Section 404(b)(1) Evaluation

USACE LRB Pultneyville East and West Piers AE Effort Project

Pultneyville Harbor, Town of Williamson, New York

Section 404(b)(1) of the Clean Water Act (33 USC 1344) requires that discharge sites and dredged fill material proposed for discharge into waters of the United States be evaluated through the application of guidelines developed by the Administrator of the U.S. Environmental Protection Agency (USEPA) in conjunction with the Secretary of the Army. The purpose of this Section 404(b)(1) Evaluation is to assess any affect that may result from placing fill material into a water of the United States, pursuant to Section 404 of the Clean Water Act.

1.0 PROJECT DESCRIPTION

1.1 Location

Pultneyville Harbor is a small boat harbor on the south shore of Lake Ontario approximately 10 miles west of Great Sodus Bay and 21 miles east of Rochester Harbor. Salmon Creek exits into Pultneyville Harbor and the harbor empties into Lake Ontario.

1.2 General Description

The Project is intended to restore structural integrity and improve long-term stability of the piers by placing new armor stone along the existing structures. Both piers are rubble mound structures. The repair of the West Pier is approximately 300 feet long and is tied into the existing structure at station 2+25 and consists of armor stone only. The repair of the East Pier is approximately 500 feet long and starts at Station 0+00 and is built with armor stones on top of underlayer stones at the center of the structure. Lower spots will be filled with bedding material (fine stone) before placing the underlayer stone. Armor stone will be a minimum of 3 feet in diameter with an average specific gravity of 2.64, weighing a minimum of 6 to 8 tons. The crest will be approximately 12 feet wide and have side slopes of 1:2. The existing timber structure in both piers is to remain in place due to its historical significance to the area.

1.3 Authority and Purpose

The harbor was originally authorized by the River and Harbor Act of 1827. It was later modified and authorized under the River and Harbor Acts of 1870. The two piers were then constructed in 1872 and 1894. These acts collectively empower the USACE to maintain and improve the navigable waters across the United States.

The original 19th century piers had decayed significantly by 1919. By the 1930's most of the timber pier structure had been washed away, leading to the removal of 404 ft of the West Pier and 167 ft of the East Pier. No further maintenance of the structures has occurred since this 1934

removal until 2021. In August 2021, the Pultneyville Yacht Club received permission (Section 408) from USACE Buffalo District to repair the westerly (landward end) 200 feet of the Pultneyville Harbor West Pier. The design of this repair work consisted of placing 6-8 ton base course stones, 3-5 ton upper level stones, and smaller rip-rap fill stone along the flat crest, extending over the existing western end of the western pier.

1.4 General Description of Fill Materials

1.4.1 General Characteristics of Material

Materials used for the repairs of the piers will consist of armor stone, underlayer stone, and bedding stone. Materials shall comply with the sizes listed in the technical drawings and with Unified Facilities Guide Specifications (UFGS) section 31 00 00.

1.4.2 Quantity of Material

Structure	Start Station	End Station	Length (ft)	Bedding	Crestline Distance	Underlayer (Tons)	Underlayer (Cubic Yards)	Armor (Tons)	Armor (Cubic Yards)	Approx. Tons/LF
West Pier	2+25	5+25	300	No	9	0	0	2,532	1,935.8	8.4
East Pier	0+00	5+25	525	No	4.5	679	519.1	5,119	3,913.6	9.8
Total repair			825			679	519.1	7,651	5,849.4	18.2

1.4.3 Source of Material

The primary material used to construct the project would be locally sourced new quarried stone that conforms to NYSDOT requirements.

1.5 Description of the Proposed Discharge Site

1.5.1 Location

The discharge location consists of the West and East Piers as described in sections 1.1 and 1.2.

1.5.2 Size

The area of construction encompasses about 825 linear feet.

1.5.3 Type of Site

The area is located along the southern shore of Lake Ontario. The harbor appears to be in a potential alluvial delta at the north end of Salmon Creek. Each pier footprint is to be comprised of remnants from the historical piers.

1.5.5 Timing and Duration of Discharge

Pier repair will occur as budget and scheduling allows. Construction is anticipated to take place over a four month period.

1.6 Description of Discharge Method

Construction will take place in two stages. The first stage includes stone layers being placed from south to north using a crane positioned on a barge. The second phase will consist of the upper stone layers being placed from south to north by an excavator operating from on top of the pier.

2.0 Factual Determinations

The construction materials to be used are chemically inert and physically immobile under existing conditions. These characteristics eliminate the possibility of chemical-biological interaction and any testing specified under Section 230.61 is not applicable in this instance.

2.1 Physical Substrate Determinations

2.1.1 Substrate Elevation and Slope

The crest height of the rubble mound overlay repair is +5.0 feet LWD for both piers. The elevation of the lakebed along the lakeside face of the west pier ranges from -4.3 feet LWD to -2.3 feet LWD on average. The elevation of the lakebed along the channel side face of the west pier ranges from -4.3 to 0 feet LWD on average.

The elevation of the lakebed along the lakeside face of the east pier ranges from -3 to 2 feet LWD on average. The elevation of the lakebed along the channel side face of the east pier ranges from -5.8 to 0.7 feet LWD. The shallow areas are near the shore with the lakebed elevation dropping as the piers continue north.

2.1.2 Sediment Type

Lakebed substrates in the harbor consist of fine grained sediments likely deposited by Salmon Creek. Project area substrate consists of historic debris including timber and rock from the original piers.

2.1.3 Fill Material Movement

The minimum stone size required for this project is 3 feet in diameter as is standard practice in the Great Lakes on rubble mound structures. This size was chosen to provide resilience to dynamic ice forces as well as wave conditions. Repairs from 1934 did not have documented evidence of foundation issues. Additionally, the local repair which is larger than the proposed repair, has not shown evidence of foundation settlement. Foundation settlement and material movement beyond the project area is unlikely.

2.1.4 Physical Effects on Benthos

Placement of the large stone units and the associated resettling of suspended sediments could initially smother some benthic organisms in the vicinity of the project area. Recolonization of these areas by benthos from the surrounding bottom substrate would likely occur rapidly following completion of construction and resettling of sediment. Such impacts would be minor, and short-term.

2.1.5 Other Effects

Some compaction of the existing substrate may occur as a result of the project construction.

2.1.6 Actions Taken to Minimize Impacts

Stone sizes for the proposed pier repair have been selected to provide the required protection from wave action and remain stable under anticipated conditions.

2.2 Water Circulation and Salinity Determinations

2.2.1 Water

a) Salinity – Not applicable.
b) Water Chemistry – No significant effect.
c) Clarity – Construction activities would result in a short-term, localized, increase in turbidity and suspended solids.
d) Color – Water color in the project area could be temporarily altered during construction activities due to increased turbidity and suspended solids. Impacts would be minor and short-term.
e) Odor – No significant effect.
f) Taste – No effect.
g) Dissolved Gas Levels – No effect.
h) Nutrients – No effect.
i) Eutrophication – No effect.

2.2.2 Current Patterns and Circulation

a) Current Pattern and Flow – No effect.
b) Velocity – No effect.
c) Stratification – The project will raise the bottom elevation of the lakebed within the project area, reducing stratification of the lake in project area.
d) Hydrologic regime – No effect.

2.2.3 Normal Water Level Fluctuations

No effect.

2.2.4 Salinity Gradients

Not applicable.

2.2.5 Actions Taken to Minimize Impacts

The contractor would be required to limit construction activities to occur within the project area and completing construction in compliance with design requirements.

2.3 Suspended Particulate/Turbidity Determinations

2.3.1 Effects on Chemical and Physical Properties of the Water Column

a) Light Penetration – Increased turbidity and suspended solids would decrease light penetration in the project area. These impacts would be minor and short-term.
b) Dissolved Oxygen – No significant effect.
c) Toxic Metals and Organics – No significant effect.
d) Pathogens – No effect.
e) Aesthetics – Increased turbidity and suspended solids would decrease the aesthetic quality of the water within the project area These impacts would be minor and short-term.

2.3.2 Expected Changes in Suspended Particulates and Turbidity in the Vicinity of the Placement Site

Construction activities can result in minor, short-term increases in turbidity and suspended solids. The plume will likely dissipate before spreading outside of the project area.

2.3.3 Effects on Biota

a) Primary Production and Photosynthesis – Aquatic macrophytes have not been identified in the project area but periphytic algae are present. The potential short-term increase in turbidity during construction activities may cause a disruption in primary production and photosynthesis. If present, macrophytes and algae will potentially be smothered by the placement of the stones but will likely grow back quickly under post construction conditions.
b) Suspension/Filter Feeders – The potential increase in localized turbidity from construction activities may temporarily disrupt filter feeders. These impacts are expected to be minor and short-term.
c) Sight Feeders – The potential increase in localized turbidity from construction activities may temporarily disrupt sight feeders. These impacts are expected to be minor and short-term.

2.3.4 Actions Taken to Minimize Impacts

The contractor would be required to limit construction activities to occur within the project area and completing construction in compliance with design requirements.

2.4 Contaminant Determinations

Construction materials would not introduce or increase any contaminants.

2.5 Aquatic Ecosystems and Organisms Determinations

2.5.1 Effects on Plankton

Minor, short-term impacts due to increased localized turbidity and suspended sediments would be expected for plankton species. Typical conditions would return after construction activities have been completed.

2.5.2 Effects on Benthos

Placement of the stone and the associated resettling of suspended sediments could initially impact some benthic organisms in the vicinity of the project area. Recolonization of these areas by benthos from the surrounding bottom substrate would likely occur rapidly post construction completion. Impacts are expected to be minor and short-term.

2.5.3 Effects on Nekton

Independently swimming species would be able to avoid the project area during construction activities. No impacts to nekton are expected.

2.5.4 Effects on Aquatic Food Web

Only minor, short-term effects on the food web are expected in the project area. These effects are due to the impacts noted to benthic species as well as the periphytic algae. Rapid re-colonization of the project site is anticipated.

2.5.5 Effects on Special Aquatic Sites

a. Sanctuaries and Refuges – Not applicable.
b. Wetlands – Not applicable.
c. Mud Flats – Not applicable.
d. Vegetated Shallows – Not applicable.
e. Coral Reefs – Not applicable.
f. Riffle and Pool Complexes – Not applicable.

2.5.6 Threatened and Endangered Species

Based on the review of available environmental data and information provided by the U.S. Fish and Wildlife Services Information for Planning and Consultation (IPaC), it has been determined that the proposed project would not affect any species proposed or designated by the U.S. Department of the Interior as threatened or endangered, nor would it affect the critical habitat of any such species. The proposed project lies within the range of the federally endangered Northern Long-eared bat (*Myotis septentrionalis*), the federally proposed endangered Tricolored Bat (*Perimyotis subflavus*), the Monarch Butterfly (*Danaus plexippus),* and the protected bald eagle (*Haliaeetus leucocephalus*). There are no suitable roost trees located in the project area. Also, there are no records of bald eagles nesting near the project area. Therefore, unless additional information indicates otherwise, no further consultation pursuant to Section 7 of the Endangered Species Act Amendments of 1978 would be undertaken with the U.S. Fish and Wildlife Service.

2.5.7 Other Wildlife

Construction equipment may cause short-term, minor disturbance to local wildlife and may cause wildlife to avoid the project area temporarily. These impacts would be minor and only present during the duration of construction activities.

2.5.8 Actions Taken to Minimize Impacts

The contractor would be required to limit construction activities to occur within the project area, taking care to minimize the potential for any accidental spills. If a spill were to occur the contractor would need to take appropriate actions to remedy the spill.

2.6 Proposed Discharge Site Determinations

2.6.1 Mixing Zone Determination

A mixing zone determination would not be applicable for this project as the proposed pier repair materials are inert.

2.6.2 Determination of Compliance with Applicable Water Quality Standards

The proposed placement of stone would comply with the State of New York's Water Quality Standards. The placement would not introduce harmful or toxic conditions or substances. Upon NYSDEC's favorable review of this Section 404(b)(1) Evaluation and Section 401 application, a Section 401 Water Quality Certification or waiver thereof would be granted.

2.6.3 Potential Effects on Human Use Characteristics

a. Municipal and Private Water Supply – No effect.
b. Recreational and Commercial Fisheries – Proposed construction activities would temporarily deter recreational fishing. These impacts would be minor and short-term.
c. Water-Related Recreation – Proposed construction activities would temporarily prohibit water-related recreational activities. These impacts would be minor and short-term.
d. Aesthetics – Construction activities would diminish the aesthetic quality of the project area due to the equipment and increased turbidity and suspended solids. These impacts would be minor and short-term.
e. Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves – No effect.

2.7 Determination of Cumulative Effects on the Aquatic Ecosystem

No long-term or major impacts on the aquatic ecosystem are expected as a result of the proposed action.

2.8 Determination of Secondary Effects on the Aquatic Ecosystem

No effect.

2.9 Public Coordination

A Section 404(a) Public Notice was distributed to applicable state and federal agencies, local officials, and Indian nations in XXXX 202X. No comments were received regarding this public notice.

2.9.1 Public Comments

To be completed later.

FINDING OF COMPLIANCE

USACE LRB PULTNEYVILLE EAST AND WEST PIERS AE EFFORT PTOJECT
PULTNEYVILLE HARBOR, TOWN OF WILLIAMSON

WAYNE COUNTY, NEW YORK

1. No significant adaptations of the Section 404(b)(1) guidelines were made relative to this evaluation.
2. A "No Action Plan" was considered. This alternative was removed from consideration, as the structural integrity of the structure would continue to degrade, commercial and recreational navigation could be negatively affected, and could potentially result in adverse impacts on navigation and public safety.
3. The planned placement of fill materials at the project site would not violate any applicable State water quality standards. The construction operation would not violate the Toxic Effluent Standards of Section 307 of the Clean Water Act.
4. Use of the selected fill site would not harm any threatened or endangered species or their designated critical habitat.
5. The proposed placement of fill material would not result in significant adverse effects on human health and welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife, or special aquatic sites. The life stages of aquatic life and other wildlife should not be adversely affected. No significant adverse effects on aquatic ecosystem diversity, productivity and stability, or recreational, aesthetic and economic values would occur.
6. Appropriate steps to minimize potential adverse impacts of the discharge on aquatic systems would be taken. During construction, the contractor would be required to minimize turbidity and accidental spills of fuels, oils, and/or greases, and take appropriate actions in the event of a release.
7. On the basis of the guidelines, the proposed site for the discharge of fill materials is specified as complying with these guidelines.
8. No comments were received from the 404(a) Public Notice.

9. The preferred alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA) per 40 CFR 230.10(a).