



IN REPLY REFER TO:

## United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE  
1011 East Tudor Road  
Anchorage, Alaska 99503-6199



AFES/MMM

**AUG 11 2016**

Gregory A. Green  
Principal Ecologist  
Owl Ridge Natural Resource Consultants, Inc.  
6407 Brayton Drive, Suite 204  
Anchorage, Alaska 99507

Agent for:  
Quintillion Subsea Operations, LLC  
201 E. 56th Avenue, #300  
Anchorage, Alaska 99518

Dear Mr. Green:

On October 29, 2015, the U.S. Fish and Wildlife Service's (Service) Region 7, Marine Mammal Management (MMM) Office received a request from Quintillion Subsea Operation, LLC (Quintillion) to provide an Incidental Harassment Authorization (IHA) for take by harassment of Pacific walrus (*Odobenus rosmarus divergens*) and polar bears (*Ursus maritimus*) that may occur incidental to a cable-laying project in the marine waters and coastal lands of Alaska, specifically the marine waters of the northern Bering, Chukchi, and Southern Beaufort Seas and coastal land adjacent to Nome, Kotzebue, Point Hope, Wainwright, Barrow, and Oliktok Point in summer and fall, 2016. Quintillion updated its request on February 3, 2016, and subsequently withdrew its application for incidental take of polar bears on April 25, 2016, citing several factors, including changes to the project that reduce the already-low probability of encounters with polar bears. This letter is to transmit the enclosed IHA and its relevant operational conditions and monitoring and reporting requirements to Quintillion.

This IHA is issued in accordance with provisions of the Marine Mammal Protection Act, as amended. The Service published a Federal Register notice informing the public of the proposed IHA on June 23, 2016 (81 FR 40902). This authorization to take Pacific walrus by harassment is valid from the date of issuance through November 15, 2016. In the event that you would like to

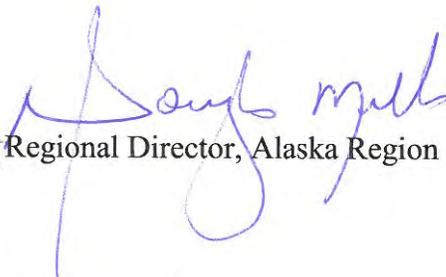
Mr. Gregory A. Green

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maintain this authorization after that ending date, please submit an application for renewal to our MMM office no later than September 30, 2016.

Should you have any questions, please contact staff biologist Kimberly Klein at (907) 786-3621 or by email [kimberly\\_klein@fws.gov](mailto:kimberly_klein@fws.gov).

Sincerely,

  
**ACTING** Regional Director, Alaska Region

Enclosure

Email cc: Ms. Sarah Barton, Quintillion Subsea Operation, LLC  
Mr. Glenn Ruckhaus, Owl Ridge Natural Resource Consultants  
Mr. John Sargent, U. S. Army Corps of Engineers



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## INCIDENTAL TAKE AUTHORIZATION (IHA-16-01)

ISSUED: August 11, 2016  
EXPIRES: November 15, 2016

In accordance with section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA), as amended (16 U.S.C. 1371), Quintillion Subsea Operation, LCC (Quintillion) is hereby authorized to take, by non-lethal Level B harassment, small numbers of Pacific walrus (*Odobenus rosmarus divergens*) during the installation of a fiber optic cable network in the marine waters and adjacent coastal areas of the northern Bering, Chukchi, and Southern Beaufort Seas during the 2016 open water season.

Activities are described in full in the following documents, incorporated here by reference:

- U.S. Fish and Wildlife Service (USFWS). 2016a. Final Environmental Assessment for an Incidental Harassment Authorization for Pacific Walrus (*Odobenus rosmarus divergens*) in Alaska and Associated State and Federal Waters during Installation of the Quintillion Fiber Optic Cable. Department of the Interior. Anchorage, Alaska. <https://www.fws.gov/Alaska/fisheries/mmm/iha.htm>.
- U.S. Fish and Wildlife Service (USFWS). 2016b. Marine Mammals; Incidental Take during Specified Activities; Proposed Incidental Harassment Authorization for Pacific Walrus in Alaska and Associated Federal Waters. Federal Register (81 FR 40902). Department of the Interior. Anchorage, Alaska. June 23, 2016. <https://www.gpo.gov/fdsys/pkg/FR-2016-06-23/pdf/2016-14847.pdf>.

### Prohibitions

- 1) The taking, by incidental Level B harassment only, is limited to Pacific walrus. The taking by Level A harassment, serious injury, or death is prohibited and may result in the modification, suspension, or revocation of this Incidental Take Authorization (IHA).
- 2) The taking of any Pacific walrus whenever the required conditions, mitigation, monitoring, and reporting measures have not been fully implemented as required by this IHA, is prohibited.

## Conditions

- 3) All vessel captains, operations managers, and protected species observers must understand and be fully aware and capable of implementing the conditions of this IHA, and be in possession of this IHA at all times during cable laying activities.
- 4) This IHA is valid only for activities associated with Quintillion's proposed project as described in USFWS (2016 a, b, cited on page 1). Changes to the proposed project without prior authorization may invalidate this IHA.
- 5) The only species authorized for taking, by Level B Harassment, are Pacific walruses. The taking of any other species under the US Fish and Wildlife Service's (Service) jurisdiction or the taking of a Pacific walrus in a manner not expressly allowed by this IHA must be reported immediately to the Service, Marine Mammals Management Office at (907) 786-3800. Receipt of the report must be verified by the Service within 24 hours.
- 6) The following documents are hereby approved, and all provisions are incorporated into this IHA by reference unless specifically noted herein or in USFWS (2016 a, b, cited on page 1):
  - *Plan of Cooperation: Quintillion Subsea Operations Cable Project Bering, Chukchi, and Beaufort Seas, Alaska* (April 2016); and
  - *Marine Mammal Monitoring and Mitigation Plan* (February 2016).
- 7) The holder of this IHA is required to cooperate with the Service and any other Federal, state, or local agency monitoring the impacts of the activity on Pacific walruses.
- 8) At the discretion of the Service, the operator will allow the Service to place an observer at the site of the activity or onboard vessels to monitor the impacts of the activity.
- 9) The number of takes may not exceed that described in USFWS (2016 a, b, cited on page 1).
- 10) The holder of this IHA is required to follow all mitigation, monitoring, and reporting measures specified herein. Failure to do so may result in the modification, suspension, or revocation of this IHA.

## Mitigation Measures

- 11) Avoidance
  - a. The trunk line will be laid in waters 30 – 150 kilometers (km) (19 – 93 miles [mi]) offshore whenever possible to avoid nearshore Pacific walrus concentrations and terrestrial haulouts.
  - b. Where cable end branches come ashore, landings will be conducted at right angles to the coastline and immediately adjacent to the respective village (except at Oliktok Point where no village exists) to minimize nearshore activities and avoid areas where haulouts may occur.
  - c. No work will be done within 50 km (31.1 mi) of Point Lay, where large haulouts are likely, or within 20 km (12.4 mi) of the Hanna Shoal Walrus Use Area.
  - d. Cable-laying activities will not be performed by multiple vessels simultaneously where doing so would create overlapping ensonification zones.
  - e. Quintillion's operations must avoid sea ice habitat used by Pacific walruses.
  - f. Cable laying will occur at 600 meters per hour (0.37 miles per hour [mph] or 0.32 knots [kn]) or less to minimize the risk of collisions between vessels and wildlife.
- 12) Adaptive Measures

When the cable ships are traveling in Alaskan waters to and from the project area (before and after completion of cable laying), and during all travel by support vessels, operators will implement the following measures:

- a. Take reasonable precautions to avoid potential interaction with Pacific walruses by changing speed or course when Pacific walruses are observed within 805 km (0.5 mi). Changes in speed or course will be achieved gradually to avoid abrupt maneuvers whenever possible.
- b. Do not approach Pacific walruses within 805 km (0.5 mi).
- c. Reduce speed to less than 2.6 meters per second (5.8 mph or 5 kn) to prevent collisions with Pacific walruses when visibility drops due to inclement weather, rough seas, or at night.
- d. Vessels may not be operated in such a way as to separate members of a group of Pacific walruses from other members of the group.
- e. Activities are not planned near known haulouts, but if Pacific walruses are observed on land, vessels will maintain a 1,610 m (1-mi) separation distance.
- f. Behavioral responses indicating Level A take of a Pacific walrus due to project activities shall be reported to the Service immediately, including separation of mother from young, stampeding haulouts, injured animals, and animals in distress. Quintillion must confirm the Service has received the report within 24 hours.

### 13) Measures To Reduce Impacts to Subsistence Users

- a. Plan routes in offshore waters away from nearshore subsistence harvest areas.
- b. Schedule operations to avoid conflict with subsistence harvest.
- c. Implement the Plan of Cooperation (POC) (cited in Condition 6, page 2).
- d. Participate in the Automatic Identification System for vessel tracking to allow the cable-laying fleet to be located in real time.
- e. Distribute a daily report by email to all interested parties identified in the POC (cited in Condition 6, page 2). Daily reports will include vessel activity, location, subsistence/local information, and any potential hazards.
- f. At the end of the cable installation process, Quintillion will conduct community meetings in Nome, Kotzebue, Point Hope, Wainwright, and Barrow to discuss and summarize project completion. Quintillion will notify the Service when meetings occur and will provide a summary of information presented and input received.

## Monitoring

### 14) Vessel-Based Protected Species Observers (PSOs)

- a. Observers will conduct vessel-based monitoring for Pacific walruses during all daylight periods of operation throughout the cable-laying operation. Quintillion will employ PSOs during cable-laying operations to monitor zones of ensonification where the received sound levels are 120 Decibel (dB) or greater and 160 dB or greater (all dB levels given herein are  $\text{dB}_{\text{rms}}$  re:  $1 \mu\text{Pa}$ )<sup>1</sup>.

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<sup>1</sup> The Service considers take by Level B harassment to occur whenever Pacific walruses are exposed to sound levels of 160 dB or greater or when behavior indicates harassment (fleeing, leaving a haulout, separation of members from a group, etc.). Quintillion has committed to monitoring the 120-dB and 160-dB isopleth and reporting the behaviors of all Pacific walruses therein. We expect Quintillion's estimates of take to include all observations within the 160-

- b. The duties of PSOs will include: watching for marine mammals and identifying Pacific walrus; recording their numbers, locations, distances, and reactions to the survey operations; and documenting take by harassment.
- c. A sufficient number of trained PSOs will be required onboard each survey vessel to achieve 100 percent monitoring coverage during all periods of cable-laying operations in daylight with a maximum of 4 consecutive hours on watch and a maximum of 12 hours of watch time per day per PSO.
- d. Nighttime observations will be made opportunistically using night-vision equipment.
- e. Each vessel will have an experienced field crew leader to supervise the PSO team, which will contain individuals with prior experience as marine mammal monitoring observers, including experience specific to Pacific walrus.
- f. New or inexperienced PSOs will be paired with an experienced PSO so that the quality of marine mammal observations and data recording is kept consistent.
- g. Resumes for candidate PSOs will be made available for the Service to review.
- h. All observers will have completed a training course designed to familiarize individuals with monitoring and data collection procedures.
- i. Fujinon 7 × 50 or equivalent binoculars and laser range finders (Leica LRF 1200 or equivalent) will be provided to PSOs.
- j. All location, weather, and marine mammal observation data will be recorded onto a standard field form or database.
- k. Global positioning system and weather data will be collected at the beginning and end of a monitoring period and at every half-hour in between.
- l. Position data will also be recorded at the change of an observer or the sighting of a Pacific walrus. Enough position data will be collected to map an accurate charting of vessel travel.
- m. Observations of Pacific walrus will also include group size and composition (adults/juveniles), behavior, distance from vessel, presence in applicable ensonification zones, and any apparent reactions to the project activities.

#### 15) Acoustic Monitoring

- a. The PSOs will monitor the 120-dB and 160-dB ensonification zone for the presence of Pacific walrus<sup>1</sup>.
- b. Sound source verification will be conducted during early-season operations. Results will be used to calibrate the 120-dB and 160-dB ensonification zones.
- c. If sound source verification indicates that sound levels produced during operations will be higher than expected (greater than 190 dB at frequencies less than 40 Kilohertz), Quintillion will coordinate with the Service to evaluate additional mitigation options.
- d. Quintillion will support passive acoustic monitoring (PAM) conducted by the 2016 Arctic Whale Ecology Study (ARCWEST)/Chukchi Acoustics, Oceanography, and Zooplankton Study Extension (CHAOZ-X). Quintillion will report to the Service, information on the acoustic effects of the cable-laying activity that is learned from these studies as part of the project's final technical report (see number 18 below).

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<sup>1</sup> dB zone and any Pacific walrus exhibiting a behavioral response indicating harassment by project activities, regardless of location. The Service will review observation reports and make final determinations regarding take.

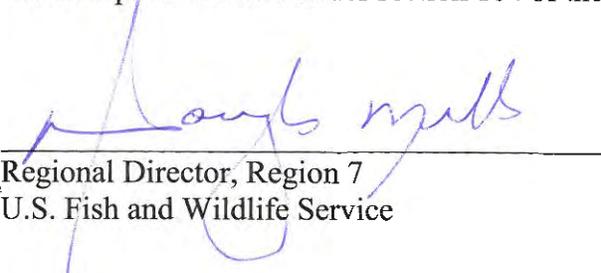
## Reporting Requirements

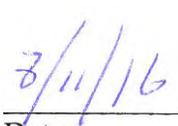
- 16) Quintillion must keep the Service informed of the impacts of authorized activities on Pacific walrus by:
  - a. Immediately reporting any injury or mortality due to project activities, and verifying receipt of report within 24 hours.
  - b. Notifying the Service upon project completion or end of the work season.
- 17) Weekly reports will be submitted to the Service each Thursday during cable-laying activities. The reports will summarize project activities, monitoring efforts conducted by PSOs, results of sound source verification, the number of Pacific walrus detected, the number exposed to sound levels greater than 160 dB<sup>1</sup>, and descriptions of all behavioral reactions indicating harassment by project activities.
- 18) A technical report will be submitted to the Service within 90 days after the end of the project or the end of the season, whichever comes first. The report will describe all project activities, monitoring efforts, and results. The report will include:
  - a. Monitoring summary (hours of monitoring, activities monitored, number of PSOs, and if requested by the Service, the daily monitoring logs).
  - b. A summary of project activities completed and additional work yet to be done.
  - c. Analyses of the factors influencing visibility and detectability of marine mammals (e.g., sea state, number of observers, and fog/glare).
  - d. Discussion of location, weather, ice cover, sea state, and other factors affecting the presence and distribution of Pacific walrus.
  - e. Number, location, distance/direction from the vessel, and initial behavior of any sighted Pacific walrus upon detection.
  - f. Dates, times, locations, heading, speed, weather, and sea conditions (including sea state and wind force), as well as description of the specific cable-laying activity occurring at the time of the Pacific walrus observation.
  - g. Estimated distance from the animal(s) at closest approach and at the end of encounter.
  - h. An estimate of the number of Pacific walrus that have been exposed to noise at received levels greater than or equal to 120 dB and 160 dB with a description of the responses (changes in behavior).
  - i. An estimate of number of Pacific walrus experiencing Level B take<sup>1</sup>, along with estimates of uncertainty, with uncertainty expressed by confidence limits, a minimum-maximum, posterior probability distribution, or another applicable method, with the exact approach to be selected based on the sampling method and data available.
  - j. A description of the mitigation measures implemented during project activities and their effectiveness for minimizing impacts to Pacific walrus.
  - k. An analysis of the effects of Quintillion's operations on Pacific walrus.
  - l. Occurrence, distribution, and composition of all Pacific walrus sightings, including date, water depth, numbers, age/size/gender (if determinable), group sizes, visibility, location of the vessel, and location of the animal (or distance and direction to the animal from the vessel) in the form of electronic database or spreadsheet files.
  - m. A discussion of any specific Pacific walrus behaviors of interest.

19) Notification of Injured or Dead Marine Mammals

- a. In the unexpected event that Quintillion's activity or any associated work causes the take of a Pacific walrus in a manner not authorized by the IHA, such as an injury or mortality (e.g., ship-strike), Quintillion will report the incident to the Service immediately. Quintillion must confirm the Service has received the report within 24 hours. The report will include the following:
  - (i) Time, date, and location (latitude/longitude) of the incident;
  - (ii) Name and type of vessel involved;
  - (iii) Vessel's speed during and leading up to the incident;
  - (iv) Description of the incident;
  - (v) Description of all sound sources used in the 24 hours preceding the incident;
  - (vi) Water depth;
  - (vii) Environmental conditions (e.g., wind speed and direction, cloud cover, and visibility);
  - (viii) Description of all Pacific walrus observations in the 24 hours preceding the incident;
  - (ix) Description of the animal(s) involved;
  - (x) Fate of the animal(s); and
  - (xi) Photographs or video footage of the animal(s) (if equipment is available).
- b. Quintillion will also be required to cease or suspend its activities in such an event until such time that the Service has reviewed the circumstances of the prohibited take, determined whether additional mitigation measures are necessary to minimize further taking, and notified Quintillion that it can resume its activities.
- c. In the event that Quintillion discovers an injured or dead Pacific walrus, and the lead PSO determines that the injury or death is not associated with activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), Quintillion must report the incident to the Service within 48 hours of the discovery. Quintillion will provide photographs, video, or other documentation to the Service.

Activities related to the monitoring described in this IHA do not require a separate scientific research permit issued under section 104 of the Marine Mammal Protection Act.

  
~~ACTING~~ Regional Director, Region 7  
U.S. Fish and Wildlife Service

  
Date