

Supplemental Environmental Assessment
on
Effects of Issuing Marine Mammal Scientific Research Permit No. 14610-03
May 2014

Lead Agency: USDOC National Oceanic and Atmospheric Administration
National Marine Fisheries Service, Office of Protected
Resources

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Location: Coastal areas and open waters of the Bering, Chukchi, and
Beaufort Seas adjacent to the Alaskan coast

Abstract: The National Marine Fisheries Service (NMFS) proposes to issue an amendment to Scientific Research Permit No. 14610-02, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*). The current permit authorizes takes of beluga, gray, humpback and bowhead whales by harassment for studies of foraging ecology, habitat requirements. The amended permit would authorize additional gray whales takes by photo-identification research activities as well as allow implantable tag modifications to accommodate acoustic tagging of bowhead whales. The amended permit would be valid through the expiration date of the original permit (May 31, 2015).

1.0 PURPOSE OF AND NEED FOR ACTION

Proposed Action: In response to an application from the Permit Holder, the Alaska Department of Fish & Game, Juneau, Alaska, NMFS proposes to issue an amendment to Scientific Research Permit No. 14610, pursuant to the Marine Mammal Protection Act of 1972, as amended (MMPA; 16 U.S.C. 1361 *et seq.*), and the Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531 *et seq.*). The permit exempts the Holder from statutory take prohibitions during conduct of research that is consistent with the purposes and policies of the MMPA and ESA and applicable permit issuance criteria. The objective of the applicant's research is to conduct studies of cetacean foraging ecology, habitat requirements, vital rates and effects of natural and anthropogenic factors.

Permit No. 14610 authorized research activities including aerial surveys for beluga whales, capture of beluga whales for instrument attachment and sample collection, remote biopsy of beluga whales, and remote biopsy and instrument attachment for gray whales. These activities aid in determining population abundance, stock structure, feeding areas and other important habitats, migration routes, behavior relative to human disturbance, and to genetically identify individuals to determine survival and calving intervals. Research occurs within waters of the Bering, Chukchi, and Beaufort Seas in Alaska. The permit was amended on two occasions:

- Permit No. 14610-01 was issued on August 3, 2010 and replaced the original permit and added authorization for takes of bowhead and humpback whales by tagging and biopsy research efforts.
- Permit No. 14610-02 was issued on August 16, 2013 and replaced Permit No. 14610-01 and changed the Responsible Party for the permit.

The current permit (No. 14610-02) authorizes takes of beluga whales (*Delphinapterus leucas*), gray whales (*Eschrichtius robustus*), endangered bowhead whales (*Balaena mysticetus*), and endangered humpback whales (*Megaptera novaeangliae*) for research activities to determine population abundance, stock structure, feeding areas and other important habitats, migration routes, behavior relative to human disturbance, and to genetically identify individuals to determine survival and calving intervals. Research activities for beluga whales include aerial survey, capture for tagging and sample collection, and remote biopsy. Research activities for bowhead whales, gray whales and humpback whales include tagging and remote biopsy. Harbor seals (*Phoca vitulina*), bearded seals (*Erignathus barbatus*), ringed seals (*P. hispida*), and spotted seals (*P. largha*) would be harassed annually incidental to the cetacean research. Tissue samples collected from whales would be imported and exported to collaborators for genetic, health, and dietary studies. Research may occur in waters of the Bering, Chukchi, and Beaufort Seas in Alaska.

A proposal to amend the current permit (No. 14610-02) includes a request for takes during photo-identification efforts to determine stock or feeding group affiliation of gray whales encountered in Alaskan waters (Chukchi and western Beaufort seas). The permit holder is also requesting to alter a current tag attachment method to allow for the attachment of a temporary acoustic tag using a two-anchor system on bowhead whales. This request is to allow for two much shorter anchors with one set of barbs each to be used for the short-term attachment of a base-plate for a temporary acoustic tag. The two anchor attachment is similar to that used by the

LIMPET tag that has been used successfully on several whale species. No additional takes are requested for tagging activities.

Purpose and Need: The primary purpose of the permit is to provide an exemption from the take prohibitions under the MMPA and ESA to allow “takes” by harassment (including level A and level B harassment as defined under the MMPA) of marine mammals, including endangered species, for bona fide scientific research. The need for issuance of the permit is related to NMFS’s mandates under the MMPA and ESA. Specifically, NMFS has a responsibility to implement both the MMPA and the ESA to protect, conserve, and recover marine mammals and threatened and endangered species under its jurisdiction. The MMPA and ESA prohibit takes of marine mammals and threatened and endangered species, respectively, with only a few very specific exceptions, including for scientific research and enhancement purposes.

The NMFS Permits Division prepared a Categorical Exclusion memorandum for the issuance of Permit No. 14610 to the ADF&G. An Environmental Assessment (EA; NMFS 2010) was prepared for issuance of Permit No. 14610-01 for takes of cetaceans, as described above. No additional NEPA analysis was required for the issuance of Permit No. 14610-02, as it only involved personnel changes. This supplemental EA (SEA) evaluates the potential effects of amending the permit to add takes from photo-identification of gray whales and the modification of implantable tags for use on bowhead whales.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

Alternative 1 - No Action (Status Quo): Under the No Action alternative, the permit amendment would not be issued to the applicant for the activities proposed. In absence of such amendment, activities currently authorized under Permit No. 14610-02 would continue through May 31, 2015 (as described below).

Currently permitted research activities for gray whales include instrument attachment with concurrent biopsy sampling (up to 50 animals annually) and biopsy sampling alone (up to 50 animals annually), with incidental harassment of up to 80 animals per year.

Currently permitted research activities for beluga whales include aerial survey (up to 1,000 animals per each of four stocks annually); capture for sample collection and instrument attachment (up to 35 animals per each of four stocks annually), and remote biopsy (up to 350 animals per each of four stocks annually). The permit allows for research-related mortality of up to three beluga whales annually, from any combination of stocks. Beluga skin and blubber will be exported to Canada for fatty acid and contaminants analysis.

Currently permitted research activities for bowhead and humpback whales include instrument attachment (up to 65 bowhead whales and 20 humpback whales annually), remote biopsy (up to 50 bowhead whales and 20 humpback whales annually), and photo-identification (of humpback whales that are tagged or biopsied). Additional whales from both species may be harassed incidental to activities directed at target animals: up to 80 bowhead whales and 30 humpback whales annually.

Harassment of up to 10 each of harbor seals, bearded seals, ringed seals, and spotted seals annually incidental to the cetacean research is currently permitted.

Alternative 2 - Proposed Permit: Under the Proposed Action alternative, a permit amendment would be issued for takes from activities as proposed by the applicant, with the permit terms and conditions standard to such permits as issued by NMFS. The amended permit would continue to allow the currently permitted takes of beluga, gray, humpback and bowhead whales, as well as incidental harassment of seals.

Target species or stocks: The amendment is for research directed at gray whales and bowhead whales, the latter of which is listed as endangered throughout their ranges under the ESA. The other species that are the subject of the current permit, beluga and humpback whales, would remain in the amended permit as previously authorized.

Duration: The permit amendment would be valid through the expiration date of the current permit: May 31, 2015. The research would commence upon permit validation (signature of the permit holder) and may occur year-round, but varies by species. Beluga whale and bowhead whale activities would occur in all months. Gray whale and humpback whale activities would occur in summer and fall.

Methods: The current research protocols for the permit are briefly summarized under Alternative 1 – No Action (Status Quo) listed above. Additional detail is provided in the application on file for this action, as well as in Section 2 of the 2010 EA prepared for permit No. 14610-01. The application and 2010 EA are hereby incorporated by reference. Both of these documents are available to the public. The terms and conditions of the current permit would remain in effect in the amendment, including measures to mitigate adverse effects. These standard permit conditions are listed and explained in Appendix A of this SEA.

The proposed amendment would increase annual takes of gray whales by 300 directed takes and up to 50 additional incidental harassment takes during new photo-identification efforts to determine stock or feeding group affiliation of gray whales encountered in Alaskan waters (Chukchi and western Beaufort seas). The photo-identification project will allow larger sample sizes to increase knowledge of gray whale movements, habitat use, and behavior relative to industrial activities including oil and gas and shipping in the Arctic.

The research protocols and the permit conditions would limit the number of times a whale is closely approached for any combination of sampling or instrument attachment, both in absolute numbers of approaches (3 per day and no intentional repeat sampling/tagging) and based on assessment of risk associated with the type of response. Researchers must cease attempts to approach, sample, or tag an animal if the procedure does not appear to be working or there are indications such acts may be life-threatening or otherwise endangering the health or welfare of the animal.

Cows and calves will not be separated and research efforts must be terminated if the whale is reacting strongly to the researcher's presence (e.g., tail slapping or approaching the boat).

The proposed amendment would also allow the researchers to alter the current implantable tag attachment methods to allow for the attachment of a temporary acoustic tag using a two-anchor system on bowhead whales (similar to the LIMPET tag that has been used successfully on 13 species of whales to date (e.g., Schorr et al. 2009; Baird et al. 2009; 2011a, b). No additional takes are requested for tagging activities. The anchors are ~6 cm apart and are 9 cm long with a similar design to the longer anchors used for the implantable bowhead tags used under the current permit, but shorter and with only one set of barbs. The shorter lengths of the anchors are designed to attach in the dermal layers only and not for long-term retention after the acoustic tag is released. The base plate with the two anchors is ~9.5 cm long and ~6.5 cm wide at its widest, but it is cross-shaped and each lobe is only ~2.2 cm wide. The plate is ~4 mm thick and serves as the platform for the acoustic tag. The acoustic tag is time-released from the base plate by a dissolving link (e.g., corrosive magnesium bolt). The base plate is designed to come off soon after the acoustic tag is released. Once the acoustic tag is released, it will float to the surface and a VHF transmitter on board allows it to be located and retrieved. The purpose of the acoustic tags is to obtain calling rates of bowhead whales, which can be used in density estimations from passive acoustic monitoring techniques.

3.0 AFFECTED ENVIRONMENT

Location

Research would occur in coastal areas and open waters of the Bering, Chukchi, and Beaufort seas adjacent to the Alaskan coast, typically within 32 km of shore in areas near coastal villages in Alaska (See map in Figure 1 of application). The exact locations are dependent on seasonal distribution and abundance of the whales: i.e., the research occurs where the whales are located. The permitted takes of marine mammals do not affect other components of the environment. Thus, the action area is effectively limited to the locations where the research occurs, or, more specifically, to where the whales are at the time they are surveyed, tagged, or sampled. Further, although there are multiple proposed locations for the research, activities are likely to only occur at one location per day due to logistics and personnel limitations.

Gray whale photo-identification efforts will take place throughout the study area, but particular focus will be in the Chukchi and western Beaufort seas during summer and fall, where gray whales have become more common possibly in response to prey availability. It is not clear to which stock or feeding group these gray whales belong and photo-id will help to identify their feeding areas, breeding areas, and their stock affiliations. In addition to currently authorized tagging and biopsy data, photo-identification will yield larger sample sizes to increase knowledge of gray whale movements, habitat use, and behavior relative to industrial activities including oil and gas and shipping in the Arctic.

The distribution of bowhead tagging efforts, by boat (all seasons) and from the ice (spring only), in time and geographic location covers the range of bowhead distribution to allow researchers to describe bowhead movements, timing, migration routes, migration speed, feeding areas, feeding depths, dive durations, behavior near seismic and drilling operations and near shipping. Western Arctic bowhead whales are distributed in seasonally ice-covered waters of the Arctic and near-Arctic, generally north of 60°N and south of 75°N in the western Arctic Basin. The majority of the population in Alaska migrates annually from wintering areas (November to March) in the

northern Bering Sea, through the Chukchi Sea in the spring (March through June) to the Beaufort Sea where they spend much of the summer (mid-May through September) before returning again to the Bering Sea in fall (September through November) to overwinter. Bowhead whales are closely associated with sea ice most of the year.

Status of Target Species

Cetaceans

Bowhead Whales

Bowhead whales are listed under the ESA as a single species. The Western Arctic bowhead stock (also known as Bering-Chukchi-Beaufort stock or the Bering stock) is the only stock found within U. S. waters. They are distributed in seasonally ice-covered waters of the Arctic and near-Arctic, generally north of 60°N and south of 75°N in the western Arctic Basin. Whales from this stock migrate annually from wintering areas (December to March) in the northern Bering Sea, through the Chukchi Sea in the spring (April through May), to the Beaufort Sea where they spend much of the summer (June through September) before returning again to the Bering Sea in the fall (October through December) to overwinter. Some bowheads are found in the Chukchi and Bering Seas in summer, and these are thought to be a part of the expanding Western Arctic stock. Most of the year, bowhead whales are closely associated with sea ice.

The most recent minimum population estimate for bowhead whales, based on surveys conducted in 2001, is 10,314 (CV = 0.2442). A calf count in 2001 provides evidence for a healthy and increasing population. This stock may now be approaching its carrying capacity. This population has been harvested for subsistence by Alaska Natives for at least 2,000 years. Subsistence hunters take approximately 0.1-0.5% of the population per annum, with the number of kills ranging between 14 and 72 per annum. Subsistence takes are regulated by a quota system under the authority of the IWC. The inter-annual variation in numbers killed depends in part on changes in management strategy and in part on higher abundance estimates in recent years. Canadian and Russian Natives are also known to take whales from this stock. The annual average subsistence take (by Natives of Alaska, Russia, and Canada combined) during the 5-year period from 2006 to 2010 was 38 bowhead whales.

Another source of human-caused mortality is entanglement in fishing gear (rope or net). However, the estimated average annual rate of known entanglement in U.S. commercial fishing gear is not known. Other threats to bowhead whales are related to habitat loss or degradation. Increasing oil and gas development in the Arctic has led to an increased risk of various forms of pollution to bowhead whale habitat, including oil spills, toxic, and nontoxic waste. Sound produced by increased levels of vessel traffic resulting from seismic exploration and drilling operations is also of concern. Evidence indicates that bowhead whales are sensitive to sound from offshore drilling platforms and seismic survey operations and that the presence of an active drill rig or seismic operations will cause bowhead whales to avoid the vicinity. Another concern is Arctic climate change, which has started to affect high northern latitudes more than elsewhere. Ice-associated animals, such as the bowhead whale, may be sensitive to changes in Arctic weather, sea-surface temperatures, or ice extent, and the concomitant effect on prey availability.

There is no critical habitat designated for bowhead whales.

Humpback Whales

Humpback whales are listed under the ESA as a single species. However, for management purposes, NMFS recognizes three breeding populations in the North Pacific, also designated as “stocks” under the MMPA. The Western North Pacific (WNP) stock (one of three breeding populations in the North Pacific), consists of winter/spring populations off Asia that migrate primarily to Russia and the Bering Sea/Aleutian Islands. The Central North Pacific (CNP) stock consists of winter/spring populations off the Hawaiian Islands that migrate primarily to northern British Columbia/Southeast Alaska, the Gulf of Alaska, and the Bering Sea/Aleutian Islands. The California-Oregon-Washington (COW) stock includes humpback whales that feed off the west coast of the United States. The winter migratory destination of this stock is primarily in coastal waters of Mexico and Central America.

NMFS recognizes two other stocks of humpback whales: the American Samoa stock in the South Pacific and the Gulf of Maine stock in the Atlantic. Whales from these two stocks would not be affected by the research, which does not occur within the ranges of these populations. Based on the latitudes at which the research would occur, the action would mostly affect whales from the WNP and CNP breeding populations or stocks, although whales from the ENP may also be encountered. Humpback whales in the high latitudes of the North Pacific are seasonal migrants that feed on euphausiids and small schooling fishes. The summer feeding range of humpback whales in the North Pacific encompasses coastal and inland waters around the Pacific Rim from Point Conception, California, north to the Gulf of Alaska and the Bering Sea, and west along the Aleutian Islands to the Kamchatka Peninsula and into the Sea of Okhotsk and north of the Bering Strait.

Given the relatively small size of the WNP stock, WNP whales probably represent a small fraction of all the whales found in the Aleutian Islands, Bering Sea, and Gulf of Alaska, which are primarily whales from Hawaii (CNP stock) and the Revillagigedos (COW stock). Humpback whales from the Western and Central North Pacific stocks mix to a limited extent on summer feeding grounds ranging from British Columbia through the central Gulf of Alaska and up to the Bering Sea. The abundance estimate for humpback whales in the North Pacific is approximately 20,000 whales. The minimum abundance estimates for the North Pacific stocks are: 732 for WNP, 2,043 for COW, and 5,883 for CNP.

There is no critical habitat designated for humpback whales.

Gray whales

Two stocks of gray whales have been recognized in the North Pacific: the Eastern North Pacific (ENP) stock, which lives along the west coast of North America, and the Western North Pacific (WNP) or "Korean" stock, which lives along the coast of eastern Asia. The ENP stock winters mainly along the west coast of Baja California, using certain shallow, nearly landlocked lagoons and bays. Calves are typically born January to mid-February. The northbound migration generally begins in soon after calving and continues through May, with cows and newborn calves migrating northward primarily between March and June along the U.S. West Coast. Much of the ENP stock spends the summer in the feeding grounds of the northern and western Bering and Chukchi Seas. However, there are also smaller feeding areas near Kodiak Island, Southeast Alaska, British Columbia, Washington, Oregon, and California.

Threats to this species include entanglement as a result of multiple fisheries within the area, subsistence hunting, and ship strike. There are dozens of fisheries throughout their known range that involves various gear types (gillnet, pot, pelagic and demersal trawl and longline). However, the large stock size and observed rate of increase of the population over the past 20 years makes it unlikely that unreported mortalities from those fisheries would be a significant source of mortality for the stock. The estimated minimum annual mortality rate incidental to U.S. commercial fisheries (6.7 whales) is not known to exceed 10% of the PBR (44.2) and, thus, can be considered to be insignificant and approaching zero mortality and serious injury rate.

Subsistence hunters in Alaska and Russia have traditionally harvested whales from this stock. . The U.S. and Russia have agreed that the quota will be shared with an average annual harvest of 120 whales by the Russian Chukotka people and 4 whales by the Makah Indian Tribe; the annual subsistence take averaged 121 whales during the 5-year period from 2003 to 2007.

The nearshore migration route used by gray whales makes ship strikes another potential source of mortality. Between 1999 and 2003, the California stranding network reported 4 serious injuries or mortalities (1 per year) of gray whales caused by ship strikes with an additional strike reported in Alaska during 1997. Ship strike mortality likely occurs at a higher rate and goes unreported because whales either do not strand (carcass sinks) or because obvious signs of trauma are difficult to detect. Thus, the annual mortality rate of 1.2 gray whales per year due to collisions with vessels represents the minimum estimate from this source of mortality.

Due to steady increases in population abundance, in 1994 the eastern North Pacific stock of gray whales was removed from the List of Endangered and Threatened Wildlife (the List), as it was no longer considered endangered or threatened under the Endangered Species Act (ESA). The population size of the ENP gray whale stock has been increasing over the past several decades despite an unusual mortality event in 1999 and 2000; the most recent abundance estimate from 2006/2007 is 19, 126 whales (CV=0.071), with a minimum population estimate of 18,017.

Beluga whales

Beluga whales are distributed throughout seasonally ice-covered arctic and subarctic waters of the Northern Hemisphere, and are closely associated with open leads and polynyas in ice-covered regions. Seasonal distribution is affected by ice cover, tidal conditions, access to prey, temperature, and human interaction. During the winter, they occur in offshore waters associated with pack ice. In the spring, they migrate to warmer coastal estuaries, bays, and rivers where they may molt and give birth to and care for their calves. Annual migrations may cover thousands of kilometers. The minimum population estimate for the Beaufort Sea stock of beluga whales is 32,453. The current population trend of the Beaufort Sea stock of beluga whales is unknown. The minimum population estimate for the Bristol Bay Stock of beluga whales is 2,467 and the population trend is increasing. The minimum population estimate for the Eastern Bering Sea Stock of beluga whales is 20,231. No data available to determine a population trend for this stock. The minimum population estimate for the Eastern Chukchi Sea Stock of beluga whales is 3,710, and there is no evidence that the population is declining.

Pinnipeds

Since issuance of the permit, the status of some pinniped species affected by the permit has changed. Harbor seals are not proposed for listing and the combined population estimate for the twelve stocks of harbor seals in Alaska is 152,602 (SE: 7,703; based on aerial survey data collected during 1998-2007). Ringed seals and bearded seals comprising the Alaskan stocks are now both listed under the ESA.

Bearded seals

The Alaska (Beringia DPS) stock of the bearded seal (*Erignathus barbatus nauticus*) was listed as a “threatened” species under the Endangered Species Act (ESA) on February 26, 2013 (77 FR 76739). Bearded seals are the largest seal in the Arctic and are commonly found with drifting sea ice rather than pack ice. There is only one recognized stock in the U.S., the Alaska Stock, distributed over the continental shelf of the Bering, Chukchi, and Beaufort Seas. A reliable population estimate for this stock is currently considered not available, but could range from 125,000 to 155,000 animals; its population trend is unknown. Threats to bearded seals include bycatch in fishing gear, and they are harvested annually by Arctic natives for subsistence. Bearded seals are potentially vulnerable to loss of sea ice due to climate change.

Ringed seals

On February 26, 2013 (77 FR 76706), the Arctic (*Phoca hispida hispida*); Okhotsk (*Phoca hispida ochotensis*); and Baltic (*Phoca hispida botnica*) subspecies of the ringed seal was listed as a “threatened” under the ESA, while the Lagoda (*Phoca hispida lagodensis*) subspecies of the ringed seal was listed as “endangered.” Ringed seals are the smallest and most common seal in the Arctic and are associated with ice floes and pack ice. There is only one recognized stock in the U.S., the Arctic Stock, though a reliable minimum population estimate for this stock cannot presently be determined because current reliable estimates of abundance are not available. The population trend for this stock is unknown. Loss of sea ice due to climate change is potentially the most serious threat to ringed seal populations. Other threats to ringed seals include predation by polar bears (ringed seals are the preferred diet of polar bears) and bycatch in fishing gear, and they are harvested annually by Arctic natives for subsistence.

Spotted seals

The Southern (*Phoca largha*) DPS of the spotted seal was listed as a “threatened” species under the ESA on November 22, 2010 (75 FR 65239). Spotted seals are distributed along the continental shelf of the Bering, Chukchi, and Beaufort seas, and the Sea of Okhotsk south to the western Sea of Japan and northern Yellow Sea. There is only one recognized stock in the U.S., the Bering Stock, though a reliable minimum population estimate for this stock cannot presently be determined. The estimated size of the spotted seal population is 59,000 animals, which includes animals from all three DPSs. The population trend for this stock is unknown. Loss of sea ice due to climate change is potentially the most serious threat to spotted seal populations. Other threats to ringed seals include bycatch in fishing gear and annual subsistence harvesting by Alaskan natives. The research would not occur within the range of the Southern population, although the collection of biological samples may occur with international collaborators leading to the import of such specimens.

As noted, sufficient information about population trends for these four species is lacking. Research of the sort proposed by the permit applicant is needed to identify and monitor changes in population abundance, distribution, behavior, population structure, and diet over time to inform future NMFS decisions about listing these species under the ESA, and to guide management actions for conservation under the MMPA.

Non-target species

In addition to the target marine mammal species, the action area is home to a variety of sea birds, fish, and other marine mammals. The applicant reports they have not encountered walruses, small cetaceans, or polar bears during their previous large whale work and that their field sites are not near seabird nesting colonies or in areas of concentrations of feeding seabirds. The non-target animals most likely to be affected incidental to research directed at individual whales are conspecifics in the immediate vicinity of target animals, and rarely, seals on the ice. The permit would include takes for conspecifics incidentally affected. Thus, effects on species that are not the subject of the permit will not be considered further.

Biodiversity and Ecosystem Function

The proposed action is directed at marine mammals and does not interfere with benthic productivity, predator-prey interactions or other biodiversity or ecosystem functions. Marine mammals will not be removed from the ecosystem or displaced from habitat, nor will the permitted research affect their diet or foraging patterns. Further, the proposed action does not involve activities known or likely to result in the introduction or spread of nonindigenous species, such as ballast water exchange or movement of vessels among water bodies. Thus, effects on biodiversity and ecosystem function will not be considered further.

Ocean and Coastal Habitats

The proposed action is directed at marine mammals and does not affect habitat. It does not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat. Thus, effects on habitat will not be considered further.

Unique Areas

There are no historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas within the action area, which is limited to coastal and open waters in which no such areas occur. The exception is essential fish habitat (EFH) designated in pelagic waters for several species of groundfish and bottom substrates for several invertebrates. The proposed action is directed at marine mammals and does not alter or affect unique areas, including any components of EFH. Thus, effects on such unique areas will not be considered further.

Historic Places, Scientific, Cultural, and Historical Resources

There are no districts, sites, highways or structures listed in or eligible for listing in the National Register of Historic Places in the action area. The proposed action represents non-consumptive use of marine mammals and does not preclude their availability for other scientific, cultural, or historic uses, including subsistence harvest by Alaskan Natives. Thus, effects on such resources will not be considered further.

Social and Economic Resources

The proposed action does not affect distribution of environmental burdens, access to natural or depletable resources or other social or economic concerns. It does not affect traffic and transportation patterns, risk of exposure to hazardous materials or wastes, risk of contracting disease, risk of damages from natural disasters, food safety, or other aspects of public health and safety. Thus, effects on such resources will not be considered further.

4.0 ENVIRONMENTAL CONSEQUENCES

Effects of the No Action Alternative (Status Quo)

The effects of the No Action Alternative, in which NMFS does not amend the permit, are the same as the effects of issuing the current permit (No. 14610-02) and as summarized in the 2010 EA. No additional takes, other than what is authorized under the current permit, will occur. As mentioned prior, no additional NEPA analysis was needed for the issuance of the current permit (No. 14610-02).

Effects of the Proposed Action Alternative

The nature of the effects of the Proposed Action Alternative, in which NMFS would issue an amendment to the current permit to allow the Holder to add additional takes of gray whales in the same locations, at the same times of year, for the same period of time and by the same research methods as currently permitted for tagging and biopsy efforts of baleen whales under the current permit, is effectively the same, if not less invasive, as for the No Action Alternative.

Photo-identification of individuals would involve approaching gray whales slowly in an 18-25 ft boat with an outboard motor to a distance of 50-80 m. Photographs would be taken by following parallel to the path of the whale at a distance > 50 m. Underside fluke photos are taken from behind also at > 50 m. The use of a telephoto 300 mm camera lens would allow researchers to approach no closer than this distance. Cow and calf pairs would not be separated and if individuals are reacting strongly to the researcher's presence (e.g., tail slapping or approaching the boat), research efforts would cease. Photo-identification efforts would result in indirect disturbance of other whales in the immediate vicinity of the small boats used for the operations.

The takes of marine mammals as described would result in minor short-term adverse effects on individual marine mammals targeted by the research, and on individual non-target marine mammals in the immediate vicinity of the research. The application describes anticipated effects of the research, as does the memorandum and attachment prepared pursuant to 50 CFR 402.14 as required for initiating formal consultation under section 7 of the ESA. The Biological Opinion (NMFS 2010) summarizing the consultation concluded that issuance of the permit is not likely to jeopardize the continued existence of listed species or result in adverse modification of designated critical habitat. The Biological Opinion is part of the administrative record supporting this action. Its analyses and conclusions are summarized here and hereby incorporated by reference.

Whales or seals that are disturbed may respond by moving away from the researchers (including changes in swim speed or direction or by diving), which could result in temporary disruption of feeding, mating, resting, and other behaviors. Some animals may not move away, but may cease

feeding, mating, etc. in response to the research. Some animals may not alter their behavior in response to the research but may have unobserved physiological responses. It is expected that animals disturbed by the research will return to normal behavior within minutes to hours after the researchers leave. The research is not expected to result in injury to non-target animals. In all cases, animals that are reasonably healthy are expected to recover from the stress and minor injuries and return to normal behavior within hours to days of capture. Researchers would not target animals that are obviously emaciated or otherwise unhealthy.

Evidence for whether the implantable tags cause serious or long-term infections or other significant adverse impacts on whales is somewhat equivocal, in large part because of the difficulty in re-sighting animals after they are tagged and in collecting samples that would detect infection or other pathological conditions. However, animals with satellite-linked transmitters have been “observed” visually or via the information from the transmitters to behave “normally” within hours of tag attachment.

In general, the behavioral responses of whales to remote tagging and biopsy have ranged from no detectable change in behavior to behaviors characteristic of avoidance or escape, such as sudden changes in swim speed or direction, or increased dive duration. Whales that attempt to avoid or escape the researchers will temporarily cease behaviors such as feeding, resting, or mating.

The consequence of stopping these behaviors is a function of how long it lasts and whether the whale is able to recover from the lapse. For example, if a whale ceases to feed for an hour as a result of being disturbed by the research vessel, it will not suffer a long-term adverse consequence unless the loss of that feeding time adversely impacts its energy needs and it is unable to make up for the lost feeding time. Similarly, if a whale ceases to engage in mating behavior for a day as a result of being disturbed by the research, this does not represent a lost reproductive opportunity for that season.

Research is not likely to result in significant losses of feeding opportunities such as might affect daily or seasonal energy or nutritional requirements. Whales have been observed to resume foraging activities within minutes of a tag attachment event. Researchers are not likely to attempt to approach whales that are actively engaged in mating behaviors as this represents a safety risk to the humans. The mating season for these species is not well defined but spans several months, or may be year-round. The research would not affect mate selection.

Although research on bowheads may take place “year-round” this does not mean it would occur daily, or that the same whales will be encountered more than once in a season or year, or even be encountered more than once over the life of the permit. The research area is wide-spread geographically, but small relative to the range of the affected species. The whales are migratory between their feeding and breeding grounds, and also move around within seasons. This is particularly true for gray whales, which are known to migrate as far south as Mexico during breeding/calving season.

While there may be minor short-term adverse effects on individual marine mammals, the research is not likely to result in adverse effects on the stocks, populations, or species. The number of whales affected represents a small portion of the individual stocks and populations

and the effects on individuals are expected to be transitory and recoverable. No biologically significant impacts are likely.

The mitigation measures in the permit are intended to minimize the potential for adverse impacts and mitigate the extent of any unavoidable adverse impacts. Researchers will be required to submit annual reports in which they must provide an accounting of the numbers of marine mammals encountered and observed effects of the research. NMFS can revoke, suspend or modify the permit if there is reason to believe the research is having or has the potential to have an adverse effect on a stock or species.

There is no evidence from monitoring reports for other permits covering these types of research activities that the effects of permit issuance and associated takes of marine mammals have deviated from what has been predicted and considered.

Cumulative Impacts

Conduct of the research will not result in individually insignificant, but cumulatively significant impacts, or in cumulative adverse effects that could have a substantial effect on the target species or non-target species. The intermittent frequency and short duration of the sampling should allow adequate time for animals to recover from adverse effects such that additive or cumulative effects of the research on its own are not expected.

There are multiple permitted researchers conducting surveys of the same species and stocks within the action area. (See Attachment 1 for list of permits.) Researchers working under NMFS permits are required to notify the appropriate NMFS Regional Office in advance of field work. The Alaska Regional Office is tasked with coordinating activities under multiple permits for Alaska to ensure there is not unnecessary duplication.

No measurable cumulative effects on population demographics are anticipated because the research is not expected to result in mortality of any bowhead or humpback whales, and any sub-lethal (disturbance) effects are likely to be short-term, with the animals recovering within hours to days.

In addition to research activities, the stocks and populations of whales that are the subject of the permit amendment are exposed to a variety of human activities including subsistence harvesting of bowhead whales in Alaska and gray whales in Washington and harassment from oil and gas development (particularly within the Beaufort and Chukchi Seas). The levels of harvest are managed under various federal and international laws and treaties and are not believed to have had an adverse impact on the status of the species. The harassment from oil and gas development is authorized pursuant to Section 101(a)(5) of the MMPA and has been found to have a negligible impact on the stocks¹.

¹ NMFS Effects of Oil and Gas Activities in the Arctic Ocean: Supplemental Draft Environmental Impact Statement (March, 2013).

5.0 Mitigation Measures

For the purposes of the photo-identification efforts, mitigation methods would be similar to those proposed for tagging and biopsy efforts. There are no additional mitigation measures beyond those that are part of the applicant's protocols or conditions that would be required by permit. The permit conditions are outlined and explained in Appendix A of the 2010 EA.

Given that the research is directed at the whales, mitigation measures that avoid or reduce their exposure to the research in general are not appropriate. It is necessary for researchers to closely approach the whales to obtain photographs for identification purposes. However, researchers only approach as closely as necessary to achieve these ends. The MMPA requires the research methods to be humane, resulting in the least possible degree of pain and suffering practicable to the animal involved. The permit mitigation measures are consistent with best practices for humane research on wildlife.

There are measures that are intended to avoid or reduce the potential for serious injury and mortality. These include permit conditions requiring researchers to cease attempts to approach, sample, or tag an animal whose behavior suggests the activity is life-threatening. Other conditions are intended to avoid dependent calves being abandoned or otherwise compromised by the research including prohibiting sampling and tagging of calves as well as mothers accompanied by calves. Researchers will not attach instruments in front of or near the blowhole. Some permit conditions are intended to minimize the potential for infection and disease transmission associated with procedures that penetrate the skin, including requiring use of sterile equipment and aseptic techniques.

There are also measures intended to avoid or reduce the potential for unnecessary harassment. These include limiting the number of times a whale may be approached in a day. In addition, conduct of the close approaches, sampling and tagging are to be conducted by or under the direct supervision of experienced personnel who can carry out the protocols efficiently and effectively. Experienced vessel operators are able to get close to whales with minimal impact and allow the researchers to collect biopsy samples and attach instruments in the least amount of time.

Review of monitoring reports of previous permits for the same or similar research protocols indicate that these types of mitigation measures are effective at minimizing stress, pain, injury, and mortality.

6.0 List of Preparers and Agencies Consulted

This document was prepared by NMFS Protected Resources personnel only (Courtney Smith and Tammy Adams, Ph.D.). No other agencies were consulted.

APPENDIX A: PERMIT CONDITIONS

The following two tables outline the conditions that are included in permits for research on marine mammals issued by NMFS under the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA). Some conditions derive from the permit requirements of the MMPA and others from NMFS regulations for permits. The language of the conditions may vary slightly in actual permits, but still address the underlying statutory or regulatory requirements. The purpose or reason for each condition is briefly explained.

Table 1. General Marine Mammal Research Permit Terms and Conditions. All permits for research on marine mammals specify that the activities authorized by the permit must occur by the means, in the areas, and for the purposes set forth in the permit application, and as limited by the following Terms and Conditions specified in the permit, including all attachments and appendices. These conditions originate from the permit requirements of the MMPA, ESA, and NMFS regulations for permits.

Condition	Origin	Purpose
<i>Duration of permit</i>		
Personnel listed in this permit (hereinafter “Researchers”) may conduct activities authorized by this permit through [a specified expiration date that varies by permit]. This permit expires on the date indicated and is non-renewable	MMPA section 104(b)(2)(C) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify duration of permitted activity.
Researchers must suspend all permitted activities in the event serious injury or mortality of protected species reaches that specified in the permit.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires this condition to ensure research does not exceed levels of serious injury and mortality determined acceptable for a given species.
If authorized take is exceeded, Researchers must cease all permitted activities and notify the Permits Division as soon as possible, but no later than within two business days. The Permit Holder must also submit a written incident report as described in the reporting section of this permit. Research may resume with written permission from NMFS.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires this condition to ensure real-time adaptive management of adverse effects of research.
<i>Number and Kind(s) of Protected Species, Location(s) and Manner of Taking</i>		
The tables in this permit outline the number of protected species, by species and stock, authorized to be taken, and the locations, manner, and time period in which they may be taken.	MMPA section 104(b)(2)(A)-(B) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify the number and kind of animals authorized to be taken, and the location and manner in which they may be taken.
Researchers must comply with the following conditions related to the manner of taking [a list of taxonomic or activity specific conditions that varies by permit]	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires these conditions to minimize adverse effects of research activities including capture, sampling, and disturbance. (See Table 2 below for conditions common to cetacean research permits.)

Condition	Origin	Purpose
Researchers working under this permit may collect visual images (<i>i.e.</i> , any form of still photographs and motion pictures) as needed to document the permitted activities, provided the collection of such images does not result in takes of protected species.	50 CFR Part 216.41(c)(vii)	Regulations require that any activity conducted incidental to the authorized scientific research activity (<i>i.e.</i> , educational and commercial photography) must not involve any taking of marine mammals beyond what is necessary to conduct the research.
The Permit Holder may use visual images collected under this permit in printed materials (including commercial or scientific publications) and presentations provided the images are accompanied by a statement indicating that the activity depicted was conducted pursuant to a NMFS Permit. This statement must accompany the images in all subsequent uses or sales.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires this condition to ensure visual images of permitted research acknowledge the appropriate permit authority for the activity.
Upon written request from the Permit Holder, approval for photography, filming, or audio recording activities not essential to achieving the objectives of the permitted activities, including allowing personnel not essential to the research (<i>e.g.</i> a documentary film crew) to be present, may be granted by the Chief, Permits Division.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” This condition allows researchers to record or document their research for educational or other purposes.
Where such non-essential photography, filming, or recording activities are authorized they must not influence the conduct of permitted activities in any way or result in takes of protected species.	50 CFR Part 216.41(c)(vii)	Regulations require that any activity conducted incidental to the authorized scientific research activity (<i>i.e.</i> , educational and commercial photography) must not involve any taking of marine mammals beyond what is necessary to conduct the research.
Personnel authorized to accompany the Researchers during permitted activities for the purpose of non-essential photography, filming, or recording activities are not allowed to participate in the permitted activities.	50 CFR Part 216.35(g)	Regulations require that individuals conducting activities under the permit possess qualifications commensurate with their duties and responsibilities. This condition therefore limits photographers, audiographers, and film crew to conduct of photography, filming and other recording activities.
The Permit Holder and Researchers cannot require compensation in return for allowing non-essential personnel to accompany Researchers to conduct non-essential photography, filming, or recording activities.	50 CFR Part 216.35(i)	Regulations state that permit holders may not require any direct or indirect compensation from another person in return for requesting authorization for such person to conduct [activities] authorized under the subject permit.
<i>Qualifications, Responsibilities, and Designation of Personnel</i>		
The following Researchers may participate in the conduct of the permitted activities in accordance with their qualifications and the limitations specified herein: [a list of names of the Principal Investigator, Co-investigators, and Research Assistants]	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” This condition identifies those individuals NMFS has determined qualified to participate in permitted research, and the degree of qualification (PI, CI, RA) relative to the research activities.
Individuals conducting permitted activities must possess qualifications commensurate with their roles and responsibilities	50 CFR Part 216.35(g)	Regulations require that individuals conducting activities under the permit possess qualifications commensurate with their duties and responsibilities.
The Permit Holder is ultimately responsible for all activities of any individual who is operating under the authority of this permit. Where the Permit Holder is an institution/facility, the Responsible Party is the person at the institution/facility who is responsible for the supervision of the Principal Investigator.	50 CFR Part 216.35(f)	Regulations state that the permit holder is responsible for all activities of any individual who is operating under the authority of the permit.
The Principal Investigator (PI) is the individual primarily responsible	50 CFR Part 216.3 and	Regulations define Principal Investigator as the individual primarily

Condition	Origin	Purpose
for the taking, import, export and any related activities conducted under the permit. The PI must be on site during any activities conducted under this permit unless a Co-Investigator named in this permit is present to act in place of the PI.	Part 216.41(c)(iii)	responsible for the taking, import, export and any related activities conducted under a permit issued for scientific research. Regulations regarding permit restrictions also require that research activities be conducted under the direct supervision of the principal investigator or a co-investigator identified in the permit.
Co-Investigators (CIs) are individuals who are qualified to conduct activities authorized by the permit without the on-site supervision of the PI. CIs assume the role and responsibility of the PI in the PI's absence.	50 CFR Part 216.41(c)(iii) and Part 216.35(g)	This condition defines the role and responsibility of co-investigators and derives from the regulatory restrictions for permits.
Research Assistants (RAs) are individuals who work under the direct and on-site supervision of the PI or a CI. RAs cannot conduct permitted activities in the absence of the PI or a CI.	50 CFR Part 216.41(c)(iii) and Part 216.35(g)	This condition defines the role and responsibility of research assistants and derives from the regulatory restrictions for permits.
Personnel involved in permitted activities must be reasonable in number and essential to conduct of the permitted activities. Essential personnel are limited to: individuals who perform a function directly supportive of and necessary to the permitted activity (including operation of any vessels or aircraft essential to conduct of the activity); individuals included as backup for those personnel essential to the conduct of the permitted activity; and individuals included for training purposes.	50 CFR Part 216.41(c)(iv)	Regulations regarding permit restrictions state that personnel involved in permitted research be reasonable in number and limited to individuals who perform a function directly supportive of and necessary to the permitted activity [i.e., "essential" personnel]; and support personnel included for the purpose of training or as backup for "essential" personnel.
Persons who require state or federal licenses to conduct activities authorized under the permit (e.g., veterinarians, pilots) must be duly licensed when undertaking such activities.	50 CFR Part 216.35(h)	Regulations state that persons who require state or federal licenses to conduct activities authorized under the permit must be duly licensed when undertaking such activities.
Permitted activities may be conducted aboard vessels or aircraft, or in cooperation with individuals or organizations, engaged in commercial activities, provided the commercial activities are not conducted simultaneously with the permitted activities.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify "any other terms and conditions which [NMFS] deems appropriate." This condition allows researchers to use platforms of opportunity for conduct of their research but prohibits use of research permits for commercial activities.
The Permit Holder may request authorization from the Permits Division to add personnel to this permit as indicated below. The Permit Holder cannot require or receive any direct or indirect compensation in return for requesting authorization for such person to act as a PI, CI, or RA under the permit.	50 CFR Part 216.35(i)	Regulations state that permit holders may not require any direct or indirect compensation from another person in return for requesting authorization for such person to conduct [activities] authorized under the subject permit.
<i>Possession of Permit</i>		
This permit cannot be transferred or assigned to any other person.	50 CFR Part 216.35(i)	Regulations state that special exception permits are not transferable or assignable to any other person.
The Permit Holder and all other persons operating under the authority of this permit must possess a copy of this permit: when engaged in a permitted activity; when a protected species is in transit incidental to a permitted activity; and during any other time when any protected species taken or imported under such permit is in the possession of such persons.	MMPA section 104(f) and regulations at 50 CFR Part 216.35(j)	This condition is paraphrased from statutory and regulatory text regarding possession of the permit.
A duplicate copy of this permit must be attached to the container,	MMPA section 104(f)	This condition is paraphrased from statutory and regulatory text

Condition	Origin	Purpose
package, enclosure, or other means of containment in which a protected species or protected species part is placed for purposes of storage, transit, supervision or care.	and regulations at 50 CFR Part 216.35(j)	regarding possession of the permit.
<i>Reports</i>		
The Permit Holder must submit annual, final, and incident reports, and any papers or publications resulting from the research authorized herein to the Chief, Permits Division,	MMPA section 104(c)(1) and regulations at 50 CFR Part 216.38	The statute requires any person authorized to take a marine mammal for scientific research to furnish to [NMFS] a report on all activities carried out pursuant to that authority. Regulations require all permit holders to submit annual, final, and special reports in accordance with the requirements established in the permit, and any reporting format established by the Office Director.
Written incident reports related to serious injury and mortality events or to exceeding authorized takes, must be submitted to the Chief, Permits Division within two weeks of the incident. The incident report must include a complete description of the events and identification of steps that will be taken to reduce the potential for additional research-related mortality or exceedence of authorized take.		The purpose of incident (special) reports is to monitor effects of research and effectiveness of permit conditions for mitigation of adverse effects.
An annual report must be submitted to the Chief, Permits Division by [a specified date that varies by permit but which is usually 90 days following the anniversary of permit issuance] for each year the permit is valid. The annual report describing activities conducted during the previous permit year must follow the format in [an Appendix with specific questions and format requirements].		The purpose of annual and final reports is to monitor permit compliance and effects of research on marine mammals. Annual and final reports also demonstrate the permit holder's progress toward achieving stated objectives of their study.
A final report must be submitted to the Chief, Permits Division within 180 days after expiration of the permit, or, if the research concludes prior to permit expiration, within 180 days of completion of the research.		
Research results must be published or otherwise made available to the scientific community in a reasonable period of time.	50 CFR Part 216.41(c)(ii)	Regulations require that research results be published or otherwise made available to the scientific community in a reasonable period of time. Note that the statutory definition of bona fide research includes "results of which likely would be accepted for publication in a refereed scientific journal."
<i>Notification and Coordination</i>		
The Permit Holder must provide written notification of planned field work to the appropriate Assistant Regional Administrators for Protected Resources. Such notification must be made at least two weeks prior to initiation of any field trip/season and must include the locations of the intended field study and/or survey routes, estimated dates of research, and number and roles (for example: PI, CI, veterinarian, boat driver, safety diver, animal restrainer, Research Assistant "in training") of participants.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify "any other terms and conditions which [NMFS] deems appropriate." NMFS requires this condition to facilitate NMFS Regional Offices' coordination and monitoring of permitted activities in each specific geographic area.

Condition	Origin	Purpose
To the maximum extent practical, the Permit Holder must coordinate permitted activities with activities of other Permit Holders conducting the same or similar activities on the same species, in the same locations, or at the same times of year to avoid unnecessary disturbance of animals. The appropriate Regional Office may be contacted for information about coordinating with other Permit Holders.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires this condition to promote coordination among permitted researchers to minimize unnecessary overlap of research in time and space and the resulting disturbance of animals.
<i>Observers and Inspections</i>		
NMFS may review activities conducted pursuant to this permit. At the request of NMFS, the Permit Holder must cooperate with any such review by: allowing any employee of NOAA or any other person designated by the Director, NMFS Office of Protected Resources to observe permitted activities; and providing any documents or other information relating to the permitted activities.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” NMFS requires this condition to facilitate monitoring of research for compliance with the terms and conditions of the permit. Note also that this condition is consistent with, and paraphrased from, regulatory requirements for the General Authorization (50 CFR Part 216.45(d)(7))
<i>Modification, Suspension, and Revocation</i>		
All permits are subject to suspension, revocation, modification, and denial in accordance with the provisions of subpart D (Permit Sanctions and Denials) of 15 CFR Part 904.	50 CFR Part 216.40	This condition is taken directly from the regulations.
The Director, NMFS Office of Protected Resources may modify, suspend, or revoke this permit in whole or in part: (1) In order to make the permit consistent with any change made after the date of permit issuance with respect to any applicable regulation prescribed under section 103 of the MMPA and section 4 of the ESA; (2) In any case in which a violation of the terms and conditions of the permit is found; (3) In response to a written request from the Permit Holder; (4) If NMFS determines that the application or other information pertaining to the permitted activities (including, but not limited to, reports pursuant to [other sections] of this permit and information provided to NOAA personnel pursuant to [other sections] of this permit) includes false information; and (5) If NMFS determines that the authorized activities will operate to the disadvantage of threatened or endangered species or are otherwise no longer consistent with the purposes and policy in Section 2 of the ESA.	MMPA section 104(e) and Regulations at 50 CFR Part 216.39 and 50 CFR Part 216.36 and ESA section 10(d)	Parts 1 and 2 of this condition are taken directly from the corresponding section of the statute. Part 3 derives from the regulatory requirements for permit amendments. Part 4 derives from the statutory and regulatory requirement that permits specify “any other terms and conditions which [NMFS] deems appropriate.” This condition allows NMFS to take appropriate action should it discover an applicant has falsified information in their application or other permit related information (e.g., permit reports). Part 5 implements part of the ESA section 10(d) requirements.
Issuance of this permit does not guarantee or imply that NMFS will issue or approve subsequent permits or amendments for the same or similar activities requested by the Permit Holder, including those of a continuing nature.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” This condition clarifies that each application for a permit, including permit amendments, must satisfy the applicable statutory and regulatory issuance requirements, independent of previous permits.
<i>Penalties and Permit Sanctions</i>		
Any person who violates any provision of this permit, the MMPA, ESA, or the regulations at 50 CFR 216 and 50 CFR 222-226 is subject to civil and criminal penalties, permit sanctions, and forfeiture as authorized under the MMPA, ESA, and 15 CFR part 904.	MMPA section 105 and regulations at 50 CFR Part 216.40(a)	This condition is paraphrased from the statute and regulations.

Condition	Origin	Purpose
NMFS shall be the sole arbiter of whether a given activity is within the scope and bounds of the authorization granted in this permit. The Permit Holder must contact the Permits Division for verification before conducting the activity if they are unsure whether an activity is within the scope of the permit. Failure to verify, where NMFS subsequently determines that an activity was outside the scope of the permit, may be used as evidence of a violation of the permit, the MMPA, the ESA, and applicable regulations in any enforcement actions.	MMPA section 104(b)(2)(D) and regulations at 50 CFR Part 216.36	Statute and regulations require that permits specify “any other terms and conditions which [NMFS] deems appropriate.” This condition clarifies that permits are not subject to interpretation by the permit holder and that NMFS’s has exclusive authority regarding interpretation of the permit.
<i>Acceptance of Permit</i>		
In signing this permit, the Permit Holder Agrees to abide by all terms and conditions set forth in the permit, all restrictions and relevant regulations under 50 CFR Parts 216, and 222-226, and all restrictions and requirements under the MMPA, and the ESA; Acknowledges that the authority to conduct certain activities specified in the permit is conditional and subject to authorization by the Office Director; and Acknowledges that this permit does not relieve the Permit Holder of the responsibility to obtain any other permits, or comply with any other Federal, State, local, or international laws or regulations.	50 CFR Part 216.33(e)(3)(i) and (ii)	This condition is paraphrased from the regulations regarding permit issuance. This condition also clarifies that the authority conferred by the permit to take marine mammals in exception to the MMPA’s prohibitions does not confer to the permit holder authority under any other laws.

Table 2. Special Conditions for Cetacean Research Permits. In addition to the general permit conditions listed in Table 1 above, permits for activities with cetaceans in the wild may contain the following special conditions related to the manner of taking, which are intended to mitigate the potential adverse impacts of research on marine mammals that are the target of or may be incidentally harassed during the research. These mitigation measures are based on information and recommendations for proper care and handling of wildlife developed by The American Society of Mammalogists (see the American Society of Mammalogists' Animal Care and Use Guidelines) and the U.S. Geological Survey (see Chapter 6: Guidelines for the Proper Care and Use of Wildlife in Field Research *in* Field Manual of Wildlife Diseases, USGS Biological Resources Division Information and Technology Report 1999-001). The authority for requiring these special conditions is provided in section 104(b)(2)(D) of the MMPA, which states that permits issued pursuant to section 104 shall specify "any other terms and conditions which [NMFS] deems appropriate." NMFS has deemed these conditions appropriate measures to minimize the adverse effects associated with various research activities.

Condition	Purpose
If a lactating female dies as a result of the permitted activities and her dependent calf can be identified, Researchers must immediately contact the NMFS Regional Stranding Network Coordinator (SNC) and proceed as directed. If the calf cannot be identified or the SNC determines the calf is not a candidate for rehabilitation, the calf is to be counted as a permit-related mortality. ²	This condition allows orphaned calves to be humanely provided for in the event the mother dies during research.
If a pregnant female dies as a result of the permitted activities, both the female and the unborn calf shall be counted as permit-related mortalities.	This condition, in conjunction with the condition that limits research-related mortality, limits adverse impacts of research on marine mammal populations.
Researchers must capture and handle animals in groups small enough that handling and restraint time for each animal is minimized and all animals can be adequately monitored for signs of adverse reactions that could lead to serious injury or mortality. ¹	Annual reports indicate animals have died (e.g., by suffocation and adverse reactions to anesthesia) while being restrained with insufficient monitoring. This condition reduces stress of handling and risk of mortality for individual animals.
Researchers must immediately cease attempts to approach, capture, restrain, sample, mark, or otherwise handle animals if the procedure does not appear to be working or there are indications such acts may be life-threatening or otherwise endanger the health or welfare of the animal. To the extent that it would not further endanger the health or welfare of the animal, Researchers may monitor or treat (e.g., administer reversal agents or attempt resuscitation) the animal as determined appropriate by the PI, CI, or attending veterinarian. ¹	This condition reduces the likelihood of mortality for animals that are unduly stressed by the research.
Researchers must use aseptic techniques for collection of external tissue samples (e.g., swabs) or puncture procedures (e.g., venipuncture, flipper tagging) and use sterile techniques for surgical procedures and collection of internal tissue samples (e.g., blubber and muscle biopsy)	This condition minimizes likelihood of introducing novel disease causing pathogens, cross-contamination among animals, and risk of mortality or other adverse effects from infection post-sampling.
Researchers must use sterile disposable instruments (e.g., needles, biopsy punches) to the maximum extent practicable.	This condition minimizes likelihood of introducing novel disease causing pathogens, cross-contamination among animals, and risk of mortality or other adverse effects from infection post-sampling.

² These conditions are specific to research on small cetaceans, such as dolphins and beluga whales, where the animals are small enough to capture and can be accommodated in rehabilitation facilities.

Condition	Purpose
Researchers must limit the amount of blood collected to actual needs for sample analysis and not exceed three attempts (needle insertions) per site per animal, and not more than 1.0 ml blood per kg body mass per capture event. ¹	This limitation on blood sampling is consistent with current veterinary guidelines for safe removal of blood from live animals.
When capturing or detaining animals in traps, pens, carriers, etc., Researchers must adequately monitor the animals to prevent injury, mortality, dehydration, and thermal stress. ¹	Annual reports indicate animals have died when left unattended in traps, carriers, etc. This condition reduces the likelihood of this by requiring appropriate monitoring.
To the maximum extent practical without causing further disturbance of marine mammals, Researchers shall monitor study sites following any disturbance (e.g., surveys or sampling activities) to determine if any marine mammals have been killed or injured or calves abandoned. Any observed serious injury to or death of a marine mammal is to be reported as indicated in [a previous condition]. Any observed abandonment of a dependent marine mammal pup is to be reported to the NMFS Regional Stranding Network Coordinator.	This condition requires researchers to collect much needed information on the effects of research on these animals.
Researchers must exercise caution when approaching animals and must retreat from animals exhibiting a strong adverse reaction to the activity or the vessel (e.g., breaching, tail lobbing, underwater exhalation, or disassociation from the group) or if behaviors indicate the approach may be life threatening.	This condition limits the potential for adverse impacts from research, including mortality, by requiring researchers to abort activities that provoke extreme responses.
Researchers must not attempt to tag or biopsy a cetacean calf less than 1 year old or a female whale accompanied by a calf less than 1 year old.	This condition is protective of the most vulnerable age class, and avoids impacts on dependent animals and mothers attending dependent animals.
Researchers must immediately terminate efforts to capture, tag or biopsy if there is evidence that the activity may be interfering with pair-bonding between mothers and calves.	This condition is protective of the most vulnerable age class, and avoids impacts on dependent animals and mothers attending dependent animals.
Researchers must approach mothers and calves gradually to minimize or avoid any startle response; must not position the research vessel between a mother and calf; and must not approach a mother or calf while the calf is nursing	This condition is protective of the most vulnerable age class, and avoids impacts on dependent animals and mothers attending dependent animals.
No animal may be taken more than 3 times in one day by any combination of permitted activities.	This condition limits the potential for adverse impacts on individual animals by limiting their exposure to the research activities.
Researchers must take appropriate actions (e.g., disinfection procedures) for minimizing the introduction of new disease agents, vectors capable of efficiently transmitting indigenous dormant diseases or those not currently being effectively transmitted, and species that can serve as amplification hosts for transmitting indigenous diseases to other species.	This condition minimizes potential for spread or introduction of disease among populations during research that spans a large geographic region.
Researchers must take reasonable measures (e.g., compare photo-identifications or distinct markings) to avoid biopsy sampling or tagging animals previously biopsied or tagged.	This condition limits the potential for adverse impacts on individual animals by limiting their exposure to the research activities.
Researchers must take reasonable measures to ensure remote collection of biopsy samples and attachment of instruments does not result in injury to the head or blowhole, including ensuring instrument placement does not obstruct the blowhole.	This condition minimizes the potential for serious injury to whales by requiring researchers to avoid the more vulnerable head and blowhole areas.
Researchers shall consider a marine mammal to have been taken if: (i). during a tag attachment attempt, the animal is approached within 100 m; the instrument (i.e., tag package) misses (does not make contact); the instrument contacts the animal but does not successfully attach; or the instrument attaches to the animal, regardless of duration of attachment. (ii). during close approach for photo-identification or behavioral observation an animal is approached within 100 m, regardless of whether the animal exhibits behaviors indicative of harassment. (iii). during a biopsy attempt, the animal is approached within 100 m; the biopsy tool misses (does not make contact); the biopsy tool contacts the animal but does not successfully collect a sample; or a	Provides guidance on when to consider an animal “taken” under the permit, for the purpose of explaining and enforcing other conditions that limit number of takes.

Condition	Purpose
<p>sample is successfully collected.</p> <p>(iv). during aerial surveys, the survey craft is flying below 1,000 feet and the animal is sighted below the survey craft.</p> <p>(v). during capture operations, the animal is trapped in the net, regardless of whether it escaped, was released without sampling or tagging, or was held for sampling and tagging.</p>	

Attachment 1. Current Marine Mammal Research Permits

The following permits allow takes of the same stocks and species of marine mammals as those proposed by the applicant for File No. 14610. The total number of takes authorized by these permits was considered relative to the minimum population abundance estimates and population trends in determining whether issuance of the proposed permit would have a significant adverse impact on the subject species and stocks for File No. 14610. Full descriptions of authorized activities are accessible online via the NMFS Authorizations and Permits for Protected Species (APPS) database.

Humpback Whales (North Pacific Stocks)

- Whale Trust (File No. 13846). Expires July 31, 2015.
- Woods Hole Oceanographic Institute (File No. 14118). Expires April 30, 2017.
- University of Hawaii at Manoa (File No. 14451). Expires July 31, 2015.
- NOAA Office of Science and Technology (File No. 14534). Expires June 30, 2015.
- University of Hawaii at Hilo (File No. 14585). Expires July 31, 2015.
- Alaska Whale Foundation (File No. 14599). Expires July 31, 2015.
- University of Alaska Southeast Sitka Campus (File No. 14122). Expires July 31, 2015.
- University of Alaska Fairbanks (File No. 14296). Expires July 31, 2015.
- Cetos Research Organization, (File No. 14353). Expires July 31, 2015.
- Moss Landing Marine Lab (File No. 15271). Expires March 31, 2016.
- Center for Whale Research (File No. 15569). Expires June 6, 2017.
- ABR, Inc. (File No. 15750). Expires November 30, 2016.
- Glacier Bay National Park and Preserve (File No. 15844). Expires February 28, 2017.
- Cascadia Research Collective (File No. 16111). Expires July 15, 2017.
- The Whale Museum (File No. 16160). Expires June 6, 2017.
- Woods Hole Oceanographic Institute (File No. 16388). Expires April 30, 2018.
- HDR, Inc. (File No. 16239). Expires September 30, 2018.
- Pacific Whale Foundation (File No. 16479). Expires June 1, 2017.
- Eye of the Whale (File No. 16919). Expires May 31, 2019.
- Keiki Kohola Project (File No. 17845). Expires January 31, 2019.

Bowhead Whales (Western Arctic stock)

- NMFS Southwest Fisheries Science Center (File No. 14097). Expires June 30, 2015.
- NMFS National Marine Mammal Laboratory (File No. 14245). Expires May 1, 2016.
- Oregon State University (File No. 14856). Expires December 31, 2018.
- HDR, Inc. (File No. 16239). Permit expires September 30, 2018.
- Woods Hole Oceanographic Institute (File No. 16388). Expires April 30, 2018.
- NMFS Northeast Fisheries Science Center (File No. 17355). Expires June 30, 2018.

Gray Whales (Eastern North Pacific Stock)

- Woods Hole Oceanographic Institute (File No. 14118). Expires April 30, 2017.
- University of Alaska, Southeast (File No. 14122). Expires July 31, 2015.
- National Marine Mammal Laboratory (File No. 14245). Expires May 1, 2016.

- University of Alaska, Fairbanks (File No. 14296). Expires July 31, 2015.
- National Marine Mammal Laboratory (File No. 14590). Expires August 1, 2015.
- Alaska Department of Fish and Game (File No. 14610). Expires May 31, 2015.
- Cascadia Research Collective (File No. 15330). Expires August 1, 2016.
- Center for Whale Research (File No. 15569). Expires June 6, 2017.
- North Gulf Oceanic Society (File No. 15616). Expires February 28, 2016.
- ABR, Inc. (File No. 15750). Expires November 30, 2016.
- Cascadia Research Collective (File No. 16111). Expires July 15, 2017.
- HDR, Inc. (File No. 16239). Expires September 30, 2018.
- Woods Hole Oceanographic Institute (File No. 16388). Expires April 30, 2018.
- Alaska Sea Life Center (File No. 17263). Expires May 31, 2017.
- Scripps Institute for Oceanography (File No. 17312). Expires September 13, 2018.
- Hokkaido University (File No. 17751). Expires June 30, 2018.

Spotted, Ribbon, Ringed, Bearded and Harbor Seals (Alaska Stocks)

- National Marine Mammal Laboratory (File No. 14590). Expires July 31, 2015.
- University of Alaska, Fairbanks (File No. 14296). Expires July 31, 2015.
- Alaska Department of Fish and Game (File No. 14325). Expires August 31, 2014.
- National Marine Mammal Laboratory (File No. 14326). Expires August 31, 2014.
- Aleut Community of St. Paul Island (File No. 14330). Expires August 31, 2014.
- Aleut Community of St. George Island (File No. 14331). Expires August 31, 2014.
- University of British Columbia (File No. 14337). Expires August 31, 2014.
- National Marine Mammal Laboratory (File No. 15126). Expires May 30, 2015.
- Alaska Department of Fish and Game (File No. 15324). Expires April 30, 2016.
- Cascadia Research Collective (File no. 15330). Expires August 1, 2016.
- North Gulf Oceanic Society (File No. 15616). Expires February 28, 2016.
- ABR, Inc. (File No. 15750). Expires November 30, 2016.
- Alaska Department of Fish and Game (File No. 16094). Expires December 31, 2016.
- Cascadia Research Collective (File No. 16111). Expires July 15, 2017.
- HDR, Inc. (File No. 16239). Expires September 30, 2018.



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

Finding of No Significant Impact Issuance of Scientific Research Permit No. 14610-03

Background

In April 2013, the National Marine Fisheries Service (NMFS) received an application for a modification to permit No. 14610-02 from Alaska Department of Fish & Game to conduct research on cetaceans in Alaska. In accordance with the National Environmental Policy Act, NMFS has prepared a Supplemental Environmental Assessment (SEA) analyzing the impacts on the human environment associated with permit issuance (Supplemental Environmental Assessment on Effects of Issuing Marine Mammal Scientific Research Permit No. 14610-03, May 2014). This document complements the Environmental Assessment developed for an earlier issuance of the permit (No. 14610-01; issued July 30, 2010). In addition, a Biological Opinion was issued under the Endangered Species Act on August 3, 2010 on summarizing the results of an intra-agency consultation pertaining to permit No. 14610-01. The analyses in the SEA, as informed by the Biological Opinion, support the below findings and determination.

Analysis

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

- 1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in Fishery Management Plans?

The proposed action is directed at marine mammals and does not affect ocean or coastal habitat. Research activities will not involve alteration of substrate, movement of water or air masses, or other interactions with physical features of ocean and coastal habitat, including any components of Essential Fish Habitat (EFH).

- 2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

The proposed action is directed at marine mammals and does not interfere with benthic productivity, predator-prey interactions or other biodiversity or ecosystem



functions. Marine mammals will not be removed from the ecosystem or displaced from habitat, nor will the permitted research affect their diet or foraging patterns.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

The proposed action directed at marine mammals does not affect traffic and transportation patterns, risk of exposure to hazardous materials or wastes, risk of contracting disease, risk of damages from natural disasters, food safety, or other aspects of public health and safety.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

The proposed action involves takes, both direct and incidental, of a number of ESA and MMPA listed species. Effects of the proposed action are similar to those already considered in the EA for the original permit: animals will be slowly approached by vessel in the same manner as currently authorized for biopsy sampling procedures. Effects of the activities on individual marine mammals will be transitory and recoverable and will not result in biologically significant population or species level effects. There is no designated critical habitat in the action area. Additionally, the permit allows takes of a limited number of marine mammals will be incidentally harassed during the proposed action. Finally, the permit would continue to contain mitigation measures to minimize the effects of the harassment and to avoid unnecessary stress to protected species by requiring use of specific protocols as described in the permit application.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

There are no social or economic impacts of the proposed action. The proposed action does not affect distribution of environmental burdens, access to natural or depletable resources or other social or economic concerns. Bowhead whales are taken for subsistence; however the allocated quota for these takes will not cause an adverse effect to the targeted stocks.

6) Are the effects on the quality of the human environment likely to be highly controversial?

The effects of the proposed action on the quality of the human environment are not controversial. There is no uncertainty regarding the affected resources, or the size or the nature of effects of the permitted research. The SEA and Biological Opinion describe the nature of the effects, including the spatial and temporal extent. No comments were received on the application to suggest that effects to resources other than those evaluated in the SEA should be considered.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

There are no historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas within the action area, which is limited to coastal and open waters in which no such areas occur. The exception is EFH designated in pelagic waters for several species of groundfish and bottom substrates for several invertebrates. The proposed action is directed at marine mammals and does not alter or affect unique areas, including any components of EFH.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The effects of the proposed action on the human environment are predictable based on evaluation of the effects of previously permitted research on the same or analogous species. The risks of the proposed action are known in that they are expected to be the same as those considered for issuance of other such permits for takes of marine mammals, and are not unique to this specific permit.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

The issuance of this permit, and the research it authorizes, is not interrelated with or interdependent on any federal, state or local actions that could cause environmental impacts. This permit is independent of other permits. While the results of the research may inform future management actions affecting the environment, the nature and timing of those actions is too speculative to consider and those actions would be subject to separate NEPA analysis.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Given that the research activities will take place over open waters, there are no districts, sites, highways, or structures listed in or eligible for listing under the National Register of Historic Places. The proposed action represents non-consumptive use of marine mammals and does not preclude their availability for other scientific cultural or historic uses, including subsistence harvest by Alaskan Natives.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

The proposed action involves observation and interaction with marine mammal species over open water areas and does not involve the introduction of non-

indigenous/invasive species, such as meiofauna through ballast water exchange and movement of vessels between water bodies.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

The decision to issue the amended permit must be based on consideration of statutory and regulatory permit issuance criteria applicable to all permits for takes of marine mammals and ESA-listed species. The modification request and attributing permit application have been processed consistent with these procedures and the issuance of the amended permit will not establish a precedent or represent a decision in principle about a future consideration affecting the quality of the human environment.

13) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

NMFS' issuance of the amended permit does not require additional Federal, State or local permits or authorizations. The permit holder may be required to obtain additional permits or licenses related to conduct of the research, such as a license to practice veterinary medicine or fly a plane. Those additional permissions are the responsibility of the applicant.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

The proposed action will not result in cumulatively significant adverse impacts on the target species or non-target species. The SEA and initial Biological Opinion upon which it is based considered the effects of the action in combination with other research activities permitted for the subject species and those species subject to incidental harassment. The effects of the proposed action are limited to transitory and recoverable effects on a limited number of individual animals which will not result in biologically significant effects on populations or species.

DETERMINATION

In view of the information presented in this document, and the analyses contained in the SEA prepared for issuance of Permit No. 14610-03, it is hereby determined that permit issuance will not significantly impact the quality of the human environment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.



Donna S. Wieting
Director, Office of Protected Resources

AUG 08 2014

Date