UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
1315 East-West Highway
Silver Spring, Maryland 20910

THE DIRECTOR

AUG 26 2015

MEMORANDUM FOR: The Record

FROM: Donna S. Wieting Ruby GAYARDO
Director, Office of Protected Resources

SUBJECT: Adoption of U.S. Army Corps of Engineers Final Revised Environmental Assessment for the Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River

Background

A. NMFS' Proposed Action

The National Marine Fisheries Service (NMFS), a division of the National Oceanic Atmospheric Administration (NOAA), is proposing to issue an Incidental Harassment Authorization (IHA) to the U.S. Army Corps of Engineers, Portland District (Corps) pursuant to section 101(a)(5)(D) of the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. §§ 1631 *et seq.*), and the regulations governing the taking and importing of marine mammals (50 Code of Federal Regulations (CFR) Part 216). This IHA will be valid from May 1, 2016 through April 30, 2017 and authorizes takes, by Level B harassment, of marine mammals incidental to the rehabilitation activities (pile installation and removal only) for Jetty A at the mouth of the Columbia River (MCR) located in Pacific County, Washington.

The proposed action by NMFS is a direct outcome of the Corps IHA request which involves pile installation and removal activities for Jetty A. This type of in-water construction activity has the potential to cause marine mammals in the vicinity of the project area to be behaviorally disturbed requiring a permit from NMFS. NMFS IHA issuance criteria requires that the taking of marine mammals authorized have a negligible impact on the species or stock(s), and, where relevant, will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses. In addition, the IHA must set forth, where applicable, the permissible methods of taking, other means of effecting the least practicable adverse impact on the species or stock and its habitat, and requirements pertaining to the monitoring and reporting of such takings.

The Corps proposed pile installation and removal activities for Jetty A is part of a major rehabilitation project planned for the entire MCR Jetty System located in Pacific County, Washington and Clatsop County, Oregon. The MCR Jetty System is referred to as Jetty A, North Jetty, and South Jetty. The initial IHA application submitted by the Corps on February 13, 2015 provided information about all proposed rehabilitation activities for the entire Jetty System. Later, on June 9, 2015, NMFS received a revised application request which included updates to estimated take numbers and clarification regarding project's timeline.

Printed on Recycled Paper

Based on all the information presented in both application requests, NMFS will issue an IHA for the first season of pile installation and some pile removal at Jetty A only. All future work occurring at the North and South Jetties and the remaining work at Jetty A will require authorization under the MMPA and will not be covered by this IHA. The Corps' application included requests for both the IHA to be issued as well as for a Letter of Authorization (LOA) that will cover future work at North and South Jetties and the remaining work at Jetty A.

Below is a summary of the planned sequence and schedule for proposed rehabilitation activities that will require authorization under the MMPA via an IHA or Letter of Authorization (LOA) for all three MCR Jetty locations. Details regarding the Corps proposed rehabilitation project were described in Section 1 of the Corps initial application submitted on February 3, 2015 and Section 1 of the Corps Final Revised Environmental Assessment "Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River" (herein referred to as Corps Final Revised EA).

1. Jetty A Repair and Head Stabilization will require an IHA for the first year of pile installation and some pile removal related to the construction and maintenance of a barge offloading facility. The barge facility will be used for activities associated with the rehabilitation at all Jetty locations. Construction and stone placement is planned to commence in 2016 and continue through 2017. The Corps has already submitted a request for an LOA that would become effective immediately after this proposed IHA expires to cover additional years of pile maintenance and removal.

2. North Jetty Repair and Head Stabilization will require an LOA for pile installation and removal for the offloading facility. Construction activities are planned to commence in 2016 and are expected to continue through 2019.

3. South Jetty Interim Repair and Head Determination will require an LOA for pile installation and removal at two barge offloading facilities. For this Jetty and planned activities, the work season generally extends from April through October each year, with extensions, contractions, and additional work windows outside of the summer season varying by weather patterns. NMFS will likely consider mitigation measure in a future LOA to avoid the presence of Southern resident killer whales (i.e., we will likely required the Corps to prohibit pile installation for offloading facilities from October 1 until or after May 1since that is their primary feeding season when they may be present at the MCR plume. Installation would occur from May 1 to September 30 each year).

B. U.S. Army Corps of Engineers Proposed Action

As described in the U.S. Army Corps of Engineers Final Revised EA for the Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River the Corps proposes to conduct major rehabilitation and repairs of the North and South Jetties and Jetty A, which are part of the Corps' MCR navigation project. The purpose of the proposed action is to perform modifications and repairs to the North and South jetties and Jetty A at the MCR that would strengthen the jetty structures, extend their functional life, and maintain deep-draft navigation.

C. Comparison of the Corp's Proposed Action to NMFS' Proposed Action

The Corps proposes to conduct major rehabilitation and repairs of the North and South Jetties and Jetty A over the course of 8 years. This project will serve to strengthen the jetty structures, extend their functional life, and maintain deep-draft navigation. NMFS proposed action of issuing an IHA during the first year of construction would only cover rehabilitation activities associated with Jetty A. The Corps originally proposed engaging in simultaneous rehabilitation work at North Jetty and Jetty A simultaneously. However, the Corps opted to work on Jetty A only during the first year of construction.

The Corps proposed the construction of four temporary offloading facilities over the course of the project. These facilities in combination would require approximately 96 piles for use as dolphins and 373 sections of Z- or H-piles of sheet pile to retain rock fill. They will be located within 200-ft of the jetty structure. Because the sediments in the region are soft (sand), use of a vibratory driver to install piles is feasible and will be used when necessary. The presence of relic stone may require locating the piling further from the jetty so that use of this method is not precluded by the existing stone. The dolphins/Z- and H-piles would be composed of either untreated timber or steel piles installed to a depth of approximately 15 to 25 feet below grade in order to withstand the needs of off-loading barges and heavy construction equipment. Because vibratory hammers will be implemented in areas with velocities greater than 1.6 feet per second, the need for hydroacoustic attenuation is not an anticipated issue.

NMFS proposed action of issuing an IHA during the first year of construction for Jetty A would cover the activities described in the previous paragraph. However, only approximately one-quarter of the number of Z- or H-piles would be required for work at Jetty A. Therefore, this authorization would allow installation of a maximum of 24 piles and a maximum of 93 sections of Z-or H-piles for retention of rock fill over 17 days.

Alternatives and Impact Assessment

A. Summary of the Alternatives Considered by the Corps

The Corps analyzed four alternatives in the Final Revised EA:

No Action Alternative

Under the No Action Alternative, no planned large-scale rehabilitation action would be taken to slow down the large, physical processes (larger waves, increased storm activity, and others) that are negatively impacting the structural stability the MCR jetty system. Those larger physical processes include landward recession of the jetty head, shrinking of the ebb tidal shoal, foundation erosion, and adjacent shoreline erosion. The lengths of each jetty would continue to recede landward with the expected response of the surrounding morphology including continued shrinking of adjacent underwater shoals and the overall shrinking of the ebb tidal shoal. Much of the material eroded from the inlets' shrinking shoals would be transported into the MCR inlet, thereby adding to requirements for regular maintenance dredging. The underwater sand shoals upon which the jetties are built would continue to erode, leaving deeper water depths along the

jetties. The deeper water (over the eroded shoals) would allow larger waves to attack the jetties resulting in greater jetty deterioration and greater foundation erosion. Wave and current action within the MCR inlet would increase.

However, on a smaller scale more immediate actions may be taken to address specific jetty sections and localized processes via an intermittent or fix-as-fails repair strategy. The No Action alternative could be characterized as a fix-as-fails approach. In this scenario, the Jetty A repair strategy would be triggered at a lower threshold when at a given segment the upper cross-sectional area falls below about 40% of its standard template profile. Depending on the condition and rate of damage to the jetty cross-section for either repair strategy, maintenance actions may be conducted as a normally planned operation, in an expedited fashion, or on an emergency basis. A fix-as-fails approach involving minimal, site-specific emergency repairs is how the jetties have been maintained historically.

Alternative 1 (Preferred Alternative)
The proposed action for Jetty A includes scheduled repair and head stabilization at a level reduced relative to head-capping. Scheduled repairs would address the loss of cross-section, reduce future cross-section instability, and stabilize the head (terminus). Scheduled cross-section repairs are primarily above mean lower low water (MLLW), with a majority of stone placement not likely to extend below -5 feet MLLW. The jetty head (Southern-most end section) would be stabilized at approximately station (STA) 89+00 with large armoring stone placed on relic jetty stone that is mostly above MLLW. Stations (STA) indicate lineal distance along the jetty relative to a fixed reference point (0+00) located at the landward-most point on the jetty root. Construction of an offloading facility will be necessary to transport materials to the Jetty A project site. This construction would require dredging and pile installation.

Alternative 2
A Base Condition scenario was considered under which the Corps would maintain current base condition requiring interim repairs with and without head stabilization. This alternative would require constant monitoring and ultimately result in loss of functionality of the structure over time.

Alternative 3
Immediate rehabilitation options were developed and evaluated for Jetty A which would include rehabilitation of two types of small templates, allow head recession and hold the jetty end state. However, additional analysis demonstrated that a resilient jetty system could be achieved at a lower cost utilizing the Preferred Alternative.

B. Summary of Alternatives Considered by NMFS

No Action Alternative
Under the No Action Alternative, NMFS would not issue an IHA and the Corps could choose not to proceed with their proposed activities or to proceed without an Authorization. If they choose the latter, the Corps would not be exempt from the MMPA prohibitions against the take of marine mammals and would be in violation of the MMPA if take of marine mammals occurs. For purposes of this adoption memo, we characterize the No Action Alternative as the Corps not

receiving an Authorization and the Corps conducting the project without the protective measures and reporting requirements required by an Authorization under the MMPA. We take this approach to meaningfully evaluate the primary environmental issues – the impact on marine mammal species or stocks from these activities in the absence of protective measures.

Alternative 1 (Preferred Alternative)
The Proposed Action constitutes Alternative 1 and is the Preferred Alternative. Under this alternative, we would issue an Authorization to the Corps for rehabilitation of Jetty A allowing the incidental take, by Level B harassment, of six species of marine mammals subject to the mandatory mitigation and monitoring measures and reporting requirements set forth in the proposed Authorization, if issued.

C. Environmental Consequences

The affected environment and the environmental consequences are discussed in the EA within subsections arranged by resource type including fish and wildlife, water quality, cultural and historic resources, socio-economic resources and cumulative effects.

In the Marine Mammals section, the EA addresses whales that could occur in the vicinity of the vicinity of the MCR project include blue, fin, sei, sperm, humpback, and southern resident killer whales. All of these species are migratory, generally are not found close to shore, and are highly mobile. Moreover, the MCR is not preferred habitat for these species, they are unlikely to feed in the vicinity of the jetties, and jetty work will have inconsequential impacts on their prey base. Acoustic effects from pile installation will be damped by the use of vibratory hammers, and will be temporary and intermittent. The impacts are expected to attenuate to background levels near the source. Therefore, sound levels are not expected to reach levels harmful to species. The preferred alternative is not expected to measurably affect these whale and species such that there will be an adverse effect to the population or species.

While the South Jetty is an important year-round, non-breeding haulout site for federally listed Steller sea lions, they are generally not found to use Jetty A. Additionally, prey resources for sea lions are not expected to be affected. The proposed action is not likely to adversely affect Steller sea lions.

Conservation measures to avoid and minimize impacts to sea lions also have been proposed. Prior to construction activities, an incidental harassment authorization (IHA) for marine mammals at the South Jetty will be obtained from the NMFS. The Corps anticipates that the new LOA will entail requirements similar to those in the previous permit for repair of the Jetty A. Effects to Steller sea lions are not expected to be measureable.

To comply with the MMPA, the Corps submitted an incidental harassment authorization (IHA) application to authorize the potential Level B harassment to the following marine mammal species near Jetty A. A summary of the take estimates is provided in the table below.

Table 1. Estimated Numbers of Marine Mammals That May Be Exposed to Level B Harassment

Species	Total proposed authorized takes	Abundance	Percentage of total stock
Killer whale (Western transient stock)	8	243	3.2%
Gray whale (Eastern North Pacific Stock)	4	18,017	<0.01%
Harbor porpoise	850	21,487	3.9%
Steller sea lion	824	63,160-78,198	1.3-1.0%
California sea lion	202	296,750	0.01%
Harbor seal	57	24,732	0.2%

As noted above, there are no known pinniped haul-outs within the vicinity of Jetty A. While increased turbidity and changes in prey distribution may also result from pile driving activities, but are expected to be temporary and return to normal shortly after construction is complete. The proposed project is not anticipated to have any permanent impact on habitats used by the marine mammals in the proposed Project area, including the food sources they use (i.e., fish and invertebrates).

EFH has been identified in the waters surrounding Jetty A. Effects on EFH by the project and issuance of the Authorization assessed here would be temporary and minor. The main effect would be short-term disturbance that might lead to temporary and localized relocation of the species for which EFH has been designated or their food. The actual physical and chemical properties of the EFH would not be impacted. Therefore, NMFS, Office of Protected Resources, Permits and Conservation Division has determined that the issuance of an Authorization for the taking of marine mammals incidental to the project would not have an adverse impact on EFH, and an EFH consultation is not required.

The environmental consequences to the marine environment are of particular importance for NMFS' evaluation in reaching a decision on whether to issue an MMPA incidental take authorization. In particular, because NMFS' proposed action is specific to authorizing unintentional take of marine mammals, the key factors considered in the decision are related to NMFS' statutory responsibilities under the MMPA. The primary documents supporting NMFS' decision are the Corps Final Revised EA, a NMFS Biological Opinion and the Corps' application for an IHA.

NMFS issued a Biological Opinion which concluded that the proposed action is not likely to jeopardize the continued existence of humpback whales or the western DPS of Steller sea lions, or destroy or adversely modify designated critical habitat.

EFH has been identified in the waters surrounding Jetty A. Effects on EFH by the project and issuance of the Authorization assessed here would be temporary and minor. The main effect would be short-term disturbance that might lead to temporary and localized relocation of the species for which EFH has been designated or their food. The actual physical and chemical properties of the EFH would not be impacted. Therefore, NMFS, Office of Protected Resources,

Permits and Conservation Division has determined that the issuance of an Authorization for the taking of marine mammals incidental to the project would not have an adverse impact on EFH, and an EFH consultation is not required.

NMFS also reviewed the Corps' IHA application to determine whether the total taking resulting from the activities would have a negligible impact on the affected species or stocks of marine mammals, would not have an unmitigable adverse impact on the availability of those species or stocks of marine mammals intended for subsistence uses, and that the permissible methods of taking and requirements pertaining to the mitigation, monitoring, and reporting of such takings are set forth. As supported by the EA, NMFS has made the requisite findings under the MMPA and will include these findings in the IHA, if issued.

D. Scoping and Public Input

NMFS IHA

To allow other agencies and the public the opportunity to review and comment on the actions, NMFS published a notice of receipt of the Corps application and proposed IHA in the *Federal Register* on July 23, 2015 (80 FR 43739). During the public comment period, NMFS received a letter from the Marine Mammal Commission. The Commission recommended that a hydroacoustic monitoring plan be incorporated in subsequent years of activity under requested regulations, if and when issued. The Commission believes such a plan is prudent due to the types and sizes of piles to be installed and removed, the substrate of the environment, and the ambient sound and sound propagation loss associated with a river mouth opening into the open ocean.

NMFS agrees that a hydroacoustic monitoring plan would be valuable for defining potential injury and harassment zones during future years of the jetty rehabilitation project. There is very limited hydroacoustic data pertaining to the MCR. NMFS will work with the applicant to devise a monitoring plan during the next application cycle.

Corps Final Revised EA

An initial draft EA was distributed for a 30-day public review in June 2006. Six comment letters were received based on the June 2006 EA. Since the current range of alternatives and project description changed, comments received on the June 2006 EA may no longer be relevant to the current proposed alternatives. Due to changes in the project description, a revised draft EA was prepared. The revised 2010 draft EA (*Revised Draft Environmental Assessment Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River, January 2010*) was informed by and revised to reflect and address the above comments, as appropriate. The revised draft EA was issued for a 30-day public review period in January 2010. The revised draft EA was provided to federal and state agencies, organizations and groups, and various property owners and interested publics. In addition, a public information meeting was held in Astoria, Oregon on February 3, 2010. After a presentation by the Corps about the MCR jetty rehabilitation project, the public was invited to ask questions and talk to Corps staff about the project. Another public information meeting to describe likely construction techniques was also held on June, 4, 2010, at Fort Vancouver, WA to solicit input from potential construction contractors and to provide additional information regarding the feasibility of the Major Rehabilitation and Repair approach. The Corps Final Revised EA was issued by the

Corps in 2012 which featured a reduced scope. The preferred alternative (Proposed Action) was described in the 2011 NMFS Biological Opinion (BiOp) and was updated in the 2012 Revised EA (as a reduced project scope relative to the Biological Assessment (BA) and BiOp).

Mitigation, Monitoring And Reporting Measures

The IHA includes detailed mitigation, monitoring, and reporting measures that must be implemented by the Corps when conducting pile driving and removal activity in the proposed action area. These mitigation, monitoring, and reporting measures are described below.

A. Mitigation

(1) Time Restriction: For all in-water pile driving activities, the Corps shall operate only during daylight hours when visual monitoring of marine mammals can be conducted.
(2) Establishment of Level B Harassment zone of influence.
(3) Establishment of shutdown zone.
(4) The Corps is authorized to utilize only vibratory driving under this IHA.
(5) Use of Soft-start: The project will utilize soft start techniques for vibratory pile driving. Whenever there has been downtime of 20 minutes or more without vibratory driving, the contractor will initiate the driving with soft-start procedures described above.

B. Monitoring

(1) Two individuals meeting the minimum qualifications identified in Section 13 of the application by the Corps will monitor the exclusion and Level B harassment zones during vibratory pile driving.
(2) The individuals will scan the waters within each monitoring zone activity using binoculars (Vector 10X42 or equivalent), spotting scopes (Swarovski 20–60 zoom or equivalent), and visual observation
(3) If waters exceed a sea-state which restricts the observers' ability to make observations within the marine mammal buffer zone (the 100 meter radius) (e.g. excessive wind or fog), impact pile installation will cease until conditions allow the resumption of monitoring.

C. Reporting

(1) The Corps is required to submit a draft monitoring report to the Office of Protected Resources, NMFS, within 90 days of the conclusion of monitoring.

NMFS Review

The Office of Protected Resources has reviewed the Corps Final Revised EA and concludes that the impacts evaluated by the Corps are substantially the same as the impacts of NOAA's proposed action to issue an IHA for the take of marine mammal incidental to rehabilitation of Jetty A at the Mouth of the Columbia River (MCR). In addition, the Office of Protected Resources has evaluated the Final EA and found that it includes all required components for adoption by NOAA including:

- a discussion of the purpose and need for the action;

- a listing of the alternatives to the proposed action;
- a description of the affected environment;
- a succinct description of the environmental impacts of the proposed action and alternatives, including cumulative impacts; and
- a listing of agencies and persons consulted, and to whom copies of the Final EA are sent.

Conclusion and Findings

NOAA's proposed action is to issue an IHA to the Corps for the incidental take of marine mammals, by Level B harassment only, related to the rehabilitation of Jetty A at the Mouth of the Columbia River (MCR)**.** NMFS' issuance of the IHA is conditioned upon the implementation of mitigation and monitoring measures as described in the Corps' application and NMFS *Federal Register* notice (80 FR 43760). These measures include timing restrictions, the establishment of shutdown and buffer zones around each driven pile, and monitoring of the action area for marine mammals. Based on this review and analysis, NMFS' Office of Protected Resources has adopted the Corps Final Revised EA under the Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act (40 CFR 1506.3) and issued a separate FONSI.