

FOR FURTHER INFORMATION CONTACT:

Kenneth R. Hollingshead, Office of Protected Resources, NMFS, (301) 713-2055, Brad Smith, Western Alaska Field Office, NMFS, (907) 271-5006.

SUPPLEMENTARY INFORMATION:**Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) directs 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, a 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.

Application

On March 26, 1998, NMFS received an application from BPXA requesting a 1-year renewal of its 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 Harrison Bay and Camden Bay/Flaxman Island, AK. Weather permitting, the survey was expected to take place between approximately July 1 and October 20, 1998. A detailed description of the work proposed for 1998 is contained in the application and need not be repeated here. A notice of receipt of the application and proposed authorization was published on May 6, 1998 (63 FR 25015), and a 30-day public comment period was provided on the application and proposed authorization. Several comments were received during the 30-day comment period. While those comments no longer require response by NMFS, because similar comments were submitted during the review and comment period for an IHA application by Western Geophysical for seismic operations in the U.S. Beaufort Sea, readers are encouraged to review the authorization notice for that applicant elsewhere in this issue of the **Federal Register**.

Dated: July 22, 1998.

Patricia A. Montanio,

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

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

[I.D.061498A]

Taking and Importing of Marine Mammals; Offshore Seismic Activities in the Beaufort Sea

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

ACTION: Notice of issuance of an incidental harassment authorization.

SUMMARY: In accordance with provisions of the Marine Mammal Protection Act (MMPA) as amended, notification is hereby given that an Incidental Harassment Authorization (IHA) to take small numbers of bowhead whales and other marine mammals by harassment incidental to conducting seismic surveys in the Western Beaufort Sea in state and federal waters has been issued to Western Geophysical/Western Atlas International of Houston, Texas (Western Geophysical).

DATES: Effective from July 23, 1998, until November 1, 1998, unless extended.

ADDRESSES: The application, authorization, monitoring plan, environmental assessment (EA), and a list of references used in this document are available by writing to the Chief, Marine Mammal Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910-3225, or by telephoning one of the contacts listed here.

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Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) directs the Secretary of Commerce (Secretary) 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, a 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 under section 101(a)(5)(D) of the MMPA in Arctic waters. For additional information on the procedures to be followed for this authorization, please refer to that document.

Summary of Request

On April 15, 1998, 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 Harrison Bay and Flaxman Island, AK. Weather permitting, the survey is expected to take place from middle- to late-July and to extend until approximately October 20, 1998.

Disturbance by seismic noise is the principal means of taking by this activity. Support vessels and aircraft will provide a secondary source of noise. The physical presence of vessels and aircraft could also lead to non-acoustic effects 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. OBC surveys involve dropping cables from a ship to the ocean bottom, forming a patch consisting of four parallel cables 10 kilometers (km) (6.2 mi) long, separated 750 m (2,500 ft) from each other. Sensors (hydrophones and geophones) are attached to the cables. These hydrophones are used to detect seismic energy reflected back from underground rock strata. The original 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 249 dB re 1 μ Pa-m (27.2

bar-meters; zero to peak) or 255 dB re 1 μ Pa-m (53 bar-meters; peak-to-peak (p-p)) from a 1,500 in³ array of airguns is in the lower to middle portion of the range of source levels commonly used for seismic operations with airgun arrays (Richardson *et al.*, 1995).

Normally, 36 seismic lines are run for each patch, covering an area 6.0 km by 17.5 km (3.7 mi by 10.87 mi), centered over the patch. The source lines for one patch will normally overlap with those for adjacent patches.

After sufficient data have been recorded to allow accurate mapping of the rock strata, the cable is 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. A detailed description of the work proposed for 1998 is contained in the application (Western Geophysical, 1998) and is available upon request (see ADDRESSES).

Comments and Responses

A notice of receipt of the application and proposed authorization was published on May 20, 1998 (63 FR 27709), and a 30-day public comment period was provided on the application and proposed authorization. During the comment period, comments regarding this application (and/or on a related application from BP Exploration (Alaska) (BPXA)), were received from the Marine Mammal Commission (MMC), the Alaska Eskimo Whaling Commission (AEWC), LGL Ltd. environmental research associates on behalf of the applicant, and Greenpeace Alaska (Greenpeace). Information on the activity and authorization request that are not subject to reviewer comments can be found in the proposed authorization notice and is not repeated here.

General Concerns

Comment 1: LGL Ltd provided information updating and correcting the **Federal Register** notice that (1) Western Geophysical's cables include both hydrophones and geophones, not just hydrophones, and (2) Western Geophysical's airguns discharge once every 16 to 24 seconds, not 1 second in duration every 5 to 12 seconds. These pulses are much less than 1 second in duration near the source, increasing to as much as 1 second in duration as received in the water at long horizontal distances.

Response: Thank you for providing this information.

Comment 2: On July 1, 1998, Western Geophysical submitted a letter to NMFS outlining modifications to its May 20,

1998, application. That letter noted that Western Geophysical's activity would be amended by the addition of shallow water cable equipment and the inclusion of a shallow water acoustic source. The shallow water equipment would be used in locations and times when the OBC system was not usable. The two sources would not be used simultaneously.

Response: NMFS has reviewed this letter and determined that, because the shallow water source is smaller (560 in³) than either the 750 in³ or the 1500 in³ seismic array, and would not be used simultaneously with the larger sources, there will not be a cumulative effect. This modification is not considered significant. The IHA will ensure that the two sources are not used simultaneously and will require sound transmission measurements be made of both sources to ensure that the designated safety zones are conservative.

Marine Mammal Impact Concerns

Comment 3: Greenpeace contends that NMFS, Western Geophysical and, BPXA, the second applicant, rely on outdated, incomplete, and inaccurate information concerning the zone of influence for seismic operations on bowhead whales. Greenpeace believes that NMFS fails to respect or incorporate either the traditional knowledge (TK) of local whalers presented at various hearings or the results of the 1997 aerial surveys, both of which indicate a seismic zone of influence greater than the 7.5 km (4.5 mi) used by NMFS. The AEWC believes the data clearly shows that bowheads are displaced and deflected at least 20 km (12 miles) by the noise of the seismic vessel when operating.

Response: Western Geophysical's application and the notice of proposed authorization note that, in addition to the known responses out to a distance of several kilometers, less conspicuous and/or less frequent effects may extend to greater distances. Since the application was submitted, a draft final report describing BPXA's combined 1996 and 1997 monitoring results (Richardson [ed.], 1998) has been completed. That report shows that (1) BPXA's 1996 and 1997 seismic programs did not greatly influence the position of the overall migration corridor; (2) although the aerial surveys showed at least partial avoidance of the area within 20 km (12 mi) of seismic operations, the 20 km (12 mi) figure is a very imprecise estimate of potential avoidance radius; and (3) the pattern of bowhead call detection rates at various locations north and east of the 1996 area of seismic operations has suggested that

migrating bowheads either called less often when near active seismic vessel, or tended to divert away from that area, or both. For additional information on the estimated zones that seismic airguns have on bowhead whales, please refer to the proposed authorization notice mentioned in this document.

It is recognized that it is difficult (for scientists at least) to determine the maximum distance at which reactions occur (Moore and Clark, 1992) that may have an adverse impact on subsistence needs. Inuit whalers, on the other hand, believe that whales exhibit avoidance reactions as far as 48 km (30 miles) away (MMS, 1997). As a result, Western Geophysical developed a Conflict and Avoidance Agreement (C&AA) with the whalers to reduce any potential interference with the hunt. That agreement was concluded by both parties on July 8, 1998.

Also, it is believed that the monitoring plan proposed by Western Geophysical (LGL Ltd. and Greeneridge, 1998b), revised on the basis of comments received during this public review period and at the Peer-Review Workshop, will provide information that will help resolve uncertainties about the effects of seismic exploration on the accessibility of bowheads to hunters.

Comment 4: Greenpeace notes that Western Geophysical fails to address the impact of an airgun on bowhead hearing at any number of distances within and beyond the zone of influence and fails to account for the impact from an airgun array operating 70 m (210 ft) from a bowhead. LGL Ltd. comments that the application notice states that temporary threshold shift (TTS) is a theoretical possibility for animals within a few hundred meters and that mitigation measures are designed to avoid exposing mammals to sound pulses that have any possibility of causing hearing damage. LGL Ltd notes that TTS is a natural protective mechanism built into the mammalian ear. Modest levels of TTS do not constitute hearing damage.

Response: The impact of airguns on bowhead hearing has been addressed in several documents, including Western Geophysical's application, the supporting EA, and in LGL and Greeneridge (1998). Without an ability to collect empirical information on physical impacts from airguns on large marine mammals, scientists must rely on either surrogate species and make conservative assumptions based upon findings for those species.

Comment 5: Greenpeace notes in its letter that marine mammals use sound to communicate and, it is clear, that many species are extremely sensitive to

both sound and physical disturbance. Greenpeace also notes that industrial noise and other activities interfere with bowhead cow-calf bonding and cause displacement from feeding areas and migratory routes. The energetic costs of noise-related changes in behavior and distribution patterns are potentially significant and will inevitably constitute harassment and "take."

Response: Thank you for providing this comment. Because there are potential effects on bowhead whales by seismic activities, an IHA is warranted. Under the IHA, NMFS will require Western Geophysical to incorporate mitigation and monitoring measures to reduce potential impacts to the lowest level practicable.

Comment 6: Greenpeace states that the fall bowhead migration begins in August, and a significant proportion of the population may be in the vicinity of Western Geophysical's seismic operations during the latter half of August. Citing Moore and Clarke (1991), Greenpeace states that, during mid- to late-August, as many as 1,200–3,000 bowhead whales may be present in the Beaufort Sea region from the Canadian border to the offshore area demarcated by the western boundary of the Arctic National Wildlife Refuge.

Response: NMFS notes that the region cited by the commenters is east of the proposed seismic survey area for Western Geophysical and that bowhead whale numbers referenced by Greenpeace are overstated because they include bowheads located in the Canadian Beaufort Sea. Moore and Clark (1991) estimated that in 1982 through 1984, up to 500 (range 0–500) bowheads may be in the region annually between the Barter and Flaxman islands; however, no whales were sighted west of that region prior to September 1 during those years. This is verified by Ljungblad *et al.* (1987). Most sighted bowheads were still in Canadian waters.

NMFS notes that, in general, bowhead whales migrate westward through the Alaskan Beaufort Sea from late August to late October, but only a portion of the population has been estimated during this time period. Other bowheads are either undetectable to observers (*i.e.*, under the ice), migrate prior to surveys commencing, or do not migrate to the Canadian Beaufort Sea.

Comment 7: LGL Ltd. provided information that airgun sounds may be audible to beluga whales at long distances not only because of the high source levels, but also because some energy at frequencies of a few hundred hertz propagates horizontally from the seismic vessel. Beluga hearing is more sensitive to these frequencies than to the

lower frequencies that dominate the seismic output (Richardson and Wursig, 1997; see also Goold, 1998).

Response: Thank you for providing this information.

Comment 8: LGL Ltd. provided information from a paper by Kastak and Schusterman (1998) updating information provided in Western Geophysical's application and in the notice of proposed authorization which indicates that, for one harbor seal tested, the hearing threshold was 102 dB re 1 uPa at 75 Hz, 96 dB at 100 Hz, and 84 dB at 200 and 400 Hz. These results are consistent with previously reported preliminary data at 100 Hz.

Response: Thank you for providing this information.

Comment 9: LGL Ltd. corrected a statement in the notice that "no studies to date have focused on pinniped reaction to underwater noise from pulsed, seismic arrays," noting that while this was true up to early 1996, the monitoring results from the 1996 and 1997 BPXA program have provided considerable information about reactions of seals. These have been described in detail in the 90-day and final reports on the 1996 and 1997 BPXA monitoring programs, as described in Richardson [ed.] (1998).

Response: Thank you for the comment. NMFS notes, however, that, while opportunistic observations have been made of seismic noise impacts on pinnipeds over the last few years, NMFS is aware of only one researcher who has physiologically monitored individual animals reaction to seismic noise. Preliminary information provided by this individual earlier this year at the annual meeting of the Marine Mammal Society in Monaco supports the results reported here.

Subsistence Concerns

Comment 10: The AEWG objects to the issuance of IHA permits to BPXA and Western Geophysical because of their opposition to seismic activities which interfere with the availability of bowhead whales within their subsistence hunting area. Greenpeace believes that seismic activities will result in a significant and unmitigable impact to subsistence communities.

Response: As mentioned previously, BPXA withdrew its application for an incidental harassment authorization on July 6, 1998. As a result, only Western Geophysical will conduct open water seismic operations this summer in the U.S. Beaufort Sea. In part, section 101(a)(5) of the MMPA requires NMFS to ensure that any taking will not have an unmitigable adverse impact on the availability of the species or stock(s) for

subsistence uses. Two elements must be present for NMFS to determine that there will not be an unmitigable adverse impact on subsistence uses: First, the impact resulting from the specified activity must be likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by (1) causing the marine mammals to abandon or avoid hunting areas, (2) directly displacing subsistence users, or (3) placing physical barriers between the marine mammals and subsistence hunters. Second, it must be an impact that cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met (50 CFR 216.103). This standard of determining impact does not require the elimination of adverse impacts, but it does require mitigation sufficient to meet subsistence requirements. However, the MMPA also requires that, where applicable, the measures will ensure the least practicable impact on the availability of marine mammals for taking for subsistence uses. In 1996 and 1997, these conditions were met through the C&AA (also known as a Plan of Cooperation) by requiring seismic operations to move west of Cross Island no later than September 1 or when whalers commenced the bowhead hunting season, whichever was earlier. A similar agreement for 1998 was concluded on July 8, 1998, between the AEWG/North Slope Borough (NSB) and Western Geophysical. As a result of this signed C&AA, NMFS concludes that there will not be an unmitigable adverse impact on the subsistence needs of the NSB whalers this year due to seismic activities.

Comment 11: In order to mitigate impacts on the availability of bowhead whales for subsistence needs, the AEWG believes the IHAs, if issued to both BPXA and Western Geophysical, must require that (1) all seismic operations east of Cross Island cease on August 15 or when a bowhead whale is sighted at Kaktovik (whichever is earlier); (2) all seismic operations east of 150 degrees West cease on August 15 or when active whaling begins in Nuiqsut or Kaktovik (whichever is earlier); and (3) all seismic operations cease on September 1 until Kaktovik, Nuiqsut, and Barrow have completed their hunts.

Response: A signed C&AA requiring, among other things, for Western Geophysical to cease all seismic activities east of Cross Island after August 31 and to move to the westernmost portion of their seismic activity area if impacts to bowhead whales continue after moving west of

Cross Island is the result of negotiations between the AEW and Western Geophysical. This signed C&AA supercedes the recommendations made on June 2, 1998, by the AEW.

Mitigation Concerns

Comment 12: LGL Ltd. noted several errors in the shutdown distances for airgun restrictions as published in the notice of proposed authorization.

Response: For clarity, NMFS is republishing the shutdown distance criteria in this document (see Mitigation).

Comment 13: The AEW recommends that, after August 15, the two seismic operations must be arranged so that (1) neither is directly offshore of the other, and (2) they are separated by at least a 25-mile east-west distance (so that the 12 miles (20 km) exclusion zone, seen in the 1997 monitoring, do not overlap).

Response: Since there are no longer two planned seismic operations to be conducted in the Beaufort Sea this summer, response to this comment is no longer applicable.

Monitoring Concerns

Comment 14: Greenpeace contends that the monitoring program proposed by Western Geophysical is not sufficiently rigorous nor independent to adequately provide reliable research to support findings about the impacts of seismic operations on marine mammals. Greenpeace recommends an additional 5 bottom-mounted acoustic recorders be installed in the offshore Beaufort Sea to detect marine mammal (principally bowhead whale) vocalizations. Greenpeace also recommends noise measurements be conducted at distances of 10 km (6 mi), 20 km (12 mi), 30 km (18 mi), 40 km (24 mi), and 50 km (30 mi).

Response: Thank you for your recommendations. Section 101(a)(5)(D)(ii)(II) of the MMPA requires authorizations issued under this section to prescribe, where applicable, requirements pertaining to the monitoring and reporting of such taking by harassment, including requirements for independent peer review of proposed monitoring plans or other research proposals where the proposed activity may affect the availability of a species or stock for taking for subsistence purposes.

Western Geophysical's proposed monitoring plan for 1998 and the results from LGL Ltd.'s 1996 and 1997 Beaufort Sea research were the subject of a scientific peer-review workshop held in Seattle, WA, on May 17 through 19, 1998. As a result of that workshop and the comments submitted on their

application, Western Geophysical amended its monitoring plan and submitted that plan to NMFS for approval. Modifications to the original plan include (1) reference to boat-based marine mammal observers onboard the second source vessel; (2) a 32-km westward extension of aerial surveys to address the question how far west of the seismic area do bowhead whales remain farther offshore than usual if bowheads are displaced offshore by seismic; (3) an additional autonomous seafloor acoustic recorder (ASAR) farther offshore from the area of seismic operations as well as the three previously proposed ones along the 25-m contour; and (4) an attempt to retrieve the two ASARs left on the bottom of the Beaufort Sea last fall.

This amended plan is being independently peer-reviewed for NMFS. Greenpeace's monitoring recommendations will be provided to these reviewers for consideration. It should be noted that workshop participant's recommended that, in addition to the three bottom-mounted recorders planned for deployment by each seismic activity, an additional 2-3 bottom-mounted recorders be installed offshore of the area of seismic operations. However, the withdrawal of BPXA from an active seismic program in 1998, made unnecessary the use of a significant increase in the number of offshore recorders.

Comment 15: Greenpeace states that the monitoring program is inadequate because it fails to account for the cumulative impact of two open-water seismic programs operating concurrently. Greenpeace also states that the monitoring program fails to account for the additional impacts of ongoing, concurrent and future oil and gas activities. The monitoring program must be sufficiently rigorous in design and scope to determine this cumulative impact.

Response: Western Geophysical's and BPXA's proposed monitoring plans were the subject of a peer-review workshop held in Seattle, WA, between May 17 and 19, 1998. These monitoring plans were being amended based upon that workshop when BPXA withdrew from participating in seismic exploration during the 1998 open water season. Part of their monitoring programs would have addressed the effects of cumulative impact of their seismic programs on bowheads. As a result of BPXA's withdrawal, there will not be a cumulative impact from seismic activities this year (Western Geophysical's two seismic vessels will not operate at the same time). A copy of Western's final monitoring program is available upon request (see ADDRESSES).

NMFS is unaware of any oil and gas activities currently underway in the offshore Beaufort Sea that might result in impacts to marine mammals. Distant water and nearshore activities are presumed by NMFS to result in an increase in the ambient noise in the marine environment. Increasing ambient noise in this environment is of concern to NMFS. Ambient noise measurements have been made by LGL Ltd. in 1996 and 1997; opportunistic measurements will continue in 1998 during a one-week acoustical measurement program and by use of sonobuoys and bottom recorders.

Comment 16: The MMC recommends NMFS review the data to determine whether a single observer is able to locate and determine when any marine mammal is in, or is likely to enter, the designated safety zone around the towed array and, if not, require that additional observers be required.

Response: NMFS has reviewed the information provided in the 1996 and 1997 monitoring program report and determined that a single biological observer is unable to ensure that no marine mammals (e.g., seals) enter the designated safety zone and that a single observer cannot adequately view both the safety zone and that portion of the zone of influence visible from the ship's bridge. However, because bowheads appear to avoid the area visible to the observer and because seals appear at times to be attracted to seismic vessels, NMFS has determined that two observers on watch at all times is unnecessary except whenever the seismic source is powered (ramped) up. In addition, observers will be required to ensure that no marine mammals enter the bow aspect of the safety zone; a lesser effort should be spent on seals entering from the sides or rear portions of the safety zone. This year's reporting requirement will include a requirement for a comprehensive assessment on the effectiveness of single observer coverage. NMFS will review the data obtained during 1998 season to determine whether future authorizations will need additional observers during all daytime seismic operations.

Comment 17: Greenpeace believes that the monitoring program is inadequate because observers will be unable to visually identify whales or seals at night or at other times of poor visibility. Where the impacts will occur after mid-July, because of the increasing hours of darkness, the probability of impacts at night and the inadequacies of the monitoring program to detect them are a virtual certainty. Similar impairment can be expected in times of fog and in other periods of poor visibility.

Response: Observers monitor the safety zones and zones of potential harassment around the seismic source whenever visibility permits, and the source is either on or within 30 minutes of powering up. Observers are aided by night-vision equipment for monitoring the safety zone. Assessments of takes by harassment will be made based upon the percentage of time spent observing in relation to the total time for seismic operations. Because: (1) relatively few marine mammals are expected in the area during the time of the survey, (2) the vessels are underway at low speeds while laying or pulling OBC cable or conducting seismic surveys, theoretically allowing animals sufficient time to move away from any annoyances, and (3) documented observations indicate that bowhead whales avoid active seismic survey areas few, if any, bowheads are expected to approach the vessel and therefore, terminating surveys at night and during inclement weather is not warranted.

Comment 18: The AEWC has recommended that a monitoring program be in place for each seismic operation and, after September 1, must be at least as detailed as that used during monitoring the 1997 seismic operation. In addition, the IHA should require the (aerial survey) monitoring to be expanded to the west to the extent needed to determine when whales, displaced by seismic noise, return to their normal migration route.

Response: Thank you for the comment. This monitoring recommendation was also provided by the AEWC at the 1998 Seattle workshop. As a result, the monitoring plan has been revised to follow this recommendation.

Comment 19: The MMC recommends NMFS (1) take such steps as necessary to verify that the operation of, and the sounds produced by, the cable, seismic source, and related support vessels are unlikely to have any effect on marine mammals in or near the proposed survey area; and (2) require the Monitoring Plan be augmented to measure the levels and characteristics of sounds produced by the various vessels and confirm those sounds have no effect on marine mammals.

Response: While NMFS does not believe that noise from vessels will have no impact on marine mammals, it is recognized as being a secondary source for potential harassment of marine mammals. These sources are authorized under the IHA, should an incidental harassment occur. The 1998 monitoring program will continue the program of previous years to measure vessel sounds, with an emphasis on vessels not

recorded in 1996 or 1997. The results of these measurements are reported annually.

National Environmental Policy Act (NEPA) Concerns

Comment 20: Greenpeace believes that, for several reasons, NMFS has failed to meet NEPA standards. First, the 1996 EA was written by BPXA, not by NMFS, and is deficient. Second, the 1998 activity is for a broader area and timeframe than described in the 1996 EA. Third, the 1996 EA fails to take account of the cumulative impact of two activities (BPXA and Western Geophysical applications). Finally, significant new information has become available since the 1996 EA was issued.

Response: In conjunction with the 1996 notice of proposed authorization for BPXA's application (61 FR 26501, May 28, 1996), NMFS released an EA that addressed the impacts on the human environment from the proposed issuance of an IHA to BPXA to conduct a 3-D seismic survey in the Western Beaufort Sea and the alternatives to that proposed action. That document was written for NMFS by LGL Ltd under funding provided by BPXA. This procedure is considered proper for building a Record of Decision. No comments were received on the EA, and, on July 18, 1996, NMFS adopted the contractor-drafted EA and concluded that neither implementation of the proposed authorization to BPXA for the harassment of small numbers of several species of marine mammals incidental to conducting an ocean-bottom cable seismic survey during the open water season (July through October) in the Northstar Unit and nearby waters in the U.S. Beaufort Sea nor the alternatives to that action would significantly affect the quality of the human environment. That determination was based on an evaluation of a single airgun array with 8–12 guns totaling 1,200–1,500 in³ (2,000 psi, 250 dB re 1 μ Pa-m, p-p), a possible second array (see page 64 of the EA), and the use of a second single airgun source (40 in³; 232 db re p-p) for calibration, for up to 100 days of operations. It should be noted that, although the planned focus of efforts for the 1996 seismic survey was the Northstar Island area, figure 1 of the EA indicates the area of possible seismic activity extended from Spy Island in the west to Flaxman Island in the east. In addition, the EA notes that BPXA may relocate to another site and continue the survey until freeze-up (approximately October 20th).

Western Geophysical's planned seismic area for 1998 is roughly between

Harrison Bay in the west to Camden Bay/Flaxman Island in the east; negligibly different from that described in the EA. In addition, both the 1996 application (and EA) and the 1998 applications indicate that surveys would be conducted between July and October.

In 1998, weather permitting, activity in the U.S. Beaufort Sea was proposed to increase, with primary airgun arrays being used by Western Geophysical (up to 16 guns in an array totaling to 1,500 in³ @ 2,000 psi). Western Geophysical plans to utilize a third source of 560 in³ (which it does not plan to use at the same time as the primary source).

While neither applicant's activity alone exceeds the activity description found in the 1996 EA, both applicants' activities together had the potential to result in cumulative impacts not addressed in the 1996 EA, and a new analysis was warranted. However, BPXA's withdrawal from open-water seismic activities on the North Slope in 1998 made the preparation of a new environmental analysis unnecessary. Should more than one seismic survey take place on the North Slope in 1999, NMFS will release a revised EA that addresses the impacts from more than one survey being conducted concurrently.

Comment 21: Greenpeace believes that the described action fits the standard neither for a FONSI nor for a "Categorical Exclusion." Greenpeace believes that because of impacts on native subsistence as well as on the Arctic marine ecosystem, particularly the bowhead whale and other marine species, NMFS must prepare a full, comprehensive EIS.

Response: NMFS disagrees. As discussed in this document, neither commenters, recent monitoring and research, nor TK have provided information that the impact (with mitigation and C&AA in place) would be more than negligible (i.e., significant; see the definition in 40 CFR 1508.24) on the bowhead or beluga whales or on several species of seals and would not have an unmitigable adverse impact on the availability of these marine mammal species for subsistence uses. Since NMFS must analyze a request for IHAs to determine whether the proposed activity has no more than a negligible impact on a species or stock of marine mammals and does not have an unmitigable adverse impact on subsistence users, it believes that the issuance of a small take authorization requires only the preparation of an EA and not of an EIS. In this case, the agency found through preparing an EA in 1996, that the proposed action(s) will

not significantly affect the quality of the human environment, thus making a finding of no significant impact. If the EA results in this finding, no additional documents are required by NEPA (NOAA Directives Manual 02-10).

Information on the impacts on the marine environment from Beaufort Sea oil and gas leasing activities, including seismic, in the area under discussion has been addressed in several EISs prepared by Minerals Management Service (MMS). Final EISs for Lease Sale 124 and 144 were completed in 1990 and 1996.

Cumulative Impact Concerns

Comment 22: Greenpeace believes NMFS is ignoring cumulative impacts from oil exploration and development on subsistence communities, bowhead whales, and other marine mammals in the Arctic environment. Greenpeace believes that impacts from seismic operations cannot be assessed separately from offshore exploratory drilling, development, and transportation activities that may follow or are already occurring.

Response: The commenter is correct, however, NMFS would like to clarify that NMFS' responsibility in this action is limited to the issuance or denial of an authorization for the short-term, incidental harassment of a small number of marine mammals by Western while conducting a seismic survey within an authorized lease sale area. NMFS does not authorize the exploration and development of oil and gas itself (e.g., conducting seismic surveys) as such authorization is provided by the MMS of the U.S. Department of the Interior and is not within the jurisdiction of the Secretary of Commerce.

NMFS also notes that the responsibility for reviewing an activity's cumulative impact belongs primarily to the responsible permitting agency, and, if that activity is Federal, federally funded or federally permitted cumulative impacts are usually reviewed under NEPA. MMS has responsibility for leasing and subsequent exploration and development activities under the Outer Continental Shelf Lands Act. As a result, MMS published draft and final EISs under NEPA regarding leasing of offshore oil and gas exploration for Lease Sale Area 144. Cumulative impacts from oil and gas exploration operations are described in those NEPA documents.

In addition, a multi-agency NEPA document is currently under public review and comment. This document will analyze the proposal for oil and gas

development at Northstar and the alternatives to that proposal. A notice of NEPA scoping was published for public comment in November 1995; a draft EIS was released by the Corps of Engineers on June 1, 1998. An analysis of concerns regarding potential future oil and gas industry and other environmental issues will be found in this document.

Comment 23: The MMC recommended NMFS consult with appropriate agencies and organizations to determine the long-term monitoring that would be required to confirm that the proposed seismic surveys and possible future exploration and development activities do not cause changes in the seasonal distribution patterns, abundance, or productivity of marine mammal populations in the area.

Response: NMFS agrees but notes that this recommendation extends beyond the requirements of the 1998 monitoring program for Western Geophysical's seismic survey. However, to the extent practicable, NMFS intends to use the peer-review process required by the MMPA for small take authorizations in Arctic waters to address these cumulative impact monitoring concerns in the future.

ESA

Comment 24: Greenpeace states that the issuance of an IHA to Western Geophysical (or BPXA) would violate the ESA as it is inconsistent with the requirements and underlying purposes of the ESA and with the requirements that each agency use the best scientific and commercial data available.

Response: NMFS disagrees, noting that the issuance of an IHA to Western Geophysical triggers section 7 of the ESA, as the issuance of the IHA is a Federal action. However, the major federal agency for offshore oil and gas lease activities is the Minerals Management Service (MMS). Consultation under section 7 for lease sale 144 was concluded on November 16, 1995, with a finding that the action was not likely to jeopardize the continued existence of listed species.

Reinitiation of formal consultation under section 7 is warranted only when there is new scientific information that has the potential to call into question the scientific and commercial data used in the previous biological opinion. At this time, NMFS does not consider the recent findings on impacts to listed marine species from the disturbance from seismic surveys sufficient to reinitiate consultation.

Mitigation

Western Geophysical will use biological observers to monitor marine

mammal presence in the vicinity of the seismic array. To avoid serious injury to marine mammals, Western Geophysical will power down the seismic source if pinnipeds are sighted within the area delineated by the 190 dB isopleth or:

(1) Within 170 m (558 ft) of an array <750 in³ operating at <2.5 m (8.3 ft) depth;

(2) Within 280 m (919 ft) of an array <750 in³ operating at >2.5 m (8.3 ft) depth;

(3) Within 200 m (656 ft) of an array 1500 in³ operating at <2.5 m (8.3 ft) depth;

(4) Within 350 m (1,148 ft) of an array 1500 in³ operating at >2.5 m (8.3 ft) depth.

Western Geophysical will power down the seismic source if bowhead, gray, or belukha whales are sighted within the area delineated by the 180 dB isopleth or:

(1) Within 660 m (2,165 ft) of an array <750 in³ operating at <2.5 m (8.3 ft) depth;

(2) Within 900 m (2,953 ft) of an array <750 in³ operating at >2.5 m (8.3 ft) depth;

(3) Within 750 m (2,461 ft) of an array 1500 in³ operating at <2.5 m (8.3 ft) depth;

(4) Within 1,000 m (3,281 ft) of an array 1500 in³ operating at >2.5 m (8.3 ft) depth.

In addition, Western Geophysical proposes to ramp-up the seismic source to operating levels at a rate no greater than 6 dB/min, commencing with an 80 in³ airgun. Additional guns will be added at intervals appropriate to limit the rate of increase in source level to a maximum of 6 dB/min.

Monitoring and Reporting 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 (1998) and in LGL Ltd. and Greeneridge Sciences Inc. (1998). As mentioned previously, this monitoring plan was amended based on review and comment and was submitted to NMFS on July 15, 1998. 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

A minimum of 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 reticulated binoculars during the daytime and with night-vision equipment during the night (prior to mid-August, there are no hours of darkness). Individual watches will normally be limited to no more than four consecutive hours during daylight hours.

When mammals are detected within a 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

From September 1, 1998, until 3 days after the seismic program ends, aerial surveys will be conducted daily, weather permitting. The primary objective will be to document the occurrence, distribution, and movements of bowhead and belukha 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 avoid overflights of the Cross Island area where whalers from Nuiqsut are based during their fall whale hunt.

Consistent with 1996 and 1997 aerial surveys in the U.S. Beaufort Sea, the daily aerial surveys are proposed to cover two grids: (1) A grid of 16 north-south lines spaced 8 km (5 mi) apart and extending from about 50 km (30 mi) west of the western side of the then-current seismic exploration area to 50 km (30 mi) east of its eastern edge, and from the barrier islands north to approximately the 100 m (328 ft) depth contour; and (2) a grid of 4 survey lines within the above region, also spaced 8 km (5 mi) apart and mid-way between the longer lines, to provide more intensive coverage of the area of the seismic operations and immediate surrounding waters.

When the seismic program is relocated east or west along the coast during the 1998 season, both survey grids will be relocated a corresponding distance along the coast. Information on the survey program can be found in Western Geophysical (1998) and in LGL Ltd. and Greeneridge Sciences Inc. (1998).

Acoustical Measurements

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

The boat-based acoustical measurement program is proposed for a 7-day period in August 1998. The objectives of this survey will be as follows: (1) To measure the levels and other characteristics of the horizontally propagating seismic survey sounds from the type(s) of airgun array(s) to be used in 1998 as a function of distance and aspect relative to the seismic source vessel(s) and to water depth.

(2) To measure the levels and frequency composition of the vessel sounds emitted by vessels used regularly during the 1998 program.

(3) To obtain additional site-specific ambient noise data, which determine signal-to-noise ratios for seismic and other acoustic signals at various ranges from their sources.

Western Geophysical and its proposed consultant (Greeneridge Sciences) are investigating the use of the OBC-system to help document horizontal propagation of the seismic surveys. In addition, during late August and September, four autonomous seafloor acoustic recorders will be placed on the sea bottom to record low-frequency sounds nearly continuously for up to 3 weeks at a time. Information includes characteristics of the seismic pulses, ambient noise, and bowhead calls. Additional data on these noise sources will be obtained from sonobuoys dropped from aircraft after September 1.

For a more detailed description of planned monitoring activities, please refer to the application and supporting document (Western Geophysical, 1998; LGL Ltd. and Greeneridge Sciences Inc., 1998b).

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) above 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 1998 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, 1999. The final technical report will contain a description of the methods, results, and interpretation of all monitoring tasks.

Consultation

Under section 7 of the ESA, NMFS has completed consultations on the issuance of this authorization.

Conclusions

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

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 to 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 (see 63 FR 27709, May 20, 1998, for potential levels of take). In addition, no take by injury and/or by death is anticipated, and the potential for temporary or permanent hearing impairment will be avoided through incorporation of the mitigation measures described in the authorization.

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 August 31, 1998, Western Geophysical will initiate aerial survey flights for bowhead whale assessments, and take other actions to avoid having an unmitigable adverse impact on subsistence uses. Appropriate mitigation measures to avoid an unmitigable adverse impact on the availability of bowhead whales for subsistence needs is the subject of consultation between Western Geophysical and subsistence users. As a result of discussions between the two parties, a C&AA has been completed. This Agreement consists of three main components: (1) Communications, (2) conflict avoidance, and (3) dispute resolution.

Summer seismic exploration in the U.S. Beaufort Sea has a small potential to influence seal hunting activities by residents of Nuiqsut. However, NMFS believes that, 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, the 1998 Western Geophysical seismic survey will not have an unmitigable adverse impact on the availability of these stocks for subsistence uses.

Since NMFS is assured that the taking would not result in more than the incidental harassment (as defined by the MMPA Amendments of 1994) of small numbers of certain species of marine mammals, would have only a negligible impact on these stocks, would not have an unmitigable adverse impact on the availability of these stocks for subsistence uses, and would result in the least practicable impact on the stocks, NMFS has determined that the requirements of section 101(a)(5)(D) of the MMPA have been met and the authorization can be issued.

Authorization

Accordingly, NMFS has issued an IHA to Western Geophysical for the above described seismic survey during the 1998 open water season provided the mitigation, monitoring, and reporting requirements described in the authorization are undertaken.

Dated: July 23, 1998.

Patricia A. Montanio,

Deputy Director, Office of Protected Resources, National Marine Fisheries Service.
[FR Doc. 98-20280 Filed 7-28-98; 8:45 am]

BILLING CODE 3510-22-F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 072298B]

Mid-Atlantic Fishery Management Council; Public Meeting

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

ACTION: Notice of public meeting.

SUMMARY: The Mid-Atlantic Fishery Management Council's (Council) Bluefish Advisory Panel, together with the Atlantic States Marine Fisheries Commission's Bluefish Advisory Panel, will hold a public meeting.

DATES: The meeting will be held on Tuesday, August 11, 1998, from 10:00 a.m. until 5:00 p.m.

ADDRESSES: This meeting will be held at the Four Points Hotel, 4101 Island Avenue, Philadelphia, PA, telephone: 215-492-0400.

Council address: Mid-Atlantic Fishery Management Council, 300 S. New Street, Dover, DE 19904, telephone: 302-674-2331.

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Acting Executive Director, Mid-Atlantic Fishery Management Council; telephone: 302-674-2331, ext. 16.

SUPPLEMENTARY INFORMATION: The purpose of this meeting is to discuss the public hearing document for Amendment 1 to the Bluefish Fishery Management Plan and possible bluefish management measures for 1999.

Although other issues not contained in this agenda may come before the Committee for discussion, in accordance with the Magnuson-Stevens Fishery Conservation and Management Act, those issues may not be the subject of formal action during this meeting. Action will be restricted to those issues specifically identified in this notice.

Special Accommodations

This meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Joanna Davis at the Council (see **ADDRESSES**) at least 5 days prior to the meeting date.

Dated: July 23, 1998.

Richard W. Surdi,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.
[FR Doc. 98-20278 Filed 7-28-98; 8:45 am]

BILLING CODE 3510-22-F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 071098H]

New England Fishery Management Council; Public Meetings; Correction

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

ACTION: Correction to a public meeting notice.

SUMMARY: The agenda for the meetings of the oversight committees and advisory panels of the New England Fishery Management Council (Council) was published on July 16, 1998. The document contained an incorrect date.

DATES: The meetings will be held on August 3 and August 7, 1998.

FOR FURTHER INFORMATION CONTACT: Paul J. Howard, Executive Director; (781) 231-0422.

Correction

In the **Federal Register** issue of July 16, 1998, in FR Doc. 98-19010, on page 38390, in the third column, under **SUPPLEMENTARY INFORMATION**, in the 1st and the 14th lines, "July 3, 1998" is corrected to read "August 3, 1998."

Dated: July 22, 1998.

Bruce Morehead,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.
[FR Doc. 98-20165 Filed 7-28-98; 8:45 am]

BILLING CODE 3510-22-F

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[I.D. 071598D]

Permits; Foreign Fishing

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

ACTION: Notice of receipt of foreign fishing application.

SUMMARY: NMFS publishes for public review and comment a summary of a foreign fishing application submitted under provisions of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

DATES: Comments must be received by August 12, 1998.

ADDRESSES: Send comments (or requests for a copy of the application) to NMFS,