US Army Corps of Engineers®
New York District

NEW YORK AND NEW JERSEY HARBOR DEEPENING CHANNEL IMPROVEMENTS

NAVIGATION STUDY

FINAL INTEGRATED FEASIBILITY REPORT & ENVIRONMENTAL ASSESSMENT

APPENDIX A7:

Fish & Wildlife Coordination Act

1. Introduction

The Fish and Wildlife Coordination Act (as amended, 16 U.S.C. §§ 661-665, 665a, 666, 666a-666c) requires governmental agencies, including the USACE, to coordinate activities so that adverse effects on fish and wildlife would be minimized when water bodies are proposed for modification. The USACE has coordinated with the USFWS as shown in Attachment 1.

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278-0090

September 29, 2020

Environmental Analysis Branch

Mr. Eric Schrading
Field Supervisor
U.S. Fish and Wildlife Service
New Jersey Field Office
4 East Jimmie Leeds Road, Unit 4
Galloway, New Jersey 08205-4465

Mr. David Stilwell
Field Supervisor
U.S. Fish and Wildlife Service
New York Field Office
3817 Luker Road
Cortland, New York 13045

Dear Mr. Schrading and Mr. Stilwell:

The U.S. Army Corps of Engineers, New York District (District) is presently conducting the New York New Jersey Harbor Deepening Improvement (HDCI) Study. As part of the planning process, the District in partnership with the Port Authority of New York and New Jersey, will be completing an Integrated Feasibility Study/Environmental Assessment. The project is identifying and evaluating navigation improvements required in the existing federal navigation channels, including Ambrose and Anchorage Channels, and surrounding areas. These improvements are required to accommodate larger ships arriving in NYNJ Harbor, such as the *Malaccamax design vessel*. The tentatively selected plan consists of one (1) meeting/passing efficiency zone, eight (8) channel widening features, and channel deepening up to -55 feet MLLW to New Jersey port terminals (Port Jersey Port Authority Marine Terminal and Elizabeth Port Authority Marine Terminal, and Port Newark, NJ) .

As part of this coordination, the District is contacting the U.S. Fish and Wildlife Service (USFWS) to request a Planning Aid Letter (PAL) as an update to the original Fish and Wildlife Coordination Act Report (FWCAR) dated December 16, 1999 on the original New York New Jersey 50-foot Harbor Deepening Project (HDP) pursuant to the Fish and Wildlife Coordination Act (FWCA of 1958, as amended (87 Stat. 401, as amended; 16 U.S.C. 661 et seq.) to ensure that there is equal consideration for fish and wildlife resources during the planning of the Corps proposed project. The HDCI Study is taking place under the same authorization and within the same physical footprint of the HDP. Please find attached a draft Scope of Work for more information.

In the past, the New Jersey Field Office led the coordination for the HDP FWCAR as well as for the Hudson Raritan Ecosystem Restoration Feasibility Study coordination.

In addition, all potential impacts (i.e. littoral habitat) associated with the HDCI construction are located in the state of New Jersey. For these reasons, the District anticipates that the ESA and PAL coordination for HDCI would be led by the New Jersey Field Office with assistance, as needed, provided by the New York Field Office.

If you have any questions or require additional information please contact Jesse Miller, Project Biologist at (917) 790-8604. Thank you for your consideration.

WEPPLER.PETER.M.1228647353

Digitally signed by WEPPLER.PETER.M.1228647353
Date: 2020.09.29 08:24:00 -04'00'

Peter Weppler
Chief, Environmental Analysis Branch

Attachments

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
Tel: 609/646 9310
www.fws.gov/northeast/njfieldoffice/

In Reply Refer to:
2021-CPA-0023

October 27, 2021

Peter Weppler, Chief
Environmental Analysis Branch, New York District
U.S. Army Corps of Engineers
Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York 10278-0090
Attention: Jesse Miller

Dear Mr. Weppler:

The U.S. Fish and Wildlife Service (Service) submits this Planning Aid Letter (PAL) for the subject New York New Jersey Harbor Deepening Channel Improvements (HDCI) Integrated Feasibility Study pursuant to the Fish and Wildlife Coordination Act of 1958 (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) (FWCA). This PAL updates the December 16, 1999 report of the Secretary of the Interior as required by Section 2(b) of the FWCA. The purpose of this PAL is to provide an update on fish and wildlife resources and recommendations to the U.S. Army Corps of Engineers (Corps) regarding resource conservation issues for the planning stages of the Feasibility Study. The December 16, 1999 Section 2(b) FWCA Report contains relevant information on fish and wildlife resources associated with the HDCI and should also be referenced by the Corps in its planning stages. Comments provided in this PAL are based on information provided by the Corps (2020), site photographs, maps, and analysis of Geographic Information Systems data sets (ArcGIS® version 10.3.1). This PAL assists the Corps in formulating alternatives and evaluating the feasibility of channel improvements proposed in the HDCI.

AUTHORITY

Legislation relevant to natural resource protection for this study includes the FWCA, the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 15.31 *et seq.*) (ESA), the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 703-712) as amended (MBTA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668a-d) (BGEPA). The following comments do not preclude separate review and comments by the Service pursuant to the National Environmental Policy Act of 1973 (83 Stat. 852; as amended, 42 U.S.C. 4321 *et seq.*) and Clean Water Act of 1977 (86 Stat. 816, 33 U.S.C. 1344 *et seq.*) (CWA).

INTRODUCTION

The subject HDCI is authorized by Section 435 of the Water Resources Development Act of 1996 (Public Law 104-303) (U.S. Army Corps of Engineers 2020). The non- Federal sponsor is the Port

Authority of New York and New Jersey.

STUDY AREA

The study area includes primary channels in the New York New Jersey Harbor including the Ambrose Channel, Anchorage Channel, the Kill Van Kull, Newark Bay Channel, South Elizabeth Channel, Elizabeth Channel, and Port Jersey Channel. The study area also includes the additional width required for structural stability and for the navigation of the design vessel to transit from sea to Elizabeth Port Authority Marine Terminal and Port Jersey Port Authority Marine Terminal. This project includes provisions for access to five marine terminals including Global Container (Bayonne), A.P. Moller, Maher, Port Newark Container, and Global Container (New York).

PROJECT DESCRIPTION

The 2016 completed Harbor Deepening Project's channels are maintained at -50 feet mean low low water (MLLW) and -53 feet MLLW in Ambrose Channel. The 2016 completed Harbor Deepening Project's channels were designed for the vessel Regina Maersk (1,044 feet long, 140 feet wide, with a static draft of 46 feet, and a capacity to carry 6,400 twenty-foot equivalent units [TEUs]). The fleet of container vessels regularly calling on the Port of New York and New Jersey now includes vessels that are depth constrained at the existing channel depth and experience maneuverability inefficiencies within the existing channel width.

This HDCI study's purpose is to determine if there is a technically feasible, economically justified, and environmentally acceptable recommendation for federal participation in a navigation improvements project in the New York and New Jersey Harbor (Corps 2020). Based on a forecast of the future fleet, the design vessel for this study is a Suezmax containership, Maersk Triple E Ultra Large Container Vessel Class (1,308 feet long, 193.5 wide, with a static draft of 52.5 feet, and a capacity to carry 18,000 TEUs). The Tentatively Selected Plan is deepening the pathways from sea to Elizabeth Port Authority Marine Terminal and Port Jersey Port Authority Marine Terminal by up to 5 feet (up to a maintained depth of -55 feet MLLW). The Tentatively Selected Plan involves deepening Ambrose Channel, Anchorage Channel, the Kill Van Kull, Newark Bay Channel, South Elizabeth Channel, Elizabeth Channel, and Port Jersey Channel. The Tentatively Selected Plan also identifies the dredging of 28,377,000 cubic yards (cy) of sediments that will be placed in the Historic Area Remediation Site (HARS) or appropriately permitted upland disposal sites able to handle and properly store non-HARS suitable dredged materials.

FEDERALLY LISTED SPECIES

Red Knot

A final rule to list the red knot (*Calidris canutus rufa*) as threatened under the ESA was published on December 11, 2014, with an effective date of January 12, 2015. Small numbers of red knots may occur in the New York and New Jersey year-round, while large numbers of birds rely on Delaware Bay and Atlantic Coast stopover habitats during the spring (May 1 through June 15) and fall (late-July through October) migration periods, respectively. These small shorebirds fly up to 9,300 miles from south to north every spring and reverse the trip every autumn, making the red knot one of the longest-distance migrating animals. Red knots break their spring migration into non-stop segments of 1,500 miles or more, ending at stopover sites called staging areas. Red knots converge in large flocks on staging areas along the Delaware Bay and Atlantic Coast. Threats to the red knot include human disturbance, reduced food availability at staging areas, and loss of stopover habitat.

Available records indicate that, during spring and fall migration, red knots occasionally occur along the shoreline and marshes in the project area (eBird, 2021).

In addition, the Service is working on a proposed rule to designate critical habitat for the red knot. In a letter dated January 24, 2014, the Service requested input on how the Corps would be affected by future critical habitat designations for the rufa red knot. The Service is currently drafting a proposed critical habitat rule for this subspecies. Portions of the Corps' study area may overlap with areas under consideration for proposed designation as critical habitat.

Saltmarsh Sparrow

The Service is evaluating the saltmarsh sparrow (*Ammospiza caudacuta*) to determine if listing under the ESA is warranted. This species may also be present in the project area. Species being evaluated for listing do not receive any substantive or procedural protection under the ESA, and the Service has not yet determined if listing of this species is warranted.

The saltmarsh sparrow is a tidal marsh obligate songbird that occurs exclusively in salt marshes along the Atlantic and Gulf coasts of the United States. Its breeding range extends from Maine to Virginia including portions of 10 states. The wintering range includes some of the southern breeding states and extends as far south as Florida. Nests are constructed in the salt marsh grasses just above the mean high water level, and they require a minimum of a 23-day period where the tides do not reach a height that causes nest failure. Across its range, the saltmarsh sparrow is experiencing low reproductive success, due primarily to nest flooding and predation, resulting in rapid population declines. Forty-eight percent of nests across the breeding range failed to produce a single nestling from 2011 to 2015. Although it has not been quantified, there is strong evidence for range contraction at both the northern and southern limits of the breeding range. Furthermore, breeding individuals are not evenly distributed across the entire range, with approximately 78 percent of the breeding population breeding in marshes of the mid-Atlantic states.

While the species still occupies the majority of its historical range, the number of individuals within the breeding range has significantly declined since 1998. Based on surveys in 2012 the population was estimated at 60,000 individuals, having declined at an average of 9 percent per year across the range since 1998. Projecting those declines through 2020 we estimate that the current populations is approximately 28,215 individuals. This represents a decline of 87 percent from the 212,000 individuals estimated in 1998.

Numerous threats have been identified as impacting the saltmarsh sparrow and/or its habitat. We assessed the following threats acting on the saltmarsh sparrow: (1) habitat loss, fragmentation, and degradation; (2) the effects of climate change; (3) hybridization; (4) predation; (5) contaminants; and (6) other factors influencing the species such as disease and altered food webs.

Federally Listed Species under Purview of the National Oceanic and Atmospheric Administration (NOAA) - Fisheries

Federally listed threatened or endangered species under the jurisdiction of the NOAA Fisheries are known to occur in the vicinity of the project area. Pursuant to the ESA, the Corps is required to consult with the NOAA - Fisheries on potential adverse effects to the following species that may result from implementing project activities.

The Corps has already prepared a Biological Assessment as Appendix A1 (Corps 2020) pursuant to ESA for several federally listed species under the jurisdiction of the NOAA - Fisheries including the Atlantic sturgeon (*Acipenser oxyrhynchus*), several sea turtle and whale species that occur in the project area. Further consultation for these species will be coordinated between the Corps and NOAA - Fisheries.

BALD EAGLE

Bald eagle (*Haliaeetus leucocephalus*) foraging habitat occurs throughout the Corps' study areas. Additionally, there are currently bald eagles nesting on the western end of Staten Island, New York and in Linden, New Jersey. The bald eagle was removed from the Federal List of Endangered and Threatened Wildlife effective August 8, 2007. The bald eagle continues to be protected under the Federal BGEPA and MBTA and also remains a State-listed species under the New Jersey Endangered and Nongame Species Conservation Act (N.J.S.A. 23:2A *et seq.*), which carries protections under the State land use regulation program. These Federal and State laws prohibit take of bald eagles. For the continued protection of bald eagles, and to ensure compliance with BGEPA, the Service recommends managing bald eagles in accordance with the National Bald Eagle Management Guidelines and all applicable State regulations. The Guidelines are available on the New Jersey Field Office' s web site at http://www.fws.gov/northeast/njfieldoffice/Endangered.

OTHER MIGRATORY BIRDS

Shooters Island is part of the New York City Park system and continues to be an important sanctuary for a variety of nesting and feeding birds, particularly wading birds and some shorebirds. Noise associated with blasting and the operation of dredging equipment within close proximity of Shooters Island remains a concern as it relates to disturbance of migratory birds. The Corps should determine the exact areas of blasting and discuss this issue further with the Service, the NJDFW and the NYDEC. The Service recommends that no dredging or blasting occur within 1,000 feet of Shooters Island between March 1 and August 31 of any given year to reduce adverse effects to nesting wading birds. Additionally, should dredging and blasting occur at night, the Corps should avoid illumination of Shooters Island to reduce disturbance to roosting wading birds. The Corps should contact the Service prior to March 1 of any given year where dredging and blasting is proposed to occur within 1,000 feet of Shooters Island to allow the Service to determine if the time and distance restrictions are necessary.

ESSENTIAL FISH HABITAT

The NOAA - Fisheries has designated the back bays in the vicinity of the study area as Essential Fish Habitat (EFH) for the life stages of a variety of fish. The Magnuson-Stevens Act (90 Stat. 331;16 U.S.C. 1801 *et seq.*) requires Federal agencies consult with the NOAA - Fisheries with respect to "any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH identified under this Act." Adverse effect is defined as "any impact which reduces the quality and/or quantity of EFH." The rule further states that "an adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and

their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH." The Service recommends that the Corps contact the NOAA - Fisheries to determine whether EFH would be affected by project activities:

> Karen Greene, Mid-Atlantic Field Offices Supervisor
> NOAA/National Marine Fisheries Service
> Habitat Conservation Division
> James J. Howard Marine Sciences Laboratory 74 Magruder Rd.
> Highlands, New Jersey 07732 (732) 872-3023 (office)

Additionally, it should be noted that king mackerel (*Scomberomorus cavalla*) and Spanish mackerel (*S. maculatus*) are not within in the project area, and cobia (*Rachycentron canadum*) are no longer federally managed. The revised list of species within the project areas includes winter flounder (*Pseudopleuronectes americanus*), windowpane (*Scophthalmus aquosus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), Atlantic mackerel (*Scomber scombrus*), scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*), red hake (*Urophycis chuss*)and the smoothhound shark complex (Atlantic stock). (This does not include additional species found near the HARS).

FISHERIES

Some of the species of interest within the project areas include winter flounder, diadromous fish and shellfish.

Winter Flounder

Winter flounder transit inlets to reach spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall and may also be affected by the placement of barriers within the estuary. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however movement into these spawning areas may occur earlier, generally from mid-to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira *et al.* 1999) and are typically more abundant near the bottom (Able and Fahay 1998). These life stages are less mobile and thus more likely to be adversely affected adversely by any impact to benthic habitat.

Diadromous Fishes

Diadromous fishes such as river herring (alewife *Alosa pseudoharengus* and blueback herring *Alosa aestivalis*), American shad (*Alosa sapidissima*), striped bass (*Marone saxatilis*), and American eel (*Anguilla rostrata*) inhabit the New York Harbor estuary and its tributaries at certain stages in their life cycles.

River herring and shad spend most of their adult lives at sea, but return to freshwater areas in the Hudson River estuary to spawn in the spring (Waldman 2006). These species are believed to be repeat spawners, generally returning to their natal rivers (Collette and Klein-MacPhee 2002). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in river herring populations throughout the mid-Atlantic since the mid-1960s, they have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. The goal of designating a species as a Species of Concern is to promote proactive conservation efforts for these species in order to preclude the need to list them in the future.

The New York Harbor estuary provides habitat for one of the largest populations of striped bass on the East Coast, with resident and/or migratory contingents found from the tidal freshwater Hudson River to the coastal Atlantic Ocean depending on the season (Gahagan *et al.* 2015). The spawning migration of resident and coastal contingents moving upriver to the freshwater reaches of the Hudson River occurs in the spring (Clark 1968). Late larvae and early juveniles favor shallow water with sluggish currents, and likely reside in nearshore shallows for increased feeding opportunities and reduced predation risk. Juveniles subsequently move downstream to overwinter in the lower Hudson River and upper New York Harbor (Dovel 1989).

Catadromous American eel spawn in the Sargasso Sea and transit inlets as elvers to migrate through estuarine habitats to freshwater tributaries. They inhabit these freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012). Active dredging within the proposed channel being considered in the feasibility study may impact these diadromous species by changing water quality.

Shellfish

Shellfish occur in the project area, including hard clam (*Mercenaria mercenaria*), soft shell clam (*Mya arenaria*), blue mussel (*Mytilus edulis*), oyster (*Crassostrea virginica*), and blue crab (*Callinectes sapidus*). These species and others are important food resources for fish and birds. Coen and Grizzle (2007) discuss the ecological value of shellfish habitat to a variety of managed species (e.g. American lobster (*Homarus americanus*), American eel, and winter flounder). Clams are a prey species for a number of federally managed fish including skates, bluefish, summer flounder and windowpane (*Scophthalmus aquosus*); siphons of hard clams provide a food source for winter flounder and scup (*Stenotomus chrysops*) (Steimle *et al.* 2000). Infaunal species such as clams filter significant volumes of water, effectively retaining organic nutrients from the water column (Nakamura and Kerciku 2000; Forster and Zettler 2004).

Blue mussel and oyster are filter feeders and thus improve water quality (Bain *et al.* 2007, Waldman 2008). Reef forming bivalves such as blue mussels and oysters support an increased diversity of finfish and invertebrates, cycle material between the water column and substrate and have the potential to enhance water quality (Dewey 2000; Nakamura and Kerciku 2000; Coen and Grizzle 2007; McDermott et. al. 2008). Further, blue mussels are an important prey item for many animals in the Mid-Atlantic region (Newell 1989). Steimle *et al.* (2000) reported that blue mussel

spat were components of the diets of winter flounder, scup, black sea bass and tautog (*Tautoga onitis*). Although no known oyster reefs presently exist in the project area, scattered live oysters can be found in certain areas, indicating the presence of isolated populations.

Spawning, nursery, foraging, and overwintering habitats for blue crabs are found throughout the project area; blue crabs are commonly found on subtidal benthic habitat and are important food resources for predatory fish and birds (Bain *et al.* 2007, Waldman 2008). The blue crab winter dredge fishery in New York is concentrated in the lower portion of New York Harbor (Briggs 1998).

ENVIRONMENTAL CONTAMINANTS

The Port of New York and New Jersey is the second largest seaport in the United States, with an estimated regional economic input in excess of $29 billion annually. It is also the largest petroleum distribution point in the United States. There are over 250 miles of engineered waterways in the Port District, allowing deepwater navigation in a harbor that is naturally only 19 feet deep. Historically, dredged materials were disposed in water, with relatively little attention paid to environmental consequences. Unfortunately, being in the oldest industrial watershed in the country, the harbor sediments are moderately to severely contaminated with a variety of industrial pollutants and are no longer considered suitable for ocean disposal (Douglas *et al.* 2003). Navigational channel maintenance and deepening inherently results in the resuspension, redistribution and exposure of sediments ladened with toxic contaminants. The Service is particularly concerned about the potential for bioaccumulation and biomagnification into fish and wildlife resources of halogenated dioxins/furans, polychlorinated biphenyls (PCBs), legacy organochlorine pesticides, and certain metals such as mercury. In addition there are other classes of compound that can adversely fish and wildlife resources through a variety of metabolic modes of action including, but not limited to base-neutral semi-volatile organic compounds, endocrine distributors, nano-plastics, fire suppression chemicals, plasticizers, and pharmaceuticals.

The primary Federal environmental statute governing transportation of dredged material for the purpose of dumping it into ocean waters (seaward of the baseline of the territorial sea) is the Marine Protection, Research, and Sanctuaries Act (MPRSA), also referred to as the Ocean Dumping Act (33 U.S.C. Section 1401 *et seq.*). In accordance with Section 103 of the MPRSA, the Corps is the permitting authority for ocean dumping of dredged material, subject to U.S. Environmental Protection Agency (EPA) review and concurrence that the material meets applicable ocean dumping criteria at 40 CFR Parts 227 and 228. Under MPRSA Section 103(d), if EPA determines the ocean dumping criteria are not met, dumping may occur only if EPA grants a waiver of the criteria. In accordance with Subsection 227.27(b), EPA and the Corps developed a testing manual to define procedures for evaluating the suitability of dredged material for ocean disposal that are based upon the biological testing requirements of the implementing regulations; the *Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal* (Corps and EPA 2016).

The Service has reviewed this guidance and considers it an acceptable roadmap for evaluating contaminant and toxicological characteristics of dredge materials and recommends its implementation in the proposed project. The Service also recommends that several of the parameters be modified as to be more informative of potential adverse impacts to fish and wildlife resources; these recommendations follow.

1. The guidance calls for the analysis of 22 PCB congeners. The Service recommends that the Corps use EPA Method 1668 (Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS); this method allows for the quantification of all 209 PCB congeners including the 12 dioxin-like congeners. Total PCBs can then be calculated as the sum of the 209 congeners which is useful in evaluating potential risk or injury to fishes. An excellent review on the effects of total PCBs to fishes can be found in Berninger and Tillett (2019). Moreover, quantification of the 12 dioxin -like PCB congeners can then be incorporated along with dioxin and furan concentrations to produce total dioxin toxic equivalency for use in food web evaluations.

2. Although commonly conducted in tissues samples undergoing organic analysis, the Service did not find mention analysis of present lipid in tissues. Precent lipid from tissues are used to normalize organic compound concentrations across species and age groups are an important component in the construction of contaminant food models using Biota Sediment Accumulation Factors and biomagnification models. The Service recommends that percent lipid is include tissue analyses of organic compounds.

3. With respect to sediment samples, the guidance calls for the analysis of 17 polycyclic aromatic hydrocarbon (PAH) parent compounds (frequently referred to as the EPA PAH_{17} list). However, the PAH_{17} list does not include the more biologically toxic alkylated PAHs. Therefore, the Service recommends that the Corps use the parent-alkylated PAH last (frequently referred to as the EPA PAH_{34} list). The enhanced PAH_{34} list allows for evaluating risks associated with sediment chemistry using the equilibrium partitioning (EqP) approach. EqP is well established for evaluating toxicity of PAH mixtures benthic organisms by calculating a Narcosis Equilibrium partitioning Sediment Benchmark expressed as Toxic Units.

The Service is available to assist the Corps in evaluating risk to fish and wildlife resources based on data generated under the aforementioned guidance. Those data should be shared with other natural resource agencies.

Additionally, sediment sampling pursuant to New York State Department of Environmental Conservation (NYDEC) guidance: Designing a Dredging Sediment Sampling and Analysis Plan (Designing a Dredging Sediment Sampling and Analysis Plan - NYS Dept. of Environmental Conservation); and TOGS 5.1.9 (https://www.dec.ny.gov/docs/water_pdf/togs519.pdf) will be required as part of any NYSDEC permitting process, whether a permit is issued after sampling results or a blanket permit for the larger deepening is issued, and sampling gets done on a reach-by-reach basis. This sampling is required in addition to any sampling done to meet EPA requirements.

BENEFICIAL USE OF DREDGED MATERIAL

Consideration of opportunities to apply the Corps initiative of "Engineering with Nature" should be considered for the proposed project allowing the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaborative processes. Similar to work completed by the Corps Philadelphia District to demonstrate the potential to engineer with nature to support and restore natural and nature-based features that contribute to coastal resilience. Opportunities to beneficially use clean sediment or

rock toward coastal resilience projects like marsh restoration and living shoreline projects should be considered as part of the proposed project.

MITIGATION

The Service considers the wetlands, shallow waters, mudflats, and beaches of the project area to be of high value to fish and wildlife resources and represent habitat components that have become scarce in the ecoregion. In accordance with the Service's Mitigation Policy (Federal Register, Vol. 46, No. 15, Jan. 23, 1981), our mitigation goal for this project in no-net-loss of in- kind habitat value. Given the high value of these habitat components in the project area to fish and wildlife resources, appropriate measures must be implemented to protect these remaining areas from any reduction in quality or quantity.

The 2016 completed Harbor Deepening Project (HDP) initially included 13 acres of mitigation at two locations in the watershed, Old Place Creek in Staten Island, New York and Woodbridge Creek in Woodbridge, New Jersey. Both of these projects involved restoration of low marsh habitat that was dominated by invasive common reed (*Phragmites australis*). However, due to limitations on availability of Old Place Creek at the time, the mitigation plan was successfully revised to restore approximately 143 acres of wetlands (1.5 million plants) at:

- Elders Point Marsh Island Restoration, Jamaica Bay, New York;
- Woodbridge Creek Ecosystem Restoration Project, Woodbridge, New Jersey;
- Salt Marsh Restoration at Key Span site, Staten Island, New York; and,
- Joseph P. Medwick Park, Carteret, New Jersey.

Post-construction monitoring was completed for all projects above.

The project's construction included 21 dredging contracts and construction of four marsh restorations. From 2009 through 2012, the original HDP was modified to include the restoration of two additional Jamaica Bay marsh islands (Elders West and Yellow Bar Hassock) through the beneficial reuse of dredged material. In 2010, with 100 percent non-federal sponsor funding, 339,235 cubic yards of sand was beneficially used for the restoration of Lincoln Park, New Jersey.

CUMULATIVE IMPACTS

Cumulative impacts analyses are not restricted to spatial and temporal overlap of projects. Several small, medium, and large past, present, and future actions have not been considered. For example, large dredging (new and maintenance) and port projects are underway or have been proposed in the region such as maintenance dredging and other activities at the various port facilities operated by the Port Authority of NY and NJ, the NY NJ Anchorages project, as well as various construction and maintenance projects along the Hudson River, Upper 8 Bay, Newark Bay, and the Kill van Kull.

A full assessment of the cumulative effects of the proposed project should be undertaken that includes the consideration of the cumulative effects of all past, present, and reasonably foreseeable future actions on aquatic resources. Some of the issues that should be addressed include the cumulative effects of the loss of aquatic water column and benthic habitat on NOAA trust resources, loss of prey species, ballast water withdrawals, water discharges, increased vessel traffic (*i.e.*, tugs), vessel collisions, and new dredging (*e.g.*, berths and other dredging) and future maintenance dredging needs.

CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

The Service concludes that the Harbor estuary and its adjacent marine and upland habitats provides high-quality habitats for fish and wildlife resources and that the proposed dredging project has the potential to adversely impact these resources both directly and indirectly. To minimize the impacts of any project that is proposed by the Corps, the Service provides the following summary of recommendations.

1. Consider bald eagles in accordance with the National Bald Eagle Management Guidelines and all applicable State regulations.

2. Continue to prohibit dredging and blasting within 1,000 feet of Shooters Island between March 1 and August 31 of any given year and avoid illuminating Shooters Island if dredging and blasting occurs at night. The Corps should contact the Service to determine if these restrictions are necessary prior to each nesting season. Should Shooters Island become abandoned or if its use as a breeding site for wading birds substantially declines, these recommended restrictions may be modified or rescinded.

3. Continue post construction benthic surveys and biological monitoring of fish and macroinvertebrates to determine the direct and indirect effects of project implementation.

4. Coordinate with the Service, NOAA - Fisheries, and State resource agencies for recommendations based on results.

5. Consider opportunities for maintenance and enhancement of benthic communities. These opportunities could be incorporated as compensatory mitigation for project impacts to fish and wildlife resources.

6. Coordinate with NOAA – Fisheries regarding consultation pursuant to EFH and ESA consultation to avoid adversely modifying EFH within the project area.

7. Adhere to the winter flounder early life stage (January 15 – May 31) and anadromous fish (March 1 – June 30) time of year restrictions.

8. Continue to evaluate the potential effect of altered water velocities, altered sedimentation rates, the resuspension and redistribution of environmental contaminants, and slumping of channel side slopes on wetlands, shallow waters, mudflats, and beaches.

9. Follow the *Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal* along with the following parameters:

    a. The guidance calls for the analysis of 22 PCB congeners. The Service recommends that the Corps use EPA Method 1668 (Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS); this method allows for the quantification of all 209 PCB congeners including the 12 dioxin-like congeners. Total PCBs can then be calculated as the sum of the 209 congeners which is useful in evaluating potential risk or injury to fishes. An excellent review on the effects of total PCBs to fishes can be found in Berninger and Tillett (2019). Moreover, quantification

of the 12 dioxin -like PCB congeners can then be incorporated along with dioxin and furan concentrations to produce total dioxin toxic equivalency for use in food web evaluations.

b. Although commonly conducted in tissues samples undergoing organic analysis, the Service did not find mention analysis of present lipid in tissues. Precent lipid from tissues are used to normalize organic compound concentrations across species and age groups are an important component in the construction of contaminant food models using Biota Sediment Accumulation Factors and biomagnification models. The Service recommends that percent lipid is include tissue analyses of organic compounds.

c. With respect to sediment samples, the guidance calls for the analysis of 17 PAH parent compounds (frequently referred to as the EPA PAH_{17} list). However, the PAH17 list does not include the more biologically toxic alkylated PAHs. Therefore, the Service recommends that the Corps use the parent-alkylated PAH last (frequently referred to as the EPA PAH_{34} list). The enhanced PAH_{34} list allows for evaluating risks associated with sediment chemistry using the equilibrium partitioning (EqP) approach. EqP is well established for evaluating toxicity of PAH mixtures benthic organisms by calculating a Narcosis Equilibrium partitioning Sediment Benchmark expressed as Toxic Units.

10. Coordinate with NYDEC regarding State sediment sampling requirements.

11. Consider opportunities to beneficially use clean sediment or rock toward coastal resilience projects like marsh restoration and living shoreline projects should be considered as part of the proposed project.

12. Provide the Service and NOAA-Fisheries with its plan to compensate for all direct impacts to shallow waters and any indirect loss of habitat value within wetlands, shallow waters, mudflats, and beaches that may occur as a result of project implementation and consider mitigation that includes high marsh habitat that reduces recontamination, benefits at-risk species like saltmarsh sparrow, and increases coastal resilience of wetlands as it relates to sea-level rise.

13. Consult with the appropriate State agencies regarding potential impacts to State- listed species.

Any questions regarding these comments can be directed to Ron Popowski at Ron_Popowski@fws.gov.

Sincerely,

ERIC SCHRADING

Digitally signed by ERIC SCHRADING
Date: 2021.10.27 16:25:42 -04'00'

Eric Schrading
Field Supervisor

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DEPARTMENT OF THE ARMY
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Environmental Analysis Branch

January 28, 2022

Mr. Eric Schrading
U.S. Fish and Wildlife Service
New Jersey Field Office
4 East Jimmie Leeds Road, Unit 4
Galloway, New Jersey 08205

Dear Mr. Schrading:

The United States Army Corps of Engineers (USACE), New York District (District) is in receipt of your draft Planning Aid Letter (PAL), dated August 27, 2021 submitting recommendations on the Harbor Deepening Channel Improvements (HDCI) study.

Please find our formal responses to the PAL attached. The District looks forward to working with your office throughout the Pre-Engineering and Design and Construction Phases of this study and thank you for your continued assistance and input to this process which helps us to advance the execution of this regionally significant project.

If you require any additional information, please feel free to contact Mr. Jesse Miller Jesse.L.Miller@usace.army.mil at 917-790-8729.

Sincerely,

WEPPLER.PETER.M.1228647353 Digitally signed by WEPPLER.PETER.M.1228647353 Date: 2022.01.28 09:18:14 -05'00'

Peter Weppler
Chief, Environmental Analysis Branch

Enclosure

cc: LIFO

USACE Responses to Draft PAL

USACE concurs with the U.S. Fish and Wildlife Service's (USFWS or the Service) overall Planning and Mitigation Recommendations. We are committed to coordination and collaboration with USFWS to advance our joint goals and obligations to ensure environmental protection and sustainability, as we offer corrections and responses to specific recommendations as follows:

ENVIRONMENTAL CONTAMINANTS

USFWS: The Port of New York and New Jersey is the third largest seaport in the United States, with an estimated regional economic input in excess of $29 billion annually.

USACE: Please note the Port of New York and New Jersey is the second largest port.

USFWS: The Service also recommends that several of the parameters be modified as to be more informative of potential adverse impacts to fish and wildlife resources; these recommendations follow.

USACE: The parameters recommended by USFWS provide information used to model toxicity and biomagnification of analytes within the food web. However, the testing methods described in the current NYD/EPA Region 2 - Regional Testing Manual utilize direct measurement of toxicity and bioaccumulation in test organisms, as opposed to relying on modeled estimates. The methods currently used to consider contaminant risks (including PCBs and PAHs) include the application of multiplication factors based on previously collected data to account for uncertainties such as unmeasured congeners, 'steady state' uptake, contaminant trophic transfer, and interspecies differences in sensitivity. Therefore, the Corps believes that adding the recommended additional parameters would increase testing costs without providing any information that would materially change the decision as to whether the material meets HARS criteria.

CONCLUSIONS AND SUMMARY OF RECOMMENDATIONS

USFWS Recommendation 1: Consider bald eagles in accordance with the National Bald Eagle Management Guidelines and all applicable State regulations.

Corps Response: Concur, Bald eagles will be considered in this study, and the National Bald Eagle Management Guidelines are discussed in Section 2.9.3 "Bald Eagles Protected under the American Bald and Golden Eagle Act of 1972".

USFWS Recommendation 2: Continue to prohibit dredging and blasting within 1,000 feet of Shooters Island between March 1 and August 31 of any given year and avoid illuminating Shooters Island if dredging and blasting occurs at night. The Corps should contact the Service to determine if these restrictions are necessary prior to each nesting season. Should Shooters Island become abandoned or if its

use as a breeding site for wading birds substantially declines, these recommended restrictions may be modified or rescinded.

Corps Response: Concur.

USFWS Recommendation 3: Continue post construction benthic surveys and biological monitoring of fish and macroinvertebrates to determine the direct and indirect effects of project implementation.

Corps Response: Benthic recovery monitoring will continue. Any other future aquatic sampling is to be determined.

USFWS Recommendation 4: Coordinate with the Service, NOAA - Fisheries, and State resource agencies for recommendations based on results.

Corps Response: Concur, the Corps will continue to coordinate with resource agencies.

USFWS Recommendation 5: Consider opportunities for maintenance and enhancement of benthic communities. These opportunities could be incorporated as compensatory mitigation for project impacts to fish and wildlife resources.

Corps Response: Concur.

USFWS Recommendation 6: Coordinate with NOAA – Fisheries regarding consultation pursuant to EFH and ESA consultation to avoid adversely modifying EFH within the project area.

Corps Response: Concur.

USFWS Recommendation 7: Adhere to the winter flounder early life stage (January 15 – May 31) and anadromous fish (March 1 – June 30) time of year restrictions.

Corps Response: USACE will abide by the Conservation Recommendations issued by NMFS HPD and the affected states under their CWA and CZMA jurisdictions, specific to the HDCI.

USFWS Recommendation 8: Continue to evaluate the potential effect of altered water velocities, altered sedimentation rates, the resuspension and redistribution of environmental contaminants, and slumping of channel side slopes on wetlands, shallow waters, mudflats, and beaches.

Corps Response: The items listed will be considered in design to avoid and/or minimize impact to existing conditions.

USFWS Recommendation 9: Follow the *Guidance for Performing Tests on Dredged*

Material Proposed for Ocean Disposal along with the following parameters:

a. The guidance calls for the analysis of 22 PCB congeners. The Service recommends that the Corps use EPA Method 1668 (Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS); this method allows for the quantification of all 209 PCB congeners including the 12 dioxin-like congeners. Total PCBs can then be calculated as the sum of the 209 congeners which is useful in evaluating potential risk or injury to fishes. An excellent review on the effects of total PCBs to fishes can be found in Berninger and Tillett (2019). Moreover, quantification of the 12 dioxin -like PCB congeners can then be incorporated along with dioxin and furan concentrations to produce total dioxin toxic equivalency for use in food web evaluations.

b. Although commonly conducted in tissues samples undergoing organic analysis, the Service did not find mention analysis of present lipid in tissues. Precent lipid from tissues are used to normalize organic compound concentrations across species and age groups are an important component in the construction of contaminant food models using Biota Sediment Accumulation Factors and biomagnification models. The Service recommends that percent lipid is include tissue analyses of organic compounds.

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Corps Response: As stated above, the parameters recommended by USFWS provide information used to model toxicity and biomagnification of analytes within the food web. However, the testing methods described in the current NYD/EPA Region 2 - Regional Testing Manual utilize direct measurement of toxicity and bioaccumulation in test organisms, as opposed to relying on modeled estimates. The methods currently used to consider contaminant risks (including PCBs and PAHs) include the application of multiplication factors based on previously collected data to account for uncertainties such as unmeasured congeners, 'steady state' uptake, contaminant trophic transfer, and interspecies differences in sensitivity. Therefore, the Corps believes that adding the recommended additional parameters would increase testing costs without providing any information that would materially change the decision as to whether the material meets HARS criteria.

USFWS Recommendation 10: Consider opportunities to beneficially use clean sediment or rock toward coastal resilience projects like marsh restoration and living shoreline projects should be considered as part of the proposed project.

Corps Response: Concur, Potential beneficial use placement options to be considered during PED and will be discussed in Appendix A13 of the Final integrated FR/EA.

USFWS Recommendation 11: Provide full mitigation for the Harbor Deepening Project pursuant to the CWA and the Service's Mitigation Policy. In addition, compensate for additional impacts to fish and wildlife resources for direct impacts to shallow water habitats (0-15 feet deep) of approximately 1.92 acres as part of the HDCI.

Corps Response: USACE fully mitigated for regulated shallow habitat impacts, under the CWA (as defined by New York State as down to -6 feet MLLW) for the 50-foot Harbor Deepening Project. USACE will provide full mitigation for HDCI impacts to CWA-regulated shallow habitat. Updated analyses show impacts to 0.53 acres of said habitat, all in the States of New Jersey, where it is defined as down to a depth of -4 feet MLLW.

EFH habitat is not regulated nor defined as requiring compensatory mitigation, as is defined by regulation shallow habitat under CWA, as implemented by the affected states. USACE mitigates, per statute as required, for significant impacts to rare, regulated and otherwise special area habitats.

USACE is currently coordinating with NMFS on appropriate beneficial use projects under the HDCI designed to conserve, enhance, or protect the function of some essential habitat for particular species during the PED phase of the project.

USFWS Recommendation 12: Provide the Service and NOAA-Fisheries with its plan to compensate for all direct impacts to shallow waters and any indirect loss of habitat value within wetlands, shallow waters, mudflats, and beaches that may occur as a result of project implementation and consider mitigation that includes high marsh habitat that reduces recontamination, benefits at-risk species like saltmarsh sparrow, and increases coastal resilience of wetlands as it relates to sea-level rise.

Corps Response: USACE will consider this type of mitigation as practicable. The Mitigation Plan for the HDCI will be discussed in Appendix A11 of the Final integrated FR/EA

USFWS Recommendation 13: Consult with the appropriate State agencies regarding potential impacts to State- listed species.

Corps Response: Concur.