



NATIONAL MARINE FISHERIES SERVICE

NOAA

Counting on the Future of Recreational Fishing

Status of progress toward achieving the goals and objectives established in the Magnuson-Stevens Reauthorization Act of 2006 to implement an improved recreational fisheries survey

**Report to Congress
January 2011**



Introduction

In January 2007, President Bush signed a bill into law reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act. In addition to numerous other provisions, the Magnuson-Stevens Reauthorization Act (MSRA) directed the Department of Commerce (Department) to establish an improved recreational fisheries survey program by January 1, 2009.

To facilitate collaboration with partner agencies and recreational fishing stakeholders, MSRA stipulates that the improved survey program must be developed “in consultation with representatives of the recreational fishing industry and experts in statistics, technology, and other appropriate fields” and must “improve the quality and accuracy of information generated ... with a goal of achieving acceptable accuracy and utility for each individual fishery.”

MSRA further states that the improved program must also “take into consideration and, to the extent feasible, implement the recommendations of the National Research Council in its report *Review of Recreational Fisheries Survey Methods* (2006)”, which was completed prior to the final adoption of MSRA, at National Marine Fisheries Service’s (NMFS) request. The Act stipulates that, unless alternate methods are deemed to be more efficient and effective, the survey program must, to the extent possible, include the following:

- An adequate number of intercepts to assure accurate statistics;
- Surveys of participation and effort that utilize federal or state registries of anglers;
- Collection and analysis of vessel trip report data from for-hire fishing vessels;
- Development of a weather corrective factor to apply to catch and effort statistics; and
- Establishment of an independent committee “composed of recreational fishermen, academics, persons with expertise in stock

assessments and survey design, and appropriate personnel from the National Marine Fisheries Service” to review data and statistics, identify deficiencies, and determine appropriate correction measures.

The MSRA also required the Department to create a regionally based registry program for recreational fisheries. The Act specifies that the registry must include a listing of all anglers who engage in recreational fishing in the Exclusive Economic Zone (EEZ), for anadromous species, or for Continental Shelf fishery resources beyond the EEZ. The registry program must obtain identification and contact information that is suitable for use in conducting recreational fishing surveys. The Act also provides that persons licensed by states that agree to provide data that is sufficient for survey needs may be exempted from the federal registration requirement.

NMFS is on track toward fully implementing both the letter and the spirit of the law through a deliberate, scientifically rigorous process engaging a broad and diverse range of scientists, state and federal agency partners, fisheries management Councils and Commissions, government and non-government marine scientists, stock assessors, recreational fishermen, ocean conservationists, businesspeople, coastal communities, and others.

As required by the statute, this document is intended to provide a point-by-point status report on the progress made by NMFS to meet the MSRA requirements by establishing and implementing the Marine Recreational Information Program (MRIP). Substantial additional information regarding MRIP, including the current updated Implementation Plan, outreach materials, and detailed reports on MRIP projects, can be found at the MRIP website: www.countmyfish.noaa.gov.

Requirements of the Magnuson-Stevens Reauthorization Act (MSRA) and the NMFS Response

MSRA Requirement ►► Angler Registry ►► Federal program

The Secretary shall establish and implement a regionally based registry program for recreational fishermen in each of the 8 fishery management regions.

MSRA Requirement ►► Angler Registry ►► State program

The Secretary shall exempt from registration under the program recreational fishermen and charter fishing vessels licensed, permitted or registered under the laws of a State if the Secretary determines that information from the State program is suitable for the Secretary's use or is used to assist in completing marine recreational fisheries statistical surveys, or evaluating the effects of the proposed conservation and management measures for marine recreational fisheries.

NMFS Response

Implementation of the Registry

The National Research Council (NRC) *Review of Recreational Fisheries Survey Methods* recommended that, “a comprehensive, universal sampling frame [of saltwater anglers] with national coverage should be established.” Subsequently, the MSRA mandated that, “the Secretary [of Commerce] shall establish and implement a regionally based registry program for recreational fisherman in each of the 8 fishery management regions.” To that end, NMFS established the National Saltwater Angler Registry Program (Registry Program) as a component of the Marine Recreational Information Program (MRIP). The Registry Program requires the registration of all anglers who participate in recreational fishing within the Exclusive Economic Zone (EEZ) or for anadromous species.

The Registry Program implements several of the recommendations of the panel of experts convened by the NRC to review recreational survey design and methods. The NRC found that current recreational surveys that rely on random telephone contacts with residents of coastal county households to collect marine recreational fishing activity data result in significant survey over-coverage because relatively few households include active anglers. The panel also determined that the current sampling methodology results in survey under-coverage because some anglers do not live in coastal counties, or they live in coastal counties but do not have landline telephones. The NRC advised that over-coverage results in sampling inefficiency and that under-coverage may lead to bias in the resultant catch estimates, since anglers from non-coastal counties are likely to have different fishing habits than those from coastal counties. To resolve these problems, the NRC recommended the development of and subsequent sampling from a comprehensive national saltwater angler registry. The panel further recommended that the registry be established either by implementing a federal registration requirement or by expanding current state saltwater licenses to include all saltwater anglers. To date, over 650,000 anglers have been registered by this program.

Partially in response to the NRC's findings and recommendations, Congress passed section 401(g) of the MSRA, which requires the Secretary of Commerce to establish a program to improve the quality and accuracy of current estimates of marine recreational fishing catch and effort, in a manner that considers and, to the extent feasible, incorporates the NRC's recommendations. As part of the program, section 401(g)(1) of the MSRA requires the Secretary to register, and collect identification and contact information for, anglers and for-hire vessels if they fish in the EEZ, for Continental Shelf fishery resources beyond the EEZ, or for anadromous species throughout their range, including state waters. Further, the Secretary is to exempt from

the federal registration requirement those anglers and vessels licensed or registered by a state if the state provides sufficient identification and contact information for use in recreational surveys. The resultant federal registry must address both the qualifications and procedures for registering anglers and vessels and for exempting qualified states' anglers and vessels from the federal registration requirement.

Establishing goals for the program requires recognition and balancing of two important provisions of the NRC recommendations and the provisions of section 401(g) of the MSRA. First, the NRC's scientific advice is clear that a universal registry or license-based frame of all saltwater anglers, without exceptions resulting from exemptions to state or federal registration requirements, is essential. However, the federal registration provisions of the MSRA do not apply to saltwater anglers fishing in state waters (territorial sea or internal waters) unless they are taking anadromous fish. Accordingly, it is necessary for states and NMFS to work in collaboration to build registries of saltwater anglers that include anglers currently exempted or not covered by state license or registration requirements and that also include anglers who are fishing for non-anadromous marine fish in state waters.

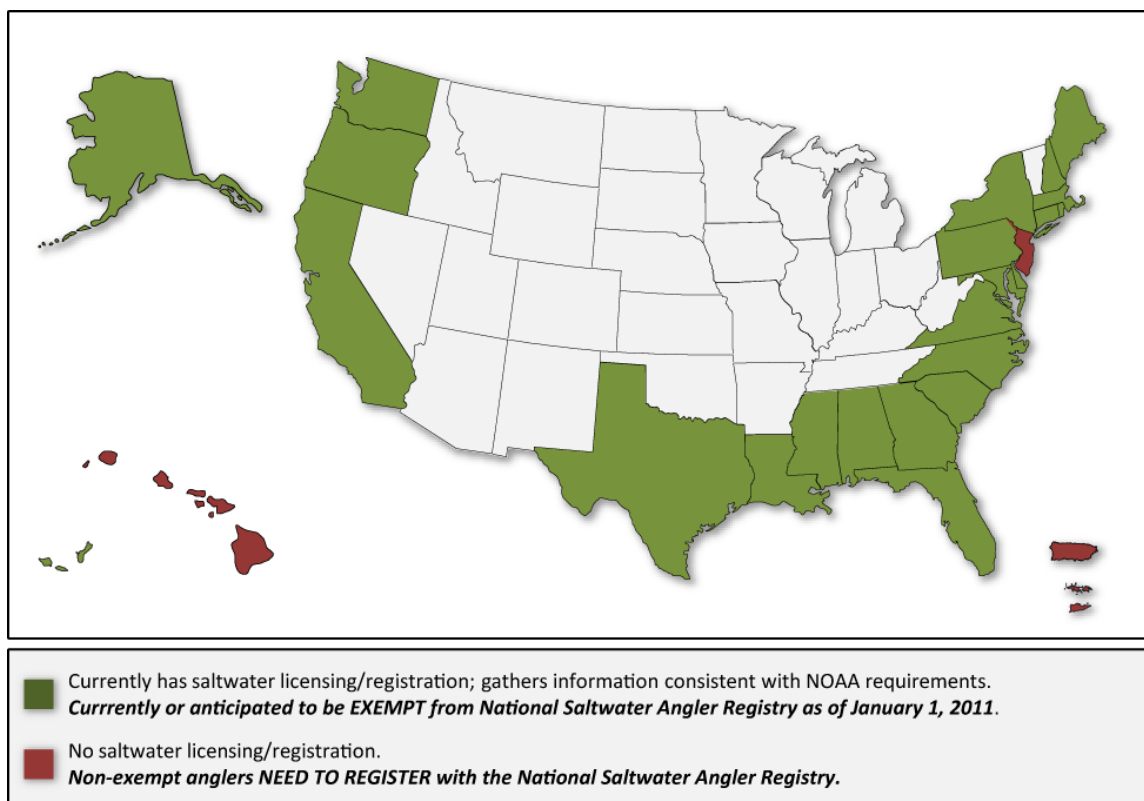
NMFS developed a proposed rule and initiated rulemaking to implement the Registry Program. A Notice of Final Rulemaking was published in the *Federal Register* on December 30, 2008 (73 FR 79705). The scope of the rule includes: the standards and process by which states may apply for exempted state designation based on their provision of license/registry-based sample frames; the standards and process by which states may apply for exempted state designation based on use of state license/registry data to perform surveys of recreational catch and effort; the requirements and process by which anglers and for-hire vessels from non-exempt states will enroll in the federal registry; and requirements for registration fees after January 1, 2011. In response to comments from states, the Final Rule set January 1, 2010, as the date by which anglers, spear fishers, and for-hire vessels would need to register with NOAA unless otherwise exempted. This delay of one year in the mandatory federal registration enabled states to have one full legislative session in which to enact legislation necessary to qualify for exempted state designation.

Subsequent to publication of the Final Rule, NMFS consulted with each state to determine the state's interest in seeking exempted state status, and to determine the specific gaps between the state's current license/registry frame coverage and that required by the rule. NMFS continues to work closely with the states to develop states' exemption proposals and, if the state is successful in qualifying for an exemption, to execute Memoranda of Agreement (MOAs) that will formalize the performance requirements and the exemption of the state's anglers and/or for-hire fishing vessels from the federal registration requirement.

Based on these consultations and expressions of intent to submit the required data, NMFS expects the following states to qualify for Exempted State designation, as indicated:

- As of 2010 for anglers and for-hire fishing vessels: Alabama, Alaska, American Samoa, California, Commonwealth of the Northern Mariana Islands, Connecticut, Delaware, Florida, Georgia, Guam, Louisiana, Mississippi, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, South Carolina, Washington;
- As of 2010 for for-hire fishing vessels: Maryland, Massachusetts, Virginia; and
- As of 2011 for anglers and for-hire fishing vessels: Maine, Maryland, Massachusetts, New Hampshire, Virginia, Texas.

Figure 1: Status of State Designations



The four states that do not currently qualify for Exempted State designation are New Jersey, Hawaii, Puerto Rico, and the U.S. Virgin Islands.

NMFS is working with each of the qualified states to develop and adopt MOAs that will formalize the states' designation as Exempted States. As of December 22, 2010, the following states have signed MOA's for registry exemption: Alaska, Washington, Oregon, California, Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Alabama, Mississippi, Georgia, South Carolina, Delaware, New York, Connecticut, Maine, Massachusetts, Virginia, Florida and Louisiana. Maryland has signed a MOA for its for-hire fishing vessels only and is working to have an MOA for its anglers in place by the end of the year, as are the remaining qualified states.

NMFS is providing financial assistance to states to support the development of state registration and/or licensing programs that will meet the requirements for development and maintenance of a complete and regularly updated National Registry of marine recreational fishing participants. NOAA funding is being provided to fund projects that will:

- Improve the completeness and accuracy of the states' license and registry database content, including the information specified in 50 CFR 600.1416(a).
- Implement enhancements to the states' license and registry database coverage consistent with the requirements of 50 CFR 600.1416(d), and to address improvements to the state programs as specified in the Memoranda of Agreement between the states and NOAA pursuant to 50 CFR 600.1415(b)(2).

- Enable the states to update their license and registry databases and submit updated registry data to NMFS and survey operators monthly.
- Develop methods for achieving the above goals that are shared among the states.

The initial round of project funding began in the fall of 2010.

Registration interface and Registry database development

In 2008, the Registry Team established the Angler Registry Database Work Group (ARDWG) to provide expertise to NMFS in its efforts to develop the national and regional databases of saltwater anglers, and to make those data available and usable as a sample frame to meet survey needs. The participants of ARDWG also provided support and advice in the development of the system NMFS will implement to enable anglers to register as required by the Final Rule.

During 2009, NMFS worked with the ARDWG participants to develop and implement the data management systems, services, and processes required for operation of the Registry Program. These systems, services, and processes include:

- **Process for Angler Registration:** Anglers can register either by calling a toll-free telephone number or through a NOAA website. Anglers register by entering their name, address, telephone number, date of birth, email address (optional), and intended fishing location(s) on the website or by providing that information to the operator, who enters it. Once anglers have provided the necessary information, they are issued a registration number, which enables them to fish immediately. Those who register on the website can print out a page with the number. Those who register via the operator-assisted process need to record the number when provided to them by the operator. All registrants are mailed a waterproof, tear-resistant registration card within 30 days of registration. The durable registration card is valid for 1 year from the date of issuance and helps with enforcement.
- **Angler Registry Database:** The initial database design was completed in January 2009 and has been periodically updated as system patches and new functionality have been added.
- **National Registration Interface:** The registration interface features address validation functionality to improve the quality of mailing address data, which we will also use to gather valid telephone numbers via reverse lookup. Call center, data entry, printing, mailing, and returned mail processing services were procured through the Government Printing Office. The national registration interface and call center were activated in late December 2009, and have been operational throughout 2010. As of September 28, 2010, 655,172 anglers and 1,071 for-hire fishing vessels have registered using this system. The National Saltwater Angler Registration portal can be viewed at: <https://www.countmyfish.noaa.gov/register>. In addition, the information developed to enable potential registrants to determine if they need to register is available online at: <https://www.countmyfish.noaa.gov/howtoregister>. Information regarding the registration program is available at: https://www.countmyfish.noaa.gov/faq_registry.html.
- **State Import Tool:** NMFS developed a custom import tool to allow states to upload state license data to the Angler Registry. As MOAs are established with the states, the ARDWG participants are working with states individually to establish and document protocols and schedules associated with state license data submission. The initial state data feeds began in the fall of 2010.
- **Sample Frame Generation, Reporting, and Survey Feedback Interfaces:** Analyses directed at defining the requirements for sample frame generation, reporting, and survey

feedback interfaces began in August 2009. An alpha release of a reporting module was released in August 2010. The Sample Frame Generation and Survey Feedback Interfaces are in development.

MSRA Requirement ► Data Collection ► Improvement of the Marine Recreational Fisheries Statistics Survey

Within 24 months after the date of enactment of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Secretary, in consultation with representatives of the recreational fishing industry and experts in statistics, technology, and other appropriate fields, shall establish a program to improve the quality and accuracy of information generated by the Marine Recreational Fishery Statistics Survey, with a goal of achieving acceptable accuracy and utility for each individual fishery.

NMFS Response

MRIP is a collaborative effort among NMFS, regional fisheries managers and stock assessment scientists, and the recreational fishing industry to develop and implement an improved recreational fisheries statistics program. The new program consists of a system of regional surveys that provides the best possible scientific information for use in the assessment and management of the Nation's marine fisheries. Decisions to implement new data collection methods will be informed by a technically sound scientific process that includes testing of new or enhanced survey methods, peer reviews of survey methods and project results, and input from stakeholder groups. New and improved survey and estimation methods are being developed by project teams of statisticians and survey design and management experts from NMFS, its partner agencies, and expert consultants, including former members of the National Research Council panel that conducted the review of the current methods. New methods undergo independent peer review before they are made available for use. The MRIP technical review and decision-making process is described fully in the 2010/2011 Implementation Plan Update at www.countmyfish.noaa.gov.

In October of 2008, NMFS adopted an Implementation Plan for MRIP (https://www.countmyfish.noaa.gov/aboutus/organization/downloads/MRIP_Implementation_Plan.pdf) that outlines the agency's program for undertaking the necessary scientific studies to address the NRC recommendations for improving survey and estimation methods, as well as the priorities and strategy for sequencing the studies and the implementation of survey improvements. Adoption of this plan, which has been updated annually, marks the formal establishment of MRIP. In addition, NMFS has sought increased funding for the program and annual appropriations have been provided as follows:

- FY 2008: \$3.5 million
- FY 2009: \$6.2 million
- FY 2010: \$9.0 million
- FY 2011 (President's Budget Request): \$9.0 million

MSRA Requirement ► Implement NRC recommendations ► Improve sampling and estimation

The program shall take into consideration and, to the extent feasible, implement the recommendations of the National Research Council in its report Review of Recreational Fishing Survey Methods (2006), including: Improve effectiveness of sampling and estimation procedures, applicability to management decisions, and usefulness for social and economic analysis.

NMFS Response

The goal for MRIP is to provide recreational fishing catch, effort, and participation statistics that satisfy stakeholder needs for accuracy, data access, and resolution and coverage. NMFS has invested more than \$20 million in MRIP for the development of the Registry Program and the conduct of more than 30 research projects directed at implementing NRC recommendations. A revised estimation design that specifically addresses concerns identified by the NRC has been peer-reviewed and will be implemented in 2011. Revised sampling procedures for the intercept survey were tested in 2010 and will be peer-reviewed and implemented in 2011.

As more accurate data collection methods are developed, tested, and implemented, attention and resources will shift toward addressing regional management and science needs for recreational fishery statistics. NMFS has initiated this process by engaging stakeholders in the MRIP decision-making process, as well as conducting listening sessions with managers, scientists, and representatives from the recreational fishing industry in each of fishery management regions.

MSRA Requirement ►► Implement NRC recommendations ►► Ongoing management needs

The program shall take into consideration and, to the extent feasible, implement the recommendations of the National Research Council in its report Review of Recreational Fishing Survey Methods (2006), including: Providing for ongoing technical evaluation and modification as needed to meet emerging management needs.

NMFS Response

By including stakeholder groups in the MRIP survey design and decision-making process, NMFS will be able to anticipate emerging fishery management and science needs for recreational fishery statistics and modify sampling and estimation designs, as appropriate. Stakeholder participation and review will be an ongoing component of MRIP.

MSRA Requirement ►► Implement NRC Recommendations ►► Other NRC recommendations

The program shall take into consideration and, to the extent feasible, implement the recommendations of the National Research Council in its report Review of Recreational Fishing Survey Methods (2006).

NMFS Response

In addition to its recommendations, addressed above, regarding improving effectiveness of sampling and estimation and providing for ongoing technical evaluation, the NRC made numerous other recommendations regarding survey management, outreach, and coordination with stakeholders and partners. The following are NMFS' responses to these additional NRC recommendations.

Other NRC Recommendations ►► Outreach and communication

Outreach and communication should be institutionalized as part of an ongoing MRFSS [Marine Recreational Fisheries Statistics Survey] program so their importance is acknowledged and appropriate expertise can be developed.

NMFS Response

NMFS has established a standing MRIP Communications and Education Team (CET) to provide expertise that will help foster productive, collaborative relationships both internally among MRIP teams and NOAA leadership, and externally with key constituencies who have valuable contributions to offer in the development of MRIP. To accomplish this, the Team carries out strategic communications to ensure information is flowing effectively among MRIP team

members and that partners and constituents are engaged in the redesign process, kept well informed of opportunities to participate, and apprised of the initiative's progress. The objectives of the CET are to:

- (1) Ensure MRIP can deliver on its promise to provide “trusted” recreational fishing estimates by ensuring engagement, transparency, and accountability among all audiences, and to communicate the important role each audience plays in the ultimate success of MRIP;
- (2) Clearly and accurately communicate MRIP's progress as the numerous ongoing test projects yield the information necessary to improve data collection and reporting;
- (3) Develop outreach partnerships among data partners, customers, and constituents as a means of both sharing and receiving information about MRIP;
- (4) Support the implementation of the National Saltwater Angler Registry through a three-tiered approach of directly encouraging fishermen to register, working with non-exempt states to communicate with their angling communities, and supporting state efforts where appropriate to facilitate state-based licensing and registration strategies that comply with MSRA reporting requirements;
- (5) Manage and continually enhance internal communications to facilitate intra-agency coordination and ensure that information is reaching audiences in a timely, understandable manner; and
- (6) Empower and task NOAA staff, MRIP working group members, and outreach partners with “big picture” MRIP information they can carry to other audiences.

To achieve these objectives, the team has developed a number of print, broadcast, and online materials intended for internal and external audiences. Many of these materials have been “co-branded” with our partners and stakeholders, and customized to meet specific stakeholder needs. Others have been created in such a way that stakeholders can easily modify the materials to meet their needs. Specific outreach products that have been developed include a multimedia self-guided training that provides users with an in-depth look at MRIP; a series of online videos; news releases and targeted articles; live-read radio public service announcements; PowerPoint presentations; brochures and flyers; advertisements; and a suite of print, online, and media materials in support of the National Saltwater Angler Registry. The CET has also directly participated in, or provided materials and strategic communications support for, scores of meetings with stakeholders and partners designed to both share information about the status of the program, and to gather information about constituent needs.

Other NRC Recommendations ► Angler association engagement

Survey managers should engage angler associations as partners through workshops, data collection, survey design, and participation in survey advisory groups.

NMFS Response

MRIP has engaged individual anglers and angler associations in several ways. From the outset MRIP managers actively sought to identify and recruit influential individuals within the recreational fishing community to participate in MRIP leadership teams, working groups, and project teams. The role of these individuals has been to observe the entire survey redesign process, provide input about angler perceptions regarding recreational fishing data collections, and serve as information portals to the broader recreational fishing community. In addition, NMFS has hosted several workshops specifically designed to provide opportunities for recreational anglers to learn about data collection methods and review survey data and estimates. These Constituent Data Reviews have become a regular component of the MRIP quality assurance program. Finally, MRIP managers have formalized a relationship with the Marine

Fisheries Advisory Committee's Recreational Fisheries Subcommittee and its Recreational Fisheries Working Group to provide *ad-hoc* advice to the agency about MRIP priorities and progress. The Subcommittee and Working Group include over 20 representatives from angler associations, businesses, and organizations nationwide.

Input received from stakeholders has influenced MRIP in numerous ways. Some examples are:

- Stakeholder concern about the potential for recreational catch to exceed annual catch limits, triggering significant reduction in fishing opportunity, led to the approval of the MRIP Timeliness Project in 2010. This project is evaluating methods for completing preliminary catch estimates more quickly to enable in-season monitoring and projection of catch.
- Recreational fishing representatives supporting the MRIP Registry Team suggested important provisions of the registry program and proposed rule, including recognition of the cultural and subsistence nature of angling among indigenous people, and the resultant waiver of the registration fee for indigenous people.
- Charter fishing industry members and the Gulf of Mexico Fishery Management Council have stated that development of a trip reporting system is a high priority for them. This advice led the Operations Team to prioritize conducting a pilot of an electronic trip reporting method.
- MRIP's pilot project for use of electronic reporting in the Gulf of Mexico charter boat fishery conducted captains meetings in the ports where the pilot is being conducted. As a result, several improvements and refinements to the reporting process were identified.
- Stakeholders have advised MRIP that getting better information on recreational discards should be a priority. As a result, one of the MRIP projects is testing the deployment of video cameras on vessels to independently monitor discards. Anglers participating in the Project Team for the pilot have offered substantial constructive input on the best ways to make the camera system work effectively and not interfere with vessel operations.

Other NRC Recommendations ►► Data constraints

The MRFSS managers should advise anglers and data users on the constraints that apply to the use of the data for various purposes.

NMFS Response

NMFS has initiated an extensive effort to provide more complete and accessible documentation for all ongoing recreational fishing data collections administered by NMFS. To that end, NMFS developed the MRIP Data Management System (MDMS), a metadata warehouse that describes protocols for sampling, data collection, and processing; sampler training and evaluation; sampling frame maintenance; metadata standards; data management documentation; data elements and definitions; and data accessibility. In addition, all new survey methods developed through MRIP will be fully documented, including descriptions of limitations of data and assumptions of survey designs. This information will be included in MDMS and made available to users of recreational fishing data.

Other NRC Recommendations ►► Expertise

A significant investment in intellectual and technical expertise is needed.

NMFS Response

Improvements in survey design and management are being developed and tested through MRIP working groups and project teams, which are composed of experts in survey design, fisheries management, and stock assessment, as well as representatives from various stakeholder groups.

In addition, NMFS has procured consultants from both academia and the private sector. Consultants, who participate as members of working groups and project teams, have been instrumental in developing improved sampling and estimation designs. Two of the consultants who are supporting MRIP were members of the NRC panel that reviewed NOAA's recreational fishing surveys. Consultant review and support will become a regular component of MRIP as improved survey designs are implemented. Finally, new sampling and estimation methods developed by MRIP will be routinely subject to independent expert peer review prior to MRIP's acceptance of the methods for use.

Other NRC Recommendations ►► Coordination

A greater degree of coordination between federal, state and other survey programs is necessary to achieve the national perspective on marine recreational fisheries that is needed.

NMFS Response

MRIP was designed to be national in scope but regionally specific, recognizing that each region (Alaska, Atlantic Coast, the Caribbean, Gulf Coast, Pacific Coast, and Pacific Islands) has unique informational needs and data collection issues. Work groups convened under MRIP are developing national guidelines for survey design, management, and operations that will be applied in all regions. Central to these guidelines is a suite of certified survey methods that are currently being developed and tested to assess the feasibility of sampling and estimation approaches in terms of accuracy, cost, public perception, and the ability to satisfy customer needs for resolution and timeliness. As methods are certified, they will be made available as soon as possible for regional deployment.

MRIP has developed standards for survey coverage and basic data elements in all regions to ensure that a complete national picture of marine recreational fishing activity and catch is compiled annually. Regional survey partners will make decisions about survey parameters to be used within each region, including: basic survey design choice(s); coverage beyond the standard minimum to accommodate region-specific data needs, including geographic scope and species included; sample design to increase the spatial resolution of estimates below the state level; and sample design frequency and data reporting and analysis processes to deliver estimates more (or less) frequently than the standard.

In addition, MRIP has created an Information Management Team to facilitate coordination and ensure the comparability and compatibility of fishing statistics among regional data collection programs. The team and resulting projects will be coordinated within NMFS to optimize coordination and integration with existing programs, including the regional Fishery Information Networks, National Fisheries Information System, and Enterprise Data Management program.

Other NRC Recommendations ►► Independent research group

A permanent and independent research group should be established and funded to continuously evaluate the statistical design and adequacy of recreational fishing surveys and to guide necessary modifications or new initiatives.

NMFS Response

As an alternative to establishing an independent research group, NMFS has chosen to integrate survey design and management experts from independent organizations directly into the survey redesign process. Specifically, individuals from academia, for-profit survey research firms, recreational fishing interest groups, and federal, regional, and state fishery management and science organizations are participating directly in MRIP working groups and project teams that

are developing and testing new survey methods. In addition, the results of completed projects are being independently peer-reviewed prior to implementation of revised survey methods. MRIP managers believe this approach will expedite the implementation of improved survey methods.

Other NRC Recommendations ► Survey office funding

Additional funding is needed for a survey office devoted to the management and implementation of marine recreational surveys, including coordination between surveys conducted in various federal and state agencies. Requests for additional funding will be incorporated into NOAA's budget, as priority requirements dictate.

NMFS Response

NMFS recognizes that additional funding will be required to carry out the recommendations of the NRC review and has sought increased funding for the program and annual appropriations have been provided as follows:

- FY 2008: \$3.5 million
- FY 2009: \$6.2 million
- FY 2010: \$9.0 million
- FY 2011 (President's Budget Request): \$9.0 million

Other NRC Recommendations ► Human dimensions

The NRC Review made several recommendations pertaining to the collection of human dimensions data.

NMFS Response

Following publication of the NRC Review, NMFS commissioned an independent review of the agency's recreational economics program. The results of that review, which was conducted by the University of Miami's Center for Independent Experts (CIE), are documented in *Review of Economic Data at the National Marine Fisheries Service for the Center of Independent Experts (2006)*. See:

http://www.st.nmfs.noaa.gov/st5/RecEcon/documents/CIE_recreational_fishery_economics_report.pdf. The detailed recommendations of the CIE review are guiding NMFS' efforts to improve collection of human dimensions data for recreational fisheries.

MSRA Requirement ► Methodology ► Adequate number of dockside interviews to estimate catch and effort

Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the greatest extent possible, include: an adequate number of intercepts to accurately estimate recreational catch and effort

NMFS Response

To date, efforts to develop an improved recreational fishing data collection program have focused on addressing potential sources of sampling and estimation error identified by the NRC. As these fundamental improvements in survey design are implemented, resources will be allocated toward increasing sample sizes of dockside interviews, as well as telephone and mail survey interviews.

MSRA Requirement ► Methodology ► Use of surveys that target registered anglers

Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the greatest extent possible, include: use of surveys that target anglers registered or licensed at the State or Federal level to collect participation and effort data.

NMFS Response

MRIP has implemented several studies to develop and test registry-based sampling methods. These studies have focused on maximizing response rates, minimizing reporting error, and efficiently accounting for anglers who are exempted from registration or licensing requirements. MRIP has been conducting pilot surveys of registered anglers in Louisiana, North Carolina, and Washington. These pilot studies have been conducted alongside the current random-digit-dialing telephone survey in a “dual frame” survey approach to maximize coverage and minimize bias as recommended by the NRC pending completion of full registry coverage of anglers. The use of registry surveys will expand as registries become more inclusive and as tests of new sampling methods are completed. NMFS is planning to begin using state and federal registry data to conduct dual frame telephone and/or mail surveys of fishing effort in additional states in 2011.

MSRA Requirement ► Methodology ► Collection and analysis of vessel trip report data from charter vessels

Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the greatest extent possible, include: collection and analysis of vessel trip report data from charter fishing vessels.

NMFS Response

The NRC Review suggested that self-reported catch and effort data provided by charter boat operators must be verifiable and submitted in a timely manner. In response to the NRC recommendations, MRIP commissioned a follow-up review to assess current for-hire data collection programs and provide recommendations for how to collect catch and effort data for the for-hire sector. The MRIP review provided specific recommendations for improving regional for-hire data collection programs, as well as best practice recommendations for the sector as a whole. Best practice recommendations include:

- (1) Logbook reporting of catch and effort for all for-hire vessels;
- (2) Validation of self-reported logbook data;
- (3) Online and paper reporting options; and
- (4) Weekly reporting (at a minimum).

The review further specified that logbook reporting requirements must be mandatory and strictly enforced for a program to be successful. Subsequent MRIP projects have focused on developing and testing methods that address these best practice recommendations. In addition, MRIP is testing the feasibility of logbook reporting that encompasses all of the best practice recommendations from the MRIP review in the Gulf of Mexico. The study, which was initiated in September 2010 and will continue for 1 year, includes dockside validation of catch and effort data, as well as an optional online reporting mechanism to facilitate timely submission of data. Feasibility is being assessed in terms of cost, compliance, timeliness, and accuracy. If the methodology proves to be feasible, it could be expanded to other regions. However, the demand for logbook reporting for the for-hire sector varies by region, so decisions to implement mandatory logbook reporting requirements will be made on a region-by-region basis in close consultation with data collection partners and stakeholders.

MSRA Requirement ► Methodology ► Development of weather corrective factors that can be applied to recreational catch and effort estimates

Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the greatest extent possible, include: development of a weather corrective factor that can be applied to recreational catch and effort estimates.

NMFS Response

The survey designs being developed by MRIP will ensure that samples are representative of the populations being surveyed. This ensures that factors such as weather that may affect the level of fishing activity or the catch rates per trip will be accounted for in the sample design, and will be reflected in the results of the sampling. If anglers have fished less frequently because of bad weather, they will report fewer trips when surveyed, and the resultant estimate will reflect such reporting. Moreover, intercept surveys will randomly encounter anglers fishing under all weather conditions, and the sample data will not be biased by disproportionate sampling under optimal weather conditions. It should be noted that other factors which may affect fishing activity—such as changing availability of fish, regulations, and economic conditions, as well as disruptive events such as the Deepwater Horizon/BP oil spill—are also similarly accounted for in the survey designs and methods. Applying an additional corrective factor to account for weather would result in double-weighting and lead to biased and inaccurate estimates.

MSRA Requirement ► Methodology ► Independent committee

Unless the Secretary determines that alternate methods will achieve this goal more efficiently and effectively, the program shall, to the greatest extent possible, include: an independent committee composed of recreational fishermen, academics, persons with expertise in stock assessments and survey design, and appropriate people from the National Marine Fisheries Service to review the collection estimates, geographic, and other variables related to dockside intercepts and to identify deficiencies in recreational data collection, and possible correction measures.

NMFS Response

MRIP was designed to engage stakeholder groups, experts in survey design, fisheries management and stock assessments, and academics in the development of survey designs, as well as the review of estimates. This will continue as MRIP progresses.

MSRA Requirement ► Deadline

The Secretary shall complete the program under this paragraph and implement the improved Marine Recreational Fishery Statistics Survey not later than January 1, 2009.

NMFS Response

As noted above, NMFS received its initial appropriation of funds for MRIP in FY 2008, and adopted the original Implementation Plan for MRIP that outlines the agency's program for undertaking the necessary scientific studies to address the NRC recommendations for improving survey and estimation methods, as well as the priorities and strategy for sequencing the studies and the implementation of survey improvements, in October 2008. Adoption of the plan, which has been updated annually, marks the formal establishment of MRIP. Marine conservation and fishing industry groups have filed lawsuits against NOAA, alleging that NOAA has not complied with the requirements of Section 401(g)(3). The cases are pending.

MSRA Requirement ► Report

Within 24 months after establishment of the program, the Secretary shall submit a report to Congress that describes the progress made toward achieving the goals and objectives of the program.

NMFS Response

This document is intended to satisfy this requirement.

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