



### Incidental Harassment Authorization

Washington State Department of Transportation (WSDOT) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (16 U.S.C. 1371(a)(5)(D)) and 50 CFR 216.107 to take, by Level B harassment only, small numbers of marine mammals incidental to conducting in-water construction work for the Bremerton and Edmonds ferry terminals dolphin relocation project in Washington State, contingent upon the following conditions:

1. This Authorization is valid from October 1, 2018, through September 30, 2019.
2. This Authorization is valid only for activities associated with in-water construction work at the Bremerton and Edmonds ferry terminals in Washington State.
3.
  - (a) The species authorized taking by Level B harassment and in the numbers shown in Table 7 are: gray whale (*Eschrichtius robustus*), humpback whale (*Megaptera novaeangliae*), minke whale (*Balaenoptera acutorostrata*), killer whale (*Orcinus orca*), long-beaked common dolphin (*Delphinus capensis*), harbor porpoise (*Phocoena phocoena*), Dall's porpoise (*P. dali*), California sea lion (*Zalophus californianus*), Steller sea lion (*Eumetopias jubatus*), Pacific harbor seal (*Phoca vitulina*), and northern elephant seal (*Mirounga angustirostris*).
  - (b) The authorization for taking by harassment is limited to the following acoustic sources and from the following activities:
    - (i) Vibratory pile driving; and
    - (ii) Vibratory pile removal.
4. Prohibitions.
  - (a) The taking, by incidental harassment only, is limited to the species listed under condition 3(a) above and by the numbers listed in Table 1 of this notice. The taking by injury, serious injury, or death of these species or the taking by harassment, injury or death of any other species of marine mammal is prohibited unless separately authorized or exempted under the MMPA and may result in the modification, suspension, or revocation of this Authorization.
  - (b) The taking of any marine mammal is prohibited whenever the required protected species observers (PSOs), required by condition 6(a), are not present in conformance with condition 6(a) of this Authorization.



5. Mitigation.

- (a) Time Restriction. In-water construction work must occur only during daylight hours.
- (b) Establishing and Monitoring Level A, Level B Harassment Zones, and Shutdown Zones.
  - (i) Before the commencement of in-water pile driving/removal activities, WSDOT must establish Level B harassment zones. The modeled Level B harassment zones (zones of influence, or ZOIs) are summarized in Table 2.
  - (ii) Before the commencement of in-water pile driving/removal activities, WSDOT must establish shutdown zones. The proposed shutdown zones are summarized in Table 3.
  - (iii) If pile driving of a segment ceases for 30 minutes or more and a marine mammal is sighted within the designated shutdown zone prior to commencement of pile driving, or if a shutdown occurs due to marine mammal sighting, the observer(s) must notify the pile driving operator (or other authorized individual) immediately and continue to monitor the shutdown zone. Operations may not resume until the marine mammal has exited the shutdown zone or 15 minutes have elapsed since the last sighting.
- (c) Monitoring of marine mammals must take place starting 30 minutes before pile driving begins until 30 minutes after pile driving ends.
- (d) The shutdown zones and ZOIs must be determined by using a range finder or hand-held global positioning system device.
- (e) Shutdown Measures
  - (i) WSDOT must implement shutdown measures if a marine mammal is detected within or to be approaching the shutdown zones provided in Table 3 of this IHA.
  - (ii) WSDOT must implement shutdown measures if Southern Resident killer whales (SRKWs) are sighted within the vicinity of the project area and are approaching the Level B harassment zone (ZOI) during in-water construction activities.
  - (iii) If a killer whale approaches the Level B harassment ZOI during pile driving or removal, and it is unknown whether it is a SRKW or a transient

killer whale, it must be assumed to be a SRKW and WSDOT must implement the shutdown measure identified in 5(e)(ii).

- (iv) If a SRKW enters the Level B harassment ZOI undetected, in-water pile driving or pile removal must be suspended until the SRKW exits the ZOI to avoid further level B harassment.
- (v) WSDOT must implement shutdown measures if the number of any allotted marine mammal takes reaches the limit under the IHA or if a marine mammal observed is not authorized for take under this IHA, if such marine mammals are sighted within the vicinity of the project area and are approaching the Level B harassment zone during pile removal activities.

(f) Coordination with Local Marine Mammal Research Network and obtaining marine mammal sightings and acoustic detection data. Prior to the start of pile driving, WSDOT must contact the Orca Network and/or Center for Whale Research to get real-time information on the presence or absence of whales before starting any pile driving.

## 6. Monitoring.

- (a) Protected Species Observers.  
WSDOT must employ NMFS-approved PSOs to conduct marine mammal monitoring for its construction project. NMFS-approved PSOs must meet the following qualifications.
  - (i) Independent observers (*i.e.*, not construction personnel) are required.
  - (ii) At least one observer must have prior experience working as an observer.
  - (iii) Other observers may substitute education (undergraduate degree in biological science or related field) or training for experience.
  - (iv) Where a team of three or more observers are required, one observer must be designated as lead observer or monitoring coordinator. The lead observer must have prior experience working as an observer.
  - (v) NMFS will require submission and approval of observer CVs.
- (b) Monitoring Protocols: PSOs must be present on site at all times during pile removal and driving.
  - (i) A 30-minute pre-construction marine mammal monitoring must be required before the first pile driving or pile removal of the day. A 30-minute post-construction marine mammal monitoring must be required after the last pile driving or pile removal of the day. If the constructors

take a break between subsequent pile driving or pile removal for more than 30 minutes, then additional 30-minute pre-construction marine mammal monitoring must be required before the next start-up of pile driving or pile removal.

- (ii) Marine mammal visual monitoring must be conducted for different zones of influence (ZOIs) based on different sizes of piles being driven or removed.
  - (A) For all vibratory driving/removal at the Bremerton Ferry Terminal, two land-based PSOs and one monitoring boat with one PSO and boat operator must monitor the Level A and Level B harassment zones.
  - (B) For all vibratory driving/removal at the Edmonds Ferry Terminal, five land-based PSOs and two ferry-based PSOs must monitor the Level A and Level B harassment zones.
  - (C) If the in-situ measurement shows that the Level B zone at the Edmonds Ferry Terminal is under 15 km from the source, three land-based PSOs and one ferry-based PSO must monitor the Level A and Level B harassment zones.
  - (D) Locations of the land-based PSOs and routes of monitoring vessels are shown in WSDOT's Marine Mammal Monitoring Plan.
- (iii) PSOs must collect the following information during marine mammal monitoring:
  - (A) Date and time that monitored activity begins and ends for each day conducted (monitoring period);
  - (B) Construction activities occurring during each daily observation period, including how many and what type of piles driven;
  - (C) Deviation from initial proposal in pile numbers, pile types, and average driving times;
  - (D) Weather parameters in each monitoring period (e.g., wind speed, percent cloud cover, visibility);
  - (E) Water conditions in each monitoring period (e.g., sea state, tide state);
  - (F) For each marine mammal sighting, the following information shall be collected:

- Species, numbers, and, if possible, sex and age class of marine mammals;
  - Description of any observable marine mammal behavior patterns, including bearing and direction of travel and distance from pile driving activity;
  - Location and distance from pile driving activities to marine mammals and distance from the marine mammals to the observation point; and
  - Estimated amount of time that the animals remained in the Level B zone;
- (G) Description of implementation of mitigation measures within each monitoring period (e.g., shutdown or delay); and
- (H) Other human activity in the area within each monitoring period.
- (c) Passive Acoustic Monitoring:
- (i) If the WSDOT conducts noise field measurement at the Edmonds Ferry Terminal to determine the actual Level B distance from the source during vibratory pile driving of 36-in piles, and the actual Level B harassment distance is confirmed by NMFS to be less than modelled, the number of PSOs will be adjusted based on the criteria listed above.

## 7. Reporting.

- (a) WSDOT must provide NMFS with a draft monitoring report within 90 days of the conclusion of the construction work or within 90 days of the expiration of the IHA, whichever comes first. This report must detail the monitoring protocol, summarize the data recorded during monitoring, and estimate the number of marine mammals that may have been harassed. In addition, the report must provide the following information on observed marine mammals within the harassment zones:
- (i) Species of observed marine mammals;
  - (ii) Number of observed marine mammal individuals;
  - (iii) Behavior of observed marine mammals;
  - (iv) Location within the harassment zones; and
  - (v) Whether mitigation measures were implemented.

(b) If WSDOT plans to renew the IHA for an additional year, a monitoring report must be received within 60 days before the expiration of an existing IHA.

(c) If comments are received from NMFS Office of Protected Resources on the draft report, a final report must be submitted to NMFS within 30 days thereafter. If no comments are received from NMFS, the draft report will be considered to be the final report.

(d) In the unanticipated event that the construction activities clearly cause the take of a marine mammal in a manner prohibited by this Authorization (if issued), such as an injury, serious injury, or mortality, WSDOT must immediately cease all operations and immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators (866-767-6114). The report must include the following information:

- (i) Time, date, and location (latitude/longitude) of the incident;
- (ii) description of the incident;
- (iii) status of all sound source use in the 24 hours preceding the incident;
- (iv) environmental conditions (*e.g.*, wind speed and direction, sea state, cloud cover, visibility, and water depth);
- (v) description of marine mammal observations in the 24 hours preceding the incident;
- (vi) species identification or description of the animal(s) involved;
- (vii) the fate of the animal(s); and
- (viii) photographs or video footage of the animal (if equipment is available).

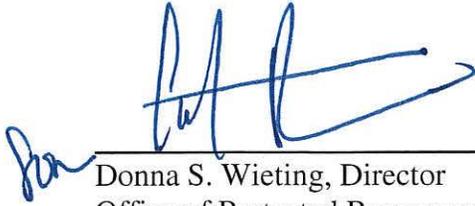
(e) Activities may not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with WSDOT to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. WSDOT may not resume their activities until notified by NMFS via letter, email, or telephone.

(f) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as described in the next paragraph), WSDOT must immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators (866-767-6114). The report must include the same information identified above. Activities may continue

while NMFS reviews the circumstances of the incident. NMFS will work with WSDOT to determine whether modifications in the activities are appropriate.

- (g) In the event that WSDOT discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), WSDOT must report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinators (866-767-6114), within 24 hours of the discovery. WSDOT must provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. WSDOT can continue its operations under such a case.
8. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.
9. A copy of this Authorization must be in the possession of each contractor who performs the construction work at the Bremerton and Edmonds ferry terminals.
10. Renewals - On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section, provided all of the following conditions are met:
- (a) A request for renewal is received no later than 60 days prior to expiration of the current IHA.
- (b) The request for renewal must include the following:
- (i) An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (*e.g.*, reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements.
- (ii) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.
- (iii) Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and

monitoring measures remain the same and appropriate, and the original findings remain valid.

A handwritten signature in blue ink, appearing to be 'Donna S. Wieting', written over a horizontal line.

Donna S. Wieting, Director  
Office of Protected Resources  
National Marine Fisheries Service

8/24/18

Date

**Table 1. Species/stocks and numbers of marine mammals authorized to be taken under this IHA.**

Species	Level B take
Gray whale	10
Humpback whale	8
Minke whale	8
Killer whale (West coast transient)	30
Killer whale (Southern resident)	0
Long-beaked common dolphin	50
Harbor porpoise	1,087
Dall's porpoise	90
California sea lion	1,149
Steller sea lion	75
Harbor seal	2,286
Northern elephant seal	15

**Table 2. Modeled maximum Level B harassment zones for various pile driving activities**

Locati on	Pile driving activity	SL (10m)	Level B harassment distance (m)
		SEL <sub>ss</sub>	All marine mammals
Bremerton*	36" indicate pile install (1 pile/day)	177	63,100
	36" indicate pile removal (1 pile/day)	177	63,100
	36" steel pile (existing dolphin) removal (3 piles/day)	177	63,100
	36" steel pile (relocated dolphin) install (3 piles/day)	177	63,100
	30" steel pile (relocated dolphin) install (3 piles/day)	174	39,800
Edmond*	36" steel pile (indicate pile) install (1 pile/day)	177	63,100
	36" steel pile (indicate pile) removal (1 pile/day)	177	63,100
	36" steel pile (existing dolphin) removal (3 piles/day)	177	63,100
	36" steel pile (relocated dolphin) install (3 piles/day)	177	63,100
	30" steel pile (relocated dolphin) install (3 piles/day)	174	39,800

\*Maximum distance to land (Bremerton = 7 km /Edmonds = 39.8 km) limits extent of modelled Level B zones.

**Table 3. Shutdown distances for various pile driving activities**

Pile type, size & pile driving method	Shutdown distance (m)				
	LF cetacean	MF cetacean	HF cetacean	Phocid	Otariid
36" indicate pile install (1 pile/day)	10	10	25	10	10
36" indicate pile removal (1 pile/day)	10	10	10	10	10
36" steel pile (existing dolphin) removal (3 piles/day)	25	10	35	10	10
36" steel pile (relocated dolphin) install (3 piles/day)	25	10	35	10	10
30" steel pile (relocated dolphin) install (3 piles/day)	25	10	25	10	10