



# United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE  
Fairbanks Fish and Wildlife Field Office  
101 12<sup>th</sup> Avenue, Room 110  
Fairbanks, Alaska 99701  
June 4, 2012



## MEMORANDUM

**To:** Deborah Pierce-Williams, Marine Mammals Management Project Leader

**From:** Sarah C. Conn, Fairbanks Field Office Project Leader 

**Subject:** Endangered Species Act section 7 consultation on the issuance of Letters of Authorization (LOA-12-CS-02 and LOA-INT-12) to Shell Gulf of Mexico Inc. for their activities in the Chukchi Sea and adjacent area in 2012

### Introduction

In 2012, Shell Gulf of Mexico Inc. (Shell) is proposing to conduct exploration and related activities for oil and gas resources in the Outer Continental Shelf (OCS) region of the Beaufort and Chukchi seas. In connection with its proposed activities in the Chukchi Sea and adjacent areas, Shell has requested various Letters of Authorization (LOA) for the take of certain marine mammals under the Marine Mammal Protection Act (MMPA). Specifically, Shell has requested an LOA (referred to as LOA 12-CS-02) for the incidental, unintentional, non-lethal take of small numbers of polar bears and Pacific walrus, pursuant to incidental take regulations promulgated under Section 101(a)(5)(A) of the MMPA for oil and gas activities in the Chukchi Sea (Chukchi ITRs). In addition, Shell has requested an LOA (referred to as LOA-12-INT-12) to enable it to deter polar bears and walrus from endangering human safety or damaging private property or to protect the welfare of the animal, pursuant to Sections 101(4)(A), Section 109(h) and Section 112(C) of the MMPA<sup>1</sup>.

### Prior Biological Opinions

Pursuant to the Endangered Species Act (ESA), a number of section 7 consultations have already been conducted in connection with proposed exploration work and related activities in the Arctic OCS. For example, a consultation has been conducted on the effects of oil and gas exploration on listed and candidate avian species and designated critical habitat. The biological opinion for that consultation is titled, "Biological Opinion and Conference Opinion for Oil and Gas Activities in the Beaufort and Chukchi Sea Planning Areas on Polar Bears (*Ursus maritimus*), Polar Bear Critical Habitat, Spectacled Eiders (*Somateria fischeri*), Spectacled Eider Critical Habitat, Steller's Eiders (*Polysticta stelleri*), Kittlitz's Murrelets (*Brachyramphus brevirostris*), and Yellow-billed Loons (*Gavia adamsii*) issued to the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement on May 8, 2012" (BOEM BO). The BOEM BO contains a comprehensive description of exploratory drilling and its effects on listed species, candidate avian species, and designated critical habitats. The Service determined,

<sup>1</sup> LOA-12-INT-12 would authorize Shell to deter polar bears and walrus from both Shell's proposed 2012 exploration work and various environmental baseline studies it proposes to conduct in the Chukchi Sea and onshore.

among other things, that the action consulted on in the BOEM BO was not likely to jeopardize the continued existence of polar bears or listed and candidate avian species, nor was it likely to destroy or adversely modify polar bear or spectacled eider critical habitat.

In addition to offshore exploratory drilling, Shell is proposing to conduct a number of environmental baseline studies in the coastal areas of the Chukchi Sea and onshore. The potential effects of these studies to polar bears, polar bear critical habitat, Steller's and spectacled eiders, Pacific walrus, and yellow-billed loons were assessed in a BO titled "2012 Shell Environmental Baseline Studies – Coastal Chukchi Sea and Onshore" which was issued on May 30, 2012 (Studies BO).

In addition, in 2008, a section 7 consultation was conducted, and a biological opinion was issued, on the promulgation of the Chukchi Incidental Take Regulations and all activities for which LOAs may be issued during the effective period of the Chukchi ITRs (5 years) including, exploratory drilling and associated activities (Chukchi ITR BO). The Service determined the action consulted on in Chukchi ITR BO was not likely to jeopardize the continued existence of the polar bear. The BO did not address the effects of the action on Pacific walrus or polar bear critical habitat, as at the time the Chukchi ITR BO was issued, polar bear critical habitat had not yet been designated and the Pacific walrus was not yet a candidate species.

### **Proposed Action**

In this document, we discuss the potential effects of issuing LOA 12-CS-02 and LOA 12-INT-12 under the MMPA and the activities for which they are proposed to be issued (Proposed Action) on polar bears, Pacific walrus, and polar bear critical habitat.

### *Description of Activity*

Shell proposes to drill exploratory wells for oil and gas resources and conduct associated activities in the Chukchi Sea OCS and adjacent areas between July and October of 2012. Shell's May 12, 2011 "Request for Letter of Authorization (LOA) for the Incidental Take of Polar Bears and Pacific Walrus, and the Intentional Take of Polar Bears by Harassment; Revised Outer Continental Shelf Lease Exploration Plan, Chukchi Sea, Alaska", provides a complete description of the activities Shell proposes to conduct in the Chukchi Sea area in accordance with its request for LOA12-CS-02, and LOA 12-INT-12. Additional description of the types of environmental studies Shell proposes to conduct onshore and in coastal waters and their effects to listed and candidate avian species and critical habitat units is also provided in the Studies BO.

The Service's MMM Office intends to issue Shell LOA 12-CS-02 which contain the following conditions to which Shell would be required to adhere:

1. Shell Operations Managers, or designates, must be fully aware, understand, and capable of implementing the conditions of this authorization.
2. The species authorized for takings, by Level B Harassment only, are: Pacific walrus (*Odobenus rosmarus divergens*), and polar bear (*Ursus maritimus*). The taking of any walrus or polar bear in a manner prohibited under this authorization must be reported within 24 hours of the taking to the Service, Incidental Take Coordinator in Anchorage, Alaska at (907) 786-3800,

or their designee.

1. This authorization is valid only for activities (including support vessels and aircraft) described in Shell's May 12, 2011, request. Changes in the sighting, timing, scope or nature of project activities will require prior review and approval.
2. The holder of this LOA is required to cooperate with the Service and any other Federal, state or local agency monitoring the impacts of the activity on walruses and polar bears.
3. At the discretion of the Service, the operator will allow the Service to place an observer on site (vessels and aircraft) to monitor the impacts of the activity on Pacific walruses and polar bears.
4. The following documents are approved and all provisions, unless specifically noted, are incorporated into this authorization by reference. Full implementation of these plans is expected:
  - (a) Interaction Plan: *Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan Exploration Drilling Program Chukchi Sea, Alaska* (May 2011), including all attachments and addenda.
  - (b) Ice Management Plan: *Attachment A* of the Interaction Plan and *Adaptive Approach to Ice Management in Areas Occupied by Pacific Walruses*, dated April 6, 2012.
  - (c) Marine Mammal Monitoring and Mitigation Plan: *Attachment B* of the Interaction Plan.
  - (d) Plan of Cooperation: *Attachment H* of the Interaction Plan.
5. If any changes develop in your project during the 2012 Chukchi Sea program, such as activities or location, notify the Service prior to the planned operation.
6. Prohibitions:
  - (a) The taking, by incidental Level B harassment only, is limited to the species listed under Condition 2, above. The taking by Level A harassment, serious injury, or death of these species is prohibited and may result in the modification, suspension or revocation of this Authorization.
  - (b) The taking of any walrus or polar bear whenever the required marine mammal mitigation and monitoring measures have not been fully implemented as required by this authorization, is prohibited.
  - (c) Any take that fails to comply with 50 CFR part 18 subpart I or the terms and conditions of this Authorization is prohibited and may result in modification, suspension or revocation of this Authorization.

7. Polar bear and walrus monitoring and mitigation must be conducted in accordance with 50 CFR §18.118. Shell must comply with the following monitoring, mitigation, and reporting requirements:

- (a) Avoid concentrations or groups of walrus and polar bears hauled out onto land or ice by all vessels and aircraft under the management of Shell. Operators of support vessels should, at all time, conduct their activities at the maximum distance possible from known or observed concentrations of animals. Under no circumstances, other than an emergency, should vessels operate within 800 meters (0.5 mile) of walrus or polar bears observed on land or ice.
- (b) Take every precaution to avoid harassment of walrus or polar bears in water when a vessel is operated near these animals. Maintain an 800 meter (0.5 mile) distance. Vessels must reduce speed when walrus or polar bears are observed in water and vessels capable of steering around these animals must do so. Vessels may not be operated in such a way as to separate members of a group of walrus or polar bears from other members of the group. Vessels should avoid multiple changes in direction and speed when walrus or polar bears are present.
- (c) Aircraft must avoid polar bears and walrus concentrations (haulout areas) by at least 0.5 mile horizontal distance and 1,500 feet unless human safety dictates otherwise. However, when aircraft are operated at altitudes below 1,500 feet vertical distance because of weather or other conditions, the operator must take all precautions possible to avoid known walrus haulout or polar bear use areas and avoid flying directly over or within 0.5 mile horizontal distance of observed polar bears and walrus. Due to their importance as polar bear summer resting habitat, flight paths for the surveys will be offset from the coastline of Chukchi Sea barrier islands by at least 0.5 mile horizontal distance and 1,500 feet horizontal distance.
- (d) Operate in full compliance with the terms identified in the approved documents identified in Condition 6, above.
- (e) Restriction of walrus or polar bear movements, by any means, in sea, on ice or on land, is prohibited. Separation distances must be maintained until animals have departed the area.

8. Monitoring.

*Vessel Monitoring.* For each walrus or polar bear sighting, a Marine Mammal Observer (MMO) or designated crew member will record the following:

- (a) Species, group size, age/size/sex categories (if determinable), behavioral activity, heading (if consistent), bearing and distance from vessel, sighting cue (what caught the observer's attention) and apparent reaction of animals seen near the vessel.
- (b) Time, location, heading, speed, and activity of the vessel, along with sea state,

visibility, cloud cover, and sun glare at any time a walrus or polar bear is sighted.

- (c) The identification of all vessels that are visible within 5 km (approximately 3 miles) of the vessel whenever a marine mammal is sighted, and the time observed, bearing, distance, heading, speed and activity of the other vessel(s).

9. Reporting:

- (a) *Weekly summary of walrus and polar bear sightings.*

The operator must tabulate and report all walrus and polar bear sightings recorded by the MMOs (or designated observers) from project vessels to the Service on a weekly basis. For each walrus or polar bear sighting include:

- i. A unique sighting identification number;
- ii. Species, group size, age/size/sex categories (if determinable), and substrate (water, ice, land or combination of these);
- iii. Date, time and location;
- iv. Environmental conditions including: water depth (meters), sea state (Beaufort scale), visibility 1 (#km), visibility 2 (light/dark), visibility 3 (glare: none, little, moderate, severe), ice condition 1 (estimated % ice cover in vicinity of sighting), ice condition 2 (estimated distance (km) to pack ice);
- v. Estimated range (meters) at first sighting, estimated range (meters) at closest approach;
- vi. The behavior of animals sighted (if determinable);
- vii. Whether animals appeared to react to the presence of the ship (yes, no), if yes, describe the reaction of the animal(s);
- viii. Vessel activity at time of sighting including: vessel name; vessel speed (knots); vessel activity code; action taken by operator in response to sighting; and,
- ix. Any MMO comments or notes.

- (b) *Notification of incident report.* The operator must report any incidental lethal take or injury of a polar bear or walrus immediately to the Service.

- (c) *Post season monitoring report.* A draft report will be submitted to the Service no later than 90 days after the end of the 2012 Chukchi Sea program. The report will describe in detail:

- i. The operations that were conducted;
- ii. The methods, results, and interpretation pertaining to all monitoring tasks;
- iii. The results of the marine mammal monitoring;
- iv. Marine mammal sightings (species, numbers, dates, times and locations; age/size/gender (as determinable), environmental correlates (particularly ice conditions), animal activities and associated survey activities);
- v. Estimates of the amount and nature of potential take (exposure) of walruses and polar bears (by species) by harassment or in other ways to project activities;

- vi. An analysis of the effects of survey operations (e.g., on sighting rates, sighting distances, behaviors, movement patterns of walruses and polar bears);
- vii. Provide an analysis of factors influencing detectability of walruses and polar bears;
- viii. Provide summaries on communications with hunters, local communities and potential effects on subsistence uses or walruses and polar bears and,
- ix. Provide the raw data in electronic format (e.g., Excel spreadsheet).

The draft report will be subject to review and comment by the Service. Any recommendations made by the Service must be addressed in the final report prior to acceptance by the Service. The draft report will be considered the final report for this activity under this LOA if the Service has not provided comments and recommendations no later than 90 days of receipt of the draft report.

d. A report on the Plan of Cooperation, as identified in condition 6 above, including the notification of the affected communities, measures taken to ensure that exploratory activities did not interfere with subsistence activities, and follow-up notification after the season, shall be submitted to the Service no later than 90 days after the end of 2012 Chukchi Sea program. A copy of the report shall be sent to affected local subsistence communities, the Alaska Nanuuq Commission, the Eskimo Walrus Commission and the North Slope Borough Wildlife Department as well as to the Service.

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

11. A copy of this LOA and the Service-approved Polar Bear Interaction Plan must be in the possession of the operator of all vessels and aircraft engaged in any activity operating under the authority of this LOA.

The Service's MMM Office also intends to issue Shell LOA 12-INT-12. The purpose of authorizing taking by harassment, or deterrence, is to maintain human and bear safety and welfare in polar bear habitat. Authorizing Level B harassment take reduces the likelihood of death or injury to polar bears or Pacific walruses. This is accomplished by the following objectives:

1. Prevent animals from associating rewards, food or otherwise, with humans and facilities;
2. "Condition" animals to avoid people, if necessary;
3. Allow animals to use travel routes (natural and man-made) to move along the coast;
4. Prevent animals from extended use of areas around facilities.

Harassment authorization is subject to the following conditions:

1. The Wildlife Interaction Plans, *Polar Bear, Pacific Walrus, and Grizzly Bear Avoidance and Human Encounter/Interaction Plan, Exploration Drilling Program Chukchi Sea, Alaska, May 2011* and *Polar Bear and Pacific Walrus Awareness and Interaction Plan, North Slope and Chukchi Sea, April 2008*, are approved and all provisions must be

complied with unless specifically noted otherwise in this Letter of Authorization (LOA). A copy of the wildlife interaction plans must be available on the specific sites for all personnel.

2. The document, *Adaptive Approach to Ice Management in Areas Occupied by Pacific Walrus*, presented to the Service on April 6, 2012, is approved and all provisions must be complied with unless specifically noted otherwise in this Letter of Authorization (LOA). A copy of this document must be available on all vessels that have the potential to deter walrus through ice management practices.
3. Shell Operations Managers, or designates, must be fully aware of, understand, and be capable of implementing the conditions of this authorization.
4. This authorization is valid only for those activities identified in the request for a LOA dated May 12, 2011 and March 14, 2012.
5. This authorization is restricted to harassment or deterrent activities.
6. Authorized individuals are responsible for documenting and reporting to the U.S. Fish and Wildlife Service (Service), Marine Mammals Management Office (MMM), at (907) 786-3800, all instances involving harassment activities as soon as possible and not later than 24 hours after the occurrence.
7. This authorization is issued specifically to Shell who is responsible for ensuring that **trained and qualified** personnel are assigned the task to harass (deter) polar bears. A list of trained personnel responsible for deterrence will be on file prior to initiation of activities with the Service Incidental Take Coordinator.
8. Shell is solely responsible for ensuring that their personnel operating under this authorization meet all Federal and State laws and regulations regarding the use and carry of firearms should firearms be used for deterrence purposes.
9. Deterrence techniques must not cause the injury or death of an animal. Types of deterrents may include, but are not limited to:

For polar bears:

- Marine mammal observers or monitors;
- Air horns;
- Electric fences;
- Chemical repellents;
- Acoustic recordings;
- Vehicles/vessels;
- Projectiles: cracker shells, bean bags, rubber bullets, and screamers.

For Pacific walrus:

- Vessels.

10. Prior to conducting a harassment activity, operators must:

- Reduce/eliminate attractants;
- Secure site; notify supervisor; move personnel to safety;
- Ensure the animal has escape route(s);
- Ensure communication with all personnel.

11. When conducting a harassment activity, operators must:

- Chose the method that will have the least effect on the animal and increase the intensity of the method or use additional methods only if necessary;
- Shout at the animal before using projectile (avoidance conditioning);
- Move the animal in a safe direction for personnel and the animal; continue with minimally necessary deterrents to receive the desired result.

12. After a harassment event has occurred, operators must:

- Monitor animal movement (to ensure no return);
- Notify supervisor and personnel to resume work;
- Fill out report to be sent to the Service as required under condition five, above (within 24 hours).

13. This Letter of Authorization is valid for the period indicated on this authorization, unless extended or terminated in writing by the U.S. Fish and Wildlife Service, Marine Mammals Management Office.

14. A final report of all encounters and hazing events must be submitted to the U.S. Fish and Wildlife Service, Marine Mammals Management Office within 60 days from the expiration date of this authorization.

### **Status of Species and Critical Habitat and Environmental Baseline**

#### *Polar Bear and Polar Bear Critical Habitat*

The current status of polar bears and polar bear critical habitat and their environmental baselines are described in the sections captioned "Polar Bear" and "Polar Bear Critical Habitat" on pages 46-49 and pages 66-71 of the BOEM BO. Since the BOEM BO was issued on May 8, 2012, there have been no significant changes to the status of polar bears or polar bear critical habitat

#### *Pacific Walrus*

The Pacific walrus ranges across the shallow continental shelf waters of the northern Bering Sea and Chukchi Sea, occasionally ranging into the East Siberian and Beaufort Seas. A recent survey estimated the population of this species to be 129,000, although uncertainty exists regarding the accuracy of this estimate. Factors associated with climate change (i.e., loss of sea ice) and hunting, the main causes of population loss, are likely to continue into the foreseeable future. For a complete description of the status of Pacific walrus, readers are referred to pages 19-22 and page 26 of the Environmental Baseline section of the document titled, "Programmatic Biological Opinion for Polar Bears (*Ursus maritimus*), Polar Bear Critical Habitat, and Conference Opinion for the Pacific Walrus (*Odobenus rosmarus divergens*) for the Beaufort Sea

Incidental Take Regulations issued in July 2011” (Beaufort ITR BO). There have been no significant changes in the status of the species since that document was issued.

### **Effects of the Action**

#### Polar Bears

##### *LOA 12-CS-02*

This LOA would be issued pursuant to the Chukchi ITRs promulgated for oil and gas activities in the Chukchi Sea under Section 101(a)(5)(A) of the MMPA, which allows for the nonlethal, unintentional, incidental take of small numbers of Pacific walrus and polar bears under the MMPA. Accordingly, the only activities for which LOA-12-CS-02 may be issued are those involving the non-lethal take of small numbers of polar bears and walrus. The type and amount of this take is described below.

Aircraft over-flights, vessel movements, exploratory drilling, and ice management activities, support activities, and studies proposed to be conducted by Shell from June 15 through November 30, 2012 could temporarily disrupt the normal behavior of polar bears encountering such activities. The effects of these types of activities are described fully in pages 79 – 87 of the BOEM BO and pages 30 – 31 of the Studies BO. An estimate of the number of polar bears that may be affected by these activities, for which LOA-12-CS-02 is proposed to be issued, follows.

Polar bears very rarely den on Alaska’s Chukchi Sea coastline. Given the timing of the proposed activities (mid-June through November), and their location, no denning polar bears are likely to be affected by Shell’s Chukchi Sea area activities.

Non-denning polar bears occur at low numbers and have a very sparse distribution in the Chukchi Sea and adjacent area. Typically, most polar bears occur in the active ice zone, far offshore, and are not common in open water where the majority of Shell’s activities will occur. Polar bears also spend a limited time on land to feed or move to other areas.

The last exploratory drilling program in the Chukchi Sea occurred in 1990, and was close to the areas Shell proposes to operate in this year. A marine mammal monitoring program for those activities observed 25 polar bears on the pack ice between June 29 and August 11 of that year. Two bears responded to the drilling and vessel operations by approaching; nine bears responded by merely watching the activities; seven bears responded by slowly moving away; five bears did not respond to the activities at all; and responses were not evaluated for two bears. Hence, of the 25 bears observed, up to 11 (44%) may have changed their behavior in minor ways in response to the industrial activity.

The average amount of pack ice in summer in the Chukchi Sea has declined between 1990 and 2012 and therefore, we could expect fewer bears to be encountered. However, the ice extent in 2012 is much greater and the 2012 drilling season is three times longer than that of the 1990 reporting period. Therefore, we conservatively assume that up to 75 individual polar bears may be observed during Shell’s 2012 drilling activities and support vessel operations. If the percentage of bears observed in 2012 that change their behavior is the same as the percentage in 1990, we anticipate that 33 polar bears (44% of 75) may exhibit minor, short-term behavioral

changes in response to Shell's activities. However, these minor changes in behavior do not meet the definition of take under the ESA.

#### *LOA-12-INT-12*

Polar bears may need to be hazed if they approach work areas. Many acoustical and vehicular deterrence methods (starting a vehicle or revving an engine) are not likely to adversely affect polar bears (75 FR 61631). However, as described in LOA 12-INT-12 and the Studies BO, trained individuals may use mechanisms (e.g., chemical repellants, electric fences, and projectiles such as bean bags projected from a shotgun) to harass or deter polar bears away from personnel and equipment. Polar bears could experience temporary disturbance and stress from some deterrence activities and may walk, run or swim away. Bears that are deterred using more aggressive methods (e.g., projectiles such as bean bags and rubber bullets), would likely experience stress, short-term pain, and could be bruised. In extremely rare circumstances, if performed incorrectly, a polar bear may be severely injured or die.

Although Shell would have authorization to use projectiles to deter bears away from ground crews, we expect the majority of deterrence events would not involve contact with the bear, and most of these events would cause only minor, temporary, behavioral changes (e.g., a bear runs or swims away) that do not rise to the level of "take" under the ESA. Very few deterrence events would likely use techniques that would contact an individual bear, such as projectiles (Studies BO). For example, from 2006 through 2010, the entire North Slope oil and gas industry reported sightings of 1,414 polar bears, of which 209 (15%) were intentionally harassed, or deterred (C. Perham, pers. communication, email, July 12, 2011). During those previous events, only between 0-5 polar bears were deterred via bean bags and between 0-1 were deterred with rubber bullets annually. Therefore, given the short time Shell proposes to operate and the scale of their operations when compared to the entire North Slope oil and gas industry, we expect instances of take by Shell involving projectiles would be very rare (two or fewer bears).

#### Polar Bear Critical Habitat

Many of the activities covered in the Proposed Action would occur in polar bear critical habitat. These activities include ice management, which could affect very small areas of the sea ice critical habitat unit for short periods of time, and activities which could temporarily disturb small, discrete areas of critical habitat making small portions of critical habitat temporarily unavailable for use by polar bears. The potential effects of all potential exploration activities in both the Beaufort and Chukchi seas collectively are discussed in the BOEM BO. In that document, we concluded that the effects of all potential exploration activities in both seas, given their limited spatial extent and relatively short duration, would likely only have minor, temporary effects on polar bear critical habitat. Because the Proposed Action here is a subset of the activities evaluated in the BOEM BO, it follows that the effects of the Proposed Action on polar bear critical habitat are likely to be only minor and temporary. Similarly, some environmental studies may cause small areas of critical habitat to be temporarily unavailable to polar bears through disturbance so the critical habitat no longer provides a place free of human disturbance for a short period of time. However, even when taken together the effects of the Proposed Action are still temporary and minor.

### Pacific Walrus

Walrus have been designated as a candidate species under the ESA. By policy, the Service conducts intra-Service section 7 conferences for Service actions that may affect candidate species.

The majority of Shell's proposed activities in the Chukchi Sea for 2012 would take place in open water or in the terrestrial environment where walrus are not present. Walrus, therefore, would not likely be affected. It is possible that some walrus may be present on ice flows and could be disturbed prior to or during by ice management activities, or from noise and vessel movements. However, if they respond to these activities, it would only be to leave the area of disturbance, and these effects would be non-lethal.

### **Conclusion**

#### Polar Bears

The Proposed Action may result in minor, short term changes in behavior of up to 33 polar bears, and the non-lethal deterrence through the use of projectiles of two or less polar bears.

In the BOEM BO, the Service previously determined that the effects of all exploration and related activities in the Beaufort and Chukchi Seas are not likely to jeopardize the continued existence of the polar bear, among other things. The Proposed Action here is a subset of the activities evaluated in the BOEM BO. Accordingly, it follows that the Proposed Action is not likely to jeopardize the continued existence of the polar bear.

This conclusion is also supported by the Chukchi ITR BO, in which the Service previously determined that the effects of all activities for which LOAs could be issued pursuant to the Chukchi ITR regulations during the 5 year period of the regulations was not likely to jeopardize the continued existence of the polar bear. Because the Proposed Action is a subset of those activities already analyzed in the Chukchi ITR BO, it follows that Shell's proposed 2012 activities are not likely to jeopardize the continued existence of the polar bear.

#### Polar Bear Critical Habitat

The Proposed Action could temporarily affect small areas of polar bear critical habitat. In the BOEM BO and Studies BO, we concluded that all exploratory drilling and its associated activities in both the Beaufort and Chukchi Seas, and environmental studies such as those proposed by Shell, would likely only have minor, temporary effects on polar bear critical habitat and, therefore, would not likely destroy or adversely modify polar bear critical habitat. Accordingly, it follows that the Proposed Action here, which is a subset of activities analyzed in the BOEM BO, is also not likely to destroy or adversely modify polar bear critical habitat.

#### Pacific Walrus

While the Proposed Action could affect Pacific walrus, the resulting impacts would be non-lethal only and would likely affect only small numbers of the species. Further, Shell is required to comply with the conditions of the LOAs, which would likely further reduce and mitigate adverse effects to walrus. Given the estimated size of the Pacific walrus population (129,000, with a 95% CI: 55,000 – 507,000), the mitigation measures required by the LOAs, and the non-lethal

nature of the take at issue, any impacts to walrus from the Proposed Action are not likely to jeopardize the continued existence of the species.

### **Incidental Take**

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. "Harm" is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, but not the purpose of, carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement (ITS).

Consistent with the ESA and regulations at 50 CFR 402.14(i), incidental take for marine mammals cannot be issued under the ESA until regulations, authorizations, or permits under the MMPA 101(a)(5) are in effect. By concluding section 7 consultation for LOA-12-CS-02 and LOA-INT-12, the two LOAs authorizing take under the MMPA may be issued, and incidental take of polar bears under the ESA is hereby authorized. Specifically, as described above, up to two bears are authorized to be incidentally taken as a result of hazing polar bears away from oil and gas activities.

Both LOA-12-CS-02 and LOA-12-INT-12 contain a series of conditions and guidelines which when implemented should reduce impacts to polar bears. No other additional terms or conditions are required through this document.

The prohibitions against taking species found in section 9 of the ESA do not apply unless these species are listed; therefore no incidental take is authorized for Pacific walrus at this time, as it is a candidate species.

### **Re-initiation Notice**

This concludes formal consultation on effects to polar bears, Pacific walrus, and polar bear critical habitat from the issuance of LOA-12-CS-02 and LOA-12-INT-12 to Shell for their proposed exploration and associated activities in the Chukchi Sea and adjacent areas in 2012. As provided in 50 C.F.R. 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if:

- (1) The amount or extent of annual incidental take is exceeded;
- (2) New information reveals effects of the action agency that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion;

- (3) The agency action is subsequently modified in a manner that causes an effect to listed or critical habitat not considered in this opinion; and/or
- (4) A new species is listed or critical habitat designated that may be affected by the action.

Thank you for your cooperation in the development of this biological and conference opinion. If you have any comments or require additional information, please contact Sarah C. Conn, Fairbanks Fish and Wildlife Field Office Project Leader, 101 12<sup>th</sup> Ave., Fairbanks, AK, 99701, Telephone: (907) 456-0499.

#### **Literature Cited**

Biological Opinion and Conference Opinion for Oil and Gas Activities in the Beaufort and Chukchi Sea Planning Areas on Polar Bears (*Ursus maritimus*), Polar Bear Critical Habitat, Spectacled Eiders (*Somateria fischeri*), Spectacled Eider Critical Habitat, Steller's Eiders (*Polysticta stelleri*), Kittlitz's Murrelets (*Brachyramphus brevirostris*), and Yellow-billed Loons (*Gavia adamsii*) issued to the Bureau of Ocean Energy Management and the Bureau of Safety and Environmental Enforcement. May 8, 2012.

Biological Opinion and Conference Opinion for 2012 Shell Environmental Baseline Studies – Coastal Chukchi Sea and Onshore. May 30, 2012

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