

MARINE RECREATIONAL INFORMATION PROGRAM

Implementation Plan
Revision 2: 2010-2011 Update
November 2010



To help ensure the long-term sustainability of U.S. fisheries through enhanced estimates of marine recreational catch and effort, a partnership of public and private organizations has developed the Marine Recreational Information Program, an improved national system of regional surveys. This Implementation Plan outlines the history of the program, its current status, and future course.

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Marine Recreational Information Program Implementation Plan: 2010/2011 Update

November 2010

The *MRIP Implementation Plan* is a joint product of the MRIP Operations, Communication and Education, Information Management, and Angler Registry Teams prepared with guidance from the Executive Steering Committee. The Implementation Plan provides an update on progress to date, as well as the blueprint for putting MRIP into action. A dynamic document, the *Implementation Plan* will continue to evolve in response to the latest science and the emerging needs of fisheries managers, regulators, policy makers and stakeholders.

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MRIP Implementation Plan

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Executive Summary

At its heart, the Marine Recreational Information Program, or MRIP, is about trust. It is about the trust scientists and managers place in recreational fishing catch and effort statistics generated through MRIP surveys. It is about the trust anglers and other stakeholders place in the decisions based on those statistics, and the underlying data collection that feeds those statistics. The foundation upon which trust must be built is survey, estimation, and data management methods that are scientifically sound and supported by rigorous, independent scientific peer review. MRIP's first priority is to develop methods that meet such scientific standards.

It is also a priority for MRIP to apply the improved methods to develop statistics that meet the requirements of data users and address the needs and concerns of stakeholders. Effective two-way communication with recreational catch statistics customers and stakeholders is another essential component of MRIP, and one which is also essential to building trust. Since its inception, MRIP has involved our data partners, customers, and stakeholders in the thorough, deliberate process required to build a recreational fishing data collection and reporting program that meets the demanding and shifting needs of all parties.

We believe that this latest iteration of the MRIP Implementation Plan demonstrates how the trust placed in the MRIP team is paying off. It outlines how many of the findings and recommendations that have been developed through research and evaluation projects conducted over the past two years are being implemented.

Among the components that we have added to this iteration of the Implementation Plan is an implementation timeline. This timeline graphically illustrates how the various pieces of the MRIP puzzle fit together; how the steps we have taken to date inform the steps we will take in the future; the process by which we are driving toward key "end points"; and the transition from MRFSS to MRIP.

2009-2010 Highlights and Their Implications Moving Forward

A description of major accomplishments and activities over the past year is included in the body of this report. Three worth noting specifically include:

Implementation of the National Saltwater Angler Registry

The National Saltwater Angler Registry has been implemented and will be used to collect trip data starting in 2011. Equally important as the nearly three-quarters of a million fishermen who signed up with the Registry since being launched on January 1, 2010, are two additional facts. The first fact is that as of January 1, 2011, we anticipate that all but two states, as well as Puerto Rico and the U.S. Virgin Islands, will be gathering data from their fishermen consistent with the needs of NMFS. This reduces the record-keeping and administrative burden on the Federal Government, and enables States to have critical information they need to manage their resources effectively. The second fact is that with the implementation of the Registry, the tone and tenor of the discussion surrounding angler registration has shifted from *whether* registration is a good idea to *how quickly* Registry data can be used to improve estimation. Although anecdotal, this shift feeds into the larger MRIP objective of ensuring productive engagement with stakeholders.

Charter boat electronic logbook reporting

In September 2010, charter boat operators began testing logbook trip reporting. The project, underway in the Gulf of Mexico, is testing whether logbook reporting, supplemented by independent dockside sampling, can yield more accurate and timely trip information than traditional surveys. It will also evaluate whether any improvements gained justify the additional reporting and data collection burden, on both fishermen and the government.

Re-estimation of MRFSS data

We have addressed one of the major concerns of the National Research Council's evaluation of MRFSS by developing a new estimation methodology for the Access Point Angler Intercept Survey. The concerns identified in the NRC Review included matching the estimation design to the sampling design and incorporating selection probabilities into estimation calculations. This new design will be applied to historical MRFSS surveys dating back to 2003, as well as for all future estimates beginning in early 2011

Introduction

NMFS is entrusted with ensuring the sustainable use of America's living marine resources. To meet this very direct, yet exceedingly complex charge, NMFS must continually promote and evaluate emerging marine science, build consensus for and ensure compliance with management decisions, and balance competing needs of stakeholders with respect to such issues as access, conservation, recreation, and commerce.

Major leaps in our understanding of the complexity and interactions of marine ecosystems have occurred in recent years thanks to independent research, as well as scientific study initiated and funded by NMFS. Where it was once believed that fisheries could be effectively managed on a stock-by-stock basis, it is now clear that all management decisions must be viewed in the context of the entirety of their impacts on ecosystems.

In addressing and balancing stakeholder needs, NMFS must ask the question, "To whom do America's oceans belong?" The answer, of course, is all of us. So whether it is the New England fisherman whose family's livelihood depends on this season's catch, the recreational angler from the Midwest who enjoys an annual deep-sea fishing trip, the Pacific Island SCUBA shop owner who outfits tourists, the Alaskan subsistence fisherman who must provide for his family, or the coastal resident who simply appreciates the mystery and the majesty of the sea, everyone's interests must be considered and uses must be balanced against one another. In addition, NMFS must respect the rights and decisions of individual states and tribes, and ensure that its actions complement, not conflict with, regional, state, tribal, and local efforts.

NMFS must act against the backdrop of new fishing technologies; demographic trends that have more people moving to the coast; growing interest in the food and energy potential of our oceans; increasing pressure on the resources from non-fishing factors such as climate change; the ever-changing status of the economy; and the recognition of the immense value of our recreational fisheries in terms of both economic impact and cultural heritage.

In this context NMFS has implemented the Marine Recreational Information Program (MRIP). Although NMFS is responsible for making MRIP work, the program's design relies extensively on input and commitment from partner agencies, organizations, and individuals. NMFS believes that this inclusive approach assures conduct of an efficient and effective data collection program that meets the dynamic demands for recreational fishing statistics.

NMFS envisions MRIP as a program that is the most trusted marine data collection system available. One in which people are confident in the integrity of the information they receive, in which stakeholders are engaged, and one that empowers partners in the data collection process. We want to ensure that the profound debates that take place about U.S. ocean policies center on the quality of the management decisions, not the quality of the data.

Background

Existing Surveys

Marine recreational fishing statistics have traditionally been collected through a combination of telephone and onsite, access-point intercept surveys. Generally, these surveys are funded by NMFS and are often conducted in cooperation with, and with supplemental funding from, interstate fisheries commissions and state natural resource agencies.

The Marine Recreational Fisheries Statistics Survey (MRFSS), initiated in 1979 as a requirement of the Magnuson Fishery Management and Conservation Act of 1976, continues to be the primary source for national recreational fishery statistics in the United States. The MRFSS is a complementary survey design that includes the Coastal Household Telephone Survey (CHTS) and the Access-Point Angler Intercept Survey (APAIS). The CHTS collects data on angler fishing effort from a random sample of coastal residential households in each state. The APAIS is a shore side survey that collects data on angler catch through probabilistic sampling of fishing access points and days. Data from the two independent surveys are combined to estimate total fishing effort, participation, and catch by species. The MRFSS is currently conducted in all regions except the Pacific Coast, Alaska, Texas, the Western Pacific Territories, and the U.S. Virgin Islands.

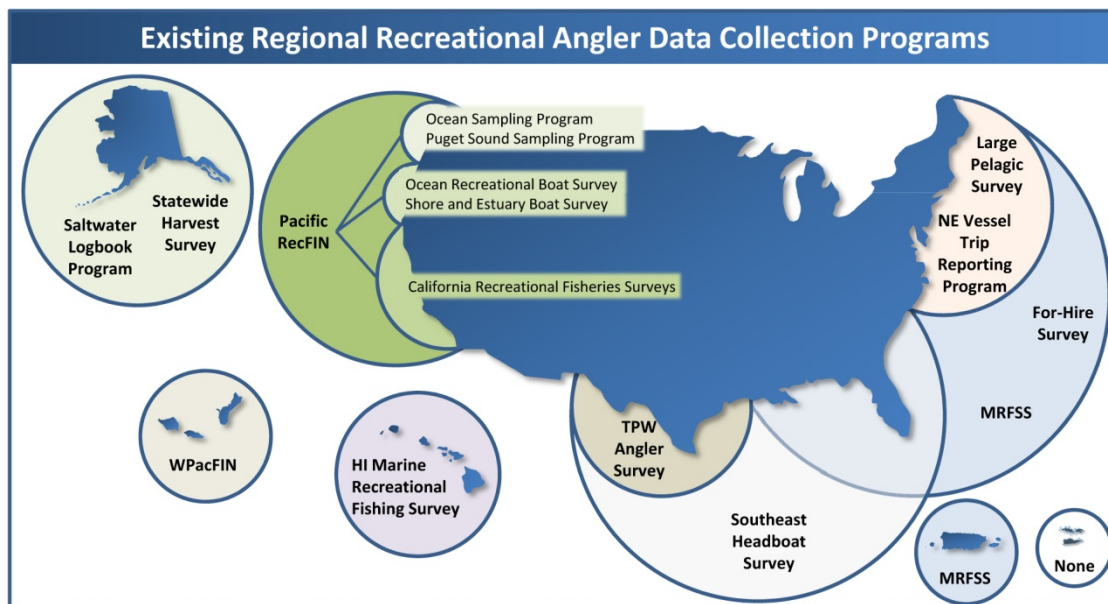
The MRFSS design was originally developed to monitor all modes of marine recreational fishing (shore, private boat, charter boat, and headboat); a new For-Hire Survey (FHS) design was later developed to provide more precise statistics on catch and effort for the charter and headboat modes. The FHS utilizes a complementary survey design that includes the APAIS but differs from the MRFSS by using a vessel directory telephone survey to collect fishing effort data through random sampling of listed vessel operators. The FHS approach also includes an at-sea sampling survey of headboat fishing trips that collects direct observations and measurements of both retained and released catches. The FHS approach was implemented in the Gulf of Mexico (1998), California (2001), and the Atlantic states (2003) through the cooperative efforts of NMFS, the interstate fisheries commissions, state natural resource agencies, and the fishing industry.

In recent years, the MRFSS approach was replaced on the Pacific Coast by a series of state surveys that are administered by the Pacific Recreational Fisheries Information Network with partial funding from NMFS. California now conducts a set of surveys that constitute the California Recreational Fisheries Survey (CRFS) Program. The CRFS includes a Party Charter Survey that employs a variation of the FHS approach, a new angler directory telephone survey that collects fishing effort data from a sample of angler license holders, and a set of access-point surveys that collect both effort and catch-per-unit-effort data. In Oregon and Washington, fishing effort and catch on ocean boats are monitored through the on-site sampling surveys of the Oregon Ocean Recreational Boat Survey and the Washington Ocean Sampling Program. Oregon's Shore and Estuary Boat Survey and Washington's Puget Sound Sampling Program now provide the only coverage of non-ocean fishing in those states, and both of these approaches have utilized access-point surveys in conjunction with new angler license frame telephone surveys.

A number of more specialized surveys are currently conducted by NMFS and the states. The Large Pelagics Survey was started by a number of Atlantic states and later developed by NMFS as a means of monitoring off-shore fishing effort and catch for highly migratory species. The Southeast Headboat Survey is a logbook program for monitoring fishing on headboats from North Carolina to Texas. A number of states, including South Carolina, Maryland, and Florida, currently conduct logbook data collections for monitoring certain segments of the for-hire fishery.

Marine recreational fishing surveys in Alaska and Texas are administered by state natural resource agencies, and recreational fishing surveys in the Western Pacific Territories are conducted by the territorial governments with support from the National Marine Fisheries Service (NMFS) Pacific Islands Fisheries Science Center. Appendix A provides an overview of regional data collection programs.

The MRFSS was developed to estimate annual fishing effort and catch by species on a regional scale, but demands for recreational fishing statistics have changed considerably since the inception of the survey. Fisheries management and stock assessment practices now require more timely and accurate estimates at finer geographic and temporal scales, thus challenging use of estimates generated by the current program. In addition to the evolving demands for recreational fishing data, there has been widespread criticism of the use of MRFSS data to regulate the impact of recreational fishing on stocks through seasonal closures and size and catch limits.



Independent National Research Council Review

In response to the growing demand for an improved recreational fishing data collection program, NMFS commissioned the National Research Council (NRC) of the National Academies of Science to conduct a high level, scientific review of the existing survey methods used by NMFS and its partners to monitor catch and effort in marine recreational fisheries throughout the US. Specifically, the NRC was asked to:

- Assess existing surveys and their suitability in monitoring effort and catch in the shore-based, private boat, and for-hire boat recreational fisheries;
- Evaluate how well these methods were providing the quality of information required to support accurate stock assessments and responsible fisheries management decisions; and
- Recommend improvements to ensure more accurate and precise estimates of recreational effort and catch.

The NRC's Ocean Studies Board formed a 10-member committee of experts in sampling design and statistics to conduct the requested review independent of NMFS. The committee held a series of five public meetings in 2005 to gather information about the current survey programs in each region. A final report of their findings (*Review of Recreational Fisheries Survey Methods*) was published in April 2006. The committee identified a number of potential problems with the sampling and estimation designs, and questioned the adequacy of existing surveys in providing the statistics needed to support stock assessments and the kinds of fishery management decisions required by current law and practice. The report includes recommendations to redesign current surveys to improve: their effectiveness; the appropriateness of their sampling procedures; their applicability to various kinds of management decisions; and their usefulness for social and economic analyses.

Magnuson-Stevens Reauthorization Act

In January 2007, President Bush signed a bill into law reauthorizing the Magnuson-Stevens Fishery Conservation and Management Act. The Magnuson-Stevens Reauthorization Act (MSRA) directed the Department of Commerce to “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” by January 12, 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.” MSRA further states that the improved program must also “take into consideration and, to the maximum extent feasible, implement the recommendations of the National Research Council in its report *Review of Recreational Fisheries Survey Methods* (2006).” 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 accurately estimate recreational catch and effort;
- use of surveys that target anglers registered or licensed at the State or Federal level to collect participation and effort data;
- collection and analysis of vessel trip report data from charter fishing vessels;
- development of a weather corrective factor that can be applied to recreational catch and effort estimates; and
- 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 the collection estimates, geographic, and other variables related to dockside intercepts and to identify deficiencies in recreational data.”

The MSRA also required the Department to implement a federal, regionally-based registry program for recreational fishing. The Act specifies that the registry must include 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. Specific provisions of MSRA, as well as NOAA's response to those provisions are included as Appendix A.

Program Scope and Goals

Initiated in 2007, MRIP is a collaborative initiative to develop and implement an improved recreational fisheries statistics program. The new program consists of a system of surveys that provides the best possible scientific information for use in the assessment and management of the Nation's marine fisheries.

Due to the dynamic nature of fisheries and fisheries management practices, MRIP must be: 1) flexible so it can be updated, modified, expanded, or contracted to meet specific regional or local informational needs; 2) robust enough to provide the most precise and least biased information possible; and 3) national in scope but regionally specific, recognizing that each region (Atlantic Coast, Gulf Coast, Pacific Coast, Pacific Islands, Alaska, and the Caribbean) has unique informational needs and data collection issues. In addition, MRIP must be inclusive and transparent, providing scientists, managers, and stakeholders an opportunity to participate.

MRIP Priorities

The goal for MRIP is to provide recreational fishing catch, effort, and participation statistics that satisfy stakeholder needs for **accuracy, information management, and coverage and resolution**. Initial efforts to achieve this goal are focused on ensuring that statistics and estimates are accurate and accessible by addressing the conclusions and recommendations provided by the NRC. Specific items from the NRC Review that are being addressed to improve accuracy and data availability include:

- “Future telephone surveys should be based on a universal sampling frame”;
- “Dual-frame procedures should be used whenever possible to reduce sample bias”;
- “Assumptions should be examined and verified so that biases can be properly evaluated”;
- “The estimation procedure for information gathered onsite does not use nominal or actual selection probabilities of the sampling design”;
- “The survey fails to provide a valid and reliable method of adequately accounting for fish caught and not brought back to the dock”;
- “Onsite methods fail to intercept anglers who have private access to fishing waters”;
- “Charter, party, and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept, as well as fish caught and released”;
- “Panel surveys should be considered in recreational fishing surveys”;
- “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”; and
- “Maintenance of a central data warehouse for marine recreational fisheries and development of appropriate dissemination tools.”

As more accurate data collection methods are developed, tested, and implemented, attention will shift toward addressing needs for coverage and resolution. Stakeholder needs were identified through regional listening sessions that included direct feedback from fisheries managers and scientists representing NMFS regional offices and science centers, fishery management councils, interstate fisheries commissions, and state natural resource agencies. Specific needs for recreational fishing statistics to support management and science include:

- Increased frequency of data collection and reporting to support timely management decisions;
- Data collected for a longer portion of the year;
- Increased geographic resolution of surveys;
- Recognition of and an explicit design for the nexus between catch and effort data and the establishment of annual catch limits and accountability measures; and
- Gathering of corroborative data in addition to angler surveys and intercepts, such as fuel costs, weather trends, etc.

Dialogue between stakeholders and survey managers is ongoing to ensure that changing demands for recreational fishing statistics are satisfied.

Program Strategy

MRIP consists of seven regional systems of surveys adhering to national standards and best practices. In addition to providing each region with the flexibility to address local and/or regional needs, this approach maximizes efficiency by utilizing, to the greatest extent practicable, existing infrastructure already developed by regional Fishery Information Networks (FINs) and/or state data collection programs. Ultimately, regional data collection partners and stakeholder groups can evaluate specific data needs and apply MRIP solutions. The partners determine how best to administer and govern regional surveys, resolve unresolved issues, determine available funding support levels, and apply funding to regional priorities consistent with MRIP national standards and best practices.

Data collection programs directly managed by NMFS implement improvements as they are identified, documented, and certified. For those programs not directly administered and/or funded by NMFS, MRIP provides technical assistance and support for improvements, for example, by enhancing data collection efforts through statistical review and analysis of survey methods, developing information management tools, or providing financial assistance.

National Strategy

MRIP develops national standards and best practices for survey design, management, and operations that can be applied in all regions. Central to these guidelines is a suite of certified survey methods that are 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. Methods are made available for regional deployment as soon as they are certified.

MRIP also seeks to achieve 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. National standards adopted by the MRIP Registry Team in 2009 are described in Table 1.

Table 1: National Standards for Survey Coverage and Basic Data Elements

Coverage Standards

Surveys produce annual estimates by regions and for each state within a region. Surveys cover all recreational fishing for marine, estuarine and anadromous finfish in all marine waters and estuaries bordering the states.

Required Data Elements

The following estimates are produced not less frequently than annually for each state in a region:

- Number of recreational fishing days;
- Number of participating recreational fishers and number of participating for-hire fishing vessels derived from survey estimates or from directories based on license or registration data;
- Recreational catch and landings in numbers of fish for each species (or, where multi-species groups are managed or assessed as a unit, by such species group), and further specified as:
 - By mode of fishing, including at a minimum, shore, private boat and for-hire modes; and
 - By area fished, including, at a minimum, EEZ, territorial sea, and internal waters of the state, or other primary jurisdictions applicable to regional management.
- Unless not utilized in management or stock assessment for the species, mean weights of fish landed for each species (or, where multi-species groups are managed or assessed as a unit, by such species group), and further specified as:
 - By mode of fishing, including, at a minimum, shore, private boat and for-hire modes; and
 - By area fished, including, at a minimum, EEZ, territorial sea and internal waters of the state, or other primary jurisdictions applicable to regional management.
- Mean lengths and weights of fish caught and released for each species, wherever direct observations and measurements can be obtained.

Regional Implementation

Regional survey partners decide about survey parameters to be used within each region. The principal decisions on survey parameters include:

- 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;
- Sample design, frequency, and data reporting and analysis processes to deliver estimates more (or less) frequently than the standard;
- Requirement for a census vs. a sample-based survey for the for-hire mode;
- Supplemental surveys required to produce or improve estimates of: infrequently-caught species, protected resources, and social and economic data;
- Supplemental surveys required to verify and improve confidence in basic survey estimates;
- Biological sampling requirements; and
- Regional outreach programs, including measures to build and maintain stakeholder awareness, generate support for and involvement in the data collection program, and instill confidence in the resulting estimates.

MRIP Organization

Executive Steering Committee

An Executive Steering Committee is overseeing MRIP. Representing state, federal, and public interests, the role of the Executive Steering Committee (ESC) is to provide:

- A connection between MRIP and the federal and state marine fisheries agencies, interstate marine fisheries commissions, and regional fishery management councils to ensure that user needs are being met;
- A means of accountability for the senior leadership of MRIP;
- Assistance in strategic decisions for MRIP; and
- Representation for MRIP in meetings of agencies and organizations outside of NOAA.

The ESC has established four MRIP leadership teams that are responsible for developing and implementing an improved data collection program for recreational fisheries, as well as promoting communication between and among NMFS, partner organizations, and constituents. Leadership teams include representatives from a broad range of organizations, expertise, and interests, and have been provided with the flexibility to establish work groups and/or project teams to address topical, national, and regional issues, as needed.

Operations Team

The Operations Team (OT) is charged with developing and recommending improvements to data collection programs under the auspices of MRIP. Each year, the OT identifies and prioritizes research needs for the coming year and commissions work groups or teams to develop projects that address the top priorities. Work groups and project teams include experts in survey design and management, natural resource management, and stock assessments, and obtain input from knowledgeable recreational fishing stakeholders. In 2010, the top research priorities closely reflect some of the primary conclusions for the NRC Review and include:

- Develop and enhance registry-based surveys;
- Assess and enhance sampling and estimation methods;
- Implement studies to assess bias resulting from under-coverage of onsite survey sampling frames;
- Develop and implement improved data collection methods for for-hire fisheries;
- Develop and test alternative methods for collecting discard data;
- Develop survey methods for rare-event or pulse fisheries; and
- Improve data quality.

Since 2007, the OT has funded 30 projects to address various aspects of these research areas. Appendix B provides descriptions of all of the OT projects.

Information Management Team

In their *Review of Recreational Fisheries Survey Methods*, the NRC identified several specific responsibilities for NMFS in developing a national statistical program, including: nationally consistent standards for data and metadata, maintenance of a central data warehouse for marine recreational fisheries, and development of appropriate dissemination tools. The Information

Management Team (IMT) is charged with supporting the national-level processing and management of data. The IMT facilitates coordination and ensures the comparability and compatibility of fishing statistics among regional data collection programs. The IMT is collaborating with Fisheries Information System (FIS) project team members in order to leverage valuable work and system functionality produced through multiple FIS projects. The team and resulting projects is coordinated within the NMFS Office of Science and Technology to optimize coordination and integration with existing programs including the FINs, National FIS, and Enterprise Data Management program.

National Saltwater Angler Registry Team

A Registry Team of federal and state agencies, regional fishery management and data collection partners, and stakeholders was established to facilitate communications and coordination with states and to assist NOAA in developing the Registry Program. The Angler Registry Database Work Group supports the Registry Team and technical staff of NMFS' Office of Science and Technology for database design and design and operation of the angler registry system. The goals of the Registry Team, as stated in the Development Plan for the Registry Program are:

- Build, over time, and maintain a directory that identifies and supplies mail and telephone contact information for marine anglers and for-hire vessels in the United States, and that is sufficient in conjunction with supplemental data, to characterize saltwater angling effort as intended by the NRC and by Congress in the MSRA.
- Maximize the use of information collected by states in conjunction with state licenses or registries to populate the directory.
- Minimize the time and paperwork required for anglers to submit information to the directory.
- Enable states, working through regional partnerships, to collect and submit recreational catch and effort data that conforms to national standards in lieu of submission of angler identification information.
- Achieve a high level of support for, and confidence in, the quality and utility of the data that results from use of the directory from anglers and fisheries professionals.

Current priorities of the Registry Team are:

- Continue to register anglers and for-hire fishing vessels that are not licensed/registered by Exempted States;
- Finalize Memoranda of Agreement (MOAs) with states that are designated as Exempted States;
- Receive angler and for-hire vessel registration data from Exempted States and the national registry and build regional registries;
- Provide technical and financial support for states' efforts to improve the completeness and accuracy of their records of registrants/licensees.

Communications and Education Team

The Communications and Education Team (CET) provides expertise that fosters 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 primary target audiences identified for the campaign include:

- Internal stakeholders – MRIP team and work group members, NOAA staff, and leadership.
- Data partners and primary customers – state agencies, marine scientists and stock assessors, fisheries management councils, and interstate marine fisheries commissions.
- Constituents – opinion leaders in the fishing community; angling organizations and clubs; regional and national conservation and environmental organizations; coastal communities and ocean recreation enthusiasts; and media outlets for reaching the broader angling public.

The complex nature of MRIP practically ensures our various audiences have questions. Leaving those questions unanswered creates an information vacuum and leads to the spread of misinformation. Close coordination with the other MRIP teams ensures the CET stays current with the broader conversation on improving the quality of recreational fishing catch and effort data collection and reporting and is able to meet audiences' information needs. In responding, the CET takes a measured approach to manage expectations of how MRIP is and is not different from the MRFSS and communicates the complexity of the challenge and the deliberate, priority-based, stepwise nature of our approach to meeting that challenge.

The objectives of the CET are to:

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

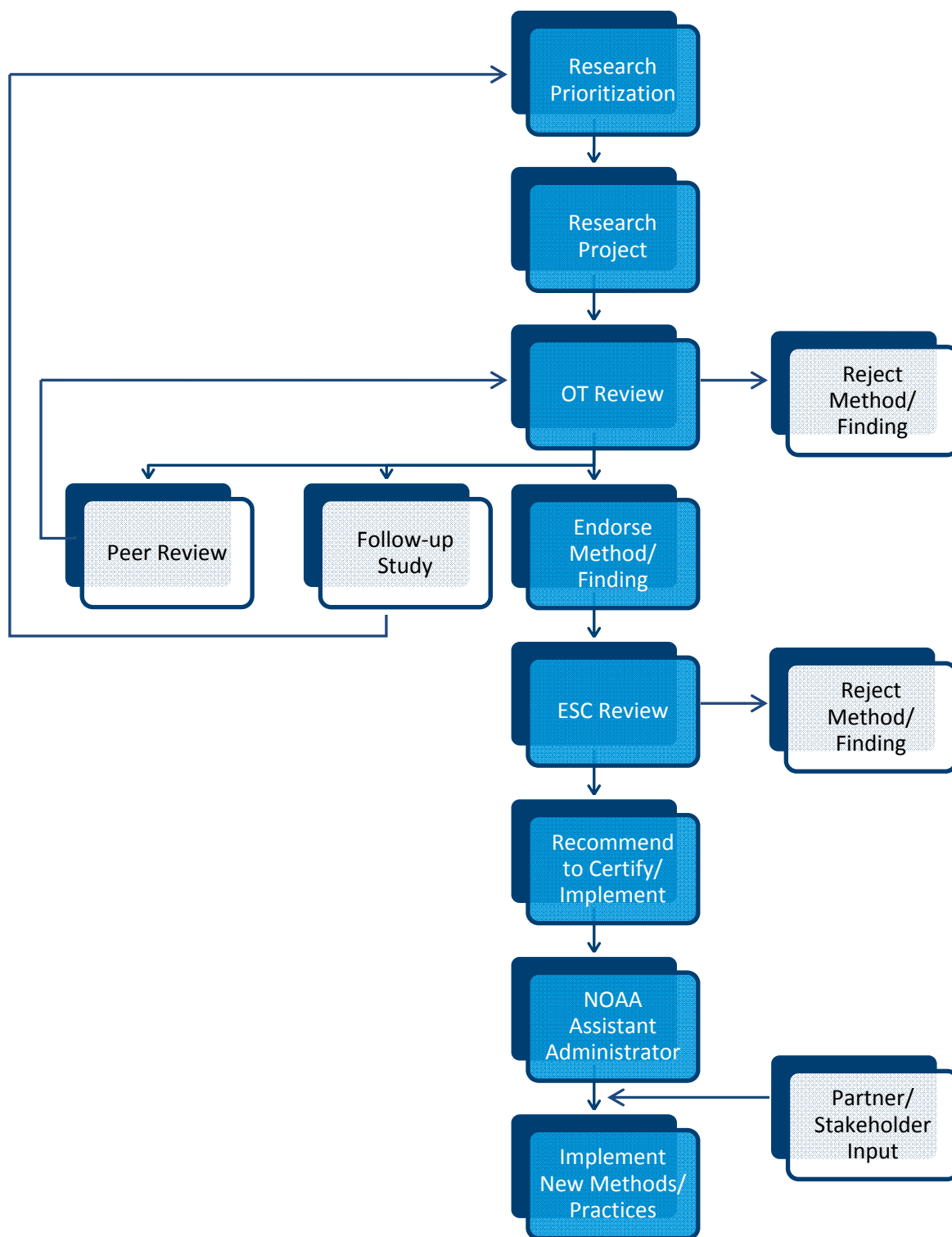
MRIP Decision-Making

For recreational fishing data collection programs directly managed and/or funded by NMFS, the decision to implement an improved methodology or practice developed through MRIP is ultimately made by the NOAA Assistant Administrator for Fisheries (AA), in close consultation with regional data collection partners and stakeholders, including interstate fisheries commissions, fishery management councils, state natural resource agencies, and NMFS regional offices and science centers. For those programs not directly administered and/or funded by NMFS, MRIP provides a suite of certified data collection methods, as well as technical assistance and support, to improve and/or replace existing data collection methods.

Decisions to implement and/or certify data collection methods are informed by a technically sound scientific process that includes testing of new or enhanced survey methods, peer reviews of survey methods and project results, reviews by the OT and ESC, and input from knowledgeable stakeholders, including members of the Marine Fisheries Advisory Committee's Recreational Fisheries Subcommittee and its Recreational Fisheries Working Group.

As research projects are completed, project teams provide the OT with reports documenting project results and describing the benefits and limitations of tested methods and practices. The OT evaluates the project findings and, depending upon the nature of the project, develops recommendations to: initiate a peer review, conduct follow-up studies, and endorse or reject a methodology or practice. Recommendations by the OT to conduct follow-up studies are identified as potential research priorities during subsequent years. OT recommendations are submitted to the ESC, which uses the recommendations to develop advice for the AA to implement, certify, or disregard data collection approaches.

Figure 1. MRIP Implementation Process



Accomplishments

Implementation of National Saltwater Angler Registry

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 that are 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.

A Notice of Final Rulemaking was published in the Federal Register on December 30, 2008. 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 detailed requirements and process by which anglers and for-hire vessels from non-exempt states enroll in the federal registry; and requirements for registration fees beginning January 1, 2011. A summary of the Final Rule is included as Appendix C.

Based on these consultations with each state and expressions of intent to submit the required data the following states may be designated as Exempted States, as indicated:

- As of 2010 for anglers and for-hire fishing vessels: Alaska, Alabama, 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, Texas, 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

NMFS is working with each of the eligible states to develop and adopt Memoranda of Agreement (MOAs) that formalize the states' designation as Exempted States. As of September 30, 2010, the following states have signed MOAs for registry exemption: Alabama, Alaska, American Samoa, California, Commonwealth of the Northern Mariana Islands, Connecticut, Delaware, Georgia, Guam, Maryland, Mississippi, New York, Oregon, South Carolina, and Washington. Massachusetts and Virginia have signed MOAs for their for-hire fishing vessels only and are working to have MOAs for their anglers in place by the end of the year, as are all the remaining eligible states.

The process of receiving proposals and issuing MOAs for state exemptions will continue until all states that qualify for exempted state designation have completed MOAs with NOAA.

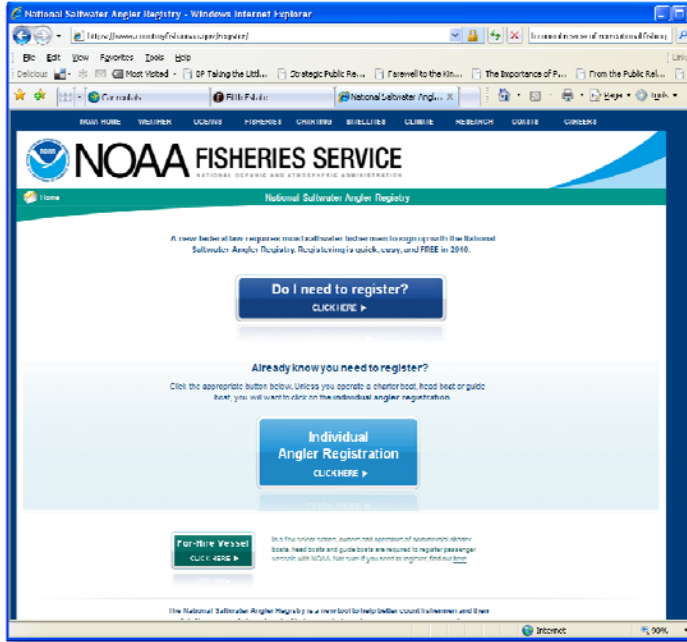

Beginning with the FY 2010 budget appropriation, NMFS is providing financial assistance to states to support the development of state registration and/or licensing programs that meet the

requirements for development and maintenance of a complete and regularly updated National Registry of marine recreational fishing participants. The initial round of project funding is occurring in the fall of 2010.

Development of Registration Interface and Registry Database

In 2008, the Registry Team established the Angler Registry Database Work Group (ARDWG) to assist and advise NMFS in the development of 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 ARDWG also provided support and advice in the development of the system NMFS is implementing to enable anglers to register as required by the final rule.

During 2009, NMFS worked with the ARDWG to develop and implement the data management systems, services and processes required to enable the Registry Program that became operational January 1, 2010. These systems, services and processes include:

- Basic Process for Angler Registration:** Anglers are able to 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 themselves 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 thirty days of registration. The durable registration card is valid for one year from the effective date and helps with enforcement. The national registration interface and call center were activated in late December of 2009, and have been operational throughout 2010. As of September 28, 2010, 655,015 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 located at:
 


[<https://www.countmyfish.noaa.gov/howtoregister/index.htm>] and Frequently Asked Questions regarding the registration program are at: [https://www.countmyfish.noaa.gov/faq_registry.html].

- 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.
- State Import Tool: NMFS has completed initial development of 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 works with states individually to establish and document protocols and schedules associated with state license data submission. The initial state data feeds are occurring in the fall of 2010.

Outreach to Support the Implementation of the National Saltwater Angler Registry

Perhaps the most publicly visible component of MRIP thus far has been the National Saltwater Angler Registry and the requirement that recreational saltwater anglers become part of the registry beginning in January 2010. Since early 2009, the CET has been working closely with the Angler Registry Team and individual states to implement an outreach campaign designed to:

- Reduce confusion among anglers about who needs to register;
- Promote compliance among anglers in states that do not receive exempted-state status; and
- Support, where appropriate, initiatives to develop state-based licensing or registration compliant with the reporting requirements in MSRA.

The best outreach is based on verifying assumptions through direct interaction and testing with target audiences. In other words, it is important that the messages make sense and the tools to deliver and receive feedback on those messages work effectively. To ensure this all happens – that accurate information is getting into the hands of anglers – the CET conducted stakeholder meetings in the Northeast and Mid-Atlantic during the fall of 2009 to ground truth and test materials the team developed to enhance compliance with the National Saltwater Angler Registry.

The end product is a cooperative online marketing kit available for states and outreach partners to use – in partnership with NOAA – to get the word out about the registry. The kit includes: web banners, tackle shop brochures, field sampler handout cards, posters, fact sheets, targeted articles, and an informational Web video. All of these materials – designed based on feedback from both angler and state partners – are customizable and easy to reproduce, and were compiled into an online outreach toolkit that was available for general use at www.countmyfish.noaa.gov. The team also designed FAQs for the registration Website, as well as a self-guided decision tree, that enabled visitors to determine quickly and efficiently whether they need to register. The decision tree was also provided to telephone contractors to aide in their information sharing. In addition to state-specific materials, the team developed materials specific to individual fisheries, such as the Potomac River, the Delaware River, and northeast smelt fisheries.

In the months subsequent to the registry launch, the CET continued to work in close coordination with the states to refine the marketing kit with newly tailored products that reflect emerging needs, including new state license information and guidance for specialized groups like tournament anglers. These tailored fact sheets, posters, and other outreach materials have been sent directly to over 500 tackle shops in states from Virginia through Maine. Thousands of anglers also learned about the registry from handouts distributed at fishing club meetings, fishing shows and state fairs across the region, state-issued email blasts, and by visiting state agency web pages and fishing guides.

The fishing community itself has been integral in helping promote the registry. Several popular fishing Websites offered free advertising and now carry our banner ads promoting the angler registry. In addition, several major angling organizations and clubs took advantage of our free copy and included it in membership email blasts and newsletters.

Recognizing that many anglers receive their information from newspapers and radio, the CET is also engaged on these fronts, issuing news releases (often in coordination with the states) and live-read radio public service announcements throughout the fishing season.

Finally, the CET is often engaged in direct outreach with anglers, serving as the main point of contact for angler inquiries about the registry. During the first eight months since the registry was launched, the CET has responded to more than 300 emails and phone calls from anglers.

The angler registry will continue as a major priority for the CET in 2011. As of next year, most states will be designated as exempted states, meaning anglers licensed in those states will be automatically registered. The CET has already begun focusing outreach effort in the handful of states where anglers will still need to register with NOAA and anticipates a sustained effort in 2011.

New Estimation Design for Catch per Unit Effort

The NRC Review suggested that, “The estimation procedure for information gathered onsite does not use nominal or actual selection probabilities of the sampling design and, therefore, has the potential to produce biased estimates of both the parameters of interest and their variances.” In addition, the Review stated that, “assumptions should be examined and verified so that biases can be properly evaluated.” To address these concerns, MRIP initiated a project to assess the current estimation design for the MRFSS APAIS survey, which collects catch data from completed recreational fishing trips to estimate catch per unit effort (CPUE).

This project has resulted in a revised estimation design that incorporates the selection probabilities and sample weights for each angler interview. The resulting estimation design, which is being peer-reviewed, is design-unbiased and will subsequently produce more accurate estimates of CPUE and the variances of CPUE estimators. The revised estimation design, including results of the peer review, will be submitted for review by the OT and ESC during the fall of 2010.

Pilot Study to Test Alternative Sampling Design for Intercept Survey

As with the estimation design, the NRC Review criticized the sampling design for APAIS for its reliance on unverified assumptions. In addition, the NRC suggested that, “the onsite sampling frame for the MRFSS should be redesigned” and that “the sampling process requires greater quality control.” These concerns are being addressed through a study that is testing a revised sampling design for the APAIS. The one-year pilot test, which was implemented in North Carolina during January 2010: includes a revised sampling frame; eliminates interviewer latitude in selecting interviewing sites; establishes discrete sampling periods of fixed duration, including nighttime sampling; and requires interviewers to collect detailed information about the number of completed boat and angler fishing trips during the sampling period. The result of these modifications will be a sampling design that adheres to the principles of probability theory and minimizes the reliance upon untested assumptions.

Preliminary results from the test study will be evaluated and reported by January of 2011. It is anticipated that a final report with recommendations for implementation of the new sampling design will be submitted to the OT for review by April of 2011.

Development and Implementation of Studies to Test Registry Surveys

The NRC Review recommended that, “future telephone surveys should be based upon a universal sampling frame,” and that in the absence of such a frame, “dual-frame procedures should be used whenever possible to reduce sample bias.” Subsequently, MSRA mandated “the use of surveys that target anglers registered or licensed at the State or Federal level to collect participation and effort data.” In addition to implementing the National Saltwater Angler Registry, MRIP has implemented several studies to develop and test registry-based sampling methods.

In 2007, following the publication of the NRC Review, NMFS and the Gulf States Marine Fisheries Commission implemented angler license directory surveys (ALDS) in Alabama, Florida, Louisiana, and Mississippi. These surveys include telephone interviews of individuals sampled from license databases in the participating states. Recognizing that the license sample frames in all states were incomplete due to exemptions to licensing requirements, ALDS sample frames were integrated with CHTS sample frames in a dual-frame approach. The dual-frame telephone survey design has resulted in improved coverage over either independent telephone survey. However, the success of the methodology is limited by several factors, including missing or incomplete contact information on license sample frames, and the ubiquitous trend of decreasing response rates in telephone surveys. In addition, a key component of any dual-frame survey is the ability to identify overlapping sample frame units accurately (i.e., anglers who could be sampled from both frames). The ability to match telephone survey sample frames is limited by missing or inaccurate telephone numbers, as well as the occurrence of mobile telephone numbers on ALDS sample frames.

Recognizing the limitations of the dual-frame telephone survey approach, a dual-frame mail survey has been designed and tested, which samples from the NC angler license database and the Delivery Sequence File, a comprehensive list of all residential addresses serviced by the United States Postal Service. The pilot test resulted in greater coverage and response rates than the dual-frame telephone survey design, and matching the component sample frames by address

proved to be feasible. A follow-up pilot test will be implemented in late 2010/early 2011 to evaluate mechanisms that may further improve response rates and improve the timeliness of mail survey reporting.

Panel Study to Assess Bias Resulting from Under-coverage of Intercept Sample Frames

The NRC Review noted, “onsite methods fail to intercept anglers who have private access to fishing waters, or intercept them only sporadically.” As a result of this under-coverage of the APAIS sample frame, the estimation design assumes that these anglers target similar species, experience similar success, and have similar residency characteristics as anglers who fish from access sites that are included on APAIS sample frames. This assumption will be tested in a study that will collect both catch and effort data through a longitudinal panel design. The study, which will be conducted in North Carolina and Florida beginning in early 2011, will recruit panelists through each state’s angler license database, as well as residential address frames. Panelists will be asked to record trip characteristics and catch data and submit monthly reports through interviewer-initiated telephone interviews or an online questionnaire. Results of the study will be used to compare trip and catch characteristics between trips that conclude at accessible and non-accessible fishing sites. In addition, the study will test the feasibility of collecting catch and effort data through an offsite panel study design.

Logbook Survey Design for the For-Hire fishery

The NRC Review concluded that, “charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released.” An MRIP follow-up review of for-hire specific data collections identified “best practice methods” for collecting catch and effort data from the for-hire sector. Specific recommendations of the MRIP review included: 1) weekly logbook reporting, 2) development of an online reporting mechanism, 3) telephone follow-up of non-responding vessels, and 4) verification of reported data through dockside observation. To address these recommendations, MRIP has developed a logbook-reporting program that is being tested in Florida and Texas. The study, which includes all federally permitted for-hire vessels in the Port Aransas region of Texas and the panhandle region of Florida, is testing the feasibility of implementing a survey design that combines electronic logbook reporting with independent dockside sampling. The survey design will be evaluated in terms of cost, timeliness of reporting, completeness of reporting, level of participation, and accuracy.

MRIP Data Management System

The initial step toward data management and standardization was to identify and summarize existing recreational fisheries data collection programs. This entailed developing an inventory that includes current protocols for sampling, data collection, and processing; sampler training and evaluation, and sampling frame maintenance; metadata standards; data management documentation; data elements and definitions; and data accessibility. Seventy-five programs were identified across regions for inclusion in this database. The data elements are maintained in a database format that allows for review, edit, and download.

National Recreational Fishing Data Query

The NRC suggested that, “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.” A National-level recreational fisheries query is being achieved through seamless integration with the existing Fisheries Information Networks. The final product will be a publicly accessible website that provides tools for accessing and summarizing current National-level recreational fisheries data. The Information Management Team is collaborating with FIS project team members in order to incorporate the work and system functionality produced through FIS projects. Specifically, the National Query will be accomplished with the goal of being seamlessly incorporated into the Fisheries One Stop Shop (FOSS) once that system is available. The database for the National Query is being developed as a precursor to the recreational portion of FOSS. Regional Fisheries Information Networks will continue to warehouse regional data and respond to regional council, state and management needs. The National Query will provide the national perspective that was recommended by the NRC and a central warehouse for data access. The product is currently in development mode, and expected to be available for public use by January 2011.

Improving Internal Communications

In 2010, the CET sought greater integration with the Operations Team. Informing internal and external audiences about the results of the pilot projects – tracking progress towards full implementation – is an important aspect of building understanding and support for MRIP. The MRIP redesign process is extensive and complex involving dozens of experts and numerous research and pilot projects operating simultaneously. Tracking and communicating progress is a challenging task.

To help improve coordination and internal communication about ongoing MRIP activities – and in the process enhance the quality and flow of information going to our partners and stakeholders – the CET and OT have taken steps to improved coordination on two critical fronts.

First, the teams have developed an interactive timeline to track progress on the range of projects, reports, and outcomes. The new tool addresses feedback from internal and external audiences alike about their desire to see how the redesign is progressing and how the various projects fit together. The new timeline tool has been developed and will be available on the MRIP website by December, 2010.

Second, to better integrate communications into individual project plans, the CET is meeting with the project leads to discuss outreach needs associated with their projects. Many projects rely on the support and cooperation of a particular angling sector for their success. Keeping these project partners informed and engaged is something the CET can and has helped with beginning this year.

Meeting Customer Needs for Information about MRIP Implementation

Better integration between the CET and OT allows for more effective outreach to other audiences about work for the groups, and progress being made to implement MRIP. The CET

sees our work with the For-Hire Work Group as an excellent illustration of integrated, strategic communications.

In 2009, the For-Hire Work Group met an important and much anticipated milestone – the release of the independent scientific review and recommendations for improving the for-hire survey. The CET worked with the team to communicate this positive progress and engage the for-hire sector more fully in MRIP.

Beginning in 2010, the For-Hire Work Group took the next step to test the recommendations with an electronic logbook reporting pilot project at three locations in the Gulf of Mexico. As before, the CET developed a communications strategy to assist the pilot and communicate progress.

In this case, the CET sought to encourage participation in the pilot by making for-hire captains fully aware of the both the pilot's practicalities and purpose. This was accomplished through a number of means starting with an invitation letter to a series of local informational meetings with participating captains, a follow-up letter to meeting participants addressing questions raised at the meetings, and finally an article from a prominent Texas for-hire captain submitted to *Texas Saltwater Fishing Magazine*, which offered an industry perspective on the project.

There is wide-ranging interest in the findings of the pilot beyond those participating directly in it; other for-hire operators are curious as to how this will affect their businesses and stakeholders eager to gain insights into MRIP's progress. Given these broader information needs, the CET is sharing the story of this pilot project widely via the Newscast email update and targeted email to our database of for-hire contacts.

Communications efforts are already underway for a number of other projects including those involving refined re-estimation methods and enhanced field sampling protocols. People should expect to see read and hear more about various MRIP projects in 2011

Providing audiences with "big picture" MRIP information.

Effectively communicating about MRIP starts with those most intimately associated with the program. NOAA leadership, MRIP team leads, and work group members are often viewed as sources of information about the program. The CET works to empowered this group with the information that enables them to respond to a range of questions.

A second target audience identified by the CET is interested and involved partners (including states, council and commission members and staff, and opinion leaders in the fishing and ocean conservation communities). Like the internal group, this audience has a specific and technical set of information needs. To ensure these audiences are kept informed and engaged in the MRIP process, the CET developed a number of products in response to feedback the team received.

In 2010, the CET posted a new informational video, this one much longer and more technical than the "Counting Catch" and "Angler Registry" videos previously posted. This training video targets our interested and involved partners with a more detailed description of MRIP – getting into details such as what MRIP is, why it is important, and how it is being implemented. Like

the videos for the general public, this training video is posted on the MRIP website and is available for use by other MRIP partners and stakeholders.

In addition, the CET has refined and updated a set of high-level talking points, pocket-guide, and PowerPoint presentation based on the most commonly asked questions about MRIP, its funding, and implementation.

The CET will continue to solicit feedback from stakeholders and refine or create products that help them meet their information needs.

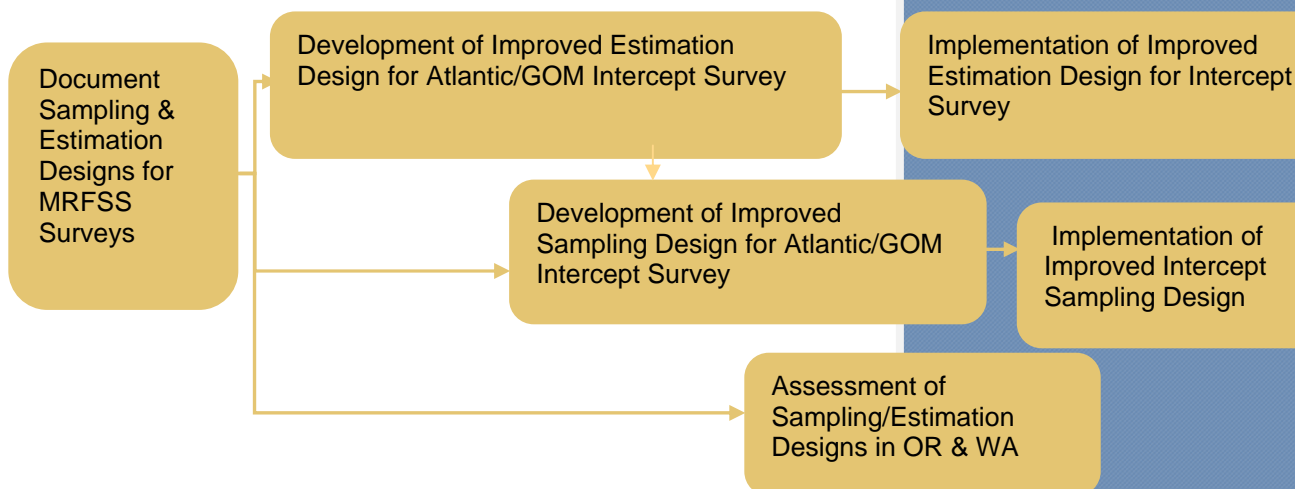
Timeline for Improving the Accuracy of Recreational Fishing Data Collections

The figure below reflects the anticipated timeline for some of the highest priority survey improvements. MRIP will continue to develop and certify methodological enhancements that address NRC recommendations and can provide a full suite of acceptable survey designs. Further studies will be developing and testing additional enhancements including the following: 1) on-site survey designs for estimating fishing effort, 2) off-site panel survey designs for monitoring both fishing effort and catch, 3) improved methods for the collection of released catch data, 4) complemented survey designs for estimating marine recreational fishing participation, 5) specialized survey designs for specific directed fisheries, and 6) survey designs for monitoring recreational fishing interactions with protected species. MRIP will develop and maintain a suite of acceptable survey designs for use by both NMFS and its various interstate commission and state agency partners in the implementation of new regional data collection programs.

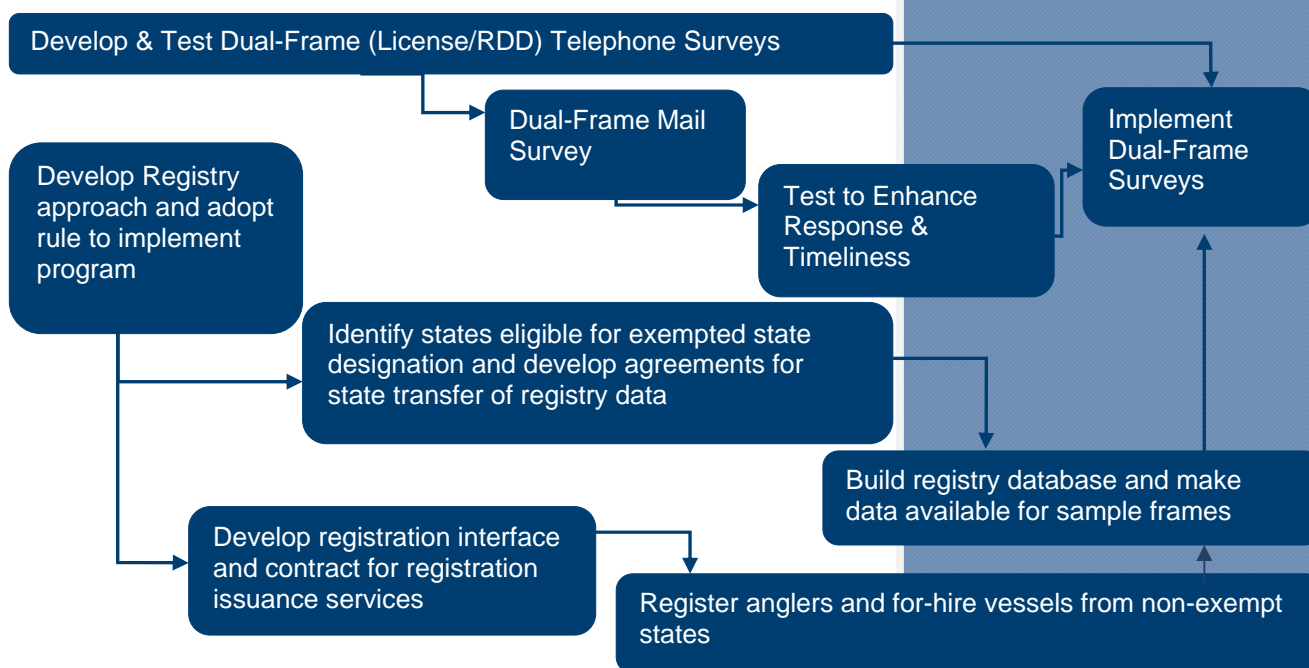


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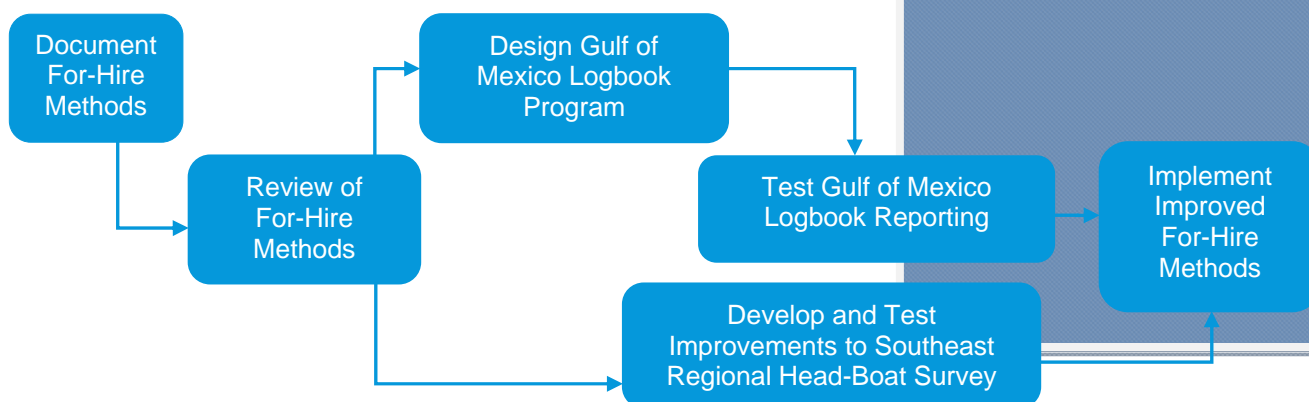
Enhance Catch Survey Designs



Implement Registry-Based Surveys



Implement For-Hire Logbooks



Once new methods for generating catch estimates, improving on-site intercept survey sampling designs, implementing registry-based surveys, and improving for-hire surveys have been implemented as described in the above figures for the surveys for which NMFS is the principal manager, NMFS will initiate survey improvements to address user needs for timeliness and resolution. NMFS will work with regional partners and stakeholders to identify and prioritize such needs on a regional basis, and will expand its data collections and revise its survey designs as appropriate, subject to availability of funds, for that purpose. Examples of improvements that could be considered for implementation include: increasing the frequency of surveys from bimonthly to monthly; shortening the period for completing data quality control and completing preliminary catch estimates; achieving targeted improvements in the proportional standard errors of catch estimates for different sample strata required for management actions; and providing catch estimates with acceptable levels of precision for a limited number of sub-state domains. Such improvements in survey data timeliness and resolution are directly responsive to the needs of fishery managers as expressed to MRIP by states, Fishery Management Councils, and NMFS Regional Office and Fisheries Science Centers, and are directly responsive to the NRC recommendations regarding consultation with fishery managers to provide data that meets the requirements of modern fishery management programs.

Appendix A – Requirements of the Magnuson-Stevens Reauthorization Act (MSRA)

Angler Registry

MSRA Requirement

Federal program

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

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

The National Research Council (NRC) Review recommended that, “a comprehensive, universal sampling frame [of saltwater anglers] with national coverage should be established.” Subsequently, 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 severe sampling inefficiency and that under-coverage may lead to serious bias in the resultant 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.

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 by January 1, 2009, 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 that are 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 §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.

The Executive Steering Committee endorsed the Registry Team's recommended approach for the registry and state exemption process in September 2007. Based on the approved approach and the foregoing goals, 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. 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. 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. A summary of the Final Rule is included as Appendix C.

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.

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

Legend:

- Currently has saltwater licensing/registration; gathers information consistent with NOAA requirements.
Currently or anticipated to be EXEMPT from National Saltwater Angler Registry as of January 1, 2011.
- No saltwater licensing/registration.
Non-exempt anglers NEED TO REGISTER with the National Saltwater Angler Registry.

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 September 30, 2010, the following states have signed MOA's for registry exemption: Alabama, Alaska, American Samoa, California, Commonwealth of the Northern Mariana Islands, Connecticut, Delaware, Georgia, Guam, Mississippi, New York, Oregon, South Carolina and Washington. Maryland,

Massachusetts and Virginia have signed MOAs for their for-hire fishing vessels only and are working to have MOAs for their anglers in place by the end of the year, as are all 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 the National Marine Fisheries Service (NMFS) and survey operators monthly.
- Develop methods for achieving the above goals that are shared among the states.

The initial round of project funding will occur 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:

- **Basic 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 thirty days of registration. The durable registration card is valid for one 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 of 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: [\[https://www.countmyfish.noaa.gov/register/\]](https://www.countmyfish.noaa.gov/register/). In addition, the information developed to enable potential registrants to determine if they need to register is located at: [\[https://www.countmyfish.noaa.gov/howtoregister/index.htm\]](https://www.countmyfish.noaa.gov/howtoregister/index.htm). Questions regarding the registration program are at: [\[https://www.countmyfish.noaa.gov/faq_registry.html\]](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 will work with states individually to establish and document protocols and schedules associated with state license data submission. The initial state data feeds will occur 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.

Data Collection

MSRA Requirement: 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 will consist 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 reviews by stakeholder groups.

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 appropriations have been provided as follows:

- FY 2008: \$3.5M
- FY 2009: \$6.2M
- FY 2010: \$9.0M
- FY 2011 (proposed): \$9.0M

Implement NRC Recommendations: Improve sampling and estimation MSRA Requirements

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.

Implement NRC Recommendations: Ongoing management needs MSRA Requirements

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.

In addition to providing recommendations to improve sampling and estimation designs and providing ongoing technical evaluation, the NRC provided the following recommendations to enhance communication and outreach, program management and support, and data collections for human dimensions.

Implement NRC Recommendations: Other NRC Recommendations

MSRA Requirements

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.

NRC Recommendation: Outreach and communication

Outreach and communication should be institutionalized as part of an ongoing MRFSS 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 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 Magnuson-Stevens Reauthorization Act 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 work group members, and outreach partners with “big picture” MRIP information that they can carry to other audiences.

NRC Recommendation: 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 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 twenty representatives from angler associations, businesses and organizations nationwide.

NRC Recommendation: 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

MRIP 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, MRIP 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.

NRC Recommendation: 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.

NRC Recommendation: 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, 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.

NRC Recommendation: 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, NOAA has chosen to integrate survey design and management experts from independent organizations directly into the survey re-design 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.

NRC Recommendation: 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.

NMFS Response

NMFS recognizes that additional funding will be required to carry out the recommendations of the NRC review.

NRC Recommendation: 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 agencies' 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.

Methodology

MSRA Requirement: Dockside intercepts

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: License frames

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: For-hire vessel reporting

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 one 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: Weather corrective factor

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 assure that samples are representative of the populations being surveyed. This assures 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 a lower number of 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, and disruptive events such as the Gulf 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 will lead to biased and inaccurate estimates.

MSRA Requirement: 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.

Deadline

MSRA Requirement

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

See response 3(A) above. NMFS received its initial appropriation of funds for MRIP in FY 2008, and the program was established with the adoption of the MRIP Implementation Plan in October, 2008.

Report

MSRA Requirement

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

NMFS will submit the report to Congress by January 12, 2011.

Appendix B – Operations Team Projects (2008-2010)

OT Priority	Project	Project Description	NRC Recommendation	Status
Data Quality	Assessment of survey QA/QC procedures	Inventory and assessment of current quality control (QC) and quality assurance (QA) processes, including recommendations for improving QA/QC practices.		Ongoing
Develop and Enhance Registry-Based Surveys (License Frame Surveys)	WA Dual-Frame Telephone Survey	Integration of CHTS and ALDS into a dual-frame approach to expand survey coverage and improve precision of fishing effort surveys. Currently being conducted in WA.	Future telephone surveys should be based on a universal sampling frame. Dual-frame procedures should be used whenever possible to reduce sample bias. Assumptions should be examined and verified so that biases can be properly evaluated.	Ongoing
	Dual-Frame Mail Survey	Develop and test dual-frame mail survey approach for collecting recreational fishing effort data.	Future telephone surveys should be based on a universal sampling frame. Dual-frame procedures should be used whenever possible to reduce sample bias. Assumptions should be examined and verified so that biases can be properly evaluated. Offsite methods that rely on telephone interviews are complicated by the increasing use of cellular telephones.	Ongoing
	Dual-Frame Telephone Survey: Development of Alternative Procedures for Matching Component Sample Frames	Develop more robust (less susceptible to reporting bias) methods for matching component sample frames in the dual-frame telephone survey approach.	Future telephone surveys should be based on a universal sampling frame. Dual-frame procedures should be used whenever possible to reduce sample bias. Assumptions should be examined and verified so that biases can be properly evaluated.	Ongoing
	Dual-Frame Mail Survey: Enhancing Mail Response Rates	Testing different combinations of contact options (e.g. standard mail, special mail, telephone) to enhance response rates in the dual-frame mail survey approach. Will also provide a measure of non-response bias in the mail survey approach.	Future telephone surveys should be based on a universal sampling frame. Dual-frame procedures should be used whenever possible to reduce sample bias. Assumptions should be examined and verified so that biases can be properly evaluated. Offsite methods that rely on telephone interviews are complicated by the increasing use of cellular telephones.	Ongoing

OT Priority	Project	Project Description	NRC Recommendation	Status
	Measurement Error in the CHTS and ALDS: Assessing the Effects of Length of Recall Period on Data Quality	Assess the extent to which the length of the recall period impacts the quality of effort estimates in the CHTS/ALDS. Results will be applicable to other data collection modes.	Assumptions should be examined and verified so that biases can be properly evaluated.	Ongoing
Assess and Enhance Sampling and Estimation Methods (Sampling and Estimation)	Document Sampling and Estimation Designs for MRFSS Surveys (CHTS, ALDS, Access-Point Intercept, FHS, LPS)	Develop technical documentation describing sampling and estimation approaches.		Complete
	Development of Alternative Estimation Procedures for MRFSS Intercept Survey	Develop estimation approaches that more closely match sampling design and account for selection probabilities.	The estimation procedure for information gathered onsite does not use nominal or actual selection probabilities of the sampling design. Unknown biases in the estimators from these surveys arise from reliance on unverified assumptions. Assumptions should be examined and verified so that biases can be properly evaluated. The current estimators of error associated with various survey products are likely to be biased and too low.	Ongoing
	Development and Testing of Alternative Sampling Design for MRFSS Intercept Survey	Development and testing of sampling design that more closely adheres to the principles of sampling theory. Methodology is being pilot tested in NC in 2010/2011.	Assumptions should be examined and verified so that biases can be properly evaluated. The onsite sampling frame for the MRFSS should be redesigned. The sampling process requires greater quality control (less latitude on the part of the samplers).	Ongoing
	Review and Assessment of Methodologies Used to Estimate Recreational Fishing Participation	Identify and quantify potential sources of bias in MRFSS methodology used to estimate participation.	Assumptions should be examined and verified so that biases can be properly evaluated.	Ongoing

OT Priority	Project	Project Description	NRC Recommendation	Status
	Evaluation of Survey Estimation Methods for Oregon and Washington Recreational Fishing Boat Surveys	Review and assessment of sampling and estimation designs for WA Ocean Boat Survey and OR Recreational Boat Survey.	Assumptions should be examined and verified so that biases can be properly evaluated.	Ongoing
Develop and Test Alternative Methods for Collecting Discard Data (Discards)	Quantifying Accuracy of Self-Reported Data on Atlantic Coast Headboat Trips	Comparison between angler-reported and observed discard data from headboat trips on the Atlantic Coast.	The survey fails to provide a valid and reliable method of adequately accounting for fish caught and not brought back to the dock.	Complete
	Video Assessment of Recreational Discards	Develop and test technology to monitor catch on private fishing vessels using vessel-mounted video cameras.	The survey fails to provide a valid and reliable method of adequately accounting for fish caught and not brought back to the dock.	Ongoing
Implement Studies to Assess Bias Resulting from Under-Coverage of Onsite Survey Sampling Frames (Survey Coverage)	Pilot Study to Quantify Differences in Catch Rates, Catch and Angler Characteristics and Behavior Between Accessible and Non-Accessible Saltwater Fishing Trips	Offsite (telephone and web) panel study to collect and compare catch data from anglers who access the water via accessible (public access) and inaccessible (private access) fishing sites. Study will be conducted in NC and FL.	Onsite methods fail to intercept anglers who have private access to fishing waters. Assumptions should be examined and verified so that biases can be properly evaluated. Panel surveys should be considered in recreational fishing surveys... Internet surveys should be considered for their potential use in recreational surveys.	Ongoing
For-Hire Improvements (For-Hire)	Documentation of ongoing for-hire data collection programs in the U.S.	Document ongoing U.S. for-hire data collection programs including survey methodologies and uses of the data and estimates.		Complete
	Independent review of ongoing for-hire data collection programs and methodologies	Review of ongoing methods used to estimate for-hire catch and effort by a panel of survey design experts.		Complete

OT Priority	Project	Project Description	NRC Recommendation	Status
	Development and implementation of a for-hire census with pilot electronic reporting option for Puerto Rico catch and effort data	Development of an electronic reporting tool and testing of the feasibility of logbook reporting in Puerto Rico	The for-Hire sector ... should be considered a commercial sector, and survey methods and reporting requirements for that sector therefore should be different from those for private anglers. Charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released. Providing the information should be mandatory for continued operation in this sector, and all the information should be verifiable and made available to the survey program in a timely manner.	Complete
	Development of probability-based sampling methods for the Southeast Region Headboat Survey (SRHS), dockside intercept sampling program	Development of new methodology for the SRHS intercepts survey that conforms to the principles of probability sampling.		Ongoing
	Implement pilot study to test probability-based sampling design for SRHS intercept survey	Implement pilot study to test revised SRHS intercept survey design.		Ongoing
	Development of an online logbook reporting tool and subsequent pilot study to test the feasibility of online reporting for headboats operating in the U.S. South Atlantic	Development and testing of an online reporting tool for the SRHS.	The for-Hire sector ... should be considered a commercial sector, and survey methods and reporting requirements for that sector therefore should be different from those for private anglers. Charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released. Providing the information should be mandatory for continued operation in this sector, and all the information should be verifiable and made available to the survey program in a timely manner.	Ongoing

OT Priority	Project	Project Description	NRC Recommendation	Status
	Hawaii for-hire pilot study to incorporate validation procedures in the commercial marine license reporting program	Assessment of the completeness of the HI Commercial Marine License (CML) vessel frame, as well as the development and implementation of a dockside pilot study to validate information provided through the CML.	The for-Hire sector ... should be considered a commercial sector, and survey methods and reporting requirements for that sector therefore should be different from those for private anglers. Charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released. Providing the information should be mandatory for continued operation in this sector, and all the information should be verifiable and made available to the survey program in a timely manner.	Ongoing
	Cooperative design of a logbook reporting program for the Gulf of Mexico	Develop recommendations from the for-hire review by designing a logbook reporting program for for-hire vessels operating in the Gulf of Mexico.	The for-Hire sector ... should be considered a commercial sector, and survey methods and reporting requirements for that sector therefore should be different from those for private anglers. Charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released. Providing the information should be mandatory for continued operation in this sector, and all the information should be verifiable and made available to the survey program in a timely manner.	Complete
	Implement pilot study to test the feasibility of logbook reporting in Gulf of Mexico	Pilot study to test the feasibility of logbook reporting in the Gulf of Mexico.	The for-Hire sector ... should be considered a commercial sector, and survey methods and reporting requirements for that sector therefore should be different from those for private anglers. Charter, party and other for-hire recreational fishing operations should be required to maintain logbooks of fish landed and kept as well as fish caught and released. Providing the information should be mandatory for continued operation in this sector, and all the information should be verifiable and made available to the survey program in a timely manner.	Ongoing

OT Priority	Project	Project Description	NRC Recommendation	Status
Develop Survey Methods for Rare-Event or Pulse Fisheries (Rare Event Species)	Evaluation of the tournament and non-tournament trips in the Large Pelagics Survey	Evaluation of sampling distribution of HMS tournaments in the Large Pelagics Intercept Survey.		Complete
	Characterization of rod and reel HMS fisheries in the U.S. South Atlantic and Gulf of Mexico	Quantify magnitude and characteristics of HMS fishing trips in the South Atlantic and Gulf of Mexico.		Complete
	Characterization of non-tournament HMS fishing by private boats in Puerto Rico	Characterization of HMS fishing in Puerto Rico		Complete
	Development and testing of HMS-specific data collection program in Puerto Rico	Development of a specialized data collection program for HMS in Puerto Rico		Funded 2010
	HMS private angler telephone survey in FL	Describe and assess the impact of recreational, private boat fishing for HMS in Florida		Complete
	Highly migratory species for-hire survey – Florida pilot study	Describe and assess the impact of for-hire fishing for HMS in FL		Ongoing
	Evaluation of the potential to use west coast recreational for-hire data to produce a CPUE index of abundance for North Pacific albacore	Design a data collection pilot program that would employ onboard observers, enhanced dockside sampling, or a combination of both to determine what long-term modifications to current sampling programs would be necessary to produce more reliable estimates of catch and effort from the fleet.		Complete

OT Priority	Project	Project Description	NRC Recommendation	Status
	Development of survey design elements for the Pacific Coast highly migratory shark species recreational fishery	Develop an adaptive sampling methodology for estimating HMS shark catch on the Pacific Coast.		Ongoing

Appendix C – Summary of Registry Rule

The Final Rule to implement the requirements of § 401(g)(1) of the Magnuson-Stevens Fishery Conservation and Management Act is encoded at 50 CFR § 600.1400-1417, and is summarized below. The complete text of the final rule can be found at:

http://www.st.nmfs.noaa.gov/mrip/aboutus/organization/downloads/Saltwater_Angler_Registry_Final_Rule.pdf

The Final rule:

- Establishes the procedures and details of the registry program that implement the requirements of the statute;
- Was published in the Federal Register on December 30, 2008;
- Is effective January 29, 2009. The federal registration requirement is effective January 1, 2010.

Under the final rule, the following parties will need to register with NMFS as of January 1, 2010:

- Persons and for-hire fishing vessels (party, charter and guide boats) which engage in angling or spearfishing for any fish in the U.S. Exclusive Economic Zone (“EEZ”) or for anadromous species (striped bass, shad, smelt, river herring, sturgeon, salmon) in any tidal waters;
- Angling or spearfishing includes fishing for, attempting to fish for, catching, or attempting to catch, fish using angling or spearfishing equipment;
- Operators of a for-hire fishing vessel in the EEZ;
- Persons and for-hire fishing vessels which possess angling or spear fishing equipment and which also possess fish in the EEZ or anadromous fish ion any tidal waters

The following are not required to register with NMFS:

- Persons under age 16;
- Persons who are angling on a state or federally-licensed for-hire fishing vessel;
- Persons who are licensed or registered by an Exempted State, or who are not required to be licensed or registered under the laws of an Exempted State;
- For-vessels which hold a NMFS-issued for-hire fishing permit;
- Persons who hold a NMFS HMS Angling Category permit;
- Persons who are lawfully angling or spearfishing pursuant to a state-issued or NMFS-issued commercial or subsistence-fishing license or permit.

Summary of the NMFS registration process:

- Persons may register on-line at a web portal provided by NOAA at: <https://www.countmyfish.noaa.gov/register/>, or by calling (888) MRIP-411.
- Individuals will submit name, address, telephone number, date of birth and region(s) of the country in which they expect to fish;
- For-hire fishing vessels will also submit vessel identification and location information;
- A temporary registration number, valid for 30 days, will be issued at the time of registration;
- A permanent registration card and number will be mailed to the registrant. The registration will be valid for one year from the date of issuance.

- There will no fee for registration in 2010. A fee will be charged beginning in 2011.

States may be designated as Exempted States in two ways. They may submit specified information about holders of state saltwater fishing license or registrations or by participating in a qualifying regional survey of marine recreational fishing. Exempted States must enter into a Memorandum of Agreement with NMFS to formalize their agreement to submit the specified data.

Requirements for states to be designated as Exempted States based on submission of state license-holder or registration data:

- States must enter into an MOA and agree to submit license-holder or registrant data to NMFS, at least annually;
- Data must include names, addresses and, to the extent available in the state's data base, telephone numbers and dates of birth of anglers and for-hire vessels/vessel operators who are licensed to fish, or who are registered as fishing, in the tidal waters of the states, or for anadromous species.

States may be designated as Exempted States, if their licensing/registration requirements exclude the following:

- Anglers on licensed for-hire fishing vessels;
- Anglers on state-licensed fishing piers, provided the state can account for such anglers in its data base;
- Anglers under age 16;
- Anglers over age 60 (for two years only);
- Active duty military personnel who are on furlough;
- Disabled persons.

States may not be designated as Exempted States, if their licensing/registration requirements exclude the following:

- Passengers on a private fishing vessel;
- Passengers in a beach buggy;
- Anglers fishing from private property;
- Anglers fishing from shore;
- Anglers fishing from a public pier;
- Anglers and for-hire fishing vessels fishing in some saltwater areas of the state.

States must also develop the following improvements to their license-holder/registry data within two years of being designated an Exempted State:

- Provide identification and telephone numbers for seniors who are not required to hold state licenses/registrations;
- Identify saltwater anglers within combination license-holder data bases;
- Refresh address and telephone numbers for holders of lifetime licenses.

Requirements for states to be designated as Exempted States based on submission of recreational survey data:

- State must participate in a qualifying regional survey of marine recreational fishing catch and effort;
- State must enter into a MOA with NMFS and agree to provide data from the survey.

Qualifying Regional surveys must:

- Include all of the states within one of the following regions: Atlantic coast--Maine through Florida (east); Caribbean--Puerto Rico and USVI; Gulf Coast--Florida (west) through Texas; Pacific coast--California, Oregon, Washington; Alaska; Hawaii: western Pacific islands--Guam, American Samoa, CNMI.
- Utilize angler registry data to identify anglers to be surveyed by telephone, if the survey includes a telephone survey;
- Meet NMFS survey design standards and best practices.