Maine Coastal Program
Coastal Zone Management Act
Federal Consistency Submission Form

The Maine Coastal Program (MCP) is the lead agency for Coastal Zone Management in Maine. MCP strongly suggests that applicants for a federal consistency determination or certification use this form for activities regulated under the Coastal Zone Management Act (CZMA) of 1972, as amended, and the National Oceanic and Atmospheric Administration (NOAA) Federal Consistency Regulations under 15 CFR Part 930. Although use of this form is not required, it is provided to applicants to facilitate the submission and timely review of a consistency determination or certification. Federal agencies and applicants are only required to provide the information listed in NOAA's Federal Consistency Regulations unless otherwise described in the Maine Guide to Federal Consistency Review, as approved by NOAA.

I. Applicant Information:

Project/Activity Name: Yarmouth Boat Yard Maintenance Dredge		
Contact Name: Steve Arnold	Authorized Agent (if applicable): GEI Consultants, Inc. c/o Dan Bannon	
Federal Agency: US Army Corps of Engineers		
Address: 72 Lafayette Street		
City: Yarmouth	State: ME	Zip Code: 04096
Email: dbannon@geiconsultants.com (Authorized Agent)	Phone Number: 207-347-2372 (Authorized Agent)	

II. Federal Consistency Category:

☐	Federal Agency Activity (15 CFR Part 930, subpart C)
☒	Federal License or Permit Activity (15 CFR Part 930, subpart D)
☐	Outer Continental Shelf Activity (15 CFR Part 930, subpart E)
☐	Federal Financial Assistance Activity to State/Local Government (15 CFR Part 930, subpart F)

III. Summary Description:

Yarmouth Boat Yard, a full-service marina located on the Royal River in the Town of Yarmouth, received prior Maine Department of Environmental Protection approval (#L-13746-4E-B-N) to maintenance dredge approximately 18,228 cubic yards of sediment from an approximately 700-foot long by 210-foot wide area of the marina that is lcoated on the Royal River in the Town of Yarmouth. The Applicant is now seeking to maintenance dredge the same area of the marina to provide safe and functional access for recreational and commercial vessels during all cycles of the tide. This project is being proposed concurrently with a proposed maintenance dredge for Yankee Marina and that application will be submitted under separate cover. The marina area will be dredged to a proposed depth of -6 feet mean lower low water (MLLW) plus 1-foot allowable overdepth resulting in approximately 10,900 cubic yards of material to be disposed at the Portland Disposal Site (PDS). The Applicant received a suitability determination from the US Army Corps of Engineers (USACE) approving the use of the PDS for disposal. Construction will occur within the Department of Marine Resources (DMR) recommended work window of November 8 to April 9 to minimize the potential for impacts to marine resources. A PBR was submitted to the Maine Department of Environmental Protection on February 4, 2025.

IV. Select enforceable policies relevant to project or activity:

▣	Natural Resources Protection Act (38 M.R.S. §§480-A to 480-S; and 480-U to 480-HH)
☐	Site Location of Development Law (38 M.R.S. §§481 to 485-A; 486-A, -B; 487-A to 490-FF)
☐	Maine Metallic Mineral Mining Act (38 M.R.S. §§490-LL to 490-TT)
☐	MaineDOT Traffic Movement Permit Law (23 M.R.S. §704-A)
☐	Erosion Control and Sedimentation Law (38 M.R.S. §420-C)
☐	Expedited Permitting of Grid-scale Wind Energy Development (35-A M.R.S. §§3451-3459)
☐	Solar Energy Development Decommissioning Law (35-A M.R.S. chapter 34-D)
☐	Storm Water Management Law (38 M.R.S. §420-D)
☐	Maine Waterway Development and Conservation Act (38 M.R.S. §§630 to 636-A; 640)
☐	Protection and Improvement of Air Law (38 M.R.S. §§581 to 610-A, -B)
☐	Protection and Improvement of Waters Act (38 M.R.S. §§361-A, 362, 362-A, 363-D, 372; 410-N; 411 to 424; 451, 451-A, 452; 464 to 470)
☐	Nutrient Management Act (7 M.R.S. §§4201 to 4214)
☐	Land Use Regulation Law (12 M.R.S. §§681 to 689)
☐	Maine Hazardous Waste, Septage and Solid Waste Management Act (38 M.R.S. §§1301 to 1310-BB; 1316 to 1316-L; 1317 to 1319-Y)
☐	Uncontrolled Hazardous Substance Sites Law (38 M.R.S. §§1362, 1367, 1367-B)
☐	Asbestos Law (38 M.R.S. §§1273 and 1281)
☐	Lead Abatement Law (38 M.R.S. §§1296 and 1298(3))
☐	Sale of Consumer Products Affecting the Environmental Law (38 M.R.S. §§1608 and 1609-10)
☐	Mercury-Added Products and Services Law (38 M.R.S. §§1661 to 1661-C; 1665-A, -B; 1672
☐	Solid Waste Management and Recycling Law (38 M.R.S. §§2101; 2133, sub-§2(A); 2165
☐	Priority Toxic Chemical Use Reduction Law (38 M.R.S. §§2321 to 2330)
☐	Wellhead Protection Law (38 M.R.S. §§1391 to 1399)
☐	Nuclear Facility Decommissioning Laws (PL 1999 c. 739; PL 1999 c. 741)
☐	Oil Discharge Prevention & Pollution Control Law (38 M.R.S. §§541 to 560)
☐	Oil Storage Facilities and Ground Water Protection Law (38 M.R.S. §§561; 562-A; 563, sub-§1(A) and 2; 563-A to -B; 564; 565-A; 566-A; 568; 568-A to -B; 569-C; 570; 570-C to -G, I to M
☐	Maine Endangered Species Act (12 M.R.S. §12801 to 12810; 12 M.R.S. §6971 to 6976; 12 M.R.S. §10001, sub-§§19 and 62)
☐	General Licensing and Enforcement Authorities; Fees (38 M.R.S. §§341-D; 344 to 349; 352 to 353; 353-A, -B)
☐	Maine Rivers Act (12 M.R.S. §§403; 407)
☐	Marine Resources Law (12 M.R.S. §§6171 to 6192; 6432-A)
☐	Importing of Certain Marine Organisms (12 M.R.S. §6071)
☐	Aquaculture Leasing Laws (12 M.R.S. §6071-A; 12 M.R.S. §6072; 12 M.R.S. §6072-A; 12 M.R.S. §6073)
☐	Subdivision Law (30-A M.R.S. §§4401 to 4408)
☐	Mandatory Shoreland Zoning Law (38 M.R.S. §§435 to 448)
☐	Coastal Management Policies Act (38 M.R.S. §§1801 to 1802)
☐	Coastal Barrier Resources System Act (38 M.R.S. §§1901 to 1905)

V. Supporting Documentation. Please list all maps, diagrams, reports, and other materials below:

MDEP Permit-by-Rule Notification Form and supporting documents Final Suitability Determination for Yarmouth Boat Yard

VI. Other Coordination. Please list all agencies and contacts required to review this project below:

Maine Department of Environmental Protection - Section 19 of Chapter 305 (Permit by Rule) Natural Resources Protection Act - Alison Sirois, Licensing Division Director, Southern Maine Regional Office, US Army Corps of Engineers, Individual Permit, Amanda Sayles, Project Manager

VII. Statement of Determination/Certification and Signature. Check one and sign below:

☐	FEDERAL AGENCY CONSISTENCY DETERMINATION. Based upon the information, data, and analysis included herein, the federal agency or its authorized agent finds the proposed activity is consistent to the maximum extent practicable with the enforceable policies of the Maine Coastal Program.
☐	FEDERAL AGENCY NEGATIVE DETERMINATION. Based upon the information, data, and analysis included herein, the federal agency or its authorized agent finds the proposed activity will not have any reasonably foreseeable effects on Maine's coastal uses or resources.
☒	NON-FEDERAL APPLICANT CONSISTENCY CERTIFICATION. Based upon the information, data, and analysis included herein, the non-federal applicant certifies that the proposed activity complies with the enforceable policies of Maine Coastal Program and will be conducted in a manner consistent with such program.

Signature: 	
Printed Name: Dan Bannon, PE, CFM, BC.PE	Date: February 6, 2025

GEI Consultants

Maine DEP NRPA Permit-by-Rule Notification Form

Yarmouth Boat Yard Maintenance Dredging

72 Lafayette Street, Yarmouth, Maine

Submitted to:
MaineDEP – Southern Maine Regional Office
312 Canco Road
Portland, Maine 04103

Submitted by:
GEI Consultants, Inc.
5 Milk Street
Portland, ME 04101
207.797.8901

February 3, 2025
Project No. 2203371

Daniel Bannon, PE, CFM, BC.PE
Coastal Practice Leader

Lisa Vickers
Senior Coastal Professional

Table of Contents

1. PBR Notification Form 1
2. Agent Authorization Letter 3
3. Maine Secretary of State Good Standing 4
4. Activity Description 7
5. Project Location Map 8
6. Site Photographs 10
7. Maine DMR Timing Approval 13
8. Public Notice of Intent to File Requirements 16
9. Copy of Department Order #L-13746-4E-B-N 20
10. Project Plans 37

List of Tables

Table 8-1. List of Notified Abutters 16

LCV/DJB:bdp
B:\Working\YARMOUTH BOAT YARD\2203371 Boat Yard Dredging\07_REGULATORY\Maine DEP\Yarmouth Boat Yard\2024 PBR Maintenance Dredge\Application Materials\NRPA PBR_Yarmouth Boat Yard_2025-02-03.docx

1. PBR Notification Form

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PERMIT BY RULE NOTIFICATION FORM

(For use with DEP Regulation, Natural Resources Protection Act - Permit by Rule Standards, Chapter 305)

APPLICANT INFORMATION (Owner)		AGENT INFORMATION (If Applying on Behalf of Owner)	
Name:	Yarmouth Boat Yard c/o Steve Arnold	Name:	GEI Consultants, Inc. c/o Dan Bannon
Mailing Address:	72 Lafayette Street	Mailing Address:	5 Milk Street
Mailing Address:		Mailing Address:	
Town/State/Zip:	Yarmouth, ME 04096	Town/State/Zip:	Portland, ME 04101
Daytime Phone #:	(207) 405-2050 Ext:	Daytime Phone #:	(207) 347-2372 Ext:
Email Address:	steve@ybyboats.com	Email Address:	dbannon@geiconsultants.com

PROJECT INFORMATION

Part of a larger project? (check 1):	☐ Yes ☑ No	After the Fact? (check 1):	☐ Yes ☑ No	Project involves work below mean low water? (check 1):	☑ Yes ☐ No	Name of waterbody:	Royal River
Project Town:	Yarmouth			Town Email Address:	nciarimboli@yarmouth.me.us	Map and Lot Number:	Map 28 / Lot 32
Brief Project Description:	The Applicant proposes to maintenance dredge to a minimum depth of 6.0 feet at MLLW (with an allowance for 1 feet of over-dredge within the marina to provide safe and functional access for recreational and commercial vessels during all cycles of the tide.						
Project Location & Brief Directions to Site:	**72 Lafayette Street** - From I-295N, take exit 15. Turn right onto US-1 towards Yarmouth in 0.4 miles. Bear right onto Portland Street in 0.6 miles Turn right onto Main Street in 0.5 miles. Bear right onto Marina Road in 450 ft. Bear right onto Lafayette Street in +/- 800 ft. Turn left in 300 ft.						

PERMIT BY RULE (PBR) SECTIONS (Check at least one): I am filing notice of my intent to carry out work that meets the requirements for Permit-by-Rule (PBR) under DEP Rules, Chapter 305. I and my agent(s), if any, have read and will comply with all of the standards in the Sections checked below.

- ☐ **Sec. (2) Act. Adj. to Prot. Natural Res.**
- ☐ **Sec. (3) Intake Pipes**
- ☐ **Sec. (4) Replacement of Structures**
- ☐ **Sec. (6) Movement of Rocks or Veg.**
- ☐ **Sec. (7) Outfall Pipes**
- ☐ **Sec. (8) Shoreline Stabilization**
- ☐ **Sec. (9) Utility Crossing**
- ☐ **Sec. (10) Stream Crossing**
- ☐ **Sec. (11) State Transportation Facilities**
- ☐ **Sec. (12) Restoration of Natural Areas**
- ☐ **Sec. (13) F&W Creat./Water Qual. Improv.**
- ☐ **Sec. (15) Public Boat Ramps**
- ☐ **Sec. (16) Coastal Sand Dune Projects**
- ☐ **Sec. (16-A) Beach Nourishment**
- ☐ **Sec. (17) Transfer/Permit Extension**
- ☑ **Sec. (18) Maintenance Dredging**
- ☐ **Sec. (19) Act. Near SVP Habitat**
- ☐ **Sec. (20) Act. Near Waterfowl/Bird Habitat**

NOTE: Municipal permits also *may* be required. Contact your local code enforcement office for information. Federal permits may be required for stream crossings and for projects involving wetland fill. Contact the Army Corps of Engineers at the Maine Project Office for information.

NOTIFICATION FORMS CANNOT BE ACCEPTED WITHOUT THE NECESSARY ATTACHMENTS AND FEE

- ☑ ***Attach*** **all required submissions for the PBR Section(s) checked above. The required submissions for each PBR Section are outlined in Chapter 305 and may differ depending on the Section you are submitting under.**
- ☑ ***Attach*** **a location map that clearly identifies the site (U.S.G.S. topo map, Maine Atlas & Gazetteer, or similar).**
- ☑ ***Attach*** ***Proof of Legal Name*** **if applicant is a corporation, LLC, or other legal entity. Provide a copy of Secretary of State's *registration information* (available at http://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x). Individuals and municipalities are not required to provide any proof of identity.**
- ☑ ***Attach*** **a list of persons to whom notice was provided and a signed copy of the Public Notice Filing and Certification form.**

FEE: I will pay the Permit-by-Rule fee (https://www.maine.gov/dep/feeschedule.pdf) by:

- ☑ **Credit Card –** Pay online through the **Payment Portal. (Attach payment confirmation when filing this notification form.)**

Signature & Certification:

- I authorize staff of the Departments of Environmental Protection, Inland Fisheries & Wildlife, and Marine Resources to access the project site for the purpose of determining compliance with the rules**.**
- I understand that this PBR becomes effective 14 calendar days after receipt by the Department of this completed form, the required submissions, and fee, *unless the Department approves or denies the PBR prior to that date.*

By signing this Notification Form, I represent that the project meets all applicability requirements and standards in Chapter 305 rule and that the applicant has sufficient title, right, or interest in the property where the activity takes place.

Signature of Agent or Applicant (may be typed):		**Date:**	

***Keep a copy as a record of permit*.** Email this completed form with attachments to DEP at: DEP.PBRNotification@maine.gov. DEP will send a copy to the Town Office as evidence of DEP's receipt of notification. No further authorization will be issued by DEP after receipt of notice. A PBR is valid for two years, except Section 4, "Replacement of Structures," are valid for three years. **Work carried out in violation of the Natural Resources Protection Act or any provision in Chapter 305 is subject to enforcement.**

2. Agent Authorization Letter

Technical Memorandum

5 Milk Street • Portland, ME 04101 • 207.797.8901

Via Email:	[illegible]
To:	Steve Arnold, Yarmouth Boat Yard
From:	Dan Bannon, GEI Consultants, Inc
Date:	December 20, 2024
Re:	Agent Authorization Yarmouth Boat Yard Maintenance Dredge Yarmouth, Maine
Project No.:	2203371

This memo serves as authorization for GEI Consultants, Inc. (GEI) to act as Authorized Agent for Yarmouth Boat Yard for the purpose of filing local, state, and federal permit applications, as applicable, associated with the proposed project that is described below:

- Maintenance dredge to minimum depth of 6.0 feet at MLLW (with an allowance for 1 feet of over-dredge) within the marina to provide safe and functional access for recreational and commercial vessels during all cycles of the tide. The work will occur on the Royal River and is associated with the parcel owned by YBY Real Estate, LLC, identified on the Town of Yarmouth Tax Map 28, Lot 30.

Please sign and date below to provide your authorization.

[signature] 12/21/24

Steve Arnold, Yarmouth Boat Yard   Date

LCV/DJB
[illegible]

3. Maine Secretary of State Good Standing

MAINE
Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Mon Jan 06 2025 14:33:52. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
YBY ACQUISITION, LLC	20041207DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
12/02/2003	N/A	MAINE

Other Names	(A=Assumed ; F=Former)
YARMOUTH BOAT YARD	A

Principal Home Office Address

Physical	Mailing
72 LAFAYETTE STREET	72 LAFAYETTE STREET
YARMOUTH, ME 04096	YARMOUTH, ME 04096

Clerk/Registered Agent

Physical	Mailing
HAWLEY R. STRAIT 100 MIDDLE STREET, WEST TOWER	HAWLEY R. STRAIT PO BOX 9729
PORTLAND, ME 04101	PORTLAND, ME 04104-5029

New Search

Click on a link to obtain additional information.

List of Filings View list of filings

Obtain additional information:

Certificate of Existence (Good Standing) (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)
Certificate of Legal Existence (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the troubleshooting page.

If you encounter technical difficulties while using these services, please contact the Webmaster. If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information Section at 207-624-7752 or e-mail.

4. Activity Description

Yarmouth Boat Yard, a full-service marina located on the Royal River in the Town of Yarmouth, received prior Department approval (#L-13746-4E-B-N) to maintenance dredge approximately 18,228 cubic yards of sediment from an approximately 700-foot long by 210-foot wide area of the marina. A copy of the prior Department approval is included in Section 10. The Applicant is now seeking to maintenance dredge the same area of the marina to provide safe and functional access for recreational and commercial vessels during all cycles of the tide. This project is being proposed concurrently with a proposed maintenance dredge for Yankee Marina and that application will be submitted under separate cover.

The marina area will be dredged to a proposed depth of -6 feet mean lower low water (MLLW) plus 1-foot allowable overdepth resulting in approximately 10,900 cubic yards of material to be disposed at the Portland Disposal Site (PDS). The Applicant received a suitability determination from the US Army Corps of Engineers (USACE) approving the use of the PDS for disposal. Construction will occur within the Department of Marine Resources (DMR) recommended work window of November 8 to April 9 to minimize the potential for impacts to marine resources. Notification of the project was submitted to DMR and a copy approving this timing is included in Section 7. Construction access will take place by land and barge and the schedule for all site construction activities will be coordinated with the Town of Yarmouth and adjacent property owners. Dredging of sediment will be performed by mechanical methods using a barge-mounted excavator or a crane with a clamshell bucket. Sediment will be loaded onto a scow barge and transported to the PDS for disposal.

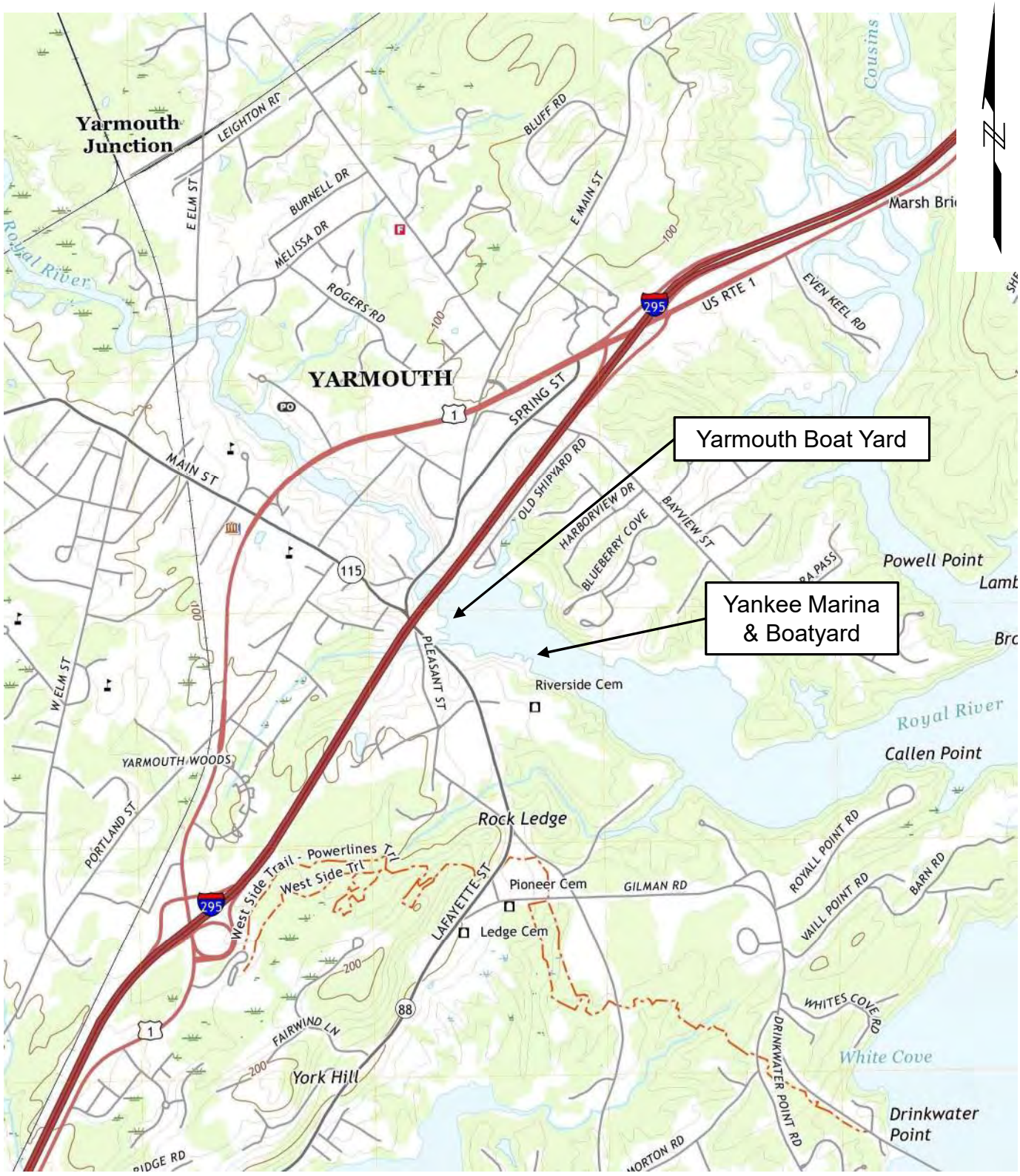
The method of dredging is anticipated to result in temporary sedimentation within the water column in close proximity to the dredge activity. Sedimentation is anticipated to be limited and temporal and will be quickly flushed from the area by tidal action and river current. As a result, this impact is considered minimal and the use of a siltation boom is not proposed during the dredge activity.

The following Erosion Control Notes are provided on the project drawings:

Erosion Control:

1. Erosion and sedimentation control measures are proposed to control accelerated erosion and sedimentation and reduce adverse impacts from runoff and erosion at the work site.
2. Application of temporary and permanent erosion control measures shall be in accordance with the latest edition of the Maine Erosion and Sediment Control BMP's published by Maine DEP and available at: https://www.maine.gov/dep/land/erosion/escbmps/.
3. The work shall be performed by a contractor that is certified by Maine DEP in erosion and sediment control measures. A certified individual shall be onsite during all construction activity.
4. The contractor's sequence of operations and schedule for work activities shall act to minimize exposure to erosion.
5. At the completion of construction, all disturbed areas shall be restored to their original condition unless otherwise indicated on the plans.

5. Project Location Map



SOURCE: The National Map, US TOPO, Yarmouth Quadrangle, 2021

Maintenance Dredging Yarmouth Boat Yard Yankee Marina & Boatyard	GEI Consultants	USGS LOCATION MAP
Royal River, Yarmouth, ME	Project 2203371/2203381	JANUARY 2025 Fig. 5-1

6. Site Photographs

Figure 6-1. Aerial View of Project Area.

Source: Nearmap. Date: May 7, 2024.

Figure 6-2. View from Yarmouth Boat Yard boat launch, facing north toward I-295 bridge.

Source: GEI Consultants, Inc. Date: July 15, 2022.

Figure 6-3. Additional view from Yarmouth Boat Yard Boat Launch, facing southeast.

Source: GEI Consultants, Inc. Date: July 15, 2022

Figure 6-4. View from Yarmouth Boat Yard marina, facing east.

Source: GEI Consultants, Inc. Date: July 15, 2022.

Figure 6-5. View from Yarmouth Boat Yard Boat Launch, facing northeast.

Source: GEI Consultants, Inc. Date: July 15, 2022.

Figure 6-6. View from Yarmouth Boat Yard facility, facing northwest.

Source: GEI Consultants, Inc. Date: July 15, 2022.

7. Maine DMR Timing Approval

REQUEST FOR APPROVAL OF TIMING OF ACTIVITY (DMR)

This form is for use in obtaining approval from the **Department of Marine Resources (DMR)** for the timing of certain projects in accordance with Chapter 305 Permit by Rule Standards. For more information you may contact environmentalreview.dmr@maine.gov.

To be filled out by applicant: (Instructions are on the back of this form)

1. Applicant's name: Yarmouth Boat Yard

Project Address: 72 Lafayette Street, Yarmouth, ME 04096

Applicant Telephone: (207) 405-2050

Consultant Name & Phone: GEI Consultants, Inc. c/o Lisa Vickers (207) 615 - 1527

Email for DMR Response : lvickers@geiconsultants.com

2. I plan to perform the following activity (please check the appropriate box):

- ☐ **Sec. 3 Intake pipes** (tidal waters only)
- ☐ **Sec. 4 Replacement of structures** (tidal waters only)
- ☐ **Sec. 7 Outfall pipes** (tidal waters only)
- ☐ **Sec. 9 Utility crossings** (any location if performed between Oct. 2 and July 14)
- ☐ **Sec. 12 Restoration of natural areas (**tidal waters only)
- ☐ **Sec. 15 Public boat ramps** (tidal waters only)
- ■ **Sec. 18 Maintenance dredging** (tidal waters only)

3. Brief description of project: [please include the name of the stream or waterbody, if known]

Yankee Marina, Inc. propose to maintenance dredge to a minimum depth of 6.0 feet at MLLW (with an allowance for 1 feet of over-dredge) within the marina to provide safe and functional access for recreational and commercial vessels during all cycles of the tide.

4. I plan to perform this activity between the dates of November 8, 2025 (start date) and April 9, 2026 (end date).

5. I have included a map showing the location of my project.
***[Please note that if no location map is provided, no approval will be granted by DMR]**

6. Send completed form to: **environmentalreview.dmr@maine.gov**

For agency use only:

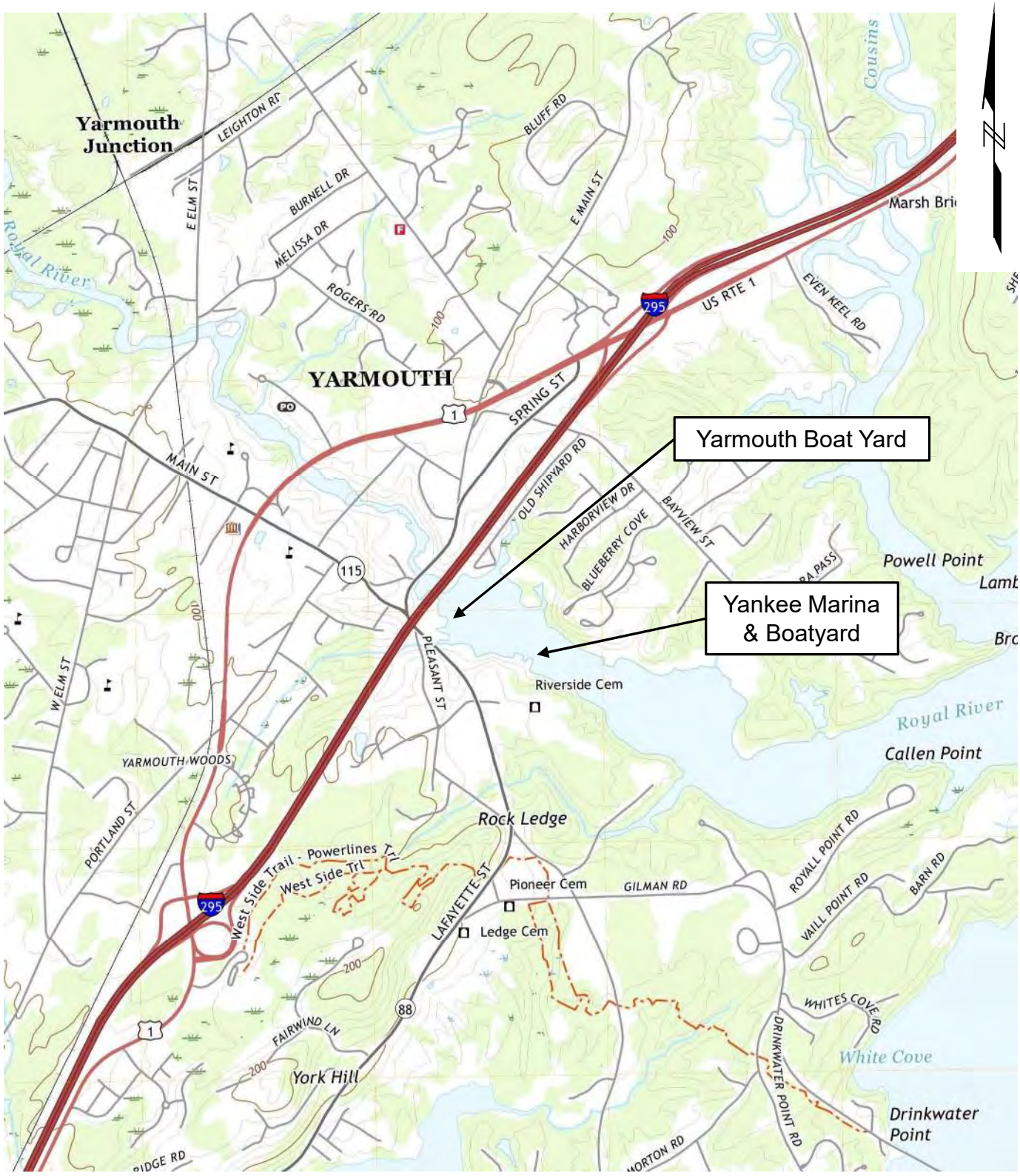
The Department has reviewed the proposed timing of the activity identified above and:

- ■ approves of the project's timing as proposed.
- ☐ requires that the project's timing be changed to occur between _____ (start date) and _____ (end date).
- ☐ Other comments: _____

Jay Turnure — DMR Environmental Coordinator

01/06/2025 — Date

DEPLW0117-A2014



SOURCE: The National Map, US TOPO, Yarmouth Quadrangle, 2021

0 2000 4000

SCALE, FEET

Maintenance Dredging Yarmouth Boat Yard Yankee Marina & Boatyard	GEI Consultants	USGS LOCATION MAP
Royal River, Yarmouth, ME	Project 2203371/2203381	DECEMBER 2024 Fig. 1

8. Public Notice of Intent to File Requirements

In accordance with Chapter 2 of the Maine DEP regulations, notice of the proposed application was provided to abutters and all persons owning land within 1,000 feet of the proposed project. The proposed work will occur on the Town of Yarmouth Tax Map #28, Lot #30 and a list of those who were notified is included in Table 8-1. The public notice was mailed on January 16, 2025, and a copy of the notice is provided in this section.

Table 8-1. List of Notified Abutters

NAME	MAILING ADDRESS	CITY, STATE, ZIP CODE
59 MARINA ROAD LLC	305 US 1 #2	YARMOUTH, ME 04096
HANNAH AMANDA	16 ROCKY HILL RD	YARMOUTH, ME 04096
MURRAY MICHAEL A JR & EMILY L	36 GRIST MILL LN	YARMOUTH, ME 04096
SCHWIND WILMONT M JR	51 EAST MAIN STREET	YARMOUTH, ME 04096
MANCHESTER JILL B	85 HIGH ST	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
MCKENNA, CATHERINE J	49 MAIN STREET	YARMOUTH, ME 04096
DUGAS, ELAINE A. LIVING TRUST	32 MAIN ST	YARMOUTH, ME 04096
CONE CLADICALS LLC	127 SPRUCE POINT RD	YARMOUTH, ME 04096
MCPHERSON KATHLEEN M	17 LAFAYETTE ST	YARMOUTH, ME 04096
SILLIN KATHARINE G - TRUSTEE	PO BOX 46	LEXINGTON, MA 02420
SULLIVAN BRENT M JR	36 MAIN ST	YARMOUTH, ME 04096
SULLIVAN, BRENT	46 MAIN ST	YARMOUTH, ME 04096
23 LAFAYETTE ST LLC	8 SCITTERYGUSSETT DRIVE	FALMOUTH, ME 04105
BENTLEY, TERRI ELLEN PEASE	9 MARINA RD	YARMOUTH, ME 04096
POTT GORDON E & ELLEN S	31 MAIN STREET	YARMOUTH, ME 04096
OKEEFE JAMES	37 MAIN STREET	YARMOUTH, ME 04096
VIRGINIA E SWAIN REVOCABLE TRUST	57 MAIN ST	YARMOUTH, ME 04096
BRICE, KATHRYN	35 EAST MAIN ST	YARMOUTH, ME 04096
HILL NICHOLAI	25 MAIN ST	YARMOUTH, ME 04096
EDWARDS, DANIEL J	78 PLEASANT ST	YARMOUTH, ME 04096
MUIR JOHN D	149 LAFAYETTE STREET	YARMOUTH, ME 04096
HARDING DONALD M	86 PLEASANT STREET	YARMOUTH, ME 04096
GILLIES CAITLIN &	1110 CATON AVE 12C	BROOKLYN, NY 11218
LABRECQUE RUDOLPH M	157 LAFAYETTE STREET	YARMOUTH, ME 04096
MACKINNON FAMILY TRUST	70 SMITH ST	YARMOUTH, ME 04096
STEVENS RALPH BENJAMIN II	172 LAFAYETTE STREET	YARMOUTH, ME 04096
MACKINNON ROBERT	44 SMITH STREET	YARMOUTH, ME 04096
ABBOTT STEPHEN W & JANE M	31 STOCKBRIDGE DRIVE	YARMOUTH, ME 04096
THAXTER JEFFREY D	43 EAST MAIN ST	YARMOUTH, ME 04096
LONE PINE LLC	17 VILLAGE BROOK ROAD	YARMOUTH, ME 04096

NAME	MAILING ADDRESS	CITY, STATE, ZIP CODE
COLLINS JOHN C	40 MERRILL DR.	YARMOUTH, ME 04096
BARTLETT ANDREA T	36 MERRILL DRIVE	YARMOUTH, ME 04096
LAGASSE JANET M	30 MERRILL DRIVE	YARMOUTH, ME 04096
JOHANSEN HERLUF T	28 LONE PINE LANE	YARMOUTH, ME 04096
SHAW CHRISTOPHER R, TRUSTEE	65 SUNSET POINT RD	YARMOUTH, ME 04096
DOSTIE LYNNE M	40 LONE PINE LAND	YARMOUTH, ME 04096
PATRICIA N ODONNELL REVOCABLE TRUST	44 LONE PINE LN	YARMOUTH, ME 04096
HALL EDWARD C JR	56 LONE PINE LN	YARMOUTH, ME 04096
WEBSTER WINIFRED W - TRUSTEE	60 LONE PINE LANE	YARMOUTH, ME 04096
PROCTOR, FREDRICK	57 LONE PINE LANE	YARMOUTH, ME 04096
RAY ALLISON A	49 LONE PINE LN	YARMOUTH, ME 04096
EMERY RAYMOND A & MARIE B	7117 LIVE OAK DR	NAPLES, FL 34114
ALLEN DARRELL G, PATRICIA A & ERIC T	4859 GRANT BANKS DR.	WIMAUMA, FL 33598
VAN ANTWERP RICHARD F	26 ROCKY HILL ROAD	YARMOUTH, ME 04096
PERRY VICTORIA E	96 HIGH ST	YARMOUTH, ME 04096
ALLEN, ERIC T.	PO BOX 1404	YARMOUTH, ME 04096
HINTON, BEVERLEE A - HEIRS OF	9 GIDEONS WAY	FREEPORT, ME 04032
CLARK ROBERT A & LORNA H	27 SMITH STREET	YARMOUTH, ME 04096
PEIXOTTO, SUSAN W &	97 PLEASANT ST	YARMOUTH, ME 04096
CILLEY SUSAN D & DEAN E	102 PLEASANT STREET	YARMOUTH, ME 04096
SANFORD RICHARD & HYDE LESLIE JT	112 PLEASANT STREET	YARMOUTH, ME 04096
HEID-PUELLE ELIZABETH R	35 PLEASANT ST	YARMOUTH, ME 04096
KEATING PAUL & BARKER JUDITH	44 PLEASANT STREET	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
ECKERSLEY-RAY STEPHANIE &	33 GRIST MILL LANE	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
FLORYAN DAVID A & CAROLYN C	PO BOX 1115	YARMOUTH, ME 04096
SCHWIND WILMONT	51 EAST MAIN STREET	YARMOUTH, ME 04096
KIANDER AARON N	12 GRIST MILL LANE	YARMOUTH, ME 04096
MOORE ADAM Q & AMIE MARIE	3 MARINA RD	YARMOUTH, ME 04096
27 LAFAYETTE ST LLC	8 SCITTERYGUSSETT DR	FALMOUTH, ME 04105
FAIRLEY M PAULA L	22 MARINA ROAD	YARMOUTH, ME 04096
WELCH STEPHEN R & TERI C	33 LAFAYETTE STREET	YARMOUTH, ME 04096
TOMPKINS JOSHUA C & MOLLY L	36 MARINA ROAD	YARMOUTH, ME 04096
MJ FAMILY LIVING TRUST	15 SCHOONER RD	SOUTH PORTLAND, ME 04106
PARISH JEDIDIAH &	38 MARINA RD	YARMOUTH, ME 04096
SULLIVAN GEORGE E	48 MARINA RD	YARMOUTH, ME 04096
MARSLAND DAVID W & REBECCA R - TRUSTEES	36 HIGH ST	YARMOUTH, ME 04096
COROI BOGDAN I	33 MARINA ROAD	YARMOUTH, ME 04096
SIROIS LAURIE	56 HIGH ST	YARMOUTH, ME 04096
MCLAUGHLIN KIMBERLY A	43 MARINA ROAD	YARMOUTH, ME 04096

NAME	MAILING ADDRESS	CITY, STATE, ZIP CODE
BERRY DONALD K	PO BOX 3892	PORTLAND, ME 04104
ZUSHI LLC	16 BROWN ST	FALMOUTH, ME 04105
KURTZ, ALEXANDER	77 HIGH ST	YARMOUTH, ME 04096
KARIN BLAKE 2021 REVOCABLE TRUST	51 PLEASANT ST	YARMOUTH, ME 04096
KENERSON, KEVIN	137 LAFAYETTE ST	YARMOUTH, ME 04096
LORENTZEN LEIF & OMARK KARINA (JT)	50 PLEASANT ST.	YARMOUTH, ME 04096
MCKENZIE, JOHN V JR & KAREN A - TTEES	61 PLEASANT ST	YARMOUTH, ME 04096
BARKER, JOANNE O & RONALD T, TTEES &	110 RAND RD	YARMOUTH, ME 04096
MACDONALD JENNIFER AP	68 PLEASANT ST	YARMOUTH, ME 04096
STEVENS MATTHEW R	76 SMITH STREET	YARMOUTH, ME 04096
EDGECOMB RICHARD D	65 PLEASANT ST	YARMOUTH, ME 04096
BRAMHALL ALISON	143 LAFAYETTE STREET	YARMOUTH, ME 04096
MARIANSKI ANDREW J	85 PLEASANT STREET	YARMOUTH, ME 04096
RODGERS BENJAMIN & EMILY	90 PLEASANT ST	YARMOUTH, ME 04096
BUSS WILLIAM R JR	22 SMITH STREET	YARMOUTH, ME 04096
ARSENAULT ELIZABETH C & GREGORY W	28 SMITH ST	YARMOUTH, ME 04096
SEKA PROPERTIES LLC	90 CORNFIELD PT. RD.	YARMOUTH, ME 04096
YANKEE PARK SUBDIVISION	YANKEE DRIVE (REAR)	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
MCGEACHEY JOSH RYAN	56 EAST MAIN ST	YARMOUTH, ME 04096
OBERINK CHRISTINE C	38 EAST MAIN ST	YARMOUTH, ME 04096
UHL ERIC J	30 EAST MAIN STREET	YARMOUTH, ME 04096
BECK, FREDERICK M	49 RATH WAY	NORTH YARMOUTH, ME 04097
ABBOTT JANE	31 STOCKBRIDGE DRIVE	YARMOUTH, ME 04096
ABBOTT STEPHEN	31 STOCKBRIDGE DRIVE	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
ACETO CHRISTINA &	C/O AMANDA ACETO MARSDEN, PR	WESTBROOK, ME 04092
FORTY LAFAYETTE STREET LLC	PO BOX 337	YARMOUTH, ME 04096
YBY REAL ESTATE LLC	72 LAFAYETTE STREET	YARMOUTH, ME 04096
YANKEE MARINA INC	PO BOX 548	YARMOUTH, ME 04096
YARMOUTH TOWN OF	200 MAIN STREET	YARMOUTH, ME 04096
TAVANO PATRICIA ANN	PO BOX 57	YARMOUTH, ME 04096
DUGAS SCOTT T 75%	387 EAST ELM STREET	YARMOUTH, ME 04096
LUNDY JASON S & JENNIKA S	79 PLEASANT STREET	YARMOUTH, ME 04096
ANSFIELD TOBY	57 HIGH STREET	YARMOUTH, ME 04096
WINTER, ELIZABETH J	65 HIGH ST	YARMOUTH, ME 04096
LENTZ MIKA	73 HIGH ST	YARMOUTH, ME 04096
CARTER PAIGE A & SAMUEL M	51 HIGH ST	YARMOUTH, ME 04096

PUBLIC NOTICE:

NOTICE OF INTENT TO FILE

Please take notice that YBY Acquisition, LLC, 72 Lafayette Street, Yarmouth, ME intends to file a Permit-by-Rule Natural Resources Protection Act permit application with the Maine Department of Environmental Protection pursuant to the provisions of 38 M.R.S. §§ 480-A through 480-KK and 38 M. R.S. § 344(7) on or about January 20, 2025.

The application is to maintenance dredge areas of the Royal River to a minimum depth of 6.0 feet at MLLW (with an allowance for 1 foot of over-dredge). The dredge will occur at the marina located at Yarmouth Boat Yard, 72 Lafayette Street, Yarmouth, ME.

The application will be filed for public inspection at the Department of Environmental Protection's Southern Maine Regional Office located at 312 Canco Road, Portland, ME 04103 during normal working hours. A copy of the application may also be seen at the municipal office in Yarmouth, ME located at 200 Main Street, Yarmouth, ME 04096.

The DEP review period for a NRPA PBR application is 14 calendar days. A decision made by the Commissioner to approve a PBR is appealable to the Board of Environmental Protection. An aggrieved person must file the appeal within 30 days of the date of a final license decision of the Commissioner. An appeal must be filed in accordance with Section 23 of the Department's Chapter 2 rules, *Processing of Applications and Other Administrative Matters.* For more information, please visit: https://www.maine.gov/dep/publications/is-appeal.html.

Individuals seeking additional information regarding the project may contact Daniel Bannon, P.E., CFM, BC.PE agent for Yankee Marina, Inc. at 207-347-2372 or dbannon@geiconsultants.com.

9. Copy of Department Order #L-13746-4E-B-N

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

October 2014

Steve Arnold
YBY Real Estate, LLC
72 Lafayette Street
Yarmouth, ME 04096

RE: Natural Resources Protection Act Application, Yarmouth, DEP #L-13746-4E-B-N

Dear Mr. Arnold:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit please contact me at (207) 615-6426 or at christine.woodruff@maine.gov.

Sincerely,

Chris Woodruff

Christine Woodruff, Project Manager
Division of Land Resource Regulation
Bureau of Land and Water Quality

pc: File
Guy Bouthillette

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

web site: www.maine.gov/dep

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

YBY REAL ESTATE, LLC	) NATURAL RESOURCES PROTECTION ACT
Yarmouth, Cumberland County	) COASTAL WETLAND ALTERATION
MAINTENANCE DREDGE	) WATER QUALITY CERTIFICATION
L-13746-4E-B-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of YBY REAL ESTATE, LLC with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. History of Project: The applicant owns the Yarmouth Boat Yard, a full service marina on the Royal River located on the north side of Lafayette Street in the Town of Yarmouth. Facilities include an office building, storage building, outside boat storage, a boat ramp with an associated float system, and four seasonal float systems providing boat slips for approximately 130 boats.

In Department Order #L-13746-03-A-N, dated December 10, 1986 and Department Order #L-16270-4E-A-N, dated January 22, 1991, the Department approved the dredging of portions of the subtidal and intertidal zones in the vicinity of the "C," "D," and "E" float strings. In Department Order #L-19969-4D-A-N, dated January 27, 2000 and Department Order #L-22102-4D-A-N, dated March 16, 2005, the Department approved stabilization of approximately 200 feet of eroding embankment and improvements to the existing boat ramp, respectively. The applicant did not initiate construction of the shoreline stabilization project within two years of the effective date of Department Order #L-19969-4D-A-N, and that permit lapsed. On May 5, 2000, the Department accepted a Permit-By-Rule Notification (PBR #24821) from the applicant for a maintenance dredging permit renewal of Department Order #L-16270-4E-A-N. In Department Order #L-24217-4E-A-N, dated June 16, 2009, the Department approved dredging approximately 6,900 cubic yards of sand and silt from a 34,088-square feet area of the marina and installation of a 133-foot long timber crib bulkhead between two existing wood bulkheads and filling approximately 1,330 square feet of coastal wetland behind the new bulkhead.

B. Summary: The applicant proposes to dredge approximately 18,228 cubic yards (in place volume) of fine sands and silts from an approximately 700-foot long by 210-foot wide area occupied by the landward end of the floats to a depth of negative six feet mean lower low water (MLLW). This covers an area of approximately 86,600 square feet. Dredging is proposed to ensure safe berthing of boats and navigating to and within

the marina during a complete tidal cycle because under the existing conditions approximately one third of the marina is not navigable at mean low water. The dredging will be conducted using a barge-mounted crane with a clamshell bucket. The applicant proposes to transport the dredged material approximately 17 miles to the Portland Disposal Site. The dredged material has been determined to be suitable for unconfined ocean disposal by the U.S. Army Corps of Engineers (Corps) in a memorandum from Ruth Ladd to Jay Clement dated July 7, 2014, and is approved for disposal at the Portland Disposal Site. The project is shown on a set of drawings titled "Yarmouth Boat Yard, Yarmouth, Maine Proposed Dredging Site Plan," prepared by TEC Associates, and dated May 22, 2014. The project site is located on Lafayette Street in the Town of Yarmouth.

C. Current Use of the Site: The Yarmouth Boat Yard is located on a 2.84-acre site on Lafayette Street and is bordered by the Royal River and Stoney Brook. The upland area is developed with buildings and parking areas. The property is identified as Lot 30 on Yarmouth Tax Map 28.

2. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicant submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicant also submitted several photographs of the proposed project site including an aerial photograph of the project site.

The proposed project is located in the Royal River, which is a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities. The shoreline of the proposed project is developed with the existing marina's float system, and the upland is developed with commercial buildings associated with the boatyard's services. In the viewshed of the scenic resource in the project area, the applicant's existing marina float system extends into the river and is adjacent to the federal channel. There is an existing marina on the adjacent downriver property, and another marina and a public boat ramp with parking lot across the river. Interstate 295 crosses the river just upriver of the property. There will be no permanent changes to the scenic and aesthetic values of the river because dredging activities will take place in the intertidal and subtidal areas; therefore, the project will look the same upon completion, except that portions of the marina will be covered with water instead of exposed substrate at low tide.

The proposed project was evaluated using the Department's Visual Impact Assessment Matrix and was found to have an acceptable potential visual impact rating. Based on the information submitted in the application and the visual impact rating, the Department determined that the location and scale of the proposed activity is compatible with the existing visual quality and landscape characteristics found within the viewshed of the scenic resource in the project area.

The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

3. SOIL EROSION:

The Natural Resources Protection Act (NRPA) requires the applicant to demonstrate that the proposed project will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to marine or freshwater environment pursuant to 38 M.R.S.A. § 480-D(2).

The proposed dredge will occur within the intertidal and subtidal area along the bulkhead and shore and towards the edge of the federal channel using a barge-mounted crane with a clamshell bucket assisted by a work boat and scow. Some movement of sediment by water is expected by the nature of dredging in a tidal area; however, as discussed in Finding 4, the timing of the dredging will be restricted to limit impacts to juvenile shellfish and other marine species. The Department of Marine Resources (DMR) reviewed the proposed project and requested the use of a closed bucket dredge to minimize sedimentation if the dredging operation starts prior to November 1.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment provided that a closed bucket dredge is used for any dredging that occurs before November 1.

4. HABITAT CONSIDERATIONS:

The NRPA requires the applicant to demonstrate that the proposed project will not cause unreasonable harm to any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life pursuant to 38 M.R.S.A. § 480-D(3).

According to the Department's Geographic Information System (GIS) database, there are no mapped significant wildlife habitats located at the site. The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated that there are no Essential or Significant Wildlife Habitats at the project site, but that the mudflats to the east currently hosts hundreds of migrating shorebirds of conservation concern. In comments dated August 29, 2014, MDIFW recommended that no dredge activity occur between the dates of April 1 and September 30 of any given year to protect migrating shorebirds. MDIFW further stated that there are no inland fisheries concerns associated with the project.

DMR reviewed the project and stated in comments dated October 3, 2014 that numerous diadromous fish species native to Maine, including Alewives, blueback herring, striped bass and sturgeon, potentially use habitat in the Royal River. DMR further commented that October is a timeframe when juvenile river herring might be emigrating to the open ocean and that sturgeon are still present before they move to wintering grounds.

DMR normally recommends that dredging be restricted to the periods between November 1 and April 1 in order to minimize potential adverse impacts to fish in the area if material is to be removed by clamshell bucket/crane/barge. DMR recognizes the navigational and safety hazards of icing on the Royal River and the proposed dredge area. To minimize long term impacts to fisheries and to alleviate the need for out of season dredging, DMR agrees to allow the proposed project to start October 15. DMR noted that impacts to diadromous fish species, the adjacent shellfish lease site and the scallop and lobster fisheries can be managed, but recommended that the work window be reevaluated if it is determined that this earlier start date is causing an adverse impacts to fishery resources. Requirements for renewing this Order are outlined in Finding 9. The applicant must contact DMR for approval of the timing of any future dredging activity. If it is determined that the work window must be adjusted, then DMR can establish a new work window protective of the fisheries in the Royal River.

DMR requested that the applicant use a closed bucket dredge when dredging operation is started prior to November 1, as it will minimize the potential impacts to juvenile shellfish and other marine species.

The Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life provided that a closed bucket dredge is used when dredging prior to November 1, and that dredging is completed between the dates of October 15 and April 1.

5. WATER QUALITY CONSIDERATIONS:

The NRPA requires the applicant to demonstrate that the proposed project will not violate any state water quality law, including those governing the classification of the State's waters pursuant to 38 M.R.S.A. § 480-D(5).

The waters of the Royal River are classified by the Department as SB. The standards for Class SB require that the waters are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, navigation and as habitat for fish and other estuarine and marine life. Discharges to Class SB waters may not cause adverse impact to estuarine and marine life in that the receiving waters must be of sufficient quality to support all estuarine and marine species indigenous to the receiving water without detrimental changes in the resident biological community.

The State's water quality standards include an antidegradation policy found at 38 M.R.S.A. § 464(4)(F). This policy provides that the existing uses and the level of water

quality necessary to protect those existing uses must be maintained and protected. The State may not issue a Water Quality Certification for the discharge of dredged material unless the applicant demonstrates that the proposed activity will not have a significant impact on existing estuarine or marine life use and habitat. A significant impact is defined as a "significant impairment to growth and reproduction or an alteration of the habitat which impairs viability of the existing population." The applicant adequately demonstrated that the proposed activity will not result in a significant degradation of recreational uses, fishing, and commercial harvesting of shellfish and other estuarine and marine species as discussed in Finding 4.

The applicant proposes to transport the dredged material to the Portland Disposal Site, which is managed by the Corps. As discussed in Finding 7, the Corps reviewed the applicant's sediment sampling data and found that the dredge material is suitable for unconfined ocean disposal at the Portland Disposal Site.

Based on sediment chemistry, the dredging schedule, and the offshore location of the disposal site, the Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters.

6. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicant proposes to alter approximately 86,600 square feet square feet of coastal wetland by dredging to a depth of negative six feet MLLW. Dredge spoils are proposed to be disposed of at the Portland Disposal Site.

The Department's *Wetlands and Waterbodies Protection Rules*, Chapter 310, interpret and elaborate on the NRPA criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a NRPA permit that involves a coastal wetland alteration must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicant submitted an alternatives analysis for the proposed project completed by Guy Bouthillette and dated July 2014. The purpose of the project is to remove accumulated sediments to allow boats to move in and around the marina's float system at low tide. The alternatives analysis considered a no-action alternative and several alternate disposal methods. There are currently areas of the marina that have no water at mean low water or are too shallow to navigate through at mean low water such that parts of the marina are not functional at mean low water. The no-action alternative was rejected because it does not allow the marina to be fully functionally at all tide levels, which would have a significant financial impact on the operation of the marina.

Disposal options examined by the applicant included upland disposal in a landfill in Norridgewock, Maine or in Rochester, New Hampshire, and open ocean disposal at the Portland Disposal Site. The upland disposal options were rejected because of the lack of adjacent upland space to dewater and because of the significant increase in costs and time necessary to dewater, test, and transport dredged material to the landfill facilities in comparison to disposal at the Portland Disposal Site. The applicant selected the Portland Disposal Site for disposal of the dredged material because of the cost savings and because transportation via barge is more feasible than transporting by barge, dewatering and then transporting by truck for upland disposal.

Because of the nature of the project site and the project purpose, some amount of coastal wetland alteration will be unavoidable. The Department concurs with the applicant's conclusions that the no-action alternative would not meet the stated project need and purpose and thus is not a practicable alternative. The Department also concurs with the applicant that conditions within the project site warrant dredging at the scale requested. The Department finds that the analysis demonstrates that dredging the project site and ocean disposal of dredged material at the Portland Disposal Site is the least environmentally damaging practicable alternative that meets the project purpose.

B. Minimal Alteration. The amount of coastal wetland to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant submitted plans of the project area which indicate the area proposed to be dredged is the minimum area to be dredged to meet the project need and purpose. Dredging the accumulated sediment material will not permanently alter the characteristics of the coastal wetland and habitat characteristics and therefore minimizes the impact to marine fisheries. Dredging is proposed during the winter to minimize the impacts to fisheries and habitat.

C. Compensation. In accordance with Chapter 310 Section 5(C)(6)(b), compensation is not required to achieve the goal of no net loss of coastal wetland functions and values if the project will not cover, remove or destroy marsh vegetation, does not fill over 500 square feet of intertidal or subtidal area, and has no adverse effect on marine resources or wildlife habitat as determined by DMR and MDIFW. The proposed dredging of the marina will not alter marsh vegetation or fill coastal wetland with the exception of the dredge material disposal at the Portland Disposal Site, and will not have adverse effect on marine resources or wildlife as determined in Finding 4. For these reasons, the Department determined that compensation is not required.

The Department finds that the applicant has avoided and minimized wetland impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project.

7. GEOLOGICAL CONSIDERATIONS:

For any activity that involves dredging, dredge spoils disposal or transporting dredge spoils by water, the NRPA requires the applicants to demonstrate that the disposal site is geologically suitable pursuant to 38 M.R.S.A. § 480-D(9).

The Portland Disposal Site is located in Bigelow Bight, 7.1 nautical miles east of Dyer Point in Cape Elizabeth, Maine. It is one of ten regional disposal sites for dredged material in New England managed by the Corps as part of the Disposal Area Monitoring System (DAMOS) Program. The Portland Disposal Site was first used for the disposal of dredged material in 1979. Since that time, it has been periodically monitored as part of the DAMOS Program. The site is a one-nautical mile square with sides running true north-south and east-west. It is characterized by a flat, sandy valley, surrounded by rocky outcrops. Water depths range from 42 meters on the rock ridges to 64 meters in the valleys.

The application included grain-size analyses conducted on samples from the proposed dredge site and noted that the material to be dredged is composed of fine sand and silt. The Corps reviewed the applicant's sediment sampling data and found that the dredge material is suitable for unconfined ocean disposal at the Portland Disposal Site.

Based on the evidence in the record, the Department finds that the applicant has demonstrated that the disposal site is geologically suitable.

8. DREDGED MATERIAL DISPOSAL AND TRANSPORTATION CONSIDERATIONS:

For any activity that involves dredging, dredge spoils disposal or transporting dredge spoils by water, the NRPA requires the applicant to demonstrate that the transportation route minimizes adverse impacts on the fishing industry pursuant to 38 M.R.S.A. § 480-D(9).

As discussed in Finding 4, DMR provided comments on the proposed project and its potential impact on the fishing industry. The applicant proposes to conduct dredging operations during the 2014-2015 dredge season and the dredge spoils will be transported by water to the Portland Disposal Site. The Corps will conduct dredging operations of the federal channel during the 2014-2015 dredge season as well. For consistency and to address concerns of local fishermen, the applicant intends to follow the transportation route proposed by the Corps and approved in Department Order #L-18684-4E-D-M, dated October 16, 2014.

In accordance with Section 480-D(9), for the dredge event described in the application, and for all subsequent dredge events, fourteen days prior to commencing the dredging operation the applicant must:

a. Clearly mark or designate the dredging area, the spoils disposal area, and the transportation route on a plan.

b. Publish the plan that shows the dredging area, the spoils disposal area and the approved transportation route in a newspaper of general circulation in the area adjacent to the transportation route.

c. Publish in a local newspaper of general circulation in the area adjacent to the transportation route a procedure that the applicants will use to respond to inquiries regarding the loss of fishing gear during the dredging operation.

DMR requested that the dredge contractor for this project equip their spoil barge with a Vessel Monitoring System to track the location and time period when the barge will be transiting areas that are in close proximity to lobster fishing gear. DMR also requested that the barge operator monitor local marine radio fishing channels when traveling the route to the Portland Disposal Site.

Provided the applicant marks the transportation route on a plan and publishes notices, equips the spoils barge with a Vessel Monitoring System, monitors local marine radio fishing channels when traveling the route to the Portland Disposal Site as described above, and given the limited window for these activities set forth herein, the Department finds that the applicant has demonstrated that the transportation route minimizes adverse impacts on the fishing industry.

9. FUTURE DREDGE EVENTS:

The NRPA was amended to allow renewal of an individual NRPA permit for maintenance dredging with a Permit-By-Rule notification (pursuant to Chapter 305 of the Department's Rules) if the area to be dredged is located in an area that was dredged within the last ten years, and the amount of material to be dredged does not exceed the amount approved by the individual permit (38 M.R.S.A. § 480-E(8)), effective September 28, 2011).

The Department has determined that to ensure that future dredge events will not result in an unreasonable impact to the environment and will not violate the standards of the NRPA, the applicant must notify the Department at least one month, but preferably six months, prior to any subsequent dredge event. The notification must include, at a minimum, an estimate of the volume of material to be dredged, a characterization of the material to be dredged, a notice of approval of the timing of the activity from DMR, and a schedule for completing dredging. The notification must be made to the Department's satisfaction prior to commencement of all subsequent dredge events. If the applicant proposes to dispose of the dredged material by means of ocean disposal at any site other than the Portland Disposal Site or to dispose of the dredged material by means of upland disposal, a new individual NRPA permit from the Department will be required.

The Department finds that, provided the applicant submits data to the Department that clearly characterizes the composition of the material to be dredged, an estimate of the volume of material to be dredged, and submits a schedule for completing the dredging, the applicant will have demonstrated that conditions for the future dredge event will be similar to those examined in the Findings of this Order.

10. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided that dredging is completed between the dates of October 15 and April 1 of any year, provided that a closed bucket dredge is used if dredging occurs prior to November 1, provided that the applicant publishes notices as described in Finding 8 fourteen days prior to the start of the dredging operation, and provided that the applicant equips the spoils barge with a Vessel Monitoring System and monitors local marine radio fishing channels when traveling the route to the Portland Disposal Site.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity is not on or adjacent to a sand dune.

I. The proposed activity is not on an outstanding river segment as noted in Title 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of YBY REAL ESTATE, LLC to dredge an 86,600-square foot area at its marina in Yarmouth and dispose of the dredged material at the Portland Disposal Site as described in Finding 1, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. Standard Conditions of Approval, a copy attached.

2. The applicant shall take all necessary measures to ensure that its activities or those of its agents do not result in measurable erosion of soil on the site during the construction of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. All dredging and disposal of the dredged material shall be completed between the dates of October 15 and April 1.

5. The applicant shall use a closed bucket dredge if dredging occurs prior to November 1.

6. The applicant shall notify the Department at least one month prior to any subsequent dredge event authorized under this Order. The notification shall outline the scope of work proposed that includes at a minimum, the location to be dredged, the estimate of volume of material to be dredged, a characterization the material to be dredged, where the dredged material will be disposed, notice of approval of the timing of the activity from DMR, a schedule for completing the dredge, and a map that delineates the transportation route to the Portland Disposal Site.

7. Prior to any subsequent dredge where the applicant proposes to dredge the project site or a portion thereof and dispose of the dredged material at a new location not identified in the application referenced in Finding 1, the applicant shall obtain from the Department a NRPA permit that approves the disposal of dredged material at the new location.

8. The applicant shall equip the spoils barge with a Vessel Monitoring System and monitor local marine radio fishing channels when traveling the route to the Portland Disposal Site

9. For the initial event described in the application and all subsequent dredge events, fourteen days prior to commencing the dredging operation the applicant shall comply with the provisions of 38 M.R.S.A. 480-D (9) and shall:

a. Clearly mark or designate the dredging area, and the spoils disposal route, and the transportation route on a plan.

b. Publish the transportation route and the plan in local newspaper of general circulation.

c. Publish in the local newspaper of general circulation the procedure that the applicant will use to respond to inquiries regarding the loss of fishing gear during the dredging operation.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 17th DAY OF October, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Filed
OCT 17 2014
State of Maine
Board of Environmental Protection

BY: Michael Kahnke
For: Patricia W. Aho, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES...

CGW/L13746BN/ATS#77999

Natural Resources Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

DEP INFORMATION SHEET
Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.

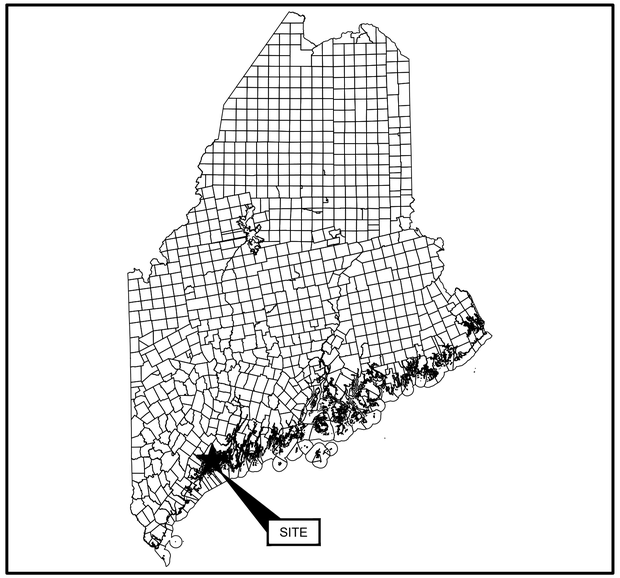
10. Project Plans

The following plans are provided with this application.

DRAWING NO.	TITLE
G-01	COVER SHEET
G-02	NOTES AND SCHEDULES
C-01	EXISTING CONDITIONS PLAN - OVERVIEW
C-02	EXISTING CONDITIONS PLAN – YARMOUTH BOAT YARD
C-03	PROPOSED CONDITIONS PLAN – YARMOUTH BOAT YARD
C-04	PROPOSED DREDGE SECTIONS – YARMOUTH BOAT YARD

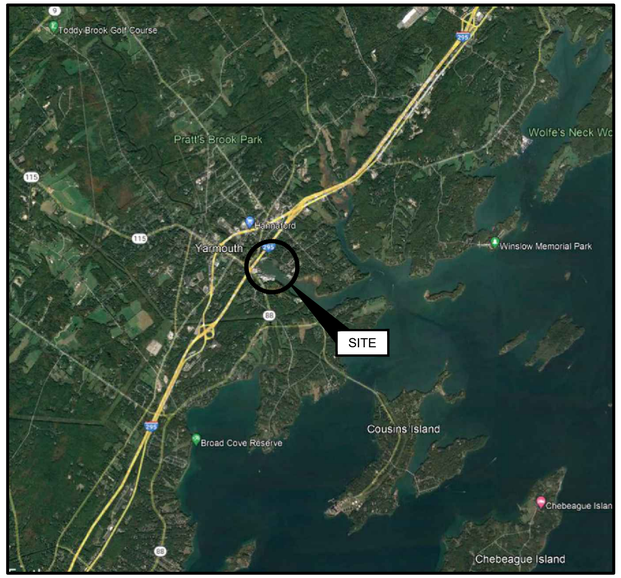
YARMOUTH BOAT YARD DREDGE PERMITTING

YARMOUTH BOAT YARD
72 LAFAYETTE STREET
YARMOUTH, ME 04096



SOURCE:
MAINEGIS DATA LIBRARY

STATE MAP
(NOT TO SCALE)



SOURCE:
GOOGLE EARTH

SITE LOCATION MAP
(NOT TO SCALE)

SHEET INDEX

SHEET NO.	DRAWING NO.	TITLE
1	G-001	COVER SHEET
2	G-002	PROJECT NOTES AND DETAILS
3	C-001	EXISTING CONDITIONS PLAN - OVERVIEW
4	C-002	PROPOSED CONDITIONS PLAN - YARMOUTH BOAT YARD
5	C-003	PROPOSED CONDITIONS PLAN - YARMOUTH BOAT YARD
6	C-004	PROPOSED DREDGE SECTIONS - YARMOUTH BOAT YARD

PREPARED FOR:

YARMOUTH BOAT YARD
72 LAFAYETTE STREET
YARMOUTH, ME 04096

PREPARED BY:

GEI CONSULTANTS, INC.
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

GEI Consultants

PRELIMINARY

GEI PROJECT NO. 2203371

NO.	DATE	ISSUE/REVISION	APP
1	1/15/2025	PERMIT SET	DJB

DRAFT

DWG. NO.
G-001

SHEET NO.
1 OF 6

PROJECT COORDINATION

1. THE CONTRACTOR SHALL SCHEDULE ALL ACTIVITIES SO AS TO LIMIT IMPACT TO USE AND/OR ACCESS TO THE PROJECT SITES, ADJACENT FACILITIES, AND THE FEDERAL NAVIGATION PROJECT. WORK SHALL BE SCHEDULED DURING SEASONAL SHUTDOWN OF WATERFRONT ACTIVITIES WHEN FLOATS HAVE BEEN REMOVED FROM THE WATER.
2. WORK SHALL BE COORDINATED WITH THE TOWN OF YARMOUTH HARBORMASTER:

   WILL OWEN 207-846-2412 (OFFICE)
3. EXISTING FLOATS WILL BE REMOVED FOR THE SEASON PRIOR TO THE START OF DREDGING ACTIVITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR TEMPORARILY RELOCATING ANY EXISTING MOORINGS THAT OBSTRUCT THE WORK AND REINSTALLATION AFTER COMPLETION OF WORK. EXISTING PILES AND FIXED STRUCTURES WILL REMAIN IN PLACE FOR THE DURATION OF THE WORK.
4. WORK IS SUBJECT TO THE FOLLOWING TIME OF YEAR AND TIMING OF ACTIVITY RESTRICTIONS:
   - ALL WORK SHALL BE COMPLETED IN-THE-DRY OR BETWEEN THE DATES NOVEMBER 8 - APRIL 9 IN ACCORDANCE WITH USACE PERMIT.
5. CONTRACTOR ACCESS TO THE SITE BY WATER SHALL AT NO TIME IMPACT USE IN THE ADJACENT FEDERAL NAVIGATION CHANNEL.
6. THE CONTRACTOR SHALL PLAN FOR STAGING OF ALL WORK ACTIVITIES FROM THEIR BARGE. LIMITED ONSITE LAYDOWN AREAS MAY BE AVAILABLE, SUBJECT TO COORDINATION WITH FACILITY OWNERS.

SITE ENVIRONMENTAL CONTROLS:

1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH TOWN, STATE, AND FEDERAL PERMITS.
2. COPIES OF PERMIT APPROVALS SHALL BE KEPT ONSITE BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

OSHA REQUIREMENTS:

1. PURSUANT TO 26 M.R.S.A. §565, THE CONTRACTOR SHALL ADHERE TO THE OCCUPATIONAL SAFETYAND HEALTH STANDARDS AS PROMULGATED BY THE FEDERAL OCCUPATIONAL SAFETY AND HEALTHADMINISTRATION (OSHA) AT 29-CFR PART 1926 AS MOST RECENTLY AMENDED.

EROSION & SEDIMENTATION CONTROL:

1. EROSION AND SEDIMENTATION CONTROL MEASURES ARE PROPOSED TO CONTROL ACCELERATED EROSION AND SEDIMENTATION AND REDUCE ADVERSE IMPACTS FROM RUNOFF AND EROSION AT THEWORK SITE.
2. APPLICATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE IN

   ACCORDANCE WITH THE LATEST EDITION OF THE MAINE EROSION AND SEDIMENT CONTROL BMP'S PUBLISHED BY MAINE DEP AND AVAILABLE AT:

   HTTPS://WWW.MAINE.GOV/DEP/LAND/EROSION/ESCBMPS/
3. THE WORK SHALL BE PERFORMED BY A CONTRACTOR THAT IS CERTIFIED BY MAINE DEP IN EROSION AND SEDIMENT CONTROL MEASURES. A CERTIFIED INDIVIDUAL SHALL BE ONSITE DURING ALL CONSTRUCTION ACTIVITY.
4. THE CONTRACTOR'S SEQUENCE OF OPERATIONS AND SCHEDULE FOR WORK ACTIVITIES SHALL ACT TO MINIMIZE EXPOSURE TO EROSION.
5. AT THE COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE INDICATED ON THE PLANS.

SITE PREPARATION:

1. CONTRACTOR SHALL INSTALL ALL SIGNAGE PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES. INCLUDE ANY OWNER REQUIRED PROJECT SIGNAGE, AND FEDERAL AND STATE MANDATED WORK PLACE SIGNAGE.
2. CONTRACTOR SHALL HAVE IN-PLACE TRASH AND SANITARY FACILITIES FOR THE WORK PLACE.
3. DISCOVERY OF INCONSISTENT SITE INFORMATION OR CONDITIONS ARE TO BE IMMEDIATELY CONVEYED TO THE OWNER AND ENGINEER PRIOR TO COMMENCING OR CONTINUING CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY DIGSAFE PRIOR TO COMMENCING ANY WORK.
5. NO SURVEY OF UNDERGROUND UTILITIES HAS BEEN CONDUCTED AND NO REPRESENTATION IS MADE BY THESE PLANS TO IDENTIFY ANY POTENTIAL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL VERIFY LOCATIONS OF UTILITIES AS MAY BE REQUIRED. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES OCCURRING AS A RESULT OF THE CONTRACTOR'S FAILURE TO LOCATE AND PROTECT UNDERGROUND UTILITIES. ALL REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING UTILITIES AND DRAINAGE AT ALL TIMES.
7. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AND RESTORE TO THE PRE-EXISTING CONDITION AT NO COST TO THE OWNER.
8. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND SHALL PERFORM THE WORK IN A MANNER THAT AVOIDS DAMAGE TO EXISTING STRUCTURES. STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, BUILDINGS, PIERS, BULKHEADS, FLOATS, PIER UTILITIES AND FIXTURES, AND RIPRAP SLOPES. CONTRACTOR SHALL REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
9. CONTRACTOR SHALL SUPPLY ALL NECESSARY TEMPORARY UTILITIES FOR CONSTRUCTION INCLUDING, BUT NOT LIMITED TO; WATER, POWER, LIGHTING, DATA, AND TELEPHONE.
10. CONTRACTOR SHALL READ AND UNDERSTAND ALL REGULATORY CONDITIONS ASSOCIATED WITH THE PROJECT AND SHALL COMPLY WITH ALL ENVIRONMENTAL REQUIREMENTS AND PERMIT CONDITIONS.

CODES:

1. MAINE DOT STANDARD SPECIFICATIONS, MARCH 2020 ED. WITH SUPPLEMENTAL SPECIFICATIONS THROUGH JANUARY 14, 2021.

SITE CONTROL AND BASELINES:

1. PROJECT BASE PLAN HAS BEEN DEVELOPED FROM THE REFERENCES AND FIELD DATA DESCRIBED UNDER "SURVEY AND PROPERTY NOTES" ON THIS SHEET.
2. ELEVATIONS ARE PROVIDED IN MLLW = 0.0 FT VERTICAL DATUM UNLESS OTHERWISE NOTED.
3. THE CONTRACTOR SHALL INSTALL SURVEY CONTROL AS NECESSARY TO PERFORM THE WORK. PERMANENT SURVEY CONTROL (AT LEAST 2 POINTS) SHALL BE ESTABLISHED FOR THE PROJECT AND PROTECTED FROM DAMAGE DURING CONSTRUCTION AND PROVIDED ON AS-BUILT DRAWINGS.
4. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN PROJECT BASELINES AND CONTROL AS REQUIRED TO ENSURE ACCURATE LOCATION OF ALL ELEMENTS OF THE PROJECT.
5. CONTRACTOR SHALL NOTE THAT EXISTING STRUCTURE DETAILS, DIMENSIONS, AND LOCATIONS ARE APPROXIMATE. BIDDERS SHALL MAKE THEIR OWN ASSESSMENT OF EXISTING CONDITIONS.

SURVEY AND PROPERTY NOTES:

1. LOCUS PARCEL IS DEPICTED ON TOWN OF YARMOUTH TAX MAP 28, LOT 30 AND IS LOCATED IN THE WATER ORIENTED COMMERICAL ZONE. THE SITE IS ALSO LOCATED IN THE SHORELAND OVERLAY DISTRICT.
2. THE RECORD OWNER IS YBY REAL ESTATE, LLC., BY DEED DATED JULY 7, 2009, RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 20816, PAGE 338.
3. BOUNDARY INFORMATION DEPICTED HEREON IS BASED ON TOWN OF YARMOUTH TAX MAPS.
4. UPLAND BASE SURVEY IS FROM 2011 PLANS BY BAKER DESIGN CONSULTANTS, AND AERIAL IMAGERY DATED MAY 2022 FROM NEARMAP.
5. BATHYMETRIC SURVEY IS FROM A PLAN ENTITLED “BATHYMETRIC SURVEY, YARMOUTH BOAT YARD” BY LITTLE RIVER LAND SURVEYING, DATED NOVEMBER 18, 2022.
6. FEDERAL CHANNEL LIMITS ARE DEPICTED BASED ON THE PLAN "ROYAL RIVER, YARMOUTH, MAINE, AFTER DREDGE SURVEY" SHEET V-104 PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS, DATED DECEMBER 11, 2015.
7. HORIZONTAL COORDINATES ARE BASED ON NAD83 MAINE STATE PLANE WEST ZONE AND ARE EXPRESSED IN FEET.
8. ELEVATIONS ARE SHOWN IN FEET BASED ON MEAN LOWER LOW WATER (MLLW) DATUM. POSITIVE VALUES REPRESENT ELEVATION ABOVE THAT SAME PLANE. REFER TO ELEVATIONS TABLE FOR DATUM CONVERSIONS.
9. PORTIONS OF THE PROPERTY ARE DEPICTED AS BEING IN A SPECIAL FLOOD HAZARD AREA BASED ON FEMA FIRM23005C0541F, EFFECTIVE DATE JULY 20, 2024. THE SITE IS LOCATED IN AE ZONE HAVING BASE FLOOD ELEVATIONS OF 10 FT, WHICH IS CONVERTED TO 15.4 FT MLLW DATUM.

DREDGING

1. THE CONTRACTOR SHALL DREDGE TO THE DEPTHS SHOWN ON THE CONTRACT DRAWINGS.
2. ALL AREAS INCLUDE AN OVERDREDGE PAYMENT LIMIT DEPTH AS SHOWN ON THE PLANS. NO WORK OUTSIDE OF THE PAYMENT LIMIT SHALL BE CONSIDERED FOR COMPENSATION.
3. CONTRACTOR SHALL NOTE THE POTENTIAL PRESENCE OF DEBRIS WITHIN THE DREDGING FOOTPRINT INCLUDING, BUT NOT LIMITED TO, MOORING BLOCKS, CHAINS, STONE, CONCRETE, TIMBER, TIMBER PILES, OR COMMERCIAL FISHING EQUIPMENT. ALL DEBRIS SHALL BE SEGREGATED FOR DISPOSAL AT AN AUTHORIZED DISPOSAL SITE.
4. CONTRACTOR SHALL NOTE AND COMPLY WITH ALL TIME OF YEAR RESTRICTIONS, DISPOSAL RATE, MONITORING, REPORTING, AND OTHER CONDITIONS OF APPROVAL IN THE PROJECT PERMITS.
5. CONTRACTOR SHALL PROVIDE THE OWNER AND TOWN OF YARMOUTH A MINIMUM OF THREE WORKING DAYS NOTICE PRIOR TO MOVING INTO THE DREDGE AREA.
6. CONTRACTOR SHALL TAKE SPECIAL CARE TO AVOID ANY OVERDREDGE BELOW OR BEYOND PAYMENT LIMITS NEAR PIERS AND BULKHEADS IMMEDIATELY ADJACENT TO THE DREDGE AREAS WHICH MAY IMPACT STABILITY OF THESE STRUCTURES.

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.38'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

DRAFT

Designed:	DJB
Drawn:	DAP
Checked:	BJB
Approved:	#######
P.E. No:	VALUE
GEI Project	2203371

GEI Consultants
GEI CONSULTANTS, INC.
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

YARMOUTH BOAT YARD
72 LAFAYETTE STREET
YARMOUTH, ME 04096

YARMOUTH BOAT YARD DREDGE PERMITTING

72 LAFAYETTE
YARMOUTH, ME 04096

NO	DATE	ISSUE/REVISION	APP
1	1/15/2025	PERMIT SET	DJB

SHEET NAME

PROJECT NOTES AND DETAILS

SHEET NO.

G-002

PRELIMINARY

SOURCE:

1. AERIAL IMAGERY FROM NEARMAP, 2022.
2. UPLAND SURVEY BASED ON PLAN DEVELOPED BY GEO-SYSTEMS LAND INFORMATION SPECIALISTS, 2004.
3. BATHYMETRIC DATA COLLECTED BY LITTLE RIVER LAND SURVEYING IN OCTOBER & NOVEMBER 2022.

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.38'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

DOYLE, JESSY B:\Working\YARMOUTH BOAT YARD\2203371 Boat Yard Dredging\00_CAD\Design\Sheets\C001 C002.dwg - 1/15/2025

Attention:

0 1"

If this scale bar does not measure 1" then drawing is not original scale.

DRAFT

Designed:	DJB
Drawn:	DAP
Checked:	BJB
Approved:	APP_BY
P.E. No:	VALUE
GEI Project	2203371

GEI Consultants

GEI CONSULTANTS, INC.
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

YARMOUTH BOAT YARD
72 LAFAYETTE STREET
YARMOUTH, ME 04096

YARMOUTH BOAT YARD DREDGE PERMITTING

72 LAFAYETTE
YARMOUTH, ME 04096

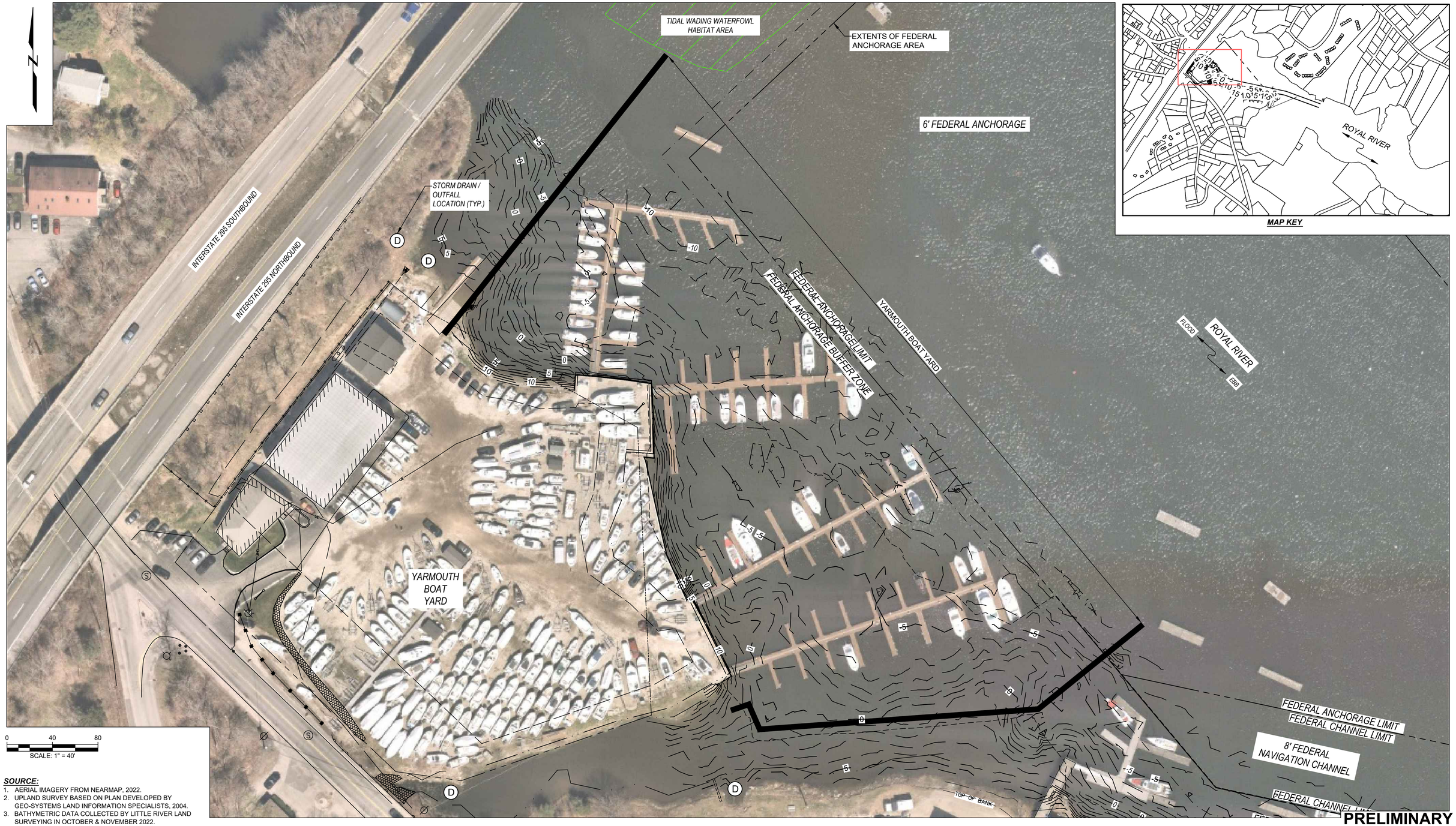
NO	DATE	ISSUE/REVISION	APP
1	1/15/2025	PERMIT SET	DJB

SHEET NAME

EXISTING CONDITIONS PLAN - OVERVIEW

SHEET NO.

C-001



SOURCE:

1. AERIAL IMAGERY FROM NEARMAP, 2022.
2. UPLAND SURVEY BASED ON PLAN DEVELOPED BY GEO-SYSTEMS LAND INFORMATION SPECIALISTS, 2004.
3. BATHYMETRIC DATA COLLECTED BY LITTLE RIVER LAND SURVEYING IN OCTOBER & NOVEMBER 2022.

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.38'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

PRELIMINARY

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YARMOUTH BOAT YARD DREDGE PERMITTING

72 LAFAYETTE
YARMOUTH, ME 04096

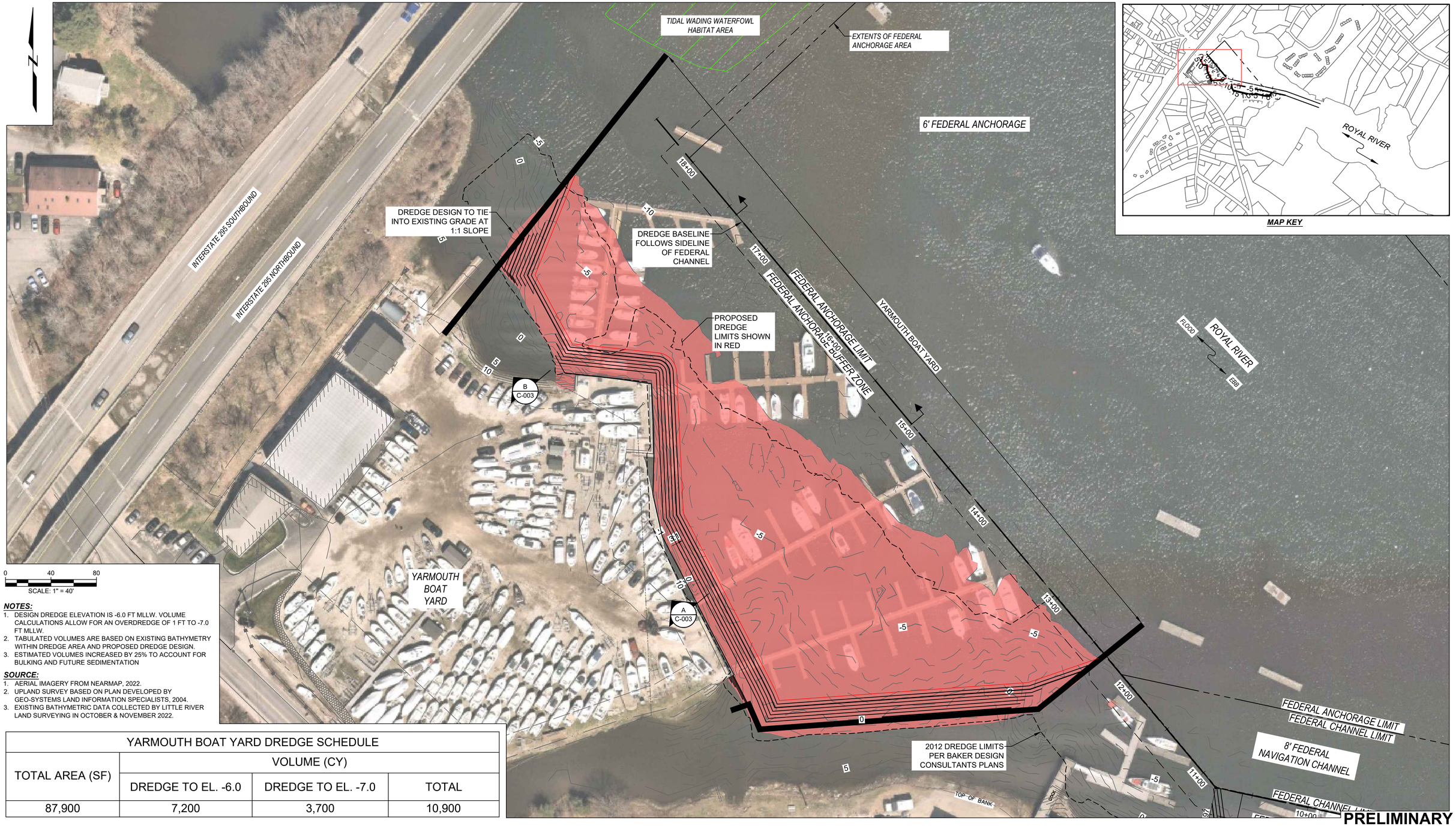
NO	DATE	ISSUE/REVISION	
1	1/15/2025	PERMIT SET	DJB

SHEET NAME

EXISTING CONDITIONS PLAN - YARMOUTH BOAT YARD

SHEET NO.

C-002



0 40 80

SCALE: 1" = 40'

NOTES:

1. DESIGN DREDGE ELEVATION IS -6.0 FT MLLW. VOLUME CALCULATIONS ALLOW FOR AN OVERDREDGE OF 1 FT TO -7.0 FT MLLW.
2. TABULATED VOLUMES ARE BASED ON EXISTING BATHYMETRY WITHIN DREDGE AREA AND PROPOSED DREDGE DESIGN.
3. ESTIMATED VOLUMES INCREASED BY 25% TO ACCOUNT FOR BULKING AND FUTURE SEDIMENTATION

SOURCE:

1. AERIAL IMAGERY FROM NEARMAP, 2022.
2. UPLAND SURVEY BASED ON PLAN DEVELOPED BY GEO-SYSTEMS LAND INFORMATION SPECIALISTS, 2004.
3. EXISTING BATHYMETRIC DATA COLLECTED BY LITTLE RIVER LAND SURVEYING IN OCTOBER & NOVEMBER 2022.

YARMOUTH BOAT YARD DREDGE SCHEDULE			
TOTAL AREA (SF)	VOLUME (CY)		
	DREDGE TO EL. -6.0	DREDGE TO EL. -7.0	TOTAL
87,900	7,200	3,700	10,900

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.38'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

Attention:

0 1"

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DRAFT

Designed:	DJB
Drawn:	DAP
Checked:	BJB
Approved:	#######
P.E. No:	VALUE
GEI Project	2203371

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YARMOUTH BOAT YARD DREDGE PERMITTING

72 LAFAYETTE
YARMOUTH, ME 04096

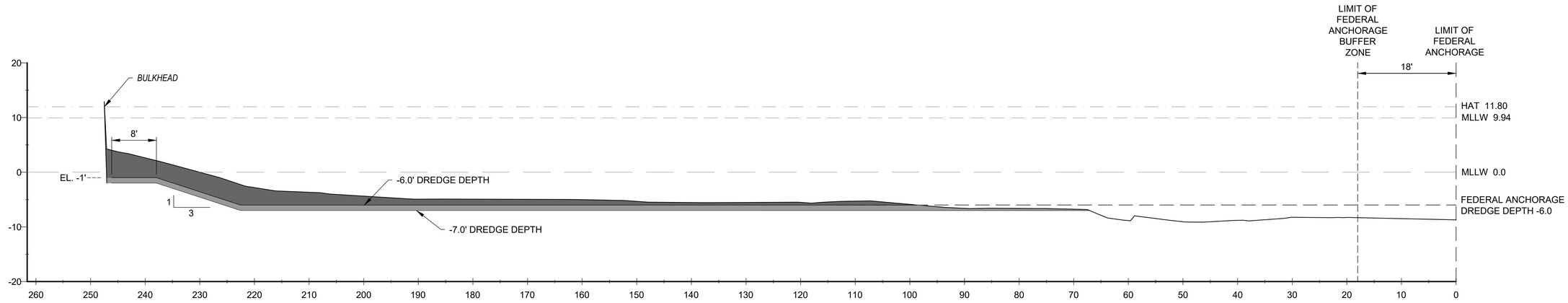
NO	DATE	ISSUE/REVISION	APP
1	1/15/2025	PERMIT SET	DJB

SHEET NAME

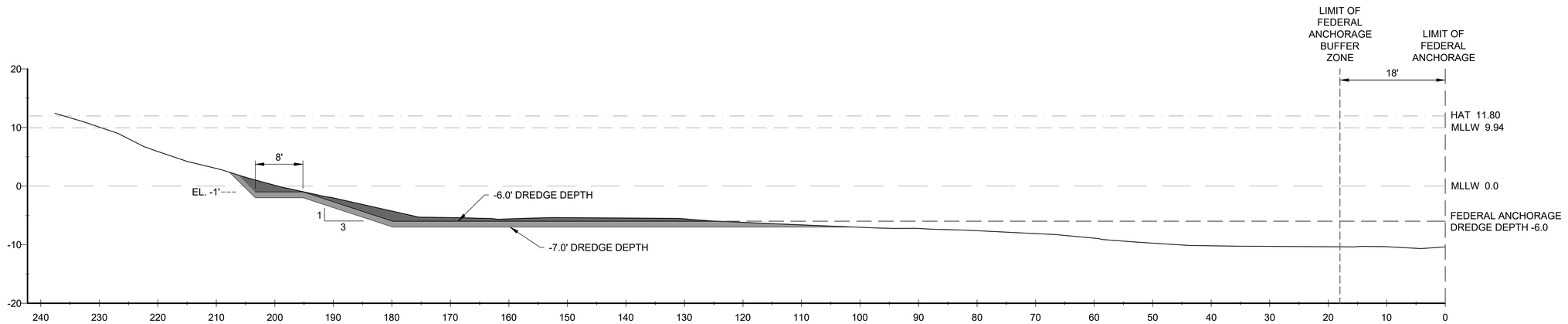
PROPOSED CONDITIONS PLAN - YARMOUTH BOAT YARD

SHEET NO.

C-003



A STA. 15+00
DESIGN DREDGE TYPICAL SECTION SCALE: 1" = 10'



B STATION 17+40
DESIGN DREDGE TYPICAL SECTION SCALE: 1" = 10'

NOTES:
1. DREDGE DESIGN PARAMETERS ARE MEASURED PERPINDICULAR TO SLOPE

SOURCE:
1. EXISTING BATHYMETRIC DATA COLLECTED BY LITTLE RIVER LAND SURVEYING IN OCTOBER 2022.

LEGEND:
- OCTOBER 2022 BATHYMETRIC SURVEY
- PROPOSED DREDGE
- PROPOSED 1-FT OVERDREDGE

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.38'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

PRELIMINARY

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YARMOUTH BOAT YARD DREDGE PERMITTING

72 LAFAYETTE
YARMOUTH, ME 04096

NO	DATE	ISSUE/REVISION	APP
1	1/15/2025	PERMIT SET	DJB

SHEET NAME
PROPOSED DREDGE SECTIONS - YARMOUTH BOAT YARD

SHEET NO.
C-004

CENAE–PDE 26 September 2024

FINAL Suitability Determination for, Yarmouth Boat Yard, Yarmouth, ME File Number NAE-2008-02244

1. **Summary:**

This determination addresses the suitability of dredged material from the proposed maintenance dredging of the Yarmouth Boat Yard in Yarmouth, ME for unconfined open water disposal at the Portland Disposal Site (PDS). The New England District (NAE) of the U.S. Army Corps of Engineers (USACE) finds that sufficient data have been provided to satisfy the evaluation and testing requirements of Section 103 of the Marine Protection Research and Sanctuaries Act (MPRSA). Based on an evaluation of the project site and the material proposed to be dredged, NAE finds the sediments suitable for unconfined open water disposal as proposed.

2. **Project Description:** The applicant is proposing to mechanically dredge approximately 6,400 cy of material from shoaled areas totaling 1.9 acres from the Yarmouth Boat Yard located in the town of Yarmouth, ME (Figures 1 and 2). This area will be dredged to the proposed depth -6 feet at mean lower low water (MLLW) plus one foot of allowable overdepth. The applicant requested that open water disposal of the proposed dredged material be evaluated for the Portland Disposal Site (PDS) as a potential alternative for this project.

3. **Conceptual Site Model:** NAE reviewed historic testing data, previous environmental assessments, water quality data, and adjacent land-use information to develop a conceptual site model (CSM) for the Yarmouth Boat Yard project (Figure 4). NAE used this CSM to characterize the system and to identify potential sources of contamination, site-specific contaminants of concern, exposure pathways, and biological receptors in order to inform this suitability determination.

Project Setting: The project area is located on the Royal River in Yarmouth, ME. The Royal River is a 39-mile-long river in southern Maine that originates in Sabbathday Lake in New Gloucester and empties into Casco Bay in Yarmouth, ME. The river was a source of power for many mills such as the Sparhawk Mill in Yarmouth, ME, located approximately 2,000 feet northwest of the project area. The Yarmouth Boat Yard property is approximately 2.9 acres in size. The upland area contains a small office building, a storage building, outdoor boat storage facilities, and gravel-surfaced facilities. The waterway facilities include a boat ramp with adjoining floats and four seasonal float systems with slips for a total of 130 boats. The property is operated as a full-service marina.

Land use in the surrounding area is a mix of commercial and residential properties. The Yankee Marina and Boat Yard is adjacent to the project area. The

Yarmouth Boat Landing Town Park is located approximately 800 feet north, across the river from the project. The Royal River Boat – Boat Yard & Boat Repair facility is located 900 feet northwest of the project areas across the Royal River. The Royal River Federal Navigation Project (FNP) -6 foot MLLW anchorage is adjacent to the north of the project areas.

Water Quality: Water Quality in the project area is dictated by tidal exchange with Casco Bay with freshwater input from the Royal River to the north and a series of stormwater outfalls within and around the marina's property (Figure 3). The Yarmouth Water Pollution Control Department is located 2,100 feet downriver of the project areas and discharges approximately 1.31 million gallons of treated effluent into the river each day. Waters of the Royal River are classified as SB by the Maine Department of Environmental Protection (MEDEP). Class SB waters must be of such quality that they are suitable for the designated uses of recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish, industrial process and cooling water supply, hydroelectric power generation, navigation and as habitat for fish and other estuarine and marine life (38 M.R.S. § 465(B)(2)).

Dredge History and Existing Testing Data: The Yarmouth Boat Yard was last dredged in 2015 when approximately 18,228 cy of material were removed and placed at PDS. Sampling and testing of the material in 2014 documented sediments as a mix of sandy and fine-grained material. A review of the associated chemistry data found concentrations of arsenic, nickel, total DDX (sum of 4,4'-DDD, 4,4'-DDE, 4,4'-DDT), total polycyclic aromatic hydrocarbons (PAHs), and total polychlorinated biphenyls (PCBs) with the potential to cause toxicity based on current sediment screening guidelines. The adjacent Yankee Marina & Boat Yard was last dredged in 2015 when approximately 21,273 cy of material were removed and placed at PDS. Sampling and testing of this material in 2014 documented sediments as a mix of sandy and fine-grained material. A review of the associated chemistry data found concentrations of arsenic, copper, nickel, total DDX, and total PCBs with the potential to cause toxicity based on current sediment screening guidelines. Biological testing from both areas found no unacceptable risk from exposure to the dredge material and suitability determinations for both sites from 2014 found sediments suitable for unconfined open water disposal at PDS.

The adjacent Royal River FNP was last dredged in 2015 when approximately 91,821 cy of sand were removed from the anchorage and channel and placed at PDS. Sampling and testing of this material in 2010 documented sediments as predominately sandy. A review of the associated chemistry data found contaminants of concern were not detected at a level likely to cause toxicity based on current sediment screening guidelines. Biological testing found no unacceptable risk from exposure to the dredge material and a suitability determination from 2011 found sediments in the FNP suitable for unconfined open water disposal at PDS.

Spill Data: Based on information provided by the applicant and a review of the Maine Department of Environmental Protection (MEDEP) Oil and Hazardous Waste Spill Database (https://www.maine.gov/dep/spills/index.html), NAE determined that there have been three spill incidents at the Yarmouth Boat Yard since it was last dredged. The largest of these was a discharge of 8 gallons of gasoline due to over fueling a vessel. In addition, in 2017 there was a spill of less than 1 pint of hydraulic steering fluid and a discharge of crankcase oil from a boat's motor into the water causing a sheen.

Disposal Site: PDS is located approximately 17 miles southeast of the project area. PDS has been monitored by the NAE Disposal Area Monitoring System (DAMOS) Program and the results are documented in multiple reports (https://www.nae.usace.army.mil/Missions/Disposal-Area-Monitoring-System-DAMOS/Reports/). The most recent DAMOS surveys of PDS occurred in 2016 (McKelvey et al., 2021).

Risk ranking: Following this tier one review of the site characteristics and the available historical data, the Yarmouth Boat Yard project was given a **low to moderate** risk ranking according to the following matrix.

Table 1: Project Risk Ranking

Rank	Guidelines
Low	Few or no sources of contamination. Data available to verify no significant potential for adverse biological effects.
Low-Moderate	Few or no sources of contamination but existing data is insufficient to confirm ranking.
Moderate	Contamination sources exist within the vicinity of the project with the potential to produce chemical concentrations that may cause adverse biological effects.
High	Known sources of contamination within the project area and project area or project(s) in the vicinity were previously unsuitable for unconfined open water placement.

4. **Sampling, Testing, and Analysis:**

NAE prepared a sampling and analysis plan (SAP) in March of 2023. The SAP called for the collection of five samples for bulk sediment chemistry and grain size analysis in the first phase of testing (Figure 3). Samples for grain size and bulk chemistry analysis were collected in April of 2023. The reported sample locations and core lengths are presented in Table 2 and core logs are provided in Appendix A.

Table 2: Sample Locations and Core Lengths

Sample ID	Longitude	Latitude	Project Depth with overdepth (ft MLLW)	Water Depth (ft MLLW)	Required Core Length (ft)	Penetration /Recovery (ft)	Chemistry Sample Intervals (ft)
YB-1	-70.177124	43.797050	-7	-2.4	4.6	4.2/3.2	0-3.2
YB-2	-70.176717	43.796843	-7	-4.4	2.6	2.6/2.3	0-2.6
YB-3	-70.176600	43.796482	-7	-2	5	5.0/4.2	0-3.2, 3.2-4.3
YB-4	-70.176241	43.795976	-7	0.2	7.2	7.2/6.7	0-1.7, 1.7-3.1, 3.1-5.1, 5.1-6.9
YB-5	-70.175497	43.796062	-7	-0.8	6.2	6.2/6.2	0-6.2

Physical and Chemical Analysis of Sediments

Cores YB-3 and YB-4 were subsampled due to a change in lithology. Cores were composed predominately of dark gray to black sandy silt with 21.2-38.5% fines with the exception of the bottom subsample from YM-3 and two deeper subsamples from YM-4 which were composed of gray silty sand with 14.8% fines and light brown sand with 10.5% and 6.3% fines, respectively. Grain size data are presented in Table 3.

Table 3: Grain Size Results

% Grain Size	Total Gravel	Coarse Sand	Medium Sand	Fine Sand	Total Fines
YB-1	1.0	16.1	31.3	24.4	27.2
YB-2	3.0	16.7	25.9	15.9	38.5
YB-3 (TOP)	34.5	14.8	13.3	6.8	30.6
YB-3 (BOTTOM)	0.5	13.1	34.3	37.3	14.8
YB-4 (0-1.7')	1.9	8.9	20.9	40.7	27.6
YB-4 (1.7-3.1')	8.4	11.6	33.5	36	10.5
YB-4 (3.1-5.1)	8.3	22.6	28.3	19.6	21.2
YB-4 (5.1-6.9')	0	0.4	15.1	78.2	6.3
YB-5	4.3	24.5	26.1	19.9	25.2

Samples were analyzed for the standard suite of contaminants specified in the *Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters* (RIM) (EPA/USACE, 2004), as no additional project specific contaminants of concern were identified in the CSM.

To examine the sediment concentrations in an ecologically meaningful context, NAE used Sediment Quality Guidelines (SQGs) to screen the chemical concentrations found in the sediment samples from the Yarmouth Boat Yard project. Applicable SQG screening values for marine and estuarine sediments are the National Oceanic and Atmospheric Administration (NOAA) effects-range low (ERL) and effects-range median (ERM). It is important to understand that these values were not derived as toxicity pass-fail thresholds. Rather, ERL and ERM values are empirically derived guidelines based on a large number of studies nationwide that identify contaminant levels that indicate probability of toxic effects to inform decision making (Long et al., 1998). Effects are considered unlikely at concentrations below the ERL with an increased probability of toxic effects as concentrations increase. At concentrations above the ERM toxic effects are considered likely. For samples with sediment concentrations that fall between the ERL and ERM levels, consideration is given to both the number of contaminants that exceed ERL values and where the concentrations fall in the range between ERL and ERM values in assessing the probability of toxic effects and the potential need for additional testing.

Arsenic concentrations slightly exceeded the ERL and PDS reference value in samples YB-2, 3 (Top), 4 (5.1-6.9'), and YB-5. Nickel also slightly exceeded the ERL and reference value in samples YB-2, 3 (Top) and YB-5 while mercury was just above the ERL in sample YB-3 (Top). All other metals were below the ERL. Samples YB-1, 2, 4 (1.7-3.1'), and 4 (3.1-5.1') had concentrations of a few PAHs and total high molecular weight PAHs (HPAHs) above the ERL and reference values. Sample YB-4 (0-1.7') also had a total HPAH concentration slightly above the ERL and fluorene was just above the ERL in the top sample from YB-3.

Total DDX concentrations were greater than the ERL and PDS reference value in samples YB-1, 2, 3 (Top), 4 (0-1.7'), 4 (1.7-3.1'), 4 (3.1-5.1'), and YB-5. 4,4'-DDT exceeded the ERM in sample YB-1 and was above the ERL and reference value in samples YB-2, 4 (0-1.7'), 4 (1.7-3.1'), 4 (3.1-5.1'), and YB-5. 4,4'-DDD concentrations exceeded the ERL and reference value in samples YB-1, 3 (Top), 4 (0-1.7'), 4 (1.7-3.1'), and YB-4 (3.1-5.1). 4,4'-DDE was also slightly above the ERL in samples YB-1, YB-4 (0-1.7'), and YB-4 (3.1-5.1'). All other pesticides were either below the ERL or not detected. Sample YB-1 had a total PCB concentration slightly above the ERL while total PCBs were below the ERL in all other samples.

A summary of the bulk sediment chemistry data is presented in Table 4 with comparison to the ERL/ERM values and reference concentrations for PDS. The full bulk chemistry results are presented in Appendix B.

Table 4: Summary of Bulk Sediment Chemistry Results

			PDS		YB-1		YB-2		YB-3 (TOP)		YB-3 (BOTTOM)		YB-4 (0-1.7')		YB-4 (1.7-3.1')		YB-4 (3.1-5.1')		YB-4 (5.1-6.9')		YB-5	
Parameter	ERL	ERM	Value	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Metals mg/kg																						
Arsenic	8.2	70	3.30		7.08		10.7		9.82		6.71		6.38		6.75		5.98		9.81		9.41	
Cadmium	1.2	9.6	0.047		0.175		0.171		0.170		0.069		0.121		0.142		0.105		0.015	J	0.242	
Chromium	81	370	15.2		28.3		36.0		35.8		26.4		21.1		17.8		23.3		13.5		37.1	
Copper	34	270	4.25		21.5		20.2		31.7		19.5		12.4		25.0		13.4		7.28		22.7	
Lead	46.7	218	7.85		32.2		23.9		40.4		15.3		15.8		41.1		18.1		1.64		36.2	
Mercury	0.150	0.710	0.019		0.109		0.041		0.156		0.010	J	0.024		0.033		0.041		0.001	U	0.068	
Nickel	20.9	51.6	9.67		18.6		24.0		24.6		17.8		15.4		14.2		16.7		15.1		24.9	
Zinc	150	410	25.8		54.7		65.0		68.6		41.5		45.6		41.3		42.6		11.6		69.4	
PAHs ug/kg																						
Acenaphthylene	44	640	1.35		55.0		95.1		16.7		1.16	J	34.4		78.4		67.6		0.391	J	17.5	
Anthracene	85.3	1,100	1.91		70.7		91.8		29.3		21.6		29.8		56.7		47.2		0.198	U	14.5	
Fluorene	19	540	0.726		27.7		43.5		19.6		12.3		15.7		33.2		23.0		0.165	U	8.16	
Phenanthrene	240	1500	8.96		240		267		117		56.0		148		202		132		0.324	U	40.8	
Total LPAH	552	3,160	14.7		417		523		246		119		240		406		292		1.96		93.2	
Benzo(a)anthracene	261	1,600	8.31		236		335		112		23.5		152		166		166		0.371	U	40.7	
Fluoranthene	600	5,100	18.9		578		709		277		74.9		396		423		357		0.292	U	95.9	
Total HPAH	1,700	9,600	104		2673		3378		1250		233		1901		1811		1814		3.64	U	497	
Pesticides ug/kg																						
4,4`-DDD	2	20	0.064	U	4.63		1.68		2.37		0.006	U	3.45		8.80		2.99		0.006	U	1.20	
4,4`-DDE	2.2	27	0.059	U	4.39		1.98		0.684		0.004	U	2.82		2.05		3.93	J	0.004	U	2.13	
4,4`-DDT	1	7	0.316		8.23	J	1.82	J	0.371		0.008	U	1.49	J	6.14	J	1.81		0.008	U	1.02	J
Total DDX	1.58	46.1	0.438		17.3		5.48		3.43		0.018	U	7.76		17.0		8.73		0.017	U	4.35	
PCBs ug/kg																						
Total PCBs	22.7	180	2.03	U	37.9		5.21		6.17		1.37		4.76		17.2		7.82		1.31		7.45	

Notes:
Yellow indicates an exceedance of the ERL
U: Compound was analyzed for but was not detected (non-detect)
J: Indicates an estimated value
Total PCBs were calculated using the NOAA 18 method
Non-detects are reported as half the MDL
Half the MDL was used for U-qualified values to calculate summary values

Elutriate Chemistry and Biological Analysis of Sediments

Based on the lithology, chemistry results, and locations of sample stations, NAE provided the applicant with a compositing plan for biological testing following the tiered testing protocol outlined in the Evaluation of Dredged Material Proposed for Ocean Disposal – Testing Manual (Green Book, EPA/USACE, 1991). The applicant collected samples for biological testing in June of 2023. One composite sample was collected according to the compositing plan in Table 5 to determine the potential for the dredged sediment to cause adverse effects to the biological receptors identified in the CSM. Site water was also collected from a central location within each proposed project area and composited. Compliance with water quality criteria was determined through elutriate testing, sediment toxicity was measured through a 10-day whole sediment acute toxicity test, human health risk was determined through a 28-day bioaccumulation test, and water column toxicity was determined through a suspended particulate phase test as described in the Green Book (EPA/USACE, 1991).

Table 5: Biological Testing Composites

Biological Composite	Sample Stations
YB-COMP	YB-1,2,3,4,5

Evaluating Potential Effects to Benthic Organisms

The CSM identified the uptake of contaminants from placed dredged material at PDS as a primary exposure pathway for project sediments and the potential for acute toxicity was determined through a 10-day whole sediment acute toxicity test as described in the Green Book (EPA/USACE, 1991).

Mean mortality in the control samples of the 10-day whole sediment acute toxicity tests was less than 10% for the amphipod (*Leptocheirus plumulosus*) and for the mysid (*Americamysis bahia*); therefore, the tests were valid based on criteria established in the testing protocols.

Mean survivability for *L. plumulosus* was 93% in the site composite sample and was not statistically different when compared to survivability in the PDS reference sediment. The material proposed to be dredged is not considered acutely toxic to the amphipods used in this assessment.

Mean survivability for *A. bahia* was 96% in the site composite sample and was not statistically different when compared to survivability in the PDS reference sediment. The material proposed to be dredged is not considered acutely toxic to the mysids used in this assessment. Results from the 10-day whole sediment toxicity test are summarized in Table 6.

Table 6: Mean Survivability in the 10-day Whole Sediment Toxicity Test

Composite	*A. bahia*	*L. plumulosus*
Lab Control	98%	94%
PDS Reference	90%	92%
YB-COMP	96%	93%

Evaluating Potential Effects to Human Health

In order to assess the potential risk to human health through the exposure pathways identified in the CSM, a 28-day bioaccumulation test was performed with the clam *Macoma nasuta* and the marine worm *Alitta virens* (previously known as *Nereis virens*) on the composite samples.

Results showed statistically significant increases of certain contaminants of concern (COCs) in tissue samples from clams exposed to project sediments when compared to tissue samples from clams exposed to PDS reference area sediments including five PAHs, three PCB congeners, and one pesticide. All significant COCs were less than 5 times the PDS reference site value.

Acenaphthylene and fluorene were detected in the site composite tissue at concentrations less than were detected in the native tissue, which reflects the initial contaminant load in the wild caught specimens prior to the test initiation, suggesting that these contaminants may not be attributable to site conditions. However, these COCs were conservatively included in subsequent risk modeling and did not affect the outcome.

Significant increases in worm tissue samples as compared to PDS reference area tissue samples included zinc, seven PAHs, two PCB congeners, and four pesticides. Most notably, dibenz(a,h)anthracene, indeno(1,2,3,-cd)pyrene, cis-chlordane, 4,4'-DDD, and 4,4'-DDE were over 10 times higher than PDS reference tissue. Anthracene and PCB 52 were over 5 times higher in the site composite tissue than in the PDS reference site tissue and all other significant COCs were less than 5 times the PDS reference site value.

Cis-chlordane was detected in the site composite tissue at a concentration less than was detected in the native tissue, which reflects the initial contaminant load in the wild caught specimens prior to the test initiation, suggesting that this contaminant may not be attributable to site conditions. However, this COC was conservatively included in subsequent risk modeling and did not affect the outcome.

Based on these results, the tissue burden data were analyzed with the EPA Bioaccumulation Evaluation Screening Tool (BEST) model to determine the toxicological significance of bioaccumulation from exposure to the dredged sediment. The BEST model includes an evaluation of the non-carcinogenic risk,

carcinogenic risk, and any observed exceedances of Food and Drug Administration (FDA) thresholds to determine potential adverse impacts to human health from the consumption of lobster, fish, or shellfish exposed to project sediments. Consideration was also given to the number of contaminants that were statistically elevated in comparison to the reference tissue concentrations and to the magnitude of those concentrations in comparison to the reference tissue concentrations and comparable organisms living in the vicinity of the disposal site according to the factors outlined in the Ocean Testing Manual (EPA/USACE 1991).

For *Macoma nasuta* and *Alitta virens,* all contaminants were below the EPA Hazard Quotient for non-carcinogenic risk of 1.0, the EPA carcinogenic risk threshold (1×10^{-4}) and were less than established FDA action levels for the site composite.

Statistically elevated concentrations of contaminants in the tissue samples that could not be evaluated using the BEST model were either less than or comparable to the NAE DAMOS 2016 PDS reference site monitoring survey data (McKelvey et al., 2021) or were less than background invertebrate concentrations in the NOAA Mussel Watch dataset (NCCOS, 2024).

Based on this evaluation, there is no unacceptable risk to the receptors identified in the CSM from the bioaccumulation of contaminants through exposure to the dredged material from the project sediments. BEST model outputs and tissue data are provided in Appendix C.

Evaluating Potential Effects to Fish and Marine Invertebrates

The conceptual site model identified the uptake of contaminants from the water column during the placement of dredged material at PDS as a primary exposure pathway for project sediments. The potential for water column toxicity was determined through a suspended particulate phase (SPP) toxicity test as described in the Green Book (EPA/USACE, 1991).

The results from the suspended particulate phase toxicity test were used to determine the median lethal concentration (LC_{50}) for the three target species exposed to the sediment elutriates. The mysid, *Americamysis bahia,* the minnow, *Menidia beryllina*, and the blue mussel, *Mytilus sp.,* showed no adverse effects on survival after exposure to the elutriate from the site composite sample, all with LC_{50} values >100% (Table 7).

Table 7: LC_{50} Values in the Suspended Particulate Phase Toxicity Test

Composite	*A. bahia*	*M. Beryllina*	*Mytilus sp.*
YB-COMP	>100%	>100%	>100%

The limiting permissible concentration (LPC) of dissolved plus suspended contaminants, after allowance for mixing, cannot exceed 0.01 of the toxic (LC_{50}) concentration beyond the boundaries of the mixing zone as described in the Green Book (EPA/USACE 1991). To determine if the discharge of dredged material would meet the limiting permissible concentration NAE utilized the Short-Term Fate (STFATE) numerical model to analyze the disposal cloud as it descends through the water column after release from a scow. Results of the STFATE evaluation using the lowest LPC (LC_{50} of 100% and an application factor of 0.01) predicted that the water column would attain the LPC within four hours of disposal of material at PDS.

Additionally, all contaminants of concern in the elutriate sample were below the federal water quality criteria. Elutriate chemistry concentrations are presented in Appendix D.

5. **Suitability Determination:**

Based on the weight of evidence including the conceptual site model, sediment chemistry results, biological testing results, and subsequent risk modeling, no significant adverse impacts through the exposure pathways identified in the conceptual site model were found for the Yarmouth Boat Yard sediments. According to the testing and evaluation requirements set forth in Section 103 of the MPRSA, and after completing a Tier III evaluation according to the Green Book, the sediments to be dredged from the Yarmouth Boat Yard are considered suitable for unconfined open water disposal at PDS.

This suitability determination was coordinated with EPA Region 1 and MEDEP. MEDEP concurred with the determination and EPA Region 1 conducted an individual evaluation of the project and documented their findings in a separate memo.

Sarah Turner

Sarah Turner
Geologist
Dredged Material Management Team
USACE-New England District

Richard B. Loyd
Chief
Environmental Resources and
Marine Programs Section
USACE-New England District

6. **References:**

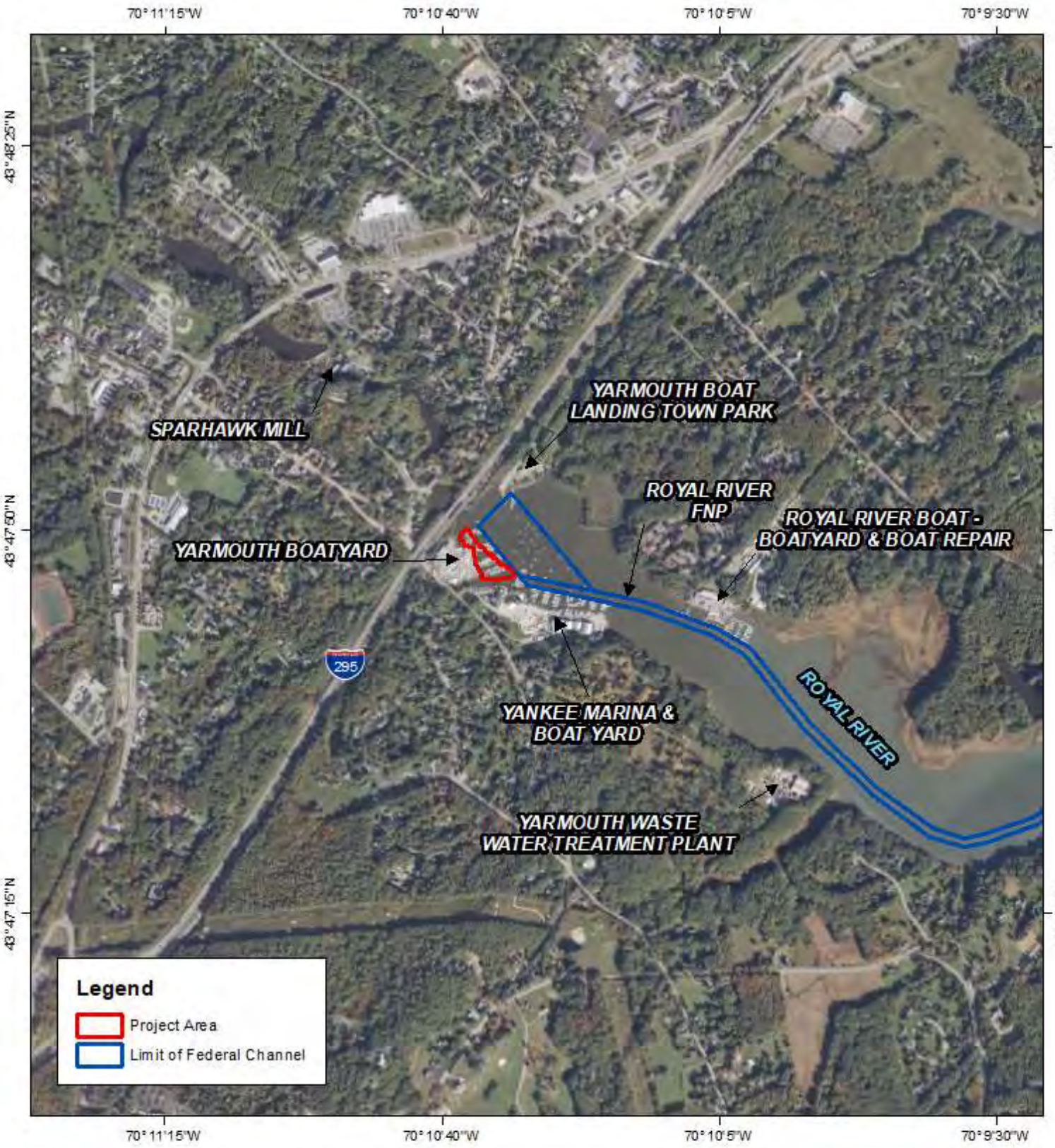
EPA/USACE 1991. Evaluation of Dredged Material Proposed for Ocean Disposal – Testing Manual. Environmental Protection Agency, Office of Water and Department of the Army, United States Army Corps of Engineers. Washington, D.C.

EPA/USACE 2004. Regional Implementation Manual for the Evaluation of Dredged Material Proposed for Disposal in New England Waters. U.S. EPA Region 1, Boston, MA/U.S. Army Corps of Engineers, New England District, Concord, MA.

Long E.R & MacDonald D.D. 1998. Recommended Uses of Empirically Derived, Sediment Quality Guidelines for Marine and Estuarine Ecosystems, Human and Ecological Risk Assessment: An International Journal, 4:5, 1019-1039.

McKelvey, Z.; Sturdivant, S. K.; Lefkovitz, L. F.; Pala, S. L.E. 2021. Monitoring Survey at the Portland Disposal Site, September 2016. DAMOS Contribution No. 203. Prepared by INSPIRE Environmental, Newport, RI. Prepared for the U.S. Army Corps of Engineers, New England District, Concord, MA. 149 pp.+ Appendices.

NCCOS, 2024. National Centers for Coastal Ocean Science, National Status and Trends: Mussel Watch Program, https://products.coastalscience.noaa.gov/nsandt_data/data.aspx



US Army Corps of Engineers
New England District

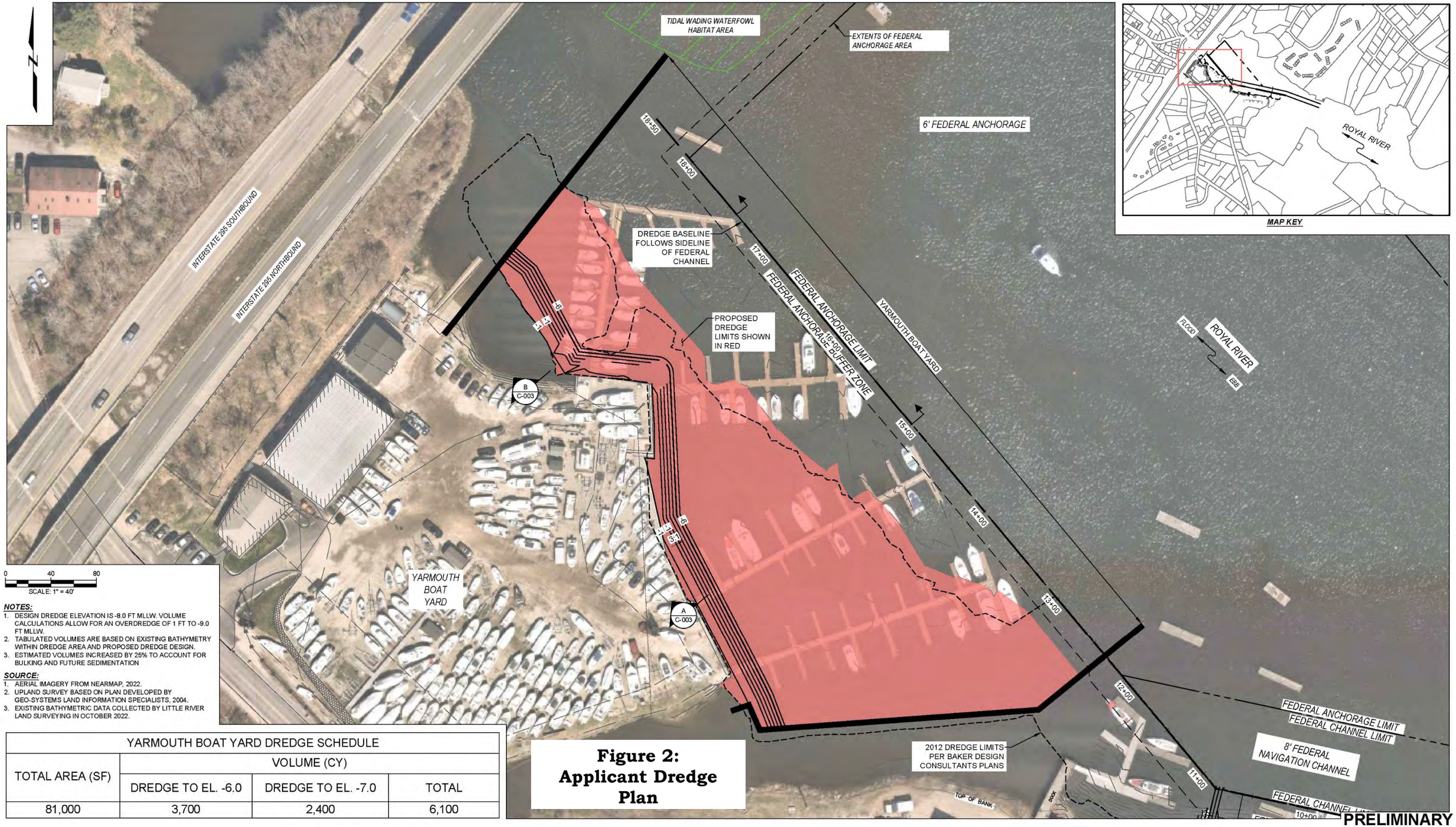
FIGURE 1
YARMOUTH BOATYARD
YARMOUTH, ME

0 1,000 2,000 3,000 Feet
0 500 1,000 Meters

1:15,000

NAIP 2018 IMAGERY

GCS NAD 1983



NOTES:

1. DESIGN DREDGE ELEVATION IS -8.0 FT MLLW. VOLUME CALCULATIONS ALLOW FOR AN OVERDREDGE OF 1 FT TO -9.0 FT MLLW.
2. TABULATED VOLUMES ARE BASED ON EXISTING BATHYMETRY WITHIN DREDGE AREA AND PROPOSED DREDGE DESIGN.
3. ESTIMATED VOLUMES INCREASED BY 25% TO ACCOUNT FOR BULKING AND FUTURE SEDIMENTATION

SOURCE:

1. AERIAL IMAGERY FROM NEARMAP, 2022.
2. UPLAND SURVEY BASED ON PLAN DEVELOPED BY GEO-SYSTEMS LAND INFORMATION SPECIALISTS, 2004.
3. EXISTING BATHYMETRIC DATA COLLECTED BY LITTLE RIVER LAND SURVEYING IN OCTOBER 2022.

YARMOUTH BOAT YARD DREDGE SCHEDULE			
TOTAL AREA (SF)	VOLUME (CY)		
	DREDGE TO EL. -6.0	DREDGE TO EL. -7.0	TOTAL
81,000	3,700	2,400	6,100

Figure 2: Applicant Dredge Plan

ELEVATION	MLLW*	NAVD88
BFE	+15.42'	+10.00'
HAT	+11.80'	+6.36'
MHHW	+9.94	+4.52'
MHW	+9.49'	+4.07'
MSL	+4.94'	-0.48'
MLW	+0.31'	-5.11'
MLLW	0.00'	-5.42'

*PROJECT DATUM

Attention:
0 1"
If this scale bar does not measure 1" then drawing is not original scale.

DRAFT

Designed:	DJB
Drawn:	DAP
Checked:	BJB
Approved:	#######
P.E. No:	VALUE
GEI Project	2203371

GEI Consultants
GEI CONSULTANTS, INC.
5 MILK STREET
PORTLAND, ME 04101
(207)797-8901

YARMOUTH BOAT YARD
72 LAFAYETTE STREET
YARMOUTH, ME 04096

YARMOUTH BOAT YARD DREDGE PERMITTING

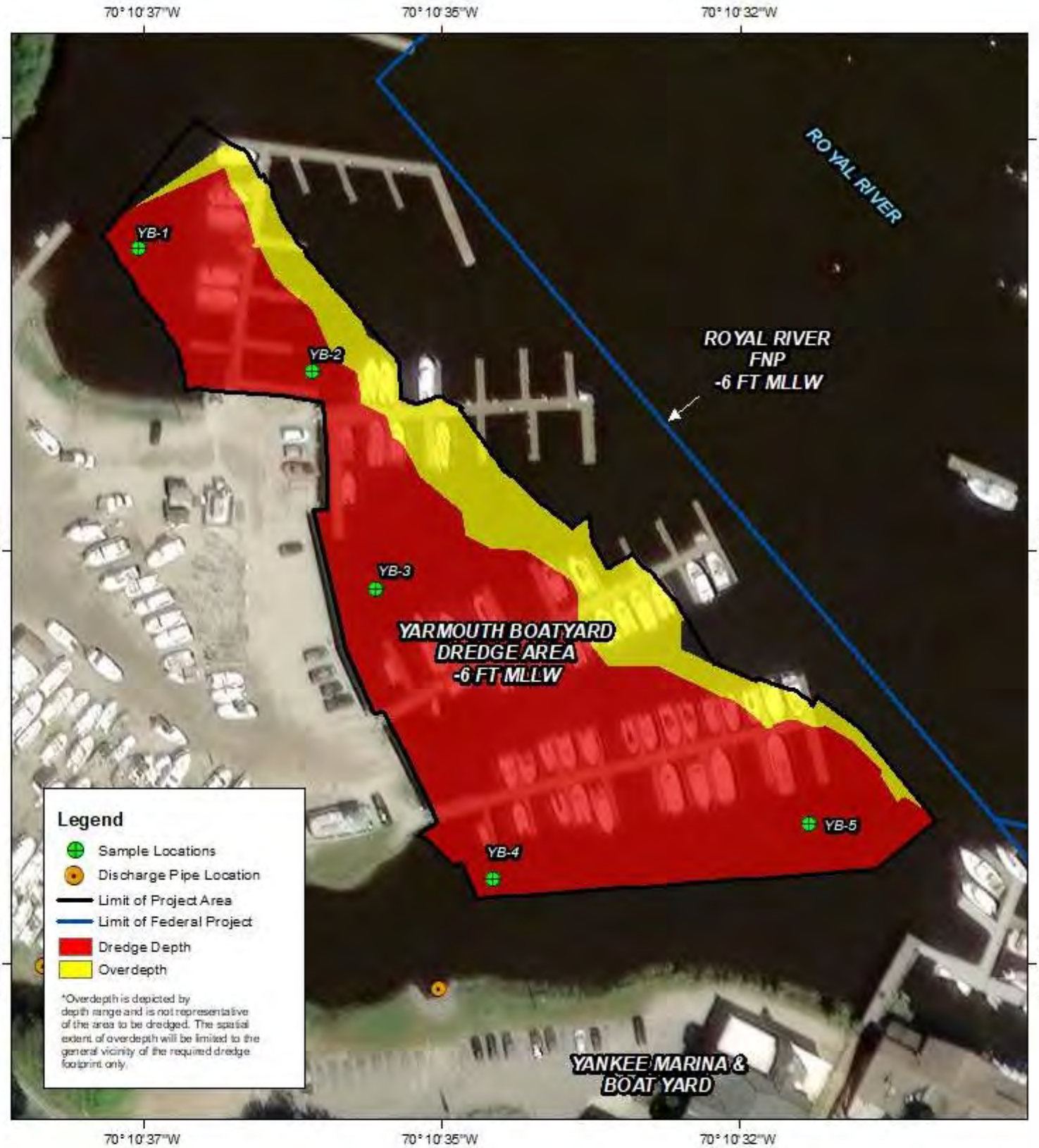
72 LAFAYETTE
YARMOUTH, ME 04096

NO	DATE	ISSUE/REVISION	APP
0			

SHEET NAME
PROPOSED CONDITIONS PLAN - YARMOUTH BOAT YARD

SHEET NO.
C-003

PRELIMINARY



US Army Corps of Engineers
New England District

FIGURE 3
YARMOUTH BOATYARD
SAMPLE LOCATIONS

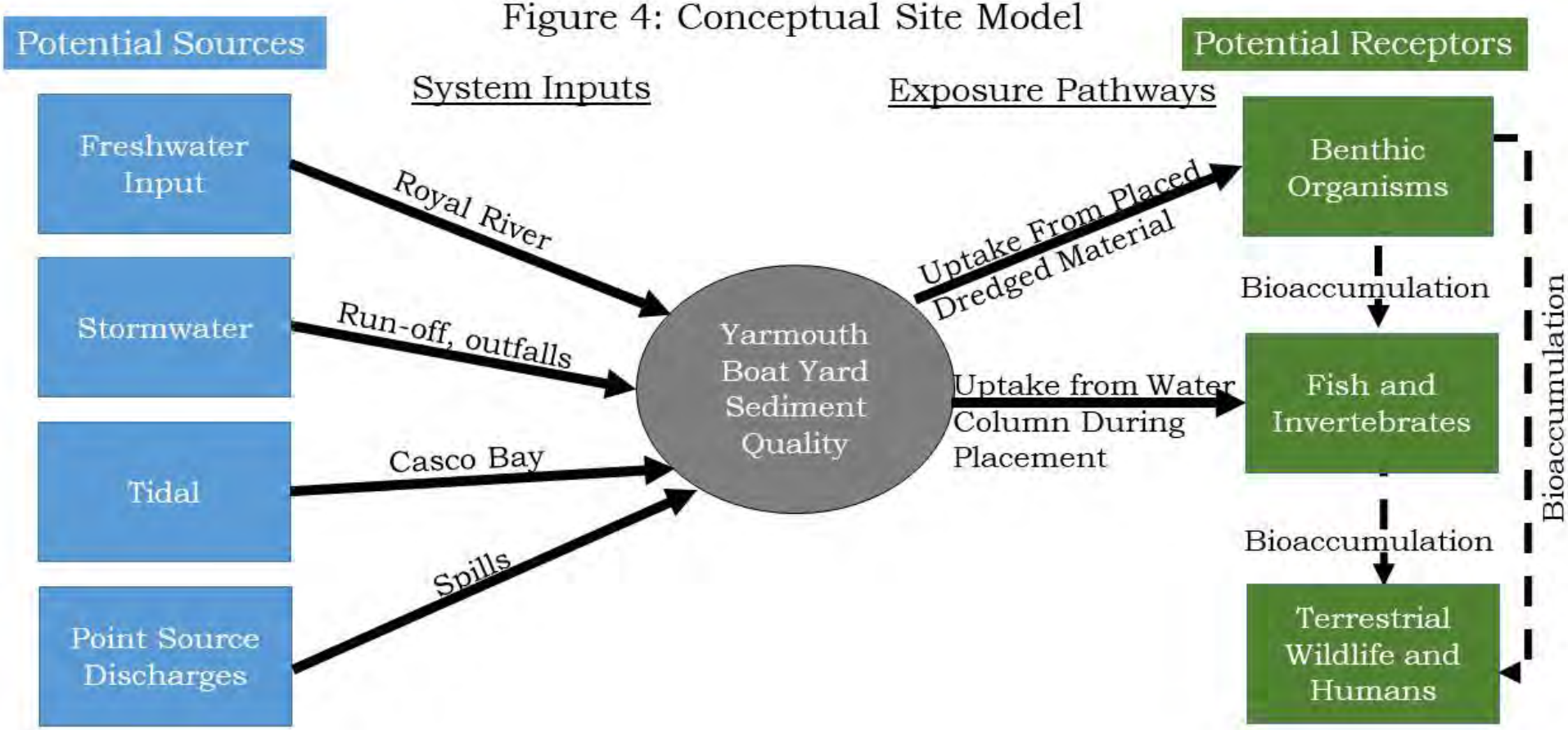
0 100 200 Feet
0 40 80 Meters

1:1,000

2024 ESRI WORLD IMAGERY

GCS NAD 1983

Figure 4: Conceptual Site Model



Appendix A

Core Logs

FIGURE 4: EXAMPLE CORE LOG DATA SHEET

PROJECT NAME: Yarmouth Boat Yard & Yankee Marina Dredge DATE: April 4, 2023
PROJECT LOCATION: Yarmouth, Maine SEA STATE: Flat
VESSEL: RV-Coring Carolina POSITIONING EQUIPMENT: RTK GPS
SAMPLING EQUIPMENT: Vibracore BHS
SAMPLING PERSONNEL: TG&B / GEI Consultants LOGGED BY: DAP

CORE ID: YB-1 ATTEMPT NO.: 6 TIME: 9:47:40 AM
LATITUDE: 43.797049865 LONGITUDE: 70.1771236 POSITION ACCURACY: +/- 1 cm
MEASURED WATER DEPTH (FT): 10.9 CORRECTED WATER DEPTH (FT MLLW): -2.4
TARGET PENETRATION (FT): 4.6 ACTUAL PENETRATION (FT): 4.2 RECOVERY (FT): 3.2
COMMENTS: Hit gravel on probes
SAMPLE INTERVAL(S):

CORE PHOTO:	CORE DESCRIPTION:
	Core taken to refusal. (0'-3.2'): SILT (ML): ~90% non-plastic to medium-plastic fines; ~5% fine to medium-coarse sand; dark greyish black. Contains some shells. Notes: 1 - Stadia rod was set with 0 feet at bottom of sample in photo. Top of sample/existing seabed surface are represented by top of photo and measured sample length on stadia rod. 2 - Penetration/recovery listed in core log header are based on observed seabed conditions during sampling. Core lengths listed in descriptions are after suspended sediment was allowed to settle within core tube, and in some cases are longer than the measured penetration/recovery due to substantial suspended sediment within water at top of sample.

FIGURE 4: EXAMPLE CORE LOG DATA SHEET

PROJECT NAME: Yarmouth Boat Yard & Yankee Marina Dredge DATE: April 4, 2023
PROJECT LOCATION: Yarmouth, Maine SEA STATE: Flat
VESSEL: RV-Coring Carolina POSITIONING EQUIPMENT: RTK GPS
SAMPLING EQUIPMENT: Vibracore BHS
SAMPLING PERSONNEL: TG&B / GEI Consultants LOGGED BY: DAP

CORE ID: YB-2 ATTEMPT NO.: 1 TIME: 2:03:05 PM
LATITUDE: 43.7968428316667 LONGITUDE: 70.17671715667 POSITION ACCURACY: +/- 1 cm
MEASURED WATER DEPTH (FT): 9.8 CORRECTED WATER DEPTH (FT MLLW): -4.4
TARGET PENETRATION (FT): 2.6 ACTUAL PENETRATION (FT): 2.6 RECOVERY (FT): 2.3
COMMENTS:
SAMPLE INTERVAL(S):

CORE PHOTO:	CORE DESCRIPTION:
	Core taken to refusal. (0'-2.6') SILT (ML): ~90% non-plastic fines; ~10% fine to medium-coarse sand; few subangular gravel pieces; gray. Notes: 1 - Stadia rod was set with 0 feet at bottom of sample in photo. Top of sample/existing seabed surface are represented by top of photo and measured sample length on stadia rod. 2 - Penetration/recovery listed in core log header are based on observed seabed conditions during sampling. Core lengths listed in descriptions are after suspended sediment was allowed to settle within core tube, and in some cases are longer than the measured penetration/recovery due to substantial suspended sediment within water at top of sample.

FIGURE 4: EXAMPLE CORE LOG DATA SHEET

PROJECT NAME: Yarmouth Boat Yard & Yankee Marina Dredge DATE: April 4, 2023
PROJECT LOCATION: Yarmouth, Maine SEA STATE: Flat
VESSEL: RV-Coring Carolina POSITIONING EQUIPMENT: RTK GPS
SAMPLING EQUIPMENT: Vibracore BHS
SAMPLING PERSONNEL: TG&B / GEI Consultants LOGGED BY: DAP

CORE ID: YB-3 ATTEMPT NO.: 1 TIME: 10:20:07 AM
LATITUDE: 43.79648174667 LONGITUDE: 70.17660033833 POSITION ACCURACY: +/- 1 cm
MEASURED WATER DEPTH (FT): 11 CORRECTED WATER DEPTH (FT MLLW): -2.0
TARGET PENETRATION (FT): 5.0 ACTUAL PENETRATION (FT): 5 RECOVERY (FT): 4.2
COMMENTS:
SAMPLE INTERVAL(S):

CORE PHOTO:	CORE DESCRIPTION:
	(0'-3.2') SILT (ML): ~90% non-plastic fines; ~10% fine to medium-coarse sand; few subangular gravel pieces; Dark greyish black. Contains woodchips. (3.2'-4.3') SANDY SILT (ML): ~70% non-plastic to medium-plastic fines; ~25% fine sand; ~5% fine to coarse, subangular to subrounded gravel; gray. Contains woodchips. Notes: 1 - Stadia rod was set with 0 feet at bottom of sample in photo. Top of sample/existing seabed surface are represented by top of photo and measured sample length on stadia rod. 2 - Penetration/recovery listed in core log header are based on observed seabed conditions during sampling. Core lengths listed in descriptions are after suspended sediment was allowed to settle within core tube, and in some cases are longer than the measured penetration/recovery due to substantial suspended sediment within water at top of sample.

FIGURE 4: EXAMPLE CORE LOG DATA SHEET

PROJECT NAME: Yarmouth Boat Yard & Yankee Marina Dredge DATE: April 4, 2023
PROJECT LOCATION: Yarmouth, Maine SEA STATE: Flat
VESSEL: RV-Coring Carolina POSITIONING EQUIPMENT: RTK GPS
SAMPLING EQUIPMENT: Vibracore BHS
SAMPLING PERSONNEL: TG&B / GEI Consultants LOGGED BY: DAP

CORE ID: YB-4 ATTEMPT NO.: 1 TIME: 10:45:22 AM
LATITUDE: 43.7959763033333 LONGITUDE: 70.17624076833 POSITION ACCURACY: +/- 1 cm
MEASURED WATER DEPTH (FT): 9.2 CORRECTED WATER DEPTH (FT MLLW): 0.2
TARGET PENETRATION (FT): 7.2 ACTUAL PENETRATION (FT): 7.2 RECOVERY (FT): 6.7
COMMENTS:
SAMPLE INTERVAL(S):

CORE PHOTO:	CORE DESCRIPTION:
	(0'-1.7') SILT (ML): ~90% non-plastic to medium-plastic fines; ~10% fine sand; dark grey. Contains some organics (1.7'-3.1') SILTY SAND (SM): ~55% fine sand; ~45% non-plastic to medium-plastic fines; dark grey and light brown. (3.1'-5.1') SILT (ML): ~90% non-plastic to medium-plastic fines; ~10% fine sand; dark grey. (5.1'-6.9') SAND (SM): ~90% fine sand; ~10% non-plastic to medium-plastic fines; light brown. Notes: 1 - Stadia rod was set with 0 feet at bottom of sample in photo. Top of sample/existing seabed surface are represented by top of photo and measured sample length on stadia rod. 2 - Penetration/recovery listed in core log header are based on observed seabed conditions during sampling. Core lengths listed in descriptions are after suspended sediment was allowed to settle within core tube, and in some cases are longer than the measured penetration/recovery due to substantial suspended sediment within water at top of sample.

FIGURE 4: EXAMPLE CORE LOG DATA SHEET

PROJECT NAME: Yarmouth Boat Yard & Yankee Marina Dredge DATE: April 4, 2023
PROJECT LOCATION: Yarmouth, Maine SEA STATE: Flat
VESSEL: RV-Coring Carolina POSITIONING EQUIPMENT: RTK GPS
SAMPLING EQUIPMENT: Vibracore BHS
SAMPLING PERSONNEL: TG&B / GEI Consultants LOGGED BY: DAP

CORE ID: YB-5 ATTEMPT NO.: 1 TIME: 1:47:06 PM
LATITUDE: 43.7960617283333 LONGITUDE: 70.175497165 POSITION ACCURACY: +/- 1 cm
MEASURED WATER DEPTH (FT): 7.0 CORRECTED WATER DEPTH (FT MLLW): -0.8
TARGET PENETRATION (FT): 6.2 ACTUAL PENETRATION (FT): 6.2 RECOVERY (FT): 6.2
COMMENTS:
SAMPLE INTERVAL(S):

CORE PHOTO:	CORE DESCRIPTION:
	(0'-6.6') SILT WITH SAND (ML): ~85% non-plastic fines; ~15% fine to medium-coarse sand; grey to dark grey. Notes: 1 - Stadia rod was set with 0 feet at bottom of sample in photo. Top of sample/existing seabed surface are represented by top of photo and measured sample length on stadia rod. 2 - Penetration/recovery listed in core log header are based on observed seabed conditions during sampling. Core lengths listed in descriptions are after suspended sediment was allowed to settle within core tube, and in some cases are longer than the measured penetration/recovery due to substantial suspended sediment within water at top of sample.

Appendix B

Bulk Sediment Chemistry Results

Yarmouth Boat Yard NAE-2008-02244					PDS		YB-1		YB-2		YB-3 (TOP)		YB-3 (BOTTOM)		YB-4 (0-1.7')		YB-4 (1.7-3.1')		YB-4 (3.1-5.1')		YB-4 (5.1-6.9')		YB-5	
Parameter	CAS Number	Units	ERL	ERM	Value	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Physical																								
Total organic carbon	14762744	%			0.790		1.54		2.08		2.26		1.05		1.59		1.92		1.22		0.027		2.60	
Metals																								
Arsenic	7440382	mg/kg	8.2	70	3.30		7.08		10.7		9.82		6.71		6.38		6.75		5.98		9.81		9.41	
Cadmium	7440439	mg/kg	1.2	9.6	0.047		0.175		0.171		0.170		0.069		0.121		0.142		0.105		0.015	J	0.242	
Chromium	7440473	mg/kg	81	370	15.2		28.3		36.0		35.8		26.4		21.1		17.8		23.3		13.5		37.1	
Copper	7440508	mg/kg	34	270	4.25		21.5		20.2		31.7		19.5		12.4		25.0		13.4		7.28		22.7	
Lead	7439921	mg/kg	46.7	218	7.85		32.2		23.9		40.4		15.3		15.8		41.1		18.1		1.64		36.2	
Mercury	7439976	mg/kg	0.150	0.710	0.019		0.109		0.041		0.156		0.010	J	0.024		0.033		0.041		0.001	U	0.068	
Nickel	7440020	mg/kg	20.9	51.6	9.67		18.6		24.0		24.6		17.8		15.4		14.2		16.7		15.1		24.9	
Zinc	7440666	mg/kg	150	410	25.8		54.7		65.0		68.6		41.5		45.6		41.3		42.6		11.6		69.4	
PAHs																								
Acenaphthene	83329	ug/kg	16	500	0.467		11.8		14.3		11.3		11.5		5.85		9.09		7.21		0.296	U	3.18	J
Acenaphthylene	208968	ug/kg	44	640	1.35		55.0		95.1		16.7		1.16	J	34.4		78.4		67.6		0.391	J	17.5	
Anthracene	120127	ug/kg	85.3	1,100	1.91		70.7		91.8		29.3		21.6		29.8		56.7		47.2		0.198	U	14.5	
Fluorene	86737	ug/kg	19	540	0.726		27.7		43.5		19.6		12.3		15.7		33.2		23.0		0.165	U	8.16	
Naphthalene	91203	ug/kg	160	2,100	1.31		12.2		11.6		52.3		16.1		6.19		26.4		15.0		0.588	U	9.06	
Phenanthrene	85018	ug/kg	240	1500	8.96		240		267		117		56.0		148		202		132		0.324	U	40.8	
Total LPAH	*SUMLPAH*	ug/kg	552	3,160	14.7		417		523		246		119		240		406		292		1.96		93.2	
Benzo(a)anthracene	56553	ug/kg	261	1,600	8.31		236		335		112		23.5		152		166		166		0.371	U	40.7	
Benzo(a)pyrene	50328	ug/kg	430	1,600	11.4		253	J-	338	J-	110	J-	16.2	J-	175	J-	150	J-	178	J-	0.690	UJ	46.9	J-
Benzo(b)fluoranthene	205992	ug/kg			9.15		249		286		137		12.4		200		165		164		0.515	U	45.6	
Benzo(g,h,i)perylene	191242	ug/kg			8.48		202		232		80.2		7.88		149		104		129		0.165	U	40.3	
Benzo(k)fluoranthene	207089	ug/kg			10.6		176		251		82.8		12.2		123		113		139		0.236	U	41.5	
Chrysene	218019	ug/kg	384	2,800	11.1		255		354		120		19.8		199		190		193		0.360	U	52.6	
Dibenz(a,h)anthracene	53703	ug/kg	63.4	260	1.45		43.5		51.5		17.6		2.26	J	31.7		22.0		29.3		0.192	U	8.50	
Fluoranthene	206440	ug/kg	600	5,100	18.9		578		709		277		74.9		396		423		357		0.292	U	95.9	
Indeno(1,2,3-cd)pyrene	193395	ug/kg			7.31		203		237		80.4		8.53		156		92		127		0.388	U	38.6	
Pyrene	129000	ug/kg	665	2,600	17.9		477		584		233		55.1		319		386		332		0.429	U	86.2	
Total HPAH	*SUMHPAH*	ug/kg	1,700	9,600	104		2673		3378		1250		233		1901		1811		1814		3.64	U	497	
Pesticides																								
4,4`-DDD	72548	ug/kg	2	20	0.064	U	4.63		1.68		2.37		0.006	U	3.45		8.80		2.99		0.006	U	1.20	
4,4`-DDE	72559	ug/kg	2.2	27	0.059	U	4.39		1.98		0.684		0.004	U	2.82		2.05		3.93	J	0.004	U	2.13	
4,4`-DDT	50293	ug/kg	1	7	0.316		8.23	J	1.82	J	0.371		0.008	U	1.49	J	6.14	J	1.81		0.008	U	1.02	J
Total DDX	SUMDDX	ug/kg	1.58	46.1	0.438		17.3		5.48		3.43		0.018	U	7.76		17.0		8.73		0.017	U	4.35	
Aldrin	309002	ug/kg			0.045	U	0.025	U	0.032	U	0.032	U	0.021	U	0.024	U	0.022	U	0.023	U	0.020	U	0.030	U
Alpha-Chlordane (cis)	5103719	ug/kg			0.047	U	0.053	U	0.069	U	0.068	U	0.045	U	0.052	U	0.047	U	0.050	U	0.042	U	0.064	U
cis-Nonachlor	5103731	ug/kg					0.007	U	0.010	U	0.009	U	0.006	U	0.007	U	0.007	U	0.007	U	0.006	U	0.009	U
Dieldrin	60571	ug/kg	0.02	8	0.045	U	0.015	U	0.020	U	0.019	U	0.013	U	0.015	U	0.013	U	0.014	U	0.012	U	0.02	U
Endosulfan I	959988	ug/kg			0.050	U	0.014	U	0.018	U	0.018	U	0.012	U	0.013	U	0.012	U	0.013	U	0.011	U	0.016	U
Endosulfan II	33213659	ug/kg			0.040	U	0.007	U	0.009	U	0.009	U	0.006	U	0.007	U	0.006	U	0.007	U	0.006	U	0.009	U
Endrin	72208	ug/kg			0.052	U	0.008	U	0.011	U	0.011	U	0.007	U	0.008	U	0.007	U	0.008	U	0.007	U	0.010	U
Gamma-Chlordane (trans)	5103742	ug/kg			0.042	U	0.015	U	0.020	U	0.019	U	0.013	U	0.015	U	0.013	U	0.014	U	0.012	U	0.02	U
Heptachlor	76448	ug/kg			0.078	U	0.016	U	0.020	U	0.020	U	0.013	U	0.015	U	0.014	U	0.015	U	0.012	U	0.019	U
Heptachlor epoxide	1024573	ug/kg			0.047	U	0.032	U	0.041	U	0.041	U	0.027	U	0.031	U	0.028	U	0.030	U	0.025	U	0.038	U
Hexachlorobenzene	118741	ug/kg					0.132	U	0.172	U	0.170	U	0.111	U	0.128	U	0.117	U	0.124	U	0.104	U	0.159	U
Lindane	58899	ug/kg					0.022	U	0.029	U	0.029	U	0.019	U	0.022	U	0.020	U	0.021	U	0.018	U	0.027	U
Methoxychlor	72435	ug/kg			0.186	U	0.035	U	0.046	U	0.045	U	0.030	U	0.034	U	0.031	U	0.033	U	0.028	U	0.042	U
Oxychlordane	27304138	ug/kg					0.031	U	0.040	U	0.039	U	0.026	U	0.030	U	0.027	U	0.029	U	0.024	U	0.037	U
Toxaphene	8001352	ug/kg			4.78	U	0.635	U	0.830	U	0.820	U	0.535	U	0.620	U	0.560	U	0.600	U	0.500	U	0.77	U
trans-Nonachlor	39765805	ug/kg					0.007	U	0.009	U	0.009	U	0.006	U	0.007	U	0.006	U	0.006	U	0.005	U	0.008	U
Total Chlordane	*SUMCHLOR*	ug/kg	0.5	6	0.089	U	0.112	U	0.146	U	0.144	U	0.094	U	0.109	U	0.100	U	0.105	U	0.088	U	0.13	U
PCBs																								
PCB 008	34883437	ug/kg			0.061	U	0.039	U	0.051	U	0.050	U	0.086	J	0.252	J	0.035	U	0.037	U	0.093	J	0.240	J
PCB 018	37680652	ug/kg			0.045	U	0.028	U	0.037	U	0.037	U	0.024	U	0.028	U	0.025	U	0.027	U	0.022	U	0.034	U
PCB 028	7012375	ug/kg			0.035	U	0.048	U	0.063	U	0.062	U	0.041	U	0.047	U	0.043	U	0.045	U	0.038	U	0.058	U
PCB 044	41464395	ug/kg			0.042	U	1.04		0.070	U	0.069	U	0.045	U	0.192	J	0.836		0.358	J	0.042	U	0.065	U
(PCB 049)	41464408	ug/kg			0.042	U	0.58		0.068	U	0.067	U	0.044	U	0.051	U	0.570		0.168	J	0.041	U	0.173	J
PCB 052	35693993	ug/kg			0.059	U	1.74		0.184	J	0.188	J	0.025	U	0.155	J	1.13		0.302	J	0.024	U	0.283	J
PCB 066	32598100	ug/kg			0.052	U	0.62		0.037	U	0.036	U	0.024	U	0.028	U	0.741		0.027	U	0.022	U	0.034	U
(PCB 087)	38380028	ug/kg			0.040	U	1.86		0.030	U	0.029	U	0.019	U	0.196	J	0.518		0.022	U	0.018	U	0.028	U
PCB 101	37680732	ug/kg			0.045	U	3.98		0.418	J	0.354	J	0.039	U	0.361	J	1.86		0.408		0.036	U	0.545	
PCB 105	32598144	ug/kg			0.086	U	1.21		0.054	U	0.053	U	0.035	U	0.040	U	0.036	U	0.039	U	0.033	U	0.050	U
PCB 118	31508006	ug/kg			0.073	U	2.60		0.281	J	0.282	J	0.037	U	0.215	J	1.05		0.305	J	0.034	U	0.339	J
PCB 128	38380073	ug/kg			0.040	U	1.12	J+	0.067	U	0.066	U	0.043	U	0.050	U	0.045	U	0.048	U	0.041	U	0.062	U
PCB 138	35065282	ug/kg			0.054	U	3.10		0.758		0.591		0.028	U	0.506		1.01		0.449		0.026	U	0.800	
PCB 153	35065271	ug/kg			0.155	U	1.98		0.270	J	0.346	J	0.058	U	0.271	J	0.772		0.575		0.054	U	0.498	
PCB 170	35065306	ug/kg			0.045	U	0.31	J	0.033	U	0.032	U	0.021	U	0.025	U	0.022	U	0.330	J	0.020	U	0.030	U
PCB 180	35065293	ug/kg			0.052	U	0.63		0.034	U	0.216	J	0.022	U	0.025	U	0.495		0.390		0.020	U	0.302	J
(PCB 183)	52663691	ug/kg			0.035	U	0.16	J	0.018	U	0.018	U	0.012	U	0.014	U	0.012	U	0.153	J	0.011	U	0.017	U
(PCB 184)	74472483	ug/kg			0.097	U	0.03	U	0.037	U	0.037	U	0.024	U	0.028	U	0.025	U	0.027	U	0.022	U	0.034	U
PCB 187	52663680	ug/kg			0.042	U	0.34	J	0.048	U	0.112	J	0.031	U	0.036	U	0.34	J	0.261	J	0.029	U	0.204	J
PCB 195	52663782	ug/kg			0.042	U	0.05	U	0.063	U	0.062	U	0.041	U	0.047	U	0.043	U	0.046	U	0.038	U	0.058	U
PCB 206	40186729	ug/kg			0.040	U	0.05	U	0.064	U	0.063	U	0.042	U	0.048	U	0.044	U	0.047	U	0.039	U	0.059	U
PCB 209	2051243	ug/kg			0.045	U	0.06	U	0.074	U	0.466	J	0.048	U	0.055	U	0.050	U	0.217	J	0.045	U	0.068	U
Total PCBs	*SumNOAA18*	ug/kg	22.7	180	2.03	U	37.9		5.21		6.17		1.37		4.76		17.2		7.82		1.31		7.45	

Notes:
Yellow indicates an exceedance of the ERL
Red indicates an exceedance of the ERM
U: Compound was analyzed for but was not detected (non-detect)
J: Indicates an estimated value
J-: Indicates an estimated value biased low
Total PCBs were calculated using the NOAA 18 method
Non-detects are reported as half the MDL
Half the MDL was used for U-qualified values to calculate summary values
Total Chlordane is a sum of alpha and gamma chlordane, cis and trans nonachlor, and oxychlordane; PDS value is a sum of only alpha and gamma chlordane

Appendix C

Bioaccumulation and BEST Model Results

TABLE C-1 STATISTICAL COMPARISONS OF *N. virens* BODY BURDENS VS. PDS 2015 REFERENCE DATA

Compound	Units	Pre-Test [d] Mean	Pre-Test [d] Qual	PDS 2015 Mean	PDS 2015 Qual	YB-COMP Mean	YB-COMP Qual	YM-COMP Mean	YM-COMP Qual
Trace Metals									
Arsenic, total	mg/Kg	1.59		1.64		1.52	NS	1.38	NS
Cadmium, total	mg/Kg	0.0233	b	0.100		0.0234	bNS	0.0228	bNS
Chromium, total	mg/Kg	0.448	b	0.500		0.150	bNS	0.234	bNS
Copper, total	mg/Kg	1.52		1.56		0.979	NS	1.09	NS
Lead, total	mg/Kg	0.250		0.500		0.155	NS	0.133	NS
Mercury, total	mg/Kg	0.0110	b	0.0304		0.00660	bNS	0.00720	bNS
Nickel, total	mg/Kg	0.405		0.500		0.335	NS	0.340	NS
Zinc, total	mg/Kg	18.6		20.3		19.6	S e	18.7	S e
PAH Compounds									
Acenaphthene	µg/Kg	0.360	a	0.530	b	0.368	aNS	0.364	aNS
Acenaphthylene	µg/Kg	0.221	a	0.152	b	0.355	abS	0.466	abS
Anthracene	µg/Kg	0.240	a	0.0600	a	0.300	abS	0.601	abS
Benzo(a)anthracene	µg/Kg	0.450	a	0.0700	a	0.459	ac	0.455	ac
Benzo(a)pyrene	µg/Kg	0.473	a	0.115	a	0.482	ac	0.477	ac
Benzo(b)fluoranthene	µg/Kg	0.623	a	0.0600	a	0.638	ac	0.631	ac
Benzo(k)fluoranthene	µg/Kg	0.287	a	0.0500	a	0.293	ac	0.290	ac
Benzo(g,h,i)perylene	µg/Kg	0.201	a	0.0600	a	0.205	ac	0.203	ac
Chrysene	µg/Kg	0.437	a	0.236	b	0.728	abS	0.623	abS
Dibenz(a,h)anthracene	µg/Kg	0.233	a	0.0450	a	0.464	abS	0.288	abS
Fluoranthene	µg/Kg	0.354	a	0.752		1.70	bS	4.83	bS
Fluorene	µg/Kg	0.425	ab	0.238	b	0.313	abNS	0.358	abNS
Indeno(1,2,3-cd)pyrene	µg/Kg	0.471	a	0.0530	a	1.86	abS	1.42	abS
Naphthalene	µg/Kg	0.821	b	0.358	b	1.37	bS	1.57	bS
Phenanthrene	µg/Kg	0.394	a	0.886		0.402	aNS	0.398	aNS
Pyrene	µg/Kg	0.522	a	0.480	b	1.75	abNS	2.66	abS
Total PAHs	µg/Kg	6.51		4.15		11.7		15.6	
PCB Congeners									
PCB 008	µg/Kg	0.0371	a	0.0300	a	0.0379	ac	0.0375	ac
PCB 018	µg/Kg	0.0270	a	0.0150	a	0.0276	ac	0.0273	ac
PCB 028	µg/Kg	0.0460	a	0.0260	ab	0.0469	aS e	0.0464	aS e
PCB 044	µg/Kg	0.0513	a	0.0740	ab	0.0522	aNS	0.0518	aNS
PCB 052	µg/Kg	0.172	ab	0.0230	a	0.176	abS	0.0832	abS
PCB 066	µg/Kg	0.0268	a	0.0560	ab	0.0274	aNS	0.0271	aNS
PCB 101	µg/Kg	0.0437	a	0.244		0.229	aNS	0.0441	aNS
PCB 105	µg/Kg	0.0392	a	0.0580	b	0.0400	aNS	0.0396	aNS
PCB 118	µg/Kg	0.0415	a	0.0560	b	0.0912	abNS	0.192	abNS
PCB 128	µg/Kg	0.0489	a	0.0720	b	0.0500	aNS	0.0495	aNS
PCB 138	µg/Kg	0.305	b	0.732		0.523	aNS	0.739	NS
PCB 153	µg/Kg	0.379	b	1.29		0.678	NS	0.784	NS
PCB 170	µg/Kg	0.114	ab	0.254		0.0245	aNS	0.0243	aNS
PCB 180	µg/Kg	0.130	ab	0.578		0.233	aNS	0.0958	aNS
PCB 187	µg/Kg	0.140	ab	0.566		0.116	aNS	0.221	aNS
PCB 195	µg/Kg	0.0461	a	0.146		0.0471	aNS	0.0466	aNS
PCB 206	µg/Kg	0.0471	a	0.276		0.0481	aNS	0.0476	aNS
PCB 209	µg/Kg	0.0538	a	0.318		0.0551	aNS	0.0996	abNS
Total PCBs	µg/Kg	3.50		9.62		5.00		5.31	
Pesticides									
Aldrin	µg/Kg	0.289	a	0.0150	a	0.0299	ac	0.0296	ac
cis-Chlordane	µg/Kg	4.25	b	0.0160	ab	0.170	abS	0.0638	aS
trans-Chlordane	µg/Kg	0.345	ab	0.0400	ab	0.0182	aNS	0.0180	aNS
cis-Nonachlor	µg/Kg	0.00850	a	0.0440	b	0.00869	aNS	0.00858	aNS
trans-Nonachlor	µg/Kg	0.143	a	0.138		0.00797	aNS	0.00789	aNS
Oxychlordane	µg/Kg	0.0363	a	0.0300	a	0.0371	ac	0.0367	ac
Total Chlordanes	µg/Kg	4.78		0.268		0.241		0.135	
4,4'-DDT	µg/Kg	0.0116	a	0.0100	a	0.0118	ac	0.0117	ac
4,4'-DDD	µg/Kg	0.336	ab	0.0700	ab	2.83	S	0.00888	aNS
4,4'-DDE	µg/Kg	0.214	ab	0.0240	ab	0.379	abS	0.00539	aNS
Total DDT	µg/Kg	0.562		0.104		3.22		0.0259	
Dieldrin	µg/Kg	0.138	ab	0.0700	b	0.0180	aNS	0.0178	aNS
alpha-Endosulfan	µg/Kg	0.0161	a	0.0150	a	0.0165	ac	0.0163	ac
beta-Endosulfan	µg/Kg	0.00832	a	0.0240	ab	0.00850	aNS	0.00840	aNS
Total Endosulfans	µg/Kg	0.0245		0.0390		0.0250		0.0247	
Endrin	µg/Kg	0.00962	a	0.0100	a	0.00982	ac	0.00971	ac
Heptachlor	µg/Kg	0.256	a	0.0100	a	0.0187	ac	0.0185	ac
Heptachlor epoxide	µg/Kg	0.0377	a	0.0150	a	0.0385	ac	0.0381	ac
Hexachlorobenzene	µg/Kg	0.158	a	0.0980	b	0.161	aS	0.159	aS
Lindane (gamma-BHC)	µg/Kg	0.0265	a	0.0150	a	0.0270	ac	0.0268	ac
Methoxychlor	µg/Kg	0.0417	a	0.165	a	0.0426	ac	0.0422	ac
Toxaphene	µg/Kg	0.762	a	5.13	a	0.777	ac	0.770	ac

Notes:

Mean concentrations are reported to 3 significant figures.

a = COC not detected (below MDL) in at least one replicate; mean value was calculated using one-half of the project specific MDL for non-detected values.

b = COC concentration estimated (detected below RL but above MDL) in at least one replicate; mean value calculated using estimated value.

c = COC was not detected in either the dredge tissue replicates or in the historic reference tissue, therefore was eliminated from further evaluation.

[d] Pre-test tissue represents the mean of three replicates, whereas the reference and site composites represent a mean of 5 replicates.

[e] Analysis conducted after removal of a statistical outlier.

NS = Not Significant - mean tissue body burden was not statistically different from the associated reference site mean body burden. Statistical significance accepted at α=0.05.

S = Significant - mean tissue body burden was statistically different, greater than the associated reference site mean body burden. Statistical significance accepted at α=0.05.

TABLE C-2 STATISTICAL COMPARISONS OF *M. nasuta* BODY BURDENS VS. PDS 2015 REFERENCE DATA

Compound	Units	Pre-Test [d] Mean	Qual	PDS 2015 Mean	Qual	YB-COMP Mean	Qual	YM-COMP Mean	Qual
Trace Metals									
Arsenic, total	mg/Kg	2.43		2.92		2.69	NS	2.85	NS
Cadmium, total	mg/Kg	0.0300	b	0.100		0.0226	bNS	0.0228	bNS
Chromium, total	mg/Kg	0.204	b	0.500		0.234	bNS	0.214	bNS
Copper, total	mg/Kg	1.37		1.84		1.24	NS	1.36	NS
Lead, total	mg/Kg	0.152		0.500		0.230	NS	0.203	NS
Mercury, total	mg/Kg	0.00307	ab	0.0200		0.0100	bNS	0.00198	aNS
Nickel, total	mg/Kg	0.373		0.576		0.390	NS	0.376	NS
Zinc, total	mg/Kg	9.90		13.8		11.7	NS	10.4	NS
PAH Compounds									
Acenaphthene	µg/Kg	0.449	a	0.520	b	0.466	aNS	0.461	aNS
Acenaphthylene	µg/Kg	0.649	ab	0.190	b	0.433	abS	0.283	aS
Anthracene	µg/Kg	0.578	ab	0.378	b	0.751	abS	0.307	aNS
Benzo(a)anthracene	µg/Kg	0.562	a	1.54		1.81	abNS	0.576	aNS
Benzo(a)pyrene	µg/Kg	0.590	a	1.45		1.34	abNS	0.604	aNS
Benzo(b)fluoranthene	µg/Kg	0.778	a	1.81		1.59	abNS	0.798	aNS
Benzo(k)fluoranthene	µg/Kg	0.358	a	1.81		1.01	abNS	0.568	abNS
Benzo(g,h,i)perylene	µg/Kg	0.250	a	1.17		1.01	abNS	0.316	abNS
Chrysene	µg/Kg	0.543	a	2.00		2.01	abNS	1.22	abNS
Dibenz(a,h)anthracene	µg/Kg	0.290	a	0.180	b	0.301	aS	0.298	aS
Fluoranthene	µg/Kg	3.35	b	5.55		8.07	bNS	5.04	bNS
Fluorene	µg/Kg	1.44	b	0.494	b	1.28	bS	0.257	aNS
Indeno(1,2,3-cd)pyrene	µg/Kg	0.587	a	0.910		1.16	abNS	0.734	abNS
Naphthalene	µg/Kg	1.30	b	0.276	b	1.31	bS	1.08	bS
Phenanthrene	µg/Kg	2.60	b	4.21		1.81	abNS	1.56	bNS
Pyrene	µg/Kg	0.650	a	4.67		6.25	bNS	4.15	bNS
Total PAHs	µg/Kg	15.0		27.2		30.6		18.2	
PCB Congeners									
PCB 008	µg/Kg	0.0463	a	0.0300	a	0.0481	ac	0.0661	abS
PCB 018	µg/Kg	0.0337	a	0.0150	a	0.0350	ac	0.0345	ac
PCB 028	µg/Kg	0.0572	a	0.0150	a	0.0595	ac	0.0588	ac
PCB 044	µg/Kg	0.0638	a	0.0100	a	0.0663	ac	0.0655	ac
PCB 052	µg/Kg	0.0355	a	0.0200	a	0.0369	ac	0.0365	ac
PCB 066	µg/Kg	0.0334	a	0.0860	ab	0.0347	aNS	0.0343	aNS
PCB 101	µg/Kg	0.0543	a	0.0150	a	0.0566	ac	0.0558	ac
PCB 105	µg/Kg	0.0489	a	0.0140	ab	0.0507	aS	0.0501	aS
PCB 118	µg/Kg	0.0517	a	0.0150	a	0.0536	ac	0.0529	ac
PCB 128	µg/Kg	0.0610	a	0.0150	a	0.0634	ac	0.0625	ac
PCB 138	µg/Kg	0.0390	a	0.0420	ab	0.0406	aNS	0.0401	aNS
PCB 153	µg/Kg	0.0813	a	0.158	b	0.0845	aNS	0.0835	aNS
PCB 170	µg/Kg	0.0299	a	0.0260	ab	0.0311	aNS	0.0307	aNS
PCB 180	µg/Kg	0.0306	a	0.0120	ab	0.0318	aS	0.0314	aS
PCB 187	µg/Kg	0.0440	a	0.0420	b	0.0457	aNS	0.0451	aNS
PCB 195	µg/Kg	0.0575	a	0.0120	ab	0.0597	aS	0.0590	aS
PCB 206	µg/Kg	0.0587	a	0.0100	a	0.0611	ac	0.0602	ac
PCB 209	µg/Kg	0.0673	a	0.0150	a	0.0699	ac	0.0692	ac
Total PCBs	µg/Kg	1.79		1.10		1.86		1.87	
Pesticides									
Aldrin	µg/Kg	0.0292	a	0.0150	a	0.0304	ac	0.0300	ac
cis-Chlordane	µg/Kg	0.0632	a	0.0100	a	0.0655	ac	0.181	abS
trans-Chlordane	µg/Kg	0.0178	a	0.0200	a	0.0185	ac	0.0182	ac
cis-Nonachlor	µg/Kg	0.00847	a	0.0100	a	0.00882	ac	0.00870	ac
trans-Nonachlor	µg/Kg	0.00778	a	0.0150	a	0.00807	ac	0.0804	aNS
Oxychlordane	µg/Kg	0.0362	a	0.152	a	0.0377	aNS	0.0372	aNS
Total Chlordanes	µg/Kg	0.133		0.207		0.139		0.325	
4,4'-DDT	µg/Kg	0.0115	a	0.128	b	0.0120	aNS	0.0118	aNS
4,4'-DDD	µg/Kg	0.00877	a	0.0640	b	0.00911	aNS	0.00899	aNS
4,4'-DDE	µg/Kg	0.224	a	0.214		0.285	aNS	0.158	aNS
Total DDT	µg/Kg	0.244		0.406		0.306		0.178	
Dieldrin	µg/Kg	0.0176	a	0.0100	a	0.0183	ac	0.0181	ac
alpha-Endosulfan	µg/Kg	0.0161	a	0.0150	a	0.0167	ac	0.0165	ac
beta-Endosulfan	µg/Kg	0.00830	a	0.0150	a	0.00863	ac	0.00852	ac
Total Endosulfans	µg/Kg	0.0244		0.0300		0.0254		0.0250	
Endrin	µg/Kg	0.00957	a	0.0100	a	0.00996	ac	0.00983	ac
Heptachlor	µg/Kg	0.0183	a	0.0360	ab	0.0190	aNS	0.0188	aNS
Heptachlor epoxide	µg/Kg	0.0376	a	0.0150	a	0.0391	ac	0.0386	ac
Hexachlorobenzene	µg/Kg	0.157	a	0.0960	b	0.163	aS	0.161	aS
Lindane (gamma-BHC)	µg/Kg	0.0264	a	0.0650	a	0.0275	aNS	0.0271	aNS
Methoxychlor	µg/Kg	0.0416	a	0.165	a	0.0433	ac	0.0427	ac
Toxaphene	µg/Kg	0.758	a	5.06	a	0.789	ac	0.780	ac

Notes:

Mean concentrations are reported to 3 significant figures.

a = COC not detected (below MDL) in at least one replicate; mean value was calculated using one-half of the project specific MDL for non-detected values.

b = COC concentration estimated (detected below RL but above MDL) in at least one replicate; mean value calculated using estimated value.

c = COC was not detected in either the dredge tissue replicates or in the historic reference tissue, therefore was eliminated from further evaluation.

[d] Pre-test tissue represents the mean of three replicates, whereas the reference and site composites represent a mean of 5 replicates.

NS = Not Significant - mean tissue body burden was not statistically different from the associated reference site mean body burden. Statistical significance accepted at α=0.05.

S = Significant - mean tissue body burden was statistically different, greater than the associated reference site mean body burden. Statistical significance accepted at α=0.05.

Project name: Yarmouth Boat Yard, Yarmouth, ME

Project number:

Model filename: YarmouthBY_Best.best

Chemical filename: Chemical_List_for_EPA_Reg1_template (in progress).xlsx

Table Of Contents

Adult Angler 1

Total Estimated Risks 1

Seafood Non-Cancer Risk 4

FDA Action Limit/Tolerance 6

Ecological Effect Level 8

FDA Level of Concern 10

Selected Chemicals 11

Macoma nasuta 11

Nereis virens 11

Human Subreport

Human: Adult Angler

Total Estimated Risks From Organics(see EPA Table Xa)

Receptor: Adult Angler

Organism: Macoma nasuta

		Cancer Risk	Non-Cancer Risk
YB-COMP		Macoma nasuta	
	Test	1.26E-6	1.82E-2
	Reference	9.33E-7	1.3E-2
		Fish Fillet	
	Test	1.22E-6	1.77E-2
	Reference	9E-7	1.26E-2
		Nereis virens	
	Test	0	0
	Reference	0	0
		Total Lobster	
	Test	6.28E-6	9.12E-2
	Reference	4.65E-6	6.49E-2

		Cancer Risk	Non-Cancer Risk
		Lobster Muscle	
	Test	1.95E-6	2.83E-2
	Reference	1.44E-6	2.01E-2
		Lobster Hepatopancreas	
	Test	4.33E-6	6.29E-2
	Reference	3.21E-6	4.48E-2

Total Estimated Risks From Organics(see EPA Table Xa)

Receptor: Adult Angler

Organism: Nereis virens

		Cancer Risk	Non-Cancer Risk
YB-COMP		Macoma nasuta	
	Test	0	0
	Reference	0	0
		Fish Fillet	
	Test	3.97E-6	5.48E-2
	Reference	3.61E-6	8.8E-2
		Nereis virens	
	Test	4.99E-6	6.64E-2
	Reference	4.38E-6	1.07E-1
		Total Lobster	
	Test	2.05E-5	2.83E-1
	Reference	1.86E-5	4.54E-1
		Lobster Muscle	
	Test	6.35E-6	8.76E-2
	Reference	5.77E-6	1.41E-1
		Lobster Hepatopancreas	
	Test	1.41E-5	1.95E-1
	Reference	1.28E-5	3.13E-1

Seafood Non-Cancer Risks (see EPA Table 6a, Columns F & G)

Receptor: Adult Angler

Organism: Macoma nasuta

			Non-Cancer Risk

Seafood Non-Cancer Risks (see EPA Table 6a, Columns F & G)

Receptor: Adult Angler

Organism: Nereis virens

			Non-Cancer Risk
YB-COMP	Zinc	**Test**	5.61E-3
		Reference	5.79E-3

FDA Action Limit/Tolerance (see EPA Table 3, Columns D & E)

Receptor: Adult Angler

Organism: Macoma nasuta

	Contaminant	FDA Action Level (mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Total PCBs	2E3	4.12E0
YB-COMP	Mercury	1E0	1E-2
YB-COMP	Total DDT	5E3	4.75E-1
YB-COMP	Total Chlordanes	3E2	2.31E-1

FDA Action Limit/Tolerance (see EPA Table 3, Columns D & E)

Receptor: Adult Angler

Organism: Nereis virens

	Contaminant	FDA Action Level (mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Total PCBs	2E3	1.11E1
YB-COMP	Mercury	1E0	6.6E-3
YB-COMP	Total DDT	5E3	6.26E0
YB-COMP	Total Chlordanes	3E2	4.37E-1

Ecological Effects Level (see EPA Table 8a.1, Columns D & E)

Receptor: Adult Angler

Organism: Macoma nasuta

	Contaminant	Ecological Effect Level (mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Anthracene	3.75E3	7.51E-1
YB-COMP	Benzo(a)pyrene	8E3	2.67E0
YB-COMP	PAH Total	1E4	3.06E1
YB-COMP	Total PCBs	4E3	4.12E0
YB-COMP	Aldrin	2.99E2	3.04E-2
YB-COMP	Dieldrin	4.37E0	2.47E-2
YB-COMP	Endosulfans	2.86E0	2.54E-2
YB-COMP	Arsenic	1.26E1	2.69E0
YB-COMP	Cadmium	3.03E0	2.26E-2
YB-COMP	Chromium	1.18E1	2.34E-1
YB-COMP	Copper	9.6E0	1.24E0
YB-COMP	Lead	1.19E1	2.3E-1
YB-COMP	Mercury	2E-1	1E-2
YB-COMP	Nickel	3.8E0	3.9E-1
YB-COMP	Zinc	1.52E3	1.17E1
YB-COMP	Total DDT	3E3	4.75E-1

Ecological Effects Level (see EPA Table 8a.1, Columns D & E)

Receptor: Adult Angler

Organism: Nereis virens

	Contaminant	Ecological Effect Level (mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Anthracene	3.75E3	3E-1
YB-COMP	Benzo(a)pyrene	8E3	9.65E-1
YB-COMP	PAH Total	1E4	1.17E1
YB-COMP	Total PCBs	4E3	1.11E1
YB-COMP	Aldrin	2.99E2	3E-2
YB-COMP	Dieldrin	4.37E0	2.44E-2
YB-COMP	Endosulfans	2.86E0	2.5E-2
YB-COMP	Arsenic	1.26E1	1.52E0
YB-COMP	Cadmium	3.03E0	2.34E-2
YB-COMP	Chromium	1.18E1	1.5E-1
YB-COMP	Copper	9.6E0	9.79E-1
YB-COMP	Lead	1.19E1	1.55E-1
YB-COMP	Mercury	2E-1	6.6E-3
YB-COMP	Nickel	3.8E0	3.35E-1
YB-COMP	Zinc	1.52E3	1.96E1
YB-COMP	Total DDT	3E3	6.26E0

FDA Level of Concern (see EPA Table 7a, Columns B & D)

Receptor: Adult Angler

Organism: Macoma nasuta

	Contaminant	FDA Level of Concern(mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Arsenic	8.6E1	2.69E0
YB-COMP	Cadmium	3.7E0	2.26E-2
YB-COMP	Chromium	1.3E1	2.34E-1
YB-COMP	Lead	1.7E0	2.3E-1
YB-COMP	Nickel	8E1	3.9E-1

FDA Level of Concern (see EPA Table 7a, Columns B & D)

Receptor: Adult Angler

Organism: Nereis virens

	Contaminant	FDA Level of Concern(mg/kg)	Steady State Corrected Mean Tissue Concentration (mg/kg)
YB-COMP	Arsenic	8.6E1	1.52E0
YB-COMP	Cadmium	3.7E0	2.34E-2
YB-COMP	Chromium	1.3E1	1.5E-1
YB-COMP	Lead	1.7E0	1.55E-1
YB-COMP	Nickel	8E1	3.35E-1

Selected Chemicals

Invertebrate Name Macoma nasuta

	YB-COMP
105	X
180	X
195	X
Acenaphthylene	X
Anthracene	X
Dibenzo(a,h)	X
Fluorene	X
Hexachlorobenzene	X
Naphthalene	X
PAH Total	X
Total PCBs	X

Invertebrate Name Nereis virens

	YB-COMP
28	X
4,4'-DDD	X
4,4'-DDE	X
52	X
Anthracene	X
Chrysene	X
Dibenzo(a,h)	X
Fluoranthene	X

	YB-COMP
Hexachlorobenzene	X
Indeno(1,2,3-c,d)	X
Naphthalene	X
PAH Total	X
Total Chlordanes	X
Total DDT	X
Total PCBs	X
cis-Chlordane	X
Zinc	X

Appendix D

Elutriate Chemistry Results

Yarmouth Boat Yard NAE-2008-02244			EPA WQC	YB Elutraite AVG	Q	YB Site Water AVG	Q	Lab Water AVG	Q
Parameter	CAS Number	Units							
Metals									
Arsenic	7440382	ug/L	69	0.93	J	0.58	J	0.14	U
Cadmium	7440439	ug/L	33	0.30	U	0.30	U	0.03	U
Hexavalent Chromium	18540299	ug/L	1100	1.50	U	1.50	U	1.50	U
Copper	7440508	ug/L	4.8	1.92	U	1.92	U	1.27	*
Lead	7439921	ug/L	210	1.72	UJ	1.72	UJ	0.17	UJ
Mercury	7439976	ug/L	1.8	0.01	U	0.01	U	0.01	U
Nickel	7440020	ug/L	74	2.78	U	2.78	U	5.37	
Selenium	7782492	ug/L	290	0.07	U	0.07	U	0.07	U
Silver	7440224	ug/L	1.9	0.82	U	0.82	U	0.08	U
Zinc	7440666	ug/L	90	17.1	U	17.1	U	7.7	J
Industrial Chemicals									
Pentachlorophenol	87865	ug/L	13	0.280	U	0.212	U	0.212	U
Pesticides									
4,4`-DDT	50293	ug/L	0.13	0.00011	U	0.00008	U	0.00008	U
Aldrin	309002	ug/L	1.3	0.00021	U	0.00016	U	0.00015	U
Alpha-Chlordane (cis)	5103719	ug/L		0.00010	U	0.00008	U	0.00007	U
Dieldrin	60571	ug/L	0.71	0.00005	U	0.00004	U	0.00004	U
Chlorpyrifos	2921882	ug/L	0.011	0.00010	U	0.00008	U	0.00007	U
Endosulfan I	959988	ug/L	0.034	0.00381	*	0.02340	J	0.00007	UJ
Endosulfan II	33213659	ug/L	0.034	0.00009	U	0.00007	U	0.00007	U
Endrin	72208	ug/L	0.037	0.00011	U	0.00008	U	0.00008	U
Gamma-Chlordane (trans)	5103742	ug/L		0.00005	U	0.00003	U	0.00003	U
Heptachlor	76448	ug/L	0.053	0.00007	U	0.00006	U	0.00005	U
Heptachlor epoxide	1024573	ug/L	0.053	0.00009	U	0.00006	U	0.00006	U
Lindane	58899	ug/L	0.16	0.00006	U	0.00005	U	0.00005	U
Toxaphene	8001352	ug/L	0.21	0.00329	U	0.00247	U	0.00242	U
Chlordane (alpha + gamma)	*SUMCHLOR*	ug/L	0.09	0.00015	U	0.00011	U	0.00010	U
PCBs									
PCB 008	34883437	ug/L		0.00009	U	0.00007	U	0.00007	U
PCB 018	37680652	ug/L		0.00012	U	0.00009	U	0.00009	U
PCB 028	7012375	ug/L		0.00012	U	0.00009	U	0.00009	U
PCB 044	41464395	ug/L		0.00008	U	0.00006	U	0.00006	U
(PCB 049)	41464408	ug/L		0.00006	U	0.00005	U	0.00005	U
PCB 052	35693993	ug/L		0.00007	U	0.00005	U	0.00005	U
PCB 066	32598100	ug/L		0.00009	U	0.00007	U	0.00007	U
(PCB 087)	38380028	ug/L		0.00012	U	0.00009	U	0.00009	U
PCB 101	37680732	ug/L		0.00014	U	0.00011	U	0.00010	U
PCB 105	32598144	ug/L		0.00010	U	0.00008	U	0.00007	U
PCB 118	31508006	ug/L		0.00008	U	0.00006	U	0.00006	U
PCB 128	38380073	ug/L		0.00010	U	0.00008	U	0.00007	U
PCB 138	35065282	ug/L		0.00007	U	0.00005	U	0.00005	U
PCB 153	35065271	ug/L		0.00004	U	0.00004	U	0.00003	U
PCB 170	35065306	ug/L		0.00011	U	0.00008	U	0.00008	U
PCB 180	35065293	ug/L		0.00009	U	0.00007	U	0.00007	U
(PCB 183)	52663691	ug/L		0.00010	U	0.00007	U	0.00007	U
(PCB 184)	74472483	ug/L		0.00009	U	0.00007	U	0.00007	U
PCB 187	52663680	ug/L		0.00006	U	0.00005	U	0.00005	U
PCB 195	52663782	ug/L		0.00005	U	0.00004	U	0.00004	U
PCB 206	40186729	ug/L		0.00012	U	0.00009	U	0.00009	U
PCB 209	2051243	ug/L		0.00006	U	0.00004	U	0.00004	U
Total PCBs	*SumNOAA18*	ug/L	0.03	0.00311	U	0.00234	U	0.00229	U

Notes

U: Compound was analyzed for but was not detected (non-detect)

J: Indicates an estimated value

* indicates average includes detects and non-detects

Non-detects are reported as 1/2 the MDL

Half the MDL was used for U-qualified values to calculate summary and average values

Yellow=exceedance of water quality criteria

Total PCBs were calculated using the NOAA 18 method

Total PCB WQC is for chronic exposure as no acute exposure value available