applicants and grant recipients must provide certain documents. The information is used to evaluate proposals, and once funded, to monitor grantee performance.

Affected Public: Not-for-profit institutions, individuals, state, local or tribal government.

Frequency: On occasion, other.

Respondent's Obligation: Required to obtain benefits.

OMB Desk Officer: David Rostker, (202) 395–3897.

Copies of the information collection proposal can be obtained by calling or writing Linda Engelmeier, DOC Forms Clearance Officer, (202) 482–3272, Department of Commerce, Room 5033, 14th and Constitution Avenue, NW., Washington, DC 20230 (or via Internet at Lengelme@doc.gov).

Written comments and recommendations for the proposed information collection should be sent to David Rostker, OMB Desk Officer, Room 10202, New Executive Office Building, 725 17th Street, NW, Washington, DC 20503 within 30 days of publication.

Dated: May 20, 1999.

Linda Engelmeier,

Departmental Forms Clearance Officer, Office of the Chief Information Officer.

[FR Doc. 99–13566 Filed 5–27–99; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 040799A]

Small Takes of Marine Mammals Incidental to Specified Activities; Offshore Seismic Activities in the Beaufort Sea

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

ACTION: Notice of receipt of application and proposed authorization for a small take exemption; request for comments.

SUMMARY: NMFS has received a request from Western Geophysical/Western Atlas International of Houston, Texas (Western Geophysical) for an authorization to take small numbers of marine mammals by harassment incidental to conducting seismic surveys in the Beaufort Sea in state and Federal waters. Under the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to authorize Western Geophysical to incidentally take, by harassment, small numbers of bowhead whales and other marine mammals in the above mentioned areas during the open water period of 1999.

DATES: Comments and information must be received no later than June 28, 1999.

ADDRESSES: Comments on the application should be addressed to Donna Wieting, Acting Chief, Marine Mammal Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910–3225. A copy of the application, a list of references used in this document, and/or an environmental assessment (EA) may be obtained by writing to this address or by telephoning one of the contacts listed here.

FOR FURTHER INFORMATION CONTACT: Kenneth R. Hollingshead, (301) 713–2055, Brad Smith, (907) 271–5006.

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 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.

Permission may 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 monitoring and reporting of such taking are set forth.

On April 10, 1996 (61 FR 15884), NMFS published an interim rule establishing, among other things, procedures for issuing incidental harassment authorizations (IHAs) under section 101(a)(5)(D) of the MMPA for activities in Arctic waters. For additional information on the procedures to be followed for this authorization, please refer to that document.

Summary of Request

On March 24, 1999, NMFS received an application from Western Geophysical requesting an authorization for the harassment of small numbers of several species of marine mammals incidental to conducting seismic surveys during the open water season in the Beaufort Sea between western Camden Bay and Harrison Bay off Alaska. Weather permitting, the survey is expected to take place between approximately July 1 and mid- to late-October, 1999. However, only a small portion of the area between western Camden Bay and Harrison Bay will be surveyed this year. A detailed description of the work proposed for 1999 is contained in the application (Western Geophysical, 1999) and is available upon request (see **ADDRESSES**).

Description of Habitat and Marine Mammal Affected by the Activity

A detailed description of the Beaufort Sea ecosystem and its associated marine mammals can be found in the EA prepared for this authorization or in other documents (Corps of Engineers, 1999; Minerals Management Service (MMS), 1992, 1996). The relevant information contained in these documents is incorporated by citation into this section and need not be repeated here. A copy of the EA is available upon request (see **ADDRESSES**).

Marine Mammals

The Beaufort/Chukchi Seas support a diverse assemblage of marine mammals, including bowhead whales (*Balaena mysticetus*), gray whales (*Eschrichtius robustus*), beluga (*Delphinapterus leucas*), ringed seals (*Phoca hispida*), spotted seals (*Phoca largha*) and bearded seals (*Erignathus barbatus*). Descriptions of the biology and distribution of these species and of others can be found in the previously referenced EA, the 1999 application from Western Geophysical, the annual monitoring reports for seismic surveys in the Beaufort Sea (LGL Ltd. and Greeneridge Sciences Inc, 1997, 1998, and 1999a) and several other documents (Corps of Engineers, 1999; Lentfer, 1988; MMS, 1992, 1996; Hill *et al.*, 1997). Please refer to those documents for information on these species.

Potential Effects of Seismic Surveys on Marine Mammals

Disturbance by seismic noise is the principal means of taking by this activity. Support vessels and aircraft will provide a potential secondary source of noise. The physical presence of vessels and aircraft could also lead to non-acoustic effects on marine mammals involving visual or other cues.

Seismic surveys are used to obtain data about formations several thousands of feet deep. The proposed seismic operation is an ocean bottom cable (OBC) survey. For this activity, OBC surveys involve dropping cables from a ship to the ocean bottom, forming a

patch consisting of 4 parallel cables 8.9 kilometers (km) (4.8 nautical miles (nm)) long, separated by approximately 600 meters (m) (1,968 feet (ft)) from each other. Hydrophones and geophones, attached to the cables, are used to detect seismic energy reflected back from underground rock strata. The source of this energy is a submerged acoustic source, called a seismic airgun array, that releases compressed air into the water, creating an acoustical energy pulse that is directed downward toward the seabed. The source level planned for this project - a maximum of 247 dB re 1 μPa-m or 22.3 bar-meters (zero to peak), or a maximum of 252 dB re 1 μPa-m or 39 bar-meters (peak-to-peak) - will be from an airgun array with a air discharge volume of 1,210 in^3. This compares to the 1,500 in^3 array used on Western Geophysical's primary source vessel in 1998 and will be the only airgun array used by Western Geophysical in the Beaufort Sea this year.

It is anticipated that 34 seismic lines will be run for each patch, covering an area 5.0 km by 15.7 km (2.7 nm by 8.1 nm), centered over the patch. Source lines for one patch will overlap with those for adjacent patches.

After sufficient data have been recorded to allow accurate mapping of the rock strata, the cables are lifted onto the deck of a cable-retrieval vessel, moved to a new location (ranging from several hundred to a few thousand feet away), and placed onto the seabed again. For a more detailed description of the seismic operation, please refer to the 1999 application from Western Geophysical.

Depending upon ambient noise conditions and the sensitivity of the receptor, underwater sounds produced by open water seismic operations may be detectable a substantial distance away from the activity. Any sound that is detectable is (at least in theory) capable of eliciting a disturbance reaction by a marine mammal or of masking a signal of comparable frequency (Western Geophysical, 1999). An incidental harassment take is presumed to occur when marine mammals in the vicinity of the seismic source, the seismic vessel, other vessels, or aircraft react to the generated sounds or to visual cues.

Seismic pulses are known to cause strong avoidance reactions by many of the bowhead whales occurring within a distance of several kilometers and may sometimes cause avoidance or other changes in bowhead behavior at considerably greater distances (Richardson *et al.*, 1995; Rexford, 1996; MMS, 1997). Results from the 1996–1998 BP and Western Geophysical seismic program monitoring indicate that most bowheads avoided an area within about 20 km (10.8 nm) of nearshore seismic operations (Miller *et al.*, 1998, 1999). It is also possible that seismic pulses may disturb some other marine mammal species occurring in the area.

Although some limited masking of low-frequency sounds (e.g., whale calls) is a possibility, the intermittent nature of seismic source pulses (1 second in duration every 16 to 24 seconds) will limit the extent of masking. Bowhead whales are known to continue calling in the presence of seismic survey sounds, and their calls can be heard between seismic pulses (LGL and Greeneridge, 1997, 1998, 1999a; Richardson *et al.*, 1986). Masking effects are expected to be absent in the case of belugas, given that sounds important to them are predominantly at much higher frequencies than are airgun sounds (Western Geophysical, 1999).

Hearing damage is not expected to occur during the project. It is not positively known whether the hearing systems of marine mammals very close to an airgun might be subject to temporary or permanent hearing impairment (Richardson *et al.*, 1995). However, planned monitoring and mitigation measures (described later in this document) are designed to avoid sudden onsets of seismic pulses at full power, to detect marine mammals occurring near the array, and to avoid exposing them to sound pulses that have any possibility of causing hearing impairment.

When the received levels of noise exceed some behavioral reaction threshold, cetaceans will show disturbance reactions. The levels, frequencies, and types of noise that will elicit a response vary between and within species, individuals, locations, and seasons. Behavioral changes may be subtle alterations in surface, respiration, and dive cycles. More conspicuous responses include changes in activity or aerial displays, movement away from the sound source, or complete avoidance of the area. The reaction threshold and degree of response are related to the activity of the animal at the time of the disturbance. Whales engaged in active behaviors, such as feeding, socializing, or mating, are less likely than resting animals to show overt behavioral reactions, unless the disturbance is directly threatening.

Bowhead Whales

Various studies (Reeves *et al.*, 1984, Fraker *et al.*, 1985, Richardson *et al.*, 1986, Ljungblad *et al.*, 1988) have reported that, when an operating seismic vessel approaches within a few kilometers, most bowhead whales exhibit strong avoidance behavior and changes in surfacing, respiration, and dive cycles. In studies prior to 1996, bowheads exposed to seismic pulses from vessels more than 7.5 km (4.0 nm) away rarely showed observable avoidance of the vessel, but their surface, respiration, and dive cycles appeared altered in a manner similar to that observed in whales exposed at a closer distance (Western Geophysical, 1999).

Within a 6– to 99–km (3.2 to 53.5 nm) range, it has not been possible to determine a specific distance at which subtle behavioral changes no longer occur (Richardson and Malme, 1993), given the high variability observed in bowhead whale behavior (Western Geophysical, 1999). However, in three studies of bowhead whales and one of gray whales, surfacing-dive cycles have been unusually rapid in the presence of seimic noise, with fewer breaths per surfacing and longer intervals between breaths (Richardson *et al.*, 1986; Koski and Johnson, 1987; Ljungblad *et al.*, 1988; Malme *et al.*, 1988). This pattern of subtle effects was evident among bowheads 6 km to at least 73 km (3.2 to 39 nm) from seismic vessels. However, in the pre–1996 studies, active avoidance usually was not apparent unless the seismic vessel was closer than about 6 to 8 km (3.2 to 4.3 nm)(Western Geophysical, 1999).

Inupiat whalers believe that migrating bowheads are sometimes displaced at distances considerably greater than 6 to 8 km (3.3 to 4.3 nm)(Rexford, 1996). Also, whalers have mentioned that bowheads sometimes seem more ''skittish'' and more difficult to approach when seismic exploration is underway in the area. It is possible that, when additional data are available and analyzed, it may be demonstrated that isolated bowheads avoid seismic vessels at distance beyond 20 km (10.8 nm). Also, the ''skittish'' behavior may be related to the observed subtle changes in the behavior of bowheads exposed to seismic pulses from distant seismic vessels (Richardson *et al.*, 1986).

Gray Whales

The reactions of gray whales to seismic pulses are similar to those of bowheads. Migrating gray whales along the California coast were noted to slow their speed of swimming, turn away from seismic noise sources, and increase their respiration rates. Malme *et al.* (1983, 1984, 1988) concluded that approximately 50 percent showed avoidance when the average received

pulse level was 170 dB (re 1 μPa). By some behavioral measures, clear effects were evident at average pulse levels of 160+dB; less consistent results were suspected at levels of 140–160 dB. Recent research on migrating gray whales showed responses similar to those observed in the earlier research when the source was moored in the migration corridor 2 km (1.1 nm) from shore. However, when the source was placed offshore (4 km (2.2 nm) from shore) of the migration corridor, the avoidance response was not evident on track plots (Tyack and Clark. 1998).

Beluga

The beluga is the only species of toothed whale (Odontoceti) expected to be encountered in the Beaufort Sea. Because their hearing threshold at frequencies below 100 Hz (where most of the energy from airgun arrays is concentrated) is poor (125 dB re 1 μPa @ 1 m) or more depending upon frequency (Johnson *et al*., 1989; Richardson *et al*., 1991, 1995), beluga are not predicted to be strongly influenced by seismic noise. However, because of the high source levels of seismic pulses, airgun sounds sometimes may be audible to beluga at distances of 100 km (54 nm)(Richardson and Wursig, 1997). The reaction distance for beluga, although presently unknown, is expected to be less than that for bowheads, given the presumed poorer sensitivity of belugas than that of bowheads for low-frequency sounds (Western Geophysical, 1999).

Ringed, Largha and Bearded Seals

No detailed studies of reactions by seals to noise from open water seismic exploration have been published (Richardson *et al*., 1995). However, there are some data on the reactions of seals to various types of impulsive sounds (LGL and Greeneridge, 1997, 1998, 1999a; J. Parsons as quoted in Greene, *et al*. 1985; Anon., 1975; Mate and Harvey, 1985). These studies indicate that ice seals typically either tolerate or habituate to seismic noise produced from open water sources.

Underwater audiograms have been obtained using behavioral methods for three species of phocinid seals, ringed, harbor, and harp seals (*Pagophilus groenlandicus*). These audiograms were reviewed in Richardson *et al*. (1995) and Kastak and Schusterman (1998). Below 30–50 kHz, the hearing threshold of phocinids is essentially flat down to at least 1 kHz and ranges between 60 and 85 dB (re 1 μPa @ 1 m). There are few data on hearing sensitivity of phocinid seals below 1 kHz. NMFS considers harbor seals to have a hearing threshold of 70–85 dB at 1 kHz (60 FR 53753, October 17, 1995), and recent measurements for a harbor seal indicate that, below 1 kHz, its thresholds deteriorate gradually to 97 dB (re 1 μPa @ 1 m) at 100 Hz (Kastak and Schusterman, 1998).

While no detailed studies of reactions of seals from open-water seismic exploration have been published (Richardson *et al*., 1991, 1995), some data are available on the reactions of seals to various types of impulsive sounds (see LGL and Greeneridge, 1997, 1998, 1999a; Thompson *et al*. 1998). These references indicate that it is unlikely that pinnipeds would be harassed or injured by low frequency sounds from a seismic source unless they were within relatively close proximity of the seismic array. For permanent injury, pinnipeds would likely need to remain in the high-noise field for extended periods of time. Existing evidence also suggests that, while seals may be capable of hearing sounds from seismic arrays, they appear to tolerate intense pulsatile sounds without known effect once they learn that there is no danger associated with the noise (see, for example, NMFS/Washington Department of Wildlife, 1995). In addition, they will apparently not abandon feeding or breeding areas due to exposure to these noise sources (Richardson *et al*., 1991) and may habituate to certain noises over time. Since seismic work is fairly common in Beaufort Sea waters, pinnipeds have been previously exposed to seismic noise and may not react to it after initial exposure.

For a discussion on the anticipated effects of ships, boats, and aircraft, on marine mammals and their food sources, please refer to the application (Western Geophysical, 1999). Information on these effects is incorporated in this document by citation.

Numbers of Marine Mammals Expected to Be Taken

Western Geophysical estimates that the following numbers of marine mammals may be subject to Level B harassment, as defined in 50 CFR 216.3:

Species	*Population*	*Harassment Takes in 1999*	
	Size	*Possible*	*Probable*
Bowhead	9,900		
160 dB criterion		1,000	<500
20 km criterion		2,500	1,250
Gray whale	26,600	<10	0
Beluga	39,258	250	<150
Ringed seal*	1–1.5 million	400	<200
Spotted seal*	>200,000	10	<2
Bearded seal*	>300,000	50	<15

* Some individual seals may be harassed more than once.

Effects of Seismic Noise and Other Activities on Subsistence Needs

The disturbance and potential displacement of marine mammals by sounds from seismic activities are the principle concerns related to subsistence use of the area. The harvest of marine mammals (mainly bowhead whales, ringed seals, and bearded seals) is central to the culture and subsistence economies of the coastal North Slope communities. In particular, if migrating bowhead whales are displaced farther offshore by elevated noise levels, the harvest of these whales could be more difficult and dangerous for hunters. The harvest could also be affected if bowheads become more skittish when exposed to seismic noise.

Nuiqsut is the community closest to the area of the proposed activity, and it harvests bowhead whales only during the fall whaling season. In recent years,

Nuiqsut whalers typically take two to four whales each season (Western Geophysical, 1999). Nuiqsut whalers concentrate their efforts on areas north and east of Cross Island, generally in water depths greater than 20 m

(65 ft). Cross Island, the principle field camp location for Nuiqsut whalers, is located within the general area of the proposed seismic area. Thus, the possibility and timing of potential seismic operations in the Cross Island area requires Western Geophysical to provide NMFS with either a Plan of Cooperation with North Slope Borough residents or to identify measures that have been or will be taken to avoid any unmitigable adverse impact on subsistence needs. Western Geophysical's application has identified those measures that will be taken to minimize any adverse effect on subsistence. In addition, the timing of seismic operations in and east of the Cross Island area will be addressed in a Conflict and Avoidance Agreement (C&AA) with the Nuiqsut whalers and the AEWC (Western Geophysical, 1999).

Whalers from the village of Kaktovik search for whales east, north, and west of the village. Kaktovik is located 60 km (32.4 nm) east of the easternmost end of Western Geophysical's planned 1999 seismic exploration area. The westernmost reported harvest location was about 21 km (11.3 nm) west of Kaktovik, near 70°10'N, 144°W (Kaleak, 1996). That site is approximately 40 km (21.6 nm) east of the closest part of Western Geophysical's planned seismic exploration area for 1999 (Western Geophysical, 1999).

Whalers from the village of Barrow search for bowhead whales much further from the planned seismic area, >200 km (>108 nm) west (Western Geophysical, 1999).

The location of the proposed seismic activity is south of the center of the westward migration route of bowhead whales, but there is some overlap. Seismic monitoring results from 1996–1998 indicate that most bowheads avoid the area within about 20 km (11 nm) around the array when it is operating. In addition, bowheads may be able to hear the sounds emitted by the seismic array out to a distance of 50 km (27 nm) or more, depending on the ambient noise level and the efficiency of sound propagation along the path between the seismic vessel and the whale (Miller *et al.*, 1997. Western Geophysical (1999) believes it is unlikely that changes in migration route will occur at distances greater than 25 km (13 nm) from an array of maximum volume of 1,210 in^3 operating in water less than 30 m (100 ft) deep. However, subtle changes in behavior might occur out to longer distances. Inupiat whalers believe that bowheads begin to divert from their normal migration path more than 35 miles away (MMS, 1997).

It is recognized that it is difficult to determine the maximum distance at which reactions occur (Moore and Clark, 1992). As a result, Western Geophysical will participate in a C&AA with the whalers to reduce any potential interference with the hunt. Also, it is believed that the monitoring plan proposed by Western Geophysical (1999; also see LGL Ltd. and Greeneridge Sciences Inc, 1999b) will provide information that will help resolve uncertainties about the effects of seismic exploration on the accessibility of bowheads to hunters.

Many Nuiqsut hunters hunt seals intermittently year-round. However, during recent years, most seal hunting has been during the early summer in open water. In summer, boat crews hunt ringed, spotted and bearded seals. The most important sealing area for Nuiqsut hunters is off the Colville delta, extending as far west as Fish Creek and as far east as Pingok Island. This area overlaps with the westernmost portion of the planned seismic area. In this area, during summer, sealing occurs by boat when hunters apparently concentrate on bearded seals. However, these subsistence hunters have not perceived any interference between recent open-water seismic activities in the Alaskan Beaufort Sea. Therefore, because Western Geophysical is proposing similar mitigation and consultation procedures this year, it is unlikely that seismic activities would have more than a negligible impact on Nuiqsut seal hunting.

Mitigation

This year, Western Geophysical will reduce its airgun array from the 1,500 in^3 used in 1998 to 1,210 in^3 and investigate whether it is practical to modify the design to reduce horizontal propagation of sound. These changes are expected to result in lower received levels and therefore smaller safety ranges and reduced takes by harassment than in 1998. However, because the 1,210 in^3 array is a subset (with some minor variations) of the 1,500 in^3 array (with 4 guns not firing), NMFS proposes to prohibit Western Geophysical from firing more than the 8 airguns that total 1,210 in^3 during the 1999 open water seismic survey without an amendment to the IHA (if issued).

Vessel-based observers will monitor marine mammal presence in the vicinity of the seismic array throughout the seismic program. To avoid the potential for serious injury to marine mammals, Western Geophysical proposes to power down the seismic source if pinnipeds are sighted within the area delineated by the 190 dB isopleth or 240 m (787.4 ft) from the array operating at 5 m (16.4 ft) depth or 80 m (262.5 ft) from the array operating at 2 m (6.6 ft) depth. Western Geophysical will power down the seismic source if bowhead, gray, or beluga whales are sighted within the area delineated by the 180 dB isopleth or within 750 m (2,460.6 ft) of the array operating at 5 m (16.4 ft) depth or 360 m (1,181.1 ft) of the array operating at 2 m (6.6 ft) depth. However, because these safety zones were based on the 1998 array configuration, within the first 10 days of Beaufort Sea operations in 1999, Western Geophysical will measure and analyze the sounds from Western's 1999 array operating at both 5 m (16.4 ft) and 2 m (6.6 ft) depths. This information will be provided to NMFS, along with the contractor's recommendation as to whether any adjustments in the safety radii are needed to meet the 190 and 180 dB_{rms} shutdown criteria.

In addition, Western Geophysical proposes to ramp-up the seismic source to operating levels at a rate no greater than 6 dB/min anytime the array has not been firing for 1–2 minutes (depending upon vessel speed). Ramp-up will begin with an air volume discharge not exceeding 80 in^3 with additional guns added at intervals appropriate to limit the rate of increase to 6 dB/min.

Monitoring

As part of its application, Western Geophysical provided a monitoring plan for assessing impacts to marine mammals from seismic surveys in the Beaufort Sea. This monitoring plan is described in Western Geophysical (1999) and in LGL Ltd. and Greeneridge Sciences Inc. (1999b). As required by the MMPA, this monitoring plan will be subject to a peer-review panel of technical experts prior to formal acceptance by NMFS.

Preliminarily, Western Geophysical plans to conduct the following:

Vessel-based Visual Monitoring

It is proposed that one or two biologist-observers aboard the seismic vessel will search for and observe marine mammals whenever seismic operations are in progress, and for at least 30 minutes prior to planned start of shooting. These observers will scan the area immediately around the vessels with reticle binoculars during the daytime supplemented with night-vision equipment during the night (prior to mid-August, there are no hours of

darkness). In addition, Western Geophysical proposes to experiment with the illumination of the safety zone with high-intensity lighting this year.

A total of four observers (three trained biologists and one Inupiat observer/communicator) will be based aboard the seismic vessel. Use of four observers is an increase over 1998 and will allow two observers to be on duty simultaneously for up to 50 percent of the active airgun hours. Use of two observers will increase the probability of detecting marine mammals and two observers will be required to be on duty whenever the seismic array is ramped up. Individual watches will normally be limited to no more than 4 consecutive hours.

When mammals are detected within or about to enter the safety zone designated to prevent injury to the animals (see Mitigation), the geophysical crew leader will be notified so that shutdown procedures can be implemented immediately.

Aerial Surveys

If the seismic program continues after August 31, Western Geophysical proposes to conduct daily aerial surveys, weather permitting, from September 4, 1999, until September 20, 1999, or until 1 day after the seismic program ends, if earlier than September 20. This reduction in survey effort is considered appropriate because some of the main questions about disturbance to bowheads from a nearshore seismic operation have been answered previously.

The primary objective will be to document the occurrence, distribution, and movements of bowhead and (secondarily) beluga and gray whales in and near the area where they might be affected by the seismic pulses. These observations will be used to estimate the level of harassment takes and to assess the possibility that seismic operations affect the accessibility of bowhead whales for subsistence hunting. Pinnipeds will be recorded when seen. Aerial surveys will be at an altitude of 300 m (1,000 ft) above sea level. Western Geophysical proposes to fly at 457 m (1500 ft) altitude over areas where whaling is occurring on that date and to avoid direct overflights of whaleboats and Cross Island, where whalers from Nuiqsut are based during their fall whale hunt.

The daily aerial surveys are proposed to cover a grid of 14 north-south lines spaced 8 km (4.3 nm) apart and will extend seaward to about the 100 m (328 ft) depth contour (typically about 65 km (35 nm) offshore. This grid will extend from about 40 km (22 nm) east to 40 km (22 nm) west of the area in which seismic operations are underway on that date. This design will provide extended coverage to the west to determine the westward extent of the offshore displacement of whales by seismic. In 1999, no ''intensive'' grid surveys are planned, as conducted in previous years.

Detailed information on the survey program can be found in Western Geophysical (1999) and in LGL Ltd. and Greeneridge Sciences Inc. (1999b), which are incorporated in this document by citation.

Acoustical Measurements

The acoustic measurement program proposed for 1999 is designed to be continue work conducted in 1996 through 1998 (see LGL and Greeneridge Sciences Inc., 1997, 1998, 1999a). The acoustic measurement program is planned to include (1) vessel-based acoustic measurements, (2) OBC-based acoustic measurements, (3) use of air-dropped sonobuoys and (4) bottom-mounted acoustical recorders.

(1) A vessel-based acoustical measurement program is proposed for a few days early in the seismic program. The objectives of this survey will be as follows: (a) To measure the levels and other characteristics of the horizontally propagating seismic survey sounds from the type of airgun array to be used in 1999 as a function of distance and aspect relative to the seismic source vessel and in relation to the operating depth of the airguns, and (b) to measure the levels and frequency composition of the vessel sounds emitted by vessels used regularly during the 1999 program in those cases when these vessels have not previously been measured adequately.

(2) Western Geophysical and its proposed consultant (Greeneridge Sciences) will use recorded signals from Western's OBC system to help document horizontal propagation of the seismic survey pulses.

(3) Sonobuoys will be dropped and monitored from bowhead survey aircraft during September 4 through 20, 1999 (if the seismic operations are continuing at that time). Sonobuoys will provide data on characteristics of seismic pulses (and signal-to-ambient ratios) at offshore locations, including some of those places where bowhead whales are observed.

(4) Autonomous seafloor acoustic recorders will be placed on the sea bottom at three locations to record low-frequency sounds nearly continuously for up to 3 weeks at a time during September (if seismic operations are continuing at that time). Information includes characteristics of the seismic pulses, ambient noise, and bowhead calls.

For a more detailed description of planned monitoring activities, please refer to the application and supporting document (Western Geophysical, 1999; LGL Ltd. and Greeneridge Sciences Inc., 1999b).

Estimates of Marine Mammal Take

Estimates of takes by harassment will be made through vessel and aerial surveys. Preliminarily, Western Geophysical will estimate the number of (a) marine mammals observed within the area ensonified strongly by the seismic vessel; (b) marine mammals observed showing apparent reactions to seismic pulses (e.g., heading away from the seismic vessel in an atypical direction); (c) marine mammals subject to take by type (a) or (b) here when no monitoring observations were possible; and (d) bowheads displaced seaward from the main migration corridor.

Reporting

Western Geophysical will provide an initial report on 1999 activities to NMFS within 90 days of the completion of the seismic program. This report will provide dates and locations of seismic operations, details of marine mammal sightings, estimates of the amount and nature of all takes by harassment, and any apparent effects on accessibility of marine mammals to subsistence users.

A final technical report will be provided by Western Geophysical within 20 working days of receipt of the document from the contractor, but no later than April 30, 2000. The final technical report will contain a description of the methods, results, and interpretation of all monitoring tasks.

Consultation

Under section 7 of the Endangered Species Act (ESA), NMFS completed an informal consultation on the issuance of an IHA for similar activities on July 23, 1998. If an authorization to incidentally harass listed marine mammals is issued under the MMPA, NMFS will issue an Incidental Take Statement under section 7 of the ESA.

National Environmental Policy Act (NEPA)

In conjunction with the 1996 notice of proposed authorization (61 FR 26501, May 28, 1996) for open water seismic operations in the Beaufort Sea, NMFS released an EA that addressed the impacts on the human environment from issuance of the authorization and the alternatives to the proposed action. No comments were received on that

document and, on July 18, 1996, NMFS concluded that neither implementation of the proposed authorization for the harassment of small numbers of several species of marine mammals incidental to conducting seismic surveys during the open water season in the U.S. Beaufort Sea nor the alternatives to that action would significantly affect the quality of the human environment. As a result, the preparation of an environmental impact statement on this action is not required by section 102(2) of NEPA or its implementing regulations.

While this year's activity is a continuation of the seismic work conducted between 1996 and 1998, NMFS determined that a new EA was warranted based on the proposed construction of the Northstar project, the collection of data from 1996 through 1998 on Beaufort Sea marine mammals and the impacts of seismic activities on these mammals, and the analysis of scientific data indicating that bowheads avoid nearshore seismic operations by up to about 20 km (10.8 nm). Accordingly, a review of the impacts expected from the issuance of an IHA has been assessed in detail in the EA and in this document, and NMFS has preliminarily determined that there will be no more than a negligible impact on marine mammals from the issuance of the harassment authorization and that there will not be any unmitigable impacts to subsistence communities, provided the mitigation measures required under the authorization are implemented.

Conclusions

NMFS has preliminarily determined that the short-term impact of conducting seismic surveys in the U.S. Beaufort Sea will result, at worst, in a temporary modification in behavior by certain species of cetaceans and possibly pinnipeds. While behavioral modifications may be made by these species to avoid the resultant noise, this behavioral change is expected to have a negligible impact on the animals.

While the number of potential incidental harassment takes will depend on the distribution and abundance of marine mammals (which vary annually due to variable ice conditions and other factors) in the area of seismic operations, due to the distribution and abundance of marine mammals during the projected period of activity and the location of the proposed seismic activity in waters generally too shallow and distant from the edge of the pack ice for most marine mammals of concern, the number of potential harassment takings is estimated to be small. In addition, no take by injury and/or death is anticipated, and the potential for temporary or permanent hearing impairment will be avoided through the incorporation of the mitigation measures mentioned in this document. No rookeries, mating grounds, areas of concentrated feeding, or other areas of special significance for marine mammals occur within or near the planned area of operations during the season of operations.

Because bowhead whales are east of the seismic area in the Canadian Beaufort Sea until late August/early September, seismic activities are not expected to impact subsistence hunting of bowhead whales prior to that date. After September 4, 1999, aerial survey flights for bowhead whale assessments will be initiated. Appropriate mitigation measures to avoid an unmitigable adverse impact on the availability of bowhead whales for subsistence needs will be the subject of consultation between Western Geophysical and subsistence users.

Also, while open-water seismic exploration in the U.S. Beaufort Sea has some potential to influence seal hunting activities by residents of Nuiqsut, because (1) the peak sealing season is during the winter months, (2) the main summer sealing is off the Colville Delta, and (3) the zone of influence by seismic sources on beluga and seals is fairly small, NMFS believes that Western Geophysical's seismic survey will not have an unmitigable adverse impact on the availability of these stocks for subsistence uses.

Proposed Authorization

NMFS proposes to issue an IHA for the 1999 Beaufort Sea open water season for a seismic survey provided the above mentioned mitigation, monitoring, and reporting requirements are incorporated. NMFS has preliminarily determined that the proposed seismic activity would result in the harassment of only small numbers of bowhead whales, beluga whales, ringed seals, bearded seals, and possibly spotted seals and gray whales; would have a negligible impact on these marine mammal stocks; and would not have an unmitigable adverse impact on the availability of marine mammal stocks for subsistence uses.

Information Solicited

NMFS requests interested persons to submit comments, and information, concerning this request (see **ADDRESSES**).

Dated: May 21, 1999.

Hilda Diaz-Soltero,

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

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 052499A]

Atlantic Highly Migratory Species and Billfish Advisory Panels; Public Meeting

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

ACTION: Notice of public meeting.

SUMMARY: NMFS will hold a joint meeting of the Atlantic Highly Migratory Species (HMS) and Billfish Advisory Panels (APs) to discuss management issues under consideration.

DATES: The joint HMS/Billfish AP meeting will be held on Thursday, June 10, 1999, from 1:00 p.m. to 4:00 p.m., and from 8:00 a.m. to 4:00 p.m. on Friday, June 11, 1999. A public comment session will be held from 4:00 p.m. to 6:00 p.m. on Thursday, June 10, 1999.

ADDRESSES: The APs will meet at the NOAA Science Center, 1301 East-West Highway, Silver Spring, Maryland 20910. Informational materials related to the AP meetings are available from Alicon Morgan, Highly Migratory Species Management Division, 1315 East-West Highway, Silver Spring, Maryland 20910. The public comment session will be held at the same location.

FOR FURTHER INFORMATION CONTACT: Alicon Morgan or Pat Wilbert at 301–713–2347, or Jenny Lee at 727–570–5447.

SUPPLEMENTARY INFORMATION: The HMS and Billfish APs were established under the authority of the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1901 *et seq.* The APs assist the Secretary of Commerce in collecting and evaluating information relevant to the management of Atlantic tunas, swordfish, and sharks, and Billfish. All AP meetings are open to the public and are attended by members of the AP, including appointed members, representatives of the five fishery management councils that work with Atlantic HMS, and the Chair, or his or