



# **Massachusetts Coastal Infrastructure Programmatic Environmental Assessment Compliance Checklist**

*Central Waterfront Bulkhead Project*

*Newburyport, Essex County, Massachusetts*

*LPDM-PJ-01-MA-2022-001*

*November 17, 2022*



**FEMA**

**U.S. Department of Homeland Security  
Federal Emergency Management Agency, Region 1  
99 High Street, Sixth Floor  
Boston, MA 02110**

## I. Project Information

<b>Coastal Flood and Erosion Mitigation Projects in Massachusetts</b>	Date: 11/17/22
<b>Assessment under the Coastal Flood and Erosion Mitigation Projects Programmatic Environmental Assessment (PEA) and Finding of No Significant Impact (FONSI)</b>  <i>*This form is designed to help FEMA review each project to determine if it should be covered by this PEA or whether another level of evaluation would be more suitable, including an SEA, a stand-alone EA, or an environmental impact statement. Project Proponents may also complete this form and submit to FEMA using the address at the end of this checklist.</i>	
<b>Disaster Description and Date:</b> N/A	
<b>Project Name and Project Number:</b> Newburyport – Central Waterfront Bulkhead Project City of Newburyport, Essex County, Massachusetts LPDM-PJ-01-MA-2022-001	
<b>Name and Contact Information of Person Completing this Form:</b> Brandon M Webb, CDM Smith, <a href="mailto:webbbm@cdmsmith.com">webbbm@cdmsmith.com</a> , 617.452.6142	

### Describe Purpose and Need for Action:

The purpose of the project is to reduce flooding within the central waterfront area of Newburyport along the shoreline of the Merrimack River. The project is needed as the current bulkheads are susceptible to overtopping and damage from high water and ice floes.

### Action(s) Proposed:

#### Hard Engineering Designs

- ☐ Revetments
- ☒ Bulkheads and Seawalls
- ☐ Levees/Berms
- ☐ Groins
- ☐ Wave Attenuators

#### Bioengineering Measures

- ☐ Bank Regrading/Stabilization
- ☐ Beach/Dune Restoration
- ☒ Marsh and Wetlands Creation, Restoration, or Enhancement

Other proposed activities not included above:

**Describe the No Action Alternative:**

Under the No Action alternative, there would be no federal financial assistance provided for bulkhead replacement. FEMA anticipates that, owing to budgetary constraints within the state and the community, the proposed flood mitigation work would remain unfunded or be deferred indefinitely. High waters and ice floes would continue to damage the current bulkhead, which could cause it to fail. Overtopping of the bulkhead from high waters and ice floes would result in flooding of the waterfront area of Newburyport. Damage to public facilities would continue to require temporary relocations of emergency operations services. This alternative would not meet the overall purpose and need.

**Describe the Proposed Action:**

The City of Newburyport proposes to reduce the risk of erosion and flood hazards by rehabilitating 1,100 feet of deteriorating bulkheads along the City's central waterfront. The project site is along the bank of the Merrimack River in Newburyport, MA, parallel to Merrimac Street and Water Street (approximate latitude and longitude: 42.812763, -70.868087 to 42.813122, -70.871296).

Rehabilitation activities would include:

- Driving fiber-reinforced polymer (FRP) sheet piles outshore of the old steel bulkheads
- Filling the void between the new FRP sheet piles and old steel piles with concrete
- Adding a new concrete cap at 10 feet NAVD88 in anticipation of sea level rise
- Installing new fender piles and steel mooring piles
- Improving the currently deteriorated East Steel Cells and Central Embayment Bulkheads along the Central Waterfront Area

On either end of the project, the rehabilitated bulkheads would connect to bulkheads previously rehabilitated in 2014. This would provide continuous protection along the City's Central Waterfront. The staging area would be landward of the bulkheads and would include a portion of the Newburyport Redevelopment Authority east parking lot off Ferry Wharf and the adjacent grassy area to the west of the lot.

Equipment for the project would include pile drivers, a crane located on a crane barge, and trucks. Materials would be primarily transported via trucks on the local roadway network; however, some materials may be transported to the project area by barge. Construction is anticipated to take 7 months and is proposed to occur from October to May.

**Describe Public/Agency Involvement to Date (if any):**

**PEA Public Notice:**

The draft PEA was made available for agency and public review and comment for a period of 30 days, from September 15, 2022, to October 15, 2022. An electronic copy was made available for review on FEMA's National Environmental Policy Act Repository at:

<https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa-repository>.

FEMA also sent a notification regarding the availability of the draft PEA for review and comment to the agencies who received the scoping document and published a Notice of Availability to the below newspapers.

Newspaper	Date NOA Published
Cape Cod Times	Wednesday – September 14, 2022
Taunton Daily Gazette	Wednesday – September 14, 2022
Bedford Standard Times	Wednesday – September 14, 2022
Boston Herald	Sunday – September 11, 2022
Herald Citizen	Thursday – September 15, 2022
Fall River Herald	Tuesday – September 13, 2022
The Daily News of Newburyport	Wednesday – September 14, 2022
Patriot Ledger	Wednesday – September 14, 2022
Gloucester Daily Times	Wednesday – September 14, 2022
Salem News	Wednesday – September 14, 2022

Articles describing the Newburyport – Central Waterfront Bulkhead Project were published on newburyportnews.com on February 3, 2022 and March 15, 2022.

**Consultations:**

- None

**List Required Permits, Approvals, or Authorizations and Status of Each:**

**Federal**

- Essential Fish Habitat (EFH) consultation with the National Marine Fisheries Service (NMFS), in process.
- Endangered Species Act (ESA) consultation with NMFS, in process.
- A Clean Water Act (CWA) 404 / Rivers and Harbors Act Section 10 permit, in process.

- National Pollution Discharge Elimination System (NPDES) permit, obtained after contract award.

## **State**

- Consultation with the Massachusetts State Historic Preservation Officer on August 9, 2022, with conditional response received on August 15, 2022.
- Massachusetts Department of Environmental Protection Bureau of Resource Protection – Wetlands WPA Form 5 permit. Obtained March 24, 2022.
- Approval or modification to Waterways license No. 194 pursuant to 310 CMR 9.22(3). Obtained April 6, 2022.
- Before construction begins, the Subapplicant must coordinate with the Massachusetts Office of Coastal Zone Management and obtain a favorable Coastal Zone Consistency Determination. The Subapplicant must comply with all terms and conditions of the issued Coastal Consistency Determination.
- Coordination with the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife for development and approval of the Sturgeon Protection Plan submitted March 3, 2022.
- Certificate of the Secretary of Energy and Environmental Affairs on the Notice of Project Change approval that project does not require an Environmental Impact Report pursuant to Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.10 of the MEPA regulations (301 CMR 11.00).

## **Local**

- Review and approval by the local floodplain development administrator or issuance of a local floodplain development permit that demonstrates that the Proposed Action is consistent with the criteria of the NFIP (44 C.F.R. part 59 et seq.) or any more restrictive federal, state, or local floodplain management standards (44 C.F.R. 9.11(d)(6)) and comply with all terms and conditions of the issued permit (in process).

## II. Analysis of Environmental Consequences

For each resource, confirm that the potential effects of the proposed project are described in the PEA and that mitigation measures described in the PEA will be applied to the project. Review the Additional Impacts Questionnaire (Section III) and document any additional impacts and proposed mitigation for those additional impacts. Determine whether the combination of potential effects described in the PEA and any additional impacts would result in significant impacts after mitigation measures are applied. Review the thresholds found in Table 6.1 of the PEA and determine whether the PEA would apply. If there are additional impacts related to a particular resource, a Supplemental EA (SEA) may still need to be prepared even if the PEA thresholds are not exceeded. An SEA may focus on only the resource(s) with the additional impacts.

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Geology, Topography, and Soils	Minimal ground disturbance would occur at the staging area and use of a vibratory hammer would minimize soil disturbance during pile driving. The Proposed Action is the retrofit of an existing bulkhead and would not require a sediment transport impact analysis. The Proposed Action is exempt from the Farmland Protection Policy Act (FPPA).	None	The Subapplicant would implement applicable best management practices (BMPs) as described in all required permits to minimize construction impacts.	Yes; in accordance with BMPs as required in permits.	Yes



Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Air Quality	The Proposed Action is in Essex County, which is currently in attainment for all criteria pollutants. The project is not expected to cause long-term air quality impacts or be a source of new emissions. Minor short-term impacts would be anticipated from the operation of vehicles and equipment to construct the project. Any short-term air quality impacts would meet <i>de minimis</i> thresholds and would not require a conformity analysis. There would be no long-term impacts from operation of the bulkhead and no new long-term source of air emissions.	None	None	Not applicable	Yes
Climate Change	The Proposed Action would have negligible short-term impacts related to greenhouse gas emissions from the operation of vehicles and equipment during construction. These emissions would be temporary and less than exceedance levels.  The Proposed Action would increase the height of the bulkhead, protecting the development within the harbor area of Newburyport from climate change related flooding, including sea level rise and increased storm surges.	None	None	Not applicable	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Water Quality and Surface Waters	In-water work is required that could have an impact on the water quality of the Merrimack River. The Subapplicant will obtain authorization from USACE for project activities occurring within waters of the U.S. pursuant to Section 404 of the CWA (in process) and Section 10 of the Rivers and Harbors Act. CWA compensatory mitigation would not be required.	None	Comply with all BMPs listed in the Massachusetts Department of Environmental Protection (MassDEP) Bureau of Resource Protection – Wetlands WPA Form 5 permit, approval, or modification to Waterways license No. 194, and the forthcoming USACE and NPDES permits.	Yes, in accordance with BMPs as required in permits.	Yes
Floodplains	According to the FEMA National Flood Hazard Layer map, portions of the project area are within Zone AE and a floodway as shown on FIRM panel 25009C0128F, dated July 3, 2012. The 8-step review process has been conducted in compliance with Executive Order 11988 and the Proposed Action is the only practicable alternative.	None	Compliance with all BMPs in the forthcoming local floodplain development permit would reduce impacts on the floodplain	Yes, in accordance with BMPs as required in permits.	Yes
Wetlands	Examination of the National Wetlands Inventory map and the underlying aerial photography did not identify any potential wetlands within or adjacent to the project area.	None	None	Not applicable	Yes
Wild and Scenic Rivers	The closest Wild and Scenic River is Lamprey River approximately 18 miles northwest of the project site. Based on the distance to the project, implementation of this project would have no direct or adverse impacts on Wild and Scenic Rivers.	None	None	Not applicable	Yes



Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Navigation	The new bulkhead would not extend into the navigation channel and would therefore not have an impact on navigation. While there would be work within the water during construction, navigation within the channel is permissible and impacts would be temporary. In addition, the Subapplicant is responsible for consulting with USACE in compliance with the River and Harbors Act. If consultation determines a Section 10 Permit is required, the Subapplicant must comply with any project conditions.	None	None	Not applicable	Yes
Coastal Zone Management Act	The Proposed Action is within the Massachusetts Coastal Zone. A favorable Coastal Zone Consistency Determination with the Massachusetts Office of Coastal Zone Management (MA CZM) would be required.	None	Compliance with all conditions and BMPs from the Coastal Zone Consistency Determination would ensure the project is consistent with Massachusetts coastal policy described in the <i>Massachusetts Coastal Management Policy Guide</i> .	Yes; consultation is required with MA CZM. Concurrence that project is consistent with state coastal zone management plan is required as a condition of the grant.	Yes
Coastal Barrier Resource Act	The Proposed Action is not in or near a Coastal Barrier Resource System zone or an Otherwise Protected Area and would therefore have no impact.	None	None	Not applicable	Yes

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Vegetation	No vegetation would be removed for construction of the Proposed Project. Minimal disturbance of an existing grassy area may occur for staging and the area would be restored after construction.	None	None	Not applicable	Yes
Fish and Wildlife	<p>The project area is highly developed and would not disturb any wildlife species not otherwise adapted to an urban environment and levels of human activity typical of a busy waterfront. Any disturbance to wildlife would be temporary during construction.</p> <p>There are numerous migratory bird species with the potential to occur in or near the project area. However, there would be no vegetation removal that could affect potential nesting habitat.</p> <p>Vibratory pile driving could disturb fish species, causing individuals to alter their behavior and resulting in an adverse effect. However, this would be a short-term minor adverse effect with implementation of the following measures:</p> <ul style="list-style-type: none"> <li>• Time of Year Restriction: No noise-producing in-water work would be conducted between April 1 and July 15 to protect pre-spawning female sturgeon.</li> <li>• Avoidance of Damaging Sound Levels: A vibratory hammer would be used to drive the piles into the sediment. There would be no use</li> </ul>	None	Compliance with avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from the ESA and EFH consultations with NMFS would minimize impacts on fish.	Yes, apply avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from consultation with NMFS.	Yes

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	<p>of an impact hammer, which would produce a significantly louder sound and stronger vibrations within the project site.</p> <ul style="list-style-type: none"> <li>• Vibratory hammers would use a “soft start” on the pile hammer to “ramp up” noise and vibrations without reaching levels that could constitute a hazard for sturgeon or other fish. This would stimulate instinctual predator avoidance behavior and would allow any fish within the project area to leave the area before the piles are driven into the sediment.</li> </ul> <p>Pile installation would temporarily increase turbidity within approximately 300 feet of the construction area (i.e., the action area). Given existing conditions in the action area, including frequent disturbance of bottom sediments from propwash, tidal flushing, and flow reversals, increased turbidity would be a short-term minor adverse effect on fish and benthic macroinvertebrate communities.</p> <p>There is potential for entrapment of fish between the existing bulkhead and the new sheetpile walls. This would be a short-term minor adverse effect with implementation of the following measures:</p> <ul style="list-style-type: none"> <li>• Spaces between the old and new sheet piles would remain open allowing for any</li> </ul>				

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	<p>individuals between the walls to leave the area before permanent entrapment could occur.</p> <ul style="list-style-type: none"> <li>• Tapping sound / vibration dissuasion method with a mallet would be used to stimulate predator avoidance behaviors and ensure that no fish are trapped between the sheet piles before the space between the old and new bulkhead is closed off and filled with concrete.</li> </ul> <p>There would be permanent loss of approximately 3,950 square feet of habitat. This would be a long-term minor adverse effect given the already modified shoreline (existing bulkheads and timber boardwalk) and the lack of sensitive habitats such as eelgrass beds or intertidal rocky habitats in the project area.</p>				
Invasive Species	The Proposed Project would not include ground-disturbing activities that could result in the spread of invasive species.	None	None	Not applicable	Yes

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Threatened and Endangered Species	The NMFS Greater Atlantic Region Section 7 ESA Mapper identified four species with potential to occur, including the North Atlantic right whale ( <i>Eubalaena glacialis</i> ), endangered, the fin whale ( <i>Balaenoptera physalus</i> ), endangered, the shortnose sturgeon ( <i>Acipenser brevirostrum</i> ), endangered, and the Gulf of Maine Distinct Population Segment of Atlantic sturgeon ( <i>Acipenser oxyrinchus oxyrinchus</i> ), threatened. In addition, the action area is within designated critical habitat for Atlantic sturgeon. There would be no effect on the two whale species as neither occur in the proposed action area. Based on the analysis conducted for ESA consultation with NMFS, the Proposed Action may affect, but is not likely to adversely affect shortnose sturgeon and Atlantic sturgeon, and critical habitat for Atlantic sturgeon with implementation of the Sturgeon Protection Plan and any additional measures resulting from the ESA and EFH consultations with NMFS.	None	Compliance with avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from the ESA and EFH consultations with NMFS would minimize impacts on listed species.	Yes, apply avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from consultation with NMFS.	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Essential Fish Habitat	The Proposed Action is within designated EFH and in-water work would result in short-term minor adverse effects on EFH from underwater noise, turbidity, and disturbance of the benthic community. There would be a long-term minor adverse effect on EFH from the permanent loss of approximately 3,950 square feet of estuarine habitat in the project footprint. Based on the analysis conducted for EFH consultation with NMFS, the adverse effect on EFH would be minor with implementation of measures outlined in the Sturgeon Protection Plan and any additional measures resulting from the ESA and EFH consultations with NMFS.	None	Compliance with avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from the ESA and EFH consultations with NMFS would minimize impacts on EFH.	Yes, apply avoidance and minimization measures outlined in the Sturgeon Protection Plan and any additional measures resulting from consultation with NMFS.	Yes



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Cultural Resources	FEMA has complied with Section 106 of the National Historic Preservation Act. FEMA has consulted with the State Historic Preservation Officer (SHPO) in accordance with the Programmatic Agreement Among the Federal Emergency Management Agency, the Massachusetts SHPO, and the Massachusetts Emergency Management Agency executed on December 12, 2018 recommending a Phase 1A archaeological investigation of the APE for in water work and a Phase 1B intensive locational for work near or on the boardwalk and staging area on August 9, 2022.  SHPO responded on August 15, 2022, that an archaeological investigation was not required, and FEMA's letter stating a finding of No Historic Properties Affected is in progress.	None	None	Not applicable	Yes
Land Use and Zoning	The Proposed Action would not result in temporary or permanent changes in land use or cause a conflict with the local zoning ordinance or a general plan. The Subapplicant would be responsible for compliance with any local ordinances and plans and obtain any required conditional use permits, zoning variances, or other legal requirements.	None	None	Not applicable	Yes

Resource	Document Project Effects and Mitigation that Conform with PEA	Document Additional Impacts <i>*See Section III. Additional Impact Questionnaire</i>	Describe Mitigation for Additional Effects and/or Results of Consultations (if Applicable)	Would Mitigation and/or Consultation Reduce Effects to a Less than Significant Level? (Yes/No)	Does PEA Coverage Apply? (Yes/No)
Noise	Temporary noise impacts may occur from the use of construction equipment, including vibratory pile drivers, as well as increased sound associated with work crews/personnel. A vibratory hammer would be used to drive the piles into the sediment. There would be no use of an impact hammer, which would produce a significantly louder sound and stronger vibrations within the project site. Vibratory hammers would use a “soft start” on the pile hammer to “ramp up” noise and vibrations. Impacts would be minimized by following all federal, state, and local noise regulations.	None	All construction activities must conform to federal, state, and local noise regulations.	Yes, construction activities must conform to local noise ordinances.	Yes
Traffic and Transportation	Construction-related traffic and movement of equipment and materials would result in short-term negligible impacts on traffic and transportation. Most of the material would be transported to the project area via barge and thus impacts on surrounding road systems would be minimal. Construction work would be off-road and not require lane closures.	None	None	Not applicable	Yes

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Public Services and Utilities	Work would require temporary disconnection of harbor lights and boat ramps. Disconnection would not interrupt service to the surrounding area as long as all local ordinances regarding shutdown procedures are complied with. There would be no impact on citywide public services and utilities.  Implementation of the project would benefit public services in the long-term by reducing potential impacts from future floods.	None	Subapplicant to follow all local ordinances regarding electrical shutdown procedures (Newburyport Ordinances Section 5-114 – 5-130).	Yes, in accordance with BMPs as required.	Yes
Public Health and Safety	Implementation of the project would benefit public health and safety in the long-term by reducing impacts from future floods.	None	None	Not applicable	Yes
Environmental Justice	There are no low-income or minority populations within or adjacent to the project area and, therefore, the Proposed Action would have no disproportionate and adverse effect on EJ populations. Work would be done within the harbor area and would not impact any nearby EJ populations because impacts related to noise, traffic, and air quality would be localized.	None	None	Not applicable	Yes

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Hazardous Materials	Construction would require the use of motorized equipment and vehicles. The use of motorized equipment or vehicles could result in the accidental release of petroleum-based materials.	None	<p>If hazardous materials (or evidence thereof) are discovered during the implementation of the project, the Subapplicant must handle, manage, and dispose of petroleum products, hazardous materials, and/or toxic waste in accordance with applicable local, state, and federal regulations.</p> <p>During construction, the Subapplicant and/or their Contractor must notify MassDEP of any sudden release or spill of any chemical (either oil or a hazardous material), that exceeds the threshold for a Reportable Quantity in compliance with the Massachusetts cleanup regulations (310 CMR 40.1600). The Massachusetts Oil and Hazardous Materials List (MOHML) provides the levels that trigger notification to MassDEP. Copies of correspondence with MassDEP must be forwarded to the state and FEMA for inclusion in the administrative record.</p>	No	Yes

### III. Additional Potential Effects Questionnaire

Additional effects may include 1) exceedance of thresholds described in this questionnaire and/or 2) effects not covered by the PEA and don't exceed thresholds. The questions below are designed to help identify any potential additional effects. If the answer to a given question is 'Yes', additional impacts may occur and should be described in an attachment and summarized in Section II.

If additional impacts not fully described in the PEA may occur, then an SEA, an EA, or an EIS might need to be prepared. An SEA may be a brief document focusing on only the specific additional impact(s) identified.

#### Geology, Topography, and Soils

Would the proposed project impact a shoreline with exposed bedrock? **No**

Would the proposed project have an adverse effect on soils protected by the Farmland Policy Protection Act? **No**

Would the proposed project cause downdrift erosion or deposition of sediments across jurisdictional boundaries?<sup>1</sup> **No**

#### Air Quality

Would the proposed project result in new long-term source(s) of air emissions? **No**

Is the proposed project in a nonattainment or maintenance area using the latest EPA Greenbook status? **No**

Would the proposed project involve many truck trips or a long duration of heavy equipment operation? **No**

If yes to both, a determination on whether the proposed project would exceed *de minimis* thresholds should be performed.<sup>2</sup>

#### Climate

Would the proposed project result in new long-term source(s) of greenhouse gas emissions? **No**

Would the project release more than 25,000 metric tons of greenhouse gases per year?<sup>3</sup> **No**

#### Water Quality

Would the proposed project cause or contribute to long-term impacts on water quality? **No**

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<sup>1</sup> Cross-jurisdictional impacts from downdrift erosion may occur in cases where a jurisdictional boundary is located downstream from the proposed project area at a distance of less than four times the length of the proposed shore-parallel structure (if a seawall, bulkhead, or revetment) or five times the length of a proposed shore-perpendicular structure (if a groin, jetty, or breakwater).

<sup>2</sup> The prescribed *de minimis* annual rates are less than 50 tons of volatile organic compounds (VOCs), 100 tons of nitrogen oxides (NOX) (O3 precursors), and 100 tons of PM2.5, SO2, or NOX (PM2.5 and precursors).

<sup>3</sup> For example, a project that would involve many truck trips or a long duration of heavy equipment operation may approach air emissions thresholds.

Would the proposed project impact water quality in such a way that TMDLs would be exceeded? **No**

Would the proposed project require compensatory mitigation under Clean Water Act Section 404 regulations? **No**

Is the proposed project over any designated sole source aquifer? **No**

If yes, what potential effects to the aquifer would occur from the project? **N/A**

#### Floodplains

Would the proposed project adversely affect floodplains as determined through the 8-step process? **No**

If yes, would state and federal regulatory agencies likely require compensatory mitigation for those adverse effects? Would the proposed project adversely impact floodplain outside of the project area? **N/A**

#### Wetlands

Would the proposed project adversely affect wetlands as determined through the 8-step process? **No**

If yes, would state and federal regulatory agencies likely require compensatory mitigation for those adverse effects? **N/A**

Would the proposed project indirectly impact wetlands through the separation of tidal wetlands from oceanic and tidal influence? **No**

Would the proposed project result in the loss of downdrift wetlands? **No**

#### Wild and Scenic Rivers

Would the proposed project have a potential effect on water quality or water resources, visual and scenic resources, and/or vegetation, fish, and wildlife habitats within a Wild and Scenic Rivers area? **No**

#### Navigation thresholds

Would the proposed project have long-term impacts on navigation other than those associated with breakwaters, groins, or jetties?<sup>4</sup> **No**

Would a structure be placed in or immediately adjacent to a navigation channel that could interfere with navigation? **Project is adjacent to a navigation channel along the bulkhead. While there would be work within the water via a barge, navigation within the channel is permissible. In addition, the Subapplicant is responsible for consulting with USACE in compliance with the River and Harbors Act. If consultation determines a Section 10 Permit is required, the Subapplicant must comply with any project conditions.**

#### Coastal Resources

Would the proposed project have a permanent adverse effect on coastal resources inconsistent with MA CZM policies? **No**

Would the proposed project have an adverse effect on Coastal Barrier Resource Systems or Otherwise Protected Areas? **No**

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<sup>4</sup> A project may have additional adverse effects on navigation if project activities or structures would obstruct navigation channels or navigational aids, even in the short term.



Vegetation

Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all vegetation species in the project area? **No**

Fish and Wildlife

Would the proposed project have an adverse effect such that it would reduce populations levels of native species or sufficient habitat would not remain to maintain the viability of all fish and wildlife species in the project area? **No.**

Would the proposed project affect Bald Eagle nesting areas or winter roosts? **No**

Would vegetation be removed during the migratory bird nesting/breeding season? **No**

Threatened and Endangered Species

Would the determination of effect under Section 7 of the Endangered Species Act be “may affect, likely to adversely affect?” **No**

Cultural Resources

Has FEMA made, or is it expected to make, an Adverse Effect determination that would be resolved through state-specific Programmatic Agreement Treatment Measures or a memorandum of understanding with the SHPO, THPO, or other consulting parties? **No**

Land Use and Zoning

Is the proposed project or location inconsistent with existing land use policies and plans? **No**

Would the project result in effects such that a community would need to revise its land use plan (e.g., revise the zoning to increase setbacks to account for down-drift erosion)? **No**

Noise

Would the proposed project generate new long-term source(s) of noise? **No**

Would the proposed project require pile driving? **Yes**

If yes, are the piles being driven with an impact or vibratory hammer; and would the noise impacts be more than moderate after mitigation measures are employed? **No. Piles would be driven with a vibratory hammer. Construction activities must conform to local noise ordinances. Following the location ordinance conditions noise impacts would be short-term and minor after implementation of the following mitigation measures (also described in Section II):**

- **Time of Year Restriction:** No noise-producing in-water work would be conducted between April 1 and July 15 of any year. Sturgeon spawning in the Merrimack River occurs upstream of the Newburyport project site in Haverhill, 16 miles away. Limiting noise-producing work during this time of year should ensure the protection of pre-spawning females for the duration of the project.
- **Avoidance of Damaging Sound Levels:** A vibratory hammer would be used to drive the piles into the sediment. There would be no use of an impact hammer, which would produce a significantly louder sound and stronger vibrations within the project site.

- **Vibratory hammers would use a “soft start” on the pile hammer to “ramp up” noise and vibrations without reaching levels that could constitute a hazard for the sturgeon. This would stimulate instinctual predator avoidance behavior and would allow any fish within the project area to leave the area before the piles are driven into the sediment.**

Traffic and Transportation

Would the proposed project have long-term impact(s) on traffic and transportation? **No**

Public Services and Utilities

Would the proposed project have long-term impact(s) on public services and utilities, including a permanent loss or major rerouting of utilities? **No**

Public Health and Safety

Would the proposed project have long-term adverse effects on public health and safety, such as a permanent source of emissions or permanent reduction of water quality? **No**

Environmental Justice

Is there an environmental justice population in or adjacent to the proposed project area and would there be adverse impacts on those populations such that outreach and coordination to resolve potential adverse impacts would be required? **No**

Hazardous Materials

Would the proposed project involve the release of hazardous materials? **No**

Has a phase I or II environmental site assessment indicated that contamination exceeding reporting levels is present in or near the project area and further action is warranted? **No**

*For Project Proponents completing this checklist:* Upon completion, submit this checklist and all attachments to FEMA EHP.