



The State of New Hampshire  
**DEPARTMENT OF ENVIRONMENTAL SERVICES**



Thomas S. Burack, Commissioner

September 07, 2016

Her Excellency, Governor Margaret Wood Hassan  
and The Honorable Council  
State House  
Concord, NH 03301

**REQUESTED ACTION**

Approve NH Dept. of Transportation's request to perform the following work on Taylor, Hampton Falls and Drakes Rivers and Landing Brook, in Hampton. File # 2016-00603. This project will not have significant impact on or adversely affect the values of Taylor River, Hampton Falls River, Drakes River and Landing Brook.

Rehabilitate pavement, bridge deck maintenance and joint repairs; guardrail upgrades; slope stabilization for a single slope failure; and one 60 inch culvert with an inlet headwall repair and outlet headwall replacement impacting 19,880 sq. ft. (17,752 sq. ft. temporary) of estuarine, riverine and palustrine wetlands and 344,920 sq. ft. (330,530 sq. ft. temporary) of buffer zones. NHDOT project #40424

Mitigation for the proposed impacts is through a payment into the Aquatic Resource Mitigation Fund.

The Department imposed the following conditions as part of this approval:

1. All work shall be in accordance with plans by NHDOT Bureau of Highway Design, dated July 16 as received by the NH Department of Environmental Services (DES) on August 1, 2016.
2. This approval is not valid until DES receives a one-time payment of \$20,545.07 to the DES Aquatic Resource Mitigation (ARM) Fund. The applicant shall remit payment to DES. If DES does not receive payment within 120 days of the date of this approval letter, DES will deny the application.
3. At least 48 hours prior to the start of construction, a pre-construction meeting shall be held with NHDES Land Resources Management Program staff at the project site, at the NHDES Office in Concord, N.H. or other mutually agreed upon location to review the conditions of this wetlands permit.
4. It shall be the responsibility of the permittee to schedule and coordinate the pre-construction meeting providing at least 5-day notice to the NHDES Wetlands Bureau and / or other Land Resources Management Program staff, and the meeting shall be attended by the permittee, the contract administrator(s), wetlands scientist(s), erosion control monitor, and the contractor(s) responsible for performing the work.
5. Construction monitoring reports shall be provided to the Wetlands Bureau file.
6. Dredged material shall be placed out of the DES Wetlands Bureau jurisdiction.
7. Construction equipment shall not be located within surface waters.
8. Discharge from dewatering of work areas shall be to sediment basins that are: a) located in uplands; b) lined with hay bales or other acceptable sediment trapping liners; and c) set back as far as possible from wetlands and surface waters, in all cases with a minimum of 20 ft. of undisturbed vegetated buffer.

DES Web site: [www.des.nh.gov](http://www.des.nh.gov)

P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095

Telephone: (603) 271-3501 • Fax: (603) 271-6683 • TDD Access: Relay NH 1-800-735-2964

9. Appropriate siltation/erosion/turbidity controls shall be in place prior to construction, shall be maintained during construction, and shall remain in place until the area is stabilized.
10. Within three days of the last activity in an area, all exposed soil areas, where construction activities are complete, shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack on slopes steeper than 3:1 or netting /matting and pinning on slopes steeper than 2:1.
11. Where construction activities have been temporarily suspended within the growing season, all exposed soil areas shall be stabilized within 14 days by seeding and mulching or if temporarily suspended outside the growing season, all exposed areas shall be stabilized within 14 days by mulching, mulching with tack on slopes steeper than 3:1 and stabilized by matting and pinning on slopes steeper than 2:1.
12. The contractor responsible for completion of the work shall utilize techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
13. Extreme precautions to be taken within riparian areas to limit unnecessary removal of vegetation during road construction and areas cleared of vegetation to be re-vegetated as quickly as possible.
14. There shall be no further alteration to wetlands or surface waters without amendment of this permit.
15. Standard precautions shall be taken to prevent import or transport of soil or seed stock from nuisance, invading species such as purple loosestrife or Phragmites.
16. The impacts associated with the temporary work shall be restored immediately following construction.
17. Cofferdams shall not be installed during periods of high flow, whether due to seasonal runoff or precipitation. Once a cofferdam is fully effective, confined work can proceed without restriction.
18. Prior to commencing work on a substructure located within surface waters, a cofferdam shall be constructed to isolate the substructure work area from the surface waters.
19. Temporary cofferdams shall be entirely removed immediately following construction.
20. Conservation Commissions shall be notified in writing of the beginning and end of the project.
21. No work shall be conducted in tidal water between April 15 and June 30.
22. The NHDOT shall commit to the recommendations provided by the Natural Heritage Bureau.
23. Prior to commencing work the NHDOT shall submit to the file the subsequent coordination e-mail / commitments with the Natural Heritage Bureau and shall adhere to those commitments.

#### EXPLANATION

The DES Wetlands Bureau approved this project on August 08, 2016. DES supported its decision with the following findings:

1. This is a major impact project per Administrative Rules Env-Wt 303.02(a), projects in tidal wetlands and Env-Wt 303.02(f), projects in and adjacent to prime wetlands designated under RSA 482-A:15.
2. The need for the proposed impacts has been demonstrated by the applicant per Env-Wt 302.01.
3. The applicant has provided evidence which demonstrates that this proposal is the alternative with the least adverse impact to areas and environments under the department's jurisdiction per Env-Wt 302.03.
4. The applicant has demonstrated by plan and example that each factor listed in Env-Wt 302.04(a) Requirements for Application Evaluation, has been considered in the design of the project.
5. The DES has determined the applicant has met the purpose of the current stream rules relative to not causing damage upstream or downstream and not impeding aquatic organisms.
6. Natural Resource Agency meetings were held at the NH Dept. of Transportation (NHDOT) on October 21, 2015 and January 20, 2016 to coordinate the review and permitting of the project.

7. In accordance with Env-Wt 703.01, the department finds that the applicant has shown with clear and convincing evidence there will be no significant loss of value set forth in RSA 482-A:1; the project is consistent with the purpose specified in RSA 482-A:1; the project could not be relocated to avoid impacts reducing the public value of the project or negatively affecting public safety; and there is no practical location to compensate for impacts on site.
8. The DES is waiving Rule Env-Wt 703.03, Public Hearing requirement for work in or adjacent to Prime Wetlands as a public hearing is unlikely to provide significant information in addition to that contained in the file.
9. The revised plans received on August 1, 2016 adjusts the location of the Highest Observable Tide Line to be at the furthest extent of the tidal wetlands and modifies the Designated Prime Wetlands to be only those wetlands included and adopted in the zoning ordinances for both towns.
10. The remaining mapping errors showing pavement and adjacent areas as Designated Prime Wetland is the result of plotting the map for the zoning ordinance.

Mitigation Findings:

11. The applicant has reviewed on-site options for mitigation and the department has determined that this project is acceptable for payment to the Aquatic Resource Mitigation (ARM) Fund.
12. The payment calculated for the proposed wetland loss equals \$20,545.07.
13. The Department decision is issued in letter form and upon receipt of the ARM fund payment, the Department shall issue a posting permit in accordance with Env-Wt 803.08(f).

Application file documents are being forwarded to the Governor and Executive Council in connection with their consideration of this matter pursuant to RSA 482-A:3,II.(a) as it is a major project in public waters of the state.

We respectfully submit this request for your consideration.

  
Thomas S. Burack  
Commissioner



# WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau  
Land Resources Management

Check the status of your application: [www.des.nh.gov/onestop](http://www.des.nh.gov/onestop)



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

	<p><b>COMPLETE</b> MAR 09 2016</p>	2016-00603
		✓ 431368
		\$10,000.00
		EMK

**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. *NO WORK IN JURISDICTION*

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**       NA  
Landing Brook (for the culvert impacts)

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 &amp; Required Attachments document for instructions to complete a &amp; 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:

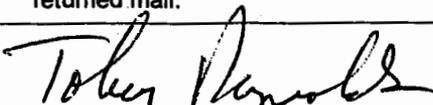
ELECTRONIC COMMUNICATION: By initialing here \_\_\_\_\_, I hereby authorize DES to communicate all matters relative to this application electronically

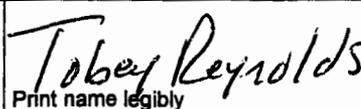
**9. AUTHORIZED AGENT INFORMATION**LAST NAME, FIRST NAME, M.I.: **Peace, Kimberly R.**COMPANY NAME: **Hoyle, Tanner & Associates, Inc.**MAILING ADDRESS: **150 Dow Street**TOWN/CITY: **Manchester**STATE: **NH**ZIP CODE: **03101**EMAIL or FAX: **kpeace@hoyletanner.com**PHONE: **(603) 669-5555**ELECTRONIC 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 &amp; 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](http://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

 318116  
 Date

## 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
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#### **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	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Scrub-shrub wetland	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Emergent wetland	- <input type="checkbox"/> ATF	109 <input type="checkbox"/> ATF
Wet meadow	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Intermittent stream	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Perennial Stream / River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Lake / Pond	- / - <input type="checkbox"/> ATF	- / - <input type="checkbox"/> ATF
Bank - Intermittent stream	- / - <input type="checkbox"/> ATF	- / - <input type="checkbox"/> ATF
Bank - Perennial stream / River	<input type="checkbox"/> ATF	<input type="checkbox"/> ATF
Bank - Lake / Pond	- / - <input type="checkbox"/> ATF	- / - <input type="checkbox"/> ATF
Tidal water	- / - <input type="checkbox"/> ATF	- / - <input type="checkbox"/> ATF
Salt marsh	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Sand dune	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Prime wetland	2,128 <input type="checkbox"/> ATF	17,643 <input type="checkbox"/> ATF
Prime wetland buffer	23,517 <input type="checkbox"/> ATF	407,887 <input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Previously-developed upland in TBZ	23 <input type="checkbox"/> ATF	1,217 <input type="checkbox"/> ATF
Docking - Lake / Pond	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Docking - River	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
Docking - Tidal Water	- <input type="checkbox"/> ATF	- <input type="checkbox"/> ATF
<b>TOTAL</b>	<b>25,668 / -</b>	<b>426,856 / -</b>

**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

\$ 10,000.00

The Application Fee is the above calculated Total or \$200, whichever is greater = (NHDOT cap)

# Seabrook-Hampton 40424 Location Map

RECEIVED  
MAR 09 2016



TS/15/28

0 0.25 0.5 1 Miles

1:24,000

40424 Project Limits

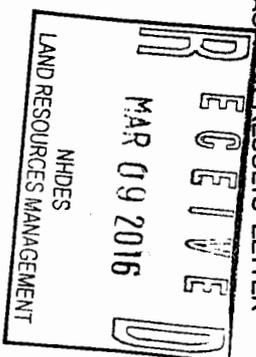
NHB16-0347



Memo



NH NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER



To: Meilottus 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 <sup>1</sup>	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

Memo



NH NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

(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 <sup>1</sup>	Federal	Notes
Dwarf Glasswort ( <i>Salicornia bigelovii</i> )	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 ( <i>Spartanium eurycarpum</i> )*	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 ( <i>Eleocharis uniglumis</i> )*	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 ( <i>Agalinis maritima</i> )	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 ( <i>Iris prismatica</i> )	E	--	Since this plant grows at wetland edges (marshes, wet meadows, seashore), it would be threatened by changes in local water levels or shoreline development.
stout dotted smartweed ( <i>Persicaria robustior</i> )*	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 ( <i>Cirsium horridulum</i> )*	E	--	This species usually occurs on uplands adjacent to salt marshes and is threatened by habitat loss due to development.

<sup>1</sup>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.

# 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

## New Hampshire Natural Heritage Bureau - Community Record

### Brackish marsh

#### Legal Status

Federal: Not listed  
State: Not listed

#### Conservation Status

Global: Not ranked (need more information)  
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), *Hierochloa 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

Federal: Not listed  
State: Not listed

#### Conservation Status

Global: Not ranked (need more information)  
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), *Hierochloa 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

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NHB16-0347

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## New Hampshire Natural Heritage Bureau - System Record

## Salt marsh system

Legal Status

Federal: Not listed  
State: Not listed

Conservation Status

Global: Not ranked (need more information)  
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

Federal: Not listed  
State: Not listed

#### Conservation Status

Global: Not ranked (need more information)  
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

Federal: Not listed  
State: Listed Endangered

#### Conservation Status

Global: Demonstrably widespread, abundant, and secure  
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 agalins (*Agalins 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 *Suaeda 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**  
**one-glumed spikesedge (*Eleocharis uniglumis*)**

**Legal Status**

Federal: Not listed  
 State: Listed Threatened

**Conservation Status**

Global: Demonstrably widespread, abundant, and secure  
 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

Federal: Not listed  
State: Listed Endangered

#### Conservation Status

Global: Demonstrably widespread, abundant, and secure  
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

Federal: Not listed  
State: Listed Endangered

#### Conservation Status

Global: Demonstrably widespread, abundant, and secure  
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:  $\geq 200$  in a 10 x 3 m panne (WP 120);  $\geq 500$  in a 40 x 25 m panne (WP 121);  $\geq 500$  in a 50 x 15 m panne (WP 122-123); and  $\geq 1,000$  in a 12 x 50 m panne (WP 125-126). Area 3: More than 400 stems, in 3 pannes separated by about 80m:  $\geq 100$  in a 20 x 8 m pan (WP 116);  $\geq 200$  in a 15 x 7 m panne (WP 117), and  $\geq 100$  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 & 3 pannes. 1997: Area 1: Salt marsh. Associated plant species include *Triglochin maritimum* (arrow-grass), *Limonium carolinianum* (sea lavender), *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**

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

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: 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., *Gaylussacia* 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**

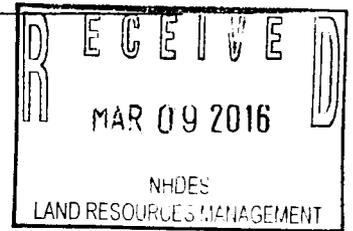
First reported: 1982

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](mailto:Amy.Lamb@dred.nh.gov). Thank you for coordinating with NHB.