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## NOTICE OF INTENT APPLICATION

### NFS Permitting of Dredge Spoil Beneficial Use Plum Island Reservation Newburyport, Massachusetts

June 2021

File No. 18.0175103.00



*Photo Credit: Google Maps*

#### **PREPARED FOR:**

Massachusetts Department of Conservation and Recreation  
251 Causeway Street, Suite 800  
Boston, MA 02114

#### **GZA GeoEnvironmental, Inc.**

144 Elm Street | Amesbury, MA 01913  
781-278-5700



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CONSTRUCTION  
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144 Elm Street  
Amesbury, MA 01913  
T: 781.278.4800  
F: 978.834.6269  
www.gza.com



June 2, 2021  
File No. 18.0175103.00

Newburyport Conservation Commission  
Newburyport City Hall  
60 Pleasant Street  
Newburyport, MA 01950

**Re: Notice of Intent Application  
NFS Permitting of Dredge Spoil Beneficial Use  
Plum Island Reservation, Newburyport, Massachusetts**

Dear Commission Members:

On behalf of our client, the Massachusetts Department of Conservation and Recreation (DCR), GZA GeoEnvironmental Inc. (GZA) is submitting this Notice of Intent (NOI) Application for the proposed Placement of Dredged Material at Plum Island Reservation in Newburyport, Massachusetts (Project Site). This application is being filed in accordance with the requirements of the Massachusetts Wetlands Protection Act and the City of Newburyport Wetland Ordinance.

The Project Site is located at the North Point of Plum Island at the mouth of the Merrimack River. The area consists of an eroded dune system that has experienced upwards of 400 feet of erosion over the past eight years. The Project consists of placement of dredged material as beach nourishment.

The U.S. Army Corps of Engineers (USACE) is undertaking a project to dredge approximately 290,000 cubic yards (cy) of sand from the Merrimack River navigational channel in Newburyport Harbor in the 2021/2022 dredge season. USACE will place approximately 125,000 cy of dredged material at Plum Island Reservation as part of a Federal Base Plan. The focus of this NOI is the placement of the remainder of dredged material at Plum Island Reservation under the Beneficial Use of Dredge Material Program authorized under Section 204 of the Water Resources Development Act of 1992. The non-Federal sponsor (NFS) for the Section 204 Project (Project) is the DCR, the owner of Plum Island Beach Reservation. This proposed nourishment is considered to be a relatively short-term effort to alleviate the severe erosion that has occurred over the past eight years at the Project site.


Additional information on the Project, including resource area impacts, is presented in the Project Narrative.

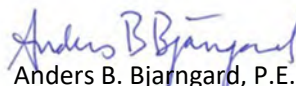
Enclosed please find two copies of this Notice of Intent Application for the above-referenced project, as required. In addition, one copy is being submitted to the Massachusetts Department of Environmental Protection Northeast Regional Office, one copy is being submitted to the Massachusetts Division of Marine Fisheries, and one copy to Natural Heritage & Endangered Species Program.

We look forward to meeting with the Commission to discuss the proposed project. Should you have any questions or comments regarding this submittal, or if you require any additional information, please contact our office at (781) 278-4806.

Very truly yours,

**GZA GEOENVIRONMENTAL, INC.**

  
David A. Smith  
Senior Project Manager

  
Anders B. Bjarngard, P.E.  
Principal

Attachment: Notice of Intent Application

cc: Massachusetts Department of Conservation and Recreation  
Massachusetts Department of Environmental Protection, NERO  
Massachusetts Division of Marine Fisheries  
Natural Heritage & Endangered Species Program



**TABLE OF CONTENTS**

**WPA FORM 3 – NOTICE OF INTENT**

**NOI WETLAND FEE TRANSMITTAL FORM**

**PROJECT NARRATIVE.....1**

**1.0 INTRODUCTION .....1**

1.1 BACKGROUND..... 1

**2.0 SUMMARY OF THE USACE – NEWBURYPORT HARBOR FEDERAL NAVIGATION PROJECT (FNP).....1**

**3.0 EXISTING CONDITIONS .....2**

3.1 JURISDICTIONAL RESOURCE AREAS ..... 2

3.1.1 Land under the Ocean..... 3

3.1.2 Land Containing Shellfish..... 3

3.1.3 Coastal Beach..... 3

3.1.4 Coastal Dune..... 3

3.1.5 Barrier Beach..... 3

3.1.6 Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie  
 Anadromous/Catadromous (“Fish Run”)..... 3

3.1.7 Estimated Habitats of Rare Wildlife (for Coastal Wetlands)..... 3

3.1.8 Land Subject to Coastal Storm Flowage (LSCSF)..... 4

3.1.9 Riverfront Area..... 4

3.1.10 100-Foot Buffer Zone..... 4

3.1.11 25-Foot No Disturb Zone ..... 4

**4.0 PROPOSED PROJECT.....5**

**5.0 REGULATORY COMPLIANCE AND IMPACTS .....6**

5.1 JURISDICTIONAL RESOURCE AREAS ..... 6

5.1.1 Land under the Ocean..... 7

5.1.2 Coastal Beach..... 8

5.1.3 Land Containing Shellfish..... 10

5.1.4 Barrier Beach..... 12

5.1.5 Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie  
 Anadromous/Catadromous (“Fish Run”)..... 12

5.1.6 Estimated Habitats of Rare Wildlife (for Coastal Wetlands)..... 15

5.1.7 Land Subject to Coastal Storm Flowage (LSCSF)..... 15

5.1.8 Riverfront Area..... 15



5.1.9 100-Foot Buffer Zone & 25-Foot No-Disturbance Zone ..... 17

5.2 OTHER REGULATED RESOURCE AREAS ..... 18

5.3 COMPLIANCE WITH STORMWATER PERMITTING ..... 18

**6.0 ALTERNATIVES ANALYSIS .....18**

6.1 ALTERNATIVES FOR SHORELINE PROTECTION AT PLUM ISLAND RESERVATION..... 18

6.1.1 Alternative 1 – No Action (Not Selected)..... 18

6.1.2 Alternative 2 – Hardened Shoreline Structures (Not Selected)..... 18

6.1.3 Alternative 3 – Federal Base Plan with Nearshore Placement (Not Selected) ..... 19

6.1.4 Alternative 4 – Section 204 Beneficial Use Placement (Preferred) ..... 19

**7.0 RESILIENCY, FUTURE MAINTENANCE AND LONG-TERM SOLUTION .....20**

**8.0 CONCLUSION .....20**

**FIGURES**

FIGURE 1 SITE LOCUS MAP

FIGURE 2 AERIAL PHOTOGRAPH

FIGURE 3 FEMA FIRMETTE

FIGURE 4 MOUTH OF COASTAL RIVER MAPS

FIGURE 5 PRIORITY AND ESTIMATED HABITAT FIGURE

**APPENDICES**

APPENDIX A PROPOSED PERMIT DRAWINGS

APPENDIX B PHOTOGRAPHIC LOG

APPENDIX C ABUTTER INFORMATION

APPENDIX D STORMWATER REPORT AND CHECKLIST



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

**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

Newburyport  
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):

<u>North Reservation Terrace</u> a. Street Address	<u>Newburyport</u> b. City/Town	<u>01950</u> c. Zip Code
<u>Latitude and Longitude:</u>	<u>42.8146°N</u> d. Latitude	<u>70.8136°W</u> e. Longitude
<u>77</u> f. Assessors Map/Plat Number	<u>125</u> g. Parcel /Lot Number	

2. Applicant:

<u>Michael</u> a. First Name	<u>Driscoll</u> b. Last Name	
<u>Massachusetts Department of Conservation and Recreation</u> c. Organization		
<u>251 Causeways Street, Suite 800</u> d. Street Address		
<u>Boston</u> e. City/Town	<u>MA</u> f. State	<u>02114</u> g. Zip Code
<u>617-719-2199</u> h. Phone Number	<u>michael.driscoll@mass.gov</u> j. Email Address	<u></u> i. Fax Number

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

<u>Priscilla</u> a. First Name	<u>Geigis, Deputy Commissioner</u> b. Last Name	
<u>Massachusetts Department of Conservation</u> c. Organization		
<u>251 Causeway Street, Suite 900</u> d. Street Address		
<u>Boston</u> e. City/Town	<u>MA</u> f. State	<u>02114</u> g. Zip Code
<u>617-645-6270</u> h. Phone Number	<u>priscilla.geigis@mass.gov</u> j. Email address	<u></u> i. Fax Number

4. Representative (if any):

<u>David</u> a. First Name	<u>Smith</u> b. Last Name	
<u>GZA GeoEnvironmental, Inc.</u> c. Company		
<u>144 Elm Street</u> d. Street Address		
<u>Amesbury</u> e. City/Town	<u>MA</u> f. State	<u>01913</u> g. Zip Code
<u>781-278-4806</u> h. Phone Number	<u>david.smith@gza.com</u> j. Email address	<u></u> i. Fax Number

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

<u>\$500</u> a. Total Fee Paid	<u>\$237.50</u> b. State Fee Paid	<u>\$262.50</u> c. City/Town Fee Paid
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Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

# WPA Form 3 – Notice of Intent

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

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## A. General Information (continued)

### 6. General Project Description:

The Project is the proposed beneficial use of approximately 165,000 cy of sandy material as beach nourishment on Plum Island Reservation in the City of Newburyport, Massachusetts. The dredged material is being generated by the US Army Corps of Engineers (USACE) Newburyport Harbor Federal Navigation Project (FNP) that includes onshore disposal, but is permitted separately.

### 7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1.  Single Family Home
- 2.  Residential Subdivision
- 3.  Commercial/Industrial
- 4.  Dock/Pier
- 5.  Utilities
- 6.  Coastal engineering Structure
- 7.  Agriculture (e.g., cranberries, forestry)
- 8.  Transportation
- 9.  Other

### 7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration 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. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

#### 2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

### 8. Property recorded at the Registry of Deeds for:

Essex

a. County

06770

c. Book

b. Certificate # (if registered land)

0683

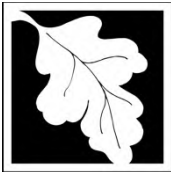
d. Page Number

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

- 1.  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.
- 2.  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.





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

**WPA Form 3 – Notice of Intent**

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

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MassDEP File Number

Document Transaction Number

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

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.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input checked="" type="checkbox"/> Land Under the Ocean	347,200 1. square feet	
	2. cubic yards dredged	
c. <input checked="" type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input checked="" type="checkbox"/> Coastal Beaches	45,750 1. square feet	165,000 2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment
	<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 checked="" type="checkbox"/> Land Containing Shellfish	347,200 1. square feet	
k. <input checked="" 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 checked="" type="checkbox"/> Land Subject to Coastal Storm Flowage	7,250 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





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

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## C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

### Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

- 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://maps.massgis.state.ma.us/PRI\\_EST\\_HAB/viewer.htm](http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm).

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

**Natural Heritage and Endangered Species Program  
Division of Fisheries and Wildlife  
1 Rabbit Hill Road  
Westborough, MA 01581**

- 2021  
b. Date of map

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.2.f, 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).*

- c. Submit Supplemental Information for Endangered Species Review\*

- Percentage/acreage of property to be altered:
 

(a) within wetland Resource Area	0.17%/9.02 Ac
	percentage/acreage
(b) outside Resource Area	
	percentage/acreage

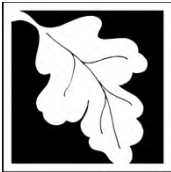
- Assessor's Map or right-of-way plan of site

- 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 \*\*
  - Project description (including description of impacts outside of wetland resource area & buffer zone)
  - Photographs representative of the site

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

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.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**WPA Form 3 – Notice of Intent**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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MassDEP File Number

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Document Transaction Number

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Newburyport  
 City/Town

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

(c)  MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).  
 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

(f) 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, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; 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 \_\_\_\_\_

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

3. 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, hand delivery, or electronic delivery of NOI to either:

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

North Shore - Hull to New Hampshire border:

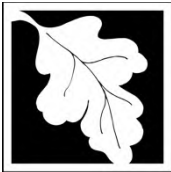
Division of Marine Fisheries -  
 Southeast Marine Fisheries Station  
 Attn: Environmental Reviewer  
 836 South Rodney French Blvd.  
 New Bedford, MA 02744  
 Email: [dmf.envreview-south@mass.gov](mailto:dmf.envreview-south@mass.gov)

Division of Marine Fisheries -  
 North Shore Office  
 Attn: Environmental Reviewer  
 30 Emerson Avenue  
 Gloucester, MA 01930  
 Email: [dmf.envreview-north@mass.gov](mailto:dmf.envreview-north@mass.gov)

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.

c.  Is this an aquaculture project?      d.  Yes     No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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Bureau of Resource Protection - Wetlands

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

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

4. 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
5. 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
6. 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
7. 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  
 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**

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

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.



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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## D. Additional Information (cont'd)

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.

NFS Permitting of Dredge Spoil Beneficial Use

a. Plan Title

GZA GeoEnvironmental, Inc.

Anders B. Bjarngard, P.E.

b. Prepared By

c. Signed and Stamped by

May 2021

varies

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

May 2021

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.

## E. Fees

1.  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:

276365

2. Municipal Check Number

5/19/21

3. Check date

276360

4. State Check Number

5/19/21

5. Check date

GZA GeoEnvironmental, Inc.

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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City/Town

## 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.

<i>Michael Driscoll DCR</i>	6/1/2021
1. Signature of Applicant	2. Date
<i>Pileen Orji</i>	6-1-21
3. Signature of Property Owner (if different)	4. Date
<i>John A. Smith</i>	5/27/21
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:

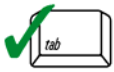
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.



**A. Applicant Information**

1. Location of Project:

North Reservation Terrace	Newburyport
a. Street Address	b. City/Town
276360	\$237.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Michael	Driscoll	
a. First Name	b. Last Name	
Massachusetts Department of Conservation and Recreation		
c. Organization		
251 Causeway Street, Suite 800		
d. Mailing Address		
Boston	MA	02114
e. City/Town	f. State	g. Zip Code
617-719-2199	michael.driscoll@mass.gov	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

Priscilla	Geigis, Deputy Commissioner	
a. First Name	b. Last Name	
Massachusetts Department of Conservation and Recreation		
c. Organization		
251 Causeway Street, Suite 900		
d. Mailing Address		
Boston	MA	02114
e. City/Town	f. State	g. Zip Code
617-645-6270	priscilla.geigis@mass.gov	
h. Phone Number	i. Fax Number	j. Email Address

**B. Fees**

Fee should be calculated using the following process & 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.

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

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2 - Beach Nourishment	1	Each	\$500
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>Step 5/Total Project Fee:</b>			\$500
<b>Step 6/Fee Payments:</b>			
Total Project Fee:			\$500
State share of filing Fee:			\$237.50
City/Town share of filing Fee:			\$262.50
			a. Total Fee from Step 5
			b. 1/2 Total Fee <b>less</b> \$12.50
			c. 1/2 Total Fee <b>plus</b> \$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.)



## PROJECT NARRATIVE

### 1.0 INTRODUCTION

On behalf of the Massachusetts Department of Conservation and Recreation (DCR), GZA GeoEnvironmental, Inc. (GZA) has prepared this Notice of Intent (NOI) application to describe the proposed beneficial use of approximately 165,000 cubic yards (cy) of sandy material as beach nourishment (Project) on Plum Island Reservation in the City of Newburyport, Massachusetts (Project Site as shown on **Attachment 1**). The dredged material is being generated by the U.S. Army Corps of Engineers (USACE) Newburyport Harbor Federal Navigation Project (FNP) that includes onshore disposal but is permitted separately.

The Applicant has already filed an Environmental Notification Form with Massachusetts Environmental Policy Act (MEPA) with an anticipated issuance of a Secretary's Certificate on June 25, 2021. The Applicant is anticipating filing a MassDEP Chapter 91 Permit for the proposed work, as described below.

This application is submitted in accordance with the requirements of the Massachusetts Wetlands Protection Act (310 CMR 10.00) and the local City of Newburyport Wetlands Ordinance. The following provides a detailed description of the USACE Newburyport Harbor Federal Navigation Project; current conditions of the Project Site; the proposed beneficial use of dredge sediments; a description of the resource areas and potential impacts to those resource areas that may result from the Project; as well as a summary of alternatives, resiliency, and conclusions.

#### 1.1 BACKGROUND

USACE will be conducting a maintenance dredging project to remove approximately 290,000 cy of sandy material from the Newburyport Harbor FNP. Under the Federal Base Plan for the USACE project, approximately 125,000 cy of the dredged material will be placed on the beach at DCR's Plum Island Reservation to protect the inlet's south jetty from flanking due to coastal erosion. Also, under the Federal Base Plan, the remainder of the dredged material would be deposited at nearshore locations off of Salisbury Beach and off of Plum Island Beach as nourishment for the littoral system. The USACE project is described in detail in **Section 2.0** below.

Section 204 of the Water Resources Development Act of 1992 allows for changes in USACE's selected disposal location for the purpose of beneficial use. At the request of the City of Newburyport, USACE performed a beneficial use assessment and determined that all the dredge spoils can be placed at Plum Island Reservation as a Beneficial Use.

DCR, as the non-federal sponsor of the Section 204 Beneficial Use portion of USACE's project, is seeking regulatory approval for placement of the additional approximately 165,000 cy of dredged material, slated for disposal at the two nearshore locations, on the beach at Plum Island Reservation.

### 2.0 SUMMARY OF THE USACE – NEWBURYPORT HARBOR FEDERAL NAVIGATION PROJECT (FNP)

The Newburyport Harbor FNP has been dredged at least 15 times since 1961. This work is typically done by the USACE on an "as-needed" basis to alleviate shoaling conditions within the FNP. The last dredging of the Newburyport Harbor FNP at the mouth of the Merrimack River occurred in 2010 and included onshore placement. The change from the typical nearshore sediment disposal to onshore, beach nourishment occurred after State and Local officials requested that the material be placed onto the beach instead of the previously authorized disposal locations to temporarily alleviate the severe beach erosion that had occurred in the local areas. The dredge spoils were pumped using hydraulic methods directly onto Plum Island Beach in Newbury and on Salisbury Beach in Salisbury as nourishment. Prior to that, the FNP was dredged in 1999 with the dredge spoils placed in the Plum Island Nearshore Disposal Site.





For the current maintenance dredging project, USACE prepared a draft Environmental Assessment (EA) resulting in a determination of a Finding of No Significant Impact (FONSI). The EA/FONSI resulted in a determination that the project would not result in a significant impact to the human environment per the National Environmental Policy Act (NEPA) regulations of 1969. The USACE prepared a Feasibility Report, EA, and a FONSI as required under the NEPA. In accordance with the provisions of Section 401 of the Federal Clean Water Act, the Massachusetts Department of Environmental Protection issued an amended 401 Water Quality Certification on May 5, 2021 and the Massachusetts Coastal Zone Management's Federal Consistency Review letter was issued on May 7, 2021. Both documents are available upon request.

USACE will contract with a private vendor to perform their dredging project. The dredging operations will be conducted hydraulically via a hydraulic cutterhead dredge. This type of dredge contains a hydraulic pump connected to a cutterhead, which loosens bottom sediments to be pumped through a pipeline to a nearby beach or upland area. In addition, the USACE may also use a small hopper dredge that would have onboard pump-off capability. The dredged material will be pumped onshore and partially contained where possible by a temporary toe berm to allow sediments to settle and water to drain from the placement location prior to grading the sand to the proposed placement template. Onshore placement will follow best management practices (BMPs) to limit elevated suspended sediment concentrations in coastal waters. The material to be placed onshore is sand and will settle onto the beach with minimal impacts to the water column. As part of the proposed construction activities, staging and access areas will be within the existing Plum Island Reservation Parking Lot with equipment access along the existing access path owned by DCR to the onshore placement area.

Onshore placement of dredge sediments will be restricted to September 1 through March 31 to avoid interactions with nesting endangered and threatened shorebird species, including Piping Plover (*Charadrius melodus*) and Least Tern (*Sternula antillarum*). Sandy material placed on the beach at Plum Island Reservation will maintain a slope no steeper than 1V:10H to provide suitable foraging habitat for the piping plover after Project completion. If the pre-dredge survey conducted by the USACE determines that the total dredge volume is greater than the current estimate of 290,000 cy, changes to the nourishment template would be limited to a change in the elevation of the berm. The overall footprint and side slope of the nourishment areas are not anticipated to change.

### **3.0 EXISTING CONDITIONS**

The Project Site is located at Plum Island Reservation along the south shore of the Merrimack River where it meets the Atlantic Ocean. Access to the site is through the existing paved parking area for Plum Island Reservation. Historically, the shoreline has fluctuated seaward and landward but there has been significant erosion at this location with loss of dune on the order of 400 linear feet over the past eight years.

This DCR Reservation provides important nesting, foraging and staging habitat for coastal bird species. The placement of dredged material would result in permanent impacts to this resource area, and sandy dredge spoils will nourish the beach and provide potential new rare species habitat for Piping Plover (*Charadrius melodus*) and Least Tern (*Sternula antillarum*), species state-listed as Threatened and Special Concern, respectively. The Piping Plover is also federally protected as Threatened pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11). These rare species and their habitats are protected and should be managed after completion of this project in compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.37), and the Massachusetts Endangered Species Act Regulations (321 CMR 10.18). The Project Site is shown on the Permit Drawings (**Appendix A**) and includes the areas of permanent impact from the beach nourishment. The Project Site encompasses an area of approximately 9.0 acres.

Photos of the Project Site are included in **Appendix B**.

#### **3.1 JURISDICTIONAL RESOURCE AREAS**

Several resource areas that are subject to protection and/or jurisdiction under the federal Clean Water Act and / or the Massachusetts Wetlands Protection Act, exist at or within 100 feet of the Project Site. These resource areas include Land



Under the Ocean, Coastal Beach, Coastal Dune, Barrier Beach, Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous (“Fish Run”), Land Containing Shellfish Estimated Habitats of Rare Wildlife (for Coastal Wetlands), Land Subject to Coastal Storm Flowage, Riverfront Area, and Buffer and 25-Foot No Disturb Zone associated with the Atlantic Ocean. The Applicant has already filed an Environmental Notification Form with Massachusetts Environmental Policy Act (MEPA) and is anticipating filing a MassDEP Chapter 91 Permit for the proposed work, as described below. Project impacts to resource areas are described in **Section 3**, below.

### 3.1.1 Land under the Ocean

A portion of the Project Site is located within Land under the Ocean. The proposed placement of dredged material is expected to occur within this resource area.

### 3.1.2 Land Containing Shellfish

A portion of the Project site is within a subtidal area at the mouth of the Merrimack River. While this is a potential location for shellfish, the area does not have any designated shellfish suitability areas that are mapped with the Massachusetts Bureau of Geographic Information (MassGIS). The area is also listed as “Conditionally Restricted” for shellfish growing.

### 3.1.3 Coastal Beach

A portion of the Project Site is located within Coastal Beach. The proposed placement of dredged material is expected to occur within this resource area.

### 3.1.4 Coastal Dune

A portion of the Project Site is located within Coastal Dune. There are no anticipated impacts to this resource area.

### 3.1.5 Barrier Beach

The entirety of Plum Island is a barrier beach. The proposed placement of dredged material is expected to be within Barrier Beach.

### 3.1.6 Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous (“Fish Run”)

A portion of the Project Site is located within the “Fish Run” resource area. The proposed placement of dredged material is expected to occur in this resource area.

### 3.1.7 Estimated Habitats of Rare Wildlife (for Coastal Wetlands)

The entirety of the Project site is within priority habitats of rare species, therefore proposed placement of dredged material is expected to occur within this resource area. This DCR Reservation provides important nesting, foraging and staging habitat for coastal bird species. The placement of dredged material would result in permanent impacts to this resource area, and sandy dredge spoils will nourish the beach and provide potential new rare species habitat for Piping Plover (*Charadrius melodus*) and Least Tern (*Sternula antillarum*), species state-listed as Threatened and Special Concern, respectively. The Piping Plover is also federally protected as Threatened pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11). These rare species and their habitats are protected and should be managed after completion of this project in compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.37), and the Massachusetts Endangered Species Act Regulations (321 CMR 10.18).



### 3.1.8 Land Subject to Coastal Storm Flowage (LSCSF)

The Project Site is located within FEMA Flood Zone VE (EL 22 Feet).

### 3.1.9 Riverfront Area

The mouth of the Merrimack River is located to the east of the proposed Project site and extends from the western end of the south jetty on Plum Island to the western end of the north jetty in Salisbury. Therefore, the proposed placement of dredged material is expected to occur within the Riverfront Area of the Merrimack River. The beach nourishment included in the Project is exempted from requirements and performance standards for the Riverfront Area in accordance with 310 CMR 10.58 (6)(i) which states, '*Structures and activities subject to a M.G.L. c. 91 waterways license or permit, or authorized prior to 1973 by a special act, are exempt, provided the structure or activity is subject to jurisdiction and obtains a license, permit, or authorization under 310 CMR 9.00: Waterways.*' This Project will require authorization from the Waterways Regulation Program under 310 CMR 9.00: Waterways and is therefore exempt from the requirements and performance standards of the Riverfront Area.

### 3.1.10 100-Foot Buffer Zone

The Buffer Zone, which extends 100 feet perpendicularly from Resource Area boundaries, is present within the Project Site. Due to the nature of this work being located along the ocean, the limit of work is located entirely within Resource Areas and therefore not within the Buffer Zone.

### 3.1.11 25-Foot No Disturb Zone

The 25-Foot No Disturb Zone, which extends 25 feet perpendicularly from Resource Area boundaries, is present within the Project Site. Due to the nature of this work being located along the ocean, the limit of work will occur is located entirely within Resource Areas.



#### 4.0 PROPOSED PROJECT

The Project, included in this NOI filing, is strictly limited to placement of approximately 165,000 cy of compatible dredge sediments onto Plum Island Reservation. The 9.02-acre placement location is an expansion of the USACE placement of approximately 125,000 cy at the south jetty spur that is the USACE Federal base Plan as shown on the Permit Drawings (**Appendix A**).

The Federal Base Plan discussed in **Section 2.0** above is being permitted and performed by the USACE. The selected USACE contractor will conduct the dredging and both the Federal Base Plan onshore disposal, and the onshore disposal included in this Project. Temporary impacts associated with construction staging and access areas are authorized under the USACE authorizations.

Similar to the USACE project, the sediments placed as part of this Project will be shaped to the limits and template as shown on the Permit Drawings (**Appendix A**), with sideslopes no greater than a 10:1 slope. If it is determined that the total volume is greater than the approximate volume of 165,000 cy that is currently estimated the change to the nourishment template would be limited to a change in the elevation of the berm. The overall footprint and side slope of the nourishment area are not anticipated to change.

The Project consists of placing suitable, compatible dredge sediments as beach nourishment. The Project is consistent with Massachusetts Executive Order No. 181, Barrier Beaches, which states under (6), *“dredge material of a compatible grain size shall be used for barrier beach nourishment, if economically feasible.”* The Project has taken into account beach nourishment recommendations as described in “Beach Nourishment: MassDEP’s Guide to Best Management Practices for Projects in Massachusetts” dated March 2007 and in the “City of Newburyport Plum Island Beach Management Plan” dated July 2009. The purpose of this beach management plan is to, “establish appropriate public policy pertaining to the operation, maintenance and preservation of Plum Island including facilities and resource areas” and to, “establish recommendations and guidelines for coastal resource protection through appropriate management practices in order to establish a framework that the City can conduct sustainable recreation planning, facility improvements and maintenance activities.” The Project is consistent with this plan through improvement of public use, access and safety to the beach, protection of resource areas and rare species habitat, and by providing storm damage maintenance and protection. As part of the permitting required for the USACE dredging and nourishment project, the dredge material has been classified and characterized as comparable to the existing sand at the nourishment site on Plum Island. As stated in the Beach Management Plan, the City of Newburyport’s primary focus for future nourishment efforts will be concentrated on critical dune areas and those at the beach-dune interface. The Project is generally in accordance with the City-focus areas.

The implementation of this nourishment project is primarily to restore the beach or otherwise improve the natural capacity of the Wetland Resource Areas to protect and sustain their interests as identified in M.G.L. c. 131, § 40, especially when such interests have been degraded or destroyed by natural or anthropogenic influences. To achieve a better overall project, a complementing objective is restoring the primary dune system along the beach to ensure protection of the nearby private residencies, facilities and utilities against flooding and to help retaining the sand resource on the beach. To achieve this objective of capturing surging or drifting sand, snow fencing will be designed and installed in accordance with the technical recommendations provided by the Massachusetts Coastal Zone Management office (CZM). The area will be complemented by native vegetation plantings, to help with sand stabilization and in providing sheltering shade to rare shorebird species during the summer months. In addition, this project will allow the general public to make use of the beach while appreciating and helping preserve natural resources and the vulnerable rare wildlife in the area.



It should be noted that with the Project’s placement of dredged material at Plum Island Reservation, impacts to the Land Under the Ocean resource area associated with the nearshore placement proposed under the USACE project are avoided. The avoided impacts are approximately 96 acres at the Salisbury nearshore disposal site and approximately 76.8 acres at the Plum Island nearshore disposal site.

While future dredging of the Merrimack River FNP may utilize beach nourishment for disposal of the dredge spoils, future efforts are not intended to be considered as maintenance for the project proposed under this NOI application. The currently proposed Project is for a one-time nourishment of the Project Site.

**5.0 REGULATORY COMPLIANCE AND IMPACTS**

The proposed work for the dredge material placement Project is within resource areas and buffer zones prescribed by the Wetlands Protection Act and Regulations. The Project has been designed to limit both temporary and permanent impacts at the site. However, the nourishment Project will result in unavoidable impacts to the Land under the Ocean, Coastal Beach, Coastal Dune, Barrier Beach, Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous (“Fish Run”), Estimated Habitats of Rare Wildlife (for Coastal Wetlands), Land Subject to Coastal Storm Flowage, Riverfront Area, and Buffer and 25 -foot No Disturb Zones. Impacts to these resource areas are unavoidable due to the nature of the proposed work, but the impacts to resource areas for this Project are anticipated to be limited and will improve beach habitat, thus protecting landward infrastructure and provide habitat for threatened and endangered species.

**5.1 JURISDICTIONAL RESOURCE AREAS**

Potential impacts are discussed and quantified in the following subsections. The total impacts proposed within each resource area are summarized in the table below. It should be noted that impacts from the USACE nourishment project have been estimated and are provided below as reference, however these impacts are not included in the proposed project under this NOI application as the USACE project is exempt from Massachusetts Wetland Protection Act review.

**Table No. 1 – Summary of Resource Area Impacts**

RESOURCE AREA	IMPACT FROM SECTION 204 PROJECT	IMPACT FROM USACE PROJECT
Land under the Ocean	347,750 sf (7.97 Ac.) impacted during nourishment placement  This Project results in a reduction of approximately 7,527,170 sf (172.8 Ac.) due to the elimination of the nearshore placement areas.	250,300 sf (5.75 Ac.) impacted during nourishment placement  7,527,170 sf (172.8 Ac.) impacted for the nearshore placement areas.
Coastal Beach	45,750 sf (1.05 Ac)	140,500 sf (3.23 Ac.)
Land Containing Shellfish	347,750 sf (7.97 Ac.) impacted during nourishment placement  This Project results in a reduction of approximately 7,527,170 sf (172.8 Ac.) due to the elimination of the nearshore placement areas.	250,300 sf (5.75 Ac.) impacted during nourishment placement  7,527,170 sf (172.8 Ac.) impacted for the nearshore placement areas.
Barrier Beach	45,750 sf (1.05 Ac)	140,500 sf (3.23 Ac.)
“Fish Run”	347,750 sf (7.97 Ac.) impacted during nourishment placement  This Project results in a reduction of approximately 7,527,170 sf (172.8 Ac.) due to the elimination of the nearshore placement areas.	250,300 sf (5.75 Ac.) impacted during nourishment placement  7,527,170 sf (172.8 Ac.) impacted for the nearshore placement areas.
Est. Habitats of Rare Wildlife	392,950 sf (9.02 Ac)	390,800 sf (8.97 Ac.)



RESOURCE AREA	IMPACT FROM SECTION 204 PROJECT	IMPACT FROM USACE PROJECT
LSCSF	7,250 sf (0.17 Ac)	19,500 sf (0.45 Ac.)
Riverfront Area	7,250 sf (0.17 Ac)	19,500 sf (0.45 Ac.)
1. Temporary impacts to resource areas are included in USACE authorizations. There are no additional temporary impacts from construction, access or staging areas associated with the Project included in this NOI application. 2. The estimated impacts listed above under the USACE project are not included in the Project. These are listed for reference as the two projects are adjacent to each other, however the USACE project is not subject to WPA review.		

5.1.1 Land under the Ocean

Massachusetts WPA Regulations define Land under the Ocean as, “land extending from the mean low water line seaward to the boundary of the municipality’s jurisdiction and includes land under estuaries.”

The proposed work that will impact the Land under the Ocean resource area includes the placement of dredged material on Plum Island Reservation, which encompasses a part of this resource area. As the dredged material is to be placed on the beach as beneficial use, there will be no need for nearshore placement at the Salisbury or Plum Island nearshore disposal sites. This results in a reduction of impacts to the LUO resource area.

As stated in 310 CMR 10.25, the Project will address the following performance standards:

**Table No. 2 – Performance Standards for Work in Land under the Ocean**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.25(3)	<i>Improvement dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects on such interests caused by changes in: (a) bottom topography which will result in increased flooding or erosion caused by an increase in the height or velocity of waves impacting the shore; (b) sediment transport processes which will increase flood or erosion hazards by affecting the natural replenishment of beaches; (c) water circulation which will result in an adverse change in flushing rate, temperature, or turbidity levels; or (d) marine productivity which will result from the suspension or transport of pollutants, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.</i>	The Project does not include dredging but does include the placement of dredged material from the USACE project to dredge the Newburyport Harbor FNP.
310 CMR 10.25(4)	<i>Maintenance dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects on such interests caused by changes in marine productivity which will result from the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.</i>	The Project does not include dredging but does include the placement of dredged material from the USACE project to dredge the Newburyport Harbor FNP.



WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.25(5)	<i>Projects not included in 310 CMR 10.25(3) or (4) which affect nearshore areas of land under the ocean shall not cause adverse effects by altering the bottom topography so as to increase storm damage or erosion of coastal beaches, coastal banks, coastal dunes, or salt marshes.</i>	The Project includes beach nourishment, and it is anticipated that sandy dredge spoils placed on Plum Island Reservation may be necessary to replenish some of the sand which has recently eroded at the Project Site. It is not anticipated that this will have adverse effects on storm damage or erosion of resource areas.
310 CMR 10.25(6)	<i>Projects not included in 310 CMR 10.25(3) which affect land under the ocean shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries habitat or wildlife habitat caused by: (a) alterations in water circulation; (b) destruction of eelgrass (<i>Zostera marina</i>) or widgeon grass (<i>Rupia maritima</i>) beds; (c) alterations in the distribution of sediment grain size; (d) changes in water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants; or (e) alterations of shallow submerged lands with high densities of polychaetes, mollusks or macrophytic algae.</i>	It is not anticipated that this Project will have an adverse impact on marine fisheries habitat. The Project will adhere to construction windows set in coordination with Federal and State environmental resource agencies including the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Massachusetts Division of Marine Fisheries in order to avoid impacts to environmental resources and protected species. The dredge material is compatible with existing sediments.
310 CMR 10.25(7)	<i>Notwithstanding the provisions of 310 CMR 10.25(3) through (6), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.</i>	This Project is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application for this Project.

5.1.2 Coastal Beach

Massachusetts WPA Regulations define Coastal Beach as, *“unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats.”*

The proposed work that will impact the Coastal Beach resource area includes the placement of dredged material on Plum Island Reservation. Sandy material is natural and will improve this resource area by providing habitat for threatened and endangered species and improving the beach’s ability to dissipate wave energy by reducing height of storm waves. The implementation of this nourishment project is primarily to restore the beach or otherwise improve the natural capacity of the Wetland Resource Areas to protect and sustain their interests as identified in M.G.L. c. 131, § 40, especially when such interests have been degraded or destroyed by natural or anthropogenic influences. To achieve a better overall project, a complementing objective is restoring the primary dune system along the beach to ensure protection of the nearby private residencies, facilities and utilities against flooding and to help retaining the sand resource on the beach. To achieve this objective of capturing surging or drifting sand, snow fencing will be designed and installed in accordance to the technical recommendations provided by the Massachusetts Coastal Zone Management office (CZM). The area will be complemented by native vegetation plantings, to help with sand stabilization and in providing sheltering shade to rare shorebird species during the summer months. In addition, this project will allow the general public to make use of the beach while appreciating and helping preserve natural resources and the vulnerable rare wildlife in the area.



As stated in 310 CMR 10.27, the Project will address the following performance standards:

**Table No. 3 – Performance Standards for Work in Coastal Beach**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.27(3)	<i>Any project on a coastal beach, except any project permitted under 310 CMR 10.30(3)(a), shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift coastal beach.</i>	The Project involves the placement of dredged material onto Plum Island Reservation for beach nourishment. The work anticipated within the Coastal Beach resource area includes placement of sandy dredge spoils on the beach. The work is intended to provide protection and improve the degraded resource area and is not anticipated that this will have an adverse effect by increasing erosion, decreasing volume or changing the form of the coastal beach or adjacent or downdrift coastal beaches.
310 CMR 10.27(4)	<i>Any groin, jetty, solid pier, or other such solid fill structure which will interfere with littoral drift, in addition to complying with 310 CMR 10.27(3), shall be constructed as follows: (a) It shall be the minimum length and height demonstrated to be necessary to maintain beach form and volume. In evaluating necessity, coastal engineering, physical oceanographic and/or coastal geologic information shall be considered. (b) Immediately after construction any groin shall be filled to entrapment capacity in height and length with sediment of grain size compatible with that of the adjacent beach. (c) Jetties trapping littoral drift material shall contain a sand bypass system to transfer sediments to the downdrift side of the inlet or shall be periodically redredged to provide beach nourishment to ensure that downdrift or adjacent beaches are not starved of sediments</i>	Not applicable to this project.
310 CMR 10.27(5)	<i>Notwithstanding 310 CMR 10.27(3), beach nourishment with clean sediment of a grain size compatible with that on the existing beach may be permitted.</i>	The Project includes beach nourishment, and sandy dredge spoils placed on Plum Island Reservation may be necessary to replenish some of the sand which has recently eroded at the Project Site. It is not anticipated that this will have adverse effects on storm damage or erosion of resource areas. The dredge material is compatible with existing sediments.
310 CMR 10.27(6)	<i>In addition to complying with the requirements of 310 CMR 10.27(3) and (4), a project on a tidal flat shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries and wildlife habitat caused by: (a) alterations in water circulation; (b) alterations in the distribution of sediment grain size; and (c) changes in water quality,</i>	The Project does not involve work within a tidal flat.





WPA Regulation	Performance Standard	Proposed Project
	<i>including, but not limited to, other than natural fluctuations in the levels of dissolved oxygen, temperature or turbidity, or the addition of pollutants.</i>	
310 CMR 10.27(7)	<i>Notwithstanding the provisions of 310 CMR 10.27(3) through (6), no project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37</i>	This Project is designed to improve affected habitats and is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application filed for this Project.

### 5.1.3 Land Containing Shellfish

Massachusetts WPA Regulations define Land Containing Shellfish as *“land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish.*

The proposed work that will impact the Land Containing Shellfish resource area includes the placement of dredged material at Plum Island Reservation, which encompasses a part of this resource area. As the full amount of dredged material is to be placed on the beach as beneficial reuse, there will be no need for nearshore placement at the Salisbury or Plum Island nearshore disposal sites. This results in a net reduction of impacts to the Land Containing Shellfish resource area.

As stated in 310 CMR 10.34, the Project will address the following performance standards:



**Table No. 4 – Performance Standards for Work in Land Containing Shellfish**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.34(4)	<i>Except as provided in 310 CMR 10.34(5), any project on land containing shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by: (a) alterations of water circulation; (b) alterations in relief elevation; (c) the compacting of sediment by vehicular traffic; (d) alterations in the distribution of sediment grain size; (e) alterations in natural drainage from adjacent land; or (f) changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants..</i>	It is not anticipated that this Project will have an adverse impact on marine fisheries habitat. The Project will adhere to construction windows set in coordination with Federal and State environmental resource agencies including the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Massachusetts Division of Marine Fisheries in order to avoid impacts to environmental resources and protected species. The dredge material is compatible with existing sediments.
310 CMR 10.34(5)	<i>Notwithstanding the provisions of 310 CMR 10.34(4), projects which temporarily have an adverse effect on shellfish productivity but which do not permanently destroy the habitat may be permitted if the land containing shellfish can and will be returned substantially to its former productivity in less than one year from the commencement of work, unless an extension of the Order of Conditions is granted, in which case such restoration shall be completed within one year of such extension.</i>	It is not anticipated that this Project will have an adverse impact on shellfish productivity. While the site is a potential location for shellfish, the area does not have any designated shellfish suitability areas that are mapped with the Massachusetts Bureau of Geographic Information (MassGIS). The area is also listed as “Conditionally Restricted” for shellfish growing.
310 CMR 10.34(6)	<i>In the case of land containing shellfish defined as significant in 310 CMR 10.34(3)(b) (i.e., those areas identified on the basis of maps and designations of the Shellfish Constable), except in Areas of Critical Environmental Concern, the issuing authority may, after consultation with the Shellfish Constable, permit the shellfish to be moved from such area under the guidelines of, and to a suitable location approved by, the Division of Marine Fisheries, in order to permit a proposed project on such land. Any such project shall not be commenced until after the moving and replanting of the shellfish have been commenced.</i>	While the site is a potential location for shellfish, the area does not have any designated shellfish suitability areas that are mapped with the Massachusetts Bureau of Geographic Information (MassGIS). The area is also listed as “Conditionally Restricted” for shellfish growing.
310 CMR 10.34(7)	<i>Notwithstanding 310 CMR 10.34(4) through (6), projects approved by the Division of Marine Fisheries that are specifically intended to increase the productivity of land containing shellfish may be permitted. Aquaculture projects approved by the appropriate local and state authority may also be permitted.</i>	The Project does not intend to increase the productivity of land containing shellfish. The Project is not an aquaculture project.
310 CMR 10.34(8)	<i>Notwithstanding the provisions of 310 CMR 10.34(4) through (7), no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.</i>	This Project is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application filed for this Project.



5.1.4 Barrier Beach

Massachusetts WPA Regulations define Barrier Beach as, “a narrow low-lying strip of land generally consisting of coastal beaches and coastal dunes extending roughly parallel to the trend of the coast. It is separated from the mainland by a narrow body of fresh, brackish or saline water or a marsh system. A barrier beach may be joined to the mainland at one or both ends.”

The proposed work that will impact the Barrier Beach resource area includes the placement of dredged material at Plum Island Reservation. Sandy material is natural and will improve this resource area by providing habitat for threatened and endangered species. The implementation of this nourishment project is primarily to restore the beach or otherwise improve the natural capacity of the Wetland Resource Areas to protect and sustain their interests as identified in M.G.L. c. 131, § 40, especially when such interests have been degraded or destroyed by natural or anthropogenic influences. To achieve a better overall project, a complementing objective is restoring the primary dune system along the beach to ensure protection of the nearby private residencies, facilities and utilities against flooding and to help retaining the sand resource on the beach. To achieve this objective of capturing surging or drifting sand, snow fencing will be designed and installed in accordance with the technical recommendations provided by the Massachusetts Coastal Zone Management office (CZM). The area will be complemented by native vegetation plantings, to help with sand stabilization and in providing sheltering shade to rare shorebird species during the summer months. In addition, this project will allow the general public to make use of the beach while appreciating and helping preserve natural resources and the vulnerable rare wildlife in the area.

As stated in 310 CMR 10.29, the Project will address the following performance standards:

**Table No. 5 – Performance Standards for Work in Barrier Beach**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.29(3)	<i>When a Barrier Beach Is Determined to Be Significant to Storm Damage Prevention, Flood Control, Marine Fisheries or Protection of Wildlife Habitat. 310 CMR 10.27(3) through (6) (coastal beaches) and 10.28(3) through (5) (coastal dunes) shall apply to the coastal beaches and to all coastal dunes which make up a barrier beach.</i>	See the above descriptions in Tables 3 and 4 above.
310 CMR 10.30(3)(a)	<i>Notwithstanding the provisions of 310 CMR 10.29(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.</i>	This Project is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application filed for this Project.

5.1.5 Banks of or Land under the Ocean, Ponds, Streams, Rivers, Lakes or Creeks that Underlie Anadromous/Catadromous (“Fish Run”)

Massachusetts WPA Regulations define “Fish Run” as, “that area within estuaries, ponds, streams, creeks, rivers, lakes or coastal waters, which is a spawning or feeding ground or passageway for anadromous or catadromous fish and which is identified by the Division of Marine Fisheries or has been mapped on the Coastal Atlas of the Coastal Zone Management Program. Such fish runs shall include those areas which have historically served as fish runs and are either being restored or are planned to be restored at the time the Notice of Intent is filed. For the purposes of 310 CMR 10.21 through 10.37, such fish runs shall extend inland no further than the inland boundary of the coastal zone.”



The proposed work that will impact the “Fish Run” resource area includes the placement of dredged material on Plum Island’s North Point, which encompasses a part of this resource area.

As stated in 310 CMR 10.35, the Project will address the following performance standards:



**Table No. 6 – Performance Standards for Work in “Fish Run”**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.35(3)	<i>Any project on such land or bank shall not have an adverse effect on the anadromous or catadromous fish run by: (a) impeding or obstructing the migration of the fish, unless DMF has determined that such impeding or obstructing is acceptable, pursuant to its authority under M.G.L. c. 130, § 19; (b) changing the volume or rate of flow of water within the fish run; or (c) impairing the capacity of spawning or nursery habitats necessary to sustain the various life stages of the fish.</i>	The Project involves the placement of dredged material onto Plum Island Reservation for beach nourishment. The work anticipated within the “Fish Run” resource area includes placement of dredged material in the nearshore areas of the site within the mouth of the Merrimack River. It is not anticipated that this Project will have an adverse impact on anadromous or catadromous fish run. The Project will adhere to construction windows set in coordination with Federal and State environmental resource agencies including the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Massachusetts Division of Marine Fisheries in order to avoid impacts to environmental resources and protected species.
310 CMR 10.35(4)	<i>Unless otherwise allowed by DMF pursuant to M.G.L. c. 130, § 19, dredging, disposal of Dredged Material or filling in a fish run shall be prohibited between March 15 and June 15 in any year.</i>	The Project will adhere to construction windows set in coordination with Federal and State environmental resource agencies including the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and the Massachusetts Division of Marine Fisheries in order to avoid impacts to environmental resources and protected species.
310 CMR 10.35(5)	<i>Notwithstanding the provisions of 310 CMR 10.35(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.</i>	This Project is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application filed for this Project.
310 CMR 10.35(6)	<i>Any person proposing a new stream crossing of a Fish Run shall demonstrate to the issuing authority that there are no practicable alternatives to the crossing, that the impacts of the crossing have been minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40. An applicant will be presumed to have made this showing if the project is designed as follows: (a) If the project includes the construction of a new non-tidal crossing, the applicant Effective 10/24/2014 310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION demonstrates to the satisfaction of the issuing authority that the crossing complies with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the top of the structure is above the elevation of the top of the bank and the structure spans the channel width by a</i>	This Project does not include a new stream crossing of a Fish Run.



WPA Regulation	Performance Standard	Proposed Project
	<p><i>minimum of 1.2 times the bankfull width. (b) If the project includes the construction of a new tidal crossing, the applicant demonstrates to the satisfaction of the issuing authority that the project is designed in a manner that does not restrict tidal flow over the full natural tidal range by consisting of a span or embedded culvert in which, at a minimum, the top of the structure is above the elevation of the top of the bank and the structure spans the channel width by a minimum of 1.2 times the bankfull width.</i></p>	

5.1.6 Estimated Habitats of Rare Wildlife (for Coastal Wetlands)

According to the Massachusetts WPA Regulations, estimated habitat is, *“indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetlands Wildlife (if any) published by the Natural Heritage and Endangered Species Program.”*

The entirety of the Project site is within priority habitats of rare species including Piping Plover and Least Tern. Proposed placement of dredged material would result in permanent impacts to this resource area. Sandy dredge spoils will nourish the beach and provide habitat for threatened and endangered species.

This DCR Reservation provides important nesting, foraging and staging habitat for coastal bird species. The placement of dredged material would result in permanent impacts to this resource area, and sandy dredge spoils will nourish the beach and provide potential new rare species habitat for Piping Plover (*Charadrius melodus*) and Least Tern (*Sternula antillarum*), species state-listed as Threatened and Special Concern, respectively. The Piping Plover is also federally protected as Threatened pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11). These rare species and their habitats are protected and should be managed after completion of this project in compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.37), and the Massachusetts Endangered Species Act Regulations (321 CMR 10.18).

The implementation of this nourishment project is primarily to restore the beach or otherwise improve the natural capacity of the Wetland Resource Areas to protect and sustain their interests as identified in M.G.L. c. 131, § 40, especially when such interests have been degraded or destroyed by natural or anthropogenic influences. To achieve a better overall project, a complementing objective is restoring the primary dune system along the beach to ensure protection of the nearby private residences, facilities and utilities against flooding and to help retaining the sand resource on the beach. To achieve this objective of capturing surging or drifting sand, snow fencing will be designed and installed in accordance with the technical recommendations provided by the Massachusetts Coastal Zone Management office (CZM). The area will be complemented by native vegetation plantings, to help with sand stabilization and in providing sheltering shade to rare shorebird species during the summer months. In addition, this project will allow the general public to make use of the beach while appreciating and helping preserve natural resources and the vulnerable rare wildlife in the area.

5.1.7 Land Subject to Coastal Storm Flowage (LSCSF)

Massachusetts WPA Regulations define LSCSF as, *“land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater.”*

The proposed work that will impact the LSCSF resource area includes the placement of dredged material on Plum Island Reservation.

5.1.8 Riverfront Area



June 2, 2021

**NFS Permitting of Dredge Spoil Beneficial Use  
Environmental Notification Form Application**

File No. 18.0175103.00

Page | 16

Massachusetts WPA Regulations define the Riverfront Area as *'the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away.'*

The proposed work that will impact the Riverfront Area resource area includes the placement of dredged material at Plum Island Reservation. The beach nourishment area included in this Project is exempt from requirements and performance standards for the Riverfront Area in accordance with 310 CMR 10.58 (6)(i) which states, *'Structures and activities subject to a M.G.L. c. 91 waterways license or permit, or authorized prior to 1973 by a special act, are exempt, provided the structure or activity is subject to jurisdiction and obtains a license, permit, or authorization under 310 CMR 9.00: Waterways.'* This proposed Project will require authorization from the Waterways Regulation Program under 310 CMR 9.00: Waterways and is therefore exempt from the requirements and performance standards of the Riverfront Area.

As stated in 310 CMR 10.58, the Project will address the following performance standards:



**Table No. 7 – Performance Standards for Work in Riverfront Area**

WPA Regulation	Performance Standard	Proposed Project
310 CMR 10.58(4)(a)	Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (Coastal Bank), 10.32 (Salt Marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to Effective 10/24/2014 310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area	See the above descriptions.
310 CMR 10.58(4)(b)	<i>Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent</i>	This Project is subject to MESA review. A streamlined review is being filed with MESA as part of the Notice of Intent Application filed for this Project.
310 CMR 10.58(4)(c)	<i>Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the prop</i>	See the Alternatives Analysis in <b>Section 6.0</b> below.

**5.1.9 100-Foot Buffer Zone & 25-Foot No-Disturbance Zone**

Massachusetts WPA Regulations define Buffer Zone as, “100-ft area horizontally (on a true lateral) landward of approved delineation of applicable wetland resource areas.” The WPA further states that any activities undertaken within 100 feet of an area specified in 310 CMR 10.02(1)(a) (e.g., Bank, Bordering Vegetated Wetland) will be conducted per (310 CMR 10.02(2)(b)), “in a manner so as to reduce the potential for any adverse impacts to the resource area during construction, and with post-construction measures implemented to stabilize any disturbed areas.”

In addition, the City of Newburyport Regulations define the 100-Foot Buffer Zone as, “The resource area which extends 100 feet from the edge of those wetland resource areas identified in § 565-3A(1) through (5). The 100-Foot Buffer Zone may overlap with other resources (e.g., Riverfront Area and Land Subject to Flooding). The following is within the 100-Foot Buffer Zone:

- A. *25-Foot No-Disturbance Zone – That portion of the buffer zone which extends 25 feet from the edge of the following wetland resource areas: Any Freshwater or Coastal Wetlands, Marshes, Wet Meadows, Bods, Swamps, Rivers, Streams, Springs, Banks, Flats, Reservoirs, Lakes, Ponds of Any Size, Beaches, Dunes, Estuaries, and the Ocean, Intermittent Streams, Brooks, and Creeks. Disturbance of any kind is prohibited within this 25-Foot No-Disturbance Zone including but not limited to grading, landscaping, vegetation removal, pruning, cutting, filling, excavation, roadway construction and/or driveway construction.*





It is not anticipated that the work will impact the Buffer Zones described above. The construction staging, construction access and other temporary construction impacts are authorized under the USACE project. The Project included in this NOI application is limited to the expanded nourishment footprint without additional temporary impacts.

## 5.2 OTHER REGULATED RESOURCE AREAS

GZA has also considered whether the Project Site falls within other environmental regulatory boundaries that would require additional permits. There are no Outstanding Resource Waters, Areas of Critical Environmental Concern, Certified or Potential Vernal Pools, or IWPA, Zone I, or Zone II water supply areas associated with the Project Site. There are also no Designated Port Areas, Salt Marshes, or Shellfish Suitability Areas associated with the Project Site. However, it is our understanding that the Project requires MEPA review and ENF due to the nature and footprint of the proposed work. Given the urgent need of the Project GZA is coordinating and filing an NOI with the Newburyport Conservation Commission as required concurrently with this ENF.

## 5.3 COMPLIANCE WITH STORMWATER PERMITTING

As the Project is limited to placement of beach nourishment material on an existing beach and nearshore area, the majority of the WPA Stormwater Standards do not apply. The Project is considered a construction Project and therefore must comply with WPA Regulations, 310 CMR 10.05(6)(k) for Stormwater Management Standards. There are no existing stormwater structures, and none are proposed as part of the Project.

As the proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum Island Reservation, it does not include construction methods or BMPs related to construction activities. The construction and placement methods are being permitted and authorized by the USACE dredging and nourishment project.

## 6.0 **ALTERNATIVES ANALYSIS**

### 6.1 ALTERNATIVES FOR SHORELINE PROTECTION AT PLUM ISLAND RESERVATION

An analysis of potential actions to address the condition of the Project Site has been completed as follows. It should be noted that this Project has been designed by the USACE, thus the proposed nourishment templates are dictated by the volumes and existing conditions that are provided by the USACE. While the alternatives listed below are potential alternatives to address the erosion at the Project Site, the Project and chosen alternative have been developed and selected by the USACE and agreed to by the Project applicant.

#### 6.1.1 Alternative 1 – No Action (Not Selected)

The no action alternative assumes that the 165,000 cy of sandy material dredged from the USACE FNP will not be placed at the Project Site and the recreational and ecological benefits of the placement of this material at Plum Island Reservation will not be realized. As such, this is not a feasible alternative for the Project.

#### 6.1.2 Alternative 2 – Hardened Shoreline Structures (Not Selected)

This alternative includes the installation of a coastal engineering structure (seawall, stone revetment, etc.) to limit additional erosion at the site. Hardened shoreline structures may reduce erosion, but are costly, require maintenance, and may disrupt natural sediment movement and transport patterns. The shoreline of a barrier beach is a dynamic environment exposed to a wide variety of erosional processes that will work against a static structure, which is why current regulations preclude installation of hard structures on a barrier beach. As such, this is not a feasible alternative for the Project.



6.1.3 Alternative 3 – Federal Base Plan with Nearshore Placement (Not Selected)

The Federal Base Plan includes dredging approximately 290,000 cy of material from shoaled areas of the FNP. Approximately 165,000 cy of sandy dredge spoils would be placed at two nearshore locations, one off of Plum Island and one off of Salisbury Beach. In addition, approximately 125,000 cy of material would be placed on the Plum Island Reservation beach to protect the inlet's south jetty from flanking due to coastal erosion. This alternative fails to maximize the sediments returned directly to the eroding beach.

6.1.4 Alternative 4 – Section 204 Beneficial Use Placement (Preferred)

The Plum Island Reservation placement alternative includes the placement of all available sandy dredge material from the FNP at Plum Island Reservation. Approximately 165,000 cy of additional material over Alternate 3 will be placed for beach nourishment, establishment of habitat for threatened and endangered species, such as piping plover and least terns, shoreline stabilization, and to protect landward areas from erosion and coastal storm damage. This alternate provides the longest period of protection and is the proposed Project.



## **7.0 RESILIENCY, FUTURE MAINTENANCE AND LONG-TERM SOLUTION**

The Upper North Shore Regional Sediment Management Study, (available upon request) describes the accelerated erosion that has occurred at this Project Site and along the general north shore region. This Report was prepared by Applied Coastal Research and Engineering, Inc. for the Massachusetts Department of Conservation and Recreation (DCR) in January 2021. The Report was “aimed at understanding the variety of coastal and inlet processes that govern the Merrimack River and barrier island complex, and to offer potential shorter-term response strategies available to landowners including municipalities of Salisbury, Newbury and Newburyport.” The Report compiled and summarized available data and performed numerical modeling of coastal processes to assess the performance of shoreline management strategies. The Report specifically evaluated the Merrimack River entrance.

The Report determined that the formation of a gyre circulation pattern that forms just to the west of the south Jetty (off of Reservation Terrace) generates currents with the velocity magnitude necessary to transport sediment suspended by waves away from the shoreline. This circulation forms during a flood tide and is amplified by greater tidal ranges such as spring tides or storm events. The Report indicates that the shoreline is likely to continue to erode at a rate of 30-70 feet per year unless the gyre is interrupted. Solutions presented consisted of constructing a weir through the south jetty, constructing an offshore breakwater and beach nourishment. While the nourishment associated with this Project would not be a long-term solution to erosion at this site, it would provide some level of protection without the need to erect any permanent structures. Ultimately the Report identified a major nourishment combined with some type of structure to interrupt the gyre to be the recommended solution for the Project Site.

The Project as described above is intended to be a short-term solution to the on-going erosion and address concerns of damage to existing public and private infrastructure landward of the Project Site. Dredge spoils have been historically placed in the nearshore areas off Plum Island and Salisbury, on either side of the Merrimack River inlet. The onshore placement of material on Plum Island’s North Point is considered beneficial use of dredged material and thus authorized under Section 204 of WRDA and consistent with Massachusetts Executive Order No. 181 – Barrier Beaches. Onshore placement will allow for improvement of the beach ecosystem and will mitigate erosion and coastal storm damage for some period of time until other measures are implemented. It should be noted that once this Project is completed there is still potential for future erosion from Nor’easters or other significant ocean storms, however impacts will be lessened significantly in the near term. The period of time that the nourishment benefit the Project Site is difficult to quantify due to the complex and dynamic riverine and coastal environment as well as the unpredictability of the frequency/intensity of storms. However, it is estimated that without additional action at or adjacent to the Project Site, a Project lifespan of 2 to 5 years may be expected.

DCR does not have immediate plans to maintain or replenish the sediments being placed at Plum Island Reservation. However, future nourishment projects proposed by DCR or other stakeholders are not precluded. Additional beach nourishment may occur on an “as-needed” basis in response to erosion of the beach and/or future maintenance dredging implemented by USACE.

## **8.0 CONCLUSION**

This Project redirects sediments that would otherwise be placed at the nearshore disposal locations off the coasts of Salisbury and Plum Island to the shoreline of Plum Island Reservation and provides immediate relief to ongoing significant erosion at the site. It nourishes the degraded coastal beach, coastal dune and barrier beach and provides significant ecological enhancements. Additionally, the Project increases storm protection for existing public utilities and infrastructure landward of Plum Island Reservation. Finally, Project is consistent with Massachusetts Executive Order No. 181, Barrier Beaches, which states under (6), “*dredge material of a compatible grain size shall be used for barrier beach nourishment, if economically feasible.*”

The Project, with the beneficial placement of dredge sediments will be performed using the best available measures to minimize adverse impacts to the wetland resources areas and meet all of the performance standards of the MA Wetlands Protection Act.



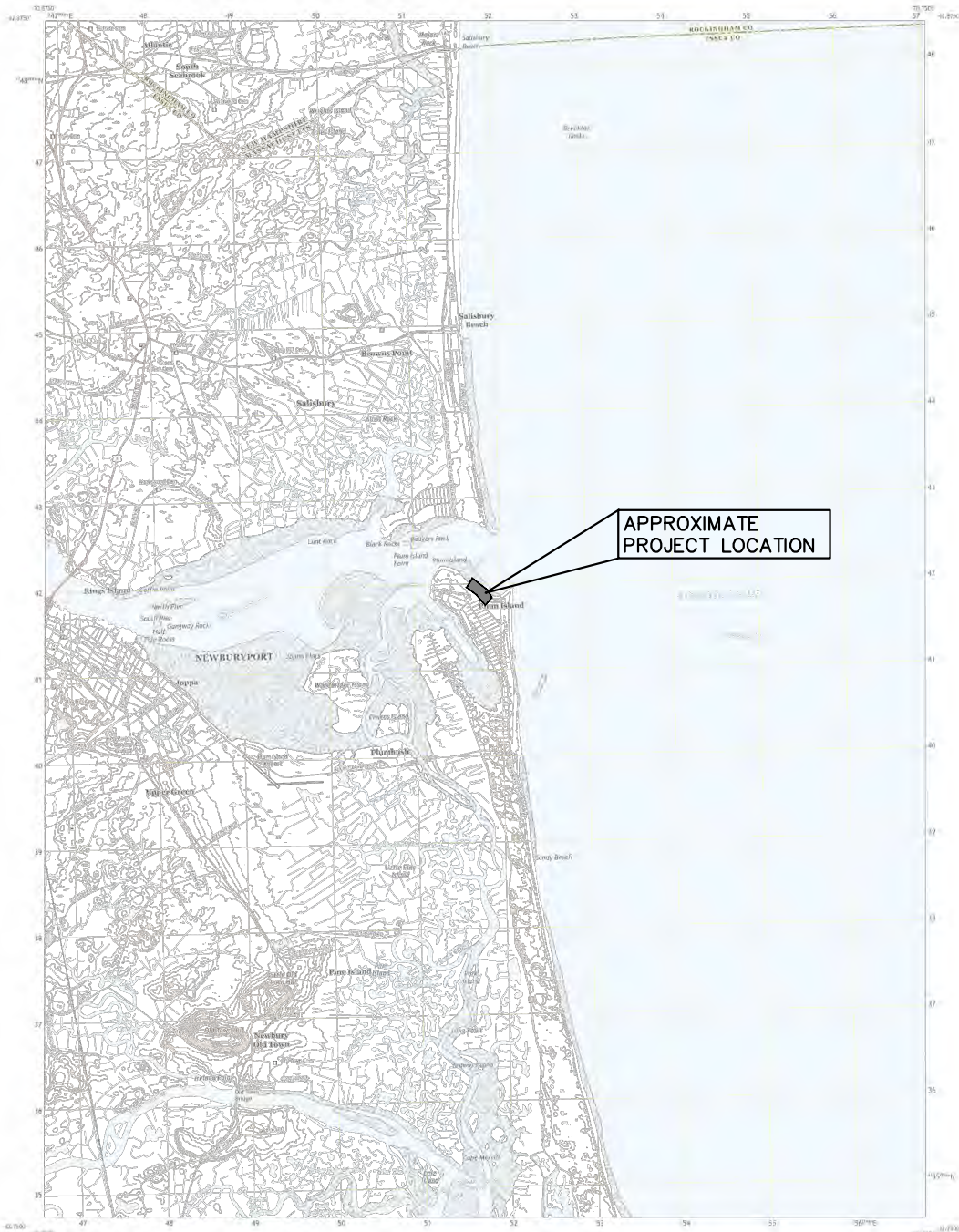
## Figures



U.S. DEPARTMENT OF THE INTERIOR  
U.S. GEOLOGICAL SURVEY



NEWBURYPORT EAST QUADRANGLE  
MASSACHUSETTS - NEW HAMPSHIRE  
7.5-MINUTE SERIES



Produced by the United States Geological Survey  
 Scale 1:24,000  
 Legend  
 NEWBURYPORT EAST, MA, NH  
 2018

© 2021 - GZA GeoEnvironmental, Inc. GZA-1\gza\massbury\jobs\175100\18.0175103.00 DCR Plum Island Beach Nourishment PRF89\Figures\CAD\Locus\_Aerial\_FEMA-MCR.dwg [NOI] Figure 1 - LOCUS May 18, 2021 - 9:35pm joshua.zali

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

NO.	ISSUE/DESCRIPTION	BY	DATE

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION
PROJ MGR: DAS DESIGNED BY: DAS DATE: JUNE 2021	REVIEWED BY: ABB DRAWN BY: JJZ PROJECT NO. 18.0175103.00
CHECKED BY: ABB SCALE: N.T.S. REVISION NO. -	FIGURE <b>1</b> SHEET NO. 1 OF 5



# SITE LOCUS MAP



NOTE:  
IMAGERY FROM MASSGIS, DATED 2019.

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NO.	ISSUE/DESCRIPTION	BY	DATE

PREPARED BY:  <b>GZA GeoEnvironmental, Inc.</b> Engineers and Scientists www.gza.com	PREPARED FOR:  <b>MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION</b>		
PROJ MGR: DAS DESIGNED BY: DAS DATE: JUNE 2021	REVIEWED BY: ABB DRAWN BY: JJZ PROJECT NO. 18.0175103.00	CHECKED BY: ABB SCALE: N.T.S. REVISION NO. -	<b>FIGURE 2</b> SHEET NO. 2 OF 5

MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
 PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
 PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

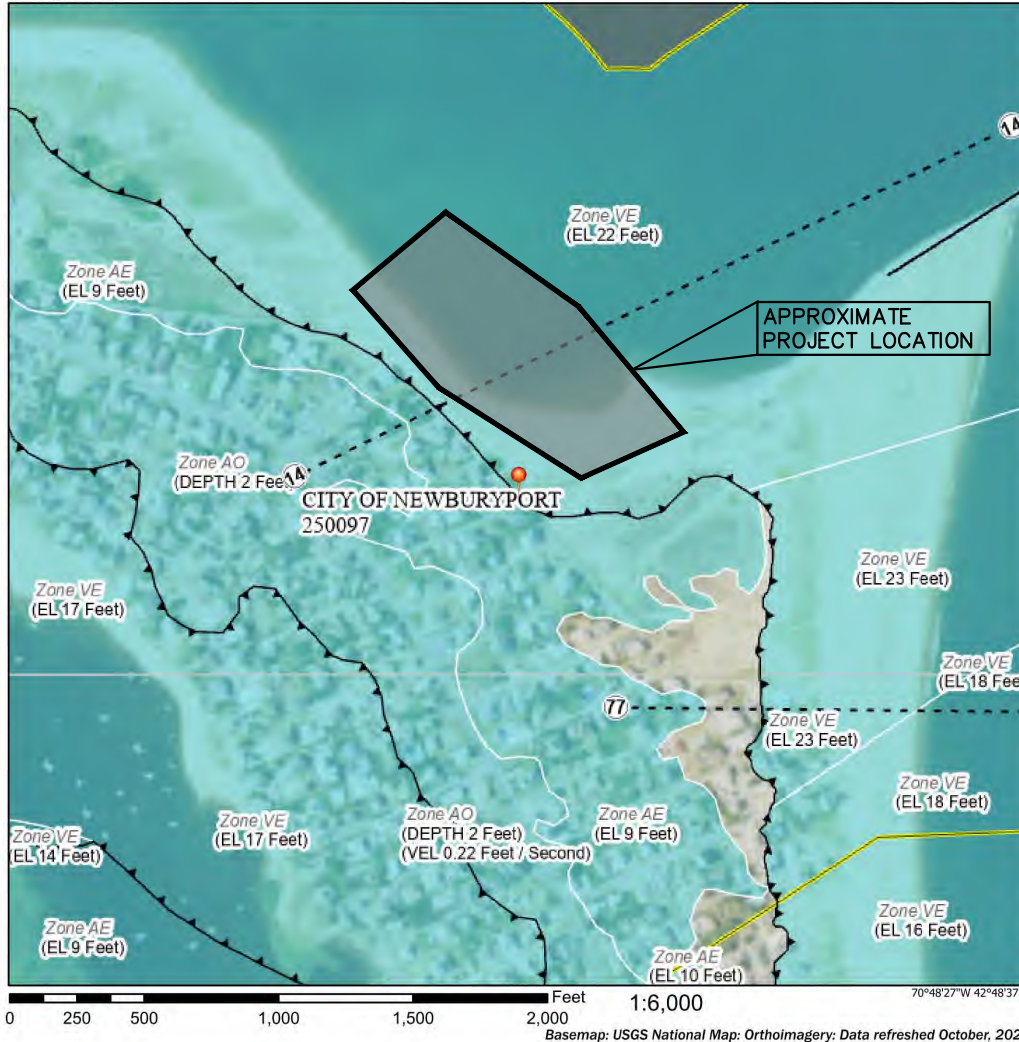
AERIAL PHOTO

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 GZA-1\GZA\amesbury\jobs\1751003\18.0175103.00 DCR Plum Island Beach Nourishment PRF69\Figures\CAD\Locus\_Aerial\_FEIMA-MOR.dwg [NOI Figure 2 - AERIAL] May 12, 2021 - 11:57am joshua.zali

# National Flood Hazard Layer FIRMette



70°49'4"W 42°49'3"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

**SPECIAL FLOOD HAZARD AREAS**

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

**OTHER AREAS OF FLOOD HAZARD**

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee, Zone X
- Area with Flood Risk due to Levee Zone D

**OTHER AREAS**

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

**GENERAL STRUCTURES**

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

**OTHER FEATURES**

- Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

**MAP PANELS**

- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 3/18/2021 at 3:48 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NO.	ISSUE/DESCRIPTION	BY	DATE

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

## FEMA FIRMETTE

PREPARED BY:  
 **GZA GeoEnvironmental, Inc.**  
Engineers and Scientists  
www.gza.com

PROJ MGR: DAS  
DESIGNED BY: ABB  
DATE: JUNE 2021

REVIEWED BY: ABB  
DRAWN BY: JJZ  
PROJECT NO. 18.0175103.00

PREPARED FOR:  
 MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

CHECKED BY: ABB  
SCALE: AS SHOWN  
REVISION NO. -

FIGURE  
**3**  
SHEET NO. 3 OF 5

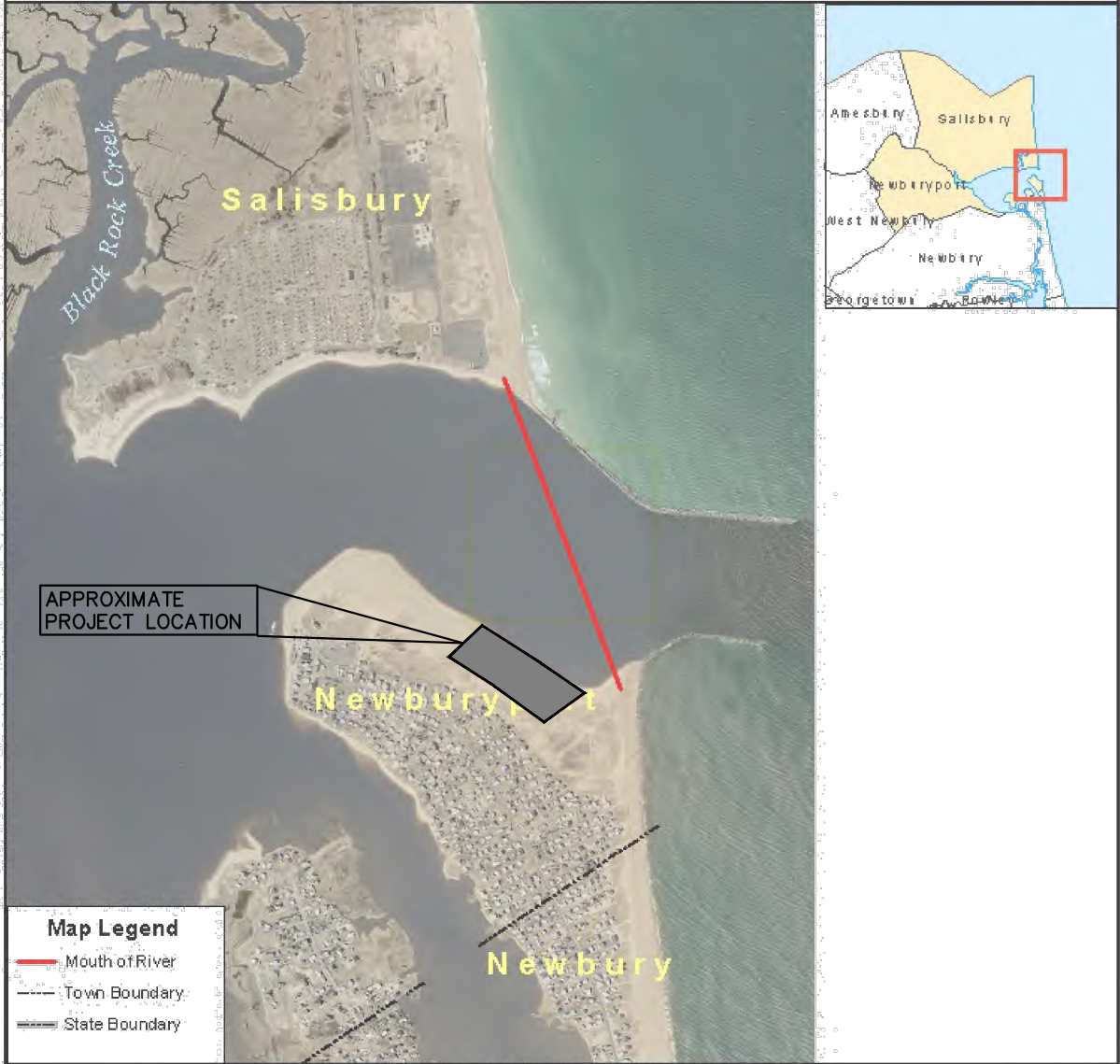
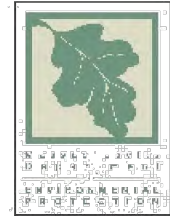
**Massachusetts  
Mouth of Coastal River Maps  
M.G.L. c.131, s.40  
310 CMR 10.58**

**Town:** NEWBURYPORT / SALISBURY

**River:** MERRIMACK RIVER

**March 1, 2005**

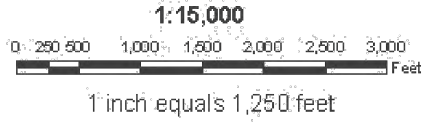
**ID:** NEWBURYPORT-SALISBURY MOR-1



APPROXIMATE PROJECT LOCATION

**Map Legend**

- Mouth of River
- Town Boundary
- State Boundary



Mouth of River lines delineated by DEP Wetlands Program.  
Color OrthoPhoto base map from MassGIS, 2001-2003.  
Mass DEP GIS Program

© 2021 - GZA GeoEnvironmental, Inc. GZA\lgzamesbury\jobs\175100\18.01175103.00 DCR Plum Island Beach Nourishment PRF89\Figures\CAD\Locust\_Aerial\_FEMA-MOR.dwg [NOI] Figure 4 - MOR [May 18, 2021 - 9:40pm] joshua.zall

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

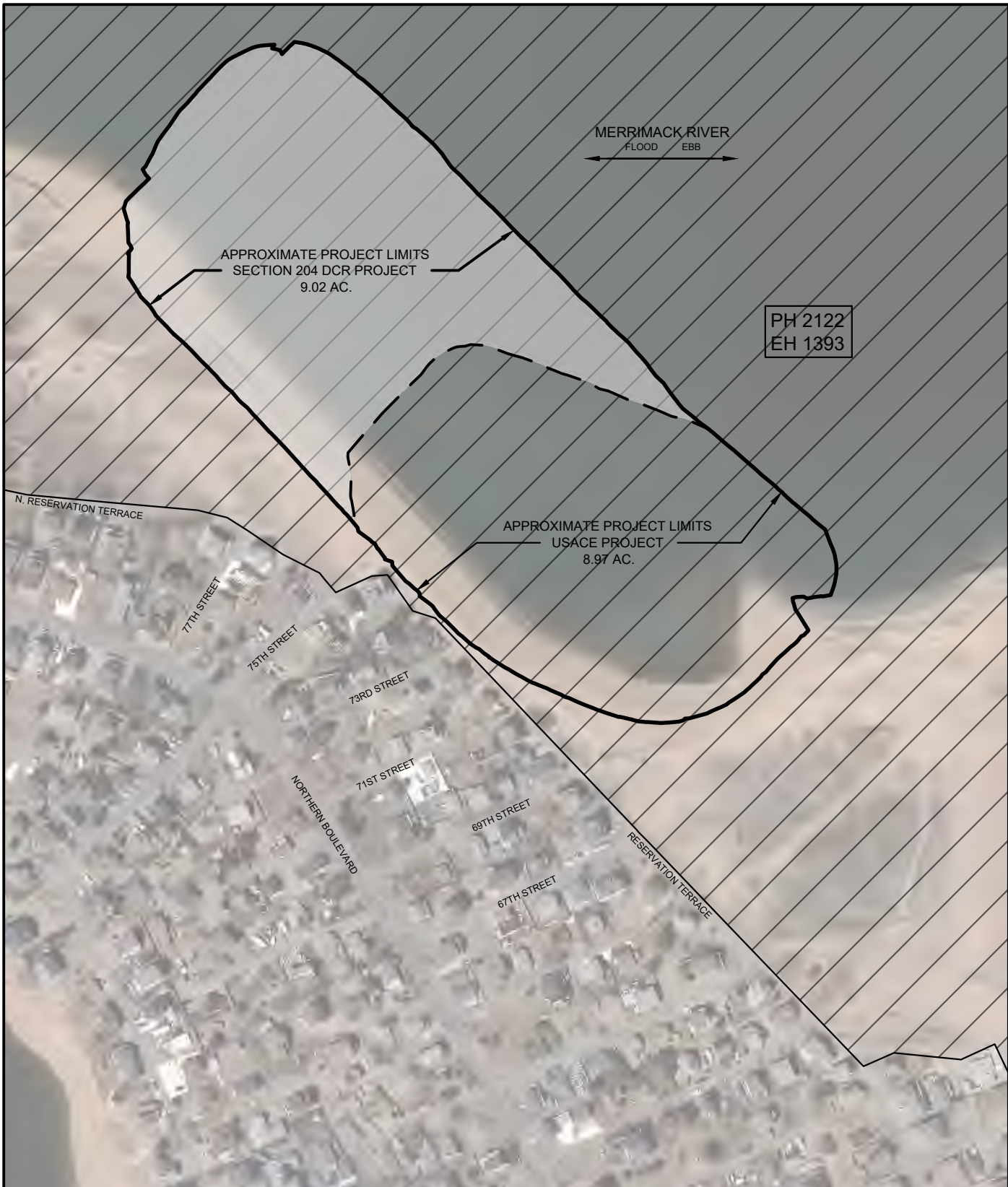
NO.	ISSUE/DESCRIPTION	BY	DATE

PREPARED BY: <b>GZA GeoEnvironmental, Inc.</b> Engineers and Scientists www.gza.com	PREPARED FOR: <b>MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION</b>
PROJ MGR: DAS DESIGNED BY: DAS DATE: JUNE 2021	REVIEWED BY: ABB DRAWN BY: JJZ PROJECT NO. 18.0175103.00
CHECKED BY: ABB SCALE: N.T.S. REVISION NO. -	FIGURE <h1 align="center">4</h1> SHEET NO. 4 OF 5

**MOUTH OF COASTAL RIVER MAP**



© 2021 - GZA GeoEnvironmental, Inc.  
 GZA-1\GZA\amesbury\jobs\175100\18.0175103.00 DCR Plum Island Beach Nourishment PRF69\Figures\CAD\Locus\_Aerial\_FEIMA-MOR.dwg [NOI Figure 5 - NHESP] May 12, 2021 - 12:05pm joshua.zali




NOTE:  
IMAGERY FROM MASSGIS, DATED 2019.

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NO.	ISSUE/DESCRIPTION	BY	DATE

MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
 PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
 PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

PREPARED BY:  
 **GZA GeoEnvironmental, Inc.**  
 Engineers and Scientists  
 www.gza.com

PREPARED FOR:  
 **MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION**

## NHESP PRIORITY AND ESTIMATED HABITATS OF RARE SPECIES

PROJ MGR: DAS	REVIEWED BY: ABB	CHECKED BY: ABB
DESIGNED BY: DAS	DRAWN BY: JJZ	SCALE: N.T.S.
DATE: JUNE 2021	PROJECT NO. 18.0175103.00	REVISION NO. -

FIGURE  
**5**  
 SHEET NO. 5 OF 5



## **Appendix A – Permit Drawings**

# MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

## PROJECT P21-3412-D01 (4050-D)

### NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE

#### PLUM ISLAND RESERVATION NEWBURYPORT, MASSACHUSETTS 01950

#### PREPARED FOR



MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
251 CAUSEWAY STREET, SUITE 900  
BOSTON, MA 02114

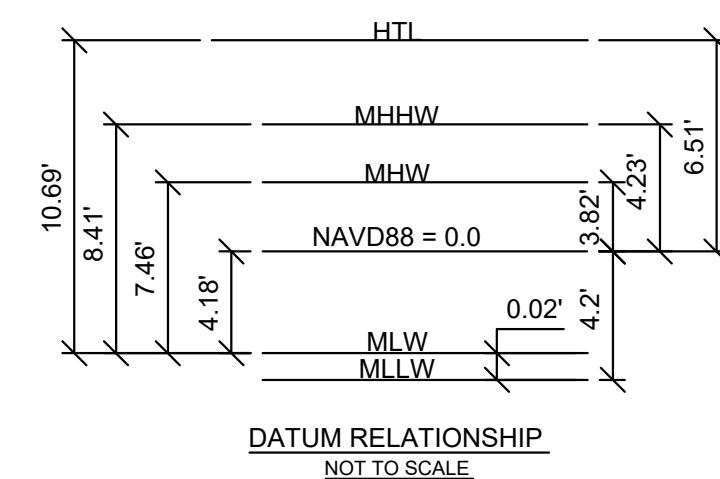
#### PREPARED BY



GZA GEOENVIRONMENTAL, INC.  
144 ELM STREET  
AMESBURY, MA 01913

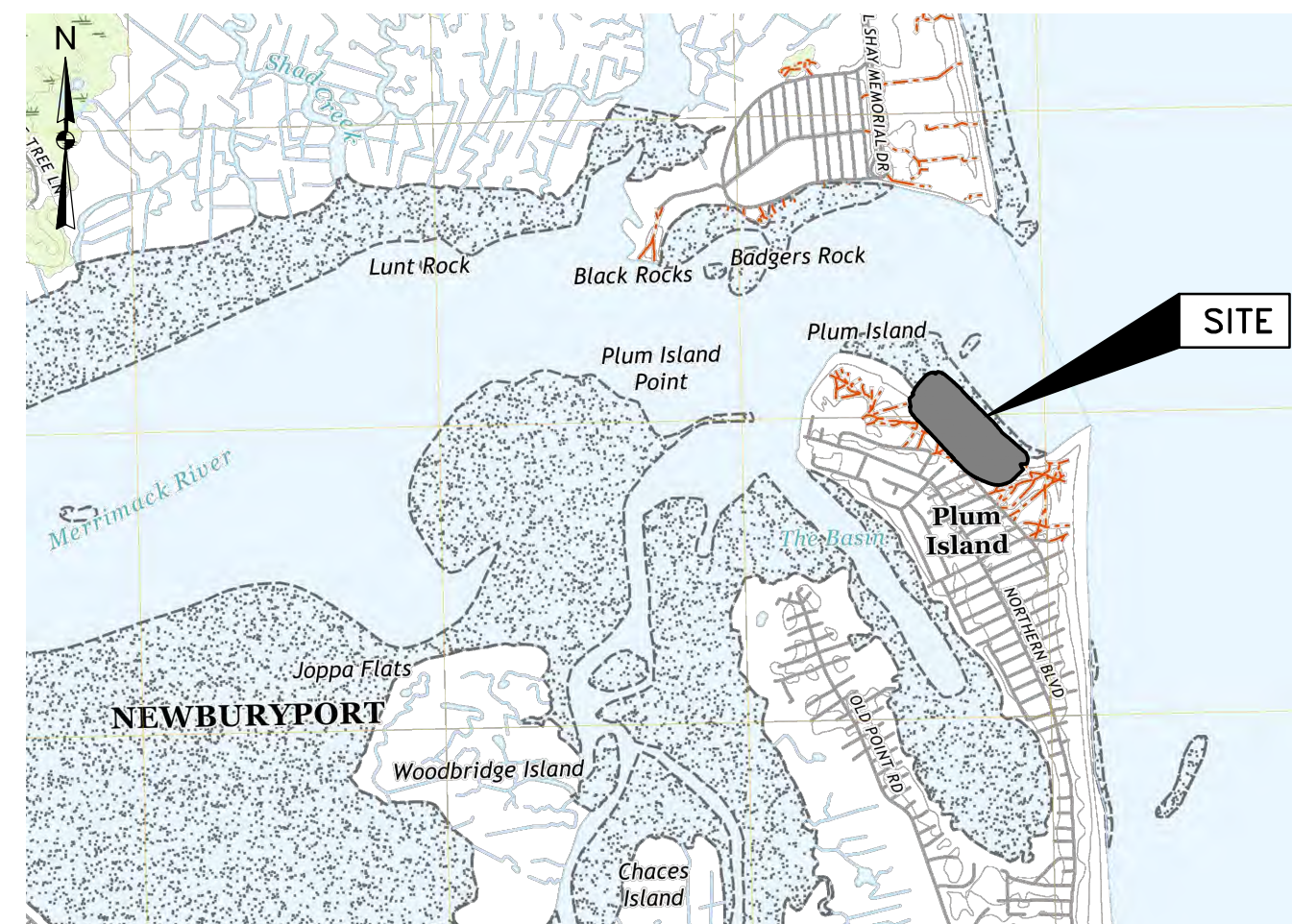
#### INDEX OF DRAWINGS

SHEET 1	COVER SHEET
SHEET 2	EXISTING SITE PLAN
SHEET 3	PROPOSED WORK PLAN
SHEET 4	PROPOSED SECTIONS



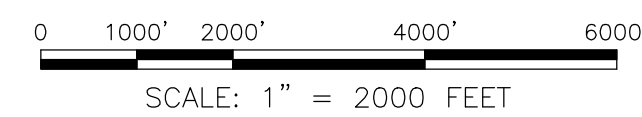
#### GENERAL NOTES:

- DATUM: CONTOURS AND ELEVATION REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). MLLW=-4.20, MLW=-4.18, NAVD88=0.0, MHW=3.82, MHHW=4.23, HTL=6.51. THE MLLW TO NAVD88 CORRECTION WAS PROVIDED BY US ARMY CORPS OF ENGINEERS.
- LIMITED TOPOGRAPHIC SURVEY'S PERFORMED BY GZA GEOENVIRONMENTAL, INC. (GZA) ON APRIL 12, 15, 20, AND 27, 2021, AND REPRESENTS THE CONDITIONS AT THE TIME OF THE SURVEYS.
- LIMITED HYDROGRAPHIC SURVEY WAS PERFORMED BY GZA ON APRIL 27, 2021, AND REPRESENTS THE CONDITIONS AT THE TIME OF THE SURVEY. HYDROGRAPHIC SURVEY WAS PERFORMED FROM A GZA SURVEY VESSEL UTILIZING AN ODOM HYDROTRAC SINGLE-FREQUENCY ECHO SOUNDER, 200 KHZ TRANSDUCER WITH AN 8-DEGREE BEAM, ODOM DIGIBAR VELOCITY PROBE, RAVEN INVICTA 310 DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS) UNIT FOR HORIZONTAL POSITIONING AND HYPACK ACQUISITION AND PROCESSING SOFTWARE.
- EXISTING UTILITY LOCATIONS WERE TAKEN FROM ELECTRONIC FILES PROVIDED BY THE CITY OF NEWBURYPORT, ENTITLED "PLUM ISLAND W&S".
- PROPERTY LINES ARE APPROXIMATE AND WERE TAKEN FROM AVAILABLE ONLINE MASSGIS DATA LAYERS.
- AERIAL IMAGE FROM 2019 MASSGIS - U.S. GEOLOGICAL SURVEY - QUANTUM SPATIAL, INC.



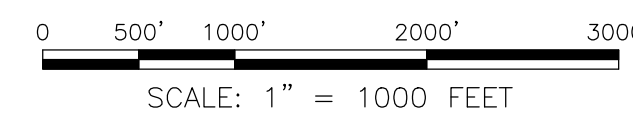
PROJECT LOCUS MAP

SOURCE: USGS DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV (2021).  
CONTOUR ELEVATIONS REFERENCE NAVD 88.  
CONTOURS AND ELEVATIONS ARE SHOWN IN FEET



PROJECT ORTHOIMAGERY SITE LOCUS

SOURCE: 2019 MASSGIS - U.S. GEOLOGICAL SURVEY - QUANTUM SPATIAL, INC.



#### LEGEND:

	HIGH TIDE LIDE (HTL) = 6.51
	MEAN HIGHER-HIGH WATER = 4.23
	MEAN HIGH WATER (MHW) = 3.28
	MEAN LOW WATER LEVEL (MLW) = -4.18
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPERTY LINE (SEE NOTE 5)
	EXISTING SAND FENCE
	EXISTING ROPE FENCE
	EXISTING BEACH ACCESS PATH
	EXISTING TIMBER WALL
	EXISTING CONCRETE BLOCKS
	EXISTING DEBRIS
	EXISTING SHRUB/BRUSH
	WATER LINES
	SEWER LINES
	SEWER VALVE CONNECTORS
	VACUUM PIT CONNECTORS
	SEWER MANHOLE
	WATER GATE
	HYDRANT
	UTILITY POLE
	LIMIT OF COASTAL DUNE / BEACH
	RIVERFRONT AREA



**PERMITTING ONLY**  
**NOT FOR CONSTRUCTION**

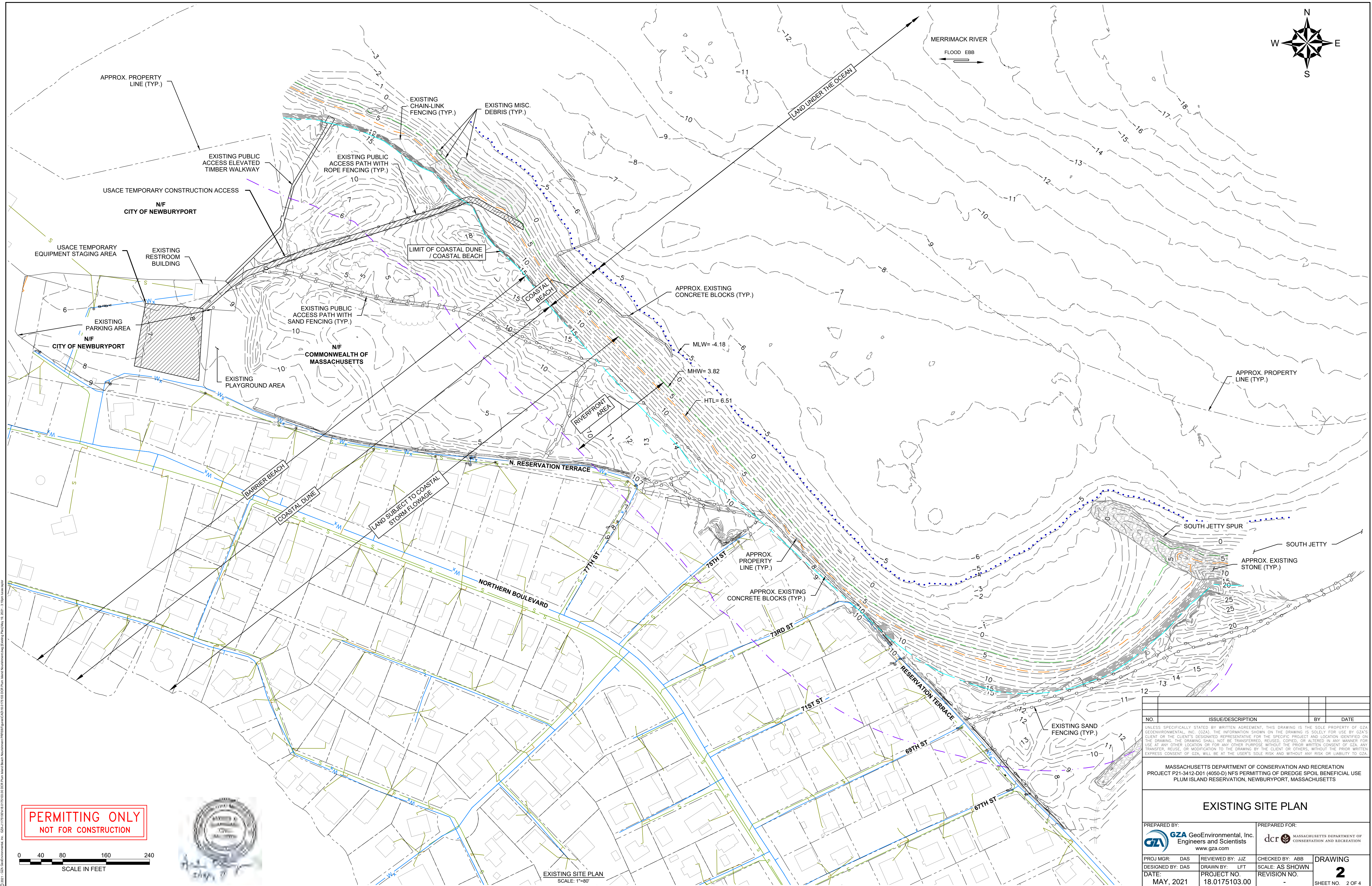
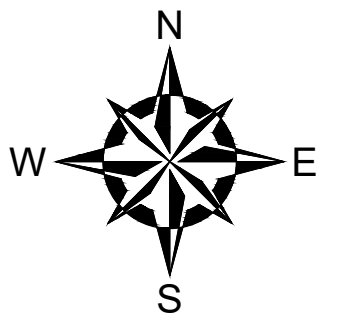
NO.	ISSUE/DESCRIPTION	BY	DATE

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

**COVER SHEET**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION
PROJ MGR: DAS DESIGNED BY: DAS	REVIEWED BY: JJZ DRAWN BY: AJPL/FT
DATE: MAY 2021	PROJECT NO. 18.0175103.00
CHECKED BY: ABB SCALE: AS SHOWN	DRAWING REVISION NO. 1
SHEET NO. 1 OF 4	



**PERMITTING ONLY**  
**NOT FOR CONSTRUCTION**



EXISTING SITE PLAN  
SCALE: 1"=80'

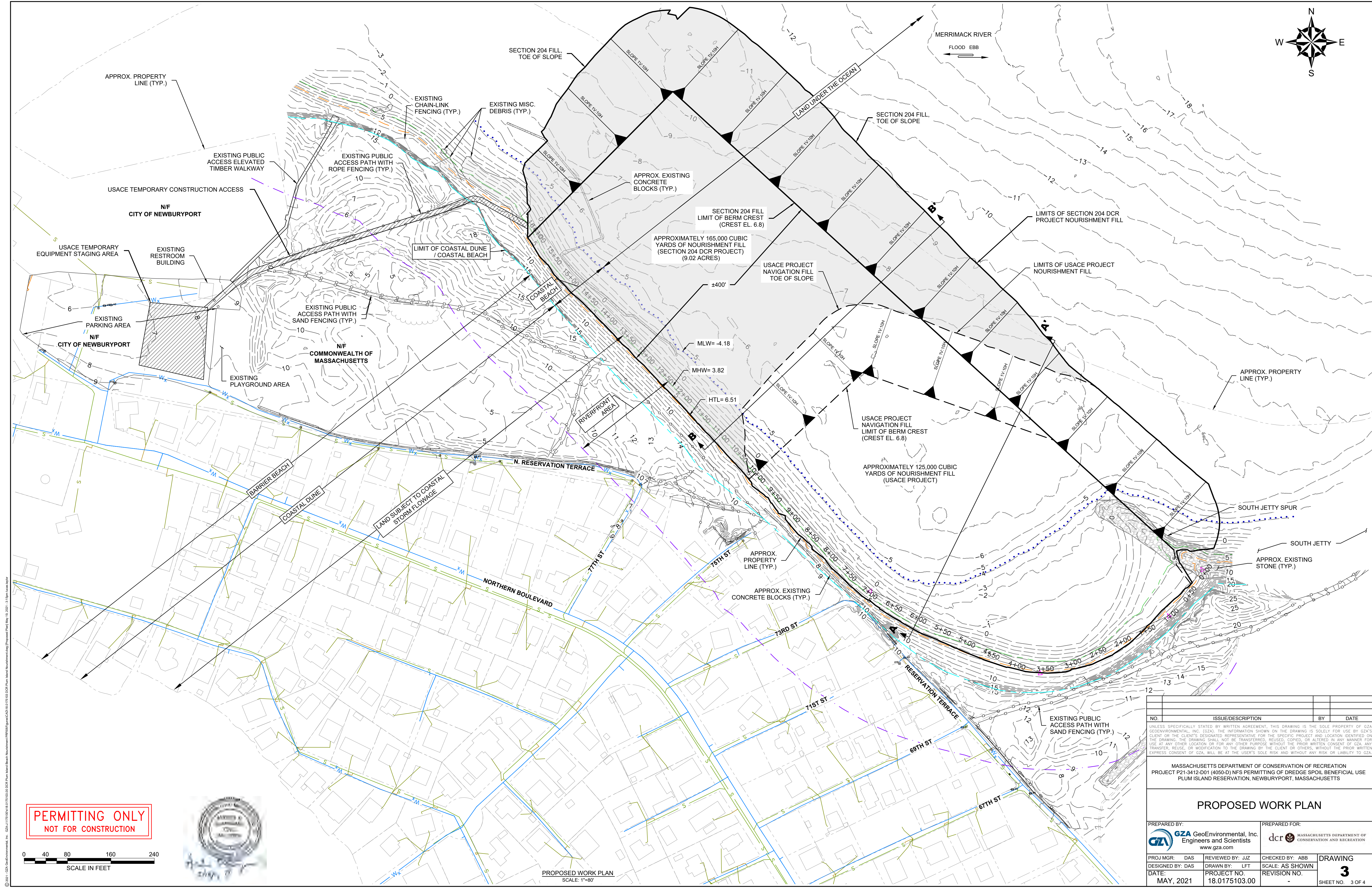
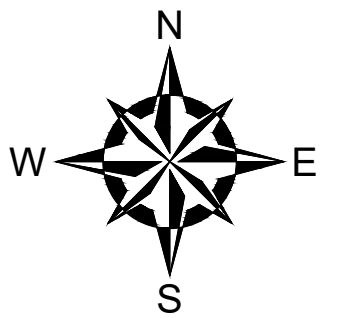
NO.	ISSUE/DESCRIPTION	BY	DATE

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) N/F PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

**EXISTING SITE PLAN**

PREPARED BY: <b>GZA GeoEnvironmental, Inc.</b> Engineers and Scientists www.gza.com	PREPARED FOR: MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION
PROJ MGR: DAS DESIGNED BY: DAS DATE: MAY, 2021	REVIEWED BY: JJZ DRAWN BY: LFT PROJECT NO. 18.0175103.00
CHECKED BY: ABB SCALE: AS SHOWN REVISION NO.	DRAWING <b>2</b> SHEET NO. 2 OF 4



**PERMITTING ONLY**  
**NOT FOR CONSTRUCTION**



PROPOSED WORK PLAN  
SCALE: 1"=80'

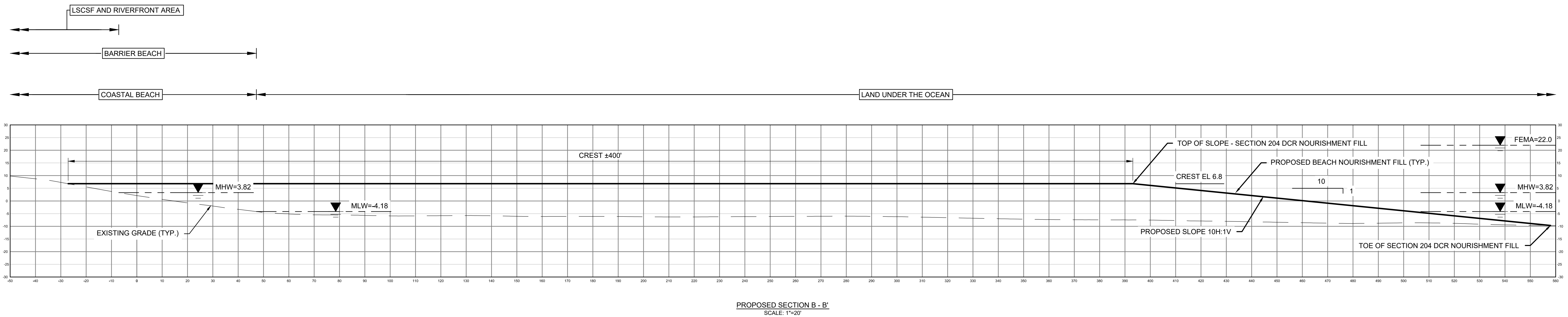
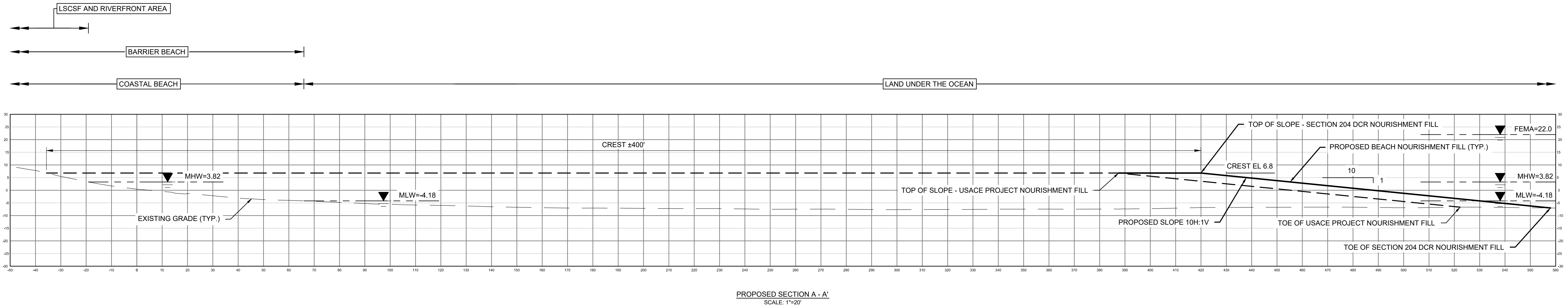
NO.	ISSUE/DESCRIPTION	BY	DATE

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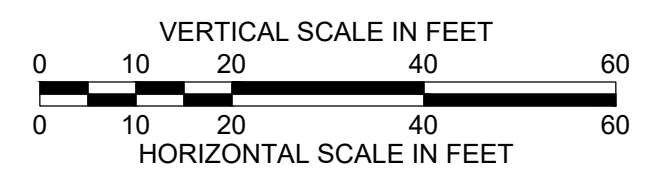
MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

**PROPOSED WORK PLAN**

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com	PREPARED FOR: MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION
PROJ MGR: DAS DESIGNED BY: DAS	REVIEWED BY: JJZ DRAWN BY: LFT
DATE: MAY, 2021	PROJECT NO: 18.0175103.00
	CHECKED BY: ABB SCALE: AS SHOWN
	DRAWING NO: <b>3</b> SHEET NO. 3 OF 4



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NOT FOR CONSTRUCTION**



NO.	ISSUE/DESCRIPTION	BY	DATE

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MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION  
PROJECT P21-3412-D01 (4050-D) NFS PERMITTING OF DREDGE SPOIL BENEFICIAL USE  
PLUM ISLAND RESERVATION, NEWBURYPORT, MASSACHUSETTS

**PROPOSED SECTIONS**

PREPARED BY: <b>GZA</b> GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: dcr MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION	
PROJ MGR: DAS	DESIGNED BY: DAS	REVIEWED BY: JJZ	CHECKED BY: ABB
DATE: MAY, 2021	PROJECT NO. 18.0175103.00	DRAWN BY: LFT	SCALE: AS SHOWN
DRAWING			<b>4</b>
SHEET NO. 4 OF 4			




© 2021, GZA GeoEnvironmental, Inc. (GZA) 171101-1810175103.00 DCR Plu... Permit Nourishment.dwg (Sheet) May 19, 2021 3:20pm Lucas Walker



## **Appendix B – Photographic Log**



# Photographic Log


<b>Client Name:</b> MA Department of Conservation and Recreation		<b>Site Location:</b> Plum Island's North Point, Newburyport, MA	<b>Project No.</b> 18.0175103.00
<b>Photo No.</b> 1	<b>Date:</b> 10-10-20		
<b>Direction Photo Taken:</b> Aerial			
<b>Description:</b> October 10, 2020 Aerial image from Google Earth.			

<b>Photo No.</b> 2	<b>Date:</b> 4-12-21		
<b>Direction Photo Taken:</b> Northwest			
<b>Description:</b> Degraded dune at end of boardwalk with unserviceable observation deck.			





# Photographic Log

<b>Client Name:</b> MA Department of Conservation and Recreation		<b>Site Location:</b> Plum Island's North Point, Newburyport, MA	<b>Project No.</b> 18.0175103.00
<b>Photo No.</b> 3	<b>Date:</b> 4-12-21		
<b>Direction Photo Taken:</b> Southeast			
<b>Description:</b> Degraded and eroded dune landward of buried emergency supersacks. Looking from the end of 75 <sup>th</sup> Street.			

<b>Photo No.</b> 4	<b>Date:</b> 4-20-21		
<b>Direction Photo Taken:</b> Southeast			
<b>Description:</b> Degraded and eroded dune landward of emergency supersacks. Looking toward Reservation Terrace from near the end of 73 <sup>rd</sup> Street.			




# Photographic Log

<b>Client Name:</b> MA Department of Conservation and Recreation		<b>Site Location:</b> Plum Island's North Point, Newburyport, MA	<b>Project No.</b> 18.0175103.00
<b>Photo No.</b> 5	<b>Date:</b> 4-20-21		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Degraded and eroded dune looking toward jetty spur.			

<b>Photo No.</b> 6	<b>Date:</b> 4-15-21		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Degraded and eroded dune. Looking toward Reservation Terrace from the jetty spur.			



# Photographic Log

<b>Client Name:</b> MA Department of Conservation and Recreation		<b>Site Location:</b> Plum Island's North Point, Newburyport, MA	<b>Project No.</b> 18.0175103.00
<b>Photo No.</b> 7	<b>Date:</b> 5-6-21		
<b>Direction Photo Taken:</b> Southeast			
<b>Description:</b> Degraded and eroded dune after supersack removal. Stockpiled sand along Reservation Terrace is from clearing of sand washed on to Reservation Terrace and adjacent property.			

<b>Photo No.</b> 8	<b>Date:</b> 5-6-21		
<b>Direction Photo Taken:</b> Northwest			
<b>Description:</b> Degraded and eroded dune after supersack removal.			



## **Appendix C – Abutter Information**



**City of Newburyport**  
**Office of the Assessor**  
60 Pleasant Street / P.O. Box 550  
Newburyport, MA 01950  
Ph 978-465-4403 / Fax 978-462-8495

**May 12, 2021**

---

**To: Newburyport Conservation Commission**  
**From: Newburyport Board of Assessors**  
**Re: Abutters List: NORTH RESERVATION TERRACE**

**Newburyport Map: 77 Lot: 125**

---

**The following are the abutters of the above mentioned property:**

**Board of Assessors**

*The Assessors Office is certifying that the persons listed in the foregoing list of abutters are the owners of record of the foregoing properties as of January 1<sup>st</sup>, 2021. The city Assessor is not certifying that the persons so listed are the persons who are required to receive notification under applicable law.*

76/ 171/D / /  
KUCINSKI JOHN M  
IRENE V T/E  
13 PAT DRIVE  
DANVERS, MA 01923

76/ 172/D / /  
KINGMAN RAYMOND R JR  
ANDREA S T/E  
10 75TH ST  
NEWBURYPORT, MA 01950

76/ 181/ / /  
MULLER MICHAEL  
STANLEY MULLER J/T  
11 73RD ST  
NEWBURYPORT, MA 01950

76/ 182/ / /  
SACKS STANTON & JUDITH T/E  
7 LILS WAY  
LYNNFIELD, MA 01940

76/ 183/ / /  
WRIGHT MARK R  
LELA C T/E  
55 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 184/ / /  
BOSSI GEORGE E TRS  
GEORGE E BOSSI 2013 REVOC. TRUST  
8 73RD ST  
NEWBURYPORT, MA 01950

76/ 192/ / /  
EDWARDS MICHELE TRS  
NRNH REALTY TRUST  
99 LAKE ST  
SALEM, NH 03079

76/ 194/ / /  
HRC LLC  
51A RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 195/ / /  
HANNASEA LLC  
51 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 205/ / /  
GEMBA ELIZABETH  
11 69TH ST  
NEWBURYPORT, MA 01950

76/ 206/ / /  
CLARKE RICHARD  
15 69TH ST  
NEWBURYPORT, MA 01950

76/ 207/ / /  
TRUESDALE BRUCE J JR  
JENNIFER D T/E  
18 69TH ST  
NEWBURYPORT, MA 01950

76/ 208/ / /  
MAGAURAN ANNE O  
16 69TH ST  
NEWBURYPORT, MA 01950

76/ 219/ / /  
FREEDMAN MARCY LYNNE TRS  
MARCY LYNNE FREEDMAN REVOC.  
TRUS  
13 67TH ST  
NEWBURYPORT, MA 01950

76/ 221/ / /  
DOYLE MICHAEL F  
KELLI A T/E  
39 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 222/ / /  
GARIBALDI DOMINICK TRS  
14 67TH STREET REALTY TRUST  
14 67TH ST  
NEWBURYPORT, MA 01950

76/ 235/ / /  
MIKITKA MARK F & KIMBERLY  
12 AVERY LANE  
ANDOVER, MA 01810

76/ 236/ / /  
HIGGINBOTHAM GREGGORY S  
12 65TH ST  
NEWBURYPORT, MA 01950

76/ 247/ / /  
SPRAGUE JEFFREY D  
DONNA M T/E  
7 CHESTNUT AVE  
AUBURN, MA 01501

76/ 248/ / /  
SPRAGUE DONNA M  
JEFFERY D J/T  
7 CHESTNUT AVE  
AUBURN, MA 01501

76/ 249/ / /  
LOWE BENJAMIN & MEMORY T/E  
20 63RD ST  
NEWBURYPORT, MA 01950

76/ 263/ / /  
HALLISEY JOHN J & CATHERINE TRS  
C/O MARY HALLISEY  
46 CLIPPER WAY  
NEWBURYPORT, MA 01950

76/ 264/ / /  
POTTER KORIN J H  
C/O KORIN HEISER CARUSO  
77 ROCKVIEW-JAMAICA PLAIN  
BOSTON, MA 02130

76/ 265/ / /  
HEARTQUIST ALLISON  
RICHARD T/E  
23 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 266/ / /  
BEAUBIEN WILLIAM A TRUSTEE  
BEAUBIEN FAMILY TRUST  
20 61ST ST  
NEWBURYPORT, MA 01950

76/ 280/ / /  
LYONS MARY-CORINNE TRS  
JOHN & CHRISTOPHER & SHANE RYAN  
3 LONG VIEW LANE  
NEWBURY, MA 01951

76/ 280/A / /  
NALLY DONALD D  
MARY BETH T/E  
21 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 280/B / /  
NEWMAN ROBERT P  
ALLISON A SCHILLING J/T  
19 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 281/ / /  
ZIOLKOWSKI EDWARD S  
MARILYN D  
28 THURSTON RD  
MELROSE, MA 02176

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ZIOLKOWSKI EDWARD S  
MARYLYN D P I RLTY TRS  
28 THURSTON RD  
MELROSE, MA 02176

76/ 283/ / /  
LANCIANI STEPHEN A JR & ERIN E T  
21 OLDE COACH RD  
NORTH READING, MA 01864

76/ 284/ / /  
CHERRY KATHLEEN L  
FULLER ROBERT G-MINNIE I  
18 RESERVATION TERR  
NEWBURYPORT, MA 01950

76/ 285/ / /  
CMAR JOSEPH J & LINDA J TRS  
CMAR FAMILY REVOCABLE TRUST  
16 RESERVATION TERRACE  
NEWBURYPORT, MA 01950

76/ 286/ / /  
MALONEY BRETT  
KENNETH POUBLON J/T  
63 LAKE ST  
MIDDLETON, MA 01949

76/ 304/ / /  
SLOANE MICHAEL M  
COLEEN A T/E  
4 JACOB RAYNOR LN  
NORTH READING, MA 01864

76/ 305/ / /  
GUNNARD RUSSELL J TRS  
GUNNARD FAMILY NOMINEE TRST  
17 SHIPMASTER CT  
LAKE WYLIE, SC 29710

76/ 306/ / /  
SIMMONS WILLIAM A  
SIMMONS MARGARET H  
19 HILLTOP CIRCLE  
WEST NEWBURY, MA 01865

76/ 309/ / /  
MASLANKA MARK A & PAMELA A TRS  
24 57TH STREET REALTY TRUST  
24 57TH ST  
NEWBURYPORT, MA 01950

76/ 333/ / /  
MCCARTHY CORNELIUS J  
ALICE M T/E  
185 IPSWICH RD  
BOXFORD, MA 01921

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MCCARTHY CORNELIUS J  
ALICE M J/T  
185 IPSWICH RD  
BOXFORD, MA 01921

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HEMANI SADRUDDIN B TRUSTEE  
S B HEMANI REVOCABLE TRUST 2009  
73 HIGH ST  
NEWBURYPORT, MA 01950

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HEMANI SADRUDDIN B TRUSTEE  
S B HEMANI REVOCABLE TRUST 2009  
73 HIGH ST  
NEWBURYPORT, MA 01950

76/ 356/ / /  
MIRICK CHRISTOPHER R  
CATHERINE C T/E  
65 KINGSBURY ST  
WELLESLEY, MA 02481

76/ 357/ / /  
DUNPHY CLARE TRUSTEE  
53RD STREET REALTY TRUST  
73 HIGH STREET  
NEWBURYPORT, MA 01950

76/ 358/ / /  
TRACY TIMOTHY R  
FREEMAN KAREN A J/T  
28 53RD ST PI  
NEWBURYPORT, MA 01950

77/ 82/ / /  
CHAROS GEORGE J  
82ND STREET P.I.  
NEWBURYPORT, MA 01950

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CHAROS GEORGE  
10 82ND STREET P.I.  
NEWBURYPORT, MA 01950

77/ 84/ / /  
COMMONWEALTH OF  
MASSACHUSETTS  
DIV OF MARINE FISHERIES  
100 CAMBRIDGE STREET  
BOSTON, MA 02109

77/ 85/ / /  
WISE KATHLEEN & OLIVER L/I  
DANA P JORDAN  
39 JAK-LEN DR  
SALISBURY, MA 01952

77/ 86/ / /  
WALLACE ROBIN F  
4 79TH ST  
NEWBURYPORT, MA 01950

77/ 86/A / /  
PAPANICKOLAS GEORGIA  
16 CHESTNUT ST  
PEABODY, MA 01960

77/ 87/ / /  
PAPANICKOLAS EMMANUEL N  
16 CHESTNUT ST  
PEABODY, MA 01960-2302

77/ 88/ / /  
LANE LEEWOOD L JR  
JOANN M LANE T/E  
36 ALBRIGHT RD  
STERLING, MA 01564

77/ 89/ / /  
BAKHTIARI MAHMOUD M  
BRENDA S T/E  
268 NORTHERN BLVD  
NEWBURYPORT, MA 01950

77/ 90/ / /  
HARVEY RICHARD  
266 NORTHERN BLVD  
NEWBURYPORT, MA 01950

77/ 91/ / /  
WATKINS JOHN A  
LOUISA M TANNER T/E  
260 NORTHERN BLVD  
NEWBURYPORT, MA 01950

77/ 92/ / /  
HOLLERAN ELEANOR TR  
HOLLERAN FAMILY TRUST  
PO BOX 255  
WINCHESTER, MA 01890

77/ 93/A / /  
TODD JEFFREY & ERIN T/E  
HAROLD J BURNS J/T  
33 WILD PASTURE RD  
KENSINGTON, NH 03833

77/ 93/B / /  
KWAN KIM M  
16 PRIMROSE LANE  
WESTBOROUGH, MA 01581

77/ 94/ / /  
BEAN DAVID F & JOHN W TRS  
BEAN FAMILY IRREVOCABLE TRUST  
4 RODGERS CIRCLE  
NORTH READING, MA 01864

77/ 95/ / /  
NAGEL J EVA  
LEE F. T/E  
56 NIELSON ROAD  
STILLWATER, NY 12170

77/ 96/ / /  
PHELAN SUSAN E  
25 FEDERAL ST  
NEWBURYPORT, MA 01950

77/ 97/ / /  
FRIEL PATRICK J III & KAREN M TR  
2011 PATRICK J FRIEL III TRUST  
238 NORTHERN BLVD  
NEWBURYPORT, MA 01950

77/ 98/ / /  
BARRETT BRIAN T  
MARIE B T/E  
135 GRIERSON AVE  
FORT HUACHUCA, AZ 85613

77/ 99/ / /  
ATKINS JOHN & ELIZABETH T/E  
87 NORTH RESERVATION TERRACE  
NEWBURYPORT, MA 01950

77/ 102/ / /  
WIK ROBERT C TRS  
ROBERT C WIK REVOCABLE TRUST  
1517 SW 54TH TERRACE  
CAPE CORAL, FL 33914

77/ 103/ / /  
SCHIAVONE LUCILLE R  
9 77TH STREET P.I.  
NEWBURYPORT, MA 01950

77/ 104/ / /  
SCHIAVONE LUCILLE R  
9 77TH STREET PI  
NEWBURYPORT, MA 01950

77/ 105/ / /  
LANGE EIVIND G III  
MARY G PUMA T/E  
15 CURTIS RD  
HAMPTON FALLS, NH 03844

77/ 106/ / /  
ATKINS JOHN & ELIZABETH T/E  
87 NORTH RESERVATION TERRACE  
NEWBURYPORT, MA 01950

77/ 107/ / /  
SWARTZ MARK G  
89 NORTH RESERVATION TERR  
NEWBURYPORT, MA 01950

77/ 108/ / /  
LEGGIERO MAURA  
ANTHONY RICARDO T/E  
9 SHERMAN ST  
LEXINGTON, MA 02173

77/ 110/ / /  
WILLIAMS RALPH R  
CLARE M J/T  
PO BOX 36  
NEWBURYPORT, MA 01950

77/ 113/ / /  
PINCHME LLC  
101 NORTH RESERVATION TERR  
NEWBURYPORT, MA 01950

77/ 115/ / /  
BLATT LOUIS A  
10 77TH ST  
NEWBURYPORT, MA 01950

77/ 116/ / /  
BLANCHARD KATE  
CRAIG CARPENTER T/E  
8 77TH ST  
NEWBURYPORT, MA 01950

77/ 121/ / /  
DELOACH ROLAN M JR  
SHERIDAN GEORGE J  
509 HERB RIVER DRIVE  
SAVANNAH, GA 31406

77/ 122/ / /  
OBRIEN HELEN F L/I  
MCLAUGHLIN LEE A.  
9 75TH ST  
NEWBURYPORT, MA 01950

77/ 123/ / /  
KINGMAN RAYMOND R JR  
ANDREA S T/E  
10 75TH STREET  
NEWBURYPORT, MA 01950

77/ 125/ / /  
COMMONWEALTH OF  
MASSACHUSETTS  
DEPARTMENT ENVIRONMENTAL MGMT  
100 CAMBRIDGE ST  
BOSTON, MA 02202

77/ 125/A / /  
CITY OF NEWBURYPORT  
PLAYGROUND/PARKING LOT  
60 PLEASANT ST  
NEWBURYPORT, MA 01950

77/ 125/B / /  
CITY OF NEWBURYPORT  
PLUM ISLAND BOAT HOUSE  
60 PLEASANT ST  
NEWBURYPORT, MA 01950



# City of Newburyport



Data Source: Produced by Merrimack Valley Planning Commission (MVPC) using data provided by the City of Newburyport & MassDOT/MASSDOCS. MVPC AND THE CITY OF NEWBURYPORT MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY, COMPLETENESS, RELIABILITY OR SUITABILITY OF THESE DATA. THE CITY OF NEWBURYPORT AND MVPC DOES NOT ASSUME ANY LIABILITY ASSOCIATED WITH THE USE OR MISUSE OF THE INFORMATION.

- Legend**
- Municipal Boundary
  - Road Right of Way
  - Road
  - Paved
  - Unpaved
  - Interstate
  - Major Road
  - Hydrographic Features
  - Local Road
  - Streams
  - Perch Stream
  - Intermittent Stream

1:4,800



**Notification to Abutters Under the  
Massachusetts Wetlands Protection Act and the  
Newburyport Wetlands Ordinance**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the City of Newburyport's Wetlands Ordinance, you are hereby notified of the following.

- A. The name of the applicant is Massachusetts Department of Conservation and Recreation
- B. The applicant has filed a Notice of Intent with the Conservation Commission for the City of Newburyport seeking permission to remove, fill, dredge, or alter an Area subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40) and the City of Newburyport's Wetlands Ordinance.
- C. The address of the lot where the activity is proposed is:  
North Reservation Terrace, Beach of Plum Island Reservation.
- D. The Public Hearing will be held on June 15, 2021 at 7 pm. Said hearing shall be located either in the Senior/Community Center or online via remote participation with confirmation and access information to be posted on the City Website meetings calendar at [www.cityofnewburyport.com/calendar](http://www.cityofnewburyport.com/calendar). All interested parties should look to the meetings calendar on the City website as the hearing date approaches.
- E. Copies of the Notice of Intent may be examined by visiting [www.cityofnewburyport.com/conservation-commission](http://www.cityofnewburyport.com/conservation-commission) and selecting the meeting agenda.
- F. Copies of the Notice of Intent may be obtained from either (check one) the applicant \_\_\_\_\_ or the applicant's representative , by calling this telephone number ( 781 ) 278 - 4806 between the hours of 9 and 5, on the following days of the week: Monday through Friday.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the Newburyport Daily News.

NOTE: Notice of the public hearing, including its date, time, and place, will be posted in Newburyport City Hall not less than forty-eight (48) hours in advance.

NOTE: You also may contact the Newburyport Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact the Newburyport Conservation Commission, please email [igodtfredsen@cityofnewburyport.com](mailto:igodtfredsen@cityofnewburyport.com).

**AFFIDAVIT OF SERVICE**

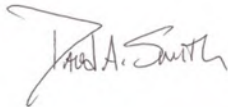
Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of Environmental Protection and the Conservation Commission when filing a Notice of Intent)

I, David A. Smith, hereby certify under the pains and penalties of perjury that on June 3, 2021 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the **DEP Guide to Abutter Notification** dated April 8, 1994, in connection with the following matter: Reservation Terrace Shoreline Protection Project

A Notice of Intent filed under the Massachusetts Wetlands Protection Act and the Newburyport Wetlands Ordinance by Massachusetts Department of Conservation and Recreation with the City of Newburyport on June 2, 2021 for property located at North Reservation Terrace, Beach of Plum Island Reservation.

The form of the notification, and a list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.



\_\_\_\_\_  
Signature

6/3/21  
Date



## **Appendix D – Stormwater Report and Checklist**



## 1.0 INTRODUCTION

### 1.1 PROJECT DESCRIPTION AND INFORMATION

This document presents the Stormwater Report for the proposed beneficial use of approximately 165,000 cubic yards (cy) of sandy material as beach nourishment on Plum Island Reservation in the City of Newburyport, Massachusetts (Project Site). The dredged material is being generated by the U.S. Army Corps of Engineers (USACE) Newburyport Harbor Federal Navigation Project (FNP) that includes onshore disposal. This activity is being permitted separately. The Project is strictly limited to placement of approximately 165,000 cy of compatible dredge sediments onto Plum Island Reservation. Temporary impacts associated with construction staging and access areas have been authorized under the USACE authorizations. A discussion of how the Project complies with these standards is included in the herein and a copy of the Checklist for Stormwater Report is attached to this document. A complete set of permit plans is included with the Notice of Intent Application.

#### 1.1.1 Project Information

**Project Name: Reservation Terrace Shoreline Protection Project**

**Project Location:**

Plum Island Reservation  
North Reservation Terrace  
Newburyport, Massachusetts

**Owner's Name(s) and Address:**

Massachusetts Department of Conservation and Recreation  
251 Causeway Street, Suite 800  
Boston, Massachusetts

**Report Preparer(s) Name and Address:**

Joshua Zall  
GZA GeoEnvironmental, Inc.  
144 Elm Street  
Amesbury, MA 01913

#### 1.1.1 Project Description

The Project, included in this NOI filing, is strictly limited to placement of approximately 165,000 cy of compatible dredge sediments onto Plum Island Reservation. The 9.02-acre placement location is an expansion of the U.S. Army Corps of Engineers (USACE) placement of approximately 125,000 cy at the south jetty spur that is the USACE Federal Base Plan as shown on the Permit Drawings (**Appendix A of the Notice of Intent**).

The Federal Base Plan discussed in the Notice of Intent Narrative is being permitted and performed by the USACE. The selected USACE contractor will conduct the dredging and both the Federal Base Plan onshore disposal, and the onshore disposal included in this Project. Temporary impacts associated with construction staging and access areas have been authorized under the USACE authorizations.

### 1.2 EXISTING LAND USES AND STORMWATER MANAGEMENT

The project site consists of a Barrier Beach and Land Under the Ocean (LUO). There is no impervious land or stormwater structures within the dune in the vicinity of the proposed Project Site.



## **2.0 STORMWATER STANDARDS**

### **2.1 STANDARD 1 - NO NEW UNTREATED DISCHARGES**

*The Massachusetts Department of Environmental Protection's Stormwater Management Standards (SMS) state that "No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth."*

The proposed project is limited to the placement of nourishment along the beach on the coastal beach, barrier beach and in the land under the ocean resource areas. No new stormwater conveyances are proposed under this project.

### **2.2 STANDARD 2 - PEAK RATE ATTENUATION**

*The Massachusetts Department of Environmental Protection's SMS states that "stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for land subject to coastal storm flowage."*

A waiver from Standard 2 is requested because only approximately 7,250 square feet of the 9.02-acre nourishment area is located within the Land Subject to Coastal Storm Flowage resource area. The remaining nourishment is located within the Coastal Beach and Land Under Ocean resource areas.

### **2.3 STANDARD 3 - RECHARGE**

*The Massachusetts Department of Environmental Protection's SMS states that "Loss of annual recharge to ground water shall be eliminated or minimized through the use of infiltration measures, including environmentally sensitive site design, low impact development techniques, best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from the pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook."*

The proposed project does not propose stormwater recharge. The project will not result in an increase in impervious area as compared to the existing condition; therefore, loss of annual recharge to ground water will not occur. In addition, because the project is located along a tidal water body, the groundwater elevations are predominantly controlled by the tides.

### **2.4 STANDARD 4 - WATER QUALITY**

*The Massachusetts Department of Environmental Protection's SMS states that "Stormwater management systems must be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This standard is met when:*

- a. Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan and thereafter are implemented and maintained;*
- b. Stormwater BMPs are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*
- c. Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook."*

There will be no increase in impervious area. There are no new stormwater conveyances proposed under this work. As the proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum



Island Reservation, it does not include construction methods or BMPs related to construction activities. The construction and placement methods are being permitted and authorized by the USACE dredging and nourishment project.

## 2.5 STANDARD 5 - LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS

*The Massachusetts Department of Environmental Protection's SMS states that "For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt and stormwater runoff, the proponent shall use the specific stormwater BMPs determined by the Department to be suitable for such use as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00."*

The Project is not classified as a use with a higher potential pollutant load; therefore, this Standard does not apply.

## 2.6 STANDARD 6 - CRITICAL AREAS

*The Massachusetts Department of Environmental Protection's SMS states that "Stormwater discharges to a Zone II or Interim Wellhead Protection Area of a public water supply and stormwater discharges near or any other critical area require the use of the specific source control and pollution prevention measures and the specific stormwater best management practices determined by the Department to be suitable for managing discharges to such area, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters or Special Resource Waters shall be set back from the receiving water and receive the highest and best practical method of treatment. A "stormwater discharge," as defined in 314 CMR 3.04(2)(a)1. or (b), to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of the public water supply."*

There are no discharges proposed as part of this project. The proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum Island Reservation.

## 2.7 STANDARD 7 - REDEVELOPMENTS AND OTHER PROJECTS SUBJECT TO THE STANDARDS ONLY TO THE MAXIMUM EXTENT PRACTICABLE

*The Massachusetts Department of Environmental Protection's SMS states that "A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pre-treatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions."*

The Stormwater Handbook defines redevelopment projects as: 1) maintenance and improvement of existing roadways, 2) development, rehabilitation, expansion and phased projects on previously developed sites provided the redevelopment results in no net increase in impervious area, and 3) remedial projects specifically designed to provide improved stormwater management. As the intent of the proposed project is to place nourishment sand along the Coastal Beach and LUO resource areas where sand previously existing, we have considered this project a redevelopment even though it does not strictly conform to the definition of such. Nevertheless, we are adhering to the applicable stormwater standards to the maximum extent practicable. Additionally, redevelopment project must fully comply with the provisions of the Stormwater Management Standards requiring the development and implementation of a construction period erosion and



sedimentation control plan, a pollution prevention plan, an operation and maintenance plan and the prohibition of illicit discharges. Impervious areas will not be increased by the proposed project. There are no new stormwater conveyances proposed under this work. As the proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum Island Reservation, it does not include construction methods or BMPs related to construction activities. The construction and placement methods are being permitted and authorized by the USACE dredging and nourishment project.

## 2.8 STANDARD 8 - CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL

*The Massachusetts Department of Environmental Protection's SMS states that "A plan to control construction-related impacts, including erosion sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan), must be developed and implemented."*

As the proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum Island Reservation, it does not include construction methods or BMPs related to construction activities. The construction and placement methods are being permitted and authorized by the USACE dredging and nourishment project.

## 2.9 STANDARD 9 - OPERATIONS AND MAINTENANCE PLAN

*The Massachusetts Department of Environmental Protection's SMS states that "A long-term operation and maintenance plan must be developed and implemented to ensure that stormwater management systems function as designed."*

There are no stormwater structures on the project site and no new structures are proposed as part of this project.

## 2.10 STANDARD 10 - PROHIBITION OF ILLICIT DISCHARGES

*The Massachusetts Department of Environmental Protection's SMS states that "All illicit discharges to the stormwater management system are prohibited."*

There are no known illicit discharges in the project area and no illicit discharges will be created as part of this project. As the proposed project is strictly limited to the placement of the 165,000 cy of compatible dredge sediments onto Plum Island Reservation, it does not include construction methods or BMPs related to construction activities. The construction and placement methods are being permitted and authorized by the USACE dredging and nourishment project.

Attachment: Massachusetts Department of Environmental Protection Checklist for Stormwater Report





**Attachment - Massachusetts Department of Environmental Protection 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.<sup>1</sup> 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 8<sup>2</sup>
- 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.

<sup>1</sup> 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.

<sup>2</sup> 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

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## 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.

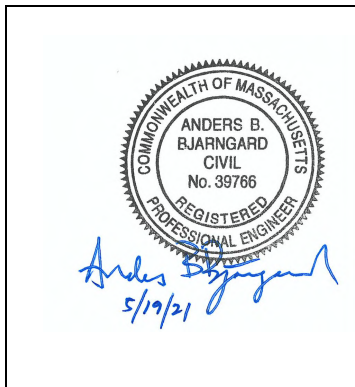
A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

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### 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



05/19/2021

Signature and Date

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## 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

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## 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

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## 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 Field<sup>1</sup>
- 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.
- 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
  - 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.

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



# Checklist for Stormwater Report

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## 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

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## 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.

### 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

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## 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

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## 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

- 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.



GZA GeoEnvironmental, Inc.