

**Environmental Assessment
Appendix H:
Section 404(b)(1) Guidelines Evaluation**



**U.S. Army Corps of Engineers
New York District**

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APPENDIX H
SECTION 404(b)(1) GUIDELINES EVALUATION

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This appendix presents a Section 404(b)(1) Guideline evaluation for the consolidated implementation of previously authorized harbor navigation improvement projects¹. A Section 404(b)(1) Guideline evaluation for the New York and New Jersey Harbor Navigation Project was documented in the *New York and New Jersey Harbor Navigation Feasibility Report*² (the *Feasibility Report*).

This evaluation is based on the regulations found at 40 CFR 230, Section 404(b)(1): Guidelines for Specification of Disposal Sites for Dredged or Fill Material. The regulations implement Sections 404(b) and 501(a) of the Clean Water Act, which govern the disposal of dredged and fill material inside the territorial sea baseline (§230.2(b)).

404 (b)(1) Evaluation

The following Section 404(b)(1) evaluation is presented in a format consistent with typical evaluations in the New York and New Jersey Harbor area and addresses all required elements of the evaluation.

Project Description

- a. Location: All channels proposed for consolidated implementation exist in the New York and New Jersey Harbor.
- b. General Description: The proposed project plan is to consolidate the authorized deepening of various Federal navigation channels from their authorized depths to 50 ft at MLW or greater. Consolidated implementation of these channels evaluated under Section 404(b)(1) are as follows:
 - Consolidation of Kill Van Kull Contract Area 4b to dredge from 40-50 feet (KVK Area 4b); and
 - Consolidation of Kill Van Kull Contract Area 5 to dredge from 40-50 feet (KVK Area 5)

¹ Specifically, the Arthur Kill Channel, Howland Hook Marine Terminal, New York and New Jersey; the Kill Van Kull and Newark Bay Channels, New York and New Jersey; and the New York and Adjacent Channels, Port Jersey Channel, New Jersey. They are designated AK-41/40, KVK/NB-45, and PJ-41, respectively, and hereinafter referred collectively to as the “Predecessor Projects”. They are Predecessor Projects in the sense that their complete implementation was assumed as part of the most likely without-project future condition for the New York and New Jersey Harbor Navigation Study.

² U.S. Army Corps of Engineers, *New York and New Jersey Harbor Navigation Study Feasibility Report*, (December, 1999). Hereinafter the shorthand reference “*Feasibility Report*” will be used to refer to this document and “Recommended Plan” to refer to the plan recommended in the *Feasibility Report* with the modifications that have occurred since the 1999 release of the *Feasibility Report*.



- c. Authority and Purpose: Authority to implement the various harbor deepening projects was granted in the Water Resources Development Act (WRDA) 1986 and WRDA 2000.
- d. General Description of Dredged Material: Approximately 40.3 million cubic yards of dredged material would be removed by the navigation channel improvements associated with the New York and New Jersey Harbor Navigation Project. The total volume and ratio of Historic Area Remediation Site (HARS) suitable and HARS-unsuitable material is not affected by consolidation.
- e. Proposed Dredged Material Placement Sites: Placement sites vary depending on dredged material type. As described in the *Feasibility Report*, rock is proposed for placement at designated artificial reef sites. Placement sites of other sediments will be identified in the New York and New Jersey Harbor Dredged Material Management Plan (DMMP). Consolidated implementation of the previously authorized projects would not change the proposed dredged material placement sites.
- f. Disposal Method: Dredged material placement/disposal will use the same methods described in the *Feasibility Report*.

Factual Determinations

a. Physical Substrate Determinations

Substrate Elevation and Slope: There will be no changes to substrate elevation and side slopes due to consolidated implementation because the ultimate configuration and channel depth is the same as described in the *Feasibility Report*.

- (2) Sediment Type: There will be no changes to sediment type due to consolidated implementation because the ultimate configuration and channel depth is the same as described in the *Feasibility Report*.
- (3) Dredged Material Movement: Dredged material movement would be as described in the *Feasibility Report* (i.e., minor short-term movement), but would reduce the frequency of events (e.g., number of dredging episodes) and the frequency of dredged material movement.
- (4) Physical Effects on Benthos: The physical effects on benthos would be as described in the *Feasibility Report* (i.e., minor short-term disruption and no long-term impact), but would reduce the frequency of events (i.e., number of dredging episodes) and the frequency of effects.
- (5) Other Effects: None identified



- (6) Action to Minimize Impacts: Not applicable
- b. Water Circulation, Fluctuations, and Salinity Determinations
- (1) Water
- (a) Salinity: Because channel deepening does not govern the overall water mass movements (tidal flow and river discharge) that control salinity, predicted changes in salinity for consolidated implementation are minimal and less than or equal to the magnitude of change described in the *Feasibility Report*.
- (b) Water Chemistry: The small, localized effects on water chemistry during consolidated dredging operations would be similar to those described in the *Feasibility Report*, but would reduce the frequency of events (i.e., number of dredging episodes) and the frequency of effects. The effects are associated with sediment resuspension from dredging activities and barge overflow from dredged material suitable for HARS remediation. The localized effects will be limited to the period of time that the dredging activities take place which would be of less overall duration than unconsolidated implementation.
- (c) Clarity: The temporary and localized increase in turbidity described in the *Feasibility Report* associated with sediment resuspension during dredging activities and barge overflow would occur during consolidated implementation, but the frequency of events (i.e., number of dredging episodes) and the frequency of effects would be reduced.
- (d) Color: Minor temporary changes possible
- (e) Odor: Odors typical of dredging operations will be created in the project area during dredging operations under consolidated implementation. Because the site is remote from residential areas, potential odors will have minimal to no impact, and be no different from unconsolidated implementation.
- (f) Taste: Not applicable
- (g) Dissolved Gas Levels: Turbulence created by barge overflow may cause temporary, primarily surface variations in dissolved gas levels, but no difference from unconsolidated implementation.



- (h) Nutrients: Temporary and localized nutrient increases may occur due to sediment resuspension during dredging activities and barge overflow. No long-term increase in nutrients and eutrophication will result attributable to consolidated implementation.
 - (i) Eutrophication: A short-term, localized increase in nutrients could contribute to an increase in algal growth. However, the limited quantity of disturbed sediments will result in minimal short-term nutrient releases, which will not result in project area eutrophication, nor differ from short term impacts without consolidation.
 - (j) Other: None identified
- (2) Current Patterns and Circulation: No impacts identified
 - (3) Normal Water Level Fluctuations: No impacts identified
 - (4) Salinity Gradients: No impacts expected
 - (5) Actions to Minimize Impacts: Not applicable
- c. Suspended Particulate/Turbidity Determination
- (1) Change at Placement Site: As with the unconsolidated actions, short-term, localized increases in suspended particulates/turbidity are expected as a result of barge overflow and placement of material at ocean remediation (HARS)/artificial reef sites, but these will be no different than from unconsolidated implementation and no long-term changes are expected.
 - (2) Effects on Chemical and Physical Properties of the Water Column: Impact should be short-term and localized as a result of dredging activities, but these will be no different than from unconsolidated impacts and no long-term changes are expected.
 - (3) Effects on Biota: Short-term exposure due to localized sediment resuspension during dredging activities and barge overflow are expected, but these will be no different than from unconsolidated implementation and no long-term effects are projected.
 - (4) Action to Minimize Impacts: Where appropriate, dredging activities will adhere to mechanical dredging limitations (e.g., slow hoist-rates) and no barge overflow as proscribed by state water quality certifications and dredging permits.



- d. Contaminant Determination: As noted in the Code of Federal Regulations, 40 CFR §227.13 (b) dredged material which meets the criteria set forth in the following paragraphs (b)(1), (2), or (3) of this section is environmentally acceptable for ocean dumping without further testing under this section (*if*):

(1) Dredged material is composed predominantly of sand, gravel, rock, or any other naturally occurring bottom material with particle sizes larger than silt, and the material is found in areas of high current or wave energy such as streams with large bed loads or coastal areas with shifting bars and channels; or

(2) Dredged material is for beach nourishment or restoration and is composed predominantly of sand, gravel or shell with particle sizes compatible with material on the receiving beaches; or

(3) *When* (ii) The site from which the material proposed for disposal is far removed from known existing and historical sources of pollution so as to provide reasonable assurance that such material has not been contaminated by such pollution.

The volume and type of material to be removed will be the same under either unconsolidated or consolidated implementation. Since the navigation channel sediments in the project area is predominantly undisturbed, and a large percentage of the clean material consists of rock and clay, the majority of the dredged material to be removed below the existing authorized channel depth meets the criteria listed above under (b) (1) and (b) (3) (ii) for ocean disposal without testing. Barge overflow related to sediments from the channel area should not contain any contaminants and therefore will have no adverse environmental impacts. In addition, rock material removed from the project area could be used in the construction of artificial reefs.

- e. Aquatic Ecosystems and Organisms Determination: No impact
- f. Proposed Disposal Site Determination: Appropriate disposal sites as identified in the DMMP or permitted since its release will be used.
- g. Determination of Cumulative Effects on the Aquatic Ecosystem: None identified
- h. Determination of Secondary Effects on the Aquatic Ecosystem: None identified

Findings of Compliance or Noncompliance

- a. There are no practicable alternatives for the proposed action under the jurisdiction of Section 404(b)(1) Guidelines.



- b. The proposed action does not appear to violate applicable state water quality standards or effluent standards
- c. The proposed action will not result in significant adverse impacts on human health or welfare, including municipal and private water supplies, recreational and commercial fishing, plankton, fish, shellfish, wildlife and special aquatic sites.
- d. All appropriate steps to minimize adverse environmental impacts have been taken.
- e. No significant adaptations of the guidelines were made relative to this evaluation.

Conclusions

Based on all of the above, the proposed action is determined to be in compliance with the Section 404(b)(1) Guidelines, subject to appropriate and reasonable conditions, to be determined on a case-by-case basis, to protect the public interest.

