



December 2017

# OFFSHORE SEISMIC SURVEYS

## Additional Guidance Needed to Help Ensure Timely Reviews

This Report Is Temporarily Restricted Pending Official Public  
Release.

# GAO Highlights

Highlights of [GAO-18-60](#), a report to the Chairman, Committee on Natural Resources, House of Representatives

## Why GAO Did This Study

Offshore seismic surveys provide federal agencies and other entities with a wide range of data, from research on fault zones to geology that may indicate the presence of oil and gas. Companies seeking to conduct such surveys to find oil and gas resources in the OCS must obtain a permit from BOEM—which oversees offshore oil and gas activities. Man-made sources of ocean noise, such as seismic surveys, may harm marine mammals. Entities whose activities may cause the taking of marine mammals, which includes harassing or injuring an animal, may obtain incidental take authorizations for seismic surveys from NMFS or FWS, depending on the potentially affected species.

GAO was asked to provide information on the seismic permitting process. This report examines (1) BOEM's review process, the number of permit applications reviewed from 2011 through 2016, and its review time frames; and (2) NMFS's and FWS's review process, the number of incidental take authorization applications reviewed from 2011 through 2016, and their review time frames, among other objectives. GAO reviewed laws and regulations and agency documents, analyzed data on applications to BOEM, NMFS, and FWS, and interviewed agency officials.

## What GAO Recommends

GAO is recommending that both NMFS and FWS develop guidance clarifying how and when staff should record review dates of incidental take authorization applications and analyze how long the reviews take. NMFS agreed and FWS partially agreed with our recommendations.

View [GAO-18-60](#). For more information, contact Frank Rusco at (202) 512-3841 or [RuscoF@gao.gov](mailto:RuscoF@gao.gov).

December 2017

# OFFSHORE SEISMIC SURVEYS

## Additional Guidance Needed to Help Ensure Timely Reviews

## What GAO Found

The Department of the Interior's Bureau of Ocean Energy Management's (BOEM) process and time frames for reviewing seismic survey applications differ by region along the Outer Continental Shelf (OCS). From 2011 through 2016, BOEM reviewed 297 applications and issued 264 seismic survey permits, and the reviews' time frames differed by region (see table). As part of the process, BOEM may require approved "incidental take" authorizations from the Department of Commerce's National Marine Fisheries Service (NMFS) or Interior's U.S. Fish and Wildlife Service (FWS), given the possibility such surveys may disturb or injure marine mammals. BOEM does not have statutory review time frame requirements for issuing permits, and officials said the agency starts its formal review once it determines that an application is complete. In some cases, the agency issued a permit on the same day it determined an application was complete.

**BOEM's Seismic Survey Permits Issued from 2011 through 2016**

OCS region	Permits issued	How many days review took
Alaska	8	35-200
Atlantic	6	0-340
Gulf of Mexico	250	0-287

Source: GAO analysis of BOEM data. | GAO-18-60

NMFS and FWS follow a similar general process for reviewing incidental take authorization applications related to seismic survey activities. From 2011 through 2016, NMFS and FWS reviewed 35 and approved 28 such applications across the three OCS regions, including some authorizations related to BOEM permits as well as research seismic surveys not associated with BOEM permits. NMFS was unable to provide accurate data for the dates the agency determines an application is adequate and complete—and FWS does not record this date. For example, based on GAO's review of NMFS data, in at least two cases, the date NMFS recorded the application had been determined adequate and complete was after the date when the proposed authorization was published in the *Federal Register*. Federal internal control standards call for agencies to use quality information. Without guidance on how to accurately record review dates, agencies and applicants will continue to have uncertainty around review time frames. Further, under the Marine Mammal Protection Act, the agencies are to review one type of incidental take authorization application—incidental harassment authorization applications—within 120 days of receiving an application for such authorizations. NMFS and FWS have not conducted an analysis of their review time frames. Not conducting such an analysis is inconsistent with federal internal control standards that call for agency management to design control activities to achieve objectives and respond to risks. Without analyzing the review time frames for incidental harassment authorization applications and comparing them to statutory review time frames, NMFS and FWS are unable to determine whether they are meeting their objectives to complete reviews in the 120-day statutory time frame.

---

# Contents

---

Letter		1
	Background	4
	BOEM's Process Differs by OCS Region, and BOEM Reviewed 297 Seismic Survey Permit Applications from 2011 through 2016	12
	NMFS and FWS Follow a Similar Process for Incidental Take Authorization Reviews, but Guidance Does Not Sufficiently Describe How to Record Certain Review Dates	20
	For Several Years, BOEM and NMFS Have Been Reviewing Certain Seismic Survey Permit and Incidental Take Authorization Applications in the Atlantic OCS	31
	Conclusions	36
	Recommendations for Executive Action	37
	Agency Comments and Our Evaluation	37
Appendix I	Objectives, Scope, and Methodology	39
Appendix II	Comments from the Department of Commerce	41
Appendix III	Comments from the Department of the Interior	45
Appendix IV	GAO Contact and Staff Acknowledgments	47
Tables		
	Table 1: Bureau of Ocean Energy Management's Seismic Survey Permit Applications Reviewed and Issued by Three Outer Continental Shelf (OCS) Regions (2011–2016)	17
	Table 2: Range of Bureau of Ocean Energy Management Time Frames, in Number of Days, for Issuing Seismic Survey Permits, by Outer Continental Shelf Region (2011–2016)	18
	Table 3: Incidental Take Authorizations Related to Seismic Surveys Reviewed and Issued by National Marine Fisheries Service by Selected Outer Continental Shelf (OCS) Region (2011–2016)	25

---

---

## Figures

Figure 1: Sample of a Seismic Survey Vessel and Towed Receivers Superimposed over a Map of Washington, D.C., for Scale	6
Figure 2: Bureau of Ocean Energy Management's (BOEM) Seismic Permitting Process for the Alaska, Atlantic, and Gulf of Mexico Regions	13
Figure 3: Number of Seismic Survey Permits Issued by Bureau of Ocean Energy Management Regions and Associated Time Frames, 2011–2016	19
Figure 4: Marine Mammal Protection Act Incidental Harassment Authorization and Incidental Take Regulation Process	21
Figure 5: Bureau of Ocean Energy Management (BOEM) Review Timeline of Six Seismic Survey Permit Applications in the Atlantic Outer Continental Shelf Region, 2014–2017	32
Figure 6: National Marine Fisheries Service (NMFS) Review Timeline of Five Incidental Harassment Authorization Applications Related to Seismic Survey Permit Applications in the Atlantic Outer Continental Shelf Region, 2014–2017	34

---

---

## Abbreviations

BOEM	Bureau of Ocean Energy Management
DOD	Department of Defense
ESA	Endangered Species Act
FWS	U.S. Fish and Wildlife Service
IHA	incidental harassment authorization
Interior	Department of the Interior
ITA	incidental take authorization
ITR	incidental take regulations
LOA	letter of authorization
MMPA	Marine Mammal Protection Act
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
OCS	Outer Continental Shelf

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



December 11, 2017

The Honorable Rob Bishop  
Chairman  
Committee on Natural Resources  
House of Representatives

Dear Mr. Chairman:

Offshore oil and natural gas are important sources of energy and revenue for the United States—constituting about 18 percent of our nation’s total oil production and about 4 percent of our total gas production<sup>1</sup>—and providing the federal government with about \$2.8 billion in revenue in fiscal year 2016, according to data from the Department of Energy’s Energy Information Administration and the Department of the Interior’s (Interior) Office of Natural Resources Revenue.<sup>2</sup> Federal agencies and private companies use information about potential oil, gas, and other resources in the Outer Continental Shelf (OCS) to make regulatory, funding, and development decisions, respectively.<sup>3</sup> Oil and gas companies conduct offshore seismic surveys in the OCS to collect data on the geology that may indicate the presence of hydrocarbons; e.g., oil

---

<sup>1</sup>Offshore oil production constituted about 18 percent of our nation’s total oil production in fiscal year 2016, and offshore gas production constituted about 4 percent of our nation’s total gas production in fiscal year 2015, according to the Department of Energy’s Energy Information Administration.

<sup>2</sup>The Energy Information Administration maintains data on total U.S. oil and natural gas production (including federal and nonfederal onshore and offshore production). The Department of the Interior’s Office of Natural Resources Revenue maintains data on federal onshore and offshore production totals by fiscal year. In terms of total production on federal lands and waters, offshore oil and gas production accounted for about 80 percent of the total federal oil production in fiscal year 2016 and 30 percent of the total federal gas production in the United States in fiscal year 2015. Revenues from offshore oil and gas production include royalties and other payments paid by private companies to the federal government for the right to explore, develop, and sell oil and gas resources from federal lands or waters.

<sup>3</sup>The Outer Continental Shelf (OCS) is outside the territorial jurisdiction of all 50 states but within the jurisdiction and control of the U.S. federal government, and consists of submerged federal lands, generally extending seaward between 3 geographical miles and 200 nautical miles off the U.S. coastline. Interior has oversight over 1.7-billion acres of submerged lands in the OCS. There are four OCS regions in the United States: the Alaska, Atlantic, Gulf of Mexico, and Pacific regions. Companies that develop and produce oil and gas from federal waters do so over a specified period of time under leases obtained from and administered by the Bureau of Ocean Energy Management.

---

and gas.<sup>4</sup> Seismic surveys—which can be conducted onshore and offshore—use mechanically generated sound waves from an acoustic source to transmit energy into the subsurface of the ocean floor. Various other entities, including the National Science Foundation, use offshore seismic surveys for other purposes, such as to identify possible earthquake fault zones.

Entities seeking to conduct geological and geophysical surveys,<sup>5</sup> including seismic surveys, to identify oil, gas, and other mineral resources in the OCS must obtain a permit from Interior’s Bureau of Ocean Energy Management (BOEM)—the federal agency responsible for the oversight of most offshore oil and gas leasing and exploration activities. Given the possibility that seismic surveys may disturb or injure marine mammals, referred to as “taking” marine mammals, entities may also need to obtain an incidental take authorization under the Marine Mammal Protection Act (MMPA) from the Department of Commerce’s National Marine Fisheries Service (NMFS) or Interior’s Fish and Wildlife Service (FWS), depending on the species that might be affected, to avoid potential liability for any illegal take of a marine mammal due to the activity.<sup>6</sup> To assess whether to authorize the taking of small numbers of marine mammals, NMFS and FWS must make certain findings, based on the best scientific evidence available, as to the impacts of such activities on marine mammals and, when applicable, certain subsistence hunters. Several industry stakeholders and a research organization that applied for incidental take authorizations have raised questions about the timeliness of the federal

---

<sup>4</sup>Oil and gas companies may also use seismic surveys to detect and avoid potential sea-floor and below seabed hazards and for the protection of archaeological resources, according to Bureau of Ocean Energy Management officials.

<sup>5</sup>Geological surveys involve direct examination of subsurface composition. This can be accomplished by extracting geologic cores or examining cuttings from a shallow well from the earth’s subsurface. Geophysical surveys are indirect ways of surveying using gravity, magnetics, or acoustic response to induced sound waves (seismic).

<sup>6</sup>Pub. L. No. 92-522, § 101, 86 Stat. 1027, 1029 (1972) (codified as amended at 16 U.S.C. § 1371). The MMPA defines “take” as to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal. 16 U.S.C. § 1362(13). The MMPA generally defines harassment as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. 16 U.S.C. § 1362(18)(A). NMFS has jurisdiction over certain marine mammals, including whales, dolphins, porpoises, seals, and sea lions. FWS has jurisdiction over other marine mammals, including walruses, polar bears, and sea otters. See 16 U.S.C. § 1362(12)(A).

---

seismic survey permitting process and incidental take authorization application reviews.

You asked us to review the federal seismic survey permitting process in each of the four OCS regions—Alaska, the Atlantic, the Gulf of Mexico, and the Pacific. In our preliminary review of all four OCS regions, we determined that there had been no new oil and gas and related seismic activity in the Pacific OCS region for the last two decades;<sup>7</sup> as a result, we excluded the Pacific OCS region from our review. This report examines—for the Alaska, the Atlantic, and the Gulf of Mexico OCS regions from 2011 through 2016, (1) BOEM's process for reviewing seismic survey permit applications in each OCS region, the number of applications reviewed from 2011 through 2016, and its review time frames; (2) NMFS and FWS processes for reviewing incidental take authorization applications related to seismic surveys in each OCS region, the number of such applications reviewed by the agencies from 2011 through 2016, and their review time frames; and (3) the status of pending seismic survey permit applications and related incidental take authorization applications in the Atlantic OCS region.

To examine the agencies' processes for reviewing seismic survey permit applications and related incidental take authorization applications, we analyzed relevant laws and regulations that govern the processes and reviewed and analyzed agency guidance, such as process flowcharts, and other documents, including Federal Register notices. We also interviewed BOEM, NMFS, and FWS agency officials in their headquarters and regional offices responsible for overseeing seismic permitting and incidental take authorization reviews in each of the three selected OCS regions. In addition, we identified and interviewed a range of knowledgeable stakeholders selected to reflect a range of industry groups, a research institution, and environmental organizations to obtain their views on the seismic survey permit and incidental take authorization application processes. Because this was a nonprobability sample of stakeholders, their views are not generalizable beyond those groups but provide illustrative examples of the views of such stakeholders.

---

<sup>7</sup>Specifically, BOEM has not included the Pacific OCS region in its 5-year OCS oil- and gas-leasing program for at least 20 years. In addition, according to BOEM officials, BOEM did not receive applications for or issue any seismic survey permits in the Pacific region from 2011 through 2016. NMFS issued three incidental take authorizations for research related to seismic surveys that did not have an associated BOEM permit in the Pacific region from 2011 through 2016. FWS did not issue any seismic-related incidental take authorizations in the region.



---

To examine the number of seismic survey permit applications and related incidental take authorization applications reviewed by BOEM, NMFS, and FWS from 2011 through 2016, we obtained data from BOEM, NMFS, and FWS on the number of permit and incidental take authorization applications each agency reviewed and the number of permits and authorizations the agencies issued in each of the three selected OCS regions. To assess the reliability of the data, we used publicly available information on the number of permit and authorization applications to check the data provided by BOEM, NMFS, and FWS. We found the data on the number of permits and authorizations to be sufficiently reliable for our purposes.

To examine the agencies' time frames for reviewing seismic survey permit applications and related incidental take authorization applications from 2011 through 2016, including applications whose reviews are pending, and the extent to which NMFS and FWS are meeting their statutory time frames for reviewing incidental harassment authorization applications related to seismic survey permits, we obtained and analyzed agency review time frame data from BOEM, NMFS, and FWS. We focused our review of pending applications on the Atlantic OCS region because it was the only region with applications that had been pending review for several years. To assess the reliability of the data, we interviewed agency officials knowledgeable about the data and analyzed the data to determine the range of review time frames by agency and by the three OCS regions. We found BOEM's data on review time frames to be sufficiently reliable for our purposes (see app. I for information on NMFS and FWS data on review time frames). We also examined agency guidance, agency communication with applicants, and data-recording procedures. We also interviewed agency officials as well as industry stakeholders.

We conducted this performance audit from July 2016 to December 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

## Background

This section includes information about seismic surveys, oil and gas activities in the four OCS regions, and the potential effects of seismic

---

activities on the environment and marine mammals as well as related requirements.

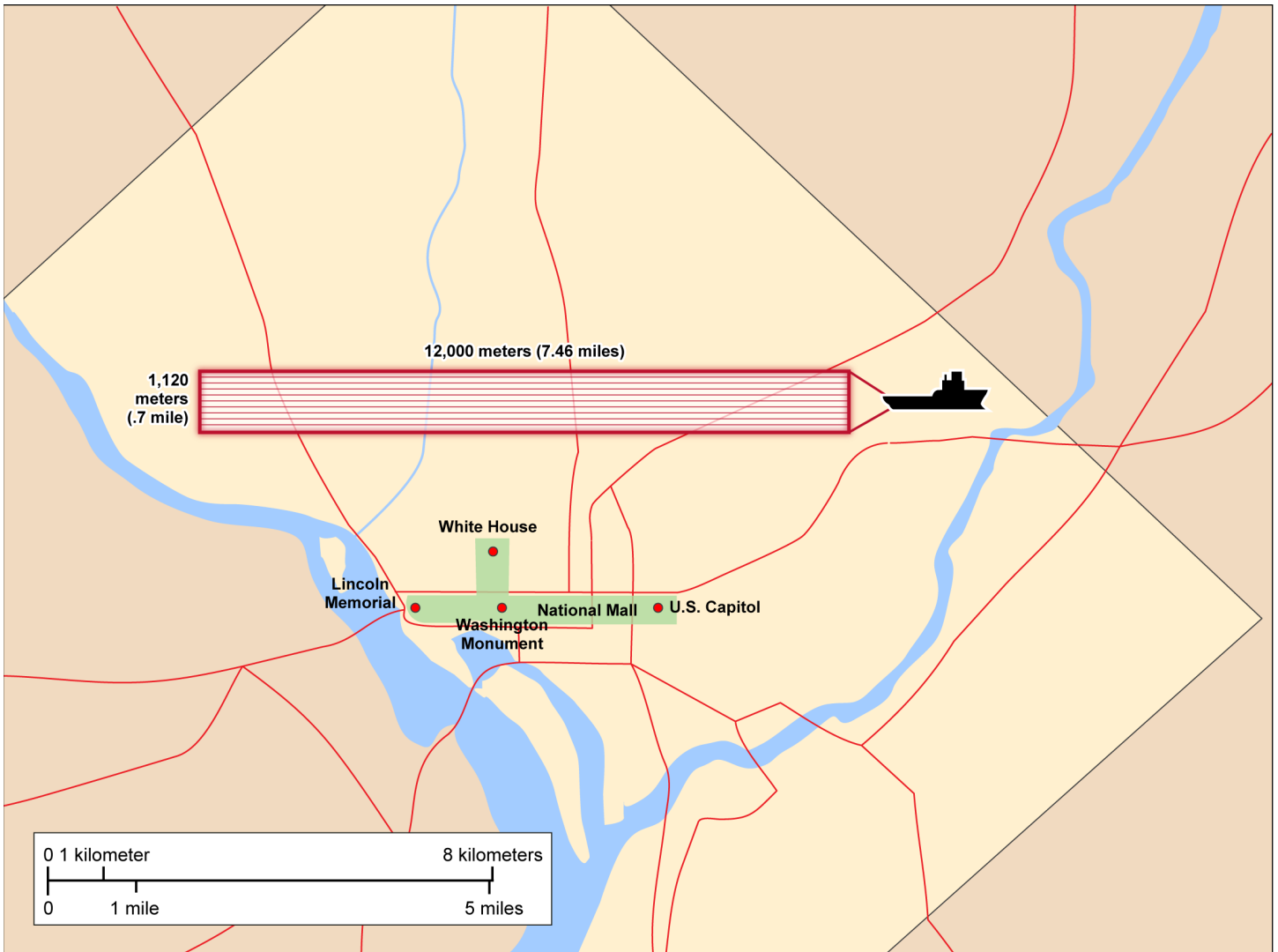
---

## Seismic Surveys

Seismic surveys use mechanically generated sound waves from an acoustic source such as an airgun to transmit energy into the subsurface. Some of this energy is reflected or refracted back to recording sensors, and data are transformed into representative images of the layers in the subsurface of the earth. Entities use seismic surveys for several purposes. For example, oil and gas companies use both onshore and offshore seismic surveys to collect data on geology that may indicate the presence of oil and gas. Other entities, such as research institutions, use seismic surveys for a variety of purposes, such as helping to detect groundwater, identifying archaeological resources and fault zones, and conducting other research.

There are two main types of seismic surveys used on the OCS: (1) deep-penetration and (2) high-resolution seismic surveys. Deep-penetration seismic surveys are conducted by vessels towing an array of airguns that use a low frequency source and emit high-energy acoustic pulses into the seafloor over long durations. Deep-penetration seismic surveys can penetrate several thousand meters into the subsurface and are then reflected and recorded by receivers to image deep geological features. Deep-penetration seismic surveys are often acquired prior to the drilling phase of oil and gas exploration. High-resolution seismic surveys typically use high-frequency acoustic signals to image the sea bottom and shallow parts right below the ocean bottom with a higher level of detail. Seismic surveys vary in technologies used, as well as in their size and scope, with towed gear in some cases spanning several miles (see fig. 1).

**Figure 1: Sample of a Seismic Survey Vessel and Towed Receivers Superimposed over a Map of Washington, D.C., for Scale**



Sources: TGS information; Map Resources and GAO (map). | GAO-18-60

## Activities in the Outer Continental Shelf (OCS) Regions

The OCS refers to the submerged lands outside the territorial jurisdiction of all 50 states but that appertain to the United States and are under its jurisdiction and control. State submerged lands generally extend from the shore to 3 geographical miles offshore.<sup>8</sup> Federal submerged lands, which

<sup>8</sup>State waters offshore Texas and the Gulf of Mexico portion of offshore Florida extend 3 leagues, or approximately 9 miles, from shore.

---

are lands under the jurisdiction of the federal government—generally extend from 3 geographical miles to 200 nautical miles offshore. With certain exceptions, waters and submerged lands beyond 200 nautical miles offshore are considered international.<sup>9</sup>

The OCS is divided into four regions managed by BOEM—Alaska, Atlantic, Gulf of Mexico, and Pacific—each with its own histories and concerns and levels of commercial activities, including oil and gas development and history of using seismic surveys. The Gulf of Mexico OCS region has had the most oil and gas activity. The Alaska OCS encompasses the Arctic submerged lands, Cook Inlet planning area, and the Gulf of Alaska. The Arctic waters of the Alaska OCS include the Beaufort and Chukchi planning areas and the Bering Sea. In the last 25 years, seismic activities in the Alaska OCS have generally taken place in the Cook Inlet and the Chukchi and Beaufort Seas. The Atlantic OCS region is divided into four areas for administrative purposes under BOEM's oil and gas leasing program: the North Atlantic, Mid-Atlantic, South Atlantic, and the Straits of Florida. At present, no active OCS oil and gas leases exist in any of these four planning areas. The most recent geological and geophysical seismic data for the Mid- and South Atlantic OCS were gathered more than 30 years ago. The Gulf of Mexico's central and western planning areas—offshore Texas, Louisiana, Mississippi and Alabama—remain the United States' primary offshore source of oil and gas, generating about 97 percent of all OCS oil and gas production.

BOEM oversees offshore oil and gas resource-management activities, including preparing the 5-year OCS oil and gas leasing program, conducting lease sales and issuing leases, and receiving, reviewing, and approving oil and gas exploration and development and production plans. As part of its role, BOEM also issues permits for geological and geophysical data acquisition on the OCS, including seismic surveys, under the Outer Continental Shelf Lands Act and regulations under the act.<sup>10</sup> BOEM does not have statutory review time frame requirements for issuing geological and geophysical seismic survey permits. Entities seeking to conduct geological and geophysical scientific research related to oil and gas but not associated with oil and gas exploration and

---

<sup>9</sup>Federal submerged lands may extend beyond 200 nautical miles offshore if the OCS extends further than 200 nautical miles offshore.

<sup>10</sup>Pub. L. No. 83-212, § 11, 67 Stat. 462, 469 (1953) (codified as amended at 43 U.S.C. § 1340); 30 C.F.R. pt. 551.

---

development, including seismic surveys, generally do not need to obtain a permit from BOEM, but they are generally required to file a Notice of Scientific Research with the Regional Director of BOEM at least 30 days before beginning such research.<sup>11</sup>

---

## Environmental Impacts of Seismic Surveys

Man-made sources of ocean noise—such as from commercial shipping, marine pile driving, sonar, and seismic activities—may have a variety of impacts on marine mammals ranging from minor disturbance to injury or death. Effects of noise on marine mammals depend on a variety of factors including the species and behavior, as well as the frequency, intensity, and duration of the noise. NMFS and FWS evaluate the potential effects of activities, such as seismic surveys, on marine mammals in determining whether to authorize incidental take under the MMPA when such authorization is requested by entities engaging in those activities. Agencies are required to evaluate potential environmental effects of their actions, such as approval of seismic survey permits, under the National Environmental Policy Act (NEPA), and in cases where Endangered Species Act listed species may be affected, conduct Endangered Species Act section 7 consultations.

## Marine Mammal Protection Act

The MMPA was enacted in 1972 to ensure that marine mammals are maintained at or restored to their optimum sustainable population.<sup>12</sup> NMFS and FWS implement the MMPA, which generally prohibits the “taking” of marine mammals.<sup>13</sup> However, the MMPA provides a mechanism for NMFS and FWS, upon request, to authorize the incidental take of small numbers of marine mammals by U.S. citizens engaging in a specified activity, other than commercial fishing, within a specified geographic region.<sup>14</sup> Specifically, NMFS and FWS issue incidental take authorizations after finding that the activities will cause the taking of only

---

<sup>11</sup>If circumstances preclude a 30-day notice, entities conducting research must provide oral notification and follow up in writing. Entities conducting research must also inform BOEM in writing when the work is concluded. 30 C.F.R. § 551.4(b)(2). Permits are required for scientific research activities if they involve using solid or liquid explosives, drilling a deep stratigraphic test, or developing data and information for proprietary use or sale. 30 C.F.R. § 551.4(b)(1).

<sup>12</sup>Pub. L. No. 92-522, § 2, 86 Stat. 1027, 1027 (1972) (codified as amended at 16 U.S.C. § 1361).

<sup>13</sup>16 U.S.C. § 1371(a), 1372(a)(1),(2).

<sup>14</sup>16 U.S.C. § 1371(a)(5)(A), (D).

---

small numbers of marine mammals of a species or stock, the taking will have a negligible impact on such marine mammal species or stocks, and the taking will not have an unmitigable adverse impact on the availability of the species or stock for taking for subsistence uses.<sup>15</sup> Entities whose seismic survey activities may result in incidental take of marine mammals obtain an incidental take authorization from NMFS or FWS, or both, depending on the affected species. If operators incidentally take a marine mammal and do not have authorization to cover the incidental take, they would be in violation of the MMPA. By statute, incidental take authorizations must also include permissible methods of taking and means of affecting the least practicable adverse impact on affected species and stocks and their habitat, monitoring requirements, and reporting requirements.

## National Environmental Policy Act

Under NEPA, federal agencies are required to evaluate the potential environmental effects of actions they propose to carry out, fund, or approve (e.g., by permit).<sup>16</sup> NEPA and implementing regulations set out an environmental review process that has two principal purposes: (1) to ensure that an agency carefully considers information concerning the potential environmental effects of proposed actions and alternatives to proposed actions and (2) to ensure that this information will be made available to the public.<sup>17</sup> Under NEPA, before approving any oil and gas leasing, exploration, geological and geophysical permits, or development activities, BOEM must evaluate the potential environmental effects of approving or permitting those activities. NMFS and FWS also must evaluate potential environmental effects under NEPA of issuing the MMPA incidental take authorization as part of their review of the proposed authorizations. Generally, the scope of the proposed permit or authorization—that is, the federal action—determines whether the federal agency prepares either an environmental assessment or a more detailed

---

<sup>15</sup>16 U.S.C. § 1371(a)(5)(A), (D).

<sup>16</sup>Pub. L. No. 91-190 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347). NEPA applies to federal agency adoption of official policies, programs, or formal plans, as well as approval of specific projects. 40 C.F.R. § 1508.18(b).

<sup>17</sup>NEPA states that the purposes of the act are “to declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.” 42 U.S.C. § 4321.

---

environmental impact statement.<sup>18</sup> Agencies may prepare an environmental assessment to determine whether a proposed action is expected to have a potentially significant impact on the human environment.<sup>19</sup> If the agency determines that the action will not have significant environmental impacts following the environmental assessment, the agency will issue a Finding of No Significant Impact. If prior to or during the development of an environmental assessment, the agency determines that the action may cause significant environmental impacts, an environmental impact statement should be prepared.

In implementing NEPA, federal agencies may rely on “tiering”, in which prior broader, earlier NEPA reviews are incorporated into subsequent site-specific analyses.<sup>20</sup> Tiering is used to avoid duplication of analysis as a proposed activity moves through the NEPA process, from a broad assessment to a site-specific analysis. If an agency would like to evaluate the potential significant environmental impacts of multiple similar or recurring activities, the agency can prepare a programmatic environmental assessment or environmental impact statement. Because BOEM prepares a site specific environmental analysis for each geological and geophysical permit application, to increase efficiency, BOEM uses this tiering process and tiers from either an existing environmental impact statement or environmental assessment during its site specific environmental analysis review.

## Endangered Species Act

The Endangered Species Act provides programs for conserving threatened and endangered species.<sup>21</sup> Under section 7 of the act, federal agencies must ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of its critical habitat.<sup>22</sup> To fulfill this responsibility, federal agencies must

---

<sup>18</sup>Agencies may also, in accordance with NEPA, categorically exclude actions that the agency has found do not individually or cumulatively have a significant effect on the human environment and for which, therefore, neither an environmental assessment nor an environmental impact statement is required. 40 C.F.R. § 1508.4.

<sup>19</sup>The human environment is interpreted comprehensively to include the natural and physical environment and the relationship of people to that environment. 40 C.F.R. § 1508.14.

<sup>20</sup>See 40 C.F.R. §§ 1500.4(i), 1502.4(d), 1502.20.

<sup>21</sup>Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544).

<sup>22</sup>16 U.S.C. § 1536.

---

consult with NMFS or FWS, depending on the affected species, to assess the potential effects of proposed actions, including approval of seismic survey permits and authorization of incidental take under the MMPA, on threatened and endangered species. The Endangered Species Act allows NMFS and FWS to exempt incidental takings from the taking prohibition for endangered and threatened species as provided through an incidental take statement. The statement is to include the amount or extent of anticipated take, reasonable and prudent measures to minimize the effects of incidental take, and the terms and conditions that must be observed. Formal consultations between federal agencies and NMFS or FWS are required where a proposed action could have an adverse effect on listed species or designated critical habitat and are concluded with issuance by NMFS or FWS of biological opinions.<sup>23</sup> The biological opinion is to discuss in detail the effects of the proposed action on listed species and their critical habitat and contain NMFS's or FWS's opinion on whether the proposed action is likely to jeopardize the continued existence of the species or destroy or adversely modify any designated critical habitat. For consultations involving marine mammals, an Endangered Species Act section 7 incidental take statement cannot be issued until the incidental take has been authorized under the MMPA.

Agencies may informally consult with NMFS or FWS, and if it is determined by the federal agency during such informal consultation that the proposed action is not likely to adversely affect endangered or threatened species or critical habitat, the informal consultation process is concluded upon written concurrence of NMFS or FWS, and no further action is necessary. If an action agency would like to evaluate the impacts of multiple similar or recurring activities on endangered and threatened

---

<sup>23</sup>Both NMFS and FWS described their internal Endangered Species Act Section 7 consultations as intra-service processes. At FWS, the action agency branch in Alaska—the Marine Mammals Management Office in the Anchorage Field Office—receives and reviews MMPA incidental take authorization applications. According to FWS officials, if a threatened or endangered species is potentially affected by the applicant's proposed activities, the Marine Mammals Management Office would consult with another FWS branch with Endangered Species Act expertise, i.e., staff at either the Anchorage or Fairbanks field offices, which act as the consulting offices for the Section 7 consultation. At NMFS, according to agency officials, the Office of Protected Resources in headquarters reviews an MMPA incidental take authorization application, and if it finds that the proposed activity could potentially affect a threatened or endangered species, officials in the Office of Protected Resources would initiate an Endangered Species Act Section 7 consultation with either the NMFS Endangered Species Act Interagency Cooperation and Coordination Division in headquarters or individual NMFS regional offices that have jurisdiction and expertise over endangered and threatened species in their regions.



---

species, NMFS or FWS can prepare a programmatic biological opinion for the OCS region.

---

---

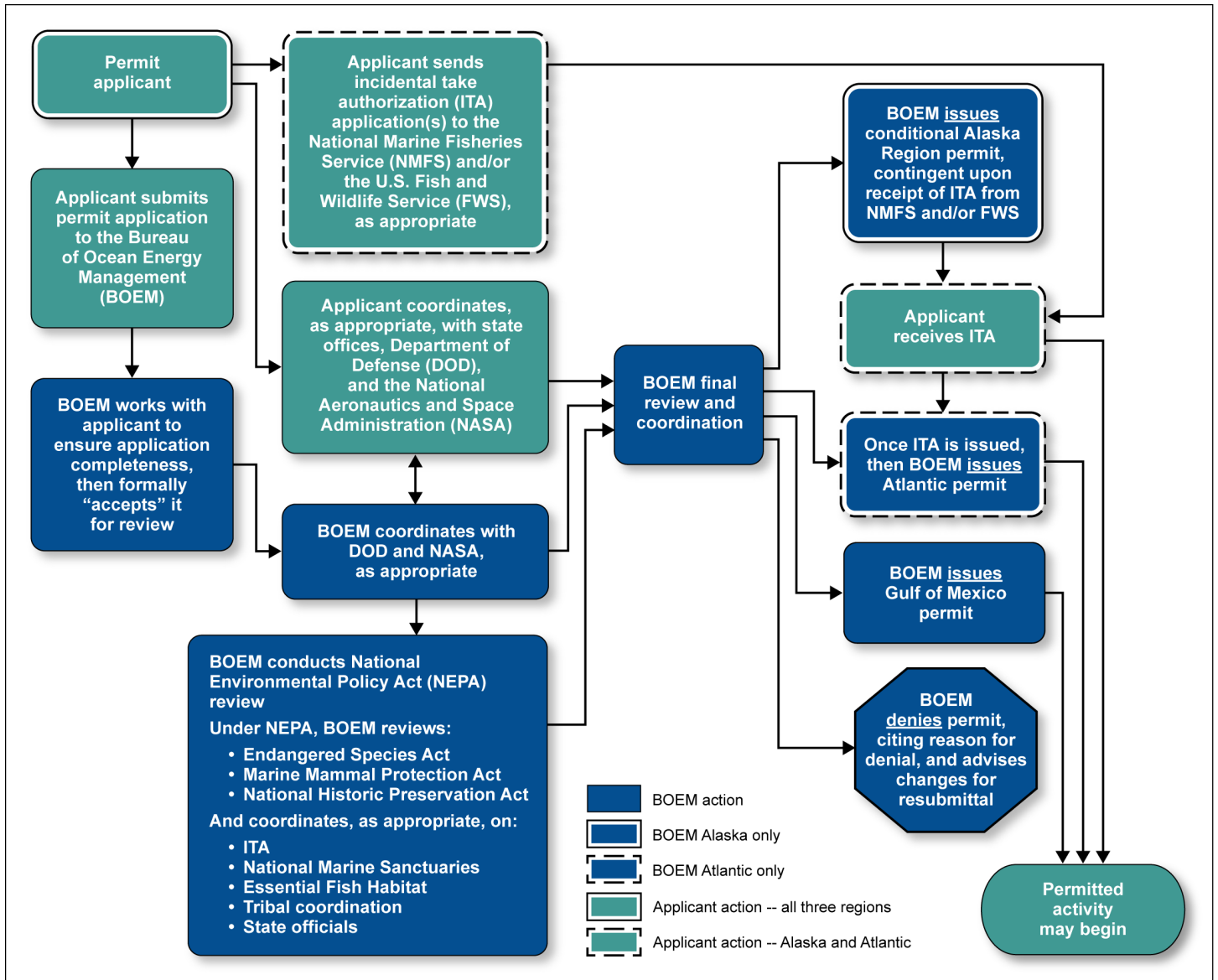
## BOEM's Process Differs by OCS Region, and BOEM Reviewed 297 Seismic Survey Permit Applications from 2011 through 2016

---

### BOEM's Process for Reviewing Seismic Survey Permit Applications Differs by Selected OCS Region

BOEM has a documented process for reviewing seismic survey applications in each of the three selected OCS regions that differs at the final step (see fig. 2), depending on the region. For the Alaska and Atlantic regions, the applicant generally submits an application to BOEM for a seismic survey permit at the same time that the applicant submits an application to NMFS or FWS for an incidental take authorization. For the Gulf of Mexico region, the applicant has generally only submitted an application to BOEM for a seismic survey permit.

**Figure 2: Bureau of Ocean Energy Management's (BOEM) Seismic Permitting Process for the Alaska, Atlantic, and Gulf of Mexico Regions**



Source: GAO analysis of Bureau of Ocean Energy Management data. | GAO-18-60

Note: NMFS has jurisdiction over certain marine mammals, including whales, dolphins, porpoises, seals, and sea lions. FWS has jurisdiction over other marine mammals, including walrus, polar bears, and sea otters. BOEM is to coordinate with relevant stakeholders—such as state officials, the Department of Defense, and the National Aeronautics and Space Administration—if proposed activities have the potential to interfere with defense or civil aerospace activities in the same area.

---

In all three regions, BOEM is required to conduct environmental reviews under NEPA, and Endangered Species Act Section 7 consultations as necessary to help ensure agency actions, such as permit approvals, do not jeopardize the continued existence of a species or destroy or adversely modify critical habitat. In all three regions, when appropriate, BOEM is also to coordinate with relevant stakeholders, such as state officials, the Department of Defense and the National Aeronautics and Space Administration, if proposed activities have the potential to interfere with defense or civil aerospace activities in the same area.

The final step in BOEM's process for reviewing seismic survey permit applications differs among the three selected OCS regions. In the Atlantic region, prior to issuing a permit, BOEM intends to require incidental take authorizations related to the seismic survey activities proposed in the permit application to be in place before issuing permits,<sup>24</sup> but BOEM issues conditional permits while waiting for incidental take authorizations in the Alaska region. In the Gulf of Mexico region, BOEM generally issues permits without requiring incidental take authorizations to be in place.

Stakeholders from industry groups and BOEM officials we interviewed stated that differences in the review process were the natural result of the process adapting to the three different OCS regions and their history of oil and gas exploration. For example, agency officials stated that, in terms of oil and gas activity, the Atlantic is a "frontier region," and, according to a stakeholder group, has vocal coastal communities that are uncomfortable with offshore energy development and, relatedly, the potential impacts of seismic surveys on marine mammals and commercial fishing. If certain activities are considered controversial or have more vocal public opponents, they may result in an increased number of public comments the agency must review, which in turn may result in BOEM taking extra time to review applications for permits or NMFS requiring more time to review incidental take authorization applications, agency officials said. For example, in the Atlantic OCS, there was a large vocal public opposition to the seismic surveys proposed. Specifically, 126 municipalities, 1,200 officials, and over 40,000 businesses representing Republicans and

---

<sup>24</sup>From 2011 through 2016, BOEM issued six high-resolution seismic survey permits in the Atlantic region without requiring applicants to have approved incidental take authorizations; however, according to BOEM officials we interviewed, BOEM will require approved incidental take authorizations for the six deep penetration seismic survey permit applications currently under review.

---

Democrats opposed seismic surveying, according to testimony at a July 2017 hearing of the House Committee on Natural Resources.<sup>25</sup>

By contrast, according to BOEM officials and industry stakeholders we interviewed, the Gulf of Mexico region has a long history of offshore energy development and seismic survey activity. BOEM has issued permits in the Gulf of Mexico region without requiring an applicant to already have an incidental take authorization in place. According to two industry stakeholders we interviewed, obtaining permits in the Gulf of Mexico has been a fairly routine process. BOEM has made a policy decision to generally require an incidental take authorization in Alaska and the Atlantic but not in the Gulf of Mexico, agency officials said.

While historically, BOEM has not required incidental take authorizations in the Gulf of Mexico to be in place prior to issuing seismic survey permits, around 2002, ocean noise emerged as an environmental concern in the region, according to BOEM officials. At that time, BOEM requested incidental take regulations from NMFS for the Gulf of Mexico at the request of NMFS and on behalf of the industry and submitted revised requests in 2004, 2011, and 2016. According to BOEM officials we interviewed, the agency has been working with NMFS since 2002 to get incidental take regulations in place. According to NMFS officials, BOEM's 2002 request only addressed 1 of the 21 species present in the Gulf of Mexico, so NMFS requested that BOEM revise its request. The 2004 request included all marine mammals present in the area, according to NMFS officials. BOEM and NMFS agreed to require mitigation measures on all deep penetration seismic surveys in lieu of the formal authorization until completion of the pending rulemaking, according to BOEM officials.

Meanwhile, in 2010, a consortium of environmental organizations sued Interior, alleging that BOEM permitted seismic activities in the Gulf of Mexico in violation of NEPA.<sup>26</sup> In correspondence with BOEM, plaintiffs also alleged that seismic activities permitted by BOEM in the Gulf of

---

<sup>25</sup>Margaret S. Howell, Stop Offshore Drilling in the Atlantic, *Evaluating Federal Offshore Oil and Gas Development on the Outer Continental Shelf*, testimony before the House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources, 115th Cong., 1st sess., July 12, 2017.

<sup>26</sup>Specifically, the plaintiffs alleged that seismic activities in the Gulf of Mexico cause significant environmental harm and that BOEM's 2004 programmatic environmental assessment and Finding of No Significant Impact for such activities was arbitrary, capricious, and contrary to NEPA.

---

Mexico resulted in the unauthorized take of marine mammals in violation of the MMPA. In June 2013, the parties reached an agreement providing for a temporary stay of all proceedings in the lawsuit until Final Action, as defined in the settlement agreement, with respect to BOEM's application for incidental take regulations or until the expiration of 30 months, whichever occurs first.<sup>27</sup> In addition, BOEM agreed to consider the appropriateness of prescribing additional mitigation measures for industry applicants related to seismic survey permits during the stay, including seasonal restrictions for coastal waters and certain monitoring and reporting requirements; the plaintiffs agreed not to challenge such permits for surveys implementing the mitigations during the stay. In February 2016, the parties agreed to extend the stay through September 25, 2017, subject to BOEM's consideration of certain additional conditions on seismic surveys permitted in the Gulf of Mexico. In October 2016, BOEM submitted a revised request to NMFS for incidental take regulations governing geophysical surveys in the Gulf of Mexico. In December 2016, NMFS published in the Federal Register a notice of receipt and request for comments and information in response to BOEM's revised request for incidental take regulations.<sup>28</sup> According to NMFS officials, the agency is currently working on developing incidental take regulations for the Gulf of Mexico region.<sup>29</sup> In September 2017, the parties agreed to extend the stay through November 1, 2018.<sup>30</sup>

---

<sup>27</sup>As defined in the settlement agreement, a "Final Action" with respect to BOEM's MMPA Application means: (1) a final decision by NMFS denying BOEM's MMPA Application; (2) BOEM's withdrawal of the Pending Application or any revision thereof, unless a revised application that is substantively the same in scope as the Pending Application is submitted to NMFS within 14 days after the Pending Application or any revision thereof is withdrawn; or (3) NMFS's issuance of an MMPA take authorization in response to BOEM's MMPA Application, preceded or accompanied by (a) a biological opinion or "not likely to adversely affect" concurrence letter from NMFS concluding consultation pursuant to Section 7(a)(2) of the Endangered Species Act and (b) an Environmental Impact Statement/Record of Decision or Environmental Assessment/Finding of No Significant Impact prepared pursuant to the National Environmental Policy Act.

<sup>28</sup>81 Fed. Reg. 88,664 (Dec. 8, 2016).

<sup>29</sup>According to BOEM officials, the agency is operating under an interim process, in which NMFS reviews all seismic survey permit applications, while NMFS develops incidental take regulations.

<sup>30</sup>In agreeing to extend the stay, the parties also agreed to the plaintiffs' filing of an amended complaint asserting a new claim against NMFS alleging unreasonable delay in processing, or failure to act upon, BOEM's MMPA application. The amended complaint, filed on October 3, 2017, is also subject to the stay.

From 2011 through 2016, BOEM Reviewed 297 Applications for Seismic Survey Permit Applications and Issued 264 Permits

Based on our review of agency data, from 2011 through 2016, BOEM reviewed 297 applications for seismic survey permits. Of the 297 seismic survey permit applications reviewed, BOEM issued 264 permits during this period, and the number of applications reviewed and permits issued varied by OCS region (see table 1). For the Gulf of Mexico region, which has had the most oil and gas activity, BOEM reviewed the most permit applications (268) and issued the most permits (250).

**Table 1: Bureau of Ocean Energy Management’s Seismic Survey Permit Applications Reviewed and Issued by Three Outer Continental Shelf (OCS) Regions (2011–2016)**

Seismic survey permit applications	OCS Region			Total
	Alaska	Atlantic	Gulf of Mexico	
Reviewed	13	16	268	<b>297</b>
Pending	0	7	1	<b>8</b>
Withdrawn by applicant	4	3	17	<b>24</b>
Deferred by applicant	1	0	0	<b>1</b>
Issued	8	6	250	<b>264</b>

Source: GAO analysis of Bureau of Ocean Energy Management data. | GAO-18-60

Note: This table includes seismic survey permits for high-resolution seismic surveys, deep-penetration seismic surveys, and vertical seismic profile surveys. The six permits issued in the Atlantic region were for high-resolution seismic surveys for non-oil and gas mineral resources and, according to Bureau of Ocean Energy Management officials, did not include the use of airguns. This table does not include the Pacific Outer Continental Shelf region because, from 2011 through 2016, the Bureau of Ocean Energy Management did not receive applications for or issue any seismic survey permits in that region. This table does not include Notices of Scientific Research, of which there were 2 in the Atlantic region, 13 in the Gulf of Mexico, and none in Alaska during this period. The Notices of Scientific Research do not result in a permit.

From 2011 through 2016, BOEM Time Frames for Issuing Seismic Survey Permit Applications Varied by OCS Region

BOEM does not have statutory review time frame requirements for issuing geological and geophysical seismic survey permits. The range of BOEM’s review time frames—from the date the agency determined that an application was complete to when BOEM issued a seismic survey permit—varied by OCS region (see table 2 and fig. 3).<sup>31</sup>

**Table 2: Range of Bureau of Ocean Energy Management Time Frames, in Number of Days, for Issuing Seismic Survey Permits, by Outer Continental Shelf Region (2011–2016)**

	Number of days and permits by Outer Continental Shelf region		
	Alaska	Atlantic	Gulf of Mexico
Seismic survey permits issued	35 – 200 n=8	0 – 340 n=6	0 – 287 n=250

Legend: n = number of days

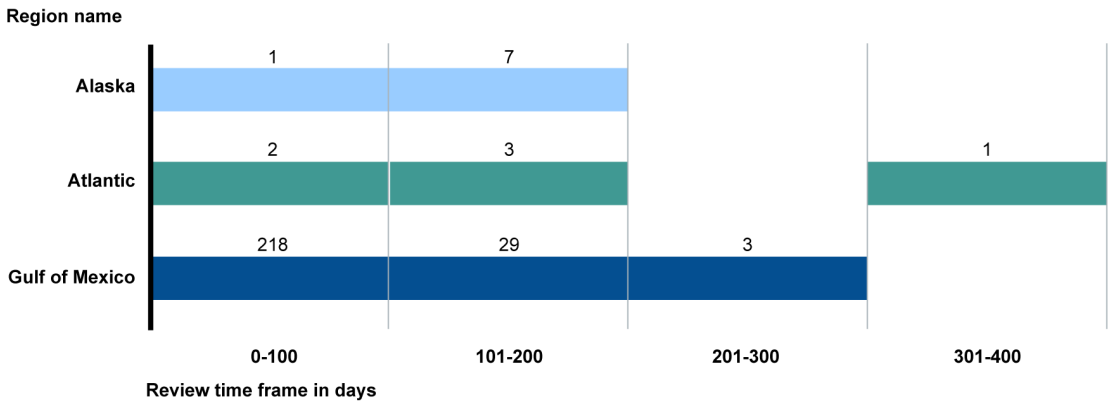
Source: GAO analysis of Bureau of Ocean Energy Management data. | GAO-18-60

Notes: The Bureau of Ocean Energy Management records the date from when it determines an application is complete, or “accepted,” following the resolution of any missing information from the applicant in the initial application, until the date when permits were either issued or denied. In some cases, the agency issued a permit on the same day it determined the application was complete—resulting in a review time frame of 0 days—because, according to BOEM officials, the agency had begun reviewing the application before it was deemed complete.

This table does not include pending, denied, or withdrawn applications or Notices of Scientific Research. This table also does not include the Pacific Outer Continental Shelf region because the Bureau of Ocean Energy Management did not issue any seismic survey permits there from 2011 through 2016. The six permits issued in the Atlantic region were for high-resolution seismic surveys for non-oil and gas mineral resources.

<sup>31</sup>BOEM also records the date that it received an application, in addition to the date it determined the application to be “accepted,” or complete, and the date it issued the permit. BOEM starts its official review once it determines that an application is “accepted,” or complete, which may take weeks or months after an application is initially received. As a result, we calculated BOEM’s review time frames from the date BOEM determined an application to be complete until the date it issued a permit.

**Figure 3: Number of Seismic Survey Permits Issued by Bureau of Ocean Energy Management Regions and Associated Time Frames, 2011–2016**



Source: GAO analysis of Bureau of Ocean Energy Management data. | GAO-18-60

Note: The Bureau of Ocean Energy Management records the date from when it determines an application is complete, or “accepted,” following the resolution of any missing information from the applicant in the initial application, until the date when it issues or denies permits. This figure does not include the Pacific Outer Continental Shelf region because the Bureau of Ocean Energy Management did not issue any seismic survey permits there from 2011 through 2016. The six permits issued in the Atlantic region were for high-resolution seismic surveys for non-oil and gas mineral resources.

Internally, according to BOEM officials, BOEM’s goal in the Gulf of Mexico OCS region is to issue high-resolution seismic survey permits within 40 days and to issue deep penetration (airgun) permits within 70 days. Our analysis of BOEM data on seismic survey permits found that, in the Gulf of Mexico OCS region, for high-resolution seismic survey permits, the agency issued 103 permits out of 108 permits (95 percent) within 40 days; for deep penetration permits, the agency issued 90 permits out of 142 permits (63 percent) within 70 days.



---

**NMFS and FWS Follow a Similar Process for Incidental Take Authorization Reviews, but Guidance Does Not Sufficiently Describe How to Record Certain Review Dates**

NMFS and FWS follow a similar application review process for reviewing incidental take authorization applications, and from 2011 through 2016, the agencies reviewed a total of 35 applications. However, neither agency was able to provide accurate data for the dates on which it began its formal processing of these applications because neither agency's guidance sufficiently describes how to record certain review dates. As a result, it is not possible to determine whether the agencies were meeting their statutory time frames for the type of incidental take authorization application that has such time frames—the incidental harassment authorizations.<sup>32</sup>

---

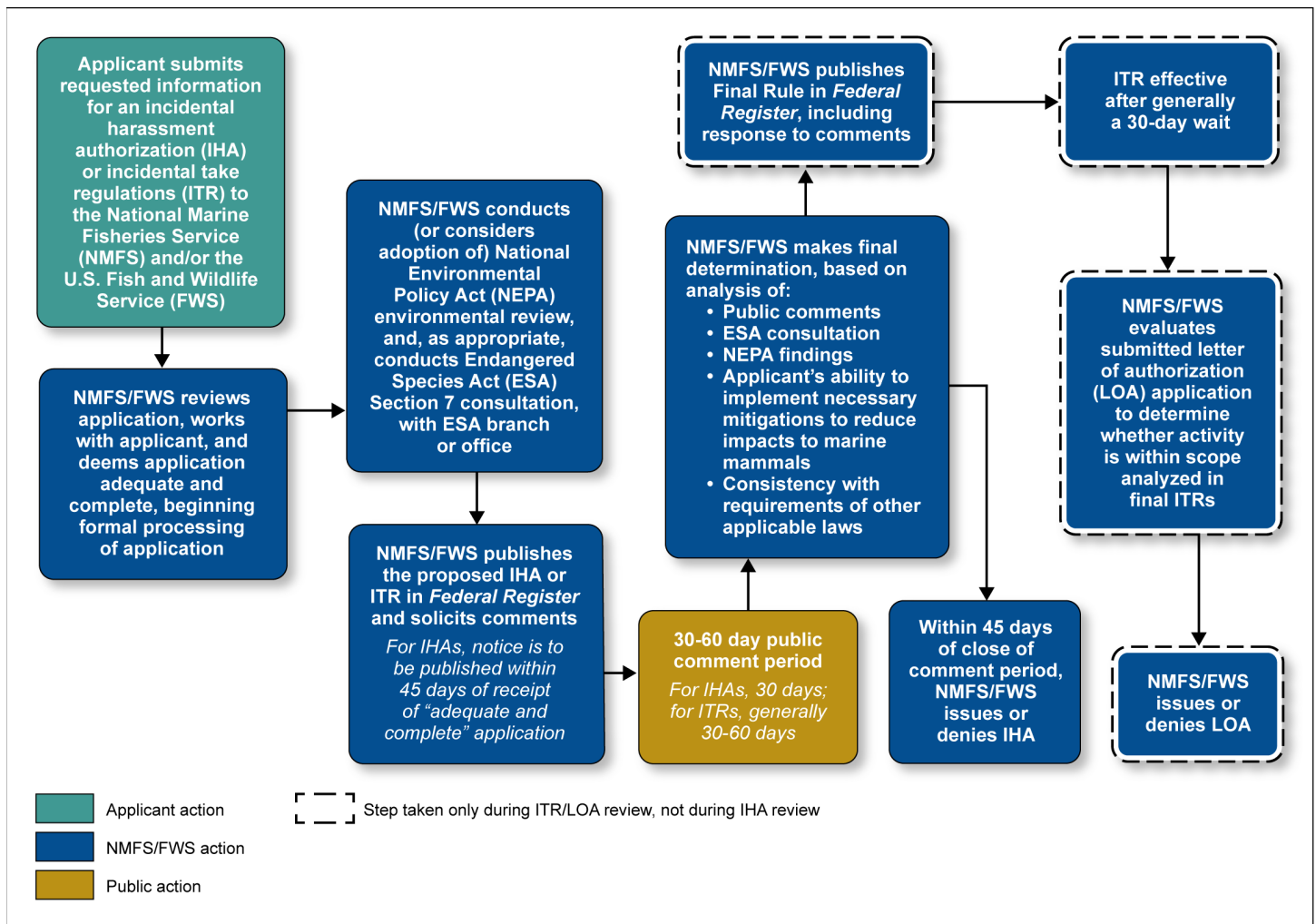
**NMFS and FWS Follow a Similar General Process to Review Incidental Take Authorization Applications**

Based on our review of agency guidance, NMFS and FWS follow a similar general process in reviewing applications for incidental take authorizations—both incidental harassment authorizations and letters of authorization with associated incidental take regulations—related to seismic survey activities (see fig. 4).

---

<sup>32</sup>The other type of incidental take authorization—the letter of authorization associated with incidental take regulations—does not have a statutory review time frame.

**Figure 4: Marine Mammal Protection Act Incidental Harassment Authorization and Incidental Take Regulation Process**



Source: GAO analysis of National Marine Fisheries Service and U.S. Fish and Wildlife Service data. | GAO-18-60

Notes: For ITRs, after NMFS determines an application to be adequate and complete, it publishes a notice of receipt for the request for ITRs in the Federal Register for a public comment period of 30 days. After reviewing public comments and other analyses and preliminary determinations, it then publishes proposed ITRs in the Federal Register for a public comment period of 30 days to 60 days. The Administrative Procedure Act provides that a rule generally may not become effective for 30 days following publication unless the agency finds good cause for immediate effectiveness. See 5 U.S.C. § 553(d). Letters of authorization are required to conduct activities pursuant to incidental take regulations.

According to NMFS and FWS officials we interviewed, the incidental take authorization process is concurrent with, but separate from, BOEM's process for issuing seismic survey permits, and entities seeking to

---

conduct seismic surveys apply separately with each agency, as appropriate.<sup>33</sup> When applicants apply for an incidental take authorization, they are first to decide which type of authorization they need—an incidental harassment authorization or a letter of authorization associated with incidental take regulations, depending on the expected effect on marine mammals. Specifically, if the proposed activity has the potential to result in the taking of marine mammals by harassment only, applicants can request an incidental harassment authorization.<sup>34</sup> Incidental harassment authorizations can be issued for up to 1 year.<sup>35</sup> The MMPA provides that NMFS or FWS shall issue incidental harassment authorizations within 120 days of receiving an application.<sup>36</sup> If an activity has the potential to result in serious injury to marine mammals, the applicant would request incidental take regulations, which can be issued for up to 5 years. Letters of authorization are required to conduct activities pursuant to incidental take regulations. Once incidental take regulations

---

<sup>33</sup>In some cases in the Alaska region, where seismic activities have the potential to result in the incidental take of marine mammal species that are under both NMFS's and FWS's jurisdiction, applicants would apply for a seismic survey permit from BOEM and may also apply for incidental take authorizations from both NMFS and FWS.

<sup>34</sup>The MMPA generally defines harassment as any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. 16 U.S.C. § 1362(18)(A).

<sup>35</sup>If an activity has the potential to result in harassment only, but is expected to last for multiple years, entities may either apply for an incidental harassment authorization, valid for 1 year, and then reapply each subsequent year, or may apply for incidental take regulations.

<sup>36</sup>Specifically, the MMPA provides that NMFS or FWS shall publish a proposed incidental harassment authorization not later than 45 days after receiving an application and request public comment for a period of 30 days after publication. The MMPA also provides that not later than 45 days after the close of the public comment period, if the required findings are made, NMFS or FWS shall issue an incidental harassment authorization. 16 U.S.C. § 1371(a)(5)(D)(iii). NMFS and FWS begin formal processing of an incidental harassment authorization application once it is deemed adequate and complete. See 50 C.F.R. §§ 18.27(d), 216.104. See also U.S. Fish and Wildlife Service Manual chapter 036 FW 2 (June 6, 2016) (FWS, *Marine Mammal Protection Act Incidental Harassment Authorizations*, accessed December 1, 2017, <https://www.fws.gov/policy/036fw2.html>); NMFS, *Incidental Take Authorizations Under the MMPA*, accessed December 1, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/>.

---

are finalized, the applicant can submit a request for a letter of authorization, which is issued under the incidental take regulations.<sup>37</sup>

Once NMFS or FWS initially receives an application for an incidental harassment authorization or incidental take regulation, agency officials said that they begin their review and determine whether the application is adequate and complete. They also work with the applicant to obtain any additional required or clarifying information, according to agency officials we interviewed. According to agency regulations and guidance, once the agency deems an application to be adequate and complete, it begins to formally process the application and may initiate several review actions, including a NEPA environmental review and, if appropriate, an Endangered Species Act Section 7 consultation. In the case of NMFS, the agency publishes a notice of receipt of a request for incidental take regulations in the *Federal Register*.<sup>38</sup> The agencies then publish in the *Federal Register* a proposed incidental harassment authorization or proposed incidental take regulations.<sup>39</sup>

For incidental harassment authorizations, the MMPA provides that NMFS or FWS, or both, are to publish a proposed incidental harassment authorization and request public comment in the Federal Register no later than 45 days after receiving an application.<sup>40</sup> Following a 30-day public comment period for proposed incidental harassment authorizations, the agencies would make their final determination on the authorization, based on:

- the findings of their NEPA review,

---

<sup>37</sup>The MMPA does not provide a specific time frame for incidental take regulation or letter of authorization reviews.

<sup>38</sup>Specifically, for incidental take regulations, NMFS regulations provide that it will first publish in the *Federal Register* a notice of receipt of a request for the implementation or reimplementation of regulations governing the incidental taking. 50 C.F.R. § 216.104(b)(1)(ii). After the comment period in response to the notice of receipt, NMFS publishes the proposed incidental take regulations for an additional comment period.

<sup>39</sup>See 50 C.F.R. §§ 18.27(d)(2), 216.104(b)(1). See also U.S. Fish and Wildlife Service Manual chapter 036 FW 2 (June 6, 2016) (<https://www.fws.gov/policy/036fw2.html>); NMFS, *Incidental Take Authorizations Under the MMPA*, accessed December 1, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/>.

<sup>40</sup>16 U.S.C. § 1371(a)(5)(D)(iii). As noted previously, NMFS and FWS begin formal processing of an incidental harassment authorization application once it is deemed adequate and complete.

- 
- the Endangered Species Act consultation,
  - an assessment of whether the proposed activity is consistent with the requirements of other statutes, as necessary,
  - an analysis of the applicant's ability to implement any necessary mitigation measures to reduce potential effects on marine mammals, and
  - a review of the formal public comments submitted regarding the proposed application.

Not later than 45 days after the close of the public comment period, NMFS and/or FWS is to, under the MMPA, issue an incidental harassment authorization, including any appropriate conditions.<sup>41</sup> In order to issue an incidental harassment authorization, the relevant agency must make the required findings that the activity will result in a taking by harassment only of small numbers of marine mammals, that the anticipated take will have a negligible impact on the species or stock, and the anticipated take will not have an unmitigable adverse impact on the availability of the species or stock for subsistence uses.

For incidental take regulations, the agencies are to publish proposed regulations in the Federal Register and generally provide a public comment period of 30-to-60 days, depending on the type of authorization requested and circumstances that may warrant a shorter or longer period. The agencies then publish a final rule in the Federal Register, which includes the agencies' response to public comments received. Generally, 30 days after the final rule is published, an approved incidental take regulation becomes effective.<sup>42</sup> Once the regulation becomes effective, the agencies may issue letters of authorization, the applications for which may have been received at the same time as the submission of the incidental take regulation request or following the implementation of the regulations, and then determine whether the activities in the letter of authorization application are within the scope of the activities analyzed in the regulations. The relevant agency can issue a letter of authorization based on a determination under the agency's regulations that the level of any incidental takings will be consistent with the findings used to determine the total taking allowable under the specific regulations.

---

<sup>41</sup>16 U.S.C. § 1371(a)(5)(D)(iii).

<sup>42</sup>The Administrative Procedure Act provides that a rule generally may not become effective for 30 days following publication unless the agency finds good cause for immediate effectiveness. See 5 U.S.C. § 553(d).

**NMFS Reviewed and Approved Incidental Take Authorizations in Three OCS Regions, and FWS Reviewed and Approved Authorizations in the Alaska OCS**

From 2011 through 2016, based on our analysis of agency data, NMFS reviewed 28 applications for incidental take authorizations and issued 21 incidental take authorizations across the Alaska, Atlantic, and Gulf of Mexico OCS regions, and FWS reviewed and issued 7 authorizations only in the Alaska OCS, in part because the marine species under FWS' jurisdiction do not tend to occur in waters of the OCS in the other regions.<sup>43</sup> Of the 28 applications NMFS reviewed, it reviewed the most applications (18) and issued the most authorizations (16) related to seismic surveys in the Alaska region (see table 3).

**Table 3: Incidental Take Authorizations Related to Seismic Surveys Reviewed and Issued by National Marine Fisheries Service by Selected Outer Continental Shelf (OCS) Region (2011–2016)**

	Alaska	Atlantic	Gulf of Mexico	Total by status
Incidental harassment authorizations				
Reviewed	18	9	1 <sup>b</sup>	<b>28</b>
Withdrawn by applicant	2	0	0	<b>2</b>
Pending	0	5	0	<b>5</b>
Issued	16	4	1	<b>21</b>
Letters of authorization (associated with incidental take regulations)				
Reviewed and issued	0 <sup>a</sup>	0	0	<b>0</b>
<b>Total incidental take authorizations issued by region</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>21</b>

Source: GAO analysis of National Marine Fisheries Service data. | GAO-18-60

Note: For seven of the incidental harassment authorizations in this table, the activities took place on both OCS and state waters, according to a National Marine Fisheries Service official. There are two types of incidental take authorizations—incidental harassment authorizations, which are valid for up to 1 year, and letters of authorization, which can only be requested and approved if there are incidental take regulations in place and which are valid for up to 5 years.

<sup>a</sup>The National Marine Fisheries Service issued one incidental take regulation in the Alaska OCS related to seismic surveys, and there were no associated letters of authorization with that regulation because no entities applied, according to agency officials.

<sup>b</sup>NMFS issued one incidental harassment authorization in the Gulf of Mexico for a research seismic survey, requested by the United States Geological Survey.

<sup>43</sup>The numbers of incidental take authorizations reviewed and issued by NMFS and FWS across the three regions include those related to seismic survey permits issued by BOEM as well as those related to research seismic surveys that would not have an associated BOEM permit—for example, a research entity conducting seismic survey related to identifying tsunami hazards would have an incidental take authorization but not have an associated BOEM permit.

---

With regard to incidental take regulations, NMFS reviewed and issued one set of incidental take regulations related to seismic surveys in Alaska but did not receive applications for—and as a result has not issued—any letters of authorization associated with the incidental take regulations, agency officials said.<sup>44</sup> There were no requests for incidental take regulations related to seismic surveys in the Atlantic region, and NMFS is currently developing incidental take regulations for the Gulf of Mexico, in response to BOEM’s request, as noted previously.

From 2011 through 2016, FWS reviewed applications for and issued incidental take authorizations related to seismic surveys only in the Alaska region, in part because the species under FWS’ jurisdiction do not tend to occur in waters of the OCS in the other regions or there has not been industry interest in applying for incidental take authorizations in those regions, according to agency officials. Specifically, FWS reviewed and issued two incidental harassment authorizations and two incidental take regulations, which had five associated letters of authorization, for seismic activities in the Alaska OCS.<sup>45</sup>

---

<sup>44</sup>For the incidental take regulations, see *Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Seismic Surveys in Cook Inlet, Alaska*, 81 Fed. Reg. 47,240 (July 20, 2016) (codified at 50 C.F.R. pt. 217, subpt. N). This set of incidental take regulations is specific to one entity in the region, so only that entity may apply for and receive a letter of authorization under the regulations. See 50 C.F.R. § 217.130.

<sup>45</sup>FWS did not issue incidental take regulations in any other OCS region during that time frame, according to agency officials we spoke with.

---

Both NMFS and FWS Did Not Accurately Record Certain Review Dates Because Neither Agency’s Guidance Sufficiently Describes How to Record Such Dates

From 2011 through 2016, NMFS did not accurately record the dates on which it determined applications to be adequate and complete, and FWS did not record those dates at all; therefore, it is not possible to determine NMFS and FWS time frames for reviewing incidental take authorization applications. As noted previously, both agencies, per their guidance and regulations, are to begin their formal processing of a request for an incidental take authorization once an application is determined to be “adequate and complete.”<sup>46</sup> NMFS has general guidance on what constitutes an adequate and complete incidental take authorization application—for both incidental harassment authorization and incidental take regulation applications, as well as associated letter of authorization applications.<sup>47</sup> Specifically, NMFS’ regulations and website outline 14 sections of information required in an incidental take authorization application, such as the anticipated impact of the activity to the species or stock of marine mammal.<sup>48</sup> The agency’s website also notes that adequate and complete means “with enough information for the agency to analyze the potential impacts on marine mammals, their habitats, and on the availability of marine mammals for subsistence uses.”<sup>49</sup>

---

<sup>46</sup>According to NMFS and FWS officials, the agencies begin reviewing applications once they receive them; they do not wait to begin their review until after the application is determined to be “adequate and complete.” Instead, according to these officials, they begin reviewing the parts that are adequate and complete, while working with the applicant to obtain any missing information or to address any needs for clarifications. However, NMFS regulations and FWS guidance state that the agencies do not start the clock on the statutory time frame until an application is deemed “adequate and complete.”

<sup>47</sup>50 C.F.R. § 216.104. NMFS, *Incidental Take Authorizations Under the MMPA*, accessed October 13, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/>.

<sup>48</sup>NMFS regulations specify 14 types of information to include in a request for an incidental take authorization, which the agency groups into sections: (1) Description of Specified Activity; (2) Dates and Duration, Specified Geographic Region; (3) Species and Numbers of Marine Mammals; (4) Affected Species Status and Distribution; (5) Type of Incidental Taking Authorization Requested; (6) Take Estimates for Marine Mammals; (7) Anticipated Impact of the Activity; (8) Anticipated Impacts on Subsistence Uses; (9) Anticipated Impacts on Habitat; (10) Anticipated Effects of Habitat Impacts on Marine Mammals; (11) Mitigation Measures; (12) Arctic Subsistence Plan of Cooperation; (13) Monitoring and Reporting; (14) Suggested Means of Coordination. See 50 C.F.R. § 216.104(a). See also NMFS, *Incidental Take Authorizations Under the MMPA*, accessed October 13, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/>; NMFS, *Apply for an Incidental Take Authorization*, accessed October 13, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/instructions.htm>.

<sup>49</sup>NMFS, *Incidental Take Authorizations Under the MMPA*, accessed October 13, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/>; NMFS, *Apply for an Incidental Take Authorization*, accessed October 13, 2017, <http://www.nmfs.noaa.gov/pr/permits/incidental/instructions.htm>.



---

FWS also has general guidance on what constitutes an adequate and complete incidental take authorization application, for both incidental harassment authorization and incidental take regulations, as well as associated letters of authorization. Specifically, FWS regulations and guidance specify that all applications must include certain pieces of information and note that if an application is determined to be incomplete, FWS staff are to notify the applicant within 30 days of receiving the application that information is lacking.<sup>50</sup>

However, neither NMFS nor FWS guidance sufficiently describes how agency staff should record the date on which an application is determined to be adequate and complete, which would start the time frame for reviewing incidental take authorization applications. Specifically, NMFS' guidance provides information on what should be included in an adequate and complete application but does not include information on how or when staff should record the date an application is determined to be adequate and complete. NMFS officials we interviewed told us that while they generally record these dates, they are not sufficiently accurate to be used for an analysis of review time frames. These officials said that determinations of whether an application is adequate and complete have historically varied by staff member, with some staff waiting until all outstanding questions are resolved with an applicant before deeming the application adequate and complete, and others considering an application to be adequate and complete if more substantive questions are answered (e.g., the dates, duration, specified geographic region of, and estimated take for the proposed activity), even if some less substantive questions are still outstanding (e.g., contact information). In addition, NMFS officials told us that, in some cases, staff might not enter into their system the date they determine an application to be adequate and complete and might instead enter the information in batches once they have a few applications that are ready for data entry. This might mean that, in cases where a staff member waits until an application is done being processed and reviewed, the date recorded for the determination of adequate and complete, and the date the incidental take authorization is published, may be zero to a few days apart. Based on our review of NMFS data, in at

---

<sup>50</sup>Internal Review Process for Authorizing Harassment under Section 101(a)(5)(D) of the Marine Mammal Protection Act, U.S. Fish and Wildlife Service (June 2016) (citing 50 C.F.R. § 18.27(d)) (FWS, *Marine Mammal Protection Act Incidental Harassment Authorizations*, accessed October 13, 2017, (<https://www.fws.gov/policy/036fw2.html>)). FWS regulations specify the items that must be included in an application for incidental take regulations. See 50 C.F.R. § 18.27(d).

---

least two cases, the date NMFS recorded for the determination of adequacy and completeness of an application was after the date when the proposed incidental take authorization was published in the Federal Register.

While FWS has guidance on what applicants should include in an incidental take authorization application, the guidance does not specify how or when staff should record the date on which they determine an application is adequate and complete. One FWS official we interviewed told us that the agency does not record this date in the spreadsheet for tracking incidental take authorization applications. According to this FWS official, agency officials do not record this date because they do not wait until the application is considered adequate and complete to begin their review. Instead, they begin processing the application while working with applicants to provide missing information and clarifications. By the time FWS officials consider an application to be adequate and complete, the officials said that they usually have a well-developed draft incidental take authorization and are typically finalizing details with the applicant. According to FWS officials, recording an adequate and complete date would have little meaning.

NMFS's and FWS's guidance does not specify how or when staff should record the date an application is determined to be adequate and complete to help ensure that such a date is recorded consistently. As a result, the agencies are either not accurately recording the date an application is adequate and complete or not recording that date. Thus, the agencies are not able to determine how long their formal processing takes. This outcome is inconsistent with federal internal control standards, which call for management to use quality information to achieve agency objectives and design control activities, such as accurate and timely recording of transactions, to achieve objectives and respond to risk.<sup>51</sup> Officials we interviewed at both agencies told us that they work to help meet applicants' project timelines—for example, applicants might need an incidental harassment authorization to be in place when their seismic survey vessel becomes available to begin operations. Until NMFS and FWS develop guidance that clarifies how and when staff should record the date on which the agency determines the "adequacy and completeness" of an application, the agencies and applicants will

---

<sup>51</sup>GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: September 2014).

---

continue to have uncertainty around review time frames for incidental take authorizations.

Further, NMFS and FWS do not know if they are meeting their statutory time frames for reviewing one type of incidental take authorization application—incidental harassment authorization applications—because they do not assess the time it takes their agencies to review applications and make authorization decisions. As noted previously, the MMPA provides that NMFS or FWS shall issue incidental harassment authorizations within 120 days of receiving an application.<sup>52</sup> Industry representatives, scientific researchers, and agency officials we interviewed noted, however, that the agencies often take longer than 120 days to make a decision about whether to issue an incidental harassment authorization. For example, NMFS and FWS officials we interviewed told us they often do not complete incidental harassment authorization reviews within the 120-day statutory time frame. According to NMFS and FWS officials, reviews may take longer than 120 days in cases where the agency determines that a threatened or endangered species under the Endangered Species Act may be affected, because the agency generally must request the initiation of a section 7 consultation, which by regulation can take up to 135 days.<sup>53</sup>

More specifically, NMFS and FWS officials we interviewed were unable to provide accurate estimates of how long it takes their agency to review incidental harassment authorization applications because they said that they do not conduct analyses of their review time frames. This practice is inconsistent with federal standards for internal control, which call for agency management to design control activities to achieve objectives and respond to risks, including by comparing actual performance to planned or expected results throughout the organization and analyzing significant

---

<sup>52</sup>In addition to the MMPA requirement that NMFS or FWS issue incidental harassment authorizations within 120 days of receiving an application, a May 2017 executive order provides that the Secretaries of Commerce and Interior shall, to the maximum extent permitted by law, expedite all stages of consideration of incidental take authorization requests. Implementing an America-First Offshore Energy Strategy, Exec. Order No. 13795, 82 Fed. Reg. 20,815 (May 3, 2017).

<sup>53</sup>Specifically, joint NMFS and FWS regulations provide that the agency, NMFS or FWS, is allowed 90 days to consult with the action agency and then 45 days to prepare and submit a biological opinion. 50 C.F.R. § 402.14(e). The 90-day consultation period can be extended by mutual agreement of the consulting agency and the action agency, subject to certain limitations when an applicant is involved.

---

differences.<sup>54</sup> Without analyzing how long it takes to review incidental harassment authorization applications, from the date the agency determines that an application is adequate and complete until the date an application is approved or denied, and comparing it to the statutory review time frame, NMFS and FWS will be unable to determine whether they are meeting their objectives of completing reviews within the statutory time frame of 120 days.

---

## For Several Years, BOEM and NMFS Have Been Reviewing Certain Seismic Survey Permit and Incidental Take Authorization Applications in the Atlantic OCS

As of October 2017, in addition to the six permits BOEM issued in the Atlantic OCS from 2011 through 2016, another six permits were pending a decision. Five related incidental harassment authorizations have also been pending a decision by NMFS, as of October 2017.

---

## BOEM Has Been Reviewing Six Seismic Survey Permit Applications in the Atlantic OCS Region for Several Years

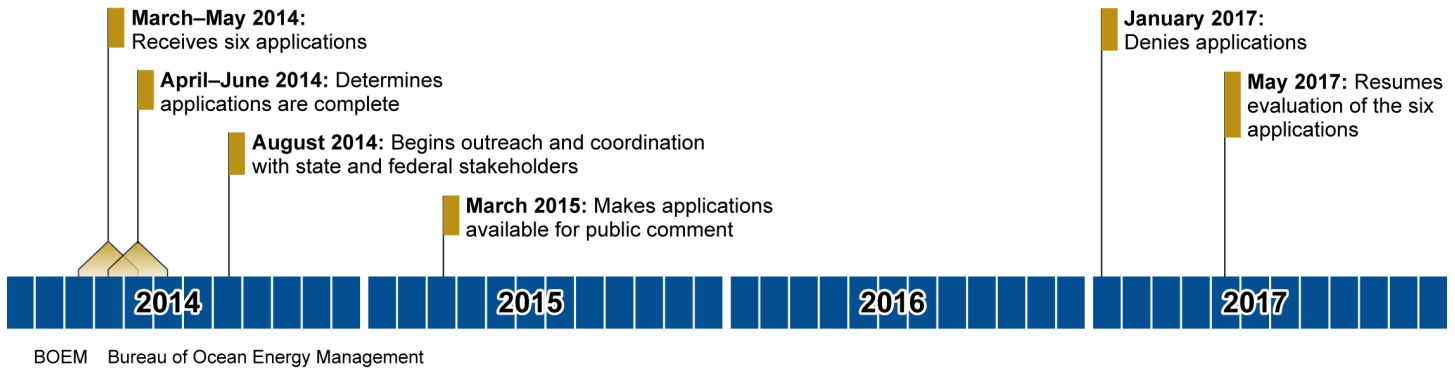
As of October 2017, in addition to the six permits BOEM issued in the Atlantic OCS from 2011 through 2016, another six permits were pending a decision. From March to May 2014, BOEM received these six applications for seismic survey permits in the Atlantic region (see fig. 5). Of the six applicants that applied to BOEM during that time, five also applied to NMFS for incidental harassment authorizations related to their seismic survey permit applications, from August 2014 to January 2016. The sixth applicant that applied to BOEM for a seismic survey permit in the Atlantic OCS region did not apply for an incidental harassment authorization with NMFS, according to NMFS officials.<sup>55</sup>

---

<sup>54</sup>GAO-14-704G.

<sup>55</sup>BOEM officials told us that they would not issue these seismic survey permits in the Atlantic OCS region without an approved incidental harassment authorization from NMFS, so they do not anticipate issuing this permit until the applicant applies for and receives an approved incidental harassment authorization.

**Figure 5: Bureau of Ocean Energy Management (BOEM) Review Timeline of Six Seismic Survey Permit Applications in the Atlantic Outer Continental Shelf Region, 2014–2017**



Source: GAO Analysis of BOEM data and interviews with BOEM officials. | GAO-18-60

Note: Five of the six applicants submitted their related incidental-harassment applications to the Department of Commerce's National Marine Fisheries Service (NMFS) from August 2014 through January 2016. According to BOEM officials, the agency was awaiting NMFS's issuance of incidental harassment authorizations before issuing seismic survey permits. Before such authorizations were issued, in January 2017, BOEM denied these applications, citing, among other things, the 5-year leasing plan, which removed the area from all leasing during the period from 2017 through 2022.

BOEM officials we interviewed stated that beginning in August 2014, the agency began conducting outreach to Atlantic state officials to explain the geological and geophysical permitting process and the seismic technologies involved in the applications. In addition, according to BOEM officials, the agency began coordinating with the Department of Defense and the National Aeronautics and Space Administration to ensure that the proposed seismic surveys did not interfere with any of their activities. According to BOEM data we reviewed, the agency had determined that all six applications to be “accepted,” or complete in late April to early June 2014.

In March 2015, BOEM made the applications available for public comment for 10 or 30 days, depending on the type of activity proposed. According to BOEM officials, while the agency does not generally provide a similar public comment period for the Gulf of Mexico or Alaska OCS regions, once the Atlantic applications were considered “accepted,” BOEM decided to provide a public comment period for them because the region is considered a “frontier area”—a region without a long history of oil and gas development—and local communities in Atlantic states are less familiar with the impacts of seismic surveys than communities in the Gulf states. From March 2015 until January 2017, BOEM had no further data on its review activities that took place. BOEM officials we interviewed told us that their seismic survey permit reviews were complete, but the

---

agency did not issue the seismic survey permits because it had made a policy decision to wait for NMFS to issue incidental harassment authorizations before doing so.

In January 2017, BOEM denied the six applications for deep-penetration seismic survey permits in the Atlantic OCS region after reviewing the applications for 948 to 982 days.<sup>56</sup> In May 2017, BOEM announced it would reconsider the six applications for seismic survey permits in the Atlantic region, after the new administration rescinded the permit denials. As of August 2017, BOEM officials we interviewed were unable to provide estimates of when the agency's reviews would be completed.

---

### NMFS Has Been Reviewing Incidental Harassment Authorization Applications Related to Seismic Survey Permits in the Atlantic OCS for Several Years

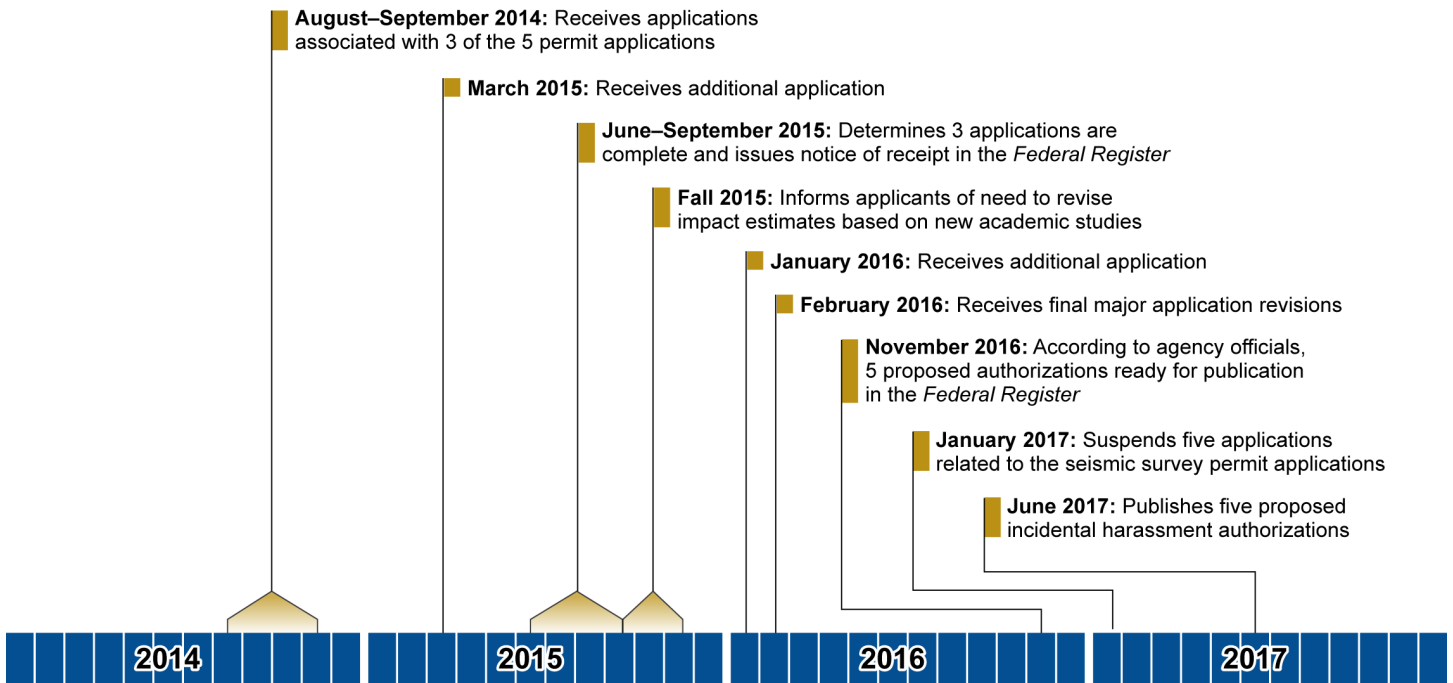
In addition to the four incidental harassment authorizations NMFS approved in the Atlantic OCS region from 2011 through 2016, there are five authorization applications related to seismic survey permits that are pending a decision by NMFS, as of October 2017.<sup>57</sup> NMFS received three incidental harassment authorization applications related to seismic surveys in the Atlantic OCS region from August to September 2014, a fourth in March 2015, and a fifth in January 2016 (see fig. 6).

---

<sup>56</sup>BOEM's letters to applicants cited reasons for the denial, including the 5-year leasing plan, which removed the area from all leasing during the 2017 through 2022 period. According to BOEM officials we interviewed, this action was the first time the agency had ever denied a geological and geophysical permit, in part because, as part of the permit process, BOEM regulations provide that if the agency disapproves a permit application, it will state the reasons for the denial and advise applicants of the changes needed to obtain approval.

<sup>57</sup>NMFS received a sixth incidental harassment authorization application for the Atlantic OCS region in October 2014 that was not related to a BOEM seismic survey permit but was for a deep-water multi-beam bathymetry survey.

**Figure 6: National Marine Fisheries Service (NMFS) Review Timeline of Five Incidental Harassment Authorization Applications Related to Seismic Survey Permit Applications in the Atlantic Outer Continental Shelf Region, 2014–2017**



NMFS National Marine Fisheries Service

Source: GAO Analysis of NMFS data and interviews with NMFS officials. | GAO-18-60

In fall 2014, NMFS redirected staff reviewing the Atlantic incidental harassment authorization applications to work on issues related to the agency’s Fisheries Science Center, according to a NMFS official we interviewed.<sup>58</sup> According to this official, review of the Atlantic applications resumed in February 2015. In spring 2015, NMFS became aware of some academic studies concerning the impacts of seismic surveys on marine mammals that they felt would be important to consider with the Atlantic OCS applications under review, according to agency officials we interviewed. According to these officials, NMFS notified applicants of these studies, and one applicant voluntarily revised its impact estimates

<sup>58</sup>Specifically, according to the NMFS official, NMFS redirected staff from reviewing the Atlantic incidental harassment authorization applications to work on pending environmental compliance analyses related to the agency’s Fisheries Science Centers following receipt of a 60-day notice of intent to sue regarding alleged violations of the Endangered Species Act, the MMPA, and the Administrative Procedure Act.

---

based on the studies. In summer 2015, NMFS officials said they determined the three applications were sufficiently complete to begin processing. The agency also published a formal notice of receipt and request for comments in the Federal Register.<sup>59</sup> According to NMFS officials we interviewed, this procedure is not a required step in the incidental harassment authorization review process, but NMFS officials thought it was important to solicit the input, given potential local community concern over the surveys in the Atlantic OCS region. Also according to NMFS officials, based on comments received during the public comment period, NMFS determined one application had been erroneously considered complete and returned the application to the applicant.

In fall 2015, NMFS officials informed applicants that NMFS would need revised applications based on the new academic studies. In addition to the applicant noted above who updated its application in spring 2015, one additional applicant chose to update its application in fall 2015, and NMFS updated two additional remaining applications.<sup>60</sup> NMFS officials told us they received the last major revisions to the applications in May 2016 and were reviewing and drafting mitigation and monitoring proposals throughout 2016. In November 2016, according to NMFS officials, the five proposed incidental harassment authorizations were ready to be published in the Federal Register, but internal leadership placed the process on hold due to uncertainty regarding BOEM's actions on the permits.

Following BOEM's denials in January 2017, NMFS suspended the five incidental harassment authorization applications related to the denied seismic survey permits; according to NMFS officials, NMFS determined there was no longer a valid basis for any proposed activity following BOEM's denial of permits for the actual activity. Agency officials informed applicants that NMFS may resume its incidental harassment authorization review if BOEM resumed its permit review at some point in the future. Once BOEM announced it would reconsider the six applications for seismic survey permits in the Atlantic region, NMFS published five proposed incidental harassment authorizations related to the permits

---

<sup>59</sup>80 Fed. Reg. 45,195 (July 29, 2015).

<sup>60</sup>The fifth applicant submitted its initial incidental harassment authorization application to NMFS with the new information included.



---

being reconsidered by BOEM in June 2017.<sup>61</sup> In July 2017, NMFS extended the public comment period an additional 15 calendar days for a total of 45 days.<sup>62</sup> After the close of the public comment period, under the MMPA, NMFS is to finalize its decision regarding the applications and either publish the final incidental harassment authorizations or deny the applications. As of October 2017, officials we spoke with at NMFS were unable to provide estimates of when the agency's reviews would be completed.

---

## Conclusions

Offshore seismic surveys provide federal agencies and commercial entities with a wide range of information, including data on fault zones and geology that may indicate the presence of oil and gas. This information can help inform regulatory and resource development decisions. In reviewing applications for seismic survey permits, BOEM records the date on which an application for a seismic survey permit is "accepted", or complete, which may be weeks or months after an application is received. NMFS and FWS, however, were unable to provide accurate data on the dates that they determined applications for incidental take authorizations were adequate and complete because the agencies' guidance does not specify how or when staff should record this date. Until NMFS and FWS develop guidance that clarifies how and when staff should record the date the agency determines the "adequacy and completeness" of an application, the agencies and applicants will continue to have uncertainty around review time frames for incidental take authorizations. Moreover, NMFS and FWS officials we interviewed said that they do not analyze their review time frames, a practice that is inconsistent with federal standards for internal control. Without analyzing how long it takes to review incidental harassment authorization applications and comparing time frames to the statutory review time frame, NMFS and FWS will be unable to determine whether they are meeting their statutory review time frame of 120 days.

---

<sup>61</sup>82 Fed. Reg. 26,244 (June 6, 2017).

<sup>62</sup>82 Fed. Reg. 31,048 (July 5, 2017). The MMPA provides that NMFS or FWS shall request public comment for a period of 30 days after publication of a proposed incidental harassment authorization. 16 U.S.C. § 1371(a)(5)(D)(iii). According to NMFS officials, they decided to extend the public comment period by 15 days for the five proposed incidental harassment authorizations for the Atlantic region in response to requests for extensions. In addition, according to NMFS officials, during the 45-day public review period, NMFS reviewed approximately 120,000 public comments requiring review and response.

---

---

## Recommendations for Executive Action

We are making the following four recommendations, including two to NMFS and two to FWS. Specifically:

The Assistant Administrator for Fisheries of NMFS should develop guidance that clarifies how and when staff should record the date on which the agency determines the “adequacy and completeness” of an incidental take authorization application. (Recommendation 1).

The Principal Deputy Director of FWS should develop guidance that clarifies how and when to record the date on which the agency determines the “adequacy and completeness” of an incidental take authorization application. (Recommendation 2).

The Assistant Administrator for Fisheries of NMFS should analyze the agency’s time frames for reviewing incidental harassment authorization applications—from the date the agency determines that an application is adequate and complete until the date an application is approved or denied—and compare the agency’s review time frames to the statutory review time frame. (Recommendation 3).

The Principal Deputy Director of FWS should analyze the agency’s time frames for reviewing incidental harassment authorization applications—from the date the agency determines that an application is adequate and complete until the date an application is approved or denied—and compare the agency’s review time frames to the statutory review time frame. (Recommendation 4).

---

## Agency Comments and Our Evaluation

We provided a copy of this report to the Departments of Commerce and the Interior for review and comment.

The Department of Commerce provided comments on behalf of the National Marine Fisheries Service (NMFS). NMFS agreed with our recommendations but recommended changes to some of the terms used in our report and stated that our characterization of the statutory and mandated requirements did not fully describe the extent of review and analysis required during their review. While we believe that our description of the extent and complexity of NMFS’ review and analysis, including the terms we use to describe NMFS’ process, was sufficient for this report, we revised the report as appropriate. In its letter, NMFS acknowledged that it does not consistently record the date that an application is deemed “adequate and complete,” and agreed with our recommendations, including describing the steps it plans to take to

---

address them. The Department of Commerce also provided technical comments, which we incorporated throughout our report as appropriate. The Department of Commerce’s letter can be found in appendix II.

The Department of the Interior provided comments on behalf of the Bureau of Ocean Energy Management (BOEM) and the U.S. Fish and Wildlife Service (FWS). The FWS partially concurred with our first recommendation and fully concurred with our second. Regarding the first recommendation, FWS noted that it plans to develop guidance for recording the “adequate and complete” date of incidental harassment authorization applications; however, it did not indicate that it would develop such guidance for the other type of incidental take authorization—the incidental take regulations. We believe that FWS should develop guidance for both. Such guidance is necessary to maintain consistency with federal internal control standards, which call for management to use quality information to achieve agency objectives and design control activities, such as accurate and timely recording of transactions, to achieve objectives and respond to risk. The Department of the Interior also provided technical comments, which we incorporated throughout our report as appropriate. The Department of the Interior’s letter can be found in appendix III.

---

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Acting Director of BOEM, the Assistant Administrator for Fisheries of NMFS, and the Principal Deputy Director of FWS.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff members who made significant contributions to this report are listed in appendix IV.

Sincerely yours,



Frank Rusco  
Director, Natural Resources and Environment

---

# Appendix I: Objectives, Scope, and Methodology

---

This report examines (1) BOEM's process for reviewing seismic survey permit applications in each OCS region, the number of applications reviewed from 2011 through 2016, and BOEM's review time frames; (2) NMFS's and FWS's processes for reviewing incidental-take authorization applications related to seismic surveys in each OCS region, the number of such applications reviewed by the agencies from 2011 through 2016, and their review time frames; and (3) the status of pending seismic survey permit applications and related incidental take authorizations in the Atlantic OCS region. In our preliminary review of all four OCS regions—Alaska, the Atlantic, the Gulf of Mexico, and the Pacific—we determined that there had been no new oil and gas and related seismic activity in the Pacific OCS region for the last two decades;<sup>1</sup> as a result, we excluded the Pacific OCS region from our review.

To examine BOEM's, NMFS's, and FWS's processes for reviewing seismic survey permit applications and related incidental take authorizations, we analyzed relevant laws and regulations that govern the processes and reviewed and analyzed agency guidance, such as process flowcharts, and other documents, including Federal Register notices. We also interviewed BOEM, NMFS, and FWS agency officials, in their headquarters and regional offices, responsible for overseeing seismic permitting and incidental take authorization reviews in each selected OCS region. In addition, we interviewed a range of stakeholders, identified and selected because of their knowledge of the seismic survey permit and incidental take authorization application processes, to obtain their views. Specifically, we interviewed representatives from 10 stakeholder groups, which included industry groups, a research institution, and environmental organizations. Because this was a nonprobability sample of stakeholders, the views of stakeholders we spoke with are not generalizable beyond those groups that we interviewed.

To examine the number of seismic survey permit applications and related incidental take authorizations that BOEM, NMFS, and FWS reviewed from 2011 through 2016, we obtained data from BOEM, NMFS, and FWS on the number of permit and authorization applications each agency

---

<sup>1</sup>Specifically, BOEM has not included the Pacific OCS region in its 5-year OCS oil and gas leasing program for at least 20 years. In addition, according to BOEM officials, BOEM did not receive applications for or issue any seismic survey permits in the Pacific region from 2011 through 2016. NMFS issued three incidental take authorizations for research related to seismic surveys that did not have an associated BOEM permit in the Pacific region from 2011 through 2016. FWS did not issue any seismic-related incidental take authorizations in the region.

reviewed and the number of permits and authorizations the agencies issued in each selected OCS region. We asked the agencies to categorize their data with different types of seismic survey technologies (e.g., deep-penetration seismic surveys, high-resolution seismic surveys, or other seismic survey technology such as vertical seismic profile technology). As a result, we identified the number of relevant permits and authorizations that were identified by these agencies as having used seismic survey technologies. We used publicly available information on the number of permit and authorization applications on agency websites to check the reliability of BOEM, NMFS, and FWS data and found the data on the number of permits and authorizations to be sufficiently reliable for our purposes.

To examine the review time frames for seismic survey permit applications and related incidental take authorizations from 2011 through 2016, as well as pending applications, and the extent to which NMFS and FWS are meeting their statutory time frames for reviewing incidental harassment authorization applications related to seismic survey permits, we obtained data from BOEM, NMFS, and FWS. We also interviewed agency officials knowledgeable about the data and analyzed the data to determine the range of review time frames by agency and by selected OCS region. We focused our review of pending applications on the Atlantic OCS region because it was the only region with applications that had been pending review for several years. We used information on the dates applications were received and issued as listed in the Federal Register or publicly available documentation to check the reliability of BOEM, NMFS, and FWS data. For BOEM, we found the dates the agency gave us generally were consistent with the dates listed in the Federal Register. As a result, we used BOEM's dates from the time an application was deemed "accepted," or adequate and complete, until the permit was issued. We found the data to be sufficiently reliable for our purposes. For NMFS and FWS, we found errors between the dates the agencies gave us and the dates listed in the Federal Register. In addition, the agencies told us they did not have reliable information on the dates that applications were determined to be adequate and complete. We also examined NMFS and FWS guidance on review time frames, agency communication with applicants, and data-recording procedures. We also interviewed agency officials as well as industry stakeholders to learn more about time frames for seismic survey permit applications and related incidental take authorizations.

# Appendix II: Comments from the Department of Commerce



**UNITED STATES DEPARTMENT OF COMMERCE**  
**The Secretary of Commerce**  
Washington, D.C. 20230

November 21, 2017

Mr. Frank Rusco  
Director, Natural Resources and Environment  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Rusco:

Thank you for the opportunity to review and comment on the Government Accountability Office's (GAO) draft report titled *Offshore Seismic Surveys: Additional Guidance Needed to Help Ensure Timely Reviews* (GAO-18-60). Enclosed are the National Oceanic and Atmospheric Administration's suggested edits and response to the GAO recommendations in the draft report.

If you have any questions, please contact me or Michael Platt, Jr., Assistant Secretary for Legislative and Intergovernmental Affairs, at (202) 482-3663.

Sincerely,

  
Wilbur Ross

Enclosure

Department of Commerce  
National Oceanic and Atmospheric Administration  
Response to the GAO Draft Report Entitled  
*Offshore Seismic Surveys: Additional Guidance  
Needed to Help Ensure Timely Reviews*  
(GAO-18-60)

**General Comments**

The Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) appreciates the opportunity to review the Government Accountability Office's (GAO) draft report. Specifically, the comments were provided by NOAA's National Marine Fisheries Service (NMFS) with input from NOAA's Office of General Counsel.

The draft report discusses that seismic surveys produce important information and are linked to energy production and the generation of substantial amounts of revenue. Although the report notes that marine mammals can be harmed, it does not provide adequate discussion of the statutory mandate of NMFS and Fish and Wildlife Service (FWS) to evaluate the anticipated effects of seismic survey activities and our requirement to work with the applicants to develop mitigation measures to reduce negative effects of surveys on marine mammals.

The report accurately describes the steps for processing applications for incidental take regulations and incidental harassment authorizations. However, it does not acknowledge the substantial information review and analysis NMFS and FWS must undertake to determine the effects that are likely to occur on affected marine mammal species or stocks. The analysis that must be produced by NMFS and FWS includes 1) the amount and type of take that will likely be caused by the applicant's activities; 2) the extent to which mitigating measures by the applicant will reduce anticipated effects on each species or stock; and 3) whether the amount and type of anticipated incidental take meets the statutory standards for small numbers, having no more than a negligible impact on each affected species or stock, and, if applicable, not affecting the availability of each species or stock for subsistence harvest. This analysis can be developed only after NMFS and FWS review and assess the information provided in the application, obtained by the agency or located in its files, and submitted during the public comment process. This absence is most notable in the description of the process in Figure 4 and on page 19. These descriptions do not fully and accurately describe the necessary analysis undertaken by the agency. Also, these descriptions address only the production of the final authorization, without noting the extensive analysis required to produce the proposed authorization.

Throughout the report, references are made to a "formal review" that does not start until after the application is deemed "adequate and complete." As we have discussed extensively but not captured in this report, NMFS begins review of the application upon receipt and continues that review through the time that the application is deemed "adequate and complete." Generally after that, we begin our development of the proposed authorization, although we may begin prior to that if we have enough information to populate some sections and the applicant is on a tight deadline. The important point is that we can only proceed so far in our analysis if the application is not

complete, but we do not hold the review in waiting for the application to be “adequate and complete.” The other important point is that any tracking of processing times (e.g., for incidental harassment authorizations (IHAs) to be compared to the 120-day statutory deadline) should begin upon an application being deemed “adequate and complete.”

The report frequently mentions that NMFS “has not conducted an analysis of their timelines” because we have not historically consistently and accurately recorded the date that application was deemed “adequate and complete.” We do not believe this statement to be entirely true. We have accurately recorded the dates that applications were received as well as the dates that were proposed and final authorizations were issued. We have used this data to manage our workload and ensure that we are on target for making decisions in the timeframes requested by applicants. Also, this data allowed us to provide comprehensive processing times, and average processing times, to GAO for our authorizations in the selected time period. However, we recognize they were likely overestimates to varying degrees, since we measured processing times from the dates the applications were received, rather than the dates they were deemed adequate and complete. Perhaps a better way to frame this would be to say that NMFS’s authorization process tracking methods to date have not been as informative as they could be (or have not been fully reliable) because of their inability to capture delays caused by applicants that do not supply the needed information with their application or in a timely fashion thereafter when requested. This problem would be resolved if we consistently recorded the date that the application was deemed “adequate and complete.”

The document often refers to “federal internal control standards” and “federal standards for internal control” that implies these standards are generally well-known and/or understood. We recommend preparing a summary of these standards and how they might relate to the issue at hand.

In the “Conclusions” section of the report on page 30, the following statement is made: “Without analyzing how long it takes to review incidental harassment authorization applications and comparing time frames to the statutory review time frame, NMFS and FWS will be unable to determine whether they are meeting their statutory review time frame of 120 days.” Without a more complete statement of the regulatory process, the reader will likely misinterpret the scope of this sentence. There are no statutory time frames for reviewing applications for incidental take regulations and letters of authorization; the 120-day deadline applies only to one type of incidental take authorization. Therefore, please revise that sentence to read as follows: “There are no statutory review deadlines for incidental take regulations and associated letters of authorization. For incidental harassment authorizations, NMFS and FWS will be unable to determine whether they are meeting their statutory review time frame of 120 days without analyzing how long it takes to review applications and comparing time frames to the statutory review time frame.”

**NOAA Response to GAO Recommendations**

The draft GAO report states “We are making the following four recommendations,” of which two apply to NMFS:



**Recommendation 1:** “The Assistant Administrator for Fisheries of NMFS should develop guidance that clarifies how and when staff should record the date on which the agency determines the “adequacy and completeness” of an incidental take authorization application.”

**NOAA Response:** NOAA agrees with this recommendation. Consistently identifying and recording the “adequacy and completeness” of an application will allow us to more accurately characterize the total processing time in terms of the time for NMFS to conduct and complete its analysis, as well as any applicant-caused delays resulting from the lack of an “adequate and complete” application. By January 2018, NMFS will develop detailed written guidance to aid analysts and applicants in consistently identifying when applications are “adequate and complete.” NMFS managers will provide regular oversight of implementation to further ensure consistency across analysts.

**Recommendation 3:** “The Assistant Administrator for Fisheries should analyze NMFS time frames for reviewing incidental harassment authorization applications – from the date the agency determines that an application is adequate and complete until the date an application is approved, or denied – and compare it to the statutory review time frame.”

**NOAA Response:** NOAA agrees with this recommendation. Once NMFS begins implementing the new guidance for determining “adequacy and completeness,” we will generate regular reports analyzing our timeframes for processing requests – from the date the agency determines that an application is adequate and complete until the date a final decision is made. This will allow us to track average timeframes, identify delays, assist applicants when necessary, and target and track improvements in efficiency. We note that statutory time frames have only been identified for incidental harassment authorizations (IHAs), not incidental take regulations, and we will compare our realized IHA timeframes to the 120 days indicated in the statute.

# Appendix III: Comments from the Department of the Interior



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240

NOV 28 2017

Mr. Frank Rusco  
Director, Natural Resources and Environment  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Rusco:

Thank you for providing the Department of the Interior (Department) the opportunity to review and comment on the draft Government Accountability Office (GAO) Report entitled, *Offshore Seismic Surveys: Additional Guidance Needed to Help Ensure Timely Reviews* (GAO-18-60).

We appreciate GAO's efforts in reviewing the Department's seismic survey permitting process in the three Outer Continental Shelf regions (Alaska, Atlantic, and the Gulf of Mexico) from 2011 through 2016 to determine the Bureau of Ocean Energy Management's process for reviewing seismic survey permit applications, and the U.S. Fish and Wildlife Service's (FWS) processes and timeframes for reviewing incidental take authorization.

GAO issued two recommendations to the Department. The first recommendation requires that the Principal Deputy Director of FWS develop guidance clarifying how and when staff should record the date on which the agency determines the "adequacy and completeness" of an incidental take authorization application.

The FWS partially concurs with this recommendation. Often, while working with an applicant and determining whether all the information provided is adequate, details of the project or timelines may change or need to be updated. This means the recorded "adequate and complete date" could require a revision each time the applicant updates or changes any aspect of the project. Therefore, the FWS plans to develop guidance for recording the "adequate and complete date" with the purpose of addressing the 120-day time period for processing incidental harassment authorizations. Work on the corrective action will begin immediately under the direction of the Assistant Director of Ecological Services.

The second recommendation requires that the Principal Deputy Director of FWS analyze the time frames for reviewing incidental harassment authorization applications – from the date the agency determines that an application is adequate and complete until the date the application is approved, or denied – and compare it to the statutory review time frame.

The FWS concurs with this recommendation and will take steps to review the incidental harassment authorizations (IHAs) issued to date and compare them with the 120-day timeline from the date the application was identified as complete (and no additional changes or updates were necessary) until the date the IHA was issued. This data will be presented in a table format

---

**Appendix III: Comments from the Department  
of the Interior**

---

indicating the date received, the date of *Federal Register* notice, the date determined adequate and complete, the date issued, and the date of effectiveness.

The enclosure includes general and technical comments for your consideration when finalizing the report.

If you have any questions, please contact Mr. Don Morgan at [don\\_morgan@fws.gov](mailto:don_morgan@fws.gov) or Ms. Kathy Garrity at [katherine\\_garrity@fws.gov](mailto:katherine_garrity@fws.gov).

Sincerely,



Scott J. Cameron  
Principal Deputy Assistant Secretary  
for Policy, Management and Budget  
Exercising the Authority of the Assistant Secretary  
for Policy, Management and Budget

Enclosure

---

# Appendix IV: GAO Contact and Staff Acknowledgments

---

---

## GAO Contact

Frank Rusco, (202) 512-3841 or [ruscof@gao.gov](mailto:ruscof@gao.gov)

---

## Staff Acknowledgments

In addition to the contact named above, Christine Kehr (Assistant Director), Nirmal Chaudhary, Maggie Childs, John Delicath, Marissa Dondoe, Cindy Gilbert, Jessica Lewis, Greg Marchand, Patricia Moye, Katrina Pekar-Carpenter, Caroline Prado, Dan Royer, and Kiki Theodoropoulos made key contributions to this report.

---

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<http://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <http://www.gao.gov> and select "E-mail Updates."

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [LinkedIn](#), [Twitter](#), and [YouTube](#). Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#). Visit GAO on the web at [www.gao.gov](http://www.gao.gov) and read [The Watchblog](#).

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <http://www.gao.gov/fraudnet/fraudnet.htm>

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

## Congressional Relations

Orice Williams Brown, Managing Director, [WilliamsO@gao.gov](mailto:WilliamsO@gao.gov), (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

---

## Public Affairs

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800, U.S. Government Accountability Office, 441 G Street NW, Room 7149, Washington, DC 20548

---

## Strategic Planning and External Liaison

James-Christian Blockwood, Managing Director, [spel@gao.gov](mailto:spel@gao.gov), (202) 512-4707, U.S. Government Accountability Office, 441 G Street NW, Room 7814, Washington, DC 20548



Please Print on Recycled Paper.