

**DEPARTMENT OF COMMERCE****National Oceanic and Atmospheric Administration**

[I.D. 110906A]

**Taking of Marine Mammals Incidental to Specified Activities; Open Water Seismic Operations in Cook Inlet, Alaska**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; proposed authorizations for two incidental take authorizations; request for comments.

**SUMMARY:** NMFS has received requests from ConocoPhillips Alaska, Inc. (CPAI) and from Union Oil Company of California (UOCC) for authorizations to take small numbers of five marine mammal species incidental to seismic operations in portions of Cook Inlet, Alaska. Under the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue authorizations to CPAI and UOCC to incidentally take, by harassment, small numbers of these species between approximately mid-March and mid-June, 2007.

**DATES:** Comments and information must be received no later than February 5, 2007.

**ADDRESSES:** Comments on the applications and draft Environmental Assessment (EA) should be addressed to P. Michael Payne, Chief, Permits, Conservation and Education Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910-3225, or by telephoning the contact listed here. The mailbox address for providing e-mail comments are [PR1.110906A@noaa.gov](mailto:PR1.110906A@noaa.gov). Comments sent via e-mail, including all attachments, must not exceed a 10-megabyte file size. Copies of the applications, the application letters, draft EA, and other related documents may be obtained by writing to this address or by telephoning one of the contacts listed here (see **FOR FURTHER INFORMATION CONTACT**). The applications and draft EA are also available at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>.

**FOR FURTHER INFORMATION CONTACT:** Shane Guan, Office of Protected Resources, NMFS, (301) 713-2289, ext 137, or Brad Smith, Alaska Region, NMFS, (907) 271-3023.

**SUPPLEMENTARY INFORMATION:****Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, notice of a proposed authorization is provided to the public for review.

An authorization shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s) and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses and that the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such taking are set forth. NMFS has defined "negligible impact" in 50 CFR 216.103 as "...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Except with respect to certain activities not pertinent here, the MMPA defines "harassment" as:

any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of small numbers of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny issuance of the authorization.

**Summary of Request**

On October 6 and on October 12, 2006, NMFS received applications from CPAI and UOCC, respectively, requesting Incidental Harassment Authorizations (IHAs) for the possible

harassment of small numbers of the Cook Inlet beluga whale (*Delphinapterus leucas*), Steller lions (*Eumetopias jubatus*), Pacific harbor seals (*Phoca vitulina richardsi*), harbor porpoises (*Phocoena phocoena*), and killer whales (*Orcinus orca*) incidental to conducting open water seismic operations in portions of Cook Inlet, Alaska.

Both proposed operations use an ocean-bottom cable (OBC) system to conduct seismic surveys. OBC seismic surveys are used in waters that are too shallow for the data to be acquired using a marine-streamer vessel and/or too deep to have static ice in the winter. This type of seismic survey requires the use of multiple vessels for cable layout/pickup, recording, shooting, and possibly one or two vessels smaller than those used in streamer operations. The utility boats can be very small, in the range of 10 - 15 m (33 - 49 ft).

An OBC operation begins by laying cables off the back of the layout vessel. Cable length typically is 4 - 6 km (2.5 - 3.7 miles) but can be up to 12 km (7.4 miles). Groups of seismic survey receivers (usually a combination of both hydrophones and vertical-motion geophones) are attached to the cable in intervals of 25 - 70 m (82 - 246 ft). Multiple cables are laid on the seafloor parallel to each other using this layout method, with a cable spacing of less than 0.5 mile (0.8 km), depending on the geophysical objective of the survey. The sound source levels (zero to peak) associated with the OBC seismic survey are the same for most 2D and 3D marine seismic surveys (233 - 240 dB re 1 microPa at 1 m).

The proposed operations would be active 24 hours per day, but the airguns would only be active for 1 - 2 hours during each of the 3 - 4 daily slack tide periods. The source for the proposed OBC seismic surveys would be a 900-in<sup>3</sup> BOLT airgun array situated on the source vessel, the *Peregrine Falcon*. The array would be made up of 2 sub-arrays, each with 2 3-airgun clusters separated by 1.5 m (4.9 ft) off the stern of the vessel. One cluster will consist of 3 225-in<sup>3</sup> airguns and the second cluster will have 3 75-in<sup>3</sup> airguns. During seismic operations, the sub-arrays will fire at a rate of every 10 - 25 seconds and focus energy in the downward direction as the vessel travels at 4 - 5 knots (4.6 - 5.8 mph). Source level of the airgun array is 249 dB re 1 microPa at 1 m (0 - peak), and the dominant frequency range is 8 - 40 Hz.

A near-field hydrophone is mounted about 1 m (3.3 ft) above each airgun station (one hydrophone is used per cluster), one depth transducer per

position is mounted on the airgun's ultrabox, and a high pressure transducer is mounted at the aft end of the sub-array to monitor high pressure air supply. A single 200 CFM PRICE compressor would supply air for the array. The compressor would be run through a pressure regulated valve tree. Water separators and dehumidifiers are also part of the source system. The array would be located with the use of DGPS antennas located on top of the A-frames. The A-frame would be lowered and raised based on water depth before the firing of the airguns.

The geographic region for the seismic operation proposed by CPAI encompasses a 25 km<sup>2</sup> (9.7 square miles) area in northwestern Cook Inlet, paralleling the shoreline from just offshore of the Beluga River south for about 6 km (3.7 miles). The approximate boundaries of the region of the proposed project area are 61°09.473' N, 151°11.987' W; 61°16.638' N, 151°02.198' W; 61°12.538' N, 150°49.979' W; and 61°05.443' N, 151°00.165' W. Water depths range from 0 to 24 m (80 ft). There will be a 1.6 km (1 mile) setback of operations from the mouth of the Beluga River to comply with Alaska Department of Fish and Game (ADFG) restrictions. The proposed seismic operations would occur from mid March depending on the time of ice breakup, and last until mid-May, 2007.

The geographic region for the activity proposed by UOCC encompasses a 28.2 km<sup>2</sup> (10.9 square miles) area in northwestern Cook Inlet, paralleling the shoreline offshore of Granite Point, and extending from shore into the inlet to an average of about 1.6 km (1 mile). The approximate boundaries of the region of the proposed project area are 61°00.827' N, 151°24.071' W; 61°02.420' N, 151°15.375' W; 61°00.862' N, 150°15.313' W; and 61°57.979' N, 151°23.946' W. There are no major rivers flowing into the open water seismic project area. Water depths range from 0 to 18 m (60 ft). The proposed seismic operations would begin as early as May 1 and end no later than June 15, 2007.

#### **Description of the Marine Mammals Potentially Affected by the Activity**

The marine mammals that are potentially found in Cook Inlet are the Cook Inlet beluga whales, Steller sea lions, Pacific harbor seals, harbor porpoises, and killer whales. Among these species, only the Steller sea lion is listed as endangered under the Endangered Species Act (ESA), and it is also designated as depleted under the MMPA. The Cook Inlet beluga whale is

designated as depleted under the MMPA. General information for these species can be found in Angliss and Outlaw (2006), which is available at the following URL: <http://www.nmfs.noaa.gov/pr/pdfs/sars/ak2005.pdf>. Additional information on these species is presented below.

#### *Cook Inlet beluga whale*

In the U.S. waters, beluga whales comprise five distinct stocks: Beaufort Sea, Eastern Chukchi Sea, Eastern Bering Sea, Bristol Bay, and Cook Inlet (Angliss and Outlaw, 2005). For the proposed seismic operations, only the Cook Inlet beluga stock occurs in the project area. The Cook Inlet stock is the most isolated of the five stocks, based on the degree of genetic differentiation between this stock and the four others (O'Corry-Crowe *et al.*, 1997).

The Cook Inlet beluga whale population has declined significantly over the years (NMFS, 2005). NMFS systematic aerial surveys documented a decline in abundance of nearly 50 percent between 1994 and 1998, from an estimate of 653 whales to 347 whales (Hobbs *et al.*, 2000). The annual abundance surveys conducted each June from 1999 to 2005 have resulted in abundance estimates of 367, 435, 386, 313, 357, 366, and 278 whales for each year, respectively (Rugh *et al.*, 2006). The Cook Inlet beluga whale stock is considered below its Optimum Sustainable Population. There is considerable concern regarding its small population size.

Cook Inlet beluga whales demonstrate site fidelity to summer concentration areas, where they regularly occur in just a few areas each year (Seaman *et al.*, 1985), typically near river mouths and associated shallow, warm and low salinity waters (Moore *et al.*, 2000). While there is inter-annual variability in beluga use among areas, generally belugas occur in the Susitna and Chickaloon areas in May to July, Turnagain Arm in August, Knik Arm in September, and the mid-Cook Inlet between Point Possession and Kalgin Island in January through April (Hansen and Hubbard, 1999; Rugh *et al.*, 2000; 2004; 2005). These patterns are consistent with those recorded for 14 tagged beluga whales tracked by satellite from 2000 to 2003 (Hobbs *et al.*, 2005).

Within this distribution, NMFS has characterized the relative value of 4 habitats as part of the management and recovery strategy in its Draft Conservation Plan for the Cook Inlet Beluga Whale (*Delphinapterus leucas*) (NMFS, 2005). Type 1 habitat is termed "High Value/High Sensitivity" and includes what NMFS believes to be the

most important and sensitive areas of the Inlet in terms of beluga whales. Type 2 is termed "High Value," and include summer feeding areas and winter habitats in waters where whales typically occur in lesser densities or in deeper waters. Type 3 habitat occurs in the offshore areas of the mid and upper Inlet and also includes wintering habitat. Type 4 habitat describes the remaining portions of the range of these whales within Cook Inlet.

Beluga whale use and distribution within Cook Inlet is documented from a study using satellite tracking of tagged whales (Hobbs *et al.*, 2005). Among the 14 beluga whales monitored by satellite telemetry between July and March in 2000 - 2003, all remained in Cook Inlet the entire time they were tracked. During summer and fall, whales were concentrated in rivers and bays in Upper Cook Inlet; during winter, they were more dispersed and located farther offshore. From December through March, whales were located primarily offshore and ranged widely in upper and mid Cook Inlet. Based on this study, it can be inferred that at least some belugas can be found in the CPAI and UOCC proposed project vicinities most months of the year as they seasonally move between the upper and lower Inlet, and between inshore and offshore waters. It can also be inferred that beluga whale occurrence in or near the UOCC Granite Point project area during late spring and early summer is much infrequent as most belugas will be concentrated in rivers and bays farther north in the Upper Inlet (Rugh *et al.*, 2000; Hobbs *et al.*, 2005; Rugh *et al.*, 2005). Beluga River area is in the extreme southern edge of the area classified by NMFS as Type 2 habitat, which is a summer feeding site. The Granite Point project area is within Type 3 habitat, which is a wintering area and secondary summering site, and historic sites.

Sources of Cook Inlet beluga whale mortality include strandings (Vos and Shelden, 2005), predation by killer whales (Shelden *et al.*, 2003), and subsistence harvest (Mahoney and Shelden, 2000; NMFS, 2003; 2005).

#### *Steller sea lion*

The western U.S. stock of Steller sea lion is distributed throughout the Bering Sea, the North Pacific Ocean, and the Gulf of Alaska east to 144°W, which includes Cook Inlet (Loughlin, 1997). The most recent minimum estimate of this population was 38,513 animals, including pups (Angliss and Outlaw, 2005). No abundance estimate for Steller sea lions is available for Cook Inlet.

Steller sea lions are sighted in Lower Cook Inlet than in the upper Inlet (LGL, 2006). Steller sea lion critical habitat has been established at locations in the southern portion of Lower Cook Inlet (58 FR 45269, August 27, 1993). Haulouts in the lower Inlet are located near the mouth of Cook Inlet at Gore Point, Elizabeth Island, Perl Island, the Barren Islands, and Chugach Island. Steller sea lions gather on traditional rookeries from mid-May through mid-July to give birth and breed. No haulouts occur in Upper Cook Inlet, the geographic region in which the proposed seismic activities would occur, and animals are rarely sighted north of Nikiski (Rugh *et al.*, 2005; LGL, 2006).

#### *Pacific harbor seal*

Harbor seals are present in coastal waters throughout Cook Inlet. They are more abundant in lower Cook Inlet than in the upper Inlet (Rugh *et al.*, 2005). In the Upper Inlet, harbor seals occur in the Little Susitna River, Susitna River, Turnagain Arm, Chickaloon Bay, Knik Arm, and Beluga River from May through October (Rugh *et al.*, 2005). Typically, fewer than about 100 harbor seals have been recorded in any one of these locations with the majority in the Chickaloon Bay and the Susitna River areas and very few at the Beluga River (Rugh *et al.*, 2005). One to three harbor seals have been annually reported in or near the Beluga River area (Rugh *et al.*, 2005).

Major harbor seal haulout sites in the Cook Inlet region are found in the lower portion of the Inlet. The reproductive period (pupping and breeding) occurs at most major haulouts in the Inlet from May through July (NMFS, 2003). Harbor seals molt following the reproductive period. The peak season for molting in the Gulf of Alaska occurs from July to September (Pitcher and Calkins, 1979).

The population size of the Gulf of Alaska stock is estimated at 29,175 seals (Angliss and Outlaw, 2005). However, no abundance estimate is available for Cook Inlet. Harbor seals have declined in some areas of the northern Gulf of Alaska by 78 percent during the past two decades (Fadely *et al.*, 1997). Causes of this decline may include natural population fluctuations or cycles, reduced environmental carrying capacity and prey availability due to natural or human causes, predation, harvests, direct fisheries related mortality, entanglement in marine debris, pollution, and emigration (Hoover-Miller, 1994).

#### *Harbor porpoise*

Harbor porpoise occur throughout Alaska waters (Lowry *et al.*, 1982). The Gulf of Alaska stock of harbor porpoise, which includes Cook Inlet animals, is estimated at 30,506 animals (Angliss and Outlaw, 2005). Dahlheim *et al.* (2000) estimated the average density of harbor porpoises in Cook Inlet was 7.2 animals per 1,000 km<sup>2</sup> (386 square miles), or 1 animal per 139 km<sup>2</sup> (53 square miles), which indicates densities are very low in the Inlet. Harbor porpoises occur in Upper Cook Inlet throughout the year in small numbers but are more abundant in the lower Inlet (LGL, 2006).

#### *Killer whale*

The Eastern North Pacific stocks of killer whales includes transient and resident killer whales in the Gulf of Alaska and Cook Inlet (Angliss and Outlaw, 2005). The minimum abundance estimated for the Alaska Resident stock of killer is 1,123 animals; and for the Gulf of Alaska, Aleutian Islands, and Bering Sea Transient stock of killer whale is 314 animals (Angliss and Outlaw, 2005).

Killer whales in Cook Inlet have not been well documented (Shelden *et al.*, 2003). However, their occurrence in the area is sporadic and not considered a daily or common event. Resident and transient killer whales have been observed. Most sightings of resident killer whales occur in the lower Inlet (Shelden *et al.*, 2003). Small groups of killer whales, believed to be transient whales, have been seen in upper Cook Inlet (NMFS, 2003). Rugh *et al.* (2005) reported observing no killer whales in the upper Inlet and only 23 in the lower Inlet during surveys from 1993 to 2004. Similarly, two recent marine mammal studies in the upper Inlet and Knik Arm did not observe any killer whales (Funk *et al.*, 2005; Ireland *et al.*, 2005). There are no records of killer whales in the Beluga River and Granite Point project areas.

#### Potential Effects on Marine Mammals and Their Habitat

Seismic surveys using acoustic energy may have the potential to adversely impact marine mammals in the vicinity of the activities (Gordon *et al.*, 2004). The sound source levels (zero to peak) associated with the OBC seismic survey can be as high as 233 - 240 dB re 1 microPa at 1 m. However, most energy is directed downward, and the short duration of each pulse limits the total energy. Received levels within several kilometers typically exceed 160 dB re 1 microPa (Richardson *et al.*, 1995), depending on water depth, bottom type,

ice cover, etc. Intense acoustic signals from seismic surveys have been known to cause behavioral alteration such as reduced vocalization rates (Goold, 1996), avoidance (Malme *et al.*, 1986, 1988; Richardson *et al.*, 1995; Harris *et al.*, 2001), and changes in blow rates (Richardson *et al.*, 1995) in several marine mammal species.

The proposed surveys would use a 900-in<sup>3</sup> BOLT airgun array consisting of 3 225-in<sup>3</sup> airguns and 3 75-in<sup>3</sup> airguns. The source level of this array is expected to be considerably lower than the 1,200-in<sup>3</sup> BOLT airgun array used by the U.S. Coast Guard (USCG) vessel *Healy* (70 FR 47792, August 15, 2005). To conservatively assess the received levels from airgun pulses, the USCG's Healy modeled data were used to calculate the maximum distances where sound levels would be 190, 180, and 160 dB re 1 microPa rms. The maximum distances where sound levels were estimated at 190, 180, and 160 dB re 1 microPa rms from a single 1,200-in<sup>3</sup> BOLT airgun in the northern Beaufort Sea were 313 m (1,027 ft), 370 m (1,214 ft), and 1,527 m (5,010 ft), respectively. However, since the proposed seismic surveys would use a smaller 900-in<sup>3</sup> airgun array in an area with soft mud bottom that gradually slopes outward from shore, which is a poor condition for sound transmission (Richardson *et al.*, 1995), the received levels are expected to be significantly lower at these distances.

The seismic surveys would only introduce acoustic energy into the water column and no objects would be released into the environment. The survey vessels would travel at a speed of 4.5 knots and the two projects would be conducted in a small area of Cook Inlet for a short period.

There is a relative lack of knowledge about the potential impacts of seismic energy on marine fish and invertebrates. Available data suggest that there may be physical impacts on eggs and on larval, juvenile, and adult stages of fish at very close range (within meters) to seismic energy source. Considering typical source levels associated with seismic arrays, close proximity to the source would result in exposure to very high energy levels. Where eggs and larval stages are not able to escape such exposures, juvenile and adult fish most likely would avoid them. In the cases of eggs and larvae, it is likely that the numbers adversely affected by such exposure would be very small in relation to natural mortality. Studies on fish confined in cages that were exposed under intense sound for extended period showed physical or physiological impacts (Scholik and Yan, 2001; 2002;

McCauley *et al.*, 2003; Smith *et al.*, 2004). While limited data on seismic surveys regarding physiological effects on fish indicate that impacts are short-term and are most apparent after exposure at very close range (McCauley *et al.*, 2000a; 2000b; Dalen *et al.*, 1996), other studies have demonstrated that seismic guns had little effect on the day-to-day behavior of marine fish and invertebrates (Knudsen *et al.*, 1992; Wardle *et al.*, 2001). It is more likely that fish will swim away upon hearing the approaching seismic impulses (Engas *et al.*, 1996). Based on the foregoing, NMFS finds preliminarily that the proposed seismic surveys would not cause any permanent impact on the physical habitats and marine mammal prey species in the proposed project area.

#### Number of Marine Mammals Expected to Be Taken

NMFS estimates that approximately 6 - 57 Cook Inlet beluga whales (average 26 whales) out of a population of 278 whales and a maximum of 30 Pacific harbor seals out of a population of 29,175 seals would be harassed incidentally by the two proposed seismic operations from March to June, 2007. These numbers of take represent 2.2 - 20.5 percent (average 9.4 percent) Cook Inlet beluga whales and less than 0.1 percent of Alaska stock of Pacific harbor seals that could be taken by Level B harassment if no mitigation and monitoring measures are implemented. These numbers are based on the animal density, length of track planned, and the assumption that all animals will be harassed at distances where noise at received level is at and above 160 dB re 1 microPa rms. Beluga whale and harbor seal densities were calculated by dividing the daily counts of whales (ranges from 11 - 99, with an average of 46) and seals (75) by the approximate area (1,248 km<sup>2</sup>, or 482 square miles) surveyed in the Susitna Delta (Beluga River to Pt. MacKenzie) during the most recently published survey for June 2004 (Rugh *et al.*, 2005). Although 20.5 percent of Cook Inlet beluga whales could subject to take by Level B harassment, this estimate was based on an unusually high count of whales on June 3, 2004 in Susitna Delta (from North Foreland to Pt. Mackenzie). Cook Inlet beluga aerial surveys conducted by NMFS in June, 2003 and 2004, provided median counts of whales between 0 - 99, with an average count of 29 whales in the same area. This estimate is conservative as it assumes that all animals exposed by seismic impulses over 160 dB re 1 microPa would be harassed and disturbed. As mentioned

earlier that the majority acoustic energy of low frequency airgun impulses falls outside beluga whale's most sensitive hearing range (Richardson *et al.*, 1995), it is most likely that only a portion of whales within the 160 dB re 1 microPa isopleth would be disturbed. In addition, it is also possible that many of the animals would be habituated to this level of acoustic disturbances. Furthermore, mitigation measures, including the ramp-up requirement during the initiation of the seismic operations (see below) could eliminate most, if not all, startling behavior from animals near the proposed project area. Therefore, NMFS believes that the actual number of Level B harassment takes of Cook Inlet beluga whale would be much lower than the estimated average of 26 whales.

There are no similar population surveys for harbor porpoises, Steller sea lions, and killer whales conducted within the proposed project area. However, based on an abundance survey of harbor porpoises within the entire Cook Inlet (Dahlheim *et al.*, 2000), it is estimated that the population density of harbor porpoise in the entire Inlet is 0.0072 animal per km<sup>2</sup>. Based on this density data, NMFS estimates that about 6 harbor porpoises out of a population of 30,506 porpoises could be harassed incidentally by the two proposed seismic operations from March to June, 2007. This number of take represents less than 0.02 percent of harbor porpoises that could be taken by Level B harassment.

There is no density estimates available for Steller sea lions and killer whales with in Cook Inlet. However, their appearance in Upper Cook Inlet is rare and none of these species were sighted in the upper Inlet during the 2004 survey (Rugh *et al.*, 2005). Therefore, NMFS concludes that the harassment of these species is reasonably believed to be much lower than those of beluga whales and harbor seals.

#### Effects on Subsistence Needs

The proposed project areas are located 4 - 15 miles (6.4 - 24.1 km) from Tyonek, which is predominately a Dena'ina Athabaskan community. However, these areas are not important subsistence areas for Tyonek hunters. The Tyonek native community has been displaced from many traditional hunting (and trapping and fishing) areas north of Tyonek including Beluga River during the twentieth century. As more non-natives utilized and occupied traditional subsistence areas combined with harvest regulation restrictions, changes in the abundance and

distribution of subsistence resources, and other factors, Tyonek native subsistence activities have focused closer to the village. While Tyonek natives may harvest one beluga whale per year and occasionally harbor seals (Huntington, 2000), their primary source of meat is moose (Foster, 1982). Therefore, NMFS believes that the proposed projects would not have an unmitigable adverse impact on the availability of marine mammal species or stocks for subsistence harvest.

#### Mitigation

The following mitigation measures are proposed be required under the proposed IHA to be issued to CPAI and UOCC for conducting seismic operations in northwestern Cook Inlet. NMFS believes that the implementation of these mitigation measures would result in the least practicable impact on marine mammal species or stocks and their habitat.

#### Time and Frequency

Seismic operations would be limited from mid-March to mid-June in portions of northwestern Cook Inlet. During the seismic operations, airguns would only be active for 1 - 2 hours during each of the 3 - 4 slack tide periods, with the vessel moving at a speed of 4 - 5 knots (4.6 - 5.8 mph).

There will be a 1.6 km (1 mile) set back of airguns from the mouth of the Beluga River to comply with ADFG restrictions.

#### Establishment of Safety Zones

The applicants propose to establish a 370-m (1,214-ft) radius safety zone for cetaceans and a 313-m (1,027-ft) radius safety zone for pinnipeds for the seismic operations. These safety zone radii were calculated from a model for a 1,200-in3 BOLT array used in the Beaufort Sea where the received sound pressure levels (SPL) attenuated to 180 dB and 190 dB re 1 microPa rms, respectively. Since the data used in calculating the size of safety zones were from a much larger array, while the proposed seismic operations would use a smaller array in an area with poor conditions for sound transmission, NMFS believes that these safety zone radii are conservative. Additional data will be acquired to verify the 190, 180, and 160 dB (rms) distances for the airgun configurations during the proposed seismic operations, and the disturbance could be modified if NMFS finds that the level of take is being exceeded and resulting in higher than a negligible impact on the species or stock in question. An independent marine acoustic firm, will be used to acquire the data. Scientifically valid

sampling design will be followed to collect data at the beginning of the seismic program. The data will be used to calibrate the acoustic model and adjust the safety radii to match the field values for the 190, 180, and 160 dB distances for each array, if different from these estimated values.

Safety zones would be surveyed and monitored prior to, during, and after the airgun seismic operations. A detailed description of marine mammal monitoring is described in the Monitoring and Reporting section below.

#### *Speed and Course Alteration*

If a marine mammal is detected outside the safety radius and based on its position and the relative course of travel is likely to enter the safety zone, the vessel's speed and/or direct course may, when practicable and safe, be changed to avoid the impacts to the animal. The marine mammal activities and movements relative to the seismic and support vessels must be closely monitored to ensure that the animal does not (1) approach the safety radius, or (2) enter the safety zone. If either of these scenarios occur, further mitigation measures must be taken (i.e., either further course alterations or power down or shut down of the airgun(s)).

#### *Power-down Procedures*

A power down involves decreasing the number of airguns in use such that the radius of the 180- or 190-dB zone is decreased to the extent that marine mammals are not in the safety zone. During a power-down, one airgun is operated. The continued operation of one airgun is intended to alert marine mammals to the presence of the seismic guns in the area.

If a marine mammal is detected outside the safety zone but is likely to enter the safety zone, and if the vessel's course and/or speed cannot be changed to avoid having the animal enter the safety radius, the airguns must be powered down before the animal is within the safety zone.

#### *Shut-down Procedures*

A shut-down occurs when all airgun activity is suspended. The operating airgun(s) must be shut down if a marine mammal approaches the applicable safety zone and a power down still would not likely to keep the animal outside the newly adjusted smaller safety zone. The operating airgun(s) must also be shut down completely if a marine mammal is found within the safety zone during the seismic operations. The shut-down procedure should be accomplished within several

seconds (of a "one shot" period) of the determination that a marine mammal is within or about to enter the safety zone.

Following a shut-down, airgun activity will not resume until the marine mammal has cleared the safety zone. The animal will be considered to have cleared the safety zone if it is visually observed to have left the safety zone, or if it has not been seen within the safety zone for 15 minutes.

#### *Ramp-up Procedures*

Although marine mammals will be protected from Level A harassment by establishment of a safety zone at a SPL levels of 180 and 190 dB re 1 microPa rms for cetaceans and pinnipeds, respectively, mitigation may not be 100 percent effective at all times in locating marine mammals. In order to provide additional protection to marine mammals near the project area by allowing marine mammals to vacate the area prior to receiving a potential injury, and to further reduce Level B harassment by startling marine mammals with a sudden intensive sound, CPAI and UOCC will be required to implement "ramp-up" practice when starting up airgun arrays. Ramp-up will begin with the smallest airgun in the array that is being used for all subsets of the 6-gun array. Airguns will be added in a sequence such that the source level in the array will increase at a rate no greater than 6 dB per 5 minutes. During the ramp-up, the safety zone for the full 6-airgun system will be maintained.

#### **Monitoring and Reporting**

Monitoring would be conducted by qualified NMFS-approved marine mammal observers (MMOs). Reticle binoculars (e.g., 7 x 50 Bushnell or equivalent) and laser range finders (Leica LRF 1200 laser range finder or equivalent) would be standard equipment for the monitors.

Vessel-based MMOs will begin marine mammals monitoring at least 30 minutes prior to the planned start of airgun operations and during all periods of airgun operations. MMOs will survey the safety zone to ensure that no marine mammals are seen within the zone before a seismic survey begins. If marine mammals are found within the safety zone, seismic operations will be suspended until the marine mammal leaves the area. If a marine mammal is seen above the water and then dives below, the operator will wait 15 minutes, and if no marine mammals are seen by the MMOs in that time it will be assumed that the animal has moved beyond the safety zone. When feasible, observations will also be made during

transits, moving cable, and other operations when airguns are inactive.

Data for each distinct marine mammal species observed in the proposed project area during the period of the seismic operations would be collected. Numbers of marine mammals observed, species identification if possible, frequency of observation, the time corresponding to the daily tidal cycle, and any behavioral changes due to the airgun operations will be recorded and entered into a custom database using a notebook computer. The accuracy of the data entry will be verified by computerized validity data checks as the data are entered and by subsequent manual checking of the database. These procedures will allow initial summaries of data to be prepared during and shortly after the field program, and will facilitate transfer of the data to statistical, graphical, or other programs for further processing and archiving.

Results from the vessel-based observations will provide: (1) Basis for real-time mitigation (airgun shut-down); (2) information needed to estimate the number of marine mammals potentially taken by harassment, which must be reported to NMFS; (3) data on the occurrence, distribution, and activities of marine mammals in the area where the seismic study is conducted; (4) information to compare the distance and distribution of marine mammals relative to the source vessel at times with and without seismic activity; and (5) data on the behavior and movement patterns of marine mammals seen at times with and without seismic activity.

Reports from CPAI and UOCC will be submitted to NMFS within 90 days after the end of the respective projects. The reports will describe the operations that were conducted, the marine mammals that were detected near the operations, and provide full documentation of methods, results, and interpretation pertaining to all monitoring. The reports will also include estimates of the amount and nature of potential "take" of marine mammals by harassment or in other ways.

#### **National Environmental Policy Act (NEPA)**

NMFS has prepared a draft EA for public review and comment (see **ADDRESSES**), that describes the impact on the human environment that would result from implementation of this action. NMFS has concluded, preliminarily, that no significant impact on the human environment would result.

### Endangered Species Act (ESA)

Based on a review conducted by NMFS Alaska Regional Office biologists, it is not likely that any ESA-listed species would be taken due to the proposed seismic operations. Steller sea lions are recorded in these waters, but are considered uncommon in spring and early summer in the proposed project area. Therefore, NMFS has determined that a formal section 7 consultation is not necessary.

### Preliminary Determinations

NMFS has determined preliminarily that small numbers of beluga whales, Pacific harbor seals, and harbor porpoises may be taken incidental to seismic surveys, by no more than Level B harassment and that such taking will result in no more than a negligible impact on such species or stocks. In addition, NMFS has determined preliminarily that Steller sea lions and killer whales, if present within the vicinity of the proposed activities could be taken incidentally, but by no more than Level B harassment and that such taking would result in no more than a negligible impact on such species or stocks. At this time, NMFS is not able to determine whether any potential take would involve small numbers of Steller sea lions or killer whales due to data limitations and our inability to develop density estimates. Regardless, given the infrequent occurrence of these species (or none at all), NMFS believes that any take would be significantly lower than those of beluga whales or harbor seals.

While behavioral modifications, including temporarily vacating the area during the project period may be made by these species to avoid the resultant visual and acoustic disturbance, NMFS nonetheless finds that this action would result in no more than a negligible impact on these marine mammal species and/or stocks. NMFS also finds that the proposed action will not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence uses.

In addition, no take by Level A harassment (injury) or death is anticipated or authorized, and harassment takes should be at the lowest level practicable due to incorporation of the mitigation measures described in this document.

### Proposed Authorization

NMFS proposes to issue IHAs to CPAI and UOCC for the potential harassment of small numbers of Cook Inlet beluga whales, Pacific harbor seals and harbor porpoises incidental to conducting seismic operations in the northwestern

Cook Inlet in Alaska, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. Likewise, NMFS proposes to issue IHAs for potential harassment of Steller sea lions and killer whales incidental to conducting of seismic operations in the northwestern Cook Inlet in Alaska, provided that previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: December 28, 2006.

**James H. Lecky,**

*Director, Office of Protected Resources,  
National Marine Fisheries Service.*

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

[I.D. 122806C]

### Gulf of Mexico Fishery Management Council (Council); Public Meetings

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice of public meetings.

**SUMMARY:** The Gulf of Mexico Fishery Management Council will convene public meetings.

**DATES:** The meeting will be held January 22–26, 2007.

**ADDRESSES:** The meeting will be held at the Grand Hotel Marriott, 1 Grand Blvd., Point Clear AL 36564.

*Council address:* Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, FL, 33607.

**FOR FURTHER INFORMATION CONTACT:**

Wayne E. Swingle, Executive Director, Gulf of Mexico Fishery Management Council; telephone: 813-348-1630.

**SUPPLEMENTARY INFORMATION:**

#### Council

*Thursday, January 25, 2007*—The Council will begin at 8:30 am to review the agenda and minutes. Public testimony on a regulatory amendment to address vermilion snapper management and exempted fishing permits (EFPs), if any, will be from 8:45 to 10 a.m. Persons wishing to testify on the regulatory amendment must register by filling out a public testimony card prior to the beginning of the testimony period. From 10 a.m. to 12 p.m. the Council will hold an Open Public Comment Period regarding any fishery issue or concern.

People wishing to speak before the Council should complete a public comment card prior to the comment period. From 1:30–2 p.m. the Council will hear a presentation regarding Dolphin Depredation. The Council will then review and discuss reports from the previous three day's committee meetings as follows: 2–3:30 pm—Reef Fish Management; 3:30–4:15 pm—Joint Reef Fish/Shrimp Management Committees; 4:15–4:45 pm—Shrimp Management Committee; 4:45–5:00 pm—Mackerel Management Committee; 5–5:15 p.m.—Data Collection Committee; Budget/Personnel Committee from 5:15–5:30 p.m.

*Friday, January 26, 2007*—The Council will begin at 8:30 a.m. to continue reviewing and discussing reports from the previous three day's committee meetings as follows: 8:30–8:45 am—Migratory Species Management Committee; 8:45–9 a.m.—SSC Selection Committee; 9–9:30 a.m. Joint Reef Fish/Mackerel/Red Drum Committees. The Council will conclude its meeting by discussing Other Business items from 9:30–10:30 a.m.

#### Committees

*Monday, January 22, 2007, 1–5:30 p.m.*—The Reef Fish Management Committee will meet to take final action on a Regulatory Amendment for Vermilion Snapper, review Reef Fish Amendment 30 (gag, amberjack, triggerfish, red grouper), and set scoping hearings. The Committee will also review the Ad Hoc Grouper IFQ Advisory Panel's (AP) recommendations for Reef Fish Amendment 29 (Grouper Individual Fishing Quota [IFQ]), as well as review a Florida Fish and Wildlife Conservation Commission study and Southeast Fisheries Science Center recommendations of a goliath grouper scientific harvest.

*Tuesday, January 23, 2007, 8:30 a.m.–12 p.m.*—The Joint Reef Fish/Shrimp Management Committee will meet to receive a presentation on red snapper juvenile densities off Texas. The Committee will also review the current Draft Joint Reef Fish Amendment 27/Shrimp Amendment 14 and additional potential shrimp actions; the Committee report from the August 2006 meeting; the NMFS' FEIS and Interim Rule; the Final Shrimp Effort Workgroup and the Ad Hoc Shrimp Effort Management AP Reports; and consider linked vs. delinked shrimp and reef fish mortality reduction scenarios for Reef Fish Amendment 27/Shrimp Amendment 14. The Committee may also select public hearing locations for Reef Fish Amendment 27/Shrimp Amendment 14