




United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Fairbanks Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
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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 12-13 and LOA 12-INT-11) to Shell Gulf of Mexico Inc. for activities in and adjacent to the Beaufort Sea 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 Beaufort 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 12-13) 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 Beaufort Sea (Beaufort ITRs). In addition, Shell has requested an LOA (referred to as LOA 12-INT-11) 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) and Section 112(2)(h) of the MMPA.¹

Previous Biological Opinions

In July 2011, a biological opinion was prepared under section 7 of the Endangered Species Act (ESA) on the promulgation of Incidental Take Regulations (Beaufort ITRs) authorizing the incidental, unintentional, non-lethal take of small numbers of polar bears and Pacific walrus from oil and gas activities in the Beaufort Sea under Section 101(a)(5)(A) of the Marine Mammal Protection Act (MMPA). In the biological opinion, the Service evaluated the effects on polar bears, Pacific walrus and polar bear critical habitat of all oil and gas activities for which Letters of Authorization (LOAs) pursuant to the Beaufort ITRs were likely to be issued during the 5-year effective period of the regulations. The biological opinion, which was 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" (Beaufort ITR BO), determined that the activities for which LOAs

¹ LOA-12-INT-11 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 Beaufort Sea and onshore.

were projected to be issued over the effective period of the ITRs, collectively, were not likely to jeopardize the continued existence of polar bears or Pacific walrus and were not likely to destroy or adversely modify polar bear 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 and Beaufort seas 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 and a BO titled "2012 Shell Environmental Baseline Studies – Coastal Chukchi Sea and Onshore" which was issued on May 30, 2012 (Studies BO). This BO also concluded the proposed activities were not likely to jeopardize the continued existence of polar bears or Pacific walrus and were not likely to destroy or adversely modify polar bear critical habitat.

Proposed Action

The Service's Marine Mammals Management Office (MMM Office) now proposes to issue LOAs 12-13 and 12-INT-11 to Shell Gulf of Mexico Inc. (Shell) authorizing the take of polar bears and Pacific walrus from exploratory drilling and associated activities and environmental baseline studies to be conducted in the Beaufort Sea and adjacent areas from June 15 until November 30, 2012. In this document, we discuss the potential effects of issuing LOA 12-13 and LOA 12-INT-11 under the MMPA and the oil and gas activities and studies for which they are proposed to be issued (Proposed Action) on polar bears, Pacific walrus and polar bear critical habitat.

These activities are a subset of those activities analyzed in the Beaufort ITR BO and Studies BO, collectively, described above. Accordingly, the conclusion and supporting analysis set forth in the Beaufort ITR BO and Studies BO apply to a determination of whether issuing an individual LOA for exploration and associated activities, such as LOA-12-13 and LOA 12-INT-11 in this case, and the activities for which the LOAs are proposed to be issued are likely to jeopardize the continued existence of the polar bear or Pacific walrus or to destroy or adversely modify polar bear critical habitat. In light of the conclusions in the Beaufort ITR BO and the Studies BO, it follows that issuing LOA 12-13 and LOA 12-INT-11 and the activities for which they would be issued are not likely to jeopardize the continued existence of the polar bear or Pacific walrus or to destroy or adversely modify polar bear critical habitat.

Effects of the Action

The activities for which these LOAs are proposed to be issued are likely to result in the incidental take of small numbers of polar bears. Specifically, Aircraft over-flights, vessel movements, exploratory drilling, ice management, and environmental studies proposed to be conducted by Shell from June 15 through November 30, 2012 pursuant to LOA-12-13 and LOA-12-INT-11 could temporarily disrupt the normal behavior of polar bears encountering such activities. For a detailed discussion of the effects of these types of activities, see pages 33 - 40 of the Beaufort ITR BO. See also pages 79 - 87 of 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, dated May 8, 2012, and pages 10 - 12 and 30 - 31 of the Studies BO.

An estimate of the number of polar bears that may be affected by the activities for which LOA-12-13 and LOA-12-INT-11 may be issued follows.

Given the timing of the proposed activities (mid-June until the end of October) no denning polar bears are likely to be affected by Shell's Beaufort Sea area activities. In contrast, non-denning polar bears occur at low numbers and have a very sparse distribution in the Beaufort 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. However, polar bears also spend a limited time on land to feed or move to other areas.

To estimate incidental take associated with Shell's activities for which LOA-12-13 and LOA-12-INT-11 are proposed to be issued, we examined information on polar bears observed during oil and gas activities in the Beaufort Sea from 2006 through 2009. During that time period, an annual average of 306 polar bears, (ranging from 170 in 2006 to 420 in 2009), were observed during all oil and gas activities in the Beaufort Sea and surrounding area. Some of these sightings are likely re-sightings of previously observed bears. For most sightings (81 percent of these observations), the Service reported that no interaction occurred (the Service uses the term 'interaction' as it is defined in human-bear conflict management, where an interaction is "...when a person(s) and bear(s) are mutually aware of one another"). The remaining 19% of observed polar bears were deflected from their travel routes, either moving away from the disturbance by walking trotting, running, or swimming, or were attracted to and moved towards the site. In summary, for all oil and gas activities in the Beaufort Sea ITR, an average of 306 polar bear observations during a 12-month period were reported, and in 58 of these instances, polar bears altered their behavior. In light of this information and the fact that Shell's proposed activities in the Beaufort Sea for 2012 would be limited to a few months and be much more limited in geographic extent when compared to all North Slope oil and gas activities, we anticipate that <20 polar bears may make minor, short term changes to their behavior as a result of Shell's activities in the Beaufort Sea and surrounding area. However, minor changes in a polar bear's behavior do not rise to the level of "take" as defined under the ESA.

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-11, the Studies BO, and the Beaufort ITR 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 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 proposed 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).

Conclusion

Polar Bears

The Service previously determined that the effects of all activities for which LOAs could be issued pursuant to the Beaufort ITR regulations during the 5 year period of the regulations was not likely to jeopardize the continued existence of the polar bear. The Service also determined the effects of environmental baseline studies in the Beaufort and Chukchi Seas are not likely to jeopardize the continued existence of polar bears, Pacific walrus, and listed and candidate avian species. Because the Proposed Action is a subset of those activities already analyzed in the Beaufort ITR BO and Baseline BO collectively, it follows that Shell's proposed 2012 activities are not likely to jeopardize the continued existence of the polar bear. However, the Proposed Action may result in minor, short term changes in behavior of <20 polar bears, and the non-lethal deterrence through the use of projectiles of two or less polar bears.

Polar Bear Critical Habitat

The Proposed Action could temporarily affect small areas of polar bear critical habitat. In the Beaufort Sea ITR BO, we concluded that all exploratory drilling and its associated activities in both the Beaufort and Chukchi seas 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. Similarly, in the Studies BO, we concluded that baseline studies in the Beaufort and Chukchi seas and adjacent areas would likely only have minor, temporary effects on polar bear critical habitat. Accordingly, it follows that the Proposed Action here, which is a subset of activities analyzed in the Beaufort ITR BO, and Studies BO collectively, is also not likely to destroy or adversely modify polar bear critical habitat.

Pacific Walrus

While the Proposed Action could affect small numbers of Pacific walrus as described in the Beaufort ITR BO and the Studies BO, however, the resulting impacts would be non-lethal. 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 Statement for polar bears

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-12-13 and LOA-12-INT-11, 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 12-13 and LOA 12-INT-11 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 12-13 and LOA 12-INT-11 to Shell for their proposed exploration and associated activities in the Beaufort 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 12th 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

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. July 2011.