



25 Nashua Road
Bedford, NH 03110-5500
(603) 472-5191
(603) 472-7052 (Fax)
www.normandeau.com

December 1, 2011

Salisbury Conservation Commission
Town Hall
5 Beach Road
Salisbury, MA 01952

Commissioners:

Please find attached a Notice of Intent (NOI) for the Massachusetts Department of Transportation Highway Division's (MassDOT) Whittier Bridge replacement and I-95 Widening project in Newburyport, Amesbury and Salisbury. The purpose of the project is to bring the Whittier Bridge up to current safety standards by creating a structure that can accommodate the traffic flow along Interstate 95. The project will improve the bridge by adding a high speed shoulder and breakdown lane in each direction and increasing the travel lanes in each direction from three to four. A multi-use path will be constructed on the northbound side between Newburyport and Amesbury to ultimately connect with the Ghost Trail in Salisbury. MassDOT is undertaking the project under the Commonwealth's Accelerated Bridge Program.

An ANRAD for the project area has been reviewed and approved your commission (ORAD dated January 6, 2010). The purpose of the NOI is to quantify impacts to resources protected by the Wetland Protection Act, present alternative analyses to minimize impacts, and identify mitigation measures for unavoidable impacts, as needed.

The attached NOI application includes plans, calculations and fees only for those impacts within the Town of Salisbury. A supplemental report includes project-wide and town-specific details. Please note that MassDOT Highway is exempt from additional local ordinances and filing fees. Any charges for newspaper announcements should be billed to MassDOT:

Ms. Irene Petsalis
MassDOT
10 Park Plaza - Room 4260
Boston, MA 02116
Phone: (617) 973-7487,
Fax: (617) 973-8879

Please feel free to contact me (603-637-1158) or Mr. Tim Dexter at MassDOT (617-973-8306) with questions or comments regarding this application. Thank you for your attention and we look forward to working with you during this review.

Sincerely,

NORMANDEAU ASSOCIATES INC

A handwritten signature in blue ink that reads "Sarah Allen".

Sarah Allen
Principal Wetland Scientist

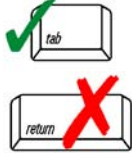


WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Salisbury
City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

East and west of I-95 from the Amesbury town line to the visitor center/Toll Ramp flyover ramp	Salisbury	01952
	b. City/Town	c. Zip Code
Latitude and Longitude:	42° 51' 36.49"	-70° 53' 36.99"
	d. Latitude	e. Longitude
N/A	N/A	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

Timothy	Dexter	
a. First Name	b. Last Name	
Massachusetts Highway Department		
c. Organization		
10 Park Plaza		
d. Street Address		
Boston	MA	02116
e. City/Town	f. State	g. Zip Code
617.973.8306	617.973.8879	timothy.dexter@state.ma.us
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

a. First Name	b. Last Name	
Commonwealth of Massachusetts		
c. Organization		
d. Street Address		
e. City/Town	f. State	g. Zip Code
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

Sarah	Allen	
a. First Name	b. Last Name	
Normandeau Associates		
c. Company		
25 Nashua Road		
d. Street Address		
Bedford	NH	03110
e. City/Town	f. State	g. Zip Code
603.637.1158	603.471.8007	sallen@normandeau.com
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$1,050	\$512.50	\$537.50
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

Whittier Bridge/I-95 Improvement Project (See attached report).

7a. Project Type Checklist:

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Limited Project Driveway Crossing | 4. <input type="checkbox"/> Commercial/Industrial |
| 5. <input type="checkbox"/> Dock/Pier | 6. <input type="checkbox"/> Utilities |
| 7. <input type="checkbox"/> Coastal Engineering Structure | 8. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) |
| 9. <input checked="" type="checkbox"/> Transportation | 10. <input type="checkbox"/> Other |

7b. Is any portion of the proposed activity eligible to be treated as a limited project subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. Yes No If yes, describe which limited project applies to this project:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

N/A

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Resource Area, Size of Proposed Alteration, Proposed Replacement (if any)
d. Bordering Land Subject to Flooding
e. Isolated Land Subject to Flooding
f. Riverfront Area
2. Width of Riverfront Area (check one):
3. Total area of Riverfront Area on the site of the proposed project:
4. Proposed alteration of the Riverfront Area:
5. Has an alternatives analysis been done and is it attached to this NOI?
6. Was the lot where the activity is proposed created prior to August 1, 1996?
3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area, Size of Proposed Alteration, Proposed Replacement (if any)
a. Designated Port Areas
b. Land Under the Ocean
c. Barrier Beach
d. Coastal Beaches
e. Coastal Dunes



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	_____	_____
	a. square feet of BVW	b. square feet of Salt Marsh
5. <input type="checkbox"/> Project Involves Stream Crossings		
	_____	_____
	a. number of new stream crossings	b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/priority_habitat/online_viewer.htm.

a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

(Not within Salisbury) _____

**Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
Route 135, North Drive
Westborough, MA 01581**



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C. Other Applicable Standards and Requirements (cont'd)

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.C, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.1.d, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

1. c. Submit Supplemental Information for Endangered Species Review*

- 1. Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
- 2. Assessor's Map or right-of-way plan of site
- 3. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work ***
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site
 - (c) MESA filing fee (fee information available at: http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_fee_schedule.htm).
Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address
Projects altering 10 or more acres of land, also submit:
 - (d) Vegetation cover type map of site
 - (e) Project plans showing Priority & Estimated Habitat boundaries

d. OR Check One of the Following

- 1. Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/ mesa/ mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
- 2. Separate MESA review ongoing. _____ a. NHESP Tracking # _____ b. Date submitted to NHESP

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/dfwele/dfw/nhesp/nhesp.htm>, regulatory review tab). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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Provided by MassDEP:
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C. Other Applicable Standards and Requirements (cont'd)

3. Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

2. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. Not applicable – project is in inland resource area only

b. Yes No If yes, include proof of mailing or hand delivery of NOI to either:

South Shore - Cohasset to Rhode Island, and the Cape & Islands:

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

3. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC

4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a. Yes No

5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

a. Yes No

6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

2. A portion of the site constitutes redevelopment

3. Proprietary BMPs are included in the Stormwater Management System.

b. No. Check why the project is exempt:

1. Single-family house

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.



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City/Town	

C. Other Applicable Standards and Requirements (cont'd)

- 2. Emergency road repair
- 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

- 1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
- 2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
- 3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
- 4. List the titles and dates for all plans and other materials submitted with this NOI.

Reconstruction of Whittier Bridge and Interstate 95 Widening - Notice of Intent Plans

a. Plan Title	
MassDOT/Tetra Tech	
b. Prepared By	c. Signed and Stamped by
12/1/2011	1" = 40'
d. Final Revision Date	e. Scale
Stormwater Report, Whittier Bridge/I-95 Improvements	11/16/11
f. Additional Plan or Document Title	g. Date

- 5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
- 6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
- 7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
- 8. Attach NOI Wetland Fee Transmittal Form
- 9. Attach Stormwater Report, if needed.



WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Salisbury

City/Town

E. Fees

- Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

068502	12/1/2011
2. Municipal Check Number	3. Check date
068420	12/1/2011
4. State Check Number	5. Check date
Normandeau Associates Inc	
6. Payor name on check: First Name	7. Payor name on check: Last Name

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

	11/29/11
1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

A. Applicant Information

1. Applicant:

Timothy Dexter
 a. First Name b. Last Name
Massachusetts Highway Department
 c. Organization
10 Park Plaza
 d. Mailing Address
Boston MA 02116
 e. City/Town f. State g. Zip Code
617-973-8306 617-973-8879 timothy.dexter@state.ma.us
 h. Phone Number i. Fax Number j. Email Address

2. Property Owner (if different):

 a. First Name b. Last Name
Commonwealth of Massachusetts
 c. Organization

 d. Mailing Address

 e. City/Town f. State g. Zip Code

 h. Phone Number i. Fax Number j. Email Address

3. Project Location:

 a. Street Address Salisbury
 b. City/Town

B. Fees

The fee should be calculated using the following six-step process and worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Roadway Construct. (Category 3c)	1	\$1,050	\$1,050
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			<u>\$1,050</u>

Step 6/Fee Payments:

Total Project Fee:	<u>\$1,050</u>
	a. Total Fee from Step 5
State share of filing Fee:	<u>\$512.50</u>
	b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:	<u>\$537.50</u>
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



NORMANDEAU ASSOCIATES, INC.

25 Nashua Road, Bedford, NH 03110-5527

(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

068502

CHECK DATE

December 1, 2011

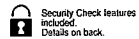
PAY

PAY **537 Dollars 50 Cents**
five three seven dollars five zero cents

AMOUNT

537.50

TO Town of Salisbury
Town Hall
5 Beach Road
Salisbury, MA 01952



⑈068502⑈ ⑆211070175⑆ 1104114302⑈

TWO SIGNATURES REQUIRED OVER \$500.00

Ronald A. Hall

MP



NORMANDEAU ASSOCIATES, INC.

25 Nashua Road, Bedford, NH 03110-5527

(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

068420

CHECK DATE

December 1, 2011

PAY

PAY **512 Dollars 50 Cents**
five one two dollars five zero cents

AMOUNT

512.50

TO Commonwealth of Massachusetts
Dept of Environmental Protection
P.O.Box 4062
Boston, MA 02211

Whittier Bridge Project - Salisbury



⑈068420⑈ ⑆211070175⑆ 1104114302⑈

TWO SIGNATURES REQUIRED OVER \$500.00

Ronald A. Hall

MP

**WHITTIER BRIDGE/I-95 IMPROVEMENT PROJECT
SALISBURY, MASSACHUSETTS
SUPPLEMENT TO WPA FORM 3 - NOTICE OF INTENT**

DECEMBER 2011

**WHITTIER BRIDGE/I-95 IMPROVEMENT PROJECT
SALISBURY, MASSACHUSETTS
SUPPLEMENT TO WPA FORM 3 - NOTICE OF INTENT**

December 2011

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APPENDICES

Appendix A – Checklist for Stormwater Report

Appendix B – Order of Resource Area Delineation

Appendix C – Rare Species Information

1.0 OVERVIEW

This Notice of Intent has been prepared for the Whittier Bridge/I-95 Improvement Project in accordance with the Massachusetts Wetlands Protection Act (WPA) (M.G.L. c. 131, §40) and its associated regulations (310 CMR 10.00). The project will provide additional Interstate (I)-95 lane capacity to improve safety and alleviate congestion and will involve replacement/rehabilitation of several structures including the Whittier Bridge over the Merrimack River.

The proposed work will impact Bordering Vegetated Wetland (BVW), Riverfront Area (RFA), and coastal resource areas in Newburyport, Amesbury, and Salisbury. BVW impacts will occur in the town of Amesbury, with permanent impacts totaling less than 5,000 square feet. Coastal resources associated with the Merrimack River will be impacted in Newburyport and Amesbury. Work will occur within RFA in Newburyport and Amesbury.

The project is subject to provisions of the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Performance Standards at 310 CMR 10.05(6)(k) through (q); therefore, a Stormwater Report is included with this submission (under separate cover). The checklist for the Stormwater Report is included as Appendix A of this report.

2.0 EXISTING CONDITIONS

2.1 LOCATION AND SITE DESCRIPTION

The project area is located within the I-95 right-of-way and extends from Interchange 57 (Route 113/Storey Avenue) in Newburyport, across the Merrimack River, to Interchange 60 (State Route 286/Main Street overpass and the Toll Road overpass) in Salisbury, south of the New Hampshire state line.

The project area includes the John Greenleaf Whittier Bridge, a fixed-span steel-truss bridge, which spans the Merrimack River in Amesbury and Newburyport. The bridge, which has three lanes in each direction, was built in 1951 and is considered structurally deficient and functionally obsolete. The current bridge does not meet current traffic volume requirements, is the location of an elevated number of accidents and fails to meet current Federal Highway Administration Interstate Highway design standards. Other bridges located within the project area include the I-95 northbound, Route 286, and Toll Road bridges in Salisbury.

I-95 within the project area currently consists of six lanes, while north and south of the project area I-95 has eight lanes. Peak hour traffic congestion occurs in this area and is highest during summer weekends. The drainage system associated with the existing roadway consists of a combination of open drainage flow from the roadway and a series of catch basins that are part of a drainage piping system with multiple discharge points. Stormwater flows directly into a wetland along the highway (Wetland O) via a ditch with little apparent treatment.

Meader Brook, a fresh-water perennial stream, crosses the study area in Salisbury via a culvert under I-95. Other water bodies including wetlands, small ponds and unnamed intermittent streams are within or in close proximity to the study area.

2.2 WETLAND RESOURCE AREAS

The following resource areas regulated by the WPA occur within the study area:

- Land Under the Ocean (tidal areas within the Merrimack River);
- Banks of or Land Under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie an Anadromous/ Catadromous Fish Run (Fish Run);
- Coastal Beach;
- Land Subject to Coastal Storm Flowage (LSCSF);
- Rocky Intertidal Shore;
- Salt Marsh;
- Riverfront Area (RFA);
- Bordering Vegetated Wetlands (BVW); and
- Bank.

In Salisbury, fourteen BVWs (Wetlands 2, 3, 5, 6, 13, K, L, O, P, Q, R, S, W, and X), Bank associated with Meader Brook and unnamed intermittent streams, and RFA associated with Meader Brook occur within the project corridor.

In addition to the resource areas described above, six isolated vegetated wetlands are located within the project corridor in Salisbury (Wetlands 1, 14, 17, M, U, and V). These wetlands have no hydrologic connection to other wetland resource areas and are not likely to pond more than 0.25-acre foot. Therefore, they do not fall under jurisdiction of the Massachusetts Wetlands Protection Act, but meet federal jurisdictional wetland definitions.

The boundaries of resource areas located in Salisbury were approved by the Salisbury Conservation Commission in an Order of Resource Area Delineation dated January 6, 2010 (Appendix B).

There are no certified vernal pools in the study area and 2009 spring surveys identified no pools supporting breeding populations of vernal pool species.

The site is not subject to any known Wetlands Restriction Orders under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105).

2.3 OUTSTANDING RESOURCE WATERS

No areas designated in the Massachusetts Surface Water Quality Standards (314 CMR 4.00) as Outstanding Resource Waters (ORWs) occur within the project area.

2.4 RARE SPECIES AND HABITATS

No state or federally-listed rare species habitat is known to occur within the portion of the project area in Salisbury. The bald eagle (*Haliaeetus leucocephalus*) and peregrine falcon (*Falco peregrinus*), both state-listed as endangered, occur in the Merrimack River and the adjacent riverbank areas within the project area in Newburyport and Amesbury. In addition, two fish species with special status are known to use the Merrimack River in the project area, shortnose sturgeon (*Acipenser brevirostrum*)

and Atlantic sturgeon (*Acipenser oxyrinchus*). The shortnose sturgeon is listed as endangered by the NHESP and the National Marine Fisheries Service (NMFS). The Atlantic sturgeon is also listed as endangered by the NHESP and as a candidate for listing by NMFS. Preliminary consultation with the NHESP indicated that impacts to bald eagle habitat will be unlikely. In 2011, the NHESP verified that a pair of peregrine falcon are utilizing the existing Whittier Bridge as nesting habitat. Consultation with the NHESP is ongoing; but currently the NHESP indicates they would prefer not to encourage nesting peregrines on the bridge due to adverse effects on other nearby protected species. Bald eagle and peregrine falcon have been delisted at the federal level and are no longer protected under the Endangered Species Act of 1973 (7 U.S.C. §136, 16 U.S.C. §1531 et seq., ESA). The NHESP will review this NOI jointly under the streamlined MESA/Wetlands Protection Act review process.

Letters from the U.S. Fish and Wildlife Service (USFWS), NMFS, and the Massachusetts Division of Fisheries and Wildlife (DMF) regarding rare species at the site are provided in Appendix C. Consultation with DMF and NMFS is ongoing in regards to work at the Whittier Bridge, which exists outside of the Salisbury town boundary.

The proposed project does not occur within an Area of Critical Environmental Concern (ACEC).

3.0 PROPOSED WORK

Project-wide proposed work will include the following:

- Replacement of the John Greenleaf Whittier Memorial Bridge over the Merrimack River with a pair of new bridges, each with four travel lanes, a high-speed shoulder and a breakdown lane in each direction.
- Widening, rehabilitation, or replacement of seven adjacent bridges along the I-95 alignment in Amesbury and Newburyport to accommodate eight lanes of traffic on I-95 and to meet current design standards as much as practicable.
- Highway widening improvements from the existing six lanes to eight lanes along the 4.25-mile project alignment from Exit 57 in Newburyport to Exit 59 in Salisbury.
- Construction of a “shared-use path”, which will parallel the I-95 alignment and cross the Merrimack River on the new I-95 northbound bridge.
- Stormwater management improvements to achieve compliance with the stormwater management standards. A new collection and conveyance system will be needed where the highway layout is relocated or expanded. In most areas where the layout will remain unchanged, portions of the existing infrastructure will be maintained. A majority of the existing stormwater discharges will remain under the post-development condition, but in some instances, discharges will be improved or relocated.

Construction activities in Salisbury are described in Section 3.1 below. Impacts to resource areas associated with the proposed work are summarized in Section 3.2. Measures to minimize project impacts, including erosion and sedimentation control, stormwater management, and proposed wetland replication areas are described in Section 3.3.

3.1 CONSTRUCTION ACTIVITIES IN SALISBURY

Project work in Salisbury will include the following:

- Widening of I-95 from six to eight lanes from the Amesbury town line north to the State Route 286/Main Street overpass and the Toll Road overpass (Interchange 60).
- Construction of the shared-use path paralleling the I-95 northbound alignment, then following the northbound off ramp to Route 110 (Elm Street) to the intersection with Merrill Street and Rabbit Road. A small portion of this path will be located in Salisbury, extending from the Amesbury town line at Route 110 and terminating at the southwest corner of the Merrill Street and Rabbit Road intersection.
- Stormwater improvements, including proposed extended detention basins (7A and 9A), infiltration basins (6 and 9B), Wet Basin 7B, sediment forebays, water quality swales with check dams and deep sump catch basins.

The overall construction duration for the Project is expected to be 48 months, including a 42-month in-water work period for demolition and reconstruction of the Whittier Bridge in Newburyport and Amesbury.

3.2 IMPACTS TO RESOURCE AREAS

The project will impact only Buffer Zone to BVW in Salisbury. Meader Brook in Salisbury has a 200-foot RFA, but because the existing culvert under I-95 is greater than 200 feet in length, the RFA halts at the culvert headwalls. The highway widening in this vicinity is located within the existing median and will not affect the RFA; therefore, no impacts to RFA in Salisbury will occur.

Details of impacts associated with wetland resources in Salisbury are described in the following section.

3.2.1 Wetland Resource Impacts

As described above, no impacts to BVW will occur in Salisbury. The project will include temporary impacts to an isolated vegetated wetland in Salisbury, Wetland M; however, this wetland is not state regulated. Some of the proposed stormwater improvements, including Infiltration Basin 6 and Wet Basin 7B will be located partially within Buffer Zone to BVW.

3.3 IMPACT MINIMIZATION AND MITIGATION

Project planning and alternatives analyses have considered all feasible measures to avoid and/or minimize impacts to wetland resource areas (Section 4.0). The project has been designed so as to avoid all direct impacts to state-regulated wetland resource areas in Salisbury. Erosion/sedimentation control and stormwater management measures will be implemented to minimize potential impacts.

3.3.1 Erosion/Sedimentation Control

Erosion and sedimentation controls will be employed to minimize the transport of sediment into the existing drainage system and adjacent resource areas during the initial earthwork and subsequent construction phases of the project. All sedimentation control measures will be installed prior to excavation or disturbance and will be maintained throughout construction.. Proposed erosion and sedimentation controls are described in Section 3.2 of the Stormwater Report (provided under separate cover).

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared in accordance with the requirements of the National Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities in effect at the time of construction. The SWPPP will specify Best Management Practices (BMPs) and inspection and maintenance requirements to minimize erosion and control sediments. The SWPPP will identify further BMPs (such as good housekeeping strategies, construction equipment maintenance, and waste management) to minimize potential impacts, other than erosion and sedimentation, associated with construction activities.

The Contractor will be responsible for preparing the SWPPP in support of construction activities. The NOI plans provide the minimum measures which the Contractor must include in the SWPPP.

3.3.2 Stormwater Management

The stormwater management system to be constructed for the Project will improve water quality associated with stormwater discharges to the Merrimack River and other project areas receiving waters compared to existing conditions.

Stormwater detention, recharge, and improved water quality will be provided through use of the following BMPs:

- Eight infiltration basins (four in Amesbury, two in Newburyport, and two in Salisbury);
- Two wet basins (Salisbury);
- Two extended detention basins (one in Amesbury and one in Salisbury);
- Twelve sediment forebays (for pretreatment prior to discharge to an infiltration basin or wet basin);
- Outlet control structure installed over existing drainage located in Route 110 Loop Ramp (Amesbury);
- Water quality swales (in the median where space is available);
- Three infiltration trenches (in Amesbury);
- Deep sump catch basins (where the highway layout is relocated and where the roadway layout will be expanded).

These BMPs are further described in the Stormwater Report (provided under separate cover), which was prepared for the project study area as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q). Under the provisions of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), stormwater discharges affecting jurisdictional resource areas or within the 100-foot buffer zone to certain resource areas are required to meet regulatory performance standards. The performance standards are listed at 310 CMR 10.05 and in the MassDEP *Massachusetts Stormwater Handbook* (2008). The Project qualifies as both new development and redevelopment and meets the Stormwater Performance Standards accordingly as detailed in the Stormwater Report. MassDEP's stormwater checklist is provided in Appendix A.

3.3.3 Mitigation

As described in Section 3.2.1, the project will not impact BVW in Salisbury, therefore no mitigation is proposed.

4.0 ALTERNATIVES ANALYSIS

There are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40.

Numerous alternatives to the Preferred Alternative design were screened for engineering, environmental, and cost factors as part of the Environmental Impact Report (EIR)/Massachusetts Environmental Policy Act (MEPA) process. These alternatives are summarized below and include highway widening and Merrimack River crossing alignment alternatives, alternative designs for the proposed replacement Merrimack River bridges, and alternative alignments and routes for the proposed shared-use path.

4.1 MERRIMACK RIVER CROSSING AND HIGHWAY WIDENING ALTERNATIVES

The following Merrimack River crossing and highway widening alternatives were analyzed:

- **No Build:** This alternative would involve limited maintenance without additional travel lanes or breakdown shoulders rather than replacing or rehabilitating the Whittier Bridge.
- **River Crossing Alternatives:**
 - *Progressive Alternative:* This alternative would replace the existing Whittier Bridge with a new eight-lane bridge to be constructed in several stages of construction.
 - *Rehabilitation Alternative:* This alternative would involve extensive rehabilitation of the existing Whittier Bridge without widening of the bridge for additional travel lanes.
 - *Retrofit with Adjacent Structure Alternative:* This alternative would be similar to the Rehabilitation Alternative with the addition of a temporary bridge to carry traffic during construction. No additional travel lanes would be constructed.
 - *New 6-Lane Bridge Alternative:* This alternative would provide two new bridges, which would carry three lanes of traffic northbound and three lanes of traffic southbound.
 - *New 8-Lane East – West Bridge Alternative:* Under this alternative, two new four-lane bridges would be constructed to the east and west of the existing bridge. Traffic would then be transferred to the new bridges, and the existing bridge would be demolished.
 - *New 8-Lane East Bridge Alternative:* This alternative would provide a new bridge to the east of the existing bridge, to which all traffic would be temporarily relocated. The existing Whittier Bridge would then be demolished, and a second new bridge would be constructed in its place. When construction is completed, the two new bridges would be configured to carry four lanes of traffic northbound and four lanes of traffic southbound.
 - *New 8-Lane West Bridge Alternative:* This alternative is similar to the previous alternative, except a new bridge would be constructed to the west of the existing bridge.
- **Highway Widening Alternatives:**
 - *Inside Widening Highway Alternative (Northern Terminus to Route 286):* This alternative would begin at the Route 110 interchange and end at the Route 286

- interchange. The alternative would widen the northbound and southbound barrels within the existing median.
- *Outside Widening Highway Alternative (Northern Terminus to Route 286):* This alternative would begin at the Route 110 interchange and end at the Route 286 interchange. This alternative would widen the northbound and southbound barrels to the outside of the existing highway.
 - *Inside Northbound/Outside Southbound Widening Highway Alternative (Northern Terminus to Route 286):* This alternative would begin at the Route 110 interchange and end at the Route 286 interchange. This alternative would widen the northbound barrel into the existing median and widen the southbound barrel to the outside of the existing highway.
 - *Outside Northbound/Inside Southbound Widening Highway Alternative (Northern Terminus to Route 286):* This alternative would also begin at the Route 110 interchange and end at the Route 286 interchange. This alternative would widen the northbound barrel to the outside of the existing highway and widen the southbound barrel into the existing median.
 - *Northern Terminus to Route 110 Widening Highway Alternative:* This alternative would involve widening both the northbound and southbound barrels with a fourth lane to the outside of the existing highway between Route 110 and I-95.

Evaluation Criteria

The following engineering and environmental criteria were developed to screen the Merrimack River crossing and highway widening alternatives:

- **Purpose and Need** (how each alternative met the Purpose and Need);
- **Highway Configuration** (including horizontal alignment, vertical alignment and impacts to existing infrastructure);
- **Bridge Configuration** (including design standards/complexities, structural safety, constructability, context sensitive structures, maintenance and inspection and life cycle/cost);
- **Traffic** (including travel time, level of service, and capacity);
- **Right-of-Way** (including fee taking, permanent easement and temporary/construction easement);
- **Cost** (the relative cost differences of each alternative considering constructability, site access, construction staging ease/restraints, traffic management, ease of demolition, and schedule impact because of extended construction);
- **Construction** (including utility relocation, constructability/demolition of existing structures, and maintenance of traffic during construction);
- **Schedule** (the relative difference between alternatives for the estimated construction schedule duration of each alternative); and
- **Environmental** (including stormwater [ability of each alternative to meet MassDEP stormwater performance standards], drinking water quality [the degree of impact on local drinking water supply protection areas], wetlands [total estimated impact to wetland resource areas within the project area], visual/viewpoints [the level of visual impact], historic [potential impact on the historic Whittier Bridge] and navigation [potential impacts to navigation on the Merrimack River]).

After a thorough evaluation of the river crossing and highway widening alternatives, the New 8-Lane East Bridge River Crossing Alternative and the Inside Widening Highway Alternative (Northern Terminus to Route 286) were identified as the Preferred Alternatives. These alternatives best met the Purpose and Need, as well as Highway Configuration, Traffic (capacity), Bridge Configuration (design standards, structural safety, maintenance and inspection, and life cycle/costs), Construction (constructability), Right-of-Way, and Environmental criteria.

4.2 BRIDGE DESIGN ALTERNATIVES

Four bridge designs were evaluated as potential replacement structures for the existing Whittier Bridge. The designs included structural options for the network tied-arch (steel plate or steel box girder approach spans), box girder (steel plate, concrete box or segmental concrete box girders), and cable-stayed (concrete or steel box girders). The following list includes a general description of the four overall bridge designs:

- **Network Tied-Arch:** a modern version of an arch-style bridge reminiscent of the existing Whittier Bridge;
- **Box Girder:** a bridge in which the main beams comprise girders in the shape of a hollow box, using either steel, concrete, or a combination;
- **Cable-stayed:** a bridge that consists of one or more columns (towers or pylons) with cables supporting the bridge deck. There are two major types: a harp design with cables nearly parallel, and a fan design where all cables connect to or pass over the top of the towers (as is the case at the I-93 Zakim Bunker Hill Bridge in Boston and Cambridge); and
- **Extradosed:** a type of cable-stayed bridge with a stiffer and stronger bridge deck that allows the cables to be omitted close to the tower and allows the towers to be lower in proportion to the span.

The bridge design alternatives were comparatively evaluated for numerous engineering and environmental factors, including:

- **Structural/Redundancy** (including difficulty of design and redundancy of structure);
- **Highway/Profile Impact** (including profile impact of the structure);
- **Inspection and Maintenance** (including accessibility and frequency);
- **Schedule Impacts** (including suitability for Accelerated Bridge Construction and number of months to complete).
- **Constructability** (including complexity of construction and shipping constraints);
- **Environmental** (including shading [wetlands], loss of river bottom [square feet], noise, fisheries, wildlife, floodplains, historic and visual impacts);
- **Cost** (including preventative maintenance cost, life cycle cost and construction cost);
- **Aesthetics** (including the visual impact of structure, articulation of channel location, and driver's view); and
- **Section 106 Criteria** (including use of granite in piers [all alternatives], graceful lines, iconic structure, elegant arch [arch alternative], and reuse of artifacts [arch alternative]).

The evaluation concluded that the steel network tied-arch bridge with steel box girder approaches was the highest rated of all the bridge types evaluated, with the steel network arch bridge with steel plate girder approaches ranking as the second-most preferred type. As both of the highest-rated bridge types are network tied-arch designs, MassDOT has selected the network tied-arch as the preferred bridge design for the project. The project described in this Notice of Intent assumes the construction of new network tied-arch bridges over the Merrimack River.

4.3 SHARED-USE PATH ALIGNMENT ALTERNATIVES

As noted above, and as strongly expressed by the three communities during early coordination, the Preferred Alternative now includes a shared use path from the Exit 57 Park-and-Ride Lot in Newburyport, across the Merrimack River on the new I-95 northbound bridge, and north to Exit 58 (Route 110) in Amesbury, then east paralleling Route 110 to the intersection of Merrill Street and Rabbit Road with Route 110 in Salisbury.

The shared-use path is intended to provide access and interconnections for alternative modes of transportation between various destinations (nodes) within the existing bicycle transportation network in the project area (the network is illustrated on Figure 2-2 in Chapter 2). Six nodes were identified, including the Exit 57 Park-and-Ride Lot in Newburyport, Maudslay State Park in Newburyport, Moseley Woods park in Newburyport, the Amesbury Visitors Center at the intersection of Main Street/Evans Place and Merrill Road, the western terminus of the Ghost Trail in Salisbury, and the eastern terminus of the Powwow Riverwalk, at the Carriagetown Marketplace on Route 110 west of I-95 in Amesbury. A feasibility study (Parsons Brinckerhoff, 2010) for the shared-use path included various alignment alternatives for the path, and included variations on the origination and destination points of the path, alternative east to west connections between Maudslay State Park and Moseley Woods, and four alternative Merrimack River crossing alternatives. Two southerly path origination points were identified, including the Exit 57 Park-and-Ride Lot and Pine Hill/Ferry Road in Newburyport. The river crossing alternatives are limited to existing bridges in the project area and include:

- U.S. Route 1 between Newburyport and Salisbury;
- The Eastern Route Rail Bridge between Newburyport and Salisbury (west of the U.S. Route 1 crossing);
- The Hines and Chain Bridges between Newburyport and Amesbury, located immediately downstream (east) of the Whittier Bridge; and
- The Rock Bridge (East Main Street/Groveland Street) between West Newbury and Haverhill, located several miles upstream of the Whittier Bridge.

Two potential east to west connections between Moseley Woods and Maudslay State Park in Newburyport were examined, including an on-road connection along Pine Hill Road and Ferry Road across the new Pine Hill/Ferry Road bridge and a connection under the new I-95 bridges along the Merrimack River shoreline through the Newburyport Water Department land. The Merrimack River shoreline option was dismissed because of potential wetland impacts, the presence of Bartlett Springs Pond, an active drinking water reservoir to the west of I-95, and the need for extensive grading to the west of I-95 to ensure that the path would meet accessibility standards. East-west connectivity for alternative transportation modes would be achieved along the new Pine Hill/Ferry Road Bridge.

After considering all shared-use path alternatives, MassDOT selected the path alignment that originates at the Exit 57 Park-and-Ride Lot in Newburyport and extends north parallel to I-95, crosses the Merrimack River on the I-95 northbound bridge, and extends to the intersection of Route 110 and Merrill Street and Rabbit Road in Salisbury.

4.4 PREFERRED ALTERNATIVE

As there is only one of each of the river crossing and widening highway alternatives remaining after the alternatives evaluation process, the New 8-Lane East Bridge Alternative and the Inside Widening highway alternative were combined into a single project build alternative. The New 8-Lane East Bridge with Inside Widening Highway Alternative with the selection of the Network Tied-Arch bridge design and with the inclusion of the shared-use path was designated as the Preferred Alternative for the EA/DEIR and is the project described in this Notice of Intent.

5.0 COMPLIANCE WITH PERFORMANCE STANDARDS

No alterations are proposed to state-regulated resource areas in Salisbury. Therefore, the performance standards at 310 CMR 10.54 - 58 do not apply.

6.0 REFERENCES

- MassDEP, 2002. *Massachusetts Inland Wetland Replication Guidelines*. Massachusetts Department of Environmental Protection. Bureau of Resource Protection Wetlands and Waterways Program. March 2002.
- MassDEP, 2003. *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas. A Guide for Planners, Designers and Municipal Officials*. Originally prepared by: Franklin, Hampden, Hampshire Conservation Districts for Massachusetts Executive Office of Environmental Affairs. May 2003 reprint.
- MassDEP, 2006. *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands*. Massachusetts Department of Environmental Protection. Bureau of Resource Protection Wetlands and Waterways Program. March 2006.
- MassDEP, 2008. *Massachusetts Stormwater Handbook*. Massachusetts Department of Environmental Protection. Revised and updated in accordance with revisions to the Wetlands regulations, 310 CMR 10.00, and the Water Quality Regulations, 314 CMR 9.00, relating to stormwater. February 2008.
- Parsons Brinckerhoff, 2010. Shared Use Path Feasibility Study. July 2010.

FIGURES

WHITTIER BRIDGE/I-95 IMPROVEMENT PROJECT

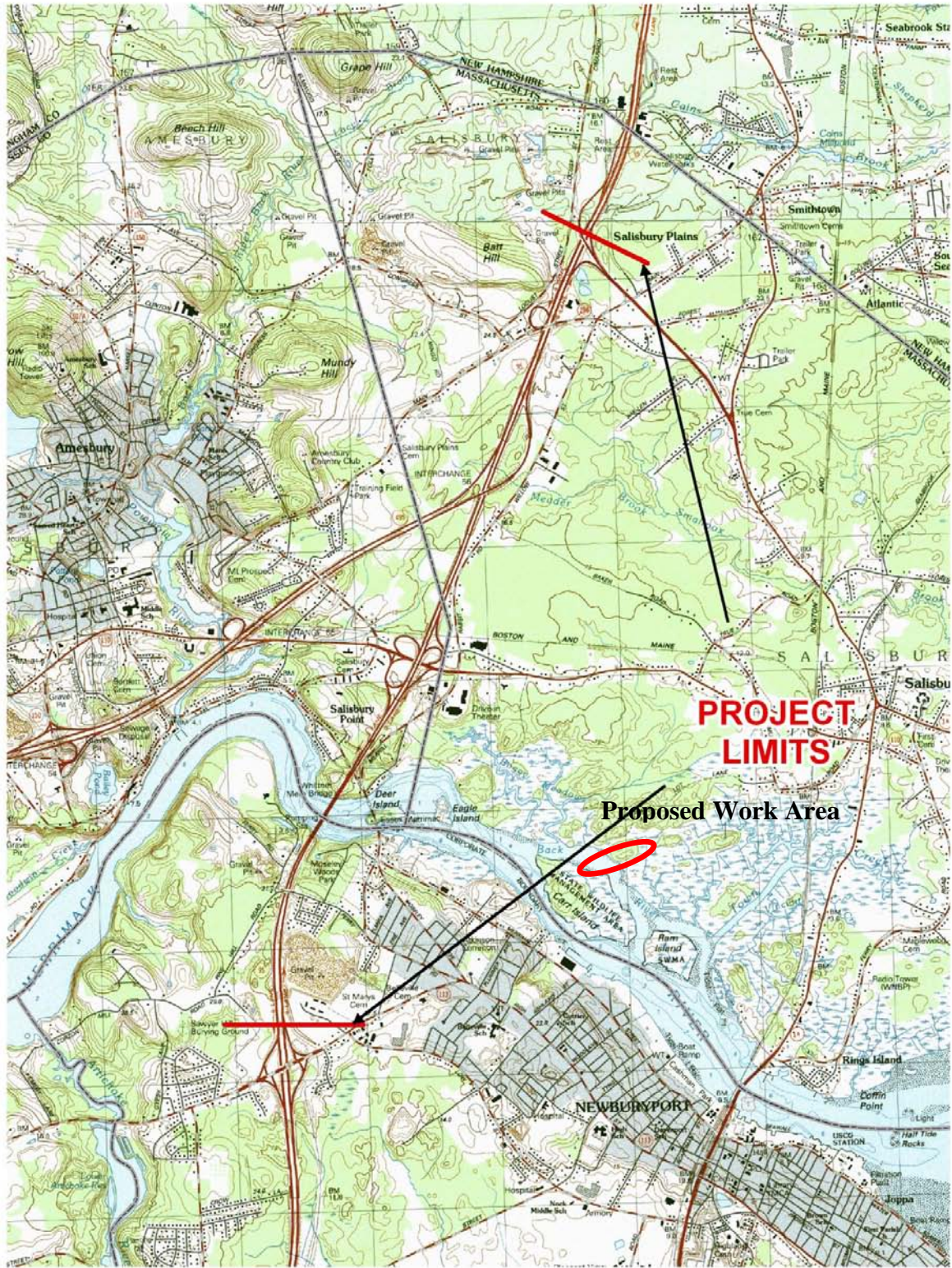


Figure 1. Locus Map, Whittier Bridge/I-95 Improvement Project
Newburyport, Amesbury, Salisbury, Massachusetts

APPENDIX A

Checklist for Stormwater Report



Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- No disturbance to any Wetland Resource Areas
- Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- Reduced Impervious Area (Redevelopment Only)
- Minimizing disturbance to existing trees and shrubs
- LID Site Design Credit Requested:
 - Credit 1
 - Credit 2
 - Credit 3
- Use of “country drainage” versus curb and gutter conveyance and pipe
- Bioretention Cells (includes Rain Gardens)
- Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- Treebox Filter
- Water Quality Swale
- Grass Channel
- Green Roof
- Other (describe): _____

Standard 1: No New Untreated Discharges

- No new untreated discharges
- Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - Static
 - Simple Dynamic
 - Dynamic Field¹
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume. New Development
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - Site is comprised solely of C and D soils and/or bedrock at the land surface
 - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - Solid Waste Landfill pursuant to 310 CMR 19.000
- Redevelopment Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - is within the Zone II or Interim Wellhead Protection Area
 - is near or to other critical areas
 - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - involves runoff from land uses with higher potential pollutant loads.
 - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

N/A

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does **not** cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - Limited Project
 - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - Bike Path and/or Foot Path
 - Redevelopment Project
 - Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

Pending

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - Name of the stormwater management system owners;
 - Party responsible for operation and maintenance;
 - Schedule for implementation of routine and non-routine maintenance tasks;
 - Plan showing the location of all stormwater BMPs maintenance access areas;
 - Description and delineation of public safety features;
 - Estimated operation and maintenance budget; and
 - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

APPENDIX B

Order of Resource Area Delineation



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

Provided by MassDEP:

065-0913

MassDEP File Number

**WPA Form 4B – Order of Resource Area
Delineation**

eDEP Transaction Number

Salisbury

City/Town

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

From: Salisbury
1. Conservation Commission

2. This Issuance is for (check one):

- a. Order of Resource Area Delineation
- b. Amended Order of Resource Area Delineation

3. Applicant:

a. First Name Massachusetts Department of Transportation Highway Division b. Last Name _____
c. Organization _____
d. Mailing Address 10 Park Plaza
Boston MA 02116
e. City/Town _____ f. State _____ g. Zip Code _____

4. Property Owner (if different from applicant):

a. First Name Commonwealth of Massachusetts b. Last Name _____
c. Organization _____
d. Mailing Address _____
e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location:

I95 corridor from Amesbury to Toll Road ramp Salisbury 01952
a. Street Address _____ b. City/Town _____ c. Zip Code _____
d. Assessors Map/Plat Number _____ e. Parcel/Lot Number _____
Latitude and Longitude _____ f. Latitude _____ g. Longitude _____
(in degrees, minutes, seconds): _____ d m s _____ d m s

6. Dates:

11/18/2009 1/6/2010 1/15/2010
a. Date ANRAD filed _____ b. Date Public Hearing Closed _____ c. Date of Issuance _____

7. Title and Date (or Revised Date if applicable) of Final Plans and Other Documents:

Whittier Bridge I95 Improvement Project...ANRAD plan 11/17/2009
a. Title _____ b. Date _____
Whittier Bridge Replacement & I95 Improvement Project Salisbury ANRAD 1/6/2010
c. Title _____ d. Date _____



WPA Form 4B – Order of Resource Area Delineation

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

065-0913

MassDEP File Number

eDEP Transaction Number

Salisbury

City/Town

B. Order of Delineation

1. The Conservation Commission has determined the following (check whichever is applicable):

a. **Accurate:** The boundaries described on the referenced plan(s) above and in the Abbreviated Notice of Resource Area Delineation are accurately drawn for the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

a. Inland Bank, Isolated Vegetated Wetlands, Land Under Water Bodies, Riverfront

b. **Modified:** The boundaries described on the plan(s) referenced above, as modified by the Conservation Commission from the plans contained in the Abbreviated Notice of Resource Area Delineation, are accurately drawn from the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

a. _____

c. **Inaccurate:** The boundaries described on the referenced plan(s) and in the Abbreviated Notice of Resource Area Delineation were found to be inaccurate and cannot be confirmed for the following resource area(s):

1. Bordering Vegetated Wetlands
2. Other resource area(s), specifically:

3. The boundaries were determined to be inaccurate because:



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**WPA Form 4B – Order of Resource Area
Delineation**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

065-0913

MassDEP File Number

eDEP Transaction Number

Salisbury

City/Town

C. Findings

This Order of Resource Area Delineation determines that the boundaries of those resource areas noted above, have been delineated and approved by the Commission and are binding as to all decisions rendered pursuant to the Massachusetts Wetlands Protection Act (M.G.L. c.131, § 40) and its regulations (310 CMR 10.00). This Order does not, however, determine the boundaries of any resource area or Buffer Zone to any resource area not specifically noted above, regardless of whether such boundaries are contained on the plans attached to this Order or to the Abbreviated Notice of Resource Area Delineation.

This Order must be signed by a majority of the Conservation Commission. The Order must be sent by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate DEP Regional Office (see <http://www.mass.gov/dep/about/region/findyour.htm>).

D. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate DEP Regional Office to issue a Superseding Order of Resource Area Delineation. When requested to issue a Superseding Order of Resource Area Delineation, the Department's review is limited to the objections to the resource area delineation(s) stated in the appeal request. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order of Resource Area Delineation will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act, (M.G.L. c. 131, § 40) and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal bylaw or ordinance, and not on the Massachusetts Wetlands Protection Act or regulations, the Department of Environmental Protection has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 4B – Order of Resource Area
Delineation

Provided by MassDEP:

 MassDEP File Number

 Document Transaction Number

 City/Town

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

E. Signatures

 Date of Issuance

Please indicate the number of members who will sign this form.

 1. Number of Signers

[Signature] 1/16/10

 Signature of Conservation Commission Member

 Signature of Conservation Commission Member

[Signature] 1/6/10

 Signature of Conservation Commission Member

 Signature of Conservation Commission Member

[Signature] 1/6/2010

 Signature of Conservation Commission Member

 Signature of Conservation Commission Member

[Signature] 1/6/2010

 Signature of Conservation Commission Member

This Order is valid for three years from the date of issuance.

If this Order constitutes an Amended Order of Resource Area Delineation, this Order does not extend the issuance date of the original Final Order, which expires on _____ unless extended in writing by the issuing authority.

This Order is issued to the applicant and the property owner (if different) as follows:

2. By hand delivery on _____

3. By certified mail, return receipt requested on _____

a. Date

a. Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee Transmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

Project Location

Mailing Address

City/Town

State

Zip Code

2. Applicant (as shown on Notice of Intent (Form 3), Abbreviated Notice of Resource Area Delineation (Form 4A); or Request for Determination of Applicability (Form 1)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. DEP File Number:

B. Instructions

1. When the Departmental action request is for (check one):

- Superseding Order of Conditions
- Superseding Determination of Applicability
- Superseding Order of Resource Area Delineation

Send this form and check or money order for \$100.00 (single family house projects) or \$200 (all other projects), payable to the *Commonwealth of Massachusetts* to:

Department of Environmental Protection
Box 4062
Boston, MA 02211



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
Request for Departmental Action Fee Transmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Instructions (cont.)

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <http://www.mass.gov/dep/about/region/findyour.htm>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

APPENDIX C

Rare Species Information



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

June 24, 2009

Amesbury Conservation Commission
Town Hall
62 Friend Street
Amesbury MA 01913

Newburyport Conservation Commission
City Hall
60 Pleasant Street
Newburyport MA 01950

Henry Barbaro
Massachusetts Highway Department
10 Park Plaza, Room 4260
Boston MA 02116

RE: Applicant: Henry Barbaro, Massachusetts Highway Department
 Project Description: Whittier Bridge Borings
 Project Location: Merrimack River Channel at I-95, Amesbury/Newburyport
 NHESP Tracking No.: 08-25969

Dear Commissioners and Mr. Barbaro:

The applicant listed above has submitted a Notice of Intent (NOI) with project plans (dated June 2009) to the Natural Heritage & Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (DFW) for compliance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.58(4)(b) and 10.59). The NHESP has also received supporting documentation for review pursuant to the MA Endangered Species Act (MESA) (MGL c131A) and its implementing regulations (321 CMR 10.00). The filing describes a series of drilled borings of the bedrock in the Merrimack River Channel in Amesbury associated with a proposed replacement of the Whittier Bridge.

NATURAL HERITAGE AND ENDANGERED SPECIES PROGRAM COMMENTS

The NHESP has determined that the proposed project is located **within *Priority and Estimated Habitat***, as indicated in the *Natural Heritage Atlas* (13th edition, 2008). Specifically, the proposed project is within the mapped habitat of the following state-listed species:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Acipenser brevirostris</i>	Shortnose Sturgeon*	Fish	Endangered*
<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	Fish	Endangered
<i>Haliaeetus leucocephalus</i>	Bald Eagle	Bird	Endangered

The NHESP notes that the Shortnose Sturgeon is federally listed as "Endangered" and that this project may require additional coordination with the National Marine Fisheries Service (NMFS).

www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, North Drive, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7891

An Agency of the Department of Fish and Game

Provided that work proceeds as outlined above, and provided that the applicant adheres to any conditions required by the NMFS, the NHESP finds that **this project, as currently proposed, will not cause adverse effects** to the habitat of state-listed rare wildlife (310 CMR 10.58(4)(b) and 10.59), or constitute a "take" of state-listed species pursuant to 321 CMR 10.18(2)(a). This determination is based on the information provided and the information contained in our database.

The NHESP has received an *Environmental Notification Form* (ENF) related to the proposed replacement of the Whittier Bridge. We anticipate that the demolition and reconstruction of the Whittier Bridge will require additional early coordination between the NHESP and MassHighway.

If project plans change, or if no physical work is commenced on the above proposed project within three years from the date of issuance of this letter, the applicant must contact the NHESP prior to any work. Please do not hesitate to contact Michael T. Jones, Ph.D., Endangered Species Review Biologist, at (508) 389-6386 (michael.t.jones@state.ma.us) with any questions or comments you may have regarding the NHESP determination.

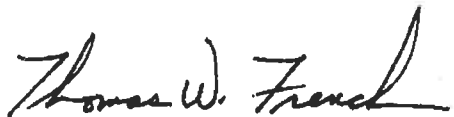
FISHERIES PROGRAM COMMENTS

The Merrimack River supports a wide variety of resident and anadromous fish species. Surveys have yielded 28 species: American eel (*Anguilla rostrata*), American shad (*Alosa sapidissima*), Atlantic salmon (*Salmo salar*), Atlantic sturgeon (*Acipenser oxyrhynchus*), black crappie (*Pomoxis nigromaculatus*), bluegill (*Lepomis macrochirus*), brook trout (*Salvelinus fontinalis*), brown bullhead (*Ameiurus nebulosus*), brown trout (*Salmo trutta*), carp (*Cyprinus carpio*), common shiner (*Notropis cornutus*), golden shiner (*Notemigonus crysoleucas*), largemouth bass (*Micropterus salmoides*), northern pike (*Esox lucius*), pumpkinseed (*Lepomis gibbosus*), rainbow trout (*Oncorhynchus mykiss*), redbreast sunfish (*Lepomis auritus*), river herring (*Alosa sp.*), sea lamprey (*Petromyzon marinus*), shortnose sturgeon (*Acipenser brevirostrum*), smallmouth bass (*Micropterus dolomieu*), spottail shiner (*Notropis hudsonius*), striped bass (*Morone saxatilis*), walleye (*Stizostedion vitreum*), white catfish (*Ameiurus catus*), white perch (*Morone americana*), white sucker (*Catostomus commersoni*) and yellow perch (*Perca flavescens*). Anadromous species are highly susceptible to changes in water quality and/or quantity such as siltation, water level fluctuations, loss of riparian habitat, barriers to migration and alterations of the temperature regime. Therefore, the project must not in any way diminish the ability of the river to support anadromous fish species.

Best management practices for erosion and sedimentation control must be adhered to for all phases of construction to minimize potential impacts to the fisheries resources. To the greatest extent practicable, all in river work should be conducted during low flow periods throughout the year. Times of year when river flow is high due to extended rain and/or snow melt events should be avoided. Also, if the project will alter the riverbed, we request that the existing grade be maintained.

If you have any questions regarding the Fisheries Comments, please contact Richard Hartley, Fisheries Biologist, at (508) 389-6330.

Sincerely,



Thomas W. French, Ph. D.
Assistant Director

cc: MA DEP Northeast Region
Sarah Allen, Normandeau Associates



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
<http://www.fws.gov/northeast/newenglandfieldoffice>

January 2, 2009

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/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm>

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (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.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type 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 Mr. Anthony Tur at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

AUG - 4 2009

Sarah A. Barnum
Normandeau Associates
25 Nashua Road
Bedford, New Hampshire 03110-5500

Re: Whittier Bridge I-95 Improvement

Dear Ms. Barnum,

This is in response to your letter regarding Mass Highway's proposed replacement of the Whittier Bridge which takes I-95 over the Merrimack River in Newburyport, Amesbury and Salisbury, Massachusetts. The existing six lane bridge over the Merrimack River is proposed for replacement. As noted in your letter, a population of federally endangered shortnose sturgeon (*Acipenser brevirostrum*) occurs in the Merrimack River.

Species Listed Under the Endangered Species Act

The size of the shortnose sturgeon population in the Merrimack River has been estimated by tag and release studies (conducted in 1988-1990) to be 33 adults with an unknown number of juveniles and sub-adults. Kieffer and Kynard (1996) noted that the low abundance of spawning fish indicate that the shortnose sturgeon population in the Merrimack River is the smallest yet identified and is likely vulnerable to extirpation. Shortnose sturgeon in the Merrimack are not known to exist upstream of the Essex Dam (Lawrence), which represents the first significant impediment to the upstream migration of shortnose sturgeon in this system.

The I-95 bridge is located approximately 5.5 miles from the mouth of the Merrimack River. The best available information indicates that shortnose sturgeon are only likely to occur in this region of the river during the summer. As such, NMFS recommends that sediment-disturbing work, which could affect individual shortnose sturgeon or their prey, be avoided during the time of year when the species is likely to be present in the action area. Alternatively, if work at this time of year can not be avoided, NMFS recommends that project proponent implement measures to minimize the potential for effects to this species. This may include the use of cofferdams, silt curtains, employing observers, and/or the use of air bubble curtains to minimize the underwater noise associated with the driving of large bore piles.

As you may know, Section 7(a)(2) of the Endangered Species Act (ESA) of 1973, as amended,



states that each Federal agency shall, in consultation with the Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Any discretionary federal action that may affect a listed species must undergo Section 7 consultation. It is unclear from your letter if the proposed bridge replacement project will be authorized, funded or carried out by any federal agency; however, as approval of the US Coast Guard, Army Corps of Engineers and/or the Federal Highway Administration is likely to be necessary, NMFS recommends that Mass Highway work with these agencies to initiate consultation pursuant to Section 7 of the ESA. The lead Federal agency, or their designated non-Federal representative, should submit a determination of effects along with justification for the determination and a request for concurrence to NMFS. If the lead Federal agency determines that the project is "not likely to adversely affect" any listed species (i.e., when direct or indirect effects of the proposed project or its interdependent and/or interrelated actions on listed species are expected to be discountable, insignificant or completely beneficial) and NMFS concurs with this determination, NMFS will reply in a letter that will convey the concurrence, thus completing Section 7 consultation. If the lead Federal agency determines that the project is "likely to adversely affect" any listed species (i.e., if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effects are not: discountable, insignificant, or beneficial) or NMFS does not concur with the agency's "not likely to adversely affect" determination, formal Section 7 consultation, resulting in the issuance of a Biological Opinion with an appropriate Incidental Take Statement, may be required. Any effects that amount to the take of a listed species (defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct") are not discountable, insignificant or entirely beneficial. Therefore, if any take is anticipated, formal consultation is required.

Technical Assistance for Candidate Species

Candidate species are those petitioned species that are actively being considered for listing as endangered or threatened under the ESA, as well as those species for which NMFS has initiated an ESA status review that it has announced in the *Federal Register*.

Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) occur in the Merrimack River. In 2006, NMFS initiated a status review for Atlantic sturgeon to determine if listing as threatened or endangered under the ESA is warranted. The Status Review Report was published on February 23, 2007. NMFS is currently considering the information presented in the Status Review Report to determine if any listing action pursuant to the ESA is warranted at this time. If it is determined that listing is warranted, a final rule listing the species could be published within a year from the date of publication of the listing determination or proposed rule. As a candidate species, Atlantic sturgeon receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on Atlantic sturgeon from any proposed project. Please note that once a species is proposed for listing the conference provisions of the ESA apply (see 50 CFR 402.10). As the listing status for this species may change, NMFS recommends that the MBTA obtain updated status information from NMFS prior to the submission of any permit applications.

Essential Fish Habitat

Consultation for Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) may be necessary for this project due to the presence of federally managed species in the project area. If EFH may be adversely affected, then the lead Federal agency must submit an EFH Assessment to NMFS analyzing the effects of the action on EFH and federally managed species. A guide to essential fish habitat designations in the Northeastern United States is located on the Habitat Conservation Division web site at <http://www.nero.noaa.gov/hcd/webintro.html>. Questions concerning EFH assessments can be directed to Chris Boelke in NMFS Habitat Conservation Division at (978)281-9131.

Please contact Julie Crocker of my staff at (978)282-8480 or by e-mail (julie.crocker@noaa.gov) if you have any questions regarding these comments or the section 7 consultation process.

Sincerely,



Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

EC: Crocker – F/NER3
Boelke – F/NER4



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

JUN - 8 2011

Susan McArthur
Massachusetts Department of Transportation
Highway Division
Ten Park Plaza
Boston, Massachusetts 02116-3969

Re: Whittier Bridge

Dear Ms. McArthur,

This is in response to your letter dated February 15, 2011, requesting consultation pursuant to Section 7 of the Endangered Species Act of 1973, as amended (ESA) regarding the Massachusetts Department of Transportation's (MassDOT) proposed reconstruction of the Whittier Bridge in Newburyport and Amesbury, Massachusetts. As noted in the letter dated September 8, 2009 from Lucy Garliauskas of the US Federal Highway Administration (FHWA), MassDOT has been designated by the FHWA as a non-federal representative for the purposes of conducting consultation pursuant to Section 7 of the ESA. MassDOT has made the preliminary determination that the proposed action is not likely to adversely affect any species listed under the jurisdiction of NMFS and has requested that NMFS concur with this determination. MassDOT has also applied to the New England District, Army Corps of Engineers for authorization for the proposed project pursuant to Section 10 of the Rivers and Harbors Act. FHWA is the lead Federal agency for purposes of the section 7 consultation, with MassDOT acting as their non-federal representative. Additional information was received via e-mail from Timothy Dexter of MassDOT on March 30, 2011, April 13, 2011, and May 9, 2011.

Proposed Action

The proposed project will involve the replacement of the Whittier Bridge over the Merrimack River in Amesbury and Newburyport, MA. The work will consist of replacing the existing bridge with two independent parallel bridges. Each of the two structures will consist of four spans supported on two end abutments and three intermediate piers, for a total of six piers in the river. The four existing piers will be removed. The central pier will consist of a pylon or tower extending above the superstructure and tower legs or a wall pier for the substructure supported on the foundation. The total length of the bridge is 1,300 feet. Work is scheduled to occur between March 2013 and December 2016.

The proposed work will involve six piers, three for each of the two parallel bridges. All work on the three piers will take place from within cofferdams (six total). Cofferdams for the northern piers (Pier 3) will consist of sheet piles driven to the gravel bottom, with a vibratory hammer. Steel support piles would then be driven within the completed cofferdam with an impact hammer. The southern piers (Pier 1) are founded on the exposed bedrock river bottom. The cofferdams for these



piers will consist of the installation of a prefabricated cofferdam consisting of sheets attached to king piles which will be drilled into the river bottom. The midpiers (Pier 2) will be constructed on the high rock in the middle of the river. This rock bottom is partially exposed at low water. The cofferdams for Pier 2 will be constructed with drilled king piles and either steel or wood sheets.

The existing piers will be demolished through combination of hydraulic drilling and splitting wedges, and hydraulic impact hammers such as hoe rams. The granite block veneers (12-18 inches in depth) incorporated into the pier face are anchored by iron bars to the concrete core. They will be salvaged for reuse. The unreinforced pier footings will be removed flush to the rock bottom or in the case of pier 3 removed to the original grade and the steel h-piles will be extracted or cut off 1 foot below grade, then the bottom will be restored to its natural material.

NMFS Listed Species in the Action Area

The action area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50CFR§402.02). For this project, the action area includes the project footprint as well as the area encompassed by the steel sheet piling cofferdams and silt curtains and the underwater area where effects of pile installation for the cofferdams (i.e., increase in suspended sediment and noise) will be experienced. This area is expected to encompass all of the effects of the proposed action. The Whittier Bridge is located approximately 5.5 miles upstream from the mouth of the river, in an area of the river known as the “lower islands” at approximately rkm 8.

There is a small population of the federally endangered shortnose sturgeon (*Acipenser brevirostrum*) in the Merrimack River. The size of this population has been estimated by tag and release studies (conducted in 1988-1990) to be 33 adults with an unknown number of juveniles and sub-adults. Kieffer and Kynard (1996) noted that the low abundance of spawning fish indicate that the shortnose sturgeon population in the Merrimack River is the smallest yet identified and is likely vulnerable to extirpation. Little research has been conducted on the Merrimack River shortnose population since 1990; although 19 adult male shortnose sturgeon were caught over the course of two days in a gillnet study conducted by USGS in 2008. An updated population estimate is not currently available.

Shortnose sturgeon in the Merrimack River are not known to exist upstream of the Essex Dam (Lawrence), which represents the first significant impediment to the upstream migration of shortnose sturgeon in this system. Sexually mature fish begin to move upriver from freshwater overwintering areas (located in the Amesbury reach) to the spawning site near Haverhill when water temperatures reach about 7°C (typically in April). Spawning occurs within a 2-km reach at river kilometers 30-32 (measured from the mouth) near Haverhill. Spawning takes place over a 5-10 day period in the spring when water temperatures are between 7 and 14°C. Physical characteristics of this spawning site are boulder-rubble substrate, water depth of 1.8-5.5m and bottom water velocity of 0.3-0.7 m/s.

Following spawning in late April-early May, fish move downriver. Some fish remain in a freshwater reach near Amesbury (Rocks Village to Artichoke River) for the remainder of the year while others move into a saline reach near the lower islands for about 6 weeks prior to returning to the freshwater reach. The Deer Island Bridge crosses the most upstream of the lower islands.

Shortnose sturgeon are likely to be present in the lower islands area during the early summer. Individuals migrating between further downstream reaches (such as Joppa Flatts) and upstream overwintering sites (located between rkm 12-23) may be transiting the action area between May and October. Due to the distance from the spawning grounds, no eggs or larvae are likely to be present in the action area. Based on the best available information, the occurrence of shortnose sturgeon in the action area is limited to the May to early October time period.

Effects of the Action

As noted above, the proposed project involves the replacement of the Whittier Bridge, which carries Rt. 95 across the Merrimack River. The effects analysis presented below will be limited to work occurring in the Merrimack River, where the action area overlaps with the occurrence of shortnose sturgeon, given that the rest of the project (i.e., roadway improvements) will have no effect on species listed under NMFS jurisdiction. In water work will primarily consist of installation of cofferdams and the demolition of the existing bridge piers.

The cofferdams for Pier 3 will involve the installation of sheet piles with a vibratory hammer and the installation of steel support piles with an impact hammer. Construction of the cofferdams for Piers 1 and 2 will involve the drilling and pinning of king piles and then installation of steel or wood sheets to be attached to the king piles. Estimated cumulative sound exposure level (SEL₁) values for driving the steel support piles is less than 183 dB re: 1 μ Pa²·sec. Driving of the steel sheet piles is expected to result in cumulative SEL values ranging from 160 dB re: 1 μ Pa²·sec to 165 dB re: 1 μ Pa²·sec. These levels are dependent not only on the pile and hammer characteristics, but also on the geometry and boundaries of the surrounding underwater and benthic environment. Drilling for the king piles is expected to result in underwater noise levels of 162dB RMS at 1 meter, with noise levels attenuating to 139dB at a distance of 28m. As the distance from the source increases, underwater sound levels produced by pile driving are known to dissipate rapidly. Using data from Illingworth and Rodkin, Inc. (2009) underwater noise levels produced from the driving of the 30-inch piles will attenuate approximately 5dB every 10- 20 meters and noise levels from the sheet piles will attenuate 3-5dB every 20 meters. This is based on a conservative literature estimate of attenuation rates for the driving of piles (Illingworth and Rodkin, Inc. 2007, 2009).

Pile driving affects fish through underwater noise and pressure which can cause effects to hearing and air containing organs, such as the swim bladder. Effects to fish can range from temporary avoidance of an area to death due to injury of internal organs. The type and size of pile, type of installation method (i.e., vibratory vs. hammer), type and size of fish (smaller fish are more often impacted), and distance from the sound source (i.e., sound dissipates over distance so noise levels are greater closer to the source) all contribute to the likelihood of effects to an individual fish. The available literature on effects of pile driving on aquatic species is difficult to summarize due to inconsistent methods of measuring underwater sound, the diversity of pile driving methods and receiving substrates, and the differing tolerances of aquatic species to underwater noise. Generally, however, the larger the pile and the closer a fish is to the pile, the greater the likelihood of effects.

Popper *et al.* (2006) have proposed a set of criteria for injury to fish exposed to pile driving. They propose that pile strikes which result in a sound exposure level (SEL) of driving. They propose that

¹ Sound Exposure Level (SEL) is defined as that level which, lasting for one second, has the same acoustic energy as the transient and is expressed as dB re: 1 μ Pa²·sec. SEL values are used in the assessment of underwater noise effects on species of fish

pile strikes which result in a sound exposure level (SEL) of 187 dB re 1 μ Pa as measured 10 meters from the source are expected to produce injuries to fish. These criteria are similar to those adopted by NMFS Northwest Regional Office, the US Fish and Wildlife Service, and the Federal Highway Administration, who determined that based on the best available scientific information, that pile driving resulting in an SEL level of 187 dB re: 1 μ Pa²•sec and a peak sound pressure level of 206 dB re: 1 μ Pa_{peak} in any single strike has no potential to cause injury or mortality to fish weighing more than 2 grams. All shortnose sturgeon likely to occur in the action area will weigh considerably more than 2 grams.

As different fish species demonstrate differing sensitivities to sound levels and there is little information on the effects of underwater noise on shortnose sturgeon, it is difficult to determine whether this criterion is appropriate for shortnose sturgeon. The NMFS Northwest Region criteria noted above, considered effects to green sturgeon which are biologically similar to shortnose sturgeon. Thus, it is reasonable to consider that acoustic thresholds designed to be protective of green sturgeon would also be protective of shortnose sturgeon.

While no studies have been conducted on the effects of pile driving on shortnose sturgeon, two studies have been conducted on the effects of blasting on this species. Both activities produce sound waves that would act similarly in the water column, making effects comparable. Moser (1999) studied the effects of rock blasting in Wilmington Harbor on caged hatchery reared shortnose sturgeon. A study done in the Cooper River, South Carolina, by Collins and Post (2001) tested the use of blasting caps to possibly repel shortnose sturgeon from a blasting site. These studies indicate that mortality of shortnose sturgeon only occurred when recorded sound levels were 234 dB. At sound levels between 196-229 dB, some shortnose sturgeon were temporarily stunned. These studies suggest that, consistent with the recommendations by Popper *et al.* 2006, exposure of shortnose sturgeon to sound levels below 187dB is unlikely to result in effects to this species. Sound levels resulting from the proposed action (183 dB SEL at the source for 30-inch piles and 160-165 dB SEL at the source for sheet piles, 162dB RMS at 1 m for the drilling of king piles) are below the range that could negatively affect shortnose sturgeon. Based on this information, NMFS is able to conclude that the effects of pile driving on shortnose sturgeon are insignificant and discountable.

The existing bridge piers will be demolished through a combination of hydraulic drilling and splitting wedges and hydraulic impact hammers. This equipment will remove the granite block veneers (12-18 inches deep) that are incorporated into the pier face. The center of the piers consist of lightly reinforced concrete. The piers will be removed flush to the rock bottom, with the exception of pier 3 which consists of steel H piles, which will be extracted or cut off 1 foot below grade. The equipment to be used to demolish the piles is similar to that being used to install the new sheet piles and king piles and it is expected that underwater noise levels associated with the demolition will be similar to that used for installation of king piles and sheet piles. As explained above, these noise levels are expected to be below the range that could negatively affect shortnose sturgeon. Based on this information, NMFS is able to conclude that the effects of pile driving on shortnose sturgeon are insignificant and discountable.

Once the cofferdams are installed, the new bridge piers will be constructed. Work within the cofferdams will be ongoing during the time of year when shortnose sturgeon may be present in the action area. While the ongoing work will result in noise, there is expected to be minimal

transmission of this noise to the underwater area where shortnose sturgeon will be present due to the need for noise to transmit through the steel walls. The potential for elevated noise to be experienced within the underwater area is further reduced as sound from one environment (air or water) is not easily transmitted across the air-water interface (Akamatsu, et. al. 2002, as referenced in Popper 2003). As such, any increase in underwater noise associated with work ongoing within the cofferdams will be insignificant.

Construction ongoing within the cofferdams will include sediment disturbing activities. However, as the joints of the cofferdams are expected to be water tight, there is not expected to be any increase in suspended sediment outside of the cofferdams. As impacts of noise and suspended sediment are expected to be insignificant, ongoing construction within the cofferdams is extremely unlikely to affect any shortnose sturgeon present in the action area. As such, effects of work ongoing within the cofferdams will be insignificant and discountable.

The cofferdam area will extend in an approximately 10 foot radius from each of the bridge piers. Shortnose sturgeon will not be able to access the habitat within the cofferdams for the period that the cofferdams are in place. However, as the area within the cofferdams is not known to support shortnose sturgeon forage items and use of the action area is limited to migrating shortnose sturgeon and the ability to pass through this reach of the river will not be impacted by the presence of the cofferdams, this temporary loss of access to this benthic habitat will be insignificant.

Section 7 Conclusions

Based on the analysis that any effects to shortnose sturgeon from the proposed action will be insignificant or discountable, NMFS is able to concur with the determination that the proposed reconstruction of the Whittier Bridge in Amesbury, Massachusetts is not likely to adversely affect any listed species under NMFS jurisdiction. Therefore, no further consultation pursuant to section 7 of the ESA is required. Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered in the consultation; (b) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the consultation; or (c) If a new species is listed or critical habitat designated that may be affected by the identified action.

Technical Assistance for Proposed Species

On October 6, 2010, NMFS published two proposed rules to list five distinct population segments (DPS) of Atlantic sturgeon under the ESA. NMFS is proposing to list four DPSs as endangered (New York Bight, Chesapeake Bay, Carolina and South Atlantic) and one DPS of Atlantic sturgeon as threatened (Gulf of Maine DPS). As you know, once a species is proposed for listing, as either endangered or threatened, the conference provisions of the ESA may apply (see 50 CFR 402.10 and ESA Section 7(a)(4)). As stated at 50 CFR 402.10, "Federal agencies are required to confer with NMFS on any action which is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat."

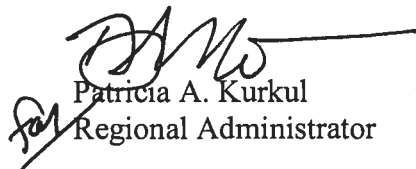
NMFS has reviewed the proposed action in order to provide guidance to the FHWA, Mass DOT and ACOE as to whether a conference is required in this case. Atlantic sturgeon are known to occur in

the Merrimack River and may be present in the action area. If present in the action area during construction, NMFS anticipates that effects to Atlantic sturgeon would be similar to those described for shortnose sturgeon above. As such, all effects resulting from pile driving, pier demolition and other in-water construction are expected to be insignificant and discountable.

As all effects of the proposed action are likely to be insignificant and discountable and the proposed action is not likely to result in the injury or mortality of any Atlantic sturgeon, the action is not likely to appreciably reduce the survival and recovery of any DPS of Atlantic sturgeon and therefore it is not reasonable to anticipate that this action would be likely to jeopardize the continued existence of any DPS of Atlantic sturgeon. As such, no conference is necessary for Atlantic sturgeon. Should project plans change, NMFS recommends that MassDOT discuss the potential need for conference with NMFS.

Should you have any questions about this correspondence please contact Julie Crocker of my staff at (978) 282-8480 or by e-mail (Julie.Crocker@Noaa.gov).

Sincerely,


Patricia A. Kurkul
Regional Administrator

Ec: Crocker, F/NER3
Boelke, F/NER4
Dexter, MassDOT

File Code: Sec 7 FHWA Mass DOT Whittier Bridge Reconstruction
PCTS I/NER/2011/01076



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

MassWildlife

Wayne F. MacCallum, *Director*

August 31, 2011

Timothy Dexter
MassDOT
10 Park Plaza
Boston, MA 02116

Re: Whittier Bridge I-95 Improvement Project
I-95, Newburyport, Amesbury, and Salisbury
NHESP Tracking No. 08-25969

Dear Mr. Dexter,

During the 2011 Spring-Summer season the Natural Heritage and Endangered Species Program (NHESP) was made aware of a pair of Peregrine Falcons (*Falco peregrinus*) establishing a territory in the vicinity of the Whittier Bridge. The NHESP requests that a nesting box be installed at the Whittier Bridge. The NHESP has worked with MassDOT Highway Division to successfully plan and install nest boxes for the species at bridge sites in western Massachusetts. The installation of the box will not affect construction and provide improved nesting habitat at this site. We look forward to working with MassDOT Highway Division in the design and installation of the nesting box.

We appreciate the opportunity to comment. If you have any questions about this letter, please contact David J. Paulson, Endangered Species Review Biologist, at 508-389-6366 (david.paulson@state.ma.us).

Sincerely,

Thomas W. French, Ph.D.
Assistant Director

www.masswildlife.org

Division of Fisheries and Wildlife
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 389-6300 Fax (508) 389-7890
An Agency of the Department of Fish and Game