National Standards for a Protected Species Observer and Data Management Program: A Model Using Geological and Geophysical Surveys

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U.S. Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Marine Fisheries Service (NMFS)

NOAA Technical Memorandum NMFS-OPR-49
November 2013

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NOAA Technical Memorandum NMFS-OPR-49
November 2013

U.S. Department of Commerce
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National Oceanic and Atmospheric Administration
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Recommended citation:

Baker, K., D. Epperson, G. Gitschlag, H. Goldstein, J. Lewandowski, K. Skrupky, B. Smith, and T. Turk. 2013. National Standards for a Protected Species Observer and Data Management Program: A Model Using Geological and Geophysical Surveys. U.S. Department of Commerce. NOAA Technical Memorandum. NMFS-OPR-49. 73 p.

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TABLE OF CONTENTS

APPENDICES

Executive Summary

This report provides recommendations for the Protected Species Observer and Data Management Program (PSO program) for marine geological and geophysical (G&G) surveys, and recommended actions on key issues for the establishment and management of such a program. The contents of this report are the combined results of discussions held between staff from the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) and the Department of the Interior's Bureau of Ocean Energy Management (BOEM) and Bureau of Safety and Environmental Enforcement (BSEE).[1]

Improvement of the PSO program for G&G surveys was the topic of a BOEM and workshop on March 26, 2008, in New Orleans, Louisiana, with BOEM, BSEE, NMFS, PSOs, and G&G industry representatives. This workshop identified existing issues with the G&G PSO program, and potential solutions were discussed. As a result of identified federal actions at this workshop, NMFS formed an ad hoc Protected Species Observer Working Group (Working Group) comprised of personnel from NMFS, BOEM, and BSEE, and convened a workshop at the NMFS Southeast Regional Office on June 19, 2008, in St. Petersburg, Florida, to discuss PSO program issues on a national level, resulting in the preparation of this report.

Since this report was drafted, BOEM has proposed leasing areas in the Northwest Atlantic that include G&G surveying activities along the U.S. East Coast, as well as G&G activities associated with sand and gravel mining in federal waters. PSOs are expected to play a similar role in the Atlantic, as modeled after the Gulf of Mexico program, once G&G permitting begins. Improvements to PSO programs for G&G surveys would have benefits for stakeholders (NMFS, BOEM, BSEE, industry, and PSOs), enhance the effectiveness of mitigation and monitoring requirements, and increase the integrity of data collected and reported.

This report provides recommendations of the Working Group for the development of a national PSO program. The core issues for the development of national standards and the foundation necessary for the successful development and management of a PSO program for G&G surveys are identified. When possible, prudent solutions to existing issues in PSO programs are recommended, and actions requiring further consideration are noted. The following are the recommendations for NMFS and BSEE and to meet the objectives identified in this review.

Recommendations for NMFS

- Establish national PSO training standards.
- Develop a policy for national PSO qualifications and eligibility, and establish criteria by which individual PSO qualifications and experience can be evaluated.
- Ensure that PSO standards developed are consistent with existing federal statutes, regulations, and policies.

[1] Collectively, BOEM and BSEE were historically part of a single agency, previously known as the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) and the Minerals Management Service (MMS). BOEMRE was reorganized, effective October 1, 2011, into the separate agencies of BOEM and BSEE.

- Develop a strategy to coordinate with regional program managers to consistently implement PSO standards nationwide through interagency section 7 consultations under the Endangered Species Act (ESA), and Letters of Authorization (LOAs) and Incidental Harassment Authorizations (IHAs) under the Marine Mammal Protection Act (MMPA).
- Develop standardized data collection and reporting requirements to be used for interagency section 7 consultations under the ESA, and LOAs and IHAs under the MMPA for standardized data management and analyses.
- Develop data quality assurance standards and process.
- Work within NMFS Protected Resources at headquarters and regional levels, Regional Science Centers and the Office of Science and Technology to create a national database to manage PSO data and after-action reports from federal agencies and non-federal permit holders.
- Develop permits, authorizations, or agreements detailing expectations and data collection and reporting of third-party PSO trainers, including performance standards, conflicts of interest, and standards of conduct.
- Develop PSO communications and outreach materials, including drafting a manual that provides national guidance on training guidelines, procedures, and protocols for the observer issues outlined in this report.

Recommendations for BOEM/BSEE

- Develop a reimbursable agreement with NMFS to develop, implement, and manage the PSO training and data program.
- Consider assessing permit fees to financially support the PSO program needed for industry activities.
- Implement standardization including data collection methods, standardized electronic forms, and software used in collaboration with NMFS and non-federal stakeholders.
- Develop permits or agreements detailing expectations and data collection and reporting of third-party PSO provider companies, including performance standards, conflicts of interest, and standards of conduct.
- Implement quality assurance standards and manage PSO data for annual data analysis.
- Establish a process to advertise for and approve PSO procedures.
- Hold a stakeholder workshop to discuss new PSO procedures.
- Develop a mechanism, procedure, or regulation to ensure that selected PSO providers are being compensated prior to deployment of approved observers.
- Develop a debriefing and evaluation system for observers.

Protected species are defined within this report as those species under the jurisdiction of NMFS that are listed as endangered or threatened under the ESA, and all marine mammals protected under the MMPA. The U.S. Fish and Wildlife Service (USFWS) also has jurisdiction over some marine mammals—including the polar bear (*Ursus maritimus*), walrus (*Odobenus rosmarus*), sea otter (*Enhydra lutris*), dugong (*Dugong dugon*), and manatee (*Trichechus* sp.)—and these animals are not under consideration in this review. Many terms are used for observers (e.g., G&G survey observers, marine mammal observers [MMOs], endangered species observers, dredge observers, watch standers, monitors, etc.). The term "protected species observer" (PSO) is used in this report to refer to all types of observers used in protected species monitoring.

Disclaimer

The application of the contents of this report is subject to the future decisions, implementation, and policies of respective federal agencies.

1. PROGRAM STRATEGY

The PSO program will address the mitigation, monitoring, reporting, and assessment needs of protected species during G&G activities. The PSO data program will provide data of both scientific and management value to federal resource agencies and stakeholders. The PSO program strategy identifies the measures needed for NMFS, BOEM, BSEE, and collaborative partners to build an effective PSO program. This review identifies technical issues and resources such as staffing and infrastructure needed in order to carry out a meaningful PSO program. Finally, the monitoring strategy will identify specific long-term goals within an adaptive management framework.

a. What Are Protected Species Observers?

The primary purpose of a PSO is to reduce the potential for injury or harassment to protected species by ensuring mitigation and monitoring requirements are followed during industry activities, and to monitor any take of protected species. PSOs function as independent data collectors when monitoring and mitigation measures are required in permits. Monitoring of take typically requires monitoring and data collection that is reported back to the permitting federal agencies. Current PSO measures generally call for monitoring of species presence and behavior within defined zones of influence, the implementation of specific mitigation requirements and protocols during the activity, and data recording on species and the specified activity. NMFS commonly requires the use of observers in commercial fisheries and for other private and industry-related activities in aquatic environments, to monitor the activity and collect data when protected species may be adversely impacted or result in "take." Requirements to use PSOs in the United States may be prescribed by NMFS under the provisions of the ESA (16 U.S.C. §§ 1531 *et seq*.) and/or MMPA (16 U.S.C. §§ 1361 *et seq*.).

b. Why Are We Recommending PSO Program Improvements?

Despite the regular use of PSOs for G&G activities, there is a still a great deal of variation in the training, performance, and reporting requirements, due to the lack of standards or other mechanism to ensure national consistency in the implementation of PSO requirements for similar G&G activities occurring in U.S. waters. In U.S. waters, requirements vary considerably between the Gulf of Mexico and Atlantic coast, Pacific coast, and Alaska, even though many of the protected species requirements and PSO needs are quite similar. NMFS, BOEM, and BSEE have worked collaboratively to improve the existing PSO program to monitor and mitigate for protected species during seismic surveys and collect data to better understand their potential effects. In recent years there has been increased coordination between NMFS, BOEM, and BSEE regarding G&G survey impacts, PSO requirements, and associated mitigation, monitoring, and reporting. Each spring, NMFS holds a public Open Water Meeting in Anchorage, Alaska, that is designed to share the results of monitoring programs from the previous year, present the monitoring plans for activities proposed for the upcoming open water season, and allow for input and comments from Alaska Natives and other interested parties on the previous and upcoming monitoring plans. Annual Open Water Summaries that identify PSO issues and recommendations are available online at http://www.nmfs.noaa.gov/pr/permits/openwater.htm.

PSOs are used every day on G&G vessels in the Gulf of Mexico. Since the inception of the Gulf of Mexico PSO program in 2003, NMFS, BOEM, and BSEE have encountered many issues and discussed improvements to the program. A review of the initial program and existing PSO issues were discussed at a March 26, 2008, BOEM and BSEE workshop with NMFS, PSOs, and industry representatives. The workshop identified issues that needed to be addressed such as conflicts of interest, standardization of data, and consistent implementation of monitoring requirements and reporting of data. The issues identified form that workshop ultimately resulted in the preparation of this technical memorandum. Following the March 26, 2008, BOEM workshop, the Working Group was then formed and a second workshop convened at the NMFS Southeast Regional Office on June 19, 2008, to discuss PSO program issues on a national level between NMFS, BOEM, and BSEE. Currently, PSOs are employed through observer provider companies and directly contract work with industry. PSO providers generally specialize in certain activity types and provide specific training skills to meet the PSO needs for that activity type. The Working Group found this activity-specific approach to be one of the limiting factors in establishing consistency in PSO training. As a result of inconsistent training and reporting, the Working Group identified considerable differences in the level and quality of data NMFS, BOEM, and BSEE receive from different regions. Standardizing PSO requirements would address these issues by promoting consistency and effectiveness across the PSO program. Such standards would foster a more balanced approach to PSO hiring, training, and performance standards. Overall, the group agreed that both PSOs and the integrity of data could benefit from national standardization of the core elements of PSO programs, and this would also streamline the permit application process by setting core expectations for permit conditions.

c. PSO Program Objectives

Data collected by PSOs during these activities can provide reliable information to monitor the effectiveness of the measures and improve the reliability of information to assist federal agencies in future decision-making (i.e., adaptive management). PSO's' data can be very instrumental in providing species-specific responses to marine activities that are otherwise not easily observed. However, the data currently collected are not being used to their full management and scientific potential, and this is a priority that must be addressed by NMFS, BOEM, BSEE, and industry. Currently, most G&G activity is associated with oil and gas exploration and development in the Gulf of Mexico, followed by the Arctic and off the U.S. West Coast. Leasing areas have been proposed in the Atlantic Ocean that would result in a large number of G&G activities off the U.S. East Coast. Similar activities are conducted for scientific objectives by the U.S. Geological Survey (USGS), the National Science Foundation (NSF), and academia.

The recommendations of the Working Group describe the objectives and approach for the implementation of a more effective PSO program, using G&G surveys as the modeled activity. The core objectives for the development of national standards and infrastructure are detailed for the successful implementation of a PSO program. The following are PSO program objectives:

1. Improve the rigor of scientific data collected by PSOs.
2. Establish standardized data collection and reporting requirements for G&G surveys.
3. Create and maintain a national or regional database to manage PSO data for G&G survey data collected and reported to NMFS and BSEE.

4. Develop funding and cooperative support to develop, implement, and manage the PSO training and data program;
5. Establish a national PSO training course and PSO eligibility standards.
6. Establish a process to approve PSO trainers.
7. Establish a process to approve PSO providers.
8. Develop a permit fee to support the PSO program needed for industry activities.
9. Develop a policy for national PSO qualifications and eligibility.
10. Conduct regular analysis of the data and make the findings available to stakeholders.

Although the PSO standards discussed in this report potentially could be applied to other activities, the recommendations of NMFS, BOEM, and BSEE in this report focus specifically on G&G surveys.

2. FEDERAL STATUTES AND AUTHORITIES BEHIND PSO PROGRAMS

Federal statutes set forth different mandates for each agency to conserve protected species and their habitats. The three main statutes, and their implementing regulations, relevant to NMFS, BOEM, and BSEE in requiring and/or implementing PSO requirements include:

Endangered Species Act (16 U.S.C. §§ 1531 et seq.)
Section 7 of the ESA (16 U.S.C. §§ 1531(a)(1)) requires the Secretaries of Commerce and the Interior to review programs and use such programs in furtherance of the purposes of the ESA. The ESA also requires that other federal agencies, in consultation with NMFS (and the USFWS) to use their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species. In addition to reviewing and establishing conservation programs, section 7 of the ESA (16 U.S.C. §§ 1536(a)(2)) requires federal agencies to consult with the Secretary of Commerce, through NMFS, to ensure that "any action authorized, funded, or carried out by such agency…is not likely to jeopardize the continued existence of any endangered species or threatened species or adversely modify or destroy [designated] critical habitat…" (see 50 CFR Part 402). Pursuant to NMFS regulations, if the proposed activity may result in incidental take, reasonable and prudent measures are set forth that specify terms and conditions (including, but not limited to, reporting requirements) to minimize such take (see 50 CFR Part 402.14).

Marine Mammal Protection Act (16 U.S.C. §§ 1361 et seq.)
Under the MMPA, NMFS may authorize the incidental, but not intentional, taking of small numbers of marine mammals. NMFS may grant Incidental Take Authorizations (ITAs, i.e., LOAs or IHAs) under the MMPA if it finds that the taking will have a negligible impact on the species or stock(s), and will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant). ITAs granted by NMFS under the MMPA specify the type of take that will occur from the specified activity, the number of takes anticipated, and requirements pertaining to the mitigation, monitoring, and reporting of such takings (see section 101(a)(5)(A) and/or (D) of the MMPA).

Outer Continental Shelf Land Act (43 U.S.C. §§ 1331 et seq.)
The Outer Continental Shelf Lands Act (OCSLA) requires BOEM and BSEE to manage the ocean energy and mineral resources on the Outer Continental Shelf (OCS) and federal and Indian mineral revenues to enhance public and trust benefits, promote responsible use, and realize fair value. This includes ensuring that offshore activities are conducted in a technically safe and environmentally sound manner.

NMFS, BOEM, and BSEE all have some responsibility to ensure the effectiveness of PSO programs according to federal statutes and implementing regulations, and may develop their own policies in coordination with NMFS pursuant to section 7(a)(1) of the ESA. A conservation program defining PSO standards and practices and maintaining a centralized data management system could be established by any federal agency under section 7(a)(1) of the ESA, which calls for federal agencies "to utilize their authorities to carry out programs for the conservation of

threatened and endangered species." Currently, G&G survey mitigation and monitoring measures are defined for individual projects or applied programmatically for similar activity types over specific oceanographic regions over specific time periods. Permitting agencies may also require additional measures or clarify requirements and reporting procedures according to federal regulations or agency policies for proposed activities.

For energy-related activities on the Outer Continental Shelf, NMFS, BOEM, and BSEE require the use of PSOs during G&G surveys when a permitted activity may adversely affect or "take" species listed under the ESA and/or a marine mammal protected under the MMPA. The BOEM and BSEE may also require PSOs under the OCSLA (43 U.S.C. §§ 1331 *et seq*.) to implement compliance measures with the ESA and MMPA, as well as the implementation of other regulations for the exploration, development, and production of natural resources on the Outer Continental Shelf of the U.S. Exclusive Economic Zone (EEZ). Generally, the requirement for PSOs is found in the Incidental Take Statement of ESA biological opinions, or in NMFS MMPA permit conditions (LOAs or IHAs). Protected species requirements are implemented by BOEM through the issuance of G&G permits, exploration plans, and development operations coordination documents, and are typically explained further in Notices to Lessee and Operators (NTLs) (see Appendix A for the current G&G NTL for the Gulf of Mexico). PSOs may also be used on oil and gas platforms, dredging activities, and other energy production activities where interactions with protected species are likely to occur.

Alaska Native subsistence monitoring and the use of PSOs have been particularly important for G&G surveys occurring in marine waters of the Alaska region (see Subsistence Monitoring section below for more information). NMFS also has the responsibility under the MMPA, and BOEM and BSEE under the OCSLA, to ensure the protection of subsistence practices; therefore, PSO duties may also have associated relevance to these monitoring requirements.

In the Gulf of Mexico, the use of PSOs is currently required under the authorities of section 7(a)(2) of the ESA through interagency section 7 consultations and is being implemented under OCSLA by BOEM and BSEE. Broader regulations for marine mammals are currently being applied for under the MMPA, but were not in place at the time of this writing. In Alaska, PSO requirements are required under both the ESA and through MMPA authorizations in the form of IHAs or LOAs issued under MMPA regulations. The BOEM and BSEE have the broad authority to require and establish a PSO-based conservation program through its mandate under the OCSLA (43 U.S.C. §§ 1331 *et seq*.) and regulations. Although PSOs are currently required, and there are few substantial differences in the nature of the requirements between each federal authority, a centralized program to train PSOs, collect data, and maintain a database does not exist nationally. Establishing a PSO program and standards would also be beneficial to industry by providing consistent expectations regarding PSO requirements nationwide. In addition, a standardized approach will yield more useful data to better inform decision-makers on the effectiveness of mitigation and monitoring measures.

3. PSO PROGRAM INFRASTRUCTURE AND SUPPORT

Generally, there are two types of observers: fishery observers and PSOs (or non-fishery observers). The NMFS National Observer Program (NOP) model for fisheries observer programs may serve as a framework to improve the regional PSO programs for G&G surveys. National standards have been developed for fisheries observers, and a similar model is needed for PSOs. Many regional fishery observer programs have been established since 1973 to monitor commercial fishing activities. Figure 1 shows the predominant model of program management used by most regional observer programs for commercial fisheries. NMFS currently uses this model to deploy hundreds of fishery observers across 47 fisheries nationally to collect fishery-dependent data.

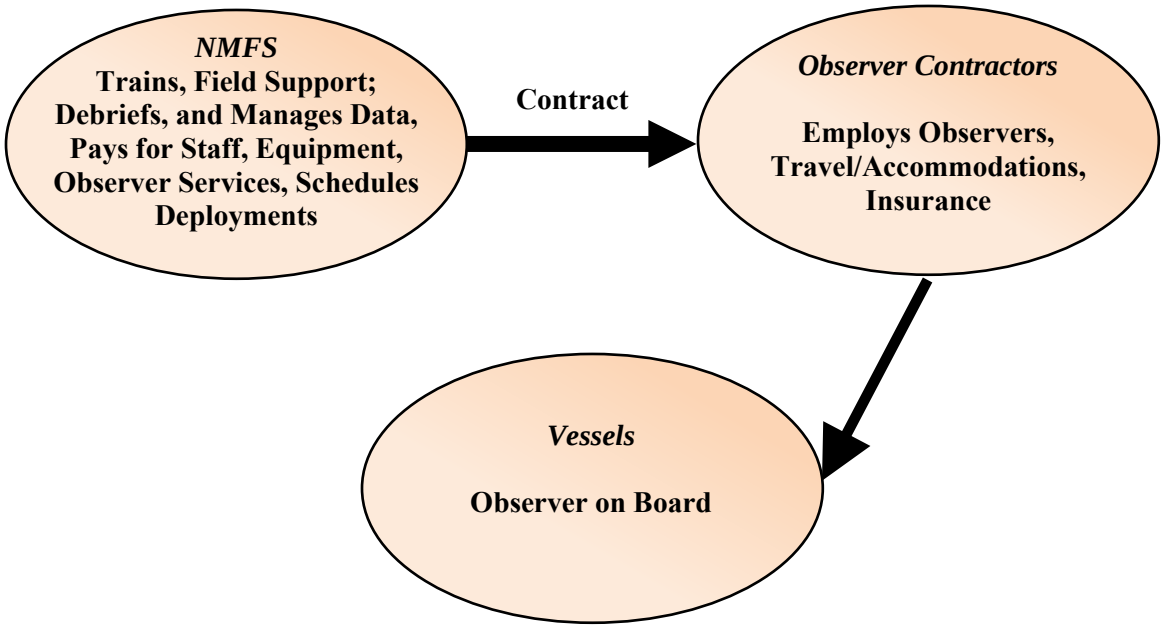

Figure 1. The primary U.S. observer model used by NMFS' fisheries observer programs.

Essentially, NMFS carries out training, in-season support, observer placement, sampling design, and data management. Through a competitive bid process, NMFS contracts with a private company (an observer provider) to employ observers, and arranges for associated travel, accommodations, and insurance. The observer provider in coordination with NMFS deploys observers to collect data on the fishing vessels and observers report data directly back to NMFS. Evaluations by the NOP have resulted in continued improvements in the fishery observer programs to standardize safety requirements, training, minimum eligibility requirements, data collection, and reporting procedures (MRAG Americas Inc., 2000; NMFS, 2000; NOAA, 2004).

The NOP for commercial fisheries and the PSO observer programs have developed independently of one another. Although the activities requiring observers differ, the observer duties, training needs, and resources required for the G&G survey PSO program and NOP are quite similar. PSO program requirements are analogous to the NMFS NOP, as both depend on

observers to record data and report compliance with mitigation and monitoring requirements, independent of the type of activity. Because the NOP has been in place since 1999 as a coordinated body of regional observer programs, the lessons learned and progress made from that program can be used to inform and improve the existing PSO program nationally as a foundation for PSO requirements for activities carried out in the U.S., or permitted activities conducted on the high seas by U.S. citizens.

The most notable difference between the NMFS fishery observer program model and the PSO model is that NMFS is the sole agency implementing the fishery observer programs. NMFS, BOEM, and BSEE would each have responsibilities in the administration of a PSO program for G&G surveys under this program were it implemented under the MMPA, ESA, and OCSLA. Additionally, PSOs are required to have completed a NMFS-approved training program, but NMFS itself does not provide the training.

a. A Model for G&G Surveys

Current implementation of the PSO G&G survey requirements have been the responsibility of the lead federal agency with regulatory oversight of the permitted action. In regard to oil and gas on the OCS, BOEM has oversight of energy exploration and development in federal waters (the BSEE oversees oil and gas production), and NMFS issues permits to individual companies that apply for an ITA under the MMPA. Under the ESA, the federal action agency is responsible for ensuring that any PSO requirements for threatened or endangered species required in an Incidental Take Statement of a biological opinion are implemented. In addition to oil and gas activities, G&G surveys are also conducted for scientific research purposes by the USGS, NSF, and academia. A structured framework is needed to establish a consistent PSO program that identifies PSO requirements for all interested parties. The main stakeholders in the development of those standards for a marine G&G survey PSO program include:

- Department of Commerce (NMFS).
- Department of the Interior (BOEM, BSEE, USFWS, and USGS).
- Oil and gas geophysical industry (e.g., International Association of Geophysical Contractors, Association of Oil and Gas Producers, and National Ocean Industries Association).
- Native groups.
- PSOs.
- PSO trainers.
- PSO providers.

Under the ESA and MMPA, the lead action agency or permit holder may have responsibilities to monitor specific activities to minimize their environmental impacts. Typically, federal agencies directly monitor or provide oversight in ensuring monitoring and mitigation measures are properly implemented through observer data collection and reporting. In some cases, reports have been submitted from PSOs to industry for review before being sent to BSEE and NMFS, while in other cases the PSOs send them directly to BSEE and NMFS. Some challenges to implementing a PSO program include identifying the funding mechanism for training, and identifying program administration and regulatory requirements, if any, that may be required. Although details of agency roles and administration of a PSO program remain to be

implemented, NMFS, BOEM, and BSEE believe the NOP is an appropriate model on which to base a PSO program for G&G surveys and other activities requiring qualified PSOs. The potential roles and responsibilities of the main stakeholders in the operation of a PSO program for G&G surveys are listed in Table 1.

Table 1. The roles of four main groups implementing a standardized PSO training program for G&G surveys in the Gulf of Mexico.

NMFS	BOEM/BSEE	PSO Trainer	PSO Provider
●Training standards ●Trainer agreements ●PSO eligibility standards	●Provider expectations ●Reporting conditions ●Industry requirements and fee collection	●Conducts training ●Inventories equipment ●Implements NMFS eligibility standards	●Employs PSOs ●Deploys PSOs to vessels ●Sets performance measures
●Data collection standards, quality assurance, and quality control ●Database administration and maintenance ●Health and safety standards	●Provide mechanism for funding of PSO training and services ●Mitigation compliance and enforcement	●Implements NMFS training standards	●Travel/accommodations ●Prepares trip reports as required ●Insurance

Data collection and reporting standards would be implemented in agreements between NMFS and approved PSO providers. Data management would then be maintained by NMFS; however, NMFS, BOEM, BSEE, and industry have interests in the data collected. Requirements for G&G survey vessels to accommodate PSOs for monitoring and reporting would be implemented by BOEM and BSEE through permit conditions and NTLs. A clear separation of the reporting and performance terms of service that currently exist in contracts between industry and PSO providers will strengthen the value of independent observations and reporting and will promote consistent expectations across regions. In the PSO program model outlined in Figure 2, the NMFS PSO eligibility and training requirements (see Sections 3 and 4 for more details) would be implemented by approved PSO trainers. PSO trainers would provide the work pool of NMFS-approved eligible PSOs qualified to work on G&G surveys.

The possible funding mechanism for the PSO program and data management is discussed in more detail below. Although this model considers oil and gas G&G surveys permitted by the BOEM, in some cases NMFS may authorize incidental take of protected species for federally funded (e.g., NSF and USGS) G&G surveys used in scientific research.

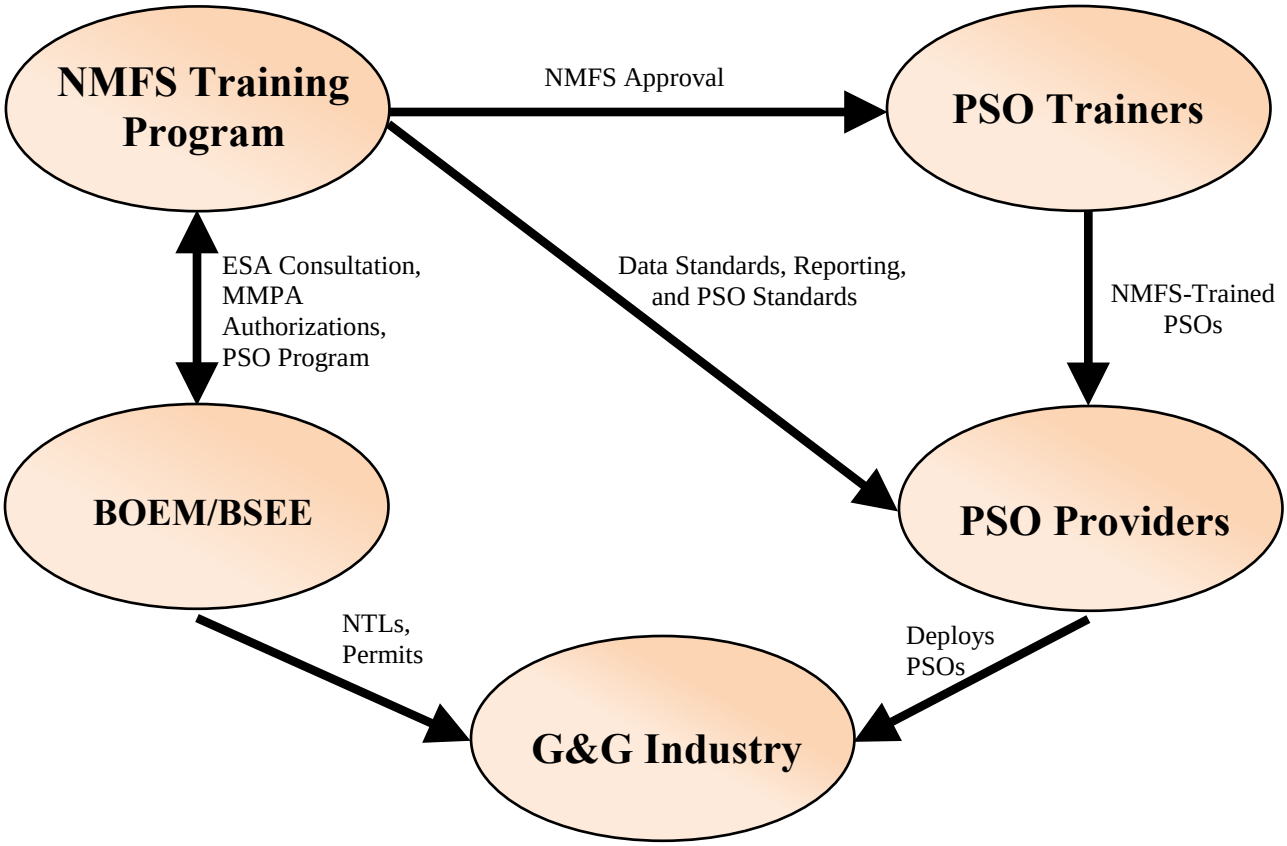

Figure 2. A model showing the major federal and non-federal interactions of a PSO training program for G&G surveys.

b. Mechanisms and Costs of Implementing a PSO program

The PSO Working Group reviewed Environmental Impact Statements and G&G permits, and mined other information resources to gauge the level of anticipated PSO coverage and program costs over the next few years. Much of the available data is incomplete and records on actual PSO costs largely reside with individuals or companies in the private sector. The Working Group reviewed information gathered from the Gulf of Mexico and Alaska separately, because of disparities in the type of work conducted and costs incurred from each region. To estimate anticipated costs, observer information from the NOP for commercial fisheries was also used.

In the proposed PSO program, NMFS, BOEM, and BSEE share agency responsibilities for administering the PSO program for G&G surveys according to their respective expertise and authorities. Possible program funding through BOEM and program responsibilities could be agreed to in a memorandum of agreement (MOA) between NMFS and BOEM. The type of funding provided may ultimately determine the level of federal oversight and management by each agency.

c. Mechanisms for PSO Training and Provider Services

NMFS would develop a training program under which PSOs may be trained by NMFS-approved trainers. Trained PSOs would then comprise the eligible work pool of observers to be available for hire to fulfill permit requirements under the ESA, MMPA, and OCSLA for the G&G industry. This PSO model decouples a PSO training program from PSO provider agreements. The benefit of having separate standards for trainers and providers is that more comprehensive and nationally consistent training programs can be developed and maintained. Also, trainers can potentially provide training services for a greater variety of activity types. The following sections outline a variety of mechanisms for further consideration that would allow for more independent, third-party contracting of PSOs.

1) *NMFS as the PSO Trainer and Provider Administrator*

Because NMFS is not currently obligated funds for non-fishery observer programs, there are two ways that funding routes could allow NMFS to directly administer PSO training services: (1) by receiving funds from other federal agencies to provide training services in support of their PSO needs, or (2) by having staff or federal funds obligated in support of a PSO program. For example, NMFS Science Center laboratories currently providing NOP training could potentially provide PSO training services if staff and/or funds were made available. In addition to reimbursable contractual agreements, the Working Group identified two federal authorities (15 U.S.C. 1525 and 31 U.S.C. 1535) that may allow the transfer of funds for authorized services between federal agencies. The provisions of these authorities appear in Appendix B. A potential model limitation of the NMFS training mechanism is that federal funds and agency staff resources may not be available to scale up or down quickly enough in response to seismic industry needs. If near-future estimates of the number of seismic surveys are inaccurate, a NMFS training program that is dependent on NMFS trainers could lead to inefficiencies for the government or industry. To determine annual PSO program funding and staffing requirements, BOEM and BSEE will need to cooperate with industry to more frequently project anticipated seismic survey needs. The mechanisms by which funds would be transferred and services rendered would need to be discussed in further detail between NMFS, BOEM, BSEE, and industry representatives.

2) *Cost-Reimbursable Contracts between NMFS and an Observer Training Center*

Alternatively, NMFS may use monetary contracts with a non-federal OTC or PSO trainers and providers to administer the program under a reimbursable system for PSO services, rather than have the seismic industry pay for PSO services directly. Similarly, BOEM may be able to administer industry funds for a PSO program or receive appropriations to run such a program (NMFS could also receive appropriations for these purposes). BOEM or NMFS would then contract with a PSO provider who would supply industry or other agencies with needed PSO staff. All PSOs under this provider would be required to undertake specific training as deemed necessary by NMFS. Currently, reimbursable arrangements with other federal agencies would be required for training services, as NMFS does not have funds appropriated to carry out such duties.

3) *NMFS-Approved Private Sector PSO Trainers and PSO Providers (*Recommended*)*

To engage in a non-reimbursable agreement to implement program requirements with non-federal partners, there would be no expectation of payment on the part of the vendor. Under this framework a vendor would have certain non-financial obligations to the federal agency, such as adhering to standards and sharing data, but would receive payment for services through industry, PSO providers, other federal agencies, or individuals as an approval vendor by agreement with an agency. A federal agency may enter into an agreement with another party, whether the service is mission related, is statutorily required, or is another type of agency activity.

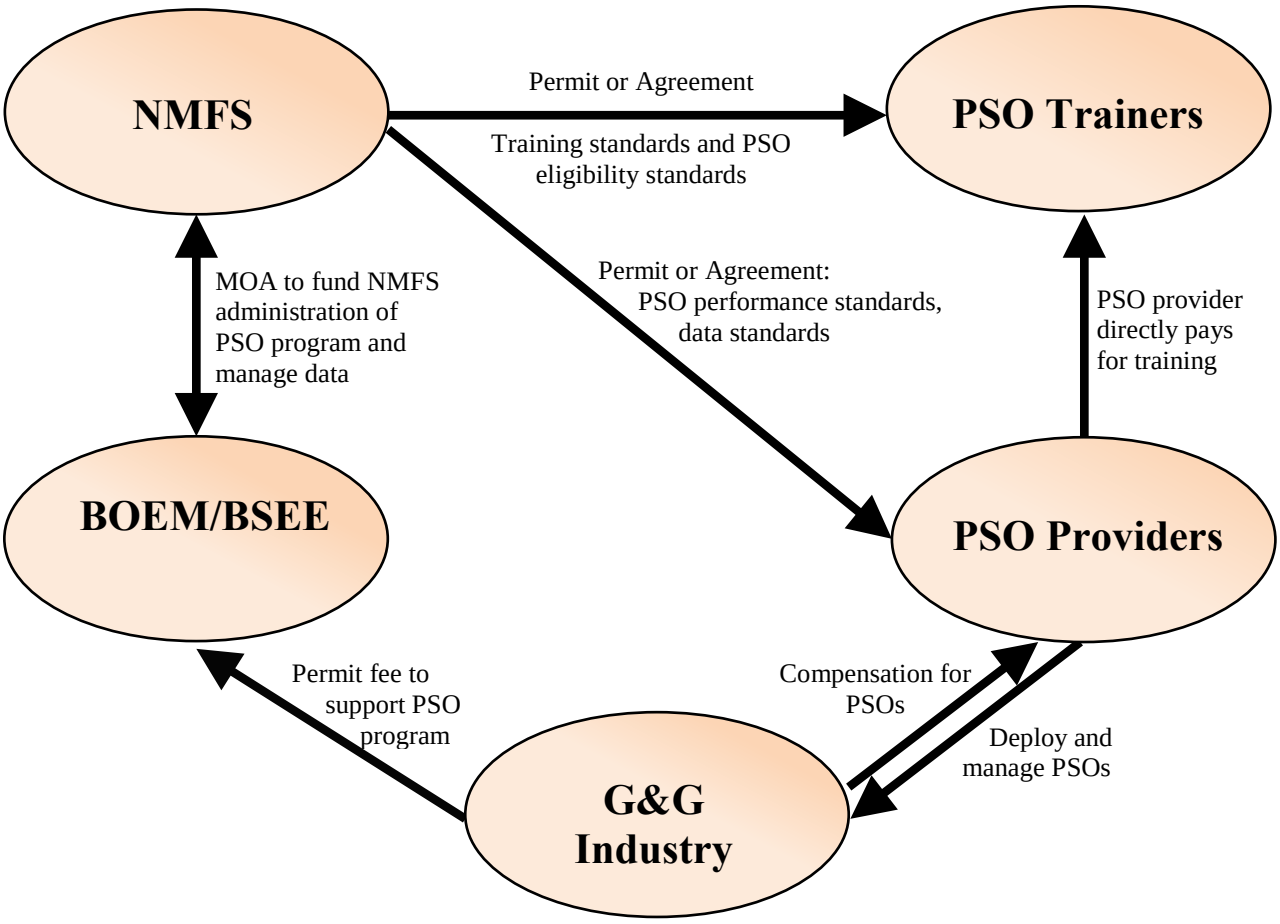

Figure 3. The preferred model showing major points of cost interactions between stakeholders, and the use of permits or agreements to implement PSO and data collection requirements with PSO trainers and providers. In this model BOEM/BSEE funding of program administration and agency roles are outlined via an MOU with NMFS.

This mechanism identified by the Working Group to implement a PSO training program and PSO standards would require an agreement under which NMFS may approve trainers to provide a NMFS PSO training program and/or PSO provider services that is consistent with the agency's PSO standards. A permit, authorization, or other agreement could allow NMFS and/or BOEM to receive the benefit of services without obligating appropriated funds. NMFS may use permits,

authorizations, or agreements with PSO providers to implement PSO performance standards and obtain data (see Figure 3). In this model, industry would continue to pay for PSO services, but PSO providers and PSO eligibility requirements would be defined by NMFS.

d. G&G PSO Program Costs

The following are estimate personnel and infrastructure costs required to fulfill the goals and objectives of a G&G survey PSO program:

- One NMFS full-time employee (FTE) national team leader to manage the PSO training and data aspects of the program: ~$130,000.
- One BSEE FTE to manage communication with PSO providers for deployment and report management: ~$130,000 (this position was created and filled in 2012).
- Additional duties: sufficient staffing in headquarters and regional offices for administration of duties relating to PSO program management, such as G&G permits, MMPA ITAs, ESA section 7 consultations, and reporting. Related duties are currently performed by regional section 7 coordinators and/or section 7 biologists conducting ESA duties. However, some additional duties may be required, such as processing and quality assurance/quality control (QA/QC) of reports and transfer of data to the national database.

Costs for the Gulf of Mexico and Atlantic

PSO Costs

In the Gulf of Mexico, an estimated 30 PSOs are required on a daily basis. This number includes PSOs required to fulfill rotational needs, with an average of 15 PSOs at sea on any given day. Based on 2009 PSO data in the Gulf of Mexico, the total estimated costs are $2,116,547 (see Table 2).

Table 2. Annual Cost of PSOs in the Gulf of Mexico.

Pay/PSO/ Day	Insurance (0.3 of pay)	Payroll Tax (0.15 of pay)	Avg. No. PSOs/Day	Annual Sea Days	Overhead	Total Annual Cost
$225	$67.5	$33.75	15[1]	346	$423,309	$2,116,547

[1]30 PSOs is the total number estimated to cover rotational needs for 15 PSOs on the water per day.
[*]Overhead costs are estimated at 25% of the total annual costs.

Anticipated training requirements are expected to increase this cost estimate with implementation of the training program. Additionally, BOEM and BSEE indicate that the demand for the number of PSOs may be expected to significantly increase in the Gulf of Mexico over at least the next 5 years, and many G&G surveys are expected to occur in federal waters of the Atlantic EEZ; thus, Table 2 likely underestimates future costs.

Training

Sufficient administrative resources would be needed to support NMFS contracts with a PSO trainer. Because no funds are currently obligated or otherwise available to facilitate training through NMFS with monetary contracts, it is anticipated training agreements would be

administered through permits. Under the recommended permit model, federal costs would be contained within the staffing costs already discussed, plus associated administrative costs (e.g., contracting, legal reviews). Under the cost-reimbursement model, annual federal costs would depend on the outcome of competitive bidding to maintain training services.

Training costs would be incurred by PSO providers or by individual PSOs. Sufficient staffing would be required to maintain contracts with a limited number of PSO trainers. Aside from the potential cost of training new PSOs through an approved PSO trainer, other anticipated costs based on those currently incurred by PSO providers and estimates of travel and training from the NOP, appear in Table 3.

Table 3. General estimation of the training cost per PSO in the Gulf of Mexico.

PSO Activity	Amount ($)
Travel to and from vessel (deployment by vessel or helicopter)	500
Lodging and travel (off vessel)	500
HUET lodging and travel	300
Helicopter Underwater Egress Training (HUET)	750
Safe Gulf Safety Training	250
G&G PSO Training	500
Medical exam/random drug testing	200
Total/PSO	**3,000**

Costs for Alaska

The Working Group was unable to obtain good estimates of the number of PSO days for Alaska, resulting in only a general upper estimate of PSO costs. Based on the available information, the daily rate per PSO is estimated at $1,200, including all costs except training, down time, and transportation. The total annual PSO costs are estimated at $8 to $9 million. Although some higher costs are associated with transportation, aerial surveys, and other costs in the Alaska region, the Working Group found this estimate high compared to the Gulf of Mexico and based on incomplete information received to estimate annual sea days. These estimates should be considered with these caveats.

Summary

Once the PSO program structure and mechanism to implement the standards are established, training requirements and the use of qualified PSOs would need to be instituted through regulatory requirements and determined on a case-by-case or program-wide basis. The funding mechanism(s) and agreements among the federal and non-federal stakeholders will require further discussion. For PSO requirements for G&G surveys, the PSO program would establish the infrastructure—such as standards, approved training programs, agreements, and database management—by which PSO services could be rendered to meet any future needs or requirements.

Not all marine activities that require monitoring are conducted by professional PSOs. Some environmental monitoring is conducted by self-initiated environmental monitoring programs within an organizations operations plan, scientific consulting firms, or other trained personnel. The Working Group recognized that the PSO program would apply specifically to G&G surveys,

but could also supplement requirements of existing programs where third-party observers are required, or could provide training services for individual observers and observer companies. Ultimately, a NMFS PSO program could provide PSO training services to other federal agencies needing PSOs or training services, if appropriated funds and staffing become available to support this program.

4. ESTABLISHMENT OF A NMFS TRAINING PROGRAM

Previous interagency ESA consultations, as well as federal permits with mitigation measures requiring PSOs to monitor an activity, typically required that third parties be used that have completed a NMFS-approved training program to provide observer services. In the past, the development of training program content has been the responsibility of applicants and lead federal agencies permitting the activity, although NMFS has contributed to course content development upon request. NMFS' approval of training courses has occurred on a case-by-case basis, making the consistent approval of standardized course quality and content difficult to achieve. Therefore, there is a need for NMFS to define training standards and the training elements necessary to provide PSOs with the core skills required to carry out PSO duties.

A standardized training program will resolve many existing training issues by:

- Providing consistency among all PSO training programs.
- Defining standard content for training programs.
- Establishing criteria by which NMFS, BOEM, or BSEE can evaluate individual PSO qualifications and experience.
- Providing a process for PSO eligibility and approval of PSO providers.

A standardized PSO training program would not only need to provide training in the mitigation requirements of the ESA and MMPA, but also equip PSOs with other important skills such as monitoring techniques, data collection tools, and health and safety considerations. Region-specific information will need to be incorporated into training coursework (e.g., species-specific conservation measures and Alaska Native subsistence monitor duties) and be provided as standard training elements in the training program for commonly occurring requirements, or be required as supplemental information in PSO briefings for specific projects. A standardized manual for all procedures and protocols for PSOs should be developed for use in any jurisdictional waters of the United States or permitted activities carried out by U.S. citizens on the high seas.

a. Training Components

The training program components for a PSO program are derived from those identified by the Working Group and from some standard requirements developed by the NMFS NOP. The recommended topics for PSO training programs are:

- Job interview, duties, and authorities.
- Life at sea.
- Offshore survival and safety training session.
- Mitigation, monitoring, and reporting requirements (ESA/MMPA/OCSLA) as they pertain to G&G surveys.
- Ethics, conflicts of interest, and standards of conduct.
- Protected species biology and behavior.
- Protected species identification.

- Overview of types of G&G surveys and sound source technology and equipment (e.g., site, two-dimensional, three-dimensional, four-dimensional, four component, ocean bottom cable, ocean bottom surveys, vertical G&G profiling, wide azimuth, high resolution, electromagnetic, airguns, sparkers, boomers, and echosounders).
- Background on underwater sound.
- Overview of oil and gas activities (including G&G acquisition operations, theory, and principles) in the Arctic, Gulf of Mexico, etc.
- Visual surveying protocols, distance calculations and determination, cues, and search methods for locating and tracking different types of species.
- Data recording and protocols, including standard forms and reports, determining range, distance, direction, and bearing of protected species and vessels; recording GPS location coordinates, weather conditions, Beaufort wind force and sea state, etc.
- Passive acoustic monitoring (PAM) for the detection and presence of calling marine mammals.
- Proficiency with software tools (i.e., MultiSeis MMO, PAMGUARD, WinCruz, Ishmael, MS Excel and Access, etc.).
- Data confidentiality.
- Field communication/support, communication and support with appropriate personnel, and using communication devices (i.e., two-way radios, satellite phones, Internet, email, facsimile).
- Reporting of violations, noncompliance, and coercion to NMFS, BOEM, and/or BSEE.
- Conflict resolution.

b. Health and Safety Training

The existing NMFS safety training programs required through the NOP for commercial fisheries observers are relevant and adequate for PSOs onboard non-fishery vessels. Since these regulations are required under the Magnuson-Stevens Fishery Conservation and Management Act, it is recommended that the measures be adopted as requirements under the MMPA, ESA, or OCSLA because the regulations for fisheries observers themselves would not be legally binding for non-fisheries activities. Although these requirements are appropriate for vessel-based or platform-based observations, in cases where aerial surveys are required (e.g., in Alaska), additional aerial safety training (e.g., "ditch training") may be required.

Vessel and aircraft safety is an important consideration in the development of a PSO program to ensure the safety of PSOs during operations and in the event of an emergency at sea. For example, fishery observers are not required to board unsafe commercial fisheries vessels (see Appendix F). Although similar protective regulations do not apply to PSOs for non-fisheries activities, the same standards could be required for PSOs through permitting requirements or through the terms of a contract with a PSO service provider.

PSOs should not be required to board, or stay aboard, a vessel that is unsafe or inadequate. Many G&G companies have safety requirements and require PSOs to undergo training before boarding a G&G source vessel. However, standards in this regard are lacking and minimum requirements should be detailed to provide for PSO safety and well-being. An unsafe or inadequate vessel is one that does not comply with the applicable regulations regarding observer

accommodations (see 50 CFR parts 229, 300, 600, 622, 635, 648, 660, and 679) or if it has not passed a U.S. Coast Guard (USCG) safety examination or inspection. A vessel that has passed a USCG safety examination or inspection should display a valid certificate of inspection pursuant to 46 U.S.C. 3311. Upon request by a PSO, a vessel owner/operator should provide correct information concerning any item relating to any safety or accommodation requirement prescribed by law or regulation. A vessel owner or operator should also allow a PSO to briefly walk through the vessel to ensure no hazardous conditions exist according to a safety checklist, and to visually examine any safety item, upon request.

A vessel should provide proof of adequate and safe berthing space for each PSO through the USCG inspection certificate. If a vessel is inadequate or unsafe for purposes of carrying a PSO and allowing operation of normal PSO functions, BOEM or NMFS, through the permit review process, may require the vessel owner or operator either to submit to and pass further USCG safety examination or inspection, or correct the deficiency that is rendering the vessel inadequate or unsafe (e.g., if the vessel is missing one personal flotation device, the owner or operator could be required to obtain an additional one), before the vessel is boarded by the PSO. If a vessel is unable to accommodate a PSO because it is inadequate or unsafe, it would not be permitted to conduct a G&G survey.

In some instances aircraft are required to effectively monitor for protected species. NOAA's Aviation Safety Policy (NOAA Administrative Order 209-124, effective October 1, 2006) applies to (a) aircraft rented, chartered, leased, or owned by NOAA or NOAA personnel, and used to conduct official business; and (b) aircraft operated by public or private entities on behalf of NOAA through written support agreements with NOAA, such as through contracting or grants procedures. Although the Aviation Safety Policy does not directly apply to non-NOAA personnel or services, any contractual agreement for aircraft and flight personnel used in a PSO program should comply with NOAA aviation safety policies and requirements. Recommended standards for aircraft and crew provisions for aircraft used for PSO requirements have been adapted from those developed by NMFS, Southeast Region for Right Whale Aerial Surveys (see Appendix G).

c. Observer Services and Product Development

Additional or specific PSO products and services will need to be developed by NMFS, BOEM, and BSEE to support the administration of a PSO program. Many existing observer training products and services developed for the NOP may be used or modified for their applicability to the development of standards for a national PSO program (see Appendix C for a list of current observer resources available on the Internet). Further development of products and services that may be needed specifically for G&G survey PSOs should be considered in the implementation of a PSO program. Some recommended products include:

- Supplemental training resources.
- A standardized manual for all procedures and protocols.
- Standardized software for data recording and analysis.
- Communications and outreach materials.

Existing resources developed through the NMFS NOP include:

- NMFS Policy Directive 04-109, NMFS Minimum Eligibility Standards for Marine Fisheries Observers (see Appendix C).
- NMFS Policy Directive 04-109-01, NMFS Minimum Eligibility Standards for Marine Fisheries Observers and Observer Safety Training Acknowledgment of Risk (see Appendix D).
- NMFS Observer Health and Safety Regulations (see Appendix E).
- NMFS Observer Safety Training.

d. Frequency and Availability of Training

As with fishery observers, persons not employed in the capacity of a PSO for periods exceeding 18 months will be expected to complete the entire training course before resuming PSO duties. For all approved PSOs, "refresher" trainings may be periodically necessary for new requirements included in Biological Opinions, MMPA regulations, and BOEM permits and notices; or for specialized trainings on new software, technologies, and techniques as needed. Regional training programs for NMFS-approved training should be considered in the establishment or approval of an observer training center. Efforts should focus on defining standard program content and a limited number of trainers approved within each region to maintain consistency in the program. Most seismic surveys currently occur in the Gulf of Mexico and most training needs occur in that region. Possible trainers include NMFS Fisheries Science Center laboratories currently providing training for the NOP, soliciting proposals from independent trainers, or a combination of both resources. Ideally, the same core training program elements will be taught in every comprehensive course, with only specialized PSO training being conducted separately (e.g., PAM methods and data processing). Once a training program is established, the program can be transferred to other regions or approved training providers.

5. PSO ELIGIBILITY AND QUALIFICATIONS

Generally, the duties of a PSO would involve observing the immediate environment for protected species whose detection triggers the implementation of mitigation requirements, monitoring compliance with mitigation requirements, collecting data by defined protocols, preparing daily reports, and submitting reports directly to BOEM, BSEE, or NMFS. The skill set required to be an effective PSO ranges from protected species identification to knowledge of computer software and industry operations.

Under the NOP, observers must meet minimum eligibility standards to be marine fisheries observers (see Appendices D and E). The same standards are recommended for determining PSO eligibility, but with some modifications, as indicated below.

a. Education/Experience Requirements

PSO candidates should have:

1. A bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences.
2. At least one undergraduate course in math or statistics.
3. Experience with data entry on computers.

Waiver of Education/Experience Requirements

As with NMFS Policy Directive 04-109-01 for marine fisheries observers, in some cases a waiver of the education/experience requirements may be appropriate if the candidate has acquired the relevant skills through alternate training or experience. In the case of PSOs, such alternate training and experience that may be considered includes, but is not limited to, the following:

1. Secondary education and/or experience comparable to PSO duties.
2. Previous work experience conducting academic, commercial, or government-sponsored protected species surveys.
3. Previous work experience as a PSO with a program in the United States or overseas; the PSO should demonstrate good standing and consistently good performance of PSO duties.

Requests for a waiver should include written justification to the approving federal agency official, who has sole discretion to waive the education/experience requirements on a case-by-case basis. The approving federal agency official may also decide to waive some or all of the education/experience requirements on a case-by-case basis if a lack of qualified PSOs is demonstrated. Individuals who are granted waivers must still satisfy the training requirements set forth below.

b. Training Requirements

All PSOs should complete a NMFS-approved PSO training course by completing all required coursework (e.g., classroom, field exercises, homework, and tests) and passing, with an overall score of 80% or greater, a written and/or oral examination developed for the training program. In addition, candidates should successfully complete the safety training and review information on the risks of participating in hands-on training as identified in the Acknowledgement of Risk form (see NMFS Minimum Eligibility Standards for Marine Fisheries Observers and Acknowledgement of Risk in Appendix D). If an applicant does not pass a training program, he/she may reapply to training. The training requirement to become a PSO is not waivable.

PSO observations may occur from land, vessels, aircraft, or fixed structures in the marine environment, each of which may require specific skills and/or training. Additional specialized training may be needed to qualify PSOs to work on different platforms to implement specific mitigation, monitoring, and reporting requirements under the MMPA, ESA, and OCSLA. The skill level and experience of PSOs would be considered further in project-specific evaluations of appropriate PSO coverage and deployment (see Observer Deployment in Section 6).

c. Physical/Medical Condition Requirements

PSO candidates should be in good health, and have no physical impairments that would prevent them from performing their assigned tasks.

d. Communication Skills

PSO candidates must be able to clearly and concisely communicate verbally and in writing in English.

e. Citizenship or Ability to Work Legally in the United States

A PSO candidate must be either a U.S. citizen or a non-citizen who has a green card, TN authorization, H1 visa, or valid work visa, and a Social Security card.

f. Subsistence Monitors

In the permitting process, NMFS must determine that an activity will not have an unmitigable adverse impact on the availability of marine mammal species or stocks for taking for subsistence uses as defined in 50 CFR 216.103. In accordance with NMFS regulations, when an activity seeking authorization under section 101(a)(5) of the MMPA may affect the availability of a species or stock of marine mammal(s) for Arctic subsistence uses (i.e., above 60° North latitude), operators must submit to NMFS either a Plan of Cooperation or information that identifies what measures have been taken and/or will be taken to minimize any adverse effects on the availability of marine mammals for subsistence uses. The use of "subsistence monitors" on operator vessels has been a common monitoring measure incorporated into recent Plans of Cooperation.

The role of subsistence monitors is to ensure that G&G survey activities would not result in such an unmitigable adverse impact by: (1) causing the marine mammals to abandon or avoid hunting areas, (2) directly displacing subsistence users, or (3) placing physical, visual, or acoustic barriers between the marine mammals and the subsistence hunters. The subsistence monitor should have the knowledge and experience necessary to identify conditions or operational aspects of the G&G program that may negatively affect subsistence hunting, identify subsistence hunting areas, identify signs in marine mammals' behavior or movements that may negatively impact their availability for harvest, and communicate with Alaska Native hunters in such a manner as to avoid or minimize any interference with subsistence hunting. Subsistence monitors in Alaska may also be required to speak Inupiat or other languages as necessary to communicate with all the parties involved. The ability to speak Native language is essential in maintaining communication with village communication centers and whaling crews along the north coast of Alaska. The number of subsistence monitors is determined by the type and location of G&G survey activities when the surveys are planned. To serve as a subsistence monitor, an individual must meet the following qualifications:

1. Proficiency in the language of the indigenous subsistence hunters sufficient to communicate with Communication Centers and Native whaling and sealing crews.
2. English communication skills.
3. Marine mammal subsistence hunting experience.
4. Experience observing protected species.
5. Meet physical/medical conditions.
6. Meet U.S. citizenship requirements (see above).

Individuals as PSOs and Subsistence Monitors

Individuals may be eligible to serve as both subsistence monitors and PSOs simultaneously. To do this, individuals should meet the education/experience requirements as outlined above (see PSO Eligibility and Qualifications – Education/Experience Requirements and Subsistence Monitors sections on page 19 and 20, respectively) *and* have successfully completed an approved training course with a passing grade of 80% or greater. Although individuals could serve in both capacities of PSO and subsistence monitor, individual monitors cannot gain any real or perceived economic advantage other than serving as a PSO. At no time will a PSO be allowed to have any financial interest in the operations that may result in a gain in advantage (for themselves or their community) in subsistence activities. To gain entry into a NMFS PSO training program, individuals should meet the standard PSO education and training qualifications to be a PSO and sign a statement that there is no conflict of interest in serving as both a PSO and a subsistence monitor (see Section 8 for more information on conflicts of interest).

6. PSO Evaluation During Permit/Authorization Approval

For G&G surveys, the equipment used, geographic region, and the number and berthing capacity of vessels used may vary; thus, the number of PSOs and experience levels required must be determined for each individual project or permit issued. The broad program objectives must be implemented at the project level for which permits are issued. Individual projects can be evaluated separately to determine appropriate PSO deployment needs. Currently, G&G surveys are evaluated through the issuance of MMPA ITAs (IHAs or LOAs) issued to federal and non-federal applicants, ESA Biological Opinions and Incidental Take Statements issued to federal agencies, or individual G&G permits issued to industry by BOEM. Since MMPA ITAs and ESA consultations can occur on both the individual project scale and programmatic scale, the recommended time to evaluate PSO coverage required for all G&G projects is during the G&G permit application review process by BOEM, or when individual LOA or IHA applications are submitted to NMFS (see Figure 4).

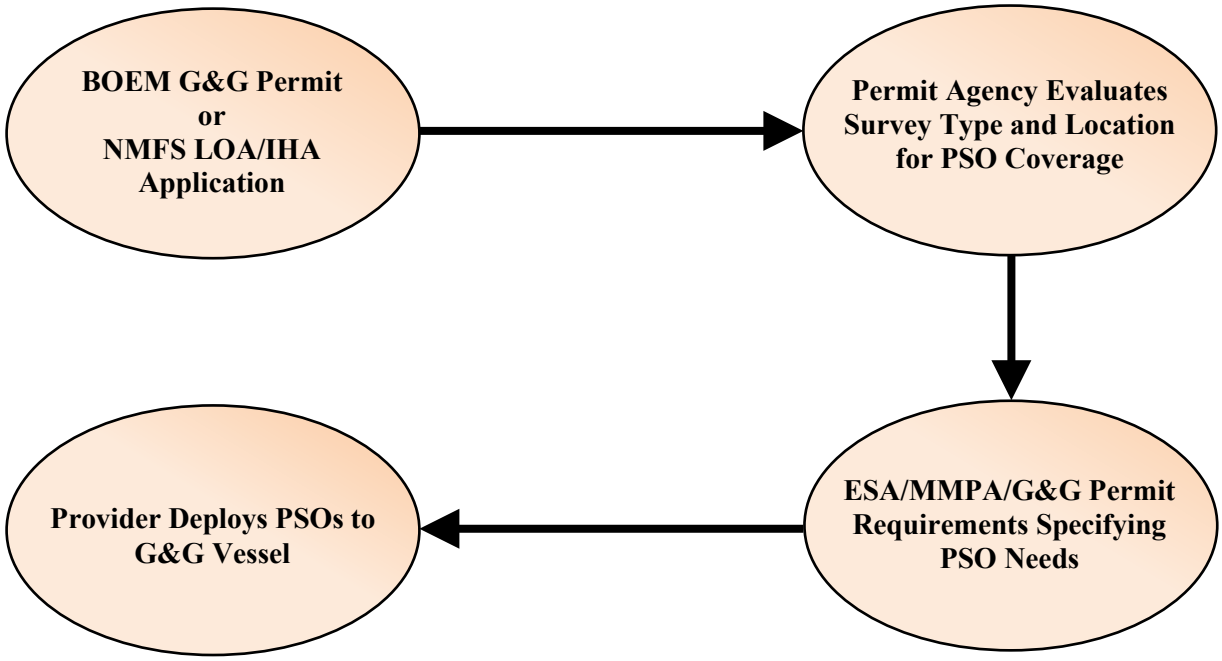

Figure 4. Recommended process for evaluating needed PSO coverage and PSO skill levels required for individual oil and gas G&G surveys. Actual PSO coverage needed would be evaluated by the permitting agency upon receiving project details when the permit application is filed.

If a single entity were responsible for scheduling and deploying PSOs (as with many of the regional commercial fisheries observer programs), a greater level of consistency in many aspects of the PSO program may be achieved, including maintaining an appropriate number of PSOs to meet scheduling and deployment needs. Prior to each survey, a PSO provider can submit a list of available PSOs at least 30 days prior to the scheduled activity. Scheduling and deployment of PSOs may be the responsibility of the contracted PSO provider or the federal agency, as in the

case of the NMFS NOP. Additional personnel would be required if a federal agency were to fulfill this responsibility. Depending on the type of survey, the number of PSOs and experience levels may vary and should be determined on an individual survey or project basis.

a. Factors to Determine PSO Experience Levels

As part of the permitting process, a list of PSOs should be submitted indicating their experience level for the PSO position filled (entry-level or senior-level PSO). The following guidelines should be followed by PSO providers and permit applicants to determine PSO experience levels. Entry-level PSOs must meet the minimum eligibility standards and qualifications discussed in Section 2. Senior-level PSOs have additional experience and qualifications and experience in addition to the minimum eligibility and qualification standards. Each PSO experience level is described below.

> Entry-Level PSO Qualifications
> An entry-level PSO must have: (1) a bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences; (2) at least one undergraduate course in math or statistics; and (3) experience with data entry on computers. In addition, an entry-level PSO must have successfully completed a NMFS-approved training course with a passing grade of 80% or greater.
>
> Senior-Level (Lead PSO) Qualifications
> A senior-level PSO must have: (1) a bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences; (2) at least one undergraduate course in math or statistics; and (3) experience with data entry on computers. In addition, a senior-level PSO must have successfully completed a NMFS-approved training course with a passing grade of 80% or greater and must have specific experience observing protected species found in the operating area.

The senior-level/lead PSO would be responsible for overseeing and managing PSO duties, which includes collecting and recording unbiased data, and data entry during the project's monitoring, mitigation, and reporting program. Additional responsibilities include maintaining and inventorying relevant equipment (e.g., visual, PAM, office supplies, literature, computers, etc.); record keeping and reporting of operations; scheduling PSO rotations; ensuring professionalism as a PSO, abiding by proper safety procedures; and communication between PSOs, authorized action organization , vessel's crew, third-party PSO provider company, and regulatory agencies. The senior-level/lead PSO should have thorough knowledge of the required monitoring, mitigation, and reporting program as well as of protected species in the action area.

b. Factors to Determine the Number of PSOs

As specified for individual projects, a minimum number of PSOs should be on watch to determine baseline survey data. The four main factors to consider are the type of survey, the number of observers required to be on duty per shift, the numbers of days of the survey, the size and numbers of vessels on the survey, and if PSO duties are required during nighttime (e.g.,

using PAM or other nighttime detection techniques). An important consideration is the allowable number of hours a PSO can work on any given day to perform PSO duties. At least one dedicated PSO should be on stand-by for visual watch over any given 24-hour period. Other than brief alerts to bridge personnel of maritime hazards, PSOs should assume no additional duties during their visual observation watch. That is, vessel crew must be responsible for maintaining lookouts for navigational safety without specifically tasking the PSOs on duty with those, or any other, tasks.

Even with optimum detection conditions, availability bias and perception bias (Marsh and Sinclair, 1989) will likely influence the effectiveness of protected species observations (i.e., ability to detect the number of animals in an area). Examples of these biases include: diving animals may be unavailable to be observed; more cryptically colored species may be more difficult to detect; and observer bias due to glare, sea state, fatigue, and experience level will further affect detection rates. In addition to observation biases, NMFS data indicate that sighting probabilities may decrease with distance (Epperly et al., 2002). The degree to which the above biases affect the detection of protected species is difficult to predict for any given G&G survey, but can be reduced by limiting observations to periods of favorable viewing conditions, adequately training observers, and frequently rotating observers to avoid fatigue. The Working Group recommends that PSOs not be required to be on watch for more than 4 consecutive hours. Watch duties of 2 consecutive hours are further suggested to reduce errors due to observer fatigue. A "break" time of at least 2 hours should be allowed before an observer begins another visual monitoring watch rotation ("break" time means no assigned observational duties). If necessary (e.g., an assigned PSO is unable to stand watch due to illness), shorter breaks may be allowed, though not less than 1 hour. No PSO should be assigned a combined watch schedule of more than 12 hours in a 24-hour period. Under certain situations (e.g., prolonged summer daylight in Alaska), additional PSOs may be required to meet this recommendation.

c. Passive Acoustic Monitoring and Experimental Mitigation Techniques

As a cooperative effort between PSO providers, vessel operators, and federal agencies, experimental PAM systems and technologies may be tested and evaluations on their utility prepared for review by the management agencies. Because some marine mammal species can be very vocal, PAM appears to be very effective at detecting some species (e.g., sperm whales [*Physeter macrocephalus*] and dolphins) when they are not detectable by sight. Operators have been encouraged to participate in deploying passive listening systems and other experimental mitigation and monitoring techniques. The testing of experimental systems is important to identify the efficacy of new technologies in the field, and will need to be developed in coordination with BOEM, BSEE, and NMFS personnel prior to deployment and testing. PAM training requirements would require a separate, specialized training detailing standardization of PAM procedures, analyses, and monitoring.

7. PSO CONDUCT, INDEPENDENCE, CONFIDENTIALITY, AND CONFLICTS OF INTEREST

The collection and reporting of independently collected, objective, and accurate data are critically important to meet quality assurance objectives of the PSO program. . Currently, some inherent conflicts of interest arise when PSO companies enter into direct contractual agreements with industry. The direct business relationships between industry companies and PSO companies create, at a minimum, the appearance of a conflict of interest, and many influence accurate reporting of data. Competition of industry PSO contracts has eroded confidence in the consistent reliability of data collected and reported to NMFS, BOEM, and BSEE.
In order to have a program with integrity that addresses standards of conduct, confidentiality, and conflicts of interest, it is widely recognized and has been documented (MRAG Americas, Inc., 2000; NMFS, 2000; and NOAA, 2004;) that the third-party pay-as-you-go observer procurement system leaves observers and observer companies vulnerable to pressures that jeopardize the quality and credibility of the data the program should provide, particularly with increased emphasis on individual vessel accountability.

a. PSO Standards of Conduct

Contractual obligations with PSO providers may include PSO eligibility requirements, adhering to PSO protocols or code of conduct, data collection standards, and the timely submission of data to NMFS, BOEM, and BSEE. If significant issues arise with the performance and/or data submitted that do not meet terms of the contractual agreement with the PSO provider, a written record of the issues will be prepared. NMFS, BOEM, or BSEE will refer their findings in writing to the PSO provider. The PSO provider would be required to correct the issue in a timely manner. If there is no discernible improvement in meeting the terms of the contract, the contract may enter a probationary period until the issues are fully reviewed. Typically, the probation is short-term pending an investigation as to the nature of the non-compliance, and a performance plan will be developed that summarizes the major performance factors that must be improved upon. If there is no improvement in the PSO provider's performance during the probationary period, the contract may be terminated. PSO providers will be required to follow the PSO eligibility requirements for any PSOs provided for G&G surveys. PSOs may be determined to be ineligible by NMFS for failure to conform to the Standards of Conduct signed during PSO training, for violating the signed conflict of interest statement, or for falsifying data. Ineligibility for data quality reasons would result in ineligibility and a contract violation for NMFS data collection requirements.

b. PSO Independence

"PSO independence" is a critical issue that must be addressed in the current PSO program. The presence of PSOs on industry vessels must not be influenced by vessel operators or any other pressures that may arise from the detection of protected species, reported violations, and the interruption of operations. PSOs should be protected from any sort of pressure arising from potential conflicts between present or future interactions with the company or vessel accommodating the PSO, and reporting of violations, that may influence the documentation and reporting of data.

Reluctance to report violations has been an issue reported in the past, given that industry currently selects and pays PSOs directly. BSEE has issued notices of non-compliance (INCs) in the past and does enforce such violations when they occur. PSO selection and reporting must occur independently of the company accommodating the PSOs. Any conflicts or violations that arise must be immediately reported to the PSO provider and federal agency, and appropriate actions taken to resolve the issue, including enforcement actions to protect the PSO.

The Working Group recommends a permit or other agreement (see Section 5) between the administering federal agency and the private sector. Such agreements between these partners can be used to eliminate the potential conflicts that may result from direct agreements between PSO providers and industry. Such permits are the recommended mechanism between the federal agency and third-party PSO providers for collecting and reporting the required data from G&G survey activities to eliminate any actual or perceived bias in the data collected. To implement the conflict of interest provisions, the existing NOP regulations may be applied, or revised as appropriate, to avoid potential conflicts of interest and establish standards of conduct, confidentiality, and the collection of unbiased data, as they pertain to applicable laws. Prior to their deployment as PSOs, individuals would be required to sign a statement that they have no conflict of interest in fulfilling PSO duties for that project (For further information on the justification and need for the NOP standards and how they may apply to a PSO program, see NMFS, 2000; NOAA, 2004; and MRAG Americas Inc., 2000.)

c. Confidentiality

It is important for PSOs to understand that data regarding the locations and transects of the vessels on which they operate may be proprietary. Therefore, the approved training program will include lessons on the need for confidentiality during and after PSO duties. PSOs may be required to sign a confidentiality statement with industry or BOEM prior to serving on any data collection cruise. Any PSO found violating this agreement may be prohibited from serving again as a PSO under NMFS, BOEM, and BSEE eligibility standards. The only exception to this condition is when information is provided to NMFS, BOEM, and BSEE that is necessary to raise awareness of safety or compliance violations.

For the monitoring of incidental takes, any proprietary information collected under this subsection should be confidential and should not be disclosed except:

- To federal employees whose duties require access to the confidential information.
- To state or tribal employees pursuant to an agreement with the Secretary of Commerce that prevents public disclosure of the identity or business of any person.
- When required by court order.
- In the case of scientific information involving marine protected species, to employees or agencies or organizations responsible for the management plan development and monitoring.

Procedures may need to be established to preserve such confidentiality, except that NMFS, BOEM, and BSEE should release or make public upon request any such information in aggregate, summary, or other form that does not directly or indirectly disclose the identity or business of any industry company. There may be important differences between confidentiality

issues currently addressed with NMFS National Observer Program and the PSO program that need to be considered in greater detail.

d. Conflicts of Interest

Issues of program integrity can be a result of actual or perceived biases in the implementation of mitigation and monitoring measures, data collection, and reporting. In an effort to reduce the potential for conflicts of interest, NMFS has drafted conflict of interest standards as well as standards of conduct, attendance, and confidentiality of NMFS-approved NOP observers and observer companies (59 FR 22133, April 29, 1994). Implementing regulations of the MMPA also address data confidentiality (see language from Section 118 in the MMPA). These standards cover the usual requirement that observers and observer suppliers cannot have either a financial or personal interest in the vessels or shore-based facilities they are employed to observe. To allow compliance with these standards, there is an explicit statement that the provision of eligible observers for remuneration does not constitute a conflict of interest. Issues of program integrity are somewhat subjective and open to interpretation. However, under previous regulations set forth by the NOP, under which the industry was essentially a client to any of several competing companies, commercial industry may impose certain commercial pressures and expectations on the PSO provider companies. Such direct relationships between industry and data collection agents for NMFS and BOEM would have a high potential for compromising the objectivity of the data collected in the PSO program.

The following measures should be implemented to ensure there are no conflicts of interest between PSOs and industry that would affect the collected data and the PSO program as a whole:

- A PSO may not have any direct financial interest in the G&G surveying industry (other than the provision of PSO services required under the ESA, MMPA, or OCSLA), including, but not limited to: (1) any ownership, mortgage holder, or other secured interest in a vessel or operator involved in G&G survey data collection activities or the use of G&G data for oil and gas exploration, development, or production; (2) any business selling supplies or services to any vessel or processor in the G&G survey industry; and (3) any business purchasing data or other products from any vessel or G&G company. This applies to offshore and shore-based ventures alike.
- A PSO may not solicit or accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from anyone who either conducts activities that are regulated by NMFS or BOEM, or has interests that may be substantially affected by the performance or nonperformance of the PSO's official duties.
- A person may not serve as a PSO on any vessel owned or operated by a person who previously employed that person in a capacity other than a PSO (e.g., as a crewmember) for a period of 12 months after being employed by that person.
- A PSO may not solicit or accept employment as a crewmember or an employee of a vessel or operator while employed by a PSO provider.
- Provisions for remuneration of PSOs do not constitute a conflict of interest.
- Membership in a regional or village Native corporation should not be considered a conflict of interest for the purpose of serving as a PSO.

- The following definitions clarify the language within the No Conflict of Interest Statement:
    - A G&G operator is defined as anyone who is physically collecting G&G information either as part of a speculative (off-lease) or proprietary (on-lease) survey. This includes all types of G&G data acquisition and survey techniques.
    - A source vessel is defined as the vessel that operates the sound source for a G&G survey, regardless of ownership. Survey may contain more than one sound source vessel (e.g., wide azimuth surveys).
    - A support vessel is defined as all other watercraft associated with the survey (e.g., streamer vessels, node vessels, chase boats, ice-breakers).
    - A direct financial interest is defined as payment or compensation received directly from the owner of that vessel, G&G surveying company, or associated shore-based facility.
    - A personal interest is defined as an interest or involvement held by the contractor, PSO, or PSO's immediate family or parent, from which the contractor or PSO, or the contractor's or PSO's immediate family or parent, receives a benefit.

Standards of Conduct

The following are requirements that PSOs should maintain in order to ensure their status as an eligible PSO with NMFS, BOEM, and BSEE:

- Training Standards of Conduct
    - Attend all training classes and activities and be on time for all sessions; no absences without prior approval.
    - Participate in discussions and exercises and be alert during training sessions.
    - Complete homework and readings.
    - Communicate with trainers, staff, and classmates in a professional manner.
    - Not be under the influence of drugs or alcohol while on duty as a PSO or in attendance at any PSO training session.
    - Not take part in illegal activities.
    - Follow all rules established by the training program.
    - Complete all aspects of training at 80% success rate or higher.
    - Interact safely and professionally, especially during at-sea and safety training.

- Any PSO, or PSO trainee, involved in data falsification should be removed from the program. Falsification is defined as the act of deliberately or knowingly fabricating data collected during observed cruises, including intentional recording of inaccurate data, intentional omission or deletion of data, falsification of reports, or, in general, the selective alteration of data.

- PSO trainees must submit a signed copy of these standards the first day of training.

The following conflict of interest statement could be required to be signed to meet the PSO minimum eligibility requirements to conduct PSO duties on G&G surveys.

No Conflict of Interest Statement

I, _____ (print name) acknowledge that I have no conflict of interest in the activity in which I desire to participate, including direct financial interests and personal interests that result in my benefit, other than the provision of PSO services.

_____ (Date)

_____ (Signature)

8. STANDARDIZED DATA COLLECTION AND QUALITY ASSURANCE

Data reporting is commonly required through federal permits and licenses to monitor the effectiveness of mitigation measures and the take of protected species, as required by the ESA and MMPA. In addition to ESA and MMPA requirements, BOEM and BSEE must ensure that permitted activities are conducted in an environmentally responsible manner under the OCSLA. Thus, NMFS, BOEM, and BSEE have statutory responsibilities and common interests to ensure that mitigation and monitoring measures are properly implemented and that quality data are collected. The data collected by PSOs and their subsequent analysis provide agencies with the necessary information to address the effectiveness of mitigation measures and to adaptively manage activities in the future. Therefore, the consistency and quality of PSO training and performance is critical to the successful management of a PSO program.

The Paperwork Reduction Act of 1995 (PRA) requires that federal agencies review their collection of information to: (1) ensure the collection of information is necessary for the proper performance and function of the agency, including whether the information shall have practical utility; (2) estimate the burden of the information collection (including hours and cost); (3) evaluate ways to enhance the quality, utility, and clarity of the information to be collected; and (4) evaluate ways to minimize the burden of the collection of information on respondents.

NMFS and the USFWS share responsibilities under the MMPA and ESA, with each agency responsible for different species. Parallel regulations under the MMPA and implementing regulations under the ESA minimize the duplication of information collection efforts for the "taking" of marine mammals and listed species that are under the jurisdiction of both agencies. Standardization of reporting forms between the two agencies in respect to certain activities that may take protected species would further minimize any duplication of effort between NMFS and the USFWS. Additionally, BOEM and BSEE have overlapping information collection requirements for offshore oil and gas activities, including G&G surveys. Cooperatively developed, standardized data collection and reporting procedures would consolidate collection requirements and further reduce the burden on respondents. Currently NMFS has OMB approval for data collection required through issuance of IHAs and LOAs, and BOEM and BSEE has OMB clearance for data collection activities required through JOINT NTL 2012 G-02. Under the NTL, BOEM and BSEE protect all proprietary information submitted according to the Freedom of Information Act and 30 CFR 250.196.

a. Standardized Data Collection

Standardized data collection is necessary for BOEM, BSEE, and NMFS to properly manage data, conduct appropriate analyses, and evaluate the impact of G&G surveys. Standardization of forms and software used will minimize discrepancies among data sets and PSOs, and will allow the synthesis and comparison of data sets whose data collection and reporting are otherwise required and collected independently of one another. The importance of accurate and complete reporting of the results of the mitigation measures and their effectiveness at reducing or avoiding take are critically important components of any adaptive management strategy. Only through diligent and careful reporting of PSO data can BOEM, BSEE, and NMFS determine the need for and effectiveness of mitigation measures.

Behavioral information is very important to any assessment of impact from G&G operations. However, there are no current standards used to characterize behavior, such as when a protected species is foraging versus milling. Through these directives, a set of standard attributes will be developed to describe various behaviors.

To determine mitigation effectiveness, information on PSO effort and G&G operations is as important as animal sightings and behavioral monitoring data. Requirements for data collection should include information on PSO effort, survey details, and species sighting reports. Reports should be submitted in a standardized format and reported in standard metric units. Electronic data collection and submission of reports should be implemented to ensure greater consistency in reporting and ease in importing the data into a database for subsequent analysis.

The Working Group's general recommendations for the content, frequency, and reporting of data collection for G&G surveys are as follows.

- PSO effort, survey details, and sightings data should be recorded continuously during G&G surveys and reports prepared each day during which G&G surveys are conducted. Reports should be submitted on a regular basis. Currently, the frequency of reporting is weekly in Alaska and twice a month in the Gulf of Mexico.
- If a protected species is sighted during an activity/operation about to enter and/or within the exclusion zone(s) during G&G acquisition while a sound source is "on," additional data should be collected regarding any mitigation measures that are triggered (e.g., power-down, shut-down, etc.), the behavior of the animal(s), any observed changes in behavior before and after the mitigation measures, and the length of time between the implemented mitigation measure and subsequent ramp-up of the sound source to resume the G&G survey. A report of these types of sightings should be sent to BSEE within 24 hours of a shut-down.
- If a shut-down occurs due to walrus or polar bear sightings, a report should also be sent to USFWS within 24 hours. These sightings should also be included in the first regular report to NMFS following the incident.

Standard data collection for any G&G survey should include the following information:

<u>PSO Effort, Survey, and Sighting Data Report</u>

- Vessel name.
- Date.
- Time.
- PSO names and affiliations.
- Survey type (e.g., site, 2D, 3D, 4D, etc.).
- BOEM permit number (for "off-lease" G&G survey) or OCS lease number (for "on-lease" G&G surveys).
- Time (Greenwich Mean Time) when survey (observing and activities) began and ended.
- Vessel location (latitude/longitude) when survey (observing and activities) began and ended.
- Vessel heading and speed (knots);
- Environmental conditions while on visual survey, including wind speed and direction, Beaufort sea state, Beaufort wind force, swell (height in meters/feet), weather conditions,

ice cover (% of surface, ice type, and distance to ice if applicable), cloud cover, sun glare, and overall visibility to the horizon (in distance, kilometers/miles).

- Factors that may be contributing to impaired observations during each PSO shift change or as needed as environmental conditions change (e.g., vessel traffic, equipment malfunctions).
- G&G activity information, such as the number and volume of airguns operating in the array, tow depth of the array, and any other notes of significance (i.e., pre-ramp-up survey, ramp-up, power-down, shut-down, testing, shooting, ramp-up completion, end of operations, streamers, bottom cables, ocean bottom seismometers, etc.).
- If a marine mammal, sea turtle, or other protected species is sighted, the following information should be recorded:
    - Watch status (sighting made by PSO on/off effort, opportunistic, crew, alternate vessel/platform, aerial, land).
    - PSO who sighted the animal.
    - Time of sighting.
    - Vessel location at time of sighting.
    - Water depth.
    - Direction of vessel's travel (compass direction).
    - Direction of animal's travel relative to the vessel (drawing is preferred).
    - Pace of the animal.
    - Estimated distance to the animal and its heading relative to vessel at initial sighting.
    - Identification of the animal (genus/species/sub-species, lowest possible taxonomic level, or unidentified); also note the composition of the group if there is a mix of species.
    - Estimated number of animals (high/low/best).
    - Estimated number of animals by cohort (adults, yearlings, juveniles, calves, group composition, etc.).
    - Description (as many distinguishing features as possible of each individual seen, including length, shape, color, pattern, scars or markings, shape and size of dorsal fin, shape of head, and blow characteristics).
    - Detailed behavior observations (e.g., number of blows, number of surfaces, breaching, spyhopping, diving, feeding, traveling; as explicit and detailed as possible; note any observed changes in behavior).
    - Animal's closest point of approach (CPA) and/or closest distance from the center point of the airgun array;
    - Platform activity at time of sighting (e.g., deploying, recovering, testing, shooting, data acquisition, other).
    - Description of any actions implemented in response to the sighting (e.g., delays, power-down, shut-down, ramp-up, speed or course alteration, etc.); time and location of the action should also be recorded.
- If a marine mammal is detected while using the PAM system, the following information should be recorded:
    - An acoustic encounter identification number, and whether the detection was linked with a visual sighting.
    - Time when first and last heard.

- Types and nature of sounds heard (e.g., clicks, whistles, creaks, burst pulses, continuous, sporadic, strength of signal, etc.).
- Any additional information recorded such as water depth of the hydrophone array, bearing of the animal to the vessel (if determinable), species or taxonomic group (if determinable), and any other notable information.

b. Data Quality Assurance and Quality Control

NMFS, BOEM, and BSEE will monitor the effectiveness of these requirements by (1) ensuring established training standards are met during training, (2) reviewing PSO data for quality assurance, assessing compliance with regulations and reporting procedures, and identifying any problems or issues; and (3) debriefing returning PSOs to assess whether the training provided was adequate to prepare them for their actual work experiences. Any deviations from established standards and any issues encountered with the standards will be reported to NMFS and BOEM by PSOs for review. NMFS, BOEM, and BSEE will compile all regional information into an annual report. Currently, if a G&G operator is found to be in non-compliance with any of the terms of the G&G permit, BOEM and BSEE can issue under 30 CFR 551 (regulations governing requirements for G&G permits) a Notification of Incidents of Noncompliance (INC) using Form MMS-1832 (OMB Control Number 1010-0114). Any intentional or negligent taking of protected species may also be subject to enforcement by NMFS under the MMPA and/or ESA.

9. DATA MANAGEMENT

The development of standards for data collection, management, and dissemination would allow timely analysis and sharing of protected species data collected by PSOs, and potentially other types of relevant environmental data submitted to the database. Currently daily G&G survey reports and after-action reports are being used to monitor compliance with permit conditions and effects to protected species, daily for individual G&G surveys. These reports are generally prepared and evaluated on an individual activity basis.

The BOEM Gulf of Mexico Region has analyzed the first 5 years of G&G survey reports collected in the Gulf of Mexico (Barkaszi et al., 2012, http://www.data.boem.gov/PI/PDFImages/ESPIS/5/5177.pdf). The purpose of this study was to summarize and synthesize G&G survey PSO reports for the years 2003 to 2008. Lack of standardized data collection and report submissions was a significant challenge in the timeliness and extent of analyses that could be completed due to challenges regarding formatting, data re-entry, and statistical analysis.

Increasing the rigor and quality of data collected by PSOs and establishing a central database for these data will provide valuable scientific data on the presence of species, their distribution, and behavioral condition near G&G survey activities. PSOs are on a unique platform to collect data not readily available to researchers. PSO data are not only useful for monitoring animals and implementing mitigation triggers for industry, but they also can complement existing studies on species abundance and distribution, acoustic modeling, and controlled exposure studies and thereby fill important data gaps during actual G&G activities (see Figure 5). Vessels used for G&G surveys provide a unique opportunity to collect data near offshore activities that may provide answers to scientific and management questions of interest to various federal, state, industry, academic, and non-governmental organizations.

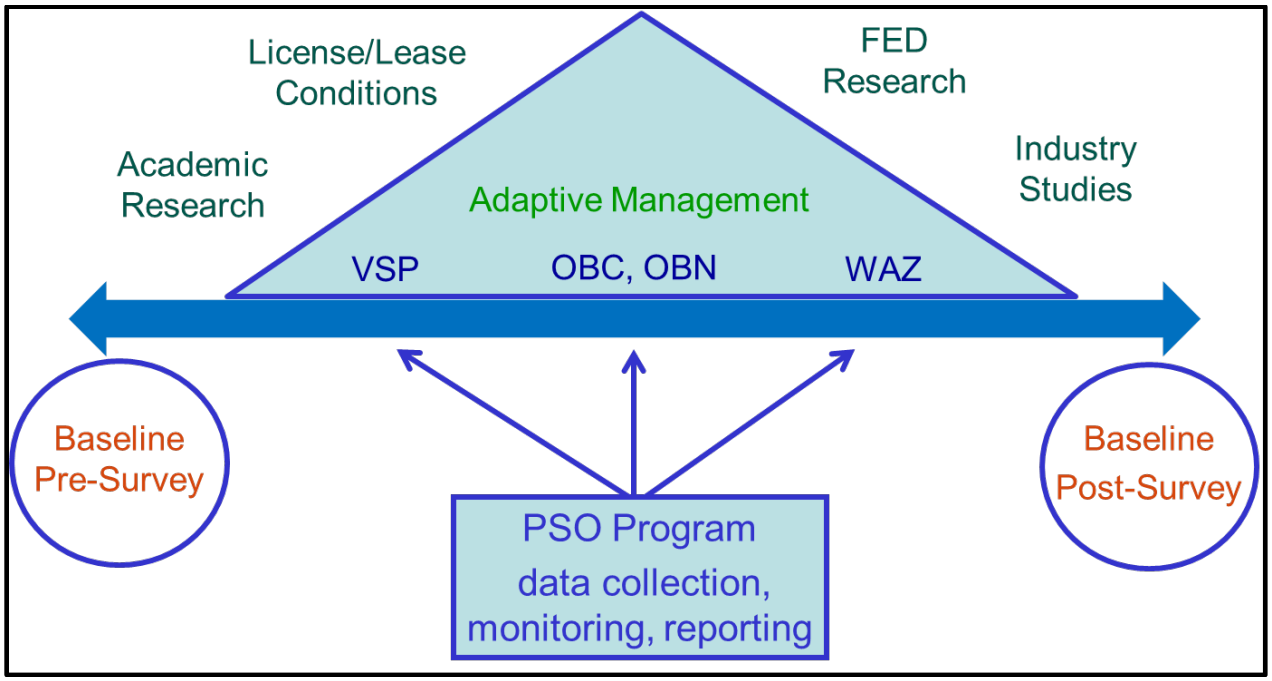

Figure 5. PSO data can fill important information gaps for resource agencies, industry, and the scientific community.

Thoughtful consideration of standardized data collection can inform the mitigation and management needs of protected species, the collection of data on species interactions and behavior near offshore activities, and the effectiveness of mitigation measures. A national database could serve as the clearinghouse for PSO data collected in different oceanic regions. The integration and analysis of PSO data with other oceanic data can provide valuable information on protected species that has been otherwise unavailable (see Figure 6).

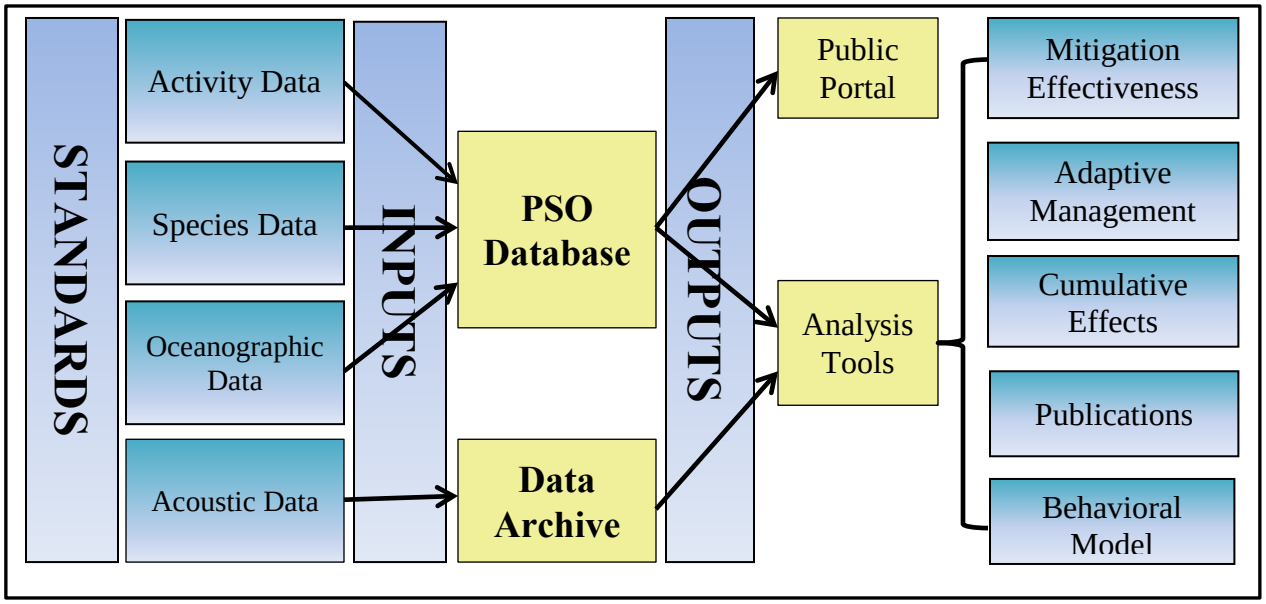

Figure 6. A conceptual diagram for the submission PSO inputs into a national database, and outputs to meet management, scientific, and stakeholder interests.

Integration of the PSO Program Data

NMFS should be responsible for the maintenance of a national database and data analysis for all G&G survey data, as G&G survey also occur in energy-related, academic, and scientific applications outside of BOEM permitting authorities. However, BOEM and BSEE have an inherent interest in maintaining data for activities it permits and may establish its own database for this purpose. For oil and gas G&G surveys under their purview, BSEE would be responsible for enforcing the submission of reports from PSO providers; however, NMFS would be responsible for national data management and analysis for all types of G&G survey data (i.e., scientific, academic, and industry).

The establishment of an independent national database could help integrate data from G&G survey reports as well as other activities (see Figure 7), such as explosive removals of marine structures, dredging, pile-driving, and other similar types of data meeting minimum data standards. A protected species database could complement other existing conservation efforts by providing access to data for specific species or actions, as well as complementing existing databases such as the NMFS Public Consultation Tracking System (PCTS), Authorizations and Permits for Protected Species (APPS) database, Marine Mammal Health and Stranding Response Program (MMHSRP) database, NMFS Ship Strike database, platforms of opportunity, and other efforts to monitor and track impacts to protected species. It is possible that some databases may be combined, (e.g., a permit and reporting database) to meet agency conservation goals.

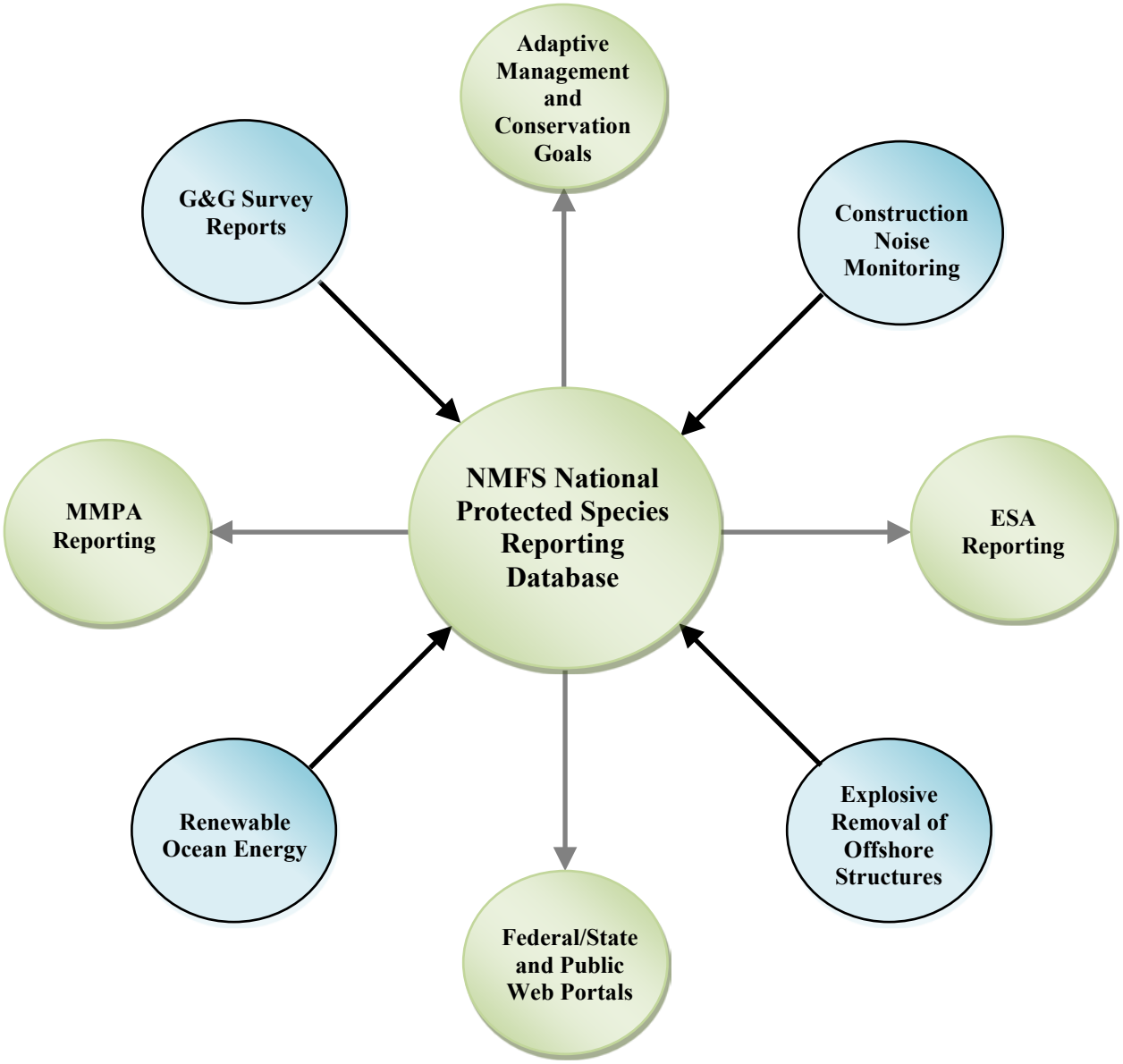

Figure 7. Establishment and maintenance of a national protected species database would serve many functions to meet common protected species conservation goals and responsibilities of management agencies.

Existing Protected Species Databases and PSO programs

Public Consultation Tracking System (PCTS)
https://pcts.nmfs.noaa.gov/pcts-web/homepage.pcts

Authorizations and Permits for Protected Species
https://apps.nmfs.noaa.gov

Marine Mammal Health and Stranding Response Program Database
https://mmhsrp.nmfs.noaa.gov

Sea Turtle Stranding and Salvage Network
http://www.sefsc.noaa.gov/STSSN/STSSNReportDriver.jsp

NMFS Large Whale Ship Strike Database
http://www.nmfs.noaa.gov/pr/pdfs/shipstrike/lwssdata.pdf

U.S. Army Corps of Engineers Sea Turtle Data Warehouse
http://el.erdc.usace.army.mil/seaturtles

NMFS Platform Removal Observer Program
http://galveston.ssp.nmfs.gov/platforms/

National Marine Mammal Laboratory's Platforms of Opportunity Program
http://www.st.nmfs.noaa.gov/tm/nwc/nwc159.pdf

The development of quality assurance and quality control standards discussed in this report and the development of standards for data quality, format, electronic submission, and analysis will be needed to make data analysis more efficient and robust (see Figure 7). The need for data standards is a common topic at many meetings regarding the quality of data to meet statistical analysis and adaptive management needs. The NMFS Fisheries Information System (FIS) (www.st.nmfs.noaa.gov/fis/) provides a potential model upon which to base the design, development, and implementation of data collection and data management to improve the timeliness and accuracy of data for protected species nationwide (see the Collaboration and Integration subsection under Program Costs in Section 6). Such an integrated model of data management could provide a means to submit, analyze, and share data in an effective way across a variety of protected species reports currently being collected by NMFS. Because of the potential for these types of data to be useful in preparing annual stock assessment reports for marine mammals, NMFS Science Centers should be consulted when these data are analyzed.

10. RECOMMENDATIONS

This report addresses key issues in the existing PSO program for G&G surveys. There are many beneficial outcomes expected from developing and implementing national PSO standards for G&G surveys (see Table 4), including benefits to stakeholders and improving monitoring and mitigation effectiveness for the benefit of protected species management. As outlined in the report, NMFS, BOEM, BSEE, and non-federal stakeholders have distinct responsibilities in implementing PSO requirements. Therefore, it is important to develop a program that can function effectively way to meet the needs of affected stakeholders.

Table 4. Summary of PSO Program objectives and outcomes.

OBJECTIVE	OUTCOME
Develop a reimbursable agreement between BOEM and NMFS to develop, implement, and manage the PSO training and data program.	PSO program support will allow implementation and future planning for the program
Develop a permit fee to support the PSO program needed for industry activities.	
Establish national PSO training standards.	All PSOs will be trained with the same materials, information, and completion requirements.
Establish a process to approve PSO providers.	PSO expectations and data monitoring, collection, and reporting requirements can be implemented and enforced.
Establish a process to approve PSO trainers.	NMFS can maintain training availability and quality of PSO training programs.
Develop a policy for national PSO qualifications and eligibility.	PSO performance and quality of data collected will improve.
Establish standardized data collection and reporting requirements for G&G surveys.	Identify new data collection needs in collaboration with federal partners and stakeholders that will improve information on effects to protected species and inform adaptive management. Improved consistency in data recording protocols and efficiency of data management.
Create and maintain a national or regional database to manage PSO data for G&G survey data collected and reported to NMFS and BSEE.	Complete more comprehensive analyses of species locations and effects of activities on their behavior.
Conduct regular reviews of the data and make the findings available to stakeholders.	Publish reports and peer reviewed papers regarding the PSO data program.

Following is a summary of recommendations for NMFS, BOEM, and BSEE to implement a standardized PSO program for G&G surveys on the Outer Continental Shelf.

Recommendations for NMFS

- Establish national PSO training standards.
- Develop a policy for national PSO qualifications and eligibility, and establish criteria by which individual PSO qualifications and experience can be evaluated.
- Ensure that PSO standards developed are consistent with existing federal statutes, regulations, and policies.
- Develop a strategy to coordinate with regional program managers to consistently implement PSO standards nationwide through interagency section 7 consultations under the ESA, and LOAs and IHAs under the MMPA.
- Develop standardized data collection and reporting requirements to be used for interagency section 7 consultations under the ESA, and LOAs and IHAs under the MMPA for standardized data management and analyses.
- Develop data quality assurance standards and process.
- Work within NMFS Regional Science Centers and the Office of Science and Technology to create a national database to manage PSO data and after-action reports from federal agencies and non-federal permit holders;
- Develop permits or agreements detailing expectations and data collection and reporting of third-party PSO trainers, including performance standards, conflicts of interest, and standards of conduct.
- Develop PSO communications and outreach materials, including drafting a manual that provides national guidance on training guidelines, procedures, and protocols for the observer issues outlined in this report.

Recommendations for BOEM/BSEE

- Develop a reimbursable agreement with NMFS to develop, implement, and manage the PSO training and data program.
- Consider assessing permit fees to financially support the PSO program needed for industry activities.
- Implement standardization for data collection methods, electronic forms, and software used in collaboration with NMFS and non-federal stakeholders.
- Develop permits or agreements detailing expectations and data collection and reporting of third-party PSO provider companies, including performance standards, conflicts of interest, and standards of conduct.
- Implement quality assurance standards and manage PSO data for annual data analysis.
- Establish a process to advertise for and approve PSO procedures.
- Hold a stakeholder workshop to discuss new PSO procedures.
- Develop a mechanism, procedure, or regulation to ensure that selected PSO providers are being compensated prior to deployment of approved observers.
- Develop a debriefing and evaluation system for observers.

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ACKNOWLEDGMENTS

The Protected Species Observer Working Group extends its gratitude to the numerous individuals who provided insights, information, and reviewed previous versions of this report. Special thanks to Mary Jo Barkaszi[1], Jolie Harrison[2], Candace Nachman[2], Jeannine Cody[2], Deborah Ben-David[3], Deborah Cranswick[4], James Wilder[5], and Victoria Cornish[6].

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[3] NMFS General Counsel for Fisheries

[4] BOEM Alaska Region

[5] USFWS Alaska Region

[6] U.S. Marine Mammal Commission

APPENDIX A. BOEM BSEE JOINT NO. 2012-G02 IMPLEMENTATION OF SEISMIC SURVEY MITIGATION MEASURES AND PROTECTED SPECIES OBSERVER PROGRAM

It is anticipated that the NTL will be updated with any new requirements or changes to PSO requirements that may result.

Downloaded on April 12, 2013 at: http://www.boem.gov/Regulations/Notices-To-Lessees/Notices-to-Lessees-and-Operators.aspx

OMB Control Number: 1010-0151
OMB Expiration Date: December 31, 2014

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM)
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT (BSEE)
GULF OF MEXICO OUTER CONTINENTAL SHELF (OCS) REGION

JOINT NTL No. 2012-G02 Effective Date: January 1, 2012

NOTICE TO LESSEES AND OPERATORS (NTL) OF FEDERAL OIL, GAS, AND SULPHUR LEASES IN THE OCS, GULF OF MEXICO OCS REGION

Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program

This NTL supersedes and replaces NTL No. 2007-G02. It does not introduce any new types of mitigation measures; however, it clarifies how you should implement seismic survey mitigation measures, including ramp-up procedures, the use of a minimum sound source, airgun testing and protected species observation and reporting. The measures contained herein apply to all on-lease/ancillary activity surveys you conduct under 30 CFR 550 and all off-lease surveys you conduct under 30 CFR 551.

Background

The use of an airgun or airgun arrays while conducting seismic operations may have an impact on marine wildlife, including marine mammals and sea turtles. Some marine mammals, such as the sperm whale (*Physeter macrocephalus*), and all sea turtles that inhabit the Gulf of Mexico are protected under the Endangered Species Act (ESA). All marine mammals are protected under the Marine Mammal Protection Act (MMPA).

In order to protect marine mammals and sea turtles during seismic operations, the National Marine Fisheries Service (NMFS) requires seismic operators to use ramp-up and visual observation procedures when conducting seismic surveys. Procedures for ramp-up, protected species observer training, visual monitoring and reporting are described in detail in this NTL. These mitigation measures apply to geophysical activities conducted under lease terms, for all seismic survey operations conducted in waters deeper than 200 meters (656 feet) throughout the Gulf of Mexico and, in the Gulf of Mexico waters east of 88.0° W. longitude, for all seismic survey operations conducted regardless of water depth. Performance of these mitigation measures is also a condition of the approval of applications for geophysical permits. You must demonstrate your compliance with these mitigation measures by submitting to BSEE certain reports detailed in this NTL.

Definitions

Terms used in this NTL have the following meanings:

1. Airgun means a device that releases compressed air into the water column, creating an acoustical energy pulse with the purpose of penetrating the seafloor.
2. Ramp-up (sometimes referred to as "soft start") means the gradual increase in emitted sound levels from an airgun array by systematically turning on the full complement of an array's airguns over a period of time.
3. Visual monitoring means the use of trained observers to scan the ocean surface visually for the presence of marine mammals and sea turtles. These observers must have successfully completed a visual observer training program as described below. The area to be scanned visually includes, but is not limited to, the exclusion zone. Visual monitoring of an exclusion zone and adjacent waters is intended to establish and, when visual conditions allow, maintain a zone around the sound source and seismic vessel that is clear of marine mammals and sea turtles, thereby reducing or eliminating the potential for injury.
4. Exclusion zone means the area at and below the sea surface within a radius of 500 meters surrounding the center of an airgun array and the area within the immediate vicinity of the survey vessel. Each survey vessel must maintain its own unique exclusion zone.
5. Whales mean all marine mammals in the Gulf of Mexico except dolphins (see definition below) and manatees. This includes all species of baleen whales (Suborder *Mysticeti*), all species of beaked whales (*Ziphius cavirostris* and *Mesoplodon sp.*), sperm whales (*Physeter macrocepahalus*), and pygmy and dwarf sperm whales (*Kogia sp.*). Of the baleen whales, only the Bryde's whale (*Balaenoptera edeni*) is expected to be present in the northern Gulf of Mexico and is considered uncommon. This species has primarily been sighted in water depths less than 200 m in the eastern Gulf of Mexico. Sightings of other baleen whale species are highly unlikely.
6. Dolphins mean all marine mammal species in the Family *Delphinidae*. In the Gulf of Mexico, this includes, among others, killer whales, pilot whales, and all of the "dolphin" species.

Ramp-up Procedures

The intent of ramp-up is to warn marine mammals and sea turtles of pending seismic operations and to allow sufficient time for those animals to leave the immediate vicinity. Under normal conditions, animals sensitive to these activities are expected to move out of the area. For all seismic surveys, including airgun testing, use the ramp-up procedures described below to allow whales, other marine mammals, and sea turtles to depart the exclusion zone before seismic surveying begins.

Measures to conduct ramp-up procedures during all seismic survey, including airgun testing, operations are as follows:

1. Visually monitor the exclusion zone and adjacent waters for the absence of marine mammals and sea turtles for at least 30 minutes before initiating ramp-up procedures. If none are detected, you may initiate ramp-up procedures. Do not initiate ramp-up procedures at night or when you cannot visually monitor the exclusion zone for marine mammals and sea turtles if your minimum source level drops below 160 dB re 1 μPa-m (rms) (see measure 5). Altering the vessel's course to shallower water depths (< 200m in

the Central and Western Planning Areas) to circumvent ramp-up requirements of the 200 meter isobath will be considered noncompliant.

2. Initiate ramp-up procedures by firing a single airgun. The preferred airgun to begin with should be the smallest airgun, in terms of energy output (dB) and volume (in3).
3. Continue ramp-up by gradually activating additional airguns over a period of at least 20 minutes, but no longer than 40 minutes, until the desired operating level of the airgun array is obtained.
4. Immediately shut down all airguns ceasing seismic operations at any time a whale is detected entering or within the exclusion zone. You may recommence seismic operations and ramp-up of airguns only when the exclusion zone has been visually inspected for at least 30 minutes to ensure the absence of marine mammals and sea turtles.
5. You may reduce the source level of the airgun array, using the same shot interval as the seismic survey, to maintain a minimum source level of 160 dB re 1 μPa-m (rms) for the duration of certain activities. By maintaining the minimum source level, you will not be required to conduct the 30-minute visual clearance of the exclusion zone before ramping back up to full output. Activities appropriate for maintaining the minimum source level are: (1) all turns between transect lines, when a survey using the full array is being conducted immediately prior to the turn and will be resumed immediately after the turn; and (2) unscheduled, unavoidable maintenance of the airgun array that requires the interruption of a survey to shut down the array. The survey should be resumed immediately after the repairs are completed. There may be other occasions when this practice is appropriate, but use of the minimum source level to avoid the 30-minute visual clearance of the exclusion zone is only for events that occur during a survey using the full power array. The minimum sound source level is not to be used to allow a later ramp-up after dark or in conditions when ramp-up would not otherwise be allowed.

Protected Species Observer Program

Visual Observers

Visual observers who have completed a protected species observer training program as described below are required on all seismic vessels conducting operations in water depths greater than 200 meters (656 ft) throughout the Gulf of Mexico. Visual observers are required on all seismic vessels conducting operations in OCS water depths less than 200 meters (656 ft.) in the Gulf of Mexico waters east of 88.0° W. longitude. At least two protected species visual observers will be required on watch aboard seismic vessels at all times during daylight hours (dawn to dusk) when seismic operations are being conducted, unless conditions (fog, rain, darkness) make sea surface observations impossible. If conditions deteriorate during daylight hours such that the sea surface observations are halted, visual observations must resume as soon as conditions permit.

Operators may engage trained third party observers, may utilize crew members after training as observers, or may use a combination of both third party and crew observers. During these observations, the following guidelines shall be followed: (1) other than brief alerts to bridge personnel of maritime hazards, no additional duties may be assigned to the observer during his/her visual observation watch (if conditions warrant more vigilant look-outs when navigating around or near maritime hazards, additional personnel must be used to ensure that watching for protected species remains the primary focus of the on-watch observers), (2) no observer will be allowed more than 4 consecutive hours on watch as a visual observer, (3) a "break" time of no less than 2 hours

must be allowed before an observer begins another visual monitoring watch rotation (break time means no assigned observational duties), and (4) no person (crew or third party) on watch as a visual observer will be assigned a combined watch schedule of more than 12 hours in a 24-hour period. Due to the concentration and diligence required during visual observation watches, operators who choose to use trained crew members in these positions may select only those crew members who demonstrate willingness as well as ability to perform these duties.

Training

All visual observers must have completed a protected species observer training course. BOEM and BSEE will not sanction particular trainers or training programs. However, basic training criteria have been established and must be adhered to by any entity that offers observer training. Operators may utilize observers trained by third parties, may send crew for training conducted by third parties, or may develop their own training program. All training programs offering to fulfill the observer training requirement must: (1) furnish to BSEE, at the address listed in this NTL, a course information packet that includes the name and qualifications (i.e., experience, training completed, or educational background) of the instructor(s), the course outline or syllabus, and course reference material; (2) furnish each trainee with a document stating successful completion of the course; and (3) provide BSEE with names, affiliations, and dates of course completion of trainees.

The training course must include the following elements:

I. Brief overview of the MMPA and the ESA as they relate to seismic acquisition and protection of marine mammals and sea turtles in the Gulf of Mexico,

II. Brief overview of seismic acquisition operations in the Gulf of Mexico,

III. Overview of seismic mitigation measures (NTLs) and the protected species observer program in the Gulf of Mexico,

IV. Discussion of the role and responsibilities of the protected species observer in the Gulf of Mexico, including:
   a) Legal requirements (why you are here and what you do),
   b) Professional behavior (code of conduct),
   c) Integrity,
   d) Authority of protected species observer to call for shut-down of seismic acquisition operations,
   e) Assigned duties,
      1) What can be asked of the observer,
      2) What cannot be asked of the observer,
   f) Reporting of violations and coercion,

V. Identification of Gulf Of Mexico marine mammals and sea turtles, with emphasis on whales,

VI. Cues and search methods for locating marine mammals, especially whales, and sea turtles,

VII. Data collection and reporting requirements:
a) Forms and reports to BSEE via email at protectedspecies@bsee.gov on the 1st and 15th of each month,
b) Whale in exclusion zone/shut-down report within 24 hours.

Visual Monitoring Methods

The observers on duty will look for whales, other marine mammals, and sea turtles using the naked eye and hand-held binoculars provided by the seismic vessel operator. The observers will stand watch in a suitable location that will not interfere with navigation or operation of the vessel and that affords the observers an optimal view of the sea surface. The observers will provide 360° coverage surrounding the seismic vessel and will adjust their positions appropriately to ensure adequate coverage of the entire area. These observations must be consistent, diligent, and free of distractions for the duration of the watch.

Visual monitoring will begin no less than 30 minutes prior to the beginning of ramp-up and continue until seismic operations cease or sighting conditions do not allow observation of the sea surface (e.g., fog, rain, darkness). If a marine mammal or sea turtle is observed, the observer should note and monitor the position (including lat./long. of vessel and relative bearing and estimated distance to the animal) until the animal dives or moves out of visual range of the observer. Make sure you continue to observe for additional animals that may surface in the area, as often there are numerous animals that may surface at varying time intervals. At any time a whale is observed within an estimated 500 meters (1,640 feet) of the sound source array ("exclusion zone"), whether due to the whale's movement, the vessel's movement, or because the whale surfaced inside the exclusion zone, the observer will call for the immediate shut-down of the seismic operation, including airgun firing (the vessel may continue on its course but all airgun discharges must cease). The vessel operator must comply immediately with such a call by an on-watch visual observer. Any disagreement or discussion should occur only after shut-down. When no marine mammals or sea turtles are sighted for at least a 30-minute period, ramp- up of the source array may begin. Ramp-up cannot begin unless conditions allow the sea surface to be visually inspected for marine mammals and sea turtles for 30 minutes prior to commencement of ramp-up (unless the method described in the section entitled "Experimental Passive Acoustic Monitoring" is used). Thus, ramp-up cannot begin after dark or in conditions that prohibit visual inspection (fog, rain, etc.) of the exclusion zone. Any shut-down due to a whale(s) sighting within the exclusion zone must be followed by a 30-minute all-clear period and then a standard, full ramp-up. Any shut-down for other reasons, including, but not limited to, mechanical or electronic failure, resulting in the cessation of the sound source for a period greater than 20 minutes, must also be followed by full ramp-up procedures. In recognition of occasional, short periods of the cessation of airgun firing for a variety of reasons, periods of airgun silence **not exceeding 20 minutes** in duration will not require ramp-up for the resumption of seismic operations if: (1) visual surveys are continued diligently throughout the silent period (requiring daylight and reasonable sighting conditions), and (2) no whales, other marine mammals, or sea turtles are observed in the exclusion zone. If whales, other marine mammals, or sea turtles are observed in the exclusion zone during the short silent period, resumption of seismic survey operations must be preceded by ramp-up.

Reporting

The importance of accurate and complete reporting of the results of the mitigation measures cannot be overstated. Only through diligent and careful reporting can BOEM, BSEE, and

subsequently NMFS, determine the need for and effectiveness of mitigation measures. Information on observer effort and seismic operations are as important as animal sighting and behavior data. In order to accommodate various vessels' bridge practices and preferences, vessel operators and observers may design data reporting forms in whatever format they deem convenient and appropriate. Alternatively, observers or vessel operators may adopt the United Kingdom's Joint Nature Conservation Committee forms (available at their website www.jncc.gov.uk). At a minimum, the following items should be recorded and included in reports to the BSEE:

Observer Effort Report: Prepared for each day during which seismic acquisition operations are conducted. Furnish an observer effort report to BSEE on the 1st and the 15th of each month that includes:

- Vessel name,
- Observers' names and affiliations,
- Survey type (e.g., site, 3D, 4D),
- BOEM Permit Number (for "off-lease seismic surveys") or Plan Control Number and OCS Lease Number (for "on-lease/ancillary seismic surveys"),
- Date,
- Time and lat./long. when daily visual survey began,
- Time and lat./long. when daily visual survey ended,
- Average environmental conditions while on visual survey, including
  - Wind speed and direction,
  - Sea state (glassy, slight, choppy, rough or Beaufort scale),
  - Swell (low, medium, high or swell height in meters),
  - Overall visibility (poor, moderate, good).

Survey Report: Prepared for each day during which seismic acquisition operations are conducted and the airguns are being discharged. Furnish a survey report to BSEE on the 1st and the 15th of each month during which operations are being conducted that includes:

- Vessel name,
- Survey type (e.g., site, 3D, 4D),
- BOEM Permit Number (for "off-lease seismic surveys") or Plan Control Number and OCS Lease Number (for "on-lease/ancillary seismic surveys"),
- Date,
- Time pre-ramp-up survey begins,
- What marine mammals and sea turtles were seen during pre-ramp-up survey?
- Time ramp-up begins,
- Were whales seen during ramp-up?
- Time airgun array is operating at the desired intensity,
- What marine mammals and sea turtles were seen during survey?
- If whales were seen, was any action taken (i.e., survey delayed, guns shut down)?
- Reason that whales might not have been seen (e.g., swell, glare, fog),
- Time airgun array stops firing.

Sighting Report: Prepared for each sighting of a marine mammal (whale or dolphin) or sea turtle made during seismic acquisition operations. Furnish a sighting report to BSEE on the 1st and the 15th of each month during which operations are being conducted that includes:

- Vessel name,
- Survey type (e.g., site, 3D, 4D),
- BOEM Permit Number (for "off-lease seismic surveys") or Plan Control Number and OCS Lease Number (for "on-lease/ancillary seismic surveys"),
- Date,
- Time,
- Watch status (Were you on watch or was this sighting made opportunistically by you or someone else?),
- Observer or person who made the sighting,
- Lat./long. of vessel,
- Bearing of vessel,
- Bearing and estimated range to animal(s) at first sighting,
- Water depth (meters),
- Species (or identification to lowest possible taxonomic level),
- Certainty of identification (sure, most likely, best guess),
- Total number of animals,
- Number of juveniles,
- Description (as many distinguishing features as possible of each individual seen, including length, shape, color and pattern, scars or marks, shape and size of dorsal fin, shape of head, and blow characteristics),
- Direction of animal's travel – compass direction,
- Direction of animal's travel – related to the vessel (drawing preferably),
- Behavior (as explicit and detailed as possible; note any observed changes in behavior,)
- Activity of vessel,
- Airguns firing? (yes or no),
- Closest distance (meters) to animals from center of airgun or airgun array (whether firing or not).

Note: If this sighting was of a whale(s) within the exclusion zone that resulted in a shut-down of the airguns, include in the sighting report the observed behavior of the whale(s) before shut-down, the observed behavior following shut-down (specifically noting any change in behavior), and the length of time between shut-down and subsequent ramp-up to resume the seismic survey (note if seismic survey was not resumed as soon as possible following shut- down). Send this report to BOEM **within 24 hours of the shut-down**. These sightings should also be included in the first regular semi-monthly report following the incident.

Additional information, important points, and comments are encouraged. All reports will be submitted to BSEE on the 1st and the 15th of each month (with one exception noted above). Forms should be scanned (or data typed) and sent via email to **protectedspecies@bsee.gov**.

Please note that these marine mammal and sea turtle reports are in addition to any reports you submit under NTL No. 2005-G07, effective July 1, 2005, and all progress and final reports required as a condition of your geophysical permit.

Borehole Seismic Surveys

Borehole seismic surveys differ from surface seismic surveys in a number of ways, including the use of much smaller airgun arrays, having an average survey time of 12-24 hours, utilizing a sound source that is not usually moving at 4-5 knots, and requiring the capability of moving the receiver in the borehole between shots. Due to these differences, the following altered mitigations apply only to borehole seismic surveys:

- During daylight hours, when visual observations of the exclusion zone are being performed as required in this NTL, borehole seismic operations will not be required to ramp-up for shutdowns of 30 minutes or less in duration, as long as no whales, other marine mammals, or sea turtles are observed in the exclusion zone during the shutdown. If a whale, other marine mammal, or sea turtle is sighted in the exclusion zone, ramp-up is required and may begin only after visual surveys confirm that the exclusion zone has been clear for 30 minutes.
- During nighttime or when conditions prohibit visual observation of the exclusion zone, ramp-up will not be required for shutdowns of 20 minutes or less in duration. For borehole seismic surveys that utilize passive acoustics during nighttime and periods of poor visibility, ramp-up is not required for shutdowns of 30 minutes or less.
- Nighttime or poor visibility ramp-up is allowed only when passive acoustics are used to ensure that no whales are present in the exclusion zone (as for all other seismic surveys). Operators are strongly encouraged to acquire the survey in daylight hours when possible.
- Protected species observers must be used during daylight hours, as required in this NTL, and may be stationed either on the source boat or on the associated drilling rig or platform if a clear view of the sea surface in the exclusion zone and adjacent waters is available.
- All other mitigations and provisions for seismic surveys as set forth in this NTL will apply to borehole seismic surveys.
- Reports should reference a Plan Control Number, OCS Lease Number, Area/Block and Borehole Number or BOEM permit number, as applicable.

Experimental Passive Acoustic Monitoring

Whales, especially sperm whales, are very vocal marine mammals, and periods of silence are usually short and most often occur when these animals are at the surface and may be detected using visual observers. However, sperm whales are at the greatest risk of potential injury from seismic airguns when they are submerged and under the airgun array. Passive acoustic monitoring appears to be very effective at detecting submerged and diving sperm whales, and some other marine mammal species, when they are not detectable by visual observation. BOEM and BSEE strongly encourage operators to participate in an experimental program by including passive acoustic monitoring as part of the protected species observer program. Inclusion of passive acoustic monitoring does **not** relieve an operator of any of the mitigations (including visual observations) in this NTL **with the following exception**: Monitoring for whales with a passive acoustic array by an observer proficient in its use will allow ramp-up and the subsequent start of a seismic survey during times of reduced visibility (darkness, fog, rain, etc.) when such ramp-up otherwise would not be permitted using only visual observers. If you use passive acoustic

monitoring, include an assessment of the usefulness, effectiveness, and problems encountered with the use of that method of marine mammal detection in the reports described in this NTL. A description of the passive acoustic system, the software used, and the monitoring plan should also be reported to BSEE at the beginning of its use.

Paperwork Reduction Act of 1995 (PRA) Statement

The PRA (44 U.S.C. Chapter 35) requires us to inform you that we collect the information described in this NTL to ensure that you conduct operations in a manner that will not jeopardize threatened or endangered species or destroy or adversely modify critical habitat that has been designated for those species. We protect all proprietary information submitted according to the Freedom of Information Act, 30 CFR 250.197, and 30 CFR 550.197. An agency may not conduct or sponsor a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. You are not obligated to respond until the OMB has approved this collection of information. We estimate the total hour burden to be 751 hours and the total "non-hour cost" burden to be $1,854,080. Direct comments regarding the burden or any other aspect of this information collection to the: Interior Desk Officer 1010–0151, Office of Management and Budget; 202-395-5806 (fax); email: **oira_docket@omb.eop.gov**. Depending on the nature of the comment, please also send a copy to either BSEE or BOEM.

In addition, this NTL refers to information collection requirements under 30 CFR 250 subpart B and 30 CFR 550 subpart B. The OMB has approved all of the information collection requirements in these regulations and assigned OMB Control Number 1010-0151.

BSEE and BOEM issue NTLs as guidance documents in accordance with 30 CFR 250.103 and 30 CFR 550.103 to clarify, supplement, and provide more detail about certain BOEM and BSEE regulatory requirements and to outline the information you provide in your various submittals. Under that authority, this NTL sets forth a policy on and an interpretation of a regulatory requirement that provides a clear and consistent approach to complying with that requirement.

Contact

Any questions regarding this NTL should be submitted in writing to: **protectedspecies@bsee.gov**.

Submittals by mail may be directed to:

Bureau of Safety and Environmental Enforcement
Gulf of Mexico OCS Region
Environmental Enforcement Branch (MS GE466)
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

John Rodi
Regional Director
BOEM

Lars Herbst
Regional Director
BSEE

APPENDIX B. OBSERVER RESOURCE WEBSITES

Observer Programs and Associations

National Observer Program (main page)
www.st.nmfs.noaa.gov/st4/nop/

Association for Professional Observers (APO)
www.apo-observer.org/

Marine Mammal Observer Association (MMOA)
www.mmo-association.org

Training Resources

NMFS National Observer Program Training Manuals
www.st.nmfs.noaa.gov/st4/nop/

MMO Software

MultiSeis MMO
www.multiseis.com

PAMGUARD
www.pamguard.org/home.shtml

WinCruz
http://swfsc.noaa.gov/uploadedFiles/Divisions/PRD/WinCruz.pdf
http://swfsc.noaa.gov/textblock.aspx?Division=PRD&ParentMenuId=147&id=1446

Safety Resources

NOAA Aviation Safety Program
www.omao.noaa.gov/aviationsafety/safety.html

USCG Dockside Safety Examination
http://www.uscg.mil/d1/prevention/CFVS.asp

APPENDIX C. NMFS POLICY DIRECTIVE 04-109, NMFS MINIMUM ELIGIBILITY STANDARDS FOR MARINE FISHERIES OBSERVERS

Modification of the following requirements may be required to be applicable to non-fisheries observers in a PSO program.

Department of Commerce ▪ National Oceanic & Atmospheric Administration ▪ National Marine Fisheries Service

NATIONAL MARINE FISHERIES SERVICE POLICY DIRECTIVE 04-109 ***August 6, 2007***
Science and Technology
NATIONAL MINIMUM ELIGIBILITY STANDARDS FOR MARINE FISHERIES OBSERVERS
NOTICE: This publication is available at: http://www.nmfs.noaa.gov/directives/.
OPR: F/ST4 (D. Hansford) **Certified by:** F/ST (B. Ponwith) **Type of Issuance:** Renewed January 2010
SUMMARY OF ACTION: Creates NOAA Fisheries PD 04-109, "National Minimum Eligibility Standards for Marine Fisheries Observers." Major features include national minimum requirements for recruiting and retaining fisheries observers for new and existing observer programs set out in NMFS Service Instruction 04-109-01.

Introduction

The National Marine Fisheries Service (NMFS) regional observer programs have been established independently since 1973 to respond to regional fishery management and conservation requirements. The NMFS currently deploys fishery observers on commercial fishing and processing vessels in 42 fisheries throughout the US. The role of fishery observers is to record and supply catch and bycatch data on commercial fishing activity. Observers also monitor compliance with Magnuson-Stevens Fishery Conservation and Management Act regulations, Marine Mammal Protection Act and Endangered Species Act requirements, and catch quotas. Currently, NMFS coordinates observer program management through the NMFS Office of Science and Technology/National Observer Program (NOP). The NOP seeks to support observer programs and increase their usefulness to the overall goals of resource conservation and management. Improvements in data collection, observer recruitment and training, and the quality of observer data are among the important issues that the NOP addresses on a national level. National minimum eligibility standards for new observers are being adopted to aid in the selection of academically and physically qualified candidates who can perform their duties professionally and objectively and to set a foundation for developing standards for quality observers for all NMFS regional observer programs.

Objective

Each regional program has set standards for observer eligibility that may be similar to, but not exactly the same as, other regions' eligibility standards. After a review by the NMFS National Observer Program Advisory Team of the eligibility standards in place in each NMFS regional observer program, NMFS has identified common areas that will benefit from being standardized nationally. The establishment of national minimum eligibility standards will enable observers that meet these basic qualifications to be recognized as minimally qualified for all NMFS observer programs. The publication of national minimum eligibility standards will alert all potential applicants and program planners of the basic qualifications for all NMFS observer program recruitment actions.

Authorities and Responsibilities

This directive establishes the following authorities and responsibilities:

The National Observer Program

The National Observer Program will coordinate with all regional observer programs to ensure the minimum eligibility standards are met.

Regional Observer Programs

Regional observer programs will monitor and ensure, through clearly developed and defined regulations and/or performance measures, that all observer providers recruit and hire qualified and experienced individuals to work as observers.

Measuring Effectiveness

Each program has different training requirements, data collection requirements, deployment and data collection needs, and trip and sea day definitions. In some programs a trip is defined in terms of gear retrieval; in others, it is based on sea days. It is essential that each program have the ability to assess observer performance independently of other programs.

Each program will determine what performance standards an observer must meet to successfully demonstrate the ability to collect quality data. Each regional program will measure the effectiveness of these requirements through a formal documented debriefing process for observers, designed to evaluate observer performance in relation to data quality. NOPAT will provide an annual report identifying deficiencies as well as where performance standards are being met or exceeded to the NOP. Where deficiencies are identified suggested improvements must also be provided.

References

This policy directive is supported by the reference listed in Attachment 1.

Signed_____ ___/s/_____ _7/23/07_____
William T. Hogarth, Ph.D. Date
Assistant Administrator for Fisheries

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

National Marine Fisheries Service Instruction 04-109-01, National Minimum Eligibility Standards for Marine Fisheries Observers

Observer Safety Training Acknowledgement of Risk Form 04-109-01, National Minimum Eligibility Standards for Marine Fisheries Observers

APPENDIX D. NMFS POLICY DIRECTIVE 04-109-01, NMFS MINIMUM ELIGIBILITY STANDARDS FOR MARINE FISHERIES OBSERVERS AND ACKNOWLEDGEMENT OF RISK

Modification of the following requirements may be required to be applicable to non-fisheries observers in a PSO program.

Department of Commerce ▪ National Oceanic & Atmospheric Administration ▪ National Marine Fisheries Service

NATIONAL MARINE FISHERIES SERVICE INSTRUCTION 04-109-01 ***August 6, 2007***
Science and Technology ***National Observer Program Minimum Eligibility Standards***
NATIONAL MINIMUM ELIGIBILITY STANDARDS FOR MARINE FISHERIES OBSERVERS
NOTICE: This publication is available at: http://www.nmfs.noaa.gov/directives/.
OPR: F/ST4 (D. Hansford) **Certified by:** F/ST4 (S. Brown) **Type of Issuance:** Renewed January 2010
SUMMARY OF REVISIONS: Signed _____/s/_____7/23/07_____ John Boreman, Ph.D. Date Director, Office of Science and Technology

NATIONAL MINIMUM ELIGIBILITY STANDARDS FOR MARINE FISHERIES OBSERVERS

Table of Contents

1. Introduction/Background

The National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS) observer programs deploy observers to collect data required for fishery conservation and management under the Magnuson-Stevens Fishery Conservation and Management Act regulations, the Marine Mammal Protection Act, and the Endangered Species Act. Quality observer data are essential for management decisions. Therefore, observers must meet minimum eligibility standards to help ensure professionalism, provide quality assurance, prevent conflict of interests, and promote agency credibility.

The purpose of this procedural directive is to establish national minimum eligibility standards for individuals admitted to and completing observer training. Detailed standards that implement NMFS Policy Directive 04-109, "National Minimum Eligibility Standards for Marine Fisheries Observers" and this procedural directive can be found in applicable Regional Supplements.

2. National Minimum Eligibility Standards for Marine Fisheries Observers

2.1 *Education/Experience*

Unless the Regional Administrator or Science Director has waived this requirement, observer candidates must have: (1) a bachelor's degree from an accredited college or university with a major in one of the natural sciences and a minimum of 30 semester hours or equivalent in the biological sciences; (2) at least one undergraduate course in math or statistics; and (3) experience with data entry on computers. All relevant course work must have been completed and performed at a level equivalent to similar course requirements at the candidate's academic institution.

Regional Administrators and Science Directors may waive the education and experience requirements of this section if an observer candidate has acquired the required skills to be considered eligible for observer training through a NMFS authorized alternative training program. Pending the granting or denial of the waiver, the justification will be filed at the regional observer program with a copy or copies provided to the National Observer Program and observer service provider. The alternate training program must include activities and functions including, but not limited to:

a. participating in or/and observing ocean fishing activities consistent with those that would be required during observer work performance;
b. participating in fisheries research cruises;
c. recording data on marine mammal sightings and fishing activities;
d. tallying incidental take of marine mammals, sea turtles, and sea birds from fishing platforms;
e. collecting biological samples and specimens from postmortem animals;
f. entering data into a database using computers; and
g. completion of a biological training program, equivalent to that received as part of a bachelor's degree, conducted by or approved by NMFS with the specific objective of preparing potential candidates for observer training.

2.2 *Training Requirement*

Observer candidates must complete required observer training by passing, with an overall score of 80% or greater, a written and/or oral tests developed by the program they wish to work in. In addition, candidates must successfully complete the safety training and review information on the risks of participating in hands on training as identified in the acknowledgment of risk form (see Observer Safety Training Acknowledgement of Risk). Failure to pass a training course for one program does not preclude subsequent application to participate in other programs.

2.3 *Conflict of Interest*

(A) An observer:

1) May not have a direct financial interest, other than the provision of observer services, in the fishery, including, but not limited to,

(i) Any ownership, mortgage holder, or other secured interest in a vessel or processor involved in the catching, taking, harvesting or processing of fish;

(ii) Any business selling supplies or services to any vessel or processor in the fishery; and

(iii) Any business purchasing raw or processed products from any vessel or processor in the fishery.

2) May not solicit or accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from anyone who either conducts activities that are regulated by NMFS or has interests that may be substantially affected by the performance or nonperformance of the observer's official duties.

3) May not serve as observers on any vessel or at any processors owned or operated by a person who previously employed the observers in another capacity (e.g., as a crewmember).

4) May not solicit or accept employment as a crewmember or an employee of a vessel or processor while employed by an observer provider.

(B) Provisions for remuneration of observers do not constitute a conflict of interest.

(C) For the purposes of these standards “a fishery” means, any fishery that is covered by a FMP that requires or will possibly require observer coverage.

2.4 *Physical/Medical Condition*
A licensed physician must certify not more than 12 months prior to the end of the observer training that the observer candidate is physically capable of serving as an observer. Documentation must be provided to the program prior to the observer candidate’s completion of training.

2.5 *Communication Skills*
Observer candidates must be able to clearly and concisely communicate verbally and in writing in English.

2.6 *Citizenship or ability to work legally in the U.S.*
All observer candidates must be a U.S. citizen, or a non-citizen who has a green card, TN authorization, H1 visa, or valid work visa, and a social security card.

Observer Safety Training Acknowledgement of Risk

I, _____ (print name) recognize the activity in which I desire to participate involves a risk of injury, which may include but are not limited to: striking objects when entering water, cardiac arrest, ventricular fibrillation, inadvertent gasping and inhalation of water, sudden drowning syndrome, or drowning from other causes, hypothermia, falls from walking on slippery surfaces, and other injuries which may occur due to the use of safety and survival equipment such as distress flares, life rafts, personal flotation devices, dewatering pumps, fire extinguishers, etc.

_____ (Date)

_____ (Signature)

If you have any medical conditions that may limit your ability to safely participate in our training activities, we encourage you to talk to the instructor.

Regional observer programs are required to discuss with observer candidates the risks involved in participation in these hands on training sessions. Trainers are encouraged to obtain the candidate's signature on this form.

APPENDIX E. HEALTH AND SAFETY REGULATIONS

NMFS Observer Health and Safety Regulations (50 CFR § 600.746):

based service or interconnected VoIP service, rather than making a TRS call via 711 in an emergency. Finally, for the reasons discussed above in limiting the duration of the waiver of the Commission's 711 call handling requirements for interconnected VoIP providers, the Commission believes that the public interest dictates that it limits this waiver relief for TRS providers to a period of six months.

Congressional Review Act

The Commission will not send a copy of document DA 07–4178 in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A), because the document is not amending or revising the Commission's existing rules.

Ordering Clauses

Pursuant to Sections 1, 2, and 225 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 152, and 225, and Sections 0.141, 0.361, and 1.3 of the Commission's rules, 47 CFR 0.141, 0.316 and 1.3, document DA 07–4178 is adopted.

The *VON Coalition Petition*, *USTelecom Petition*, and *Hamilton Petition* are granted in part, and denied in part, as set forth herein.

Federal Communications Commission.

Catherine W. Seidel,

Chief, Consumer and Governmental Affairs Bureau.

[FR Doc. E7–21525 Filed 10–31–07; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 600

[Docket No. 071023555–7555–01; I.D. 062906A]

RIN 0648–AU46

Magnuson-Stevens Act Provisions; General Provisions for Domestic Fisheries; Observer Health and Safety

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

ACTION: Final rule.

SUMMARY: NMFS publishes this final rule to enhance the safety of observers and the efficiency of their deployment. The purpose of the final rule is to clarify prohibited actions regarding observers, reinforce that an observer may not be deployed nor stay aboard an unsafe vessel, clarify when a fishing vessel is inadequate for observer deployment and how an owner or operator can resolve discrepancies, clarify when the safety decal requirement applies, and provide for an alternate NMFS safety equipment examination of certain small fishing vessels. This final rule is necessary to maintain and enhance the safety and effectiveness of fisheries observers in carrying out their duties as authorized by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and the fishery management plans and regulations adopted under the Magnuson-Stevens Act.

DATES: Effective December 3, 2007.

FOR FURTHER INFORMATION CONTACT: Lisa Desfosse at 301–713–2328.

SUPPLEMENTARY INFORMATION:

Electronic Access

This **Federal Register** document is also accessible via the Internet at the Office of the **Federal Register**'s website at *http://www.gpoaccess.gov/fr/index.html*.

Background

The Magnuson-Stevens Act, as amended (16 U.S.C. 1801 *et seq.*), the Marine Mammal Protection Act, as amended (MMPA) (16 U.S.C. 1361 *et seq.*), and the Atlantic Tunas Convention Act, as amended (ATCA) (16 U.S.C. 971 *et seq.*) authorize the Secretary of Commerce (Secretary) to station observers aboard commercial fishing vessels to collect scientific data required for fishery and protected species conservation and management, to monitor incidental mortality and serious injury to marine mammals and to other species listed under the Endangered Species (ESA), and to monitor compliance with existing Federal regulations. In addition, under the South Pacific Tuna Act of 1988 (SATA) (16 U.S.C. 973 *et seq.*), NMFS may require observers in the South Pacific tuna fishery.

Regulations governing health and safety of observers are codified at 50 CFR 600.725 and 600.746. They were first promulgated as a final rule at 63 FR 27213, May 18, 1998. These amendments apply to any vessel designated to carry an observer as part of a mandatory or a voluntary observer program under the Magnuson-Stevens Act, the MMPA, the ATCA, SPTA, or any other U.S. law.

This final rule clarifies and updates prohibitions; changes paragraph headings to better reflect contents; clarifies communications requirements; requires pre-trip vessel safety checks; clarifies that corrective measures are required prior to an observer being deployed aboard a vessel; adopts an alternate NMFS safety equipment examination using a NMFS Pre-trip Safety Checklist for U.S. Coast Guard (USCG) Category I vessels (vessels less than 26 ft. (8 m)) under certain circumstances when a USCG Commercial Fishing Vessel (CFV) Safety Examination cannot be conducted; and clarifies that observer safety requirements apply from the time a vessel is notified of an observer requirement, rather than on the day the fishing trip is scheduled to begin. This action strengthens the ability of NMFS to assist with observer program compliance issues.

Observer Samples

This final rule revises the prohibitions of § 600.725 to prohibit tampering with or destroying an observer's samples or equipment, or interfering with a NMFS approved observer. This change was necessary because observers reported fishing vessel crews interfering with their sampling programs by throwing samples or equipment overboard or otherwise destroying or tampering with them. The changes also reflect that NMFS observers are now sometimes assigned to shoreside plants.

Observer Safety

Paragraph (b) of § 600.746 addresses observer safety, and the heading is changed accordingly. Paragraph (b) stated that an observer is not required to board, or stay aboard, a vessel that is inadequate or unsafe as described in paragraph (c) of the section. The definition was intended to allow the observer to subjectively decide whether to board. This language could be interpreted to not allow an observer to board a vessel to determine if the vessel is unsafe. The final rule replaces the term "is not required" with, "will not be deployed," clarifying the original intent of the regulation that observers not depart in or stay aboard vessels inadequate for observer deployment. Further, the term "inadequate or unsafe" is revised to "inadequate for observer deployment." This change clarifies that, while NMFS cannot determine the absolute safety of a vessel, NMFS can require standards of accommodation and safety on a vessel prior to an observer deploying in that vessel.

Proof of Examination

The regulations at § 600.746(c) considered a vessel inadequate or unsafe for carrying an observer unless

the vessel's owner or operator can: (1) show proof to NMFS of either a current USCG CFV Safety Examination decal or a USCG certificate of examination; and (2) notify NMFS of that compliance when requested. This rule amends the current regulations to allow the owner or operator to show proof of passing the USCG CFV Safety Examination when the decal may have been lost due to window replacement, other repair, or accident.

Accommodations and Safety Requirements

This final rule updates accommodations requirements at 50 CFR parts 229, 285, 300, 600, 622, 635, 648, 660, and 679. Each NMFS region will provide information to vessel owners/operators in a manner appropriate to that region or fishery, as established by the appropriate Regional Administrator. The rule also clarifies that both the accommodations requirement and the USCG CFV Safety Examination requirement or alternate examination procedure set out in paragraph (h) of this section must be satisfied for the vessel to be considered adequate under the requirements of paragraph (c).

Vessel Requirement

The rule revises § 600.725 to include paragraph (w) "Any vessel that is carrying one or more observers must maintain safe conditions for the protection of observers including compliance with all U.S. Coast Guard and other applicable rules, regulations, or statutes applicable to the vessel and which pertain to safe operation of the vessel."

Vessel Pre-Trip Safety Check

The regulations at § 600.746(c)(3) encourage, but do not require, observers to use the pre-trip safety check, including the check for USCG required safety equipment. A vessel may have met the requirements for issuance of a current USCG CFV Safety Examination decal, or passed an appropriate USCG inspection; however, the equipment required for issuance of the decal or passing of the inspection may not be present or in satisfactory condition prior to the initial deployment of the observer.

This final rule will require that the vessel's captain or the captain's designee accompany the observer in a safety check prior to the initial deployment. The observer will use a checklist that includes the six items listed in the regulation, plus items required by the USCG and added by each observer program, in consultation with USCG, to be fishery area and vessel specific. The vessel's captain or designee must also accompany the observer in a walk through the vessel's spaces to ensure that no obviously hazardous conditions exist about the vessel. This pre-trip check may be incorporated into the vessel safety orientation to be provided by a Federally documented vessel to the observer as required by 46 CFR 28.270.

This final rule also clarifies at § 600.746(f)(5) that an emergency position indicating radio beacon (EPIRB), when required, shall be registered to the vessel at its documented homeport and at § 600.746(f)(6) that survival craft, when required, "shall have sufficient capacity to accommodate the total number of persons, including the observer(s), that will embark on the voyage."

Corrective Measures

This final rule revises the current language of § 600.746(d) corrective measures to require that the vessel owner/operator selected to carry an observer must comply with the safety requirements when the vessel is notified. Additionally, this final rule clarifies that in a voluntary program, it is the choice of the owner/operator of the vessel whether to correct safety discrepancies and allow the vessel to carry an observer.

Alternate NMFS Safety Equipment Examination

The current regulations do not allow for an alternative to the USCG CFV Safety Examination in cases where NMFS observers are required to board smaller vessels in remote areas (primarily in Alaska) in order to carry out their duties. Their remote location precludes them from traveling to a location where a CFV safety examination can be performed, and USCG personnel, in certain circumstances, may not be able to travel to all locations to conduct an examination. This final rule revises § 600.746 to allow a USCG Category I vessel (a vessel less than 26 ft. (8 m.) in length) an alternative method for meeting the safety requirement by passing an alternate NMFS safety equipment examination that is consistent with the USCG CFV Safety Examination standards for USCG Category I vessels. The alternate safety examination would be conducted by a NMFS approved observer, NMFS employee, or an authorized observer provider. This alternate NMFS safety equipment examination (designed in consultation with USCG to be fishery-area-specific) would only be available to USCG Category I vessels in a remote location, and only for a period up to 30 days after date of notification that the vessel is required to carry an observer.

Duration

This final rule revises § 600.746(e) to § 600.746 (h) and amends the language by adding the phrase "at the time of written or verbal selection of the vessel to carry an observer" by the observer program. This clarifies that vessels are required to comply with the observer safety requirements at the time their vessel is selected to carry an observer, which may be days or weeks in advance of the actual deployment date of an observer to the selected vessel. This will allow NMFS to check vessels for compliance with the safety requirements prior to the deployment of an observer.

Summary of Comments and Responses

NMFS received several substantive comments from the public. Below are summaries of significant public comments and the NMFS' responses with proposed changes.

Comments Relating to Observer Safety

Comment 1: Safety has improved as a result of the observer health and safety regulations, but some NMFS observer programs have had difficulty requiring vessels to comply with the observer health and safety regulations, e.g., lack of adequate bunk space to accommodate an observer, and/or lack a survival craft of sufficient capacity to accommodate all persons on the vessel, including the observer. We believe the proposed deletions of 50 CFR 600.746(d) and (f) may in fact exacerbate the problem. Regulations that direct NMFS to ensure that vessels take corrective actions to come into compliance with the accommodation and safety requirements, or else not fish, are not only necessary, but should be strengthened. Otherwise, vessels that fail safety examinations may have little incentive to correct deficiencies before fishing. Accordingly, we strongly urge that 50 CFR 600.746(d) and (f) be retained in the Final Rule and fully implemented to ensure that the observer safety regulations achieve their intended effect.

Response: The language contained in 50 CFR 600.746(d) was in conflict with the revised language in 50 CFR 600.746(e), which makes clear that vessels are required to comply with the observer safety requirements from the time the vessel is selected to carry an observer, which may be days or weeks in advance of the actual deployment. The language contained in 50 CFR

600.746(d) was deleted because it could be interpreted to mean compliance is required only immediately prior to the observer boarding the vessel and is inconsistent with the revisions in 50 CFR 600.746(e).

However, NMFS agrees with the comment with regard to the proposed deletion of 50 CFR 600.746(f). NMFS agrees that this provision must be retained to ensure that the observer safety regulations achieve their intended effect and will reinstate this provision.

Comments Relating to Proof of Examination

Comment 2: The proposed rule adds language to paragraph (d)(1), clarifying that the decal must have been issued in the past two years, or at an interval consistent with current Coast Guard regulations. The Commercial Fishing Vessel (CFV) dockside safety examination program was expanded to fish catching vessels by Coast Guard policy only, on a voluntary basis, making the statement partially inaccurate.

Response: NMFS agrees and will add, "or policy" so that paragraph (d)(1) will read: " clarifying that the decal must have been issued in the past two years, or at an interval consistent with current Coast Guard regulations or policy."

Comments in Relating to Alternate Safety Equipment Examination

Comment 3: Certain NMFS observer programs have been unable to successfully deploy observers on small vessels (<26 feet) that do not have access to USCG examiners in their area. Many of these fishing sites are in very remote areas where USCG examiners are rarely accessible. In these situations, an alternate safety equipment examination performed either by the NMFS certified contract observer, their employer, or a NMFS observer program employee, is reasonable. The proposed regulatory text is vague and could be open to a broader interpretation. It does not reference remote sites; instead it references the unavailability of examiners or the unavailability of transportation to or from an inspection station. It should be clear that this alternate examination is not meant to apply to fishing vessels in more populous areas where fishers may assert they tried to schedule an examination yet could not.

Response: In the preamble, NMFS makes clear that the intent of the proposed rule is to address vessels <26 ft. in remote areas, primarily in Alaska. This is the focus of the regulation, but the regulation still provides flexibility to address other scenarios that may arise in the future in other areas. To further clarify the proposed rule's intent, in the first sentence of 50 CFR 600.746(g), NMFS will insert, "If a vessel is under 26 ft. (8 m) in length, in a remote location, and NMFS has determined that the USCG cannot provide a USCG Commercial Fishing Vessel Safety Examination..."

Comments Relating to Display or Show Proof

Comment 4: While subparagraphs (3) and (4) adequately address the fish processing vessels and fish tender vessels, respectively, there is no mention of an alternative means to show proof for fish catching vessels.

Response: NMFS agrees with this comment and in § 600.746, will renumber subparagraphs (3) and (4), to (i) and (ii). NMFS will also add, (iii) "*For vessels not subject to (i) and (ii) above, a dockside examination report form indicating the decal number and date and place of issue.*" and place (i), (ii), and (iii) under subparagraph (2).

Comment 5: Commercial fishing industry vessels may undergo a safety examination, but are not generally required to be inspected, unless they are over a certain tonnage, also operate as a cargo vessel, or also operate as a small passenger vessel. In such cases they may be issued a certificate of inspection (COI). Currently, we know of no fishing vessels that are required to be inspected.

Response: The intent of subparagraph (d) (3) (4) (modified to (i) and (ii)), is to address alternate means to show proof of a decal for observers deployed on fish processing and tending vessels. The language has been revised to also address fishing vessels, (iii) For vessels not subject to (i) and (ii) above, a dockside examination report form indicating the decal number and date and place of issue.

Classification

NMFS has determined that this final rule is consistent with the Magnuson-Stevens Fishery Conservation and Management Act and other applicable laws.

This final rule has been determined to be not significant for purposes of Executive Order 12866.

Final Regulatory Flexibility Analysis (FRFA)

Section 603 of the Regulatory Flexibility Act (RFA) requires that NMFS prepare a Final Regulatory Flexibility Analysis (FRFA) summarizing significant issues raised by the public comments in response to the Initial Regulatory Flexibility Analysis (IRFA). The agency's response to those comments and changes made to the rule as a result of the comments are below. There were no comments on the IRFA or the economic impacts of the rule. There are no reporting, recordkeeping, or other compliance costs associated with this rulemaking.

Description and Number of Entities Affected

NMFS has defined all fish-harvesting or hatchery businesses that are independently owned and operated, not dominant in their field of operation, with annual receipts of $4,000,000 or less, as small businesses. NMFS estimates that approximately 8,925 vessels could be required to carry an observer in NMFS-regulated fisheries. Current, precise data on the number of commercial fishing vessels that are small entities are not presently available because year-to-year participation by such entities in any given fishery is variable, due to economic, regulatory, climatic, and other factors. However, combining the best available data estimates from each of the regional observer programs derived an estimate of 8,755–8,825 vessels.

The rule clarifies an existing NMFS requirement that vessels display a USCG CFV Safety Examination decal. The decal is obtained by passing a free (except to some processor vessels) examination of compliance with USCG safety regulations, that is scheduled at a time convenient to the vessel owner/operator. No disproportionate economic impacts between small and large entities were identified for this action. Furthermore, there are no disproportionate economic impacts among groups of entities based on types of gear, areas fished, or vessel size.

Preferred Alternative

This final rule does not require that vessel operators expend more than the existing rules require (e.g., for the purchase of a larger life raft to accommodate an observer). However, failure of a vessel to comply with this rule may cause loss of fishing time. The cost of a lost fishing day varies among fisheries. For example, an average cost of a day-at-sea across all vessels 40–80 ft in length (i.e., all gears) in the Northeast in 2006 was $895, but this figure would vary in other fisheries, depending upon the value of the fishery, the type of management regime governing that fishery and the degree to which the vessel derives its income from that fishery. The risk of loss of fishing time due to this proposed rule is minimal, because vessel owners are already required to comply with USCG safety regulations and to obtain a USCG

CFV Safety Decal when fishing in a federally permitted fishery that requires observer coverage. Therefore, this rule does not impose any new compliance costs.

"No Action" and Other Alternatives

Under the "no action" alternative to this rule, no new costs would be incurred. However, the difference between the cost of "no action" and the cost of the preferred alternative is minimal and NMFS believes that most of the affected vessels already voluntarily follow the USCG safety regulations and comply with the existing NMFS requirement for a USCG CFV Safety Decal when fishing in a federally permitted fishery that requires observer coverage.

A more detailed copy of this analysis is available from NMFS (see **ADDRESSES**).

List of Subjects in 50 CFR Part 600

Fisheries, Fishery, Fishing vessels, Reporting and recordkeeping requirements.

Authority: 5 U.S.C. 561 and 16 U.S.C. 1801 *et seq.*

Dated: October 26, 2007.

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

■ For the reasons set out in the preamble, 50 CFR part 600 is amended as follows:

PART 600—MAGNUSON-STEVENS ACT PROVISIONS

■ 1. The authority citation for part 600 continues to read as follows:

Authority: 5 U.S.C. 561 and 16 U.S.C. 1801 *et seq.*

■ 2. In § 600.725, paragraphs (p), (t), and (u) are revised and paragraph (w) is added to read as follows:

§ 600.725 General prohibitions.

* * * * *

(p) Fail to show proof of passing the USCG Commercial Fishing Vessel Safety Examination or the alternate NMFS safety equipment examination, or fail to maintain the vessel safety conditions necessary to pass the examination, when required by NMFS pursuant to § 600.746.

* * * * *

(t) Assault, oppose, impede, intimidate, or interfere with a NMFS-approved observer.

(u)(1) Prohibit or bar by command, impediment, threat, coercion, interference, or refusal of reasonable assistance, an observer from conducting his or her duties as an observer; or

(2) Tamper with or destroy samples or equipment.

* * * * *

(w) Fail to maintain safe conditions for the protection of observers including compliance with all U.S. Coast Guard and other applicable rules, regulations, or statutes applicable to the vessel and which pertain to safe operation of the vessel.

■ 3. In § 600.746, paragraphs (b) through (f) are revised and paragraphs (g), (h), and (i) are added to read as follows:

§ 600.746 Observers.

* * * * *

(b) *Observer safety.* An observer will not be deployed on, or stay aboard, a vessel that is inadequate for observer deployment as described in paragraph (c) of this section.

(c) *Vessel inadequate for observer deployment.* A vessel is inadequate for observer deployment if it:

(1) Does not comply with the applicable regulations regarding observer accommodations (see 50 CFR parts 229, 285, 300, 600, 622, 635, 648, 660, and 679), or

(2) Has not passed a USCG Commercial Fishing Vessel Safety Examination, or for vessels less than 26 ft (8 m) in length, has not passed an alternate safety equipment examination, as described in paragraph (g) of this section.

(d) *Display or show proof.* A vessel that has passed a USCG Commercial Fishing Vessel Safety Examination must display or show proof of a valid USCG Commercial Fishing Vessel Safety Examination decal that certifies compliance with regulations found in 33 CFR Chapter 1 and 46 CFR Chapter 1, and which was issued within the last 2 years or at a time interval consistent with current USCG regulations or policy.

(1) In situations of mitigating circumstances, which may prevent a vessel from displaying a valid safety decal (broken window, etc.), NMFS, the observer, or NMFS' designated observer provider may accept the following associated documentation as proof of the missing safety decal described in paragraph (d) of this section:

(i) A certificate of compliance issued pursuant to 46 CFR 28.710;

(ii) A certificate of inspection pursuant to 46 U.S.C. 3311; or

(iii) For vessels not required to obtain the documents identified in (d)(1)(i) and (d)(1)(ii) of this section, a dockside examination report form indicating the decal number and date and place of issue.

(e) *Visual inspection.* Upon request by an observer, a NMFS employee, or a designated observer provider, a vessel owner or operator must provide correct information concerning any item relating to any safety or accommodation requirement prescribed by law or regulation, in a manner and according to a timeframe as directed by NMFS. A vessel owner or operator must also allow an observer, a NMFS employee, or a designated observer provider to visually examine any such item.

(f) *Vessel safety check.* Prior to the initial deployment, the vessel owner or operator or the owner or operator's designee must accompany the observer in a walk through the vessel's major spaces to ensure that no obviously hazardous conditions exist. This action may be a part of the vessel safety orientation to be provided by the vessel to the observer as required by 46 CFR 28.270. The vessel owner or operator or the owner or operator's designee must also accompany the observer in checking the following major items as required by applicable USCG regulations:

(1) Personal flotation devices/ immersion suits;

(2) Ring buoys;

(3) Distress signals;

(4) Fire extinguishing equipment;

(5) Emergency position indicating radio beacon (EPIRB), when required, shall be registered to the vessel at its documented homeport;

(6) Survival craft, when required, with sufficient capacity to accommodate the total number of persons, including the observer(s), that will embark on the voyage; and

(7) Other fishery-area and vessel specific items required by the USCG.

(g) *Alternate safety equipment examination.* If a vessel is under 26 ft (8 m) in length, and in a remote location, and NMFS has determined that the USCG cannot provide a USCG Commercial Fishing Vessel Safety Examination due to unavailability of inspectors or to unavailability of transportation to or from an inspection station, the vessel will be adequate for observer deployment if it passes an alternate safety equipment examination conducted by a NMFS certified observer, observer provider, or a NMFS observer program employee, using a checklist of USCG safety requirements for commercial fishing vessels under 26 ft (8 m) in length. Passage of the alternative examination will only be effective for the single trip selected for observer coverage.

(h) *Duration.* The vessel owner or operator is required to comply with the requirements of this section when the vessel owner or operator is notified orally or in writing by an observer, a

NMFS employee, or a designated observer provider, that his or her vessel has been selected to carry an observer. The requirements of this section continue to apply through the time of the observer's boarding, at all times the observer is aboard, and at the time the observer disembarks from the vessel at the end of the observed trip.

(i) *Effect of inadequate status.* A vessel that would otherwise be required to carry an observer, but is inadequate for the purposes of carrying an observer, as described in paragraph (c) of this section, and for allowing operation of normal observer functions, is prohibited from fishing without observer coverage.

[FR Doc. E7–21550 Filed 10–31–07; 8:45 am]

BILLING CODE 3510–22–S

APPENDIX F. LEGAL AUTHORITIES THAT ALLOW RECEIPT OF FUNDS

The statutes below may be relevant to allow federal agencies to receive funds from third parties or enter into agreements that would allow the transfer of funds between the parties.

Special Studies Authority, 15 U.S.C. 1522

15 U.S.C. 1525. Special studies; special compilations, lists, bulletins, or copies; cost payments for special work; joint projects: cost apportionment, waiver.

The Secretary of Commerce is authorized, upon the request of any person, firm, organization, or others, public or private, to make special studies on matters within the authority of the Department of Commerce; to prepare from its records special compilations, lists, bulletins, or reports; to perform the functions authorized by section 1152 of this title; and to furnish transcripts or copies of its studies, compilations, and other records; upon the payment of the actual or estimated cost of such special work.

In the case of nonprofit organizations, research organizations, or public organizations or agencies, the Secretary may engage in joint projects, or perform services, on matters of mutual interest, the cost of which shall be apportioned equitably, as determined by the Secretary, who may, however, waive payment of any portion of such costs by others, when authorized to do so under regulations approved by the Office of Management and Budget.

Agency Agreements, 31 U.S.C. 1535

The provisions of the Economy Act provide that:

a. The head of an agency or major organizational unit within an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if:
    1. Amounts are available
    2. The head of the ordering agency or unit decides the order is in the best interest of the United States Government
    3. The agency or unit to fill the order is able to provide or get by contract the ordered goods or services, and
    4. The head of the agency decides ordered goods or services cannot be provided by contract as conveniently or cheaply by a commercial enterprise
b. Payment shall be made promptly by check on the written request of the agency or unit filling the order. Payment may be in advance or on providing the goods or services ordered and shall be for any part of the estimated or actual cost as determined by the agency or unit filling the order. A bill submitted or a request for payment is not subject to audit or certification in advance of payment. Proper adjustment of amounts paid in advance shall be made as agreed to by the heads of agencies or units on the basis of the actual cost of goods or services provided.

c. A condition or limitation applicable to amounts for procurement of any agency or unit placing an order or making a contract under this section applies to the placing of the order or the making of the contract.
d. An order placed or agreement made under this section obligates an appropriation of the ordering agency or unit. The amount obligated is deobligated to the extent that the agency or unit filling the order has not incurred obligations, before the end of the period of availability of the appropriation, in:
    1. Providing goods or services, or
    2. Making an authorized contract with another person to provide the requested goods or services
e. This section does not:
    1. Authorize orders to be placed for goods or services to be provided by convict labor; or
    2. Affect other laws about working funds.

APPENDIX G. RECOMMENDED PROTECTED SPECIES OBSERVER AVIATION REQUIREMENTS

For NOAA's policy on aviation safety on the collection of federal data services that may be subject to additional requirements, please see the NOAA circular, NOAA Administrative Order (NAO) 209-124 (http://www.corporateservices.noaa.gov/ames/NAOs/Chap_209/209-124.pdf.)

Certification

Preferred certification for planned or routine aerial surveys is as follows:
The vendor should hold a current Federal Aviation Administration (FAA) Air Carrier or Operating Certificate. Furthermore their Operations Specifications should authorize operation of the category and class of aircraft and conditions of flight required to complete missions for the Government.

Aircraft will be operated and maintained under provisions of 14 CFR Part 135. Specific aircraft used under this contract should be carried on the list required by 14 CFR 135.63.

Operations should be conducted in accordance with the operations limitations of the aircraft airworthiness certificate.

Acceptable certification for planned or routine aerial surveys is as follows:
Approval/certification of the vendor/operator by a federal agency for operations similar to proposed/funded project is required. Aircraft operators which are not part 135 certificate holders but have been approved for use by NASA or the Department of Energy for instance are an example. Operators will be required to submit proof of approval from a federal agency. Acceptance of the approval is subject to review.

Flight Operations

Notwithstanding any status as a Public Aircraft Operation, the vendor should operate in accordance with his approved FAA Operations Specifications, and all portions of 14 C.F.R Part 91 and each certification listed above.

Flight Plans

Pilots should file and operate on a FAA flight plan. Vendor flight plans are not acceptable. Flight plans should be filed prior to takeoff when possible.

Flight Following

One of the flight following methods should be implemented:

1. Pilots are responsible for flight following with the FAA, USCG, or other responsible entity. Check-in should not exceed one hour intervals under normal circumstances; or
2. The CAS vendor should provide, install, and maintain an automated flight following (AFF) system per the manufacturer's requirements. The AFF system installed should be one compatible with the Government's AFF network (https://www.aff.gov/). The CAS vendor should procure and maintain a subscription for satellite service that allows interface with the Government's AFF network during any use under this

contract. The aircraft vendor should register this installation with AFF. (Registration Information will be provided at award) The standard position-reporting interval should not exceed two minutes. Aircraft location checks should not exceed one-hour intervals under normal circumstances. It is incumbent upon the aviation vendor to conduct a thorough evaluation of any potential AFF vendor's services and products to ensure compliance with this requirement.

Manifesting

The pilot-in-command should ensure that a manifest of all crewmembers and passengers onboard has been completed. A copy of this manifest should remain at the point of initial departure. Manifest changes will be left at subsequent points of departure when practical.

Passenger Briefing

Before each takeoff, the pilot-in-command should ensure that all passengers have been briefed in accordance with the briefing items contained in 14 CFR 135 including:

a. Emergency Locator Transmitter (ELT);
b. First Aid Kit (if applicable); and
c. Personal Protective Equipment (if applicable).

Pilot Authority and Responsibilities

The pilot is responsible for the safety of the aircraft, its occupants, and cargo. The pilot should comply with the directions of the Government, expect, when in the pilot's judgment, compliance will be a violation of applicable federal or state regulations or agreement provisions. The pilot should refuse any flight or landing which is considered hazardous or unsafe.

The pilot should not permit any passenger to ride in the aircraft or any cargo be loaded unless authorized by the Government.

Pilots are responsible for computing the weight and balance for all flights and for assuring that the gross weight and center of gravity do not exceed the aircraft's limitations. Pilots should be responsible for the proper loading and securing of all internal or external cargo.

Flight Crew Requirements

Two pilots are required for each flight. Pilots should have at least a FAA commercial pilot certificate with appropriate category, class, and type rating if required.

Instrument rating for airplanes.

Pilots should hold at least a current second class medical certificate issued under provisions of 14 CFR Part 67.

Pilots should show evidence of satisfactory passing all required FAA flight checks in accordance with provisions of 14 CFR Part 135. All pilots should meet the currency requirements of 14 CFR 61.57.

Pilot flying hours should be verified from certified pilot records.

Pilot-In-Command should have recorded minimum flying time as pilot-in-command as follows:

a. 1,500 hours total pilot time;
b. 100 hours in category within the preceding 12 months;
c. 1,200 hours pilot-in-command in airplanes;
d. 25 hours make and model;
e. 200 hours multiengine; and
f. 100 hours operating below 1,000 feet supporting observations, photogrammetric, or other natural resources surveys (over open ocean preferred).

Pilot-Second-In-Command (Co-Pilot)

a. Requirements as specified in 14 CFR Part 135.

Flight crewmembers should demonstrate that they have taken a ditching and water survival training course within the preceding 5 years.

Flight Crewmember's Duty and Flight Limitations

Duty Limitations. Duty includes flight time, ground duty of any kind, and standby or alert status. Local travel up to a maximum of 30 minutes each way between the work site and place of lodging will not be considered duty time. Flight crewmembers will be subject to the following duty hour limitations:

a. A maximum of 14 consecutive duty hours during any assigned duty period;
b. Pilots should be given one day of rest within any 7 consecutive calendar days, or two days of rest within any 14 consecutive days; and
c. Pilots should be given a minimum of 10 consecutive hours of rest (off duty), not to include any preflight or post-flight activity, prior to any assigned duty period.

Flight Limitations

All flight time, regardless of how or where performed, except personal pleasure flying, will be reported by each flight crew member and used to administer flight time and duty time limitations. Flight time to and from a duty station as flight crew member (commuting) will be reported and counted toward limitations if it is flown on a duty day. Flight time includes, but is not limited to: military flight time, charter, flight instruction, 14 CFR 61.56 flight review, flight examinations by FAA designees, and flight time for which a flight crew member is compensated, or any other flight time of a commercial nature whether compensated or not. Pilot time computation should begin at takeoff and end when the aircraft is stopped at the parking spot. Flight crewmembers will be limited to the following flight hour limitations, which should fall within their duty hour limitations:

a. 10 hours of flight crew consisting of two pilots during any assigned duty period; and
b. A maximum of 50 hours flight time during any consecutive six-day period. When a pilot acquires 50 or more flight hours in a consecutive six-day period, the pilot should be given the following 24-hour period of rest (off duty) and a new six-day cycle should begin. The 24-hour period should be one calendar day off duty.

Pilot Proficiency

Pilots should display evidence in using all equipment specified (marine and aviation VHF radio, GPS, etc.). Pilots may be required to demonstrate proficiency.

Pilots should demonstrate their ability to perform the following functions with the required GPS:

1. Determine the geographic coordinates of a destination identified on a sectional aeronautical chart;
2. Install destination coordinates;
3. Acquire distance/bearing information to a destination;
4. Record as a waypoint, coordinates of various locations while enroute to a primary destination; and
5. Navigate from a present position to a selected recorded waypoint or between two recorded waypoints.

The aircraft vendors shall submit an experience resume for each pilot offered for approval. The resume should include names and pilot addresses of past employers, substantiation of related type and typical terrain flying and should show any and all accidents involving aircraft. Pilots should be knowledgeable of IFT, VFR, low level and slow flight procedures while flying over water. This includes special flight techniques for low level in slow flight configuration.

Pilots may be required to demonstrate proficiency during an initial evaluation flight.

Personal Protective Equipment

Personal Flotation Devices (PFD) required by 14 CFR 91 or Life-Preserver(s) (TS-C13) required by 14 CFR 135, or survival suits (when appropriate as in Alaskan waters) should be on board all aircraft operated over water and beyond power-off gliding distance to shore.

Anti-exposure suits should be readily available to occupants of multiengine aircraft when conducting extended over water flight (as defined in 14 CFR 1.1) and when the water temperature is estimated to be 59 degrees Fahrenheit or less.

Aircraft Requirements

These standards are in addition to airworthiness requirements.

Condition of Equipment

Vendor-furnished aircraft and equipment should be operable, free of damage, and in good repair. Aircraft systems and components should be free of leaks except within limitations specified by the manufacturer

All windows and windshields should be clean and free of scratches, cracks, crazing, distortion, or repairs, which hinder visibility. Repairs such as safety wire lacing and stop drilling of cracks are not acceptable permanent repairs. Prior to acceptance, all temporarily repaired windows and windshields should have permanent repairs completed or should be replaced.

The aircraft interior should be clean and neat. There should be no un-repaired tears, rips, cracks, or other damage to the interior. The exterior finish, including the paint, should be clean, neat, and in good condition. Any corrosion should be within manufacturer or FAA acceptable limits.

Additional Equipment Requirements
Fire extinguisher(s), as required by 14 CFR 135, should be a hand-held bottle with a minimum 2-B:C rating mounted and accessible to the flight crew.

Shoulder harness and lap belt for front seat occupants and both occupants in tandem seat airplanes are required. The shoulder strap and lap belt will fasten with a metal to metal, single point, quick-release mechanism.

One automatic-portable/automatic-fixed ELT, utilizing an external antenna and meeting the requirements of 14 CFR 91.207 (excluding Section f.), should be installed per the manufacturer's installation manual, in a conspicuous or marked location.

Minimum Aircraft Specifications:

1. At least 1,200 pounds or 2 passenger capacity - required, 3 passenger capacity - desired
2. High wing - required
3. Multi-engine - required, turbine - desired
4. Capable of survey speed of 100 knots
5. Two positions for biologists with unobscured window views on each side of the aircraft – required
6. A minimum of 6 hours operational flight range – desired
7. Flight operations should not extend beyond 45 minutes reserve fuel at 120 knots at sea level – required
8. Following avionics, at minimum:
    a. GPS navigation aids – required
    b. Radios:
        i. Fully operational primary and secondary COMM (VHF radio) units (VHF stand alone linked to intercom, NAV/COMM, GPS/COMM)
        ii. Aircraft mounted marine radio – required
    c. External antenna mount for scientist's GPS – desired
    d. Intercom (static free, clear communications) with headsets for all occupants of aircraft – required, linkage to marine radio – preferred
9. One opening window aft of the cockpit and accessible to the scientific party for photography and/or a floor camera port – required
10. AC or DC power for powering laptop computers – desired
11. Direct connection to aircraft GPS system for laptop computer – required
12. IFR-certified – required
13. Extended overwater operations emergency equipment as listed in 14 CFR Part 135 § 135.167, including registered 406 mHz EPIRB capable of being removed from aircraft and operated in a marine environment – required

Maintenance Requirements
Aircraft should be maintained in accordance with all applicable mandatory Manufacturers' Bulletins as required by the Vendor's Operations Specifications, and all applicable FAA Airworthiness Directives (AD).

Maintenance Test Flight
A functional maintenance test flight should be performed, at the vendor's expense, following installation, overhaul, major repair, or replacement of any engine, propeller, or primary flight control. The pilot should enter the result of this test flight in the aircraft maintenance record.

Fuel and Servicing Requirements
All fuel should be commercial (or military) grade aviation fuel approved for use by the airframe and engine manufacturer.

Government personnel (passengers) should not be involved with any refueling of aircraft. Aircraft should not be refueled while engines are running and propellers are turning.

Aircraft Vendor Insurance
Insurance in amounts equal to or greater than the minimum amounts required by either 14 CFR 205.5 or by the state in which the Vendor is operating pursuant to the attached scope of work, whichever is greater – desired.

Observer Crew
Observers should be NMFS-approved PSOs.

Observers should have successfully completed aviation safety training prescribed in the Exhibit to NOAA Administrative Order (NAO) 209-124 (NOAA Aviation Safety Training and ALSE Requirements). For information on training and training requirements go to: http://www.omao.noaa.gov/aviationsafety/safety.html.
Observers should possess, or have immediately accessible in the aircraft, applicable ALSE prescribed in the Exhibit to NAO 209-124 and the following:

1. Nomex flight suit;
2. Strobe light;
3. Rescue streamer or sea dye marker; and
4. Combo-edge knife.

Observers are preferred to wear the leather boots or shoes for personal safety equipment/gear during flight.