UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

INCIDENTAL HARASSMENT AUTHORIZATION

Duck Point Development II, LLC. (DPD), is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to harass marine mammals incidental to incidental pile driving and removal activities during construction of a second cruise ship berth and new lightering float at Cannery Point (Icy Strait) on Chichagof Island near Hoonah, Alaska, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from June 3, 2019 to June 2, 2020.

2. This IHA is valid only for incidental pile driving and removal activities (vibratory, impact, socketing, and rock anchoring) conducted between June 3 and November 30 and associated with the construction of a second cruise ship berth and new lightering float at Cannery Point (Icy Strait) on Chichagof Island near Hoonah, Alaska.

3. General Conditions

   (a) A copy of this IHA must be in the possession of DPD, its designees, work crew personnel, and Protected Species Observers (PSOs) operating under the authority of this IHA.

   (b) The species authorized for taking are gray whale (*Eschrichtius robustus*), minke whale (*Balaenoptera acutorostrata*), humpback whale (*Megaptera novaeangliae*), kille whale (*Orcinus orca*), Pacific white-sided dolphin (*Lagenorhynchus obliquidens*), Dall's porpoise (*Phocoenoides dalli*), harbor porpoise (*Phocoena phocoena*), Steller sea lion (*Eumetopias jubatus*), and harbor seal (*Phoca vitulina*).

   (c) The taking, by Level A and B harassment, is limited to the species listed in condition 3(b). Table 1 (attached) provides the authorized number of takes per species and stock.

   (d) The taking, by serious injury, or death of any of species listed in condition 3(b) of this IHA is prohibited.

Printed on Recycled Paper

(e) The taking, by Level A harassment, Level B harassment, serious injury, or death, of marine mammal species not identified in condition 3(b) is prohibited.

(f) DPD will conduct a maximum of 75 working days associated with vibratory and impact pile driving, socketing, and rock anchoring.

4. Mitigation Measures

The holder of this IHA is required to implement the following mitigation measures:

(a) For in-water construction, heavy machinery activities other than pile driving (e.g., use of barge-mounted excavators, or dredging), if a marine mammal comes within 10 m, DPD must cease operations and reduce vessel speed to the minimum level required to maintain steerage and safe working conditions.

(b) DPD is required to conduct briefings for construction supervisors and crews, the monitoring team, and DPD staff prior to the start of all pile driving activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, the marine mammal monitoring protocol, and operational procedures.

(c) DPD is required to employ PSOs per the Marine Mammal Monitoring Plan, dated April 2019, and Monitoring Measures described in section 5 of this IHA.

(d) Marine mammal monitoring must take place from 30 minutes prior to initiation of pile driving activity through 30 minutes post-completion of pile driving activity. Pile driving may commence when observers have declared the shutdown zone clear of marine mammals. In the event of a delay or shutdown of activity resulting from marine mammals in the shutdown zone (Table 2 attached), animals must be allowed to remain in the shutdown zone (*i.e.*, must leave of their own volition) and their behavior must be monitored and documented.

(e) If a marine mammal is entering or is observed within an established shutdown zone (Table 2), pile driving must be halted or delayed. Pile driving may not commence or resume until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone; 15 minutes have passed without subsequent detections of small cetaceans and pinnipeds; or 30 minutes have passed without subsequent detections of large cetaceans.

(f) DPD must use soft start techniques when impact pile driving. Soft start requires contractors to provide an initial set of strikes at reduced energy (40 percent), followed by a one-minute waiting period, then two subsequent reduced energy

strike sets. A soft start must be implemented at the start of each day's impact pile driving and at any time following cessation of impact pile driving for a period of thirty minutes or longer.

(g) DPD is required to use pile caps or pile cushions during impact pile driving.

(h) If a species for which authorization has not been granted, or a species for which authorization has been granted but the authorized takes are met, is observed approaching or within the monitoring zone (Table 3 attached), pile driving and removal activities must shut down immediately using delay and shut-down procedures. Activities must not resume until the animal has been confirmed to have left the area or the observation time period, as indicated in condition 4(b) above, has elapsed.

(i) All work must be conducted during daylight hours. If poor environmental conditions restrict visibility full visibility of the shutdown zone, pile installation must be delayed.

5. Monitoring Measures

The holder of this IHA is required to abide by the following marine mammal and acoustic monitoring measures:

(a) Marine mammal monitoring must be conducted in accordance with the Marine Mammal Monitoring Plan, dated April 2019.

(b) Marine mammal monitoring during pile driving and removal must be conducted by NMFS-approved PSOs in a manner consistent with the following:

i. Independent PSOs (*i.e.*, not construction personnel) who have no other assigned tasks during monitoring periods must be used.

ii. Other PSOs may substitute education (degree in biological science or related field) or training for experience.

iii. Where a team of three or more PSOs are required, a lead observer or monitoring coordinator must be designated. The lead observer must have prior experience working as a marine mammal observer during construction.

iv. DPD must submit PSO CVs for approval by NMFS prior to the onset of pile driving.

(c) PSOs must have the following additional qualifications:

i. Ability to conduct field observations and collect data according to assigned protocols.

ii. Experience or training in the field identification of marine mammals, including the identification of behaviors.

iii. Sufficient training, orientation, or experience with the construction operation to provide for personal safety during observations.

iv. Writing skills sufficient to prepare a report of observations including but not limited to the number and species of marine mammals observed; dates and times when in-water construction activities were conducted; dates, times, and reason for implementation of mitigation (or why mitigation was not implemented when required); and marine mammal behavior.

v. Ability to communicate orally, by radio or in person, with project personnel to provide real-time information on marine mammals observed in the area as necessary.

6. Reporting

The holder of this IHA is required to:

(a) Submit a draft report on all monitoring conducted under the IHA within ninety calendar days of the completion of marine mammal and acoustic monitoring or sixty days prior to the issuance of any subsequent IHA for this project, whichever comes first. A final report shall be prepared and submitted within thirty days following resolution of comments on the draft report from NMFS. This report must contain the informational elements described in the Marine Mammal Monitoring Plan, dated April 2019, including, but not limited to:

i. Dates and times (begin and end) of all marine mammal monitoring.

ii. Construction activities occurring during each daily observation period, including how many and what type of piles were driven or removed and by what method (*i.e.*, impact or vibratory).

iii. Weather parameters and water conditions during each monitoring period (*e.g.,* wind speed, percent cover, visibility, sea state).

iv. The number of marine mammals observed, by species, relative to the pile location and if pile driving or removal was occurring at time of sighting.

v. Age and sex class, if possible, of all marine mammals observed.

vi. PSO locations during marine mammal monitoring.

vii. Distances and bearings of each marine mammal observed to the pile being driven or removed for each sighting (if pile driving or removal was occurring at time of sighting).

viii. Description of any marine mammal behavior patterns during observation, including direction of travel.

ix. Number of individuals of each species (differentiated by month as appropriate) detected within the monitoring zone, and estimates of number of marine mammals taken, by species (a correction factor should be used to estimate the total take numbers, as appropriate).

x. Detailed information about any implementation of any mitigation triggered (e.g., shutdowns and delays), a description of specific actions that ensued, and resulting behavior of the animal, if any.

xi. Description of attempts to distinguish between the number of individual animals taken and the number of incidences of take, such as ability to track groups or individuals.

(b) Reporting injured or dead marine mammals:

i. In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as serious injury, or mortality, DPD must immediately cease the specified activities and report the incident to the NMFS Office of Protected Resources (301-427-8401) and the Alaska Region Stranding Coordinator ((877) 925-7773). The report must include the following information:

1. Time and date of the incident;

2. Description of the incident;

3. Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);

4. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;

5. Species identification or description of the animal(s) involved;

6. Fate of the animal(s); and

7. Photographs or video footage of the animal(s).

Activities must not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with DPD to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. DPD may not resume their activities until notified by NMFS.

ii. In the event DPD discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.,* in less than a moderate state of decomposition), DPD must immediately report the incident to the Office of Protected Resources, NMFS, and the Alaska Region Stranding Coordinator, NMFS. The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with DPD to determine whether additional mitigation measures or modifications to the activities are appropriate.

iii. In the event that DPD discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the specified activities (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), DPD must report the incident to the Office of Protected Resources, NMFS, and the Alaska Region Stranding Coordinator, NMFS, within 24 hours of the discovery.

7. 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.

8. Renewals - On a case-by-case basis, NMFS may issue a one-year IHA renewal with an expedited public comment period (15 days) when 1) another year of identical or nearly identical activities 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 allowed for under this IHA, 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.

(c) 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.

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

JUN 0 3 2019
Date

Attachments

Table 1. Takes by Level A and Level B Harassment.

Species	Stock (NEST)	Authorized Level A Harassment	Authorized Level B Harassment	Percent of Stock
Minke Whale	N/A	0	9	N/A
Humpback Whale	Hawaii DPS (9,487) [a] Mexico DPS (606) [a]	0	408 26 (Total 434)	4.3 4.5
Gray Whale	Eastern North Pacific (26,960)	0	3	Less than 1 percent
Killer Whale	Alaska Resident (2,347) Northern Resident (261) West Coast Transient (243)	0	469 52 49 (Total 570)	19.9 [b] 19.9 [b] 20.2 [b]
Pacific White-Sided Dolphin	North Pacific (26,880)	0	164	Less than 1 percent
Dall's Porpoise	Alaska (83,400) [c]	0	1,038	1.2
Harbor Porpoise	NA	32	1,992	NA
Harbor Seal	Glacier Bay/Icy Strait (7,210)	16	156	2.16
Steller Sea Lion	Eastern U.S. (41,638) Western U.S. (53,303)	0	520 39 (Total 559)	1.25 Less than 1 percent

[a] Under the MMPA humpback whales are considered a single stock (Central North Pacific); however, we have divided them here to account for DPSs listed under the ESA. Using the stock assessment from Muto et al. 2018 for the Central North Pacific stock (10,103 whales) and calculations in Wade et al. 2016; 9,487 whales are expected to be from the Hawaii DPS and 606 from the Mexico DPS.

[b] Take estimates are weighted based on calculated percentages of population for each distinct stock, assuming animals present would follow same probability of presence in project area.

[c] Jefferson et al. 2019 presents the first abundance estimates for Dall's porpoise in the waters of Southeast Alaska with highest abundance recorded in spring (N=5,381, CV= 25.4%), lower numbers in summer (N=2,680, CV=19.6%), and lowest in fall (N=1,637, CV=23.3%). However, NMFS currently recognizes a single stock of Dall's porpoise in Alaskan waters and an estimate of 83,400 Dall's porpoises is used by NMFS for the entire stock (Muto *et al.*, 2018).

Table 2. Shutdown Zones during Project Activities.

Source	Shutdown Zones (radial distance in meters, area in km^2)				
	Low-Frequency Cetaceans	Mid-Frequency Cetaceans	High-Frequency Cetaceans	Phocids	Otariids
In-Water Construction Activities					
Barge movements, pile positioning, sound attenuation placement*	10 m (0.00093 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
Vibratory Pile Driving/Removal					
24-in steel installation (18 piles; ~40 min per day on 4.5 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
30-in steel temporary installation (62 piles; ~2 hours per day on 10.5 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
30-in steel removal (62 piles; ~1 hour per day on 10.5 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
30-in steel permanent installation (3 piles; ~1 hour per day on 1.5 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
36-in steel permanent installation (16 piles; ~1 hour per day on 8 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	50 m (0.02307 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)
42-in steel permanent installation (8 piles; ~2 hours per day on 4 days)	50 m (0.02307 km^2)	10 m (0.00093 km^2)	50 m (0.02307 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)
Impact Pile Driving					
36-in steel permanent installation (16 piles; ~10 minutes per day on 4 days)	1,000 m (2.31 km^2)	50 m (0.02307 km^2)	100 m* (0.0875 km^2)	50 m* (0.02307 km^2)	50 m (0.02307 km^2)
42-in steel permanent installation (8 piles; ~6 minutes per day on 4 days)	750 m (1.44 km^2)	50 m (0.02307 km^2)	100 m* (0.0875 km^2)	50 m* (0.02307 km^2)	50 m (0.02307 km^2)
Socketed Pile Installation					
24-in steel permanent installation (18 piles; ~2 hours per day on 9 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	50 m (0.02307 km^2)	15 m (0.0021 km^2)	10 m (0.00093 km^2)
30-in steel temporary installation (up to 10 piles; ~2 hours per day on 5 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	50 m (0.02307 km^2)	15 m (0.0021 km^2)	10 m (0.00093 km^2)
Rock Anchor Installation					

8-in anchor permanent installation (for 24-inch piles, 2 anchors; ~1 hour per day on 2 days)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	25 m (0.005763 km^2)	10 m (0.00093 km^2)	10 m (0.00093 km^2)
33-in anchor permanent installation (for 36- and 42-inch piles, 24 anchors; ~8 hours per day on 12 days)	100 m (0.0875 km^2)	10 m (0.00093 km^2)	100 m (0.0875 km^2)	50 m (0.02307 km^2)	10 m (0.00093 km^2)

*Due to the need to reduce the number of shutdowns, the large Level A shutdown zones were reduced and Level A takes were requested.

Table 3. Level B Harassment Monitoring Zones.

Activity	Received Level at 10 meters	Level B Harassment Zone (m)*	Level B Harassment Zone (km^2)
Vibratory Pile Driving/Removal			
24-inch steel installation	161.9 SPL[3]	6,215 (calculated 6,213)	39 km^2
30-inch steel temporary installation	161.9 SPL[3]	6,215 (calculated 6,213)	
30-inch steel removal	161.9 SPL[3]	6,215 (calculated 6,213)	
30-inch steel permanent installation	161.9 SPL[3]	6,215 (calculated 6,213)	
36-inch steel permanent installation	168.2 SPL[4]	16,345 (calculated 16,343)	193 km^2
42-inch steel permanent installation	168.2 SPL[4]	16,345 (calculated 16,343)	
Impact Pile Driving[5,6]			
36-inch steel permanent installation	186.7 SEL/ 198.6 SPL[4]	3,745 (calculated 3,744)	19 km^2
42-inch steel permanent installation	186.7 SEL/ 198.6 SPL[4]	3,745 (calculated 3,744)	
Socketed Pile Installation			
24-inch steel permanent installation	166.2 SPL[7]	12,025 (calculated 12,023)	116 km^2
30-inch steel temporary installation	166.2 SPL[7]	12,025 (calculated 12,023)	
Rock Anchor Installation			
8-inch anchor permanent installation (for 24-inch piles	166.2 SPL[7]	12,025 (calculated 12,023)	116 km^2
33-inch anchor permanent installation (for 36-inch piles)	166.2 SPL[7]	12,025 (calculated 12,023)	
33-inch anchor permanent installation (for 42-inch piles)	166.2 SPL[7]	12,025 (calculated 12,023)	

*Numbers rounded up to nearest 5 meters.