton Brook under NH Route 11A just east of the Gilford/Alton Town line. This is a Tier 3 stream located within a 1.6 square mile watershed with associated prime wetlands. This structure was constructed in 1930, is undersized and in poor condition, which makes maintenance of the area very difficult. The chosen alternative proposes a 16' wide, 8' tall closed bottom box culvert with a 2' embedment relocated on a skew to more adequately match the natural stream channel.

Meli Dube, NHDOT, discussed two of the major remaining environmental concerns: relocation of the prime wetland boundary and mitigation for stream and bank impacts. An attempt to re-delineate the prime wetland boundary was made in 2008 based on an assessment of the functions and values of the prime wetland and a field inspection report by Gino Infascelli, NHDES. M. Dube discussed why the current prime wetland boundary does not seem accurate and why the proposed project will not negatively impact the functions and values of the prime wetland. Primarily, the existing prime wetland boundary includes the previously disturbed roadway and an area downstream from the crossing, neither of which contribute value to the wetland. Additionally, increasing the size of the culvert to be compliant with the NHDES Stream Crossing Rules (Env-Wt 900), relocating the culvert to more adequately match the natural stream, removing the existing 8" perch at the outlet and embedding the structure with natural materials to simulate the stream bottom will improve the identified functions of the wetland. L. Sommer, NHDES, agreed that all prime wetland impacts outside of the stream are temporary and therefore do not require mitigation. G. Infascelli agreed that the current prime wetland boundary is inaccurate and suggested consulted Env-Wt 700 for instructions to proceed with a re-delineation. G. Infascelli also indicated that onsite mitigation may be required for prime wetland impacts within the stream. M. Dube reminded the committee that mitigation was discussed at the April, 2015 meeting and L. Sommer had suggested salvaging acceptable vegetation for stabilizing the new bank. M. Dube used the plans to demonstrate that most of the abandoned bank and channel will be replaced with new bank and channel, which shall be appropriately constructed and stabilized using the salvaged vegetation when appropriate. L. Sommer agreed that these areas will not require mitigation, however, new plans comparing the existing and proposed OHW and TOB will be necessary to establish the length of abandoned stream that is not being replaced and will therefore require mitigation. Stantec will create these plans and M. Dube will follow up with G. Infascelli and L. Sommer. G. Infascelli

BUREAU OF ENVIRONMENT
CONFERENCE REPORT

SUBJECT: NHDOT Monthly Natural Resource Agency Coordination Meeting
DATE OF CONFERENCE: January 20, 2016
LOCATION OF CONFERENCE: John O. Morton Building
ATTENDED BY:

NHDOT
Matt Urban
Ron Crickard
Randy Talon
Kerry Ryan
Mark Hemmerlein
Marc Laurin
Charlie Blackman
Peter Salo
Maggie Baldwin
Sam Fifield
Don Lyford
John Sargent
Rebecca Martin
Tobey Reynolds
Meli Dube
Chris Carucci
Laurel Pushee
Darrell Elliott
Steven Liakos
Carol Niewola
Keith Cota

Federal Highway Administration
Jamie Sikora

Army Corps of Engineers
Michael Hicks

NHDES
Gino Infascelli
Lori Sommer

NH Fish & Game
Carol Henderson

Consultants/Public Participants

Mike Pillsbury
Christine Perron
Josh Lund
Kimberly Peace
Jason Ayotte
Thom Marshall
Vicki Chase
Jennifer Riordan
Glen Smart
John Pelletier
Sean Tiney
Richard Fixler
John Trottior
Mark Hutchins
Chris Bean
Leo Tidd

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

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

M. Baldwin stated that the wetland application will be submitted soon.
Rebecca Martin explained that a NHB search indicated that there is a record of rare wildlife, plant, and/or natural community in the vicinity, but that, according to the NHB report, it is not expected to be impacted by the proposed project. An IPaC search indicated potential presence of Canada Lynx and Northern Long-Eared Bat. As the project will not reduce habitat that would be used by the Canada Lynx, no impacts to this species are expected. R. Martin described that a Final 4(d) rules has been published for the NLEB, which goes into effect on February 16th. If the Army Corps of Engineers, the lead federal agency for this project, agrees to adopt the streamlined Section 7 consultation included in the Intra-Service Programmatic Biological Opinion (PBO) issued by USFWS, a 30 day notification process for the project could be utilized, which would allow clearing of trees outside of the Time of Year restriction. Otherwise, District will likely clear trees during the NLEB inactive season, prior to April 14th. As FHWA is not the lead agency for this project, informal consultation with USFWS will be necessary, if the streamlining procedures included in the USFWS PBO for section 7 compliance are not utilized.

Seabrook-Hampton Falls-Hampton 40424

Hoyle, Tanner and Associates (HTA) and the Department provided a project overview with plans and pictures summarizing the proposed conditions and coordination to date. This project includes rehabilitating 3.5 miles of US Route 1 beginning near the intersection of US Route 1 and Rocks Road in Seabrook and ending at the intersection of US Route 1 and Park Avenue in Hampton, NH. The project is scoped to rehabilitate the pavement including replacing in-kind guardrail and other incidental construction, as well as bridge maintenance to the bridges over Hampton Falls and Taylor Rivers. In addition, roadway embankment stabilization adjacent to the Drakes River and headwall repair/replacement and installation of a new catch basin will occur in the US Route 1/NH Route 101 Interchange will be included.

The meeting focused on identifying the wetland and shoreland impacts for the resource areas in the US Route 1 corridor. The primary concerns for the project are impacts to the tidal and prime wetland buffers near the bridges and slope stabilization adjacent to the Drakes River in Hampton. Conceptual impacts were highlighted consisting of approximately 4,400 square feet (SF) of total Wetland Impacts (2,750 SF and 1,650 SF of permanent and temporary impacts, respectively); 198,000 SF of Buffer Impacts and 1,800 SF of Protected Shoreland Impacts.

The discussion centered on the slope stabilization adjacent to the Drakes River, which will require the placement of stone riprap on the embankment between the roadway and saltmarsh due to erosion of the slope. Mike Hicks, US Army Corps of Engineers, reminded the group that any new fill in the saltmarsh in this area would require an individual permit. Meli Dube (MD), NHDOT Bureau of Environment, clarified that all fill is intended to restore the previously constructed roadway embankment to its historical dimensions and no riprap will be placed outside of previously filled areas. MD discussed previous coordination with MH on this matter. MH confirmed that as long as work remains within previously disturbed areas, this work is considered maintenance and will not require an individual permit. The Department has searched for historical as-built plans or permits for this area, however, no plan indicating the dimensions of the roadway have been found. A representative plan, based on the existing embankment on either side of eroded area, historical roadway construction practices and best engineering judgment, will be provided to ACOE along with a descriptive narrative confirming the scope of work discussed above. Lori

Sommer, NHDES, requested to see better photos to determine whether or not this work will be considered maintenance of existing infrastructure and the need for mitigation.

Bridge work on the Hampton Falls River bridge will include partial to full depth deck repairs and patching of spalled concrete on the abutments, which will require temporary impacts to the river. Bridge work on the Taylor River bridge will include partial to full depth deck repair and the use of a snooper truck to patch spalled concrete, which eliminates any wetland impacts in the river. MD confirmed with MH that it is no longer necessary to coordinate with the National Oceanic and Atmospheric Administration regarding Essential Fish Habitat due to the elimination of the work within the channel of the Taylor River. MD also indicated that the NH Natural Heritage Bureau had been contacted previously, but will be updated after the meeting with an updated scope of work.

Gino Infascelli inquired about impacts to the prime wetland buffer at the NH Route 101/US Route 1 interchange in Hampton. MD indicated that this area is completely upland and the work will be limited to resurfacing and guardrail replacement, which will have no impact on the functions and values of the designated prime wetland. GI also reminded the group that this project will be a major impact project and that the presence of prime wetland buffer zone impacts will require review by the Governor and Council, which adds to the wetland permitting time frame.

HTA indicated that there are two cemeteries within 25' of the project area, however, there is no proposed excavation in these areas and no impacts are anticipated. MD confirmed that cultural resources coordination has been completed and the NH Division of Historical Resources has issued a "No Historic Properties Affected" memo.

This project was previously reviewed at the October 21, 2015 Natural Resource Agency Meeting.

Thornton-Woodstock 40404

This project includes rehabilitating approximately 6.8 miles of Interstate 93 northbound and southbound barrels beginning at the bridge over the Pemigewasset River (State bridge #247/079 & 247/080) near the intersection Exit 29 in Thornton, NH and ending at the bridge over the Pemigewasset River (State bridge #201/068 & 202/068) north of Exit 30 in Woodstock, NH. The project is scoped to rehabilitate the pavement and replace in-kind guardrail, drainage maintenance, rock scaling and associated tree clearing, as well as bridge maintenance to the bridges over US Route 3 in Thornton, Merrill Access Road, Mirror Lake Road, and US Route 3 in Woodstock. In addition, advertisement is anticipated in November, 2016.

Hoyle, Tanner and Associates (HTA) provided a project overview with plans and pictures summarizing the proposed conditions and identifying the wetland impacts and shoreland areas. Wetland and shoreland impacts are associated with drainage maintenance work which will replace several deteriorated slope pipes as well as the headwall holding twin 72" reinforced concrete pipes which carry Leemans brook under the highway to the Pemigewasset River. Gino Infascelli, NHDES, noted that this stream crossing is located within ¼ mile of the Pemigewasset River, which is a designated river, and is therefore considered a Tier 3 stream crossing. Wetland delineations have not been completed at this time, however, estimated impacts based on initial field reviews include 500 s.f. of temporary wetland impacts and 800 s.f. of permanent wetland impacts. There are no anticipated protected shoreland impacts outside of the anticipated wetland impacts.

HTA discussed tree clearing associated with rock scaling on the cliffs adjacent to the highway. This clearing will be limited to the appropriate time of year restrictions in order to avoid impacts to

Melilotus Dube

From: Melilotus Dube
Sent: Tuesday, March 08, 2016 1:42 PM
To: 'Sommer, Lori'
Cc: Matt Urban
Subject: RE: NHDOT Seabrook-Hampton Falls-Hampton 40424 Mitigation Discussion

Lori,
The total permanent impacts directly within prime wetlands equaled 2,128 square feet. Using the online calculator for "tidal impacts" in Hampton, the mitigation for this project will be $20,545.07. The great majority of these impacts are for the slope stabilization adjacent to Drake's River.
Thank you,
Meli

From: Sommer, Lori [mailto:Lori.Sommer@des.nh.gov]
Sent: Friday, March 04, 2016 3:02 PM
To: Melilotus Dube
Cc: Kathleen Corliss
Subject: RE: NHDOT Seabrook-Hampton Falls-Hampton 40424 Mitigation Discussion

Hi Meli –
This summary is acceptable. Thanks,

Lori

From: Melilotus Dube [mailto:MDube@dot.state.nh.us]
Sent: Friday, February 26, 2016 2:03 PM
To: Sommer, Lori
Cc: Kathleen Corliss
Subject: NHDOT Seabrook-Hampton Falls-Hampton 40424 Mitigation Discussion

Good afternoon Lori,

To summarize our meeting regarding mitigation for wetland impacts associated with the Seabrook-Hampton Falls-Hampton 40424 project:

- There is no mitigation required for the impacts to the previously disturbed tidal buffer and prime wetland buffer zones associated with resurfacing, guardrail replacement and drainage grate resetting.
- There is no mitigation required for the temporary impacts to the Hampton Falls River for the purpose of providing access for workers to patch the spalled concrete on the abutments by hand.
- There is no mitigation necessary for the headwall replacement/repair on the culvert carrying Landing's Brook under NH Route 101 at the NH101/US1 interchange as this is considered to be maintenance of existing infrastructure.
- There is no mitigation required for the roadside embankment stabilization adjacent to Drake's River for the purpose of stabilizing the roadway and providing sturdy ground on which to replace the guardrail as this is considered to be maintenance of existing infrastructure provided that all fill remain within previously filled areas.
- All work that falls directly within Prime Wetland boundaries will require mitigation, which will be calculated using the NHDES online calculator as "tidal" impacts.

Thank you for your help! Please let me know if you have any additional comments or if this description does not match your understanding of our discussion on 2/24/16.

Meli

New Hampshire DOT
Department of Transportation

Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

William Cass, P.E.
Assistant Commissioner

SEABROOK-HAMPTON FALLS-HAMPTON
X-A004(397)
40424
APR 7249

No Historic Properties Affected Memo

Pursuant to the response to a Request for project review received on December 4, 2015, and for the purpose of compliance with regulations of the National Historic Preservation Act and the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the NH Division of Historical Resources (NHDHR) and the NH Division of the Federal Highway Administration (FHWA) have coordinated the identification and evaluation of historical and archaeological resources with plans resurface US Route 1 from New Zealand Road in Seabrook through the town of Hampton Falls, to the NH Route 101 interchange in Hampton. The scope of work includes inlay and overlay pavement treatments, as well as potential guardrail replacement and/or extension, curb resetting, sidewalk ramp and drainage upgrades where necessary based on the pavement recommendation. The resurfacing work extends through industrial, residential and natural areas, but will remain within the existing disturbed footprint of the roadway within State right-of-way. Parts of the proposed project corridor are designated as a scenic byway, the American Independence Byway. The proposed project is necessary to maintain the integrity of the roadway in order to extend the life of the road and maintain adequate safety for those traveling on the road. This work will not change the configuration of the roadway and not impact its aesthetic value.

Work will also include repairs on a concrete box bridge predating 1930 that carries US Route 1 over the Hampton Falls River (194/059) and a 1965 pre-stressed concrete bridge over the Taylor River (146/087). Both bridges underwent major repairs including full deck and guardrail replacement in 2003. Work will be limited to replacing modern materials in-kind and/or follow the Secretary of Interior's standards.

Historic and current topographic maps indicate two cemeteries adjacent to the project corridor on US Route 1, the Elmwood Cemetery in Seabrook, and the Shaw Cemetery in Hampton. The New Hampshire Department of Transportation's contractor will be required to contact the Department's Cultural Resources Program to arrange for an archaeologist to monitor work in this area if any excavation will occur within 25 feet of either cemetery.

In three locations along the project corridor, US Route 1 crosses the old Boston and Maine Railroad, which is part of the Eastern Railroad Linear Historic District that is eligible for listing on the National Register of Historic Places. As the roadway is built up, the corridor extends above the railroad alignment.

Based on a review pursuant to 36 CFR 800.4, we agree that there are no historic or archeological resources affected in the project area and that no further survey work is needed, unless archaeological monitoring is necessary.

In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

for Patrick Bauer, Administrator
Federal Highway Administration — Date 1/27/16

Jill Edelmann
Cultural Resources Manager — Date 1/27/2016

Concurred with by the NH State Historic Preservation Officer:

for Elizabeth H. Muzzey
State Historic Preservation Officer
NH Division of Historical Resources — Date 1-28-16

c.c. Chris St. Louis, NHDHR
Tobey Reynolds, NHDOT
Melilotus Dube, NHDOT
Jamie Sikora, FHWA

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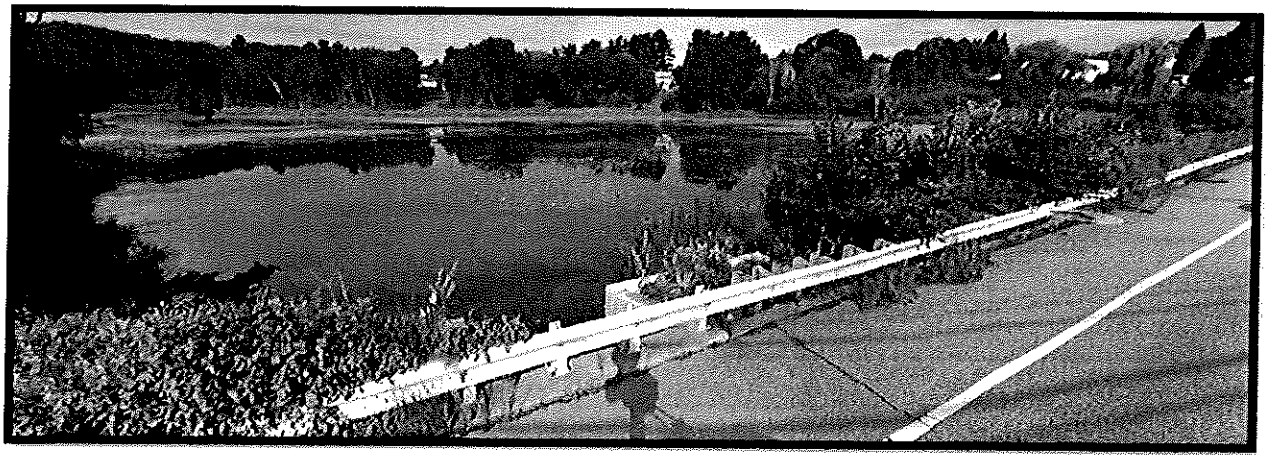
NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Seabrook-Hampton Falls-Hampton, US Route 1 Pavement Rehabilitation
NHDOT Project No. 40424

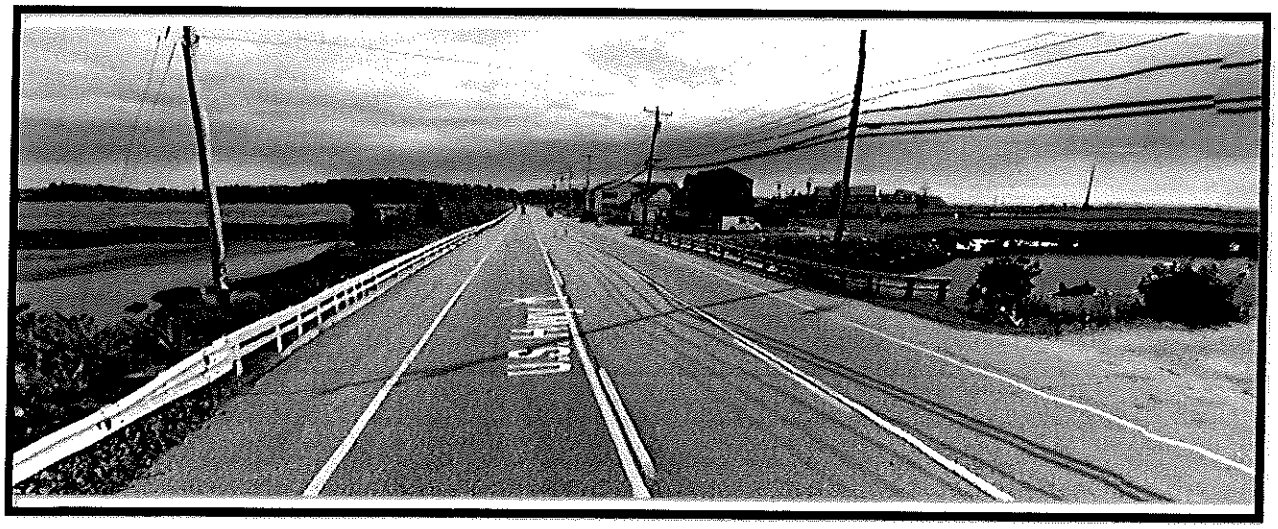
Photographs

Impact Area 2 US Route 1, Hampton Falls (Looking South)
Photo Courtesy of Google Maps

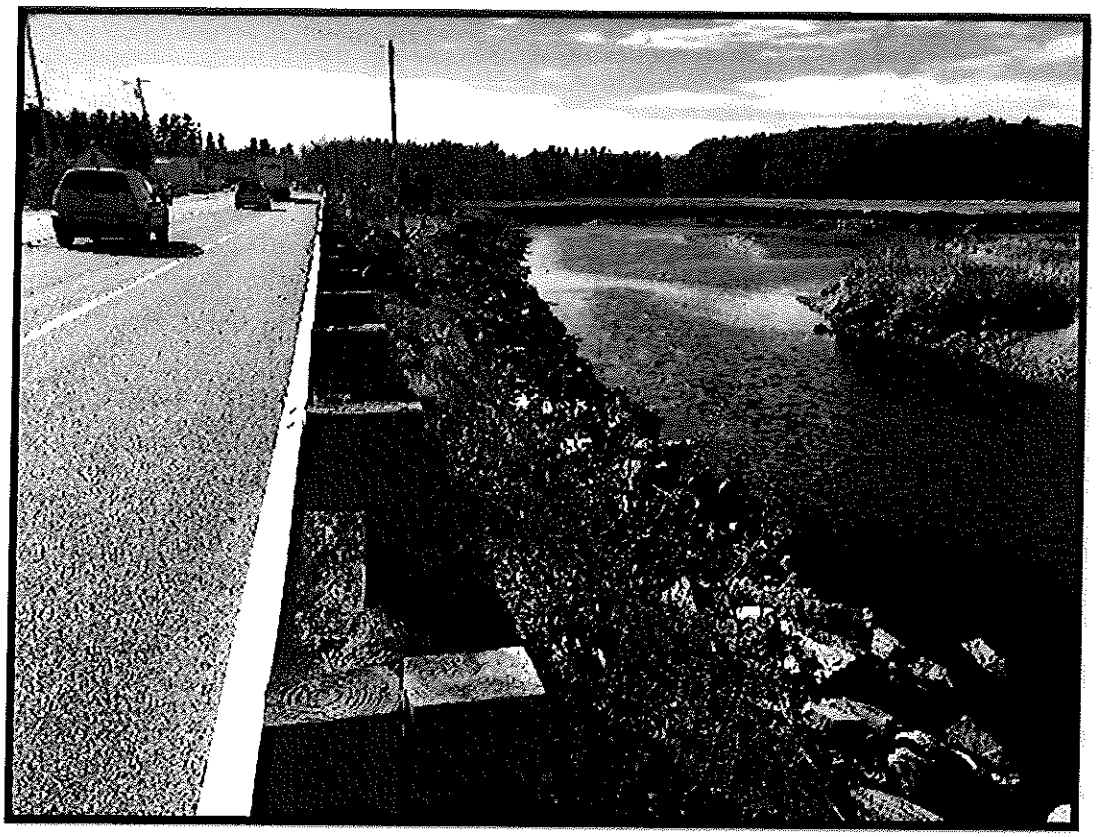


Impact Area 2 Dodge Pond, Hampton Falls (Looking West)
Photo Courtesy of Google Maps

Impact Area 3 Taylor River Bridge (Upstream)
November 2015



Impact Area 3 US Route 1, Hampton (Looking North)
Photo Courtesy of Google Maps



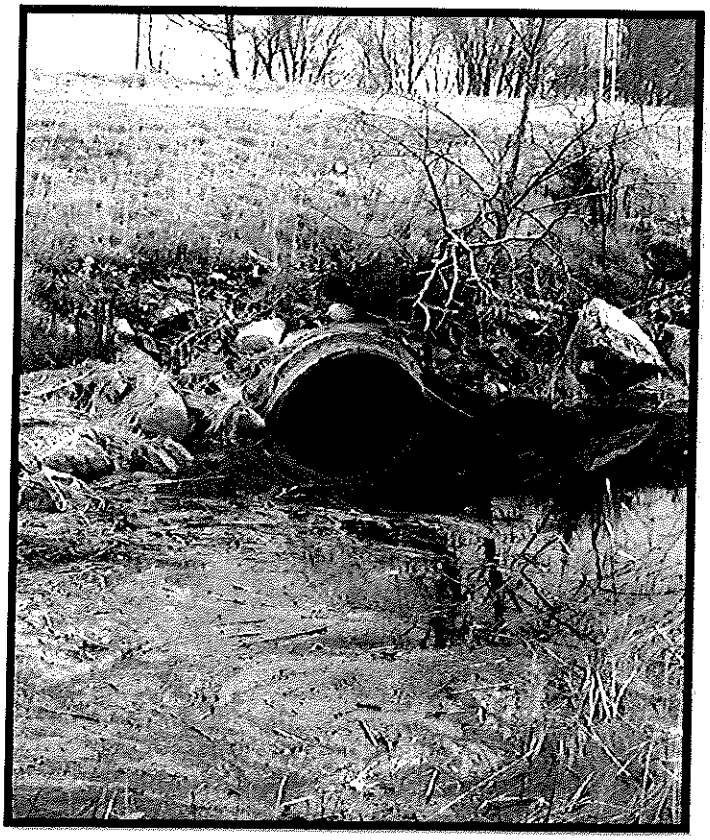
Impact Area 4 Drakes River & Existing Rip Rap
November 2015

Impact Area 4 Slope Erosion/Scour
November 2015

Impact Area 5 Guardrail Replacement
November 2015

Impact Area 5 Guardrail Replacement
November 2015

Impact Area 7 Upstream Headwall Repair
November 2015



Impact Area 7 Downstream Headwall Replacement
November 2015

Impact Area 8 NH 101 Eastbound Ramp to US 1 Southbound

Photo Courtesy of Google Maps

NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES
WETLAND PERMIT APPLICATION
for
Seabrook-Hampton Falls-Hampton, US Route 1 Pavement Rehabilitation
NHDOT Project No. 40424

Supplemental Narrative

The following information is offered as a supplement to the information provided in the Wetland Permit Application and Plans.

Erosion and Sediment/Siltation Control

The contractor shall be responsible for implementing Erosion and Sediment control measures in accordance with the "NHDOT Guidelines for Temporary Erosion and Sediment Control and Stormwater Management", and "New Hampshire Stormwater Manual, Volume 3 Erosion and Sediment Controls during Construction" by the NHDES.

Erosion and siltation control measures will be installed by the Contractor prior to start of any work and will be maintained for the duration of the construction activities. Such details will be provided by the Contractor as part of Item 645.7, Storm Water Pollution Prevention Plan. It is the Contractor's responsibility to not cause violations of surface water quality standards.

Construction Sequence

1) Install approved contractor detailed erosion control measures and implement the Storm Water Pollution Prevention Plan per the approved contractor detailed plans.

2) Install double perimeter protection along the shore lines for both water bodies and wetland areas, especially for Hampton Falls and Taylor River bridge repairs during both phases of the traffic control plan throughout the project.

3) Roadway ¾" Overlay – Seabrook to Hampton Falls (Sta. 1004+60 to 1119+00±)
   a. Remove existing guardrail, grade beam guardrail and terminal section platforms and reestablish vegetation with humus, seed, and turf establishment items as needed.
   b. Raise utility and drainage structures.
   c. Place ¾" pavement overlay along roadway, driveways and intersections.
   d. Place crush gravel for shoulder leveling, as required.

4) Roadway Pavement Inlay –Hampton Falls to Hampton (Sta. 1119+00± to 2045+86±)
   a. Remove existing guardrail, grade beam guardrail and terminal section platforms and reestablish vegetation with humus, seed, and turf establishment items as needed.
   b. Cold Plane 1 ½" existing wearing course.
   c. Reconstruct and adjust utility and drainage structures as required.
   d. Place 1 ½" wearing course pavement overlay along roadway.

5) Roadway NH Route 101 EB to US Route 1 SB Ramp –Hampton (Sta. 102+20± to 111+00±)
   a. Remove existing cable guardrail, pavement and curbing.

c. Reconstruct and adjust utility and drainage structures as required.
d. Place 1 ½" wearing course pavement overlay along roadway.

5) Roadway NH Route 101 EB to US Route 1 SB Ramp –Hampton (Sta. 102+20± to 111+00±)
   a. Remove existing cable guardrail, pavement and curbing.
   b. Fine grade existing crush gravel base materials.
   c. Reconstruct drainage structures.
   d. Place 3" Binder Course Pavement and place bituminous
   e. Install w-beam guardrail and terminal units.
   f. Place 1 ½" wearing course pavement overlay along ramp.

6) US Route 1 Over Hampton Falls River Bridge, Hampton Falls (Sta. 1054+28 to 1054+40)

   Bridge maintenance work consists of removing existing pavement and barrier membrane, completing concrete deck partial and full depth slab repairs and concrete repairs to the abutment walls, installing a new barrier membrane, and placing bridge and roadway wearing course pavement.
   a. Utilize Manual on Uniform Traffic Control Devices (MUTCD) temporary traffic control layout with portable concrete barrier Phase 1 layout to protect the work zone while maintaining two-way traffic with a minimum clear width of 24'.
   b. Contractor shall coordinate clearing, access, and erosion control requirements necessary for the substructure concrete repair work with the Contract Administrator prior to commencement. During asphalt & concrete deck removal maintain all debris within a confined location to mitigate any potential runoff as well as worker safety. The contractor is expected to contain any debris that falls into the waterway, remove debris and restore the channel prior to completion and removal of erosion control.
   c. Substructure and superstructure repairs - The erosion control plan shall provide a shielding plan bridge deck and superstructure repairs to remove deteriorated concrete from entering the waterways. Working in low flow by the use of a small boat may be allowed.
   d. Superstructure Repairs, Phase 1 –
      i. Remove existing pavement, existing barrier membrane, brush curb as needed, and existing guardrail.
      ii. Identify concrete removal and perform concrete deck repairs
      iii. Repair brush curb
      iv. Install barrier membrane and place bridge and wearing course pavement.
   e. Upon completion of Phase 1 limits, perform traffic control operations to remove Phase 1 pavement markings, install Phase 2 pavement marking and portable concrete barrier. Perform superstructure repairs as noted in Phase 1.

7) US Route 1 Over Taylor River, Hampton (Sta. 1119+03 to 1119+37)
Bridge maintenance work consists of removing existing pavement and barrier membrane, completing superstructure concrete deck beam repairs on top and underside of the superstructure, installing a new barrier membrane, and placing bridge and roadway wearing course pavement. Limited abutment/wingwall concrete removal and reconstruction is required at the ends of the concrete deck beams to perform the beam repairs.

a. Utilize Manual on Uniform Traffic Control Devices (MUTCD) temporary traffic control layout with portable concrete barrier to protect the work zone while maintaining two-way traffic with a minimum clear width of 24'.
b. Contractor shall coordinate erosion control requirements with the Contract Administrator prior to commencement. Tidal flows will limit the daily operation and no temporary scaffolding will be allow in the waterway. During asphalt & concrete deck removal maintain all debris within a confined location to mitigate any potential runoff, repairs, as well as worker safety. The erosion control plan shall provide a shielding plan for above and below the bridge deck repairs while removal of deteriorated concrete, asphalt and any other materials that may potentially enter the waterways. Shielding plan should incorporate a debris removal process. If any debris falls into the waterway the operation should be halted and removal of the debris will be done before continuing with repairs.
c. Concrete deck beam underside repairs, Phase 1 - A snooper/under bridge vehicle is suggested to avoid impact within the Taylor River and should have the ability to retrieve any concrete debris during removal.–
    i. Remove existing pavement, existing barrier membrane, and brush curb as needed to address concerns.
    ii. Remove sections of bridge rail required to perform deck beam and brush curb repairs, as necessary.
    iii. Identify concrete removal and perform concrete deck beam repairs
    iv. Repair brush curb, as needed.
    v. Install section of bridge rail removed, barrier membrane, and place bridge pavement and wearing course pavement.
d. Upon completion of Phase 1 limits, perform traffic control operations to remove Phase 1 pavement markings, install Phase 2 pavement marking and portable concrete barrier. Perform superstructure repairs as noted in Phase 1.

8) 60" RCP Headwall Repairs, NH Route 101, Hampton (Sta. 4530+25±)
The 60" RCP Headwall Repairs consist of pointing and grouting loose stones the inlet headwall and replacing the outlet headwall with a new concrete headwall.

a. Contractor shall notify Contract Administrator utilize MUTCD temporary signing and daily shoulder closures to access the headwalls on NH Route 101.
b. Erosion control shall be installed and work performed during low flow conditions.
c. Inlet repairs consist of removing loose stones, cleaning areas of collapsed headwall wing stones, removing loose mortar, and rebuilding headwall wing, as necessary.
d. Outlet replacement consist of removing collapsed headwall and wing stones, performing excavation, compaction of subgrade, placement of backfill and outlet stone within headwall excavation limits, and stabilizing NH Route 101 slopes with turf establishment, seed, fertilizer and matting, as required.
e. No culvert pipe repairs or pipe replacements are included in this work.

9) Remove all temporary erosion control measures after completion of the segments and work outlined above.

Restoration

All areas of disturbance will be restored upon completion of work. It is not anticipated that the riverbed will be disturbed, however, the riverbed and streambed areas will be evaluated for disturbance and the need for restoration activities such as replacement or redistribution of stones/cobbles in order to leave the streambed in the work area similar to the upstream and downstream areas.