

**Marine Recreational Information Program
Executive Steering Committee
Implementation Workshop
16-17 July 2013
Baltimore, MD**

Attendance

ESC Members: Ned Cyr, Doug Mecum, Bonnie Ponwith, Bob Beal, Dave Donaldson, Randy Fisher, Gordon Colvin, John Boreman

Others: Kitty Simonds, Miguel Rolon, Josh Demello, Roy Morioka, Hongguang Ma, Graciela Garcia-Moliner, Russ Porter, Gregg Bray, Mike Cahall, Ron Salz, Lauren Dolinger-Few, Dave VanVoorhees, Rob Andrews, Pres Pate, Tom Sminkey, Leah Sharpe, Scott Ward, April Bagwill, Anjunell Lewis

Agenda

- I. Welcome and Introductions (Cyr, Boreman, Workshop Participants)
- II. Overview of Workshop Goals and Anticipated Outcomes (Boreman)
 1. Implementation Oversight
 2. Partnerships
 3. Funding Streams
- III. Review of background white papers (20 minutes each, including Q&A)
[Attached]
 1. Current status of recreational fishing surveys in the US, including coverage and funding support. Include documentation of goals/standards, and current status, for coverage, precision, timeliness (Lauren Dolinger-Few lead author)
 2. Current roles of federal and state/territorial agencies, fishery management councils, and interstate fisheries commissions in the conduct and support of surveys, and in establishing standards and best practices for survey and estimation methods and coverage requirements (Tom Sminkey lead author).
 3. Implementation governance structure: the pros and cons of a national implementation team, regional implementation teams, or use of existing regional governance structures (FINs, ACCSP, Councils, Commissions, NRCC, etc.) (John Boreman lead author).

4. Suggested protocol(s) for meeting operational requirements of MRIP, including standards for: data collection and processing, archiving, and retrieval; compliance/enforcement; and outreach and education (Rob Andrews lead author).

IV. Implementation Oversight (ESC)

- Governance: national implementation team; regional implementation teams; use of existing regional governance structures (FINs, ACCSP, Councils, NRCC, etc.).
- Protocols:
 - Meeting operational requirements (enforcement, permit requirements and administration, validation, data management, outreach) for implementation of methods that go beyond sample surveys (e.g., for-hire logbooks, catch cards, or other mandatory angler reporting).
 - Choosing among alternative accepted (“certified”) methods.
 - Choosing among options for investing in improved survey coverage, precision of estimates and timelines of availability of catch estimates.

V. Partnerships (ESC)

Questions to be addressed: Who should be responsible for what? What is the relationship of non-MRIP surveys in relation to MRIP? How can MRIP be fully integrated with other surveys (including the FWS’s National Fishing and Hunting Survey and the surveys conducted by Texas Parks and Wildlife and Alaska Fish and Game) into a seamless system of data collection and processing, archiving, and accessing?

VI. Funding Streams (ESC)

Questions to be addressed: At what level of resolution does MRIP stop supporting implementation programs, then how to prioritize if MRIP cannot get it all covered at that level? Who supports what?

VII. Review of Decisions Made and Action Items (All)

VIII. Next Steps (ESC)

IX. If time allows:

- Status of the FY13 spend plan and its implications for future investment opportunity and a long-term budget strategy (Colvin, Van Voorhees)
- Team updates (Pate/Andrews, Dolinger-Few, Darby/Ward/Sharpe, Colvin)

Workshop Outcomes

Overall, the ESC agreed to recommend to NMFS that a hybrid approach to MRIP implementation be established, whereby NMFS (through MRIP) would maintain a central role in developing and certifying survey methods and establishing national standards or best practices, and regions (through the FINs or equivalent) would have responsibility for selecting survey methods and managing data collection. The ESC agreed to take on a larger role in MRIP by including overview of the implementation phase of the program in addition to its overview of the research and development phase, and to recommend expansion of the Operations Team's charge to include monitoring implementation and recommending priorities for investment of MRIP funds and resources to assist regional implementation efforts. In its expanded role, the ESC also agreed to identify key gaps in implementation coverage, and monitor feedback from information users, specifically fisheries managers and stock assessment scientists.

Specific decisions made at the workshop:

1. The ESC will recommend that it maintain its capacity of program overview and participation as MRIP transitions from research and development to implementation. As an overview body, the ESC should identify issues regarding implementation; seek feedback from regions on progress in implementation and any problems being encountered; determine if regions are getting what they need, and identify information gaps; and determine how MRIP can provide assistance in filling in those gaps. An outline of ESC responsibilities in MRIP implementation vs the responsibility of the regional implementation teams is detailed in the table below.
2. The regional fishery information networks (FINs) and their equivalents (i.e., ACCSP) will serve as the regional MRIP Implementation teams. The Caribbean and West Pacific groups that currently exist for information sharing will be sufficient to serve as implementation teams for those regions. The implementation role of the regional teams is also detailed in the table below.
3. MRIP priorities for investment of resources for expanded survey implementation will generally be guided by whether the survey, alone or in combination with other surveys being implemented in a region:
 - Utilizes a MRIP-certified survey design or methodology;
 - Conforms to the MRIP standards for survey coverage and basic data elements (http://www.st.nmfs.noaa.gov/Assets/recreational/pdf/National_Standards_for_Survey_Coverage_and_Data_Elements.pdf);
 - Conforms to any additional national standards or best practices that the MRIP national implementation team may adopt in the future; and
 - Provides catch estimates for fisheries managed under MSRA (including Atlantic HMS or jointly by the states and NMFS) that are deemed by the MRIP regional implementation team to provide recreational catch statistics sufficient to:
 - Complete generally reliable stock assessments;

- Support development of annual catch limits that meet MSRA requirements; and
- Support development of recreational regulations that minimize triggering of accountability measures.

4. Ned Cyr to speak with the Office of Sustainable Fisheries regarding inclusion of a representative from that office on the ESC.

5. The role of the MRIP Operations Team will be expanded to include oversight of the operational aspects of MRIP implementation. The team's terms of reference will be amended to include the added role of identifying the limits of resolution, precision, scope, etc. for MRIP support of implementation programs. Also, the amended terms of funded reference should include development of a method to prioritize implementation program (perhaps by using a scorecard approach), as well as consideration of "special" approaches, e.g., western Pacific bottomfish and implications of regional management of the Gulf of Mexico red snapper stock. Gordon Colvin, John Boreman, and Pres Pate will draft the amended terms of reference for review by the ESC.

6. There is a need to determine goals for future funding; currently MRIP has a limited number of projects that can be funded. Therefore, a more targeted approach to MRIP projects is necessary to assess specific deficiencies. ESC can help determine these priorities and therefore what proposals are submitted.

7. MRIP should continue in its role of supporting review of non-MRIP surveys to evaluate methodologies and/or identify areas for improvement.

8. The MRIP implementation process would be considering "additional investments" that would build on current base funds for regional programs, instead of looking to re-allocate base funds.

Element	ESC	Regions
Assuring surveys adhere to certification methods	Certifications	X
Operational requirements <ul style="list-style-type: none"> • Develop/certify data collection design • Data collection approval • Procurement/Grant management • Survey operations and oversight • Information management • Research and Development • Compliance/Enforcement • Outreach/Communications 	X X ¹ QA/QC Stds Standards X Resources	Choices X X ² X X Input X X
Choosing among methods		X
Choosing among options for coverage-timeliness-precision	Priorities and Policy	X
Get feedback from regions and advise NMFS leadership regarding needs	X	Input
Get feedback from data users	X	Input

¹ For management of grants from MRIP appropriations

² For procurement of Regional Survey services

Background White Papers Prepared for the Workshop

1. Current status of recreational fishing surveys in the US, including coverage and funding support. Include documentation of goals/standards, and current status, for coverage, precision, timeliness (Lauren Dolinger-Few lead author) – **Pages 7 - 17**
2. Current roles of federal and state/territorial agencies, fishery management councils, and interstate fisheries commissions in the conduct and support of surveys, and in establishing standards and best practices for survey and estimation methods and coverage requirements (Tom Sminkey lead author) – **Pages 18 - 29**
3. Implementation governance structure: the pros and cons of a national implementation team, regional implementation teams, or use of existing regional governance structures (FINs, ACCSP, Councils, Commissions, NRCC, etc.) (John Boreman lead author) – **Pages 30 - 35**
4. Suggested protocol(s) for meeting operational requirements of MRIP, including standards for: data collection and processing, archiving, and retrieval; compliance/enforcement; and outreach and education (Rob Andrews lead author) – **Pages 36 - 45**

Current status of recreational fishing surveys in the US

Introduction

This white paper provides a review of the current status of major recreational fishing survey programs in the US. The narrative includes a discussion of goals, usage and data collections standards, and provides regional highlights. The matrix provides detailed documentation and metrics in a more flexible format, useful for comparison. Included in the matrix are program specific data on MRIP status, funding, coverage, precision and timeliness. Additional descriptive information (Appendix A) about specific programs was derived from the 2009 MRIP Implementation Plan and updated with current information.

Program Goals and Usage

Most programs were designed with the goal of providing regional, annual totals of catch and effort, which serve as input for stock assessments. Reasonably precise estimates are important for all managed species. Both timeliness and precision are priorities for the relatively few species (e.g. salmon) that are managed in-season. In-season monitoring is often achieved through landing/trip reports, and logbooks. Quotas may be monitored for individuals, sectors or overall totals.

Stock assessments require both fishery-dependent and independent data on catch, relative abundance and the life history of the species in question. Fishery-dependent data are derived from the fishing process itself and are collected through such avenues as self-reporting, onboard observers, portside surveys, telephone surveys or vessel-monitoring systems. Fishery-independent data are derived from activities such as trawl, acoustic, video and side-scan sonar research surveys and some tagging experiments.

Annual catch limits (ACLs) are established in advance of the fishing season for stocks to rebuild or maintain a healthy status. Data are collected and analyzed throughout the year to monitor/project if harvest will exceed the ACL. In some instances, in-season accountability measures (AMs) are instituted (e.g. close the fishery) to ensure ACLs are not exceeded, otherwise post-season AMs may be more appropriate (e.g. paybacks, adjustments)

To monitoring charter vessel individual fishing quotas (IFQs) effectively, validation of self-reported data and reporting of catch must be available in near real-time. The fishery must be managed on an individual vessel basis, rather than via fleet-wide measures. Data should be available for fishers to manage their catch and quota pounds efficiently.

Permit, license, and registry requirements

Many Federal and State permit holders are often required to report landings by submitting some form of 'trip' report (e.g. Fishing Vessel Trip Reports). Most of these requirements expect the permit holder to complete these reports during, or immediately

following, the trip. However, with insufficient enforcement, permit holders may be able to fish for a full season without reporting. Only during the permit renewal process are trip reports checked for completion. This allows the permit holder to postpone preparation of the reports, until such a time that they are unlikely to recall actual catch/trip details. Data from these reports may be used for in-season monitoring, though they may be incomplete.

Other permits, license, and angler registries require that registry/license holders provide contact information for follow-up surveys (e.g. Alaska Statewide Harvest Survey). These surveys may be repeated periodically throughout the year to limit recall time and improve data quality.

Data collection standards

Generally, regional commissions identify goals for data collection. The Atlantic Coastal Cooperative Statistics Program (ACCSP), which partners with the Atlantic States Marine Fisheries Commission (ASMFC), serves as the standard-setting entity along the Atlantic coast. MRIP has also implemented data collection requirements, beginning with the National Saltwater Angler Registry (NSAR). States which have data collection programs that meet the requirements are exempt from providing angler license data. MRIP is also establishing standards by certifying data collection designs and specifying that funding support will be limited to programs that implement certified methods.

Regional Highlights

Alaska

Surveys in Alaska are managed by the Alaska Department of Fish and Game (ADFG) and funded through the Sport Fish Restoration Program. The program is one of few with specific goals for precision of estimates: +15% for angler effort (days) and harvest for statewide estimates at 95% confidence.

Pacific Coast

Data collection is managed by the states (CA-WA), and supported by the Pacific States Marine Fisheries Commission (PSMFC) and funding from the NOAA Fisheries. Due to budget limitations, the surveys generally focus on public access, high productivity ports during high activity months.

Western Pacific Islands

Data collection in each state/territory is administered independently, with funding provided by Guam DAWR, Northern Mariana DWF, Am Samoa DMWR, and Hawaii DAR with support from NOAA Fisheries and WPacFIN. Most regions only sample boat-based activity at specific ports.

Atlantic Coast

The majority of major data collections programs on the Atlantic coast are directly managed by OST. As a result, these programs tend to be the most integrated with MRIP goals and priorities.

Gulf of Mexico & Caribbean

Most data collections programs in the Gulf of Mexico from Florida through Louisiana are managed by the Gulf States Marine Fisheries Commission (GSMFC) through a cooperative agreement with OST. These programs are closely integrated with MRIP goals and priorities.

Appendix A: Program Matrix

REGION	State/Territory	Program	MRIP Status	Fisheries Covered			Component of Fishery Covered				Availability of Data (Delay in months)			Temporal Coverage	Resolution		
				P/R boat	CB/HB	Shore	Harvest	Released	Trips	Participate	Biological	< 1	1-3			4-6	> 6
ALASKA	Alaska	SWHS	no MRIP activity	x	x	x	x		x					x	Jan-Dec	annual	
		Saltwater Logbook	no MRIP activity		x		x	x	x						x	Jan-Dec	annual
PACIFIC	California	CRFS	MRIP pilots in progress	x	x	x	x	x	x					x	Jan-Dec	monthly	
		CPFV Logooks	MRIP pilots in progress		x				x						x	Jan-Dec	monthly
	ALDS	MRIP pilots in progress	x		x			x						x	Jan-Dec	monthly	
	Oregon	SRHS (currently inactive)	MRIP pilots in progress	x		x			x						x	Jan-Dec	bi-monthly
		ORBS	MRIP pilots in progress	x	x		x	x	x						x	Jan-Dec	weekly
	Washington	ALS	MRIP pilots in progress	x	x	x			x						x	Jan-Dec	bi-monthly
Puget Sound Samp Prg		MRIP pilots in progress	x	x		x		x						x	Jan-Dec	bi-monthly	
WESTERN PACIFIC	Hawaii	OSP	certified MRIP method	x	x		x	x	x					x	May-Sep	monthly	
		HMRFS	MRIP pilots in progress	x	x	x	x	x						x	Jan-Dec	bi-monthly	
		CHTS	MRIP pilots in progress	x	x	x			x						x	Jan-Dec	bi-monthly
	Com Marine Logbook	MRIP pilots in progress		x		x	x	x							x	Jan-Dec	monthly
		Boat and Shore-based	MRIP pilots in progress	x	x	x			x	x	x				x	Jan-Dec	annual
	Guam	Boat and Shore-based	MRIP pilots in progress	x	x	x			x	x	x				x	Jan-Dec	annual
CNI	Boat and Shore-based	no MRIP activity	x	x	x			x	x	x				x	Jan-Dec	annual	
		no MRIP activity	x			x			x	x	x				x	Jan-Dec	annual
ATLANTIC	North/Mid Atlantic	APUS	certified MRIP method	x	x	x	x	x	x	x				x	Mar-Dec	bi-monthly	
		CHTS	MRIP pilots in progress	x		x			x						x	Mar-Dec	bi-monthly
		FHS	MRIP pilots in progress		x				x						x	Mar-Dec	weekly
		FVTR	no MRIP activity		x		x	x	x							Jan-Dec	annual
		LPTS	MRIP pilots in progress	x	x	x	x			x					x	Mar-Dec	monthly
	South Atlantic	APUS	certified MRIP method	x	x	x	x	x	x	x					x	Jan-Dec	bi-monthly
		CHTS	MRIP pilots in progress	x	x	x			x	x					x	Jan-Dec	bi-monthly
		FHS (CB)	MRIP pilots in progress		x				x						x	Jan-Dec	weekly
		SRHS	MRIP pilots in progress		x		x			x					x	Jan-Dec	annual
		APUS	certified MRIP method	x	x	x	x	x	x	x					x	Jan-Dec	bi-monthly
GULF	Gulf (FL-LA)	CHTS	MRIP pilots in progress	x	x	x		x	x	x				x	Jan-Dec	bi-monthly	
		FHS (CB)	MRIP pilots in progress		x				x	x					x	Jan-Dec	weekly
		SRHS	MRIP pilots in progress		x		x			x					x	Jan-Dec	annual
		APUS	certified MRIP method	x	x	x	x	x	x	x					x	Jan-Dec	bi-monthly
TX	Marine Sport Harvest	no MRIP activity	x	x	x			x						x	Jan-Dec	bi-annual	
		SRHS	MRIP pilots in progress	x	x	x			x						x	Jan-Dec	annual
CARIBBEAN	PR	MRFSS Intercept	MRIP pilots in progress	x	x	x	x	x	x					x	Jan-Dec	bi-monthly	
		CHTS	MRIP pilots in progress	x	x	x			x	x					x	Jan-Dec	bi-monthly

Appendix A: Program Matrix (continued)

REGION	State/Territory	Program	Funding Source	Program Data Usage	Gaps/Weakness/Needs
ALASKA	Alaska	SWHS	Sport Fish Rest. Prgm	post-season	weight of harvest, timely availability of data
		Saltwater Logbook	AK	post-season	
PACIFIC	California	CRFS	PSMFC, S&T	post-season	participation, MM private access, compliance
		CFV Logbooks	PSMFC, S&T	in-season	
		ALDS	PSMFC, S&T	post-season	
	Oregon	SEBS (currently inactive)	PSMFC, S&T	post-season	participation
		ORBS	PSMFC, S&T	in-season	winter months, not all ports, shore fishing
	Washington	ALS	PSMFC, S&T	post-season	participation
		Puget Sound Samp Prg	PSMFC, S&T	post-season	private access, shore
OSP		PSMFC, S&T	post-season	winter months, not all ports, shore fishing	
WESTERN PACIFIC	Hawaii	HMRFS	S&T	post-season	
		CHTS	S&T	post-season	
		Com Marine Logbook	HDAR	in-season	compliance
	Guam	Boat and Shore-based	DAWR, WPacFIN	post-season	not all ports, only non-military
		CNMI	DAWR, WPacFIN	post-season	not all ports
	Am. Samoa	Boat and Shore-based	DMWR	post-season	not all ports, for-hire
ATLANTIC	North/Mid Atlantic	APMS	ACCSP, S&T	post-season	private access sites, Jan/Feb (ALL), Mar/Apr (ME)
		CHTS	ACCSP, S&T	post-season	Jan/Feb (ALL), Mar/Apr (ME)
		FHS	ACCSP, S&T	post-season	Jan/Feb (ALL), Mar/Apr (ME)
		FVTR	NERO	in-season	compliance issues
		LPS	ACCSP, S&T	post-season	Nov-May (ALL)
	South Atlantic	LPTS	ACCSP, S&T	post-season	Nov-May (ALL)
		APMS	ACCSP, S&T	post-season	private access, Jan/Feb (GA/SC)
		CHTS	ACCSP, S&T	post-season	Jan/Feb (GA/SC)
		FHS (CB)	ACCSP, S&T	post-season	Jan/Feb (GA/SC)
		SRHS	SEFSC	post-season	non-federal waters
GULF	Gulf (FL-LA)	APMS	GSMFC, S&T	post-season	private access sites
		CHTS	GSMFC, S&T	post-season	
		FHS (CB)	GSMFC, S&T	post-season	
	SRHS	SEFSC	post-season	non-federal waters	
	TX	Marine Sport Harvest	TPWD	post-season	participation
CARIBBEAN	PR	SRHS	SEFSC	post-season	non-federal waters
		MHPS Intercept	S&T	post-season	weekend, night
		CHTS	GSMFC, S&T	post-season	

APPENDIX B. Coverage, Resolution, and Timeliness of Current Survey Methods

ALASKA

State/Territory Alaska

Administrator Alaska Department of Fish and Game

Survey Alaska Statewide Harvest Survey

Survey Methodology List-based mail, licensed angler households (resident and non-resident)

Fisheries Covered Private Boat, charter boat, shore fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state

Temporal Resolution Annual

Timeliness November of following year

State/Territory Alaska

Administrator Alaska Department of Fish and Game

Survey Alaska Saltwater Logbook Program

Survey Methodology Census logbook

Fisheries Covered Charterboat fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state

Temporal Resolution Trip

Timeliness Spring of following year

PACIFIC

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey CRFS Primary Launch Ramps

Survey Methodology Access-point intercept, census count of boat trips

Fisheries Covered Private boat fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey CRFS Secondary Launch Ramps

Survey Methodology Access-point intercept, roving boat counts

Fisheries Covered Private boat fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey CRFS Beaches and Banks

Survey Methodology Access-point intercept

Fisheries Covered Shore fishing from beaches or banks for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey CRFS Man-Made Structures

Survey Methodology Access-point intercept

Fisheries Covered Shore fishing from man-made structures for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey California Commercial Passenger Fishing Vessel (CPFV) Survey

Survey Methodology Access-point intercept/List-based telephone

Fisheries Covered Charter boat, headboat fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory California

Administrator CA, PSMFC (Pacific RecFIN)

Survey CRFS Angler License Directory Survey

Survey Methodology List-based telephone

Fisheries Covered Private boat and shore fishing (man-made and beach bank) for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Monthly

Timeliness 30 days after wave

State/Territory Oregon

Administrator OR, PSMFC (Pacific RecFIN)

Survey OR Shore and Estuary Boat Survey (SEBS) – *inactive*

Survey Methodology List-based telephone

Fisheries Covered Private boat and shore fishing for saltwater finfish species

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Bi-monthly

Timeliness 30 days after wave

State/Territory Oregon

Administrator OR, PSMFC (Pacific RecFIN)

Survey OR Shore and Estuary Boat Survey (SEBS) – *inactive*

Survey Methodology Access-point intercept

Fisheries Covered Shore fishing for saltwater species or boat fishing for saltwater species in inland waters

Temporal Coverage Annual

Spatial Resolution Sub-state/Area fished

Temporal Resolution Bi-monthly

Timeliness 30 days after wave

State/Territory Oregon

Administrator OR, PSMFC (Pacific RecFIN)

Survey OR Boat Survey (ORBS)

Survey Methodology Exit counts/Access-point intercept

Fisheries Covered Private and charter boat fishing for saltwater finfish species in ocean waters

Temporal Coverage Annual

Spatial Resolution Port/Area fished

Temporal Resolution Weekly

Timeliness 30 days after wave

State/Territory Washington

Administrator WA, PSMFC (Pacific RecFIN)

Survey WA Angler License Survey (ALS)

Survey Methodology List-based telephone
Fisheries Covered Private boat, charter boat and shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution Area fished
Temporal Resolution Bi-monthly
Timeliness 30 days after wave

State/Territory Washington
Administrator WA, PSMFC (Pacific RecFIN)
Survey WA Puget Sound Boat Survey
Survey Methodology Access-point intercept
Fisheries Covered Private boats fishing in Puget Sound
Temporal Coverage Annual
Spatial Resolution Area fished
Temporal Resolution Bi-monthly
Timeliness 30 days after wave

State/Territory Washington
Administrator WA, PSMFC (Pacific RecFIN)
Survey WA Ocean Sampling Program (OSP)
Survey Methodology Access-point intercept
Fisheries Covered Private and charter boats leaving from coastal ports
Temporal Coverage Annual
Spatial Resolution Area fished
Temporal Resolution Bi-monthly
Timeliness 30 days after wave

WESTERN PACIFIC

State/Territory Hawaii
Administrator NOAA Fisheries Office of Science and Technology
Survey Hawaii Marine Recreational Fishing Survey (HMRF)
Survey Methodology Access-point intercept
Fisheries Covered Private boat, shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State/Area fished
Temporal Resolution Bi-monthly
Timeliness 45 days after wave

State/Territory Hawaii
Administrator NOAA Fisheries Office of Science and Technology
Survey Coastal Household Telephone Survey (CHTS)
Survey Methodology Random-digit-dialing telephone
Fisheries Covered Private boat, charter boat, headboat, shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State
Temporal Resolution Bi-monthly
Timeliness 45 days after wave

State/Territory Hawaii
Administrator State of Hawaii Division of Aquatic Resources
Survey State of Hawaii Commercial Marine License Logbook
Survey Methodology Fishers reporting
Fisheries Covered Commercial (trolling, bottomfishing, for-hire and others)
Temporal Coverage Daily fishing log by fishing area
Spatial Resolution Established state's statistical fishing areas (for State and Federal waters)
Temporal Resolution Monthly
Timeliness Quarterly per cooperative agreement

State/Territory Guam
Administrator Division of Aquatic and Wildlife Resources
Survey Boat-based and shore-based

Survey Methodology Systematic random sampling surveys using combination of roving creel, bus-route and access point
Fisheries Covered Commercial, non-commercial and for-hire
Temporal Coverage Systematic random selection of day, night, weekday and weekend/holiday
Spatial Resolution Boat-based: Guam's three most actively used ports/Shore-based: Non-military and accessible shoreline areas
Temporal Resolution Quarterly data expansion is possible; however, annual expansion is mostly used
Timeliness Quarterly per cooperative agreement

State/Territory Commonwealth of the Northern Mariana Islands

Administrator Division of Fish and Wildlife

Survey Boat-based and shore-based

Survey Methodology Systematic random sampling surveys using combination of roving creel, bus-route and access point

Fisheries Covered Commercial, non-commercial, and for-hire

Temporal Coverage Systematic random selection of day, night, weekday, and weekend/holiday

Spatial Resolution Boat-based: Three most actively used ports on the western side of Saipan Island/Shore-based: Accessible shoreline areas in the western lagoon of Saipan Island

Temporal Resolution Quarterly data expansion is possible; however, annual expansion is mostly used

Timeliness Quarterly per cooperative agreement

State/Territory American Samoa

Administrator Department of Marine and Wildlife Resources

Survey Boat-based and shore-based

Survey Methodology Systematic random sampling surveys using combination of roving creel, bus-route and access point

Fisheries Covered Commercial and non-commercial; new emerging for-hire fishery can be added if resources are available

Temporal Coverage Systematic random selection of day, night, weekday and weekend/holiday

Spatial Resolution Boat-based: Four most actively used ports on Tutu'ila Island/Shore-based: Accessible shoreline areas along the southern coast of Tutu'ila and Aunu'u Islands

Temporal Resolution Quarterly data expansion is possible; however, annual expansion is mostly used

Timeliness Quarterly per cooperative agreement

ATLANTIC

State/Territory Maine-Georgia

Administrator NOAA Fisheries Office of Science and Technology

Survey Access-Point Angler Intercept Survey

Survey Methodology Access-point intercept

Fisheries Covered Private boat, charter boat, headboat, shore fishing for saltwater finfish species

Temporal Coverage March-December (MA-GA); May-October (ME, NH)

Spatial Resolution State/area fished

Temporal Resolution Bi-monthly

Timeliness 45 days after wave

State/Territory Maine-Georgia

Administrator NOAA Fisheries Office of Science and Technology

Survey Coastal Household Telephone Survey (CHTS)

Survey Methodology Random-digit-dialing telephone

Fisheries Covered Private boat, shore fishing for saltwater finfish species

Temporal Coverage March-December (MA-GA); May-October (ME, NH)

Spatial Resolution State

Temporal Resolution Bi-monthly

Timeliness 45 days after wave

State/Territory Maine-Georgia

Administrator NOAA Fisheries Office of Science and Technology

Survey For-Hire Survey

Survey Methodology List-based telephone

Fisheries Covered Charter boat, headboat fishing for saltwater finfish species

Temporal Coverage March-December (MA-GA); May-October (ME, NH)
Spatial Resolution State/Area fished
Temporal Resolution Weekly
Timeliness 45 days after wave

State/Territory Maine-Virginia
Administrator NOAA Fisheries Northeast Regional Office
Survey VTR Program
Survey Methodology Census logbook
Fisheries Covered Charter boat, headboat fishing for species targeted by Federally permitted vessels
Temporal Coverage Annual
Spatial Resolution Trip location
Temporal Resolution Trip
Timeliness Variable – data submitted 15th of month following trip

State/Territory Maine-Virginia
Administrator NOAA Fisheries Office of Science and Technology
Survey Large Pelagic Intercept Survey (LPIS)
Survey Methodology Access-point intercept
Fisheries Covered Charter and private boat fishing for HMS
Temporal Coverage June-October
Spatial Resolution State
Temporal Resolution Monthly
Timeliness 30 days after month

State/Territory Maine-Virginia
Administrator NOAA Fisheries Office of Science and Technology
Survey Large Pelagic Telephone Survey (LPTS)
Survey Methodology List-based telephone
Fisheries Covered Charter and private boat fishing for HMS with HMS permit
Temporal Coverage June-October
Spatial Resolution State
Temporal Resolution Weekly (charter), bi-weekly (private boats)
Timeliness 30 days after month

ATLANTIC AND GULF

State/Territory North Carolina-Texas
Administrator NOAA Fisheries Southeast Fisheries Science Center
Survey Southeast Regional Headboat Survey (SRHS)
Survey Methodology Census logbook, access-point intercept
Fisheries Covered Headboat fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution Trip location
Temporal Resolution Trip
Timeliness May of following year

GULF

State/Territory East Coast of Florida-Louisiana
Administrator Gulf States Marine Fishery Commission GSMFC (RecFIN)
Survey Access-Point Angler Intercept Survey (APAIS)
Survey Methodology Access-point intercept
Fisheries Covered Private Boat, charter boat, shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State/Area fished
Temporal Resolution Bi-monthly
Timeliness 45 days after wave

State/Territory East Coast of Florida-Louisiana
Administrator Gulf States Marine Fishery Commission GSMFC (RecFIN)
Survey Coastal Household Telephone Survey (CHTS)

Survey Methodology Random-digit-dialing telephone
Fisheries Covered Private boat, shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State
Temporal Resolution Bi-monthly
Timeliness 45 days after wave

State/Territory East Coast of Florida-Louisiana
Administrator Gulf States Marine Fishery Commission GSMFC (RecFIN)
Survey For-Hire Survey
Survey Methodology List-based telephone
Fisheries Covered Charter boat fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State/Area fished
Temporal Resolution Weekly
Timeliness 45 days after wave

State/Territory Texas
Administrator Texas Parks and Wildlife Department
Survey Texas Marine Sport Harvest Monitoring Program
Survey Methodology Access-point angler intercept, roving boat/trailer counts
Fisheries Covered Private boat, charter boat fishing for saltwater finfish species
Temporal Coverage Annual (May 15-May 14)
Spatial Resolution Bay system or Gulf area
Temporal Resolution Bi-Annual
Timeliness Prior year estimates available after 6 months

CARIBBEAN

State/Territory Puerto Rico
Administrator NOAA Fisheries Office of Science and Technology
Survey MRFSS Intercept
Survey Methodology Access-point intercept
Fisheries Covered Private Boat, charter boat, headboat, shore fishing for saltwater finfish species
Temporal Coverage Annual
Spatial Resolution State/Area fished
Temporal Resolution Bi-monthly
Timeliness 45 days after wave

MRIP White Paper #2
Regional Marine Recreational Fishing Data Collection Programs
June 2013

NOAA, National Marine Fisheries Service, Office of Science and Technology

2. Current roles of federal and state/territorial agencies, fishery management councils, and interstate fisheries commissions in the conduct and support of surveys, and in establishing standards and best practices for survey and estimation methods and coverage requirements (ST1 lead author).

Marine Recreational Fisheries Surveys – Regional Administration and Support

This paper will summarize the various regional programs of fishery dependent data collections to obtain information about the marine recreational fisheries of the United States. The programs use a variety of surveys and oversight authorities and entities to monitor these fisheries and I have attempted to summarize the documented formal aspects of these programs. Much of the education, outreach and feedback from fishery participants seem to be ad hoc or periodic without formal programs, whereas the actual data collection surveys are generally administered under formal contracts, grants and cooperative programs of government agencies or interstate commissions.

A. Atlantic States

The Atlantic Coastal Cooperative Statistics Program (ACCSP) is a cooperative state-federal program to design, implement, and conduct marine fisheries statistics data collection programs and to integrate those data into a single data management system that will meet the needs of fishery managers, scientists, and fishermen. It is composed of representatives from natural resource management agencies coastwide, including the Atlantic States Marine Fisheries Commission, the three Atlantic fishery management councils, the 15 Atlantic states, the Potomac River Fisheries Commission, the D.C. Fisheries and Wildlife Division, NOAA – National Marine Fisheries Service and the U.S. Fish & Wildlife Service.

The ACCSP Coordinating Council is the governing body of the Program and oversees program design and implementation. The policies set by the Council guide the Program and each partner's participation in it. Membership is composed of one voting member from each of the ACCSP's 23 state and federal partners. Coordinating Council members represent the policy-level of their respective agencies. The Council makes decisions by consensus where possible, or by majority vote.

The Coordinating Council members oversee all appointments to the Operations Committee, Advisory Committee, and various technical committees. Recommendations from technical committees are channeled through the Advisory Committee, followed by the Operations Committee, and then to the Coordinating Council for final decisions. The Operations Committee is comprised of an experienced staff person from each partner. The Committee serves as the steering committee to direct development of program standards and assimilate information from the various committees into cohesive recommendations to the Coordinating Council. The Recreational Technical Committee is

the primary panel for discussion of the marine recreational data collection program for the Atlantic States, including technical proposals for pilot studies and enhancements to the ongoing NMFS MRIP surveys of the recreational fishery.

Survey Design

Marine recreational data collection surveys used for the Atlantic States are primarily designed by the NMFS and conducted by contractors for the NMFS. The Coastal Household Telephone Survey (CHTS) collects effort data and produces effort estimates for shore and private boat fishing anglers. The For-Hire Survey uses a directory based design and produces effort estimates for charter and head boat anglers. Individual state fishery agencies may sub-contract with the NMFS' contractor to conduct the Marine Recreational Information Program (MRIP) Access Point Angler Intercept Survey (APAIS). These surveys have been designed and developed with input from the ACCSP Recreational-Technical Committee (RecTech) since the establishment of the ACCSP partnership. The MRIP program includes the state agencies, commissions, and councils in the re-design, testing, and implementing of new surveys, including the new APAIS implemented on the Atlantic and Gulf Coasts in March 2013.

Large pelagic and highly migratory species (HMS) like tunas, billfish and some sharks present a special challenge for researchers working to determine the health of fish stocks. That's because many of these species are part of "rare event" or "pulse" fisheries; they are only caught on a small proportion of all fishing trips, and activity often happens in bursts, as opposed to across a longer season. On the Atlantic Coast from Maine to Virginia, NOAA Fisheries uses the Large Pelagics Survey (LPS) to measure the total recreational catch of these species. The LPS includes two complementary survey components. The Large Pelagics Intercept Survey interviews randomly selected anglers and for-hire captains returning from fishing trips targeting large pelagic fishes and measures average catch per trip, average size of kept fish, and number of fish released alive. The Large Pelagics Telephone Survey interviews randomly selected recreational anglers and for-hire captains who hold permits to fish for HMS. It produces the estimates of fishing effort, or the total number of trips taken for large pelagic species during a given period of time. Additional biological information is gathered through the Large Pelagics Biological Survey. This supplemental dockside survey is used primarily for recreational bluefin tuna, targeting both private and for-hire boats. The survey collects length, weight, and body part samples that are used by scientists in studies of fish populations and stock assessments. These surveys are all administered by the NMFS with input from the HMS Advisory Panel to Office of Sustainable Fisheries, NMFS. The LPS surveys are conducted on the Atlantic coast from Maine to Virginia only using a contractor for New Hampshire to Virginia and in Maine the state's Department of Marine Fisheries.

The Southeast Headboat Survey is a logbook and port sampling program designed and operated by the NMFS, Southeast Fisheries Science Center, Beaufort, NC lab. It includes monthly logbook submission of trip-level reports of marine recreational fishing on head boats that target reef fishes and a dockside biological data collection for targeted species. The MRIP has supported projects to improve the documentation and estimation of this program, and pilot test electronic data capture for the logbook data submission.

Data Standards and Data Collection Standards

A third edition of the program design for the ACCSP defines policies, data collection and data management standards. This document (see Appendix) provides direction on future improvements for Atlantic Coast commercial, recreational, and for-hire fisheries statistics. In the third edition of the program design, significant updates were made to recreational catch and effort data collection standards. These standards not only reflect the current data needs identified by the partners (as compiled by the Recreational Technical Committee), but also provide guidance to MRIP of NOAA Fisheries Service (NMFS). These standards support the continued use of innovative technologies and state performance of intercept sampling. The partners recognize that full implementation of some standards is a long-term goal, and components will be incorporated commensurate with available resources. References to most specific programs have been removed to allow for changes to methodologies over time. The program design was updated to provide long-term guidance for implementing programs and providing accurate and timely fisheries-dependent data in support of state and federal fisheries conservation and management activities.

Advisory Body

The ACCSP has a constituent Advisory Committee that includes representatives from the fields of commercial, for-hire and recreational fishing. The Coordinating Council member from each partner state designates one commercial and one recreational or for-hire representative to the Advisory Committee to provide perspectives from a variety of fisheries experiences. Members evaluate technical recommendations and advise on development and implementation of the ACCSP. The Committee members also sit on some of the technical committees (e.g., RecTech, Biological Data Committee) as well as on their own Advisory Committee to provide direct liaison from the technical discussions to the entire Advisory Committee when it meets as a group.

B. Gulf of Mexico States

The Fisheries Information Network (FIN) is a state-federal cooperative program among agencies established to collect, manage, and disseminate statistical data and information on the commercial fisheries of the Southeast Region. The FIN is designed to provide sound scientific information on catch, effort, and participation that managers need to prudently conserve and manage marine commercial fisheries resources in the Region. Under this program, there are two distinct components: the Commercial Fisheries Information Network (ComFIN) and the Recreational Fisheries Information Network in the Southeast Region [RecFIN(SE)].

The partners comprising the FIN are state and federal agencies in the Region concerned with conservation and management of marine commercial and recreational fisheries. Primary data users will be the Memorandum of Understanding (MOU) signatories that assess stocks, forecast trends, and monitor fishery regulations. Also benefiting from the FIN information will be other agencies responsible for the conservation and management of living marine resources of the Region.

The organizational structure of the program consists of the FIN Committee, geographic subcommittees (Caribbean and Gulf), standing and ad hoc subcommittees, technical work groups, and administrative support. The FIN Committee, consisting of the signatories of the MOU or their designees, is responsible for planning, managing and evaluating the program. Agencies represented by signatories to the MOU are the National Marine Fisheries Service, Alabama Department of Conservation and Natural Resources/Marine Resources Division, Florida Fish and Wildlife Conservation Commission/Fish and Wildlife Research Institute, Louisiana Department of Wildlife and Fisheries, Mississippi Department of Marine Resources, Puerto Rico Department of Environmental and Natural Resources, Texas Parks and Wildlife Department, U.S. Virgin Islands Department of Planning and Natural Resources, U.S. Fish and Wildlife Service, National Park Service, Gulf States Marine Fisheries Commission, Caribbean Fishery Management Council and Gulf of Mexico Fishery Management Council.

Conduct of the MRIP Access-Point Angler Intercept Survey (APAIS) in Louisiana, Mississippi, Alabama, and Florida for shore, for-hire, and private modes is an activity under the RecFIN(SE) program. It provides for coordination of the field intercept survey of shore, for-hire and private boat anglers to estimate angler catch using existing MRIP methodology, and entry of the data. The four states also supplement the level of sampling of charter boats to improve the precision and of catch rate estimates produced by the APAIS. The angler-intercept data are combined with the NMFS' MRIP effort estimates for the Gulf States from the CHTS to produce catch and landings estimates by species for shore and private boat angler. The For-Hire Telephone Survey, also conducted by the agency staff in LA, MS, AL and FL, is a weekly telephone survey of charter boat captains, which produces estimates of charter boat fishing effort. This survey's effort estimates combined with the enhanced APAIS sampling of charter boats produces the catch and landings estimates for this sector.

Head Boat Port Sampling in Texas and Florida - provides for the sampling of catches, collection of catch reports from head boat personnel, and gathering of effort data on head boats, which operate primarily in the Exclusive Economic Zone from ports along the coasts of Texas and Florida. This logbook program is designed and operated by the NMFS, SouthEast Fisheries Science Center, Beaufort, NC lab. It includes monthly logbook submission of trip-level reports of headboat fishing trips on boats that target reef fishes and a dockside biological data collection for targeted species. The MRIP has supported projects to improve the documentation and estimation, and pilot test electronic data capture for this program.

Additional recreational fisheries data collections in the Gulf of Mexico region include the NMFS Billfish tournament survey administered by the SEFSC, NMFS and pilot studies of Highly Migratory Species conducted by the MRIP program, NMFS.

Data Standards and Data Collection Standards

The GulfFIN program provides the forum for the cooperative setting of data standards and data collection procedures and standards between the NMFS, the GSMFC, and the recreational fishery data collection states of FL to LA (TX does not conduct MRIP surveys, nor does it receive GulfFIN funds for recreational fishery monitoring). Work groups, such as the Data Collection Plan Work Group, coordinate with their agency to identify the type and amount of data needed, the geographic area over which the data

need to be collected, species of interest and desired levels of precision for the data collection programs and the FIN Committee develops the program goals in cooperation with the NMFS.

Advisory Body

The GulfFIN program does not have a formal constituent advisory committee, but when planning major changes to recreational fishery survey components (e.g., for-hire fishery monitoring programs) constituent representatives are invited to participate in the workgroups tasked with recommending, administering, and evaluating pilot studies. Educational outreach meetings for constituent groups and the public are conducted prior to implementing major survey changes (e.g. FHS weekly telephone survey, pilot logbook study, economic surveys) or new data collection programs.

B.2. Texas

Survey Design

Texas Parks and Wildlife's Coastal Fisheries Division (TPWCFCG) manages the marine fishery resources of Texas' four million acres of saltwater, including the bays and estuaries and out to nine nautical miles in the Gulf of Mexico. Coastal Fisheries management strategies are directed toward optimizing the long-term utilization and sustaining fisheries populations at levels that are necessary to ensure replenishable stocks of commercially and recreationally important species. The Coastal Fisheries staff works closely with other department divisions as well as other state, federal and international fishery management agencies to provide optimum opportunities from and conservation for the rich biological diversity inherent in Texas' marine waters.

The TPWCFCG administers the Texas Marine Sport Harvest Monitoring Program which includes an access-point angler intercept survey and roving counts of boats and trailers to produce estimates of private and charter boat fishing landings of finfishes. The survey year runs in two 6-month seasons from May 15 – May 14 and estimates are produced for each of the two bi-annual periods. Annual estimates are available six months after year-end. The fishery survey data and estimates are provided to the GulfFIN database and are available to data users upon request, but are not loaded into the website data queries of marine recreational fishing catch and effort from the other Gulf States.

C. Pacific States

The Recreational Fisheries Information Network (RecFIN) is charged with coordinating a recreational fisheries data management system for the Pacific Coast states for use by federal and state managers and researchers. RecFIN was officially established with an MOU in 1992 through agreement and signature of the state fishery directors in California, Oregon, and Washington, PSMFC, the Regional Directors of NMFS in both the Southwest and Northwest regions, and the NOAA Assistant Administrator for Fisheries.

Survey Design

The RecFIN Technical Committee is the lead RecFIN body and is made up of representatives from the state fish and wildlife agencies in California, Oregon and Washington, Pacific States Marine Fisheries Commission, Pacific Fishery Management Council (PFMC), Northwest and Southwest Regions of NOAA Fisheries and Northwest and Southwest Fisheries Science Centers and NOAA Fisheries headquarters. The PSMFC RecFIN Program Manager serves as Chariman of the Technical Committee. RecFIN covers the management area ascribed to the Pacific Fishery Management Council. The state of Alaska oversees their state's sampling program for state and North Pacific Fishery Management Council use and needs and does not participate directly in RecFIN.

Data Standards / Data Collection Standards

To assist the RecFIN Techncial Committee in their task, RecFIN has two subcommittees – the RecFIN Statistical Subcommittee and the RecFIN Data Subcommittee. The Statistical Subcommittee is made up of statisticians from all three states, PSMFC, the NW and SW Fishery Science Centers, and the Fisheries Statistics Division of the NOAA headquarters office of Science and Technology. Prior to the official establishment of RecFIN, PSMFC was the de-facto RecFIN body and coordinated the MRFSS sampling on the Pacific coast from its establishment in 1979 until its replacement with differing Pacific coast sampling programs in 2003 and 2004. PSMFC has actively conducted the sampling programs with Commission employees in all three states off and on in many of the past 34 years. Since 2003, and in 2011 in California, the three states are themselves conducting the recreational sampling surveys that provide the catch and effort estimates for RecFIN. RecFIN provides some financial support to each state for this effort. The four current components of RecFIN are the California Recreational Fisheries Survey (CRFS); the Oregon Recreational Boat Survey (ORBS); the Washington Ocean Sampling Program (OSP), and the Washington Puget Sound Boat Survey. Shore and man-made sampling is not currently conducted in Oregon and Washington because of a lack of funds. California samples all modes of fishing in CRFS. All these sampling programs were reviewed by the RecFIN Statistical Subcommittee, the RecFIN Technical Committee and by NRC and the MRIP consultants under NOAA Fisheries review of recreational sampling methods.

Advisory Body

The RecFIN Chairman presented the sampling programs and protocols to the Pacific Fishery Management Council and its Statistical Subcommittee (SSC) for their review. Currently, the PFMC leaves it to RecFIN to oversee the statistical soundness of the sampling programs and to ensure that they meet the Council and state management needs. From time to time PFMC provides directives or requests to RecFIN that relate to their current of upcoming management plans. RecFIN works regularly with PFMC on recreational data issues and meeting the data requirements of these management plans. RecFIN most directly communicates with the PFMC Groundfish Management Team,

whose management measures drive the ocean recreational fishery in all three states, as well as the SSC. The PFMC Groundfish staff officer is the Commission's representative to RecFIN. Currently, there are two PFMC SSC members sitting on the RecFIN Technical Committee.

D. Western Pacific

The Western Pacific Fisheries Information Network (WPacFIN) program provides access to best available fisheries data from the Western Pacific Region to support fisheries management in that region. It obtains these data through cooperative agreements with participating state and territorial fisheries agencies in American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), Guam, and Hawaii. It also works closely with the Western Pacific Fishery Management Council and Pacific Islands Regional Office (PIRO). WPacFIN was established in 1981.

The American Samoa Department of Marine and Wildlife Resources (DMWR) modified its data collection programs to include recreational and subsistence fisheries data. The Guam Division of Aquatic and Wildlife Resources (DAWR) has been conducting offshore and inshore creel surveys since the early 1970s. Beginning in 1982, DAWR began modifying its data collecting and processing systems to improve estimates of catch and effort by improving sampling techniques and by incorporating the use of computers to expand the survey data. The CNMI conducts creel surveys to collect data on the recreational fishery of the commonwealth. These programs collaborate with the PIR Fishery Science Center staff via the WPacFIN program for survey design advice and review. WPacFIN has worked in close collaboration with HDAR since 1981 and provides technical, data processing, and quality control support for its programs.

The Hawaii Division of Aquatic Resources (HDAR) manages the state's aquatic resources and ecosystems through programs in commercial fisheries, aquatic resources protection, habitat enhancement, and recreational fisheries. The HDAR has been conducting the Hawaii Marine Recreational Fishery Survey (HMRFS) for the NMFS via a cooperative agreement (grant) since 2001. The HDAR staff is responsible for the APAIS field data collections, monitoring of sampling goals, and data entry and QC. The NMFS administers the CHTS for Hawaii and produces catch and effort estimates for Hawaii shore and private boat anglers. The HDAR has a state-supported logbook program which includes the for-hire fishing boats in Hawaii. The MRIP has supported several studies to improve elements of the HMRFS program and the effort survey methods to be used in Hawaii.

Survey Design

The various surveys and data collections of the Western Pacific region have been designed in cooperation or with input from the NMFS PIR Science Center staff. The current HMRFS has been undergoing a review by all regional partners and expert consultants (MRIP project, 2012) and a second phase project to develop a new design for shore angling intercept using some type of roving creel design is scheduled to be completed in 2013. Another MRIP project is examining the utility of using the Hawaii vessel registration database as a sample frame for fishing effort surveys by PIFSC staff.

Data Standards and Data Collection Standards

Data standards and data collection standards are determined by the individual survey programs. Because the HMRFS utilizes the same basic angler interview (with a few modifications) as the Atlantic and Gulf of Mexico APAIS most of the data standards and data collection standards used in those two regions are applied to the HMRFS if possible.

Advisory Body

During the initial planning and development stages of the HMRFS in Hawaii a Recreational Fisheries Task Force worked closely with HDAR staff, West Pacific Fishery Management Council staff, and the NMFS staff (PIR and HQ/ST1) to determine the types of surveys to be implemented in Hawaii, the details of the questionnaire to be used for the angler intercept survey, and the implementation schedule across the main Hawaiian Islands (circa 2000-2002). This group included constituent fishermen, data users, and HDAR staff but became less active, meeting irregularly during much of the ensuing decade. In recent years (2010-present) it has been reconstituted, but does not have a formal advisory role to the NMFS.

E. Alaska

Four programs funded and fielded by the Alaska Department of Fish & Game (ADFG), Division of Sport Fish, provide the recreational fishing catch and effort data, and biological data (age, size and sex composition), necessary to support the North Pacific Fishery Management Council, and NMFS (Alaska Fisheries Science Center, Alaska Region) for federal and international management, primarily of halibut and groundfish.

- 1) The Alaska Statewide Harvest Survey program is funded and fielded to estimate recreational angler participation, effort, harvest, and catch of finfish and shellfish in fresh and salt water statewide. This survey also estimates these quantities by mode (shore, boat) and sector (for-hire, private).
- 2) The Alaska Sportfishing Guide/Business Licensing and Vessel Registration program is funded and fielded to update and maintain a database of vessels used in for-hire recreational fisheries in salt and fresh water statewide.
- 3) The Assessment of Recreational Halibut and Groundfish Harvest in Southcentral Alaska and
- 4) the Southeast Alaska Marine Boat Fishery Harvest Studies programs are funded and fielded to estimate mean weights of harvested Pacific halibut and rockfish species relevant to international and federal management of these species.

All salmon management in Alaska, including recreational fishery management, is delegated to the state of Alaska through the North Pacific Fishery Management Council and Pacific Salmon Treaty authorities and regulatory processes.

Survey Design

ADFG designs and implements these four fishery data collection programs, as well as salmon monitoring programs.

Data Standards and Data Collection Standards

Harvest biomass of Pacific halibut by recreational sector in Alaska is used by the IPHC and NPFMC to assess the coast-wide abundance of Pacific halibut and to allocate Pacific halibut harvests between the recreational for-hire and commercial sectors in IPHC areas 2C and 3A in Alaska. These data are transmitted to the IPHC annually in October in the form of a memo that is incorporated into the Fishery Removals section of the report of assessment and research activity (RARA) and to the NPFMC in the form of an oral report and accompanying tables.

Harvest biomass and release mortality biomass of demersal shelf rockfish by the recreational fishery in the Outside District of southeast Alaska are integrated into the stock assessment of DSRs in this area. These data are transmitted via email to ADF&G Commercial Fisheries Division each October for development of the Stock Assessment and Fishery Evaluation (SAFE) report for this stock.

The ADFG salmon surveys not only provide salmon catch, effort, and biological data, but also produce data on recovery of coded-wire tags for estimating hatchery and wild stock contributions of salmon.

Federal Fishery Management Support

The following table describes the submission of data necessary for management of Pacific halibut statewide per requirements of the North Pacific Halibut Act (16 U.S.C. §§ 773-773k) and demersal shelf rockfish (DSR) in the Outside District of southeast Alaska per requirements of the NPFMC Gulf of Alaska Groundfish FMP (50 CFR 679).

Species	Sent to	Information	Scope	Purpose	How Transmitted	Timeline
Pacific halibut	International Pacific Halibut Commission (IPHC)	Harvest (no. fish), average weight in harvest, harvest biomass.	By sector (for-hire/private) and IPHC regulatory area	Stock assessment, establishing catch limits	Memo with summarized estimates.	October, annually
	North Pacific Fishery Management Council (NPFMC)	Harvest (no. fish), average weight of harvest, harvest biomass.	By sector (for-hire/private) and IPHC regulatory area	Allocation between for-hire and commercial sectors	Oral report and accompanying tables	October, annually
Demersal Shelf Rockfish (DSR)	NPFMC, NMFS Groundfish Plan Team	Harvest (no. fish), average weight in harvest, sport harvest biomass, sport release mortality biomass.	By management area, Southeast Alaska	Management of directed DSR commercial fishery per the Gulf of Alaska Groundfish FMP	Text and tables submitted to assessment biologists via email and incorporated into stock assessment document.	October, annually

The North Pacific Fishery Management Council (NPFMC) is one of eight regional councils established by the Magnuson Fishery Conservation and Management Act in 1976 (which has been renamed the Magnuson-Stevens Fishery Conservation and Management Act) to oversee management of the nation's fisheries. With jurisdiction over the million square mile Exclusive Economic Zone (EEZ) off Alaska, the Council has primary responsibility for groundfish management in the Gulf of Alaska (GOA) and Bering Sea and Aleutian Islands (BSAI), including cod, pollock, flatfish, mackerel, sablefish, and rockfish species harvested mainly by trawlers, hook and line longliners and pot fishermen. The Council also makes allocation and limited entry decisions for halibut, though the U.S. - Canada International Pacific Halibut Commission (IPHC) is responsible for conservation of halibut. Other large Alaska fisheries such as salmon, crab and herring are managed primarily by the State of Alaska.

Note: The Alaska Fisheries Information Network (AKFIN) supports the data needs of fisheries analysts and economists by consolidating commercial fisheries data and dispensing those data upon request. Hence, this program was not included in this paper.

F. Caribbean Region

The Caribbean Region includes the Commonwealth of Puerto Rico and the US Virgin Islands (a US Territory). The MRFSS program initiated the APAIS and the CHTS in both island groups in 2000, but due to logistic and labor problems in the USVI the survey was discontinued in that territory by the end of the year. No marine recreational data collection program has been sponsored by the NMFS in the USVI since then. Both the CHTS and APAIS have continued in Puerto Rico since their implementation. The CHTS is included in the Atlantic and Gulf contracted survey using the same protocols and is administered by the NMFS. The APAIS has been included in the Atlantic contract in 2000-2008 and 2010, but most recently has been a task of the GulfFIN program under the administrative oversight of the GSMFC staff as a component of the Gulf States APAIS (2009, 2011-present).

Survey Design

The APAIS design followed that used in the Gulf Region prior to 2013, but the new APAIS based on the recommendations and results of the MRIP APAIS pilot survey conducted in NC could not be implemented in Puerto Rico due to logistic, cost, and staffing issues. The Puerto Rico DNER participated in a survey design workshop, supported by MRIP, for the USVI and PR in August 2012. The goal of that workshop was to review the specific data needs of the region's territories and the past data collections, and to recommend potential methods for survey design to support current fishery management. This collaborative workshop included participants from the USVI, PR, NMFS-SER and NMFS-ST, the Caribbean Fishery Management Council (CFMC), GSMFC, and expert consultants. A final report from that workshop is pending and a follow-up design proposal for MRIP support is expected in 2013.

Data Standards and Data Collection Standards

To be determined in collaboration with the GSMFC, NMFS, CFMC and territory agencies as surveys are designed and implemented in the region.

Advisory Body

Although the Caribbean Fishery Management Council has a formal Advisory Panel, it does not have an advisory role to the GulfFIN program or the MRIP recreational fisheries surveys. Input from this body concerning the recreational fisheries surveys in USVI or PR would be informal and ad hoc communications to the territory hosts of the surveys or to the NMFS at public Council meetings.

Fishery Management Councils and Marine Fisheries Commissions

Fishery Management Councils – the Councils are among the primary users of recreational fisheries survey data. In the Atlantic States regions there are 3 councils: New England FMC, Mid-Atlantic FMC, and the South Atlantic FMC. Council staff irregularly attend the data/estimate review workshops held by NMFS to review APAIS data, data collection summaries by the effort survey contractors, and the catch and effort estimates produced from all the recreational fishery surveys on the Atlantic Coast. These review meetings (or wave meetings) are an opportunity for data users to provide feedback on preliminary data and estimates, which may require review for accuracy in data processing. Further feedback by these data users are generally individual communications to NMFS/ST1 staff on an ad hoc basis. In the Gulf of Mexico region the Gulf of Mexico FMC is a primary data user, but does not typically send any staff to the wave meetings, however they also provide input into surveys and data review feedback on an ad hoc basis or during the annual GulfFIN meetings. The Pacific FMC has representation on the RecFIN committee and provides feedback as a data user via the RecFIN program overseeing the recreational fishery surveys of CA, OR, and WA. The Western Pacific FMC has representation on the Operations Team of the MRIP and is an active participant in the ongoing MRIP projects to review and re-design the Hawaii MRFS and a member of WPacFIN with collaborative oversight of the Western Pacific Territories' creel surveys.

Marine Fisheries Commission – Both the Pacific States and the Gulf States Marine Fisheries Commissions (PSMFC & GSMFC) are directly involved in the conduct of the marine recreational fisheries surveys conducted in their respective regions. They both serve as the umbrella administrator of the data collection programs conducted by the individual state agencies and the central depository of the data collected. They provide staff for data entry, database management, QC of the data, and survey conduct protocol oversight and adherence. Both Commissions also host extensive websites devoted to the recreational fisheries data collected and the estimates produced using those data and include public access to both the survey data files and the catch and effort statistics via query tools and downloadable data sets. They also host the wave meetings in their regions if the NMFS is not hosting multi-region wave meetings. The Atlantic States

MFC is not directly involved in survey conduct or administration but the staff is a primary data user and periodically attend the wave review meetings.

White Paper #3: GOVERNANCE

The nation's recreational catch of marine species, and the associated amount of effort applied to obtain that catch, is primarily monitored by the National Marine Fisheries Service (NMFS). Prior to 1979, estimates of marine recreational catch and effort were based on the Department of Interior's National Survey of Hunting and Fishing, which was published every five years in conjunction with the US census (Essig and Holliday 1991). In 1979, NMFS introduced a standardized annual survey (the Marine Recreational Fishery Statistics Survey, MRFSS). The purpose of MRFSS was to provide accurate, precise, and timely fisheries-dependent information for US marine fisheries through the coordination and administration of recreational fisheries surveys nationwide (NRC 2006). However, MRFSS has not been the only survey of its kind conducted in US marine waters. Most notable are the surveys conducted by Texas and Alaska, which do not submit their data to NMFS for inclusion in summary reports. When the NRC report was published in 2006, there were 13 surveys of marine recreational anglers conducted by federal or state agencies that were funded by NMFS. However, these surveys had significantly different methodologies and statistical properties (NRC 2006); for example, the highly migratory species surveys used catch cards, phone and internet reporting, and tournament reporting.

One of the objectives of MRIP is to bring all the state- and federally-funded marine recreational surveys under one compatible system. In order to accomplish this objective, a governance model needs to be established for MRIP. Governance involves assuring that the surveys within the MRIP system are adhering to accepted (i.e., certified) methods, and that the operational requirements (survey services procurement and implementation, enforcement, permit requirements and administration, validation, quality assurance/quality control, data management, outreach) for successful survey implementation are being met. Governance also involves choosing among alternative methods for estimating catch and effort when more than one is available, and choosing among options for investing in the following conditions: (1) improved survey coverage, (2) improved estimate precision, and (3) improved timeliness of estimate availability. Usually, available funding will preclude maximizing enhancement of all three of these factors. Accordingly, governance will include establishing goals or targets for survey coverage, timeliness and precision of catch estimates, evaluating tradeoffs among varying combinations of options for expansion/enhancement of data collection, and choosing the most cost effective investment with available funding. Governance promotes adherence to MRIP goals and objectives as well as its standards and best practices, coordination of data collection and archiving, seamless exchange of data and information among the surveys, and achievement of informed consent among partners on the most cost-effective use of available resources as well as priorities for additional investment.

The purpose of this paper is to present the pros and cons of several alternative models for governance in an effort to stimulate discussion and, ultimately, a recommendation by the Executive Steering Committee on the most appropriate governance model for the MRIP system of surveys. The seven models described below, representing national- and

regional-level governance structures, are not cast in stone and are provided solely to stimulate discussion and decision making; the governance model that is eventually selected will probably be a hybridization of two or more of the seven.

Model I - National Governance

The national governance model would have all decisions affecting implementation of the MRIP system of surveys handled by one governance body, based out of NMFS headquarters and reporting directly to the Assistant Administrator for Fisheries. There are three versions of the national model, perhaps more. Version IA has MRIP implementation totally governed by senior staff within the NMFS. A second version (IB) would have the Executive Steering Committee govern MRIP, and a third version (IC) would consist of a joint governance team representing NMFS and its MRIP partners, not necessarily restricted to the organizations participating on the Executive Steering Committee.

IA – Governance Solely by NMFS

An MRIP governance team represented solely by NMFS would consist of senior staff in the Office of Science and Technology and Office of Sustainable Fisheries, similar to the governance model used for MRFSS.

Pros:

- Easier to apply consistent methodological and operational standards across the nation
- Would be directly supervising NMFS staff involved in the administration of MRIP
- Would assure strong linkage of survey tradeoff decisions to needs of federal management plan implementation and stock assessment

Cons:

- Partners and regions may feel disenfranchised from governance-related decisions (the same criticism that was leveled at MRFSS)
- Not consistent with Congressional direction, as stated in the Magnuson-Stevens Act, which requires that the quality and accuracy of the marine recreational fishing survey be improved “in consultation with representatives of the recreational fishing industry”
- Not consistent with NRC (2006) recommendation: “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.”
- It is highly desirable to have the states involved with survey operations – a NMFS-only governance structure will strongly discourage this
- More difficult to define and satisfy the differing data needs for stock assessment and management application among regions and fisheries

IB – Governance by the MRIP Executive Steering Committee

The MRIP Executive Steering Committee (ESC) includes senior managers from the National Marine Fisheries Service (NMFS), including representatives of the NMFS Headquarters Office of Science and Technology and the NMFS Regions and Fisheries

Science Centers. It also includes the Executive Directors of the three Interstate Marine Fisheries Commissions, with whom NMFS works in cooperative state-federal data collection programs. In addition, representatives of the Regional Fishery Management Councils and the Secretary of Commerce's Marine Fisheries Advisory Committee participate in ESC meetings and communications, and provide their individual input on matters before the ESC.

The ESC provides advice to NMFS regarding MRIP implementation, appropriate direction to the Teams and Work Groups, and strategic decisions, including decisions affecting budgeting and out-year planning. The ESC members 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, and represent MRIP in meetings of agencies and organizations outside of NOAA. The ESC monitors the overall progress of MRIP, providing a means of accountability for the senior leadership of MRIP.

Pros:

- The ESC is familiar with the MRIP goals and objectives, and has been overseeing progress on the development of new methodologies for monitoring recreational catch and effort
- The ESC has strong links to the states through the interstate commissions, and the viewpoints of the Regional Fishery Management Councils are reflected in the input from the Councils' participants

Cons:

- The ESC is not an operations-level committee and would likely delegate decision-making responsibility to proxies
- The ESC does not comprehensively represent the needs and interests of each of the regions

IC – Joint National Governance by NMFS and MRIP Survey Partners

This model would be an expansion of Model IB to include more representation of MRIP partners in governance, beyond the partners on the Executive Steering Committee. The additional partners might include representatives from the Fishery Information Networks (FINs) and the Atlantic Coastal Cooperative Statistics Program (ACCSP), as well as representatives from states currently not under the MRIP umbrella (Alaska and Texas). Or, it could include an expanded body that adds regional members from all of the councils, NMFS science centers (e.g., delegates of NMFS Science Board members), and NMFS Regions (e.g., delegates of NMFS Reg Board members).

Pros:

- Groups actually involved in the implementation of the program would be making the governance-related decisions, which give the participants a greater stake in the outcome of their decisions.
- Expanding the ESC may help shift the “weight” of voting members such that representation will more appropriately reflect the relative magnitude and importance of recreational fisheries to each region.

Cons:

- In order to get adequate representation, the number of people involved in this governance model may be too many for efficient decision-making
- Groups actually involved in the implementation of the program would be making the governance-related decisions, which could lead to criticism that MRIP partners are feathering their nests.

Model II – Regional Governance

Governance at the regional level would be consistent with one of the original objectives of MRIP (adapt the MRIP survey system to regional requirements). Regional governance would be based on adhering to a set of national standards for data collection, archiving, and retrieval, as well as a set of standards that are region-specific. The regional governance model would consist of an oversight body composed of decision makers from NMFS, state agencies, regional management, and/or regional data management entities.

IIA – Governance Solely by NMFS

A NMFS-only governance body might include representatives from the fisheries science center and regional office, as well as a representative from the NMFS Office of Science and Technology.

Pros:

- Would be directly supervising NMFS regional staff involved in the administration of MRIP
- Would be linked to national program through performance plans
- Would assure strong linkage of survey tradeoff decisions to needs of federal management plan implementation and stock assessment

Cons:

- Regional partners would feel disenfranchised from governance-related decisions
- Not consistent with Congressional direction, as stated in the Magnuson-Stevens Act, which requires that the quality and accuracy of the marine recreational fishing survey be improved “in consultation with representatives of the recreational fishing industry”
- It is highly desirable to have the states involved with survey operations. A NMFS-only governance structure will strongly discourage this.

IIB – Governance by MRIP Participants

Currently, regional partners in the MRIP survey system include ACCSP, GulfFIN, PacFIN, and WPacFIN. Representatives from these partners and regional NMFS offices involved with recreational fishing would constitute regional governance model IIB.

Pros:

- Groups actually involved in the implementation of the program would be making the governance-related decisions

Cons:

- In order to get adequate representation, the number of people involved in this governance model may be too many for efficient decision-making
- Groups actually involved in the implementation of the program would be making the governance-related decisions
- Established regional FINs do not currently exist for Hawaii or for Atlantic HMS. If this option is preferred, it will be necessary to find ways to either include these regions in other FINs (e.g., include Atlantic HMS in ACCSP and/or GulfFIN) or establish new governance bodies for them.

IIC – Governance by Interstate Fishery Management Commissions and Regional Councils

The governance body represented by this model would consist of the executive directors of the regional councils and relevant interstate commissions. The NMFS regional director and science center director, or their proxies, would serve as *ex officio* members of the committee.

Pros:

- Would create closer coordination among states in the region, and between the states and the regional councils
- Would involve key regional leaders in management of marine recreational fisheries, but not leaders on the science side (regional science centers)
- Would allow greater opportunity for input by members of the recreational fishing industry through the commission and council industry advisory committees

Cons:

- Strict adherence to national standards for data collection, archiving, and retrieval would be more problematic if NMFS does not have a significant role
- May be difficult to assure that operational requirements (i.e., enforcement, permit requirements and administration) are met if NMFS does not have a significant role
- In general, these members are part of the current FIN partnerships -- creating such a new body might be duplicative and overly demanding of time and resources for partners

IID – Governance by Regional Oversight Committees

This regional governance model would be fashioned after the Northeast Region Coordinating Council (NRCC). Membership on the NRCC includes the NMFS Regional Administrator, NMFS Science Center Director, the executive directors, chairs, and vice chairs of the New England and Mid-Atlantic fishery management councils, and the executive director of the Atlantic States Marine Fisheries Commission. The purpose of the NRCC is to coordinate activities among the participating agencies and organizations. Model IID would have regional governance of MRIP overseen by analogous bodies in all six NMFS regions.

Pros:

- Would involve key regional leaders in science and management of marine recreational fisheries
- Would ensure close regional coordination among NMFS, the commissions, and councils

Cons:

- An NRCC-like oversight committee is not an operations-level committee and would likely delegate decision-making responsibility to proxies
- Since this committee would not be directly involved in the MRIP survey system, if the members choose not to use proxies they would need to be brought up-to-speed on the history of MRIP development and the tools available for use in monitoring or recreational catch and effort
- Would essentially add another layer to the bureaucracy associated with MRIP and be duplicative of the FINs
- States may not feel adequately represented by Commission Executive Directors

A “hybrid” of a national and regional model may also be considered, which would have governance at two levels:

1. A National level for certifying methods and for recommending how to distribute resources, particularly funding, among regions;
2. A Regional level for: selecting preferred methods for implementation; securing necessary partner commitments for meeting operational requirements; establishing standards/targets for precision, timeliness, coverage, etc; performing the tradeoff analysis and deciding on most cost effective expansion of data collection options.

References Cited

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White Paper # 4: Suggested Protocols for Meeting Operational Requirements of MRIP

Introduction

This white paper provides an overview of the operational requirements for designing, testing and administering a fishery-dependent monitoring program, and presents options for meeting those requirements within the context of a national program with regionally-specific monitoring needs. Much of the content is derived from the experiences of the NOAA Fisheries Service Office of Science and Technology (OST), which currently administers recreational fishing surveys for the Atlantic and Gulf Coasts, Puerto Rico and Hawaii, and provides funding and technical and information management support for surveys administered through the Pacific Recreational Fisheries Information Network (Pacific RecFIN). However, the operational requirements described in this document are not unique to OST. For example, any successful data collection program requires funding, a robust data collection design, a mechanism for collecting data, oversight and quality control, and a mechanism for distributing information. Subsequently, the information included in this document is broadly applicable and provides a comprehensive overview of operational requirements for designing and administering a data collection program.

Operational Requirements for Managing Recreational Fisheries Data Collections

Developing and Certifying Data Collection Designs

MRIP will provide a suite of certified methods for monitoring recreational fishing catch, effort and participation. Data collection and estimation designs are developed by collaborative research teams representing regional fishery management councils, interstate fisheries commissions, state natural resource agencies, stakeholder groups and NOAA Fisheries. Potential methods are thoroughly tested, and project results are peer reviewed and approved by the MRIP Operations Team (OT). OT recommendations are submitted to the MRIP Executive Steering Committee, which provides advice to the NOAA Assistant Administrator for Fisheries to certify and potentially implement a data collection design.

MRIP will provide, to the greatest extent possible, funds and staff time to support surveys that NMFS/OST conducts, and will provide funds and technical support to other partners to conduct recreational fishing catch/effort data collections using survey and estimation methods that have been certified via MRIP. In general, MRIP will not fund continued use of methods that are not certified if alternative, certified methods are available unless a plan to improve and certify ongoing survey methods is in place and is being followed.

Data Collection Approvals

The Paperwork Reduction Act (PRA) requires clearance by the Office of Management and Budget (OMB) of any information collection initiated or funded by a Federal agency,

including information collected by a state or grantee, if the grant or state cooperative agreement is specifically executed to conduct an information collection on behalf of the agency and/or the agency must approve the information collection (http://www.cio.noaa.gov/services_programs/pragg.html).

The OMB PRA clearance process takes approximately six months, beginning with publication of a Federal Register notice informing the public of the intent to ask for clearance for the information collection. The clearance request, which is reviewed internally by NMFS, NOAA and DOC prior to submission to OMB, includes a justification for the information collection, an estimate of public reporting burden, a detailed description of the data collection design and any and all data collection forms.

Procurement and Grants Management

Generally, data collections administered by NOAA fisheries are conducted either by state natural resource agencies who receive funds through cooperative agreements with the NOAA Fisheries, or private companies who are awarded data collection contracts through the competitive Federal procurement process. Each year, Contracting Officer Representatives (CORs) within NOAA Fisheries are asked to provide the NOAA Acquisition and Grants Office (AGO) with information about upcoming procurements, including descriptions, estimated dollar values and expected contract award dates. Generally AGO requests these Advanced Acquisition Plans during the first quarter of each fiscal year.

The Office of Science and Technology (OST) collaborates with AGO to identify appropriate vehicles for procuring data collection contracts, conduct market research to identify data collection firms and develop cost estimates, and develop statements of work describing data collection requirements. Once procurement materials have been completed and reviewed³, AGO issues a request for quotes, either broadly or to a group of pre-defined vendors that are likely to be responsive to the request. OST is responsible for assembling a technical evaluation team to review proposals and make a recommendation for award based upon the technical merits of the proposals.

The timing and schedule of procurement actions are dependent upon the dollar value of the contract award and the type of procurement. For example, data collection contracts administered by OST are often ordered from existing blanket purchase agreements (BPA) between OST and one or more data collection firms. Orders against existing BPAs can be completed within 2-6 months and can be submitted as late as early May to early July, depending upon whether the procurement is competitive or not, for a contract award within the fiscal year. In contrast, an order for full and open competition for a data collection contract with a dollar value between \$1.5 and \$10.0 million must be submitted to AGO by late January and may not be awarded until the following fiscal year.

³ The level of review required for procurement is dependent upon the anticipated dollar value of the contract award. Large dollar value contracts may require review by DOC.

Regardless of the dollar value and specific mechanism, the procurement process requires considerable planning and lead time. OST currently administers data collection contracts for the Coastal Household Telephone Survey, the Access-Point Angler Intercept Survey (APAIS) on the Atlantic Coast, the For-Hire Telephone Survey (FHTS) on the Atlantic Coast, the Large Pelagic Telephone Survey for ME-VA, and the Large Pelagic Intercept Survey, also for ME-VA. Contracts are generally awarded for a period of 1-5 years, depending on the cost of the data collection and the likelihood that data collection designs will be modified in the future.

Once a data collection contract has been awarded, OST is responsible for providing oversight of data collection tasks and ensuring that contract requirements are satisfied. A COR or technical point of contact (POC) maintains regular communication with the contractor's project management staff, often through regular conference calls. The POC/COR is also responsible for ensuring that sufficient funding is available to complete requirements; reviewing contract deliverables, including data summaries, reports, outputs from error-checking processes and data files; and approving invoices.

In several regions and states, data collections are conducted by state natural resource agencies through grants or cooperative agreements between the state or regional interstate fisheries management commissions and OST. In many ways, the administration of grants and cooperative agreements is similar to contract administration; a Federal Program Officer (FPO) from OST provides oversight for the data collection and ensures that requirements specified in the cooperative agreement or grant is satisfied. As with a data collection contract, the FPO reviews and approves survey deliverables, including survey data and summary reports.

In contrast to the competitive procurement process, awarding a grant or cooperative agreement is less time consuming and can be accomplished in a shorter timeframe, generally within 2-4 months. OST currently administers cooperative agreements with the Gulf States Marine Fisheries Commission (Gulf Fishery Information Network Grant) to conduct the APAIS and FHTS in FL, AL, MS, LA, and Puerto Rico, the Pacific States Marine Fisheries Commission (Pacific Recreational Fisheries Information Network) to conduct recreational fishing surveys in WA, OR and CA, and the HI Division of Aquatic Resources to conduct the HI APAIS. In the Gulf States and HI, survey data are provided to OST and included in the estimates that are published on the MRIP website after each survey wave. On the west coast, state natural resource agencies or Pacific RecFIN staff produce estimates and provide summary-level estimates to OST at the conclusion of each survey year.

Survey Operations and Oversight

Regardless of the funding mechanism, all recreational fisheries data collections require significant oversight to ensure that sampling, data and estimates adhere to data collection protocols and quality control standards. For the Atlantic and Gulf coasts, OST staff allocate sample among waves and states prior to the beginning of each survey year for the CHTS, APAIS, LPTS, LPIS and FHS. Where possible, samples are optimally allocated

to maximize the precision of survey estimates for a fixed total sample size. Final sample allocations are reviewed by OST and provided to the data collection contractors or states for implementation. The contractors and states are responsible for ensuring that data collection personnel execute sampling according to the desired allocation and data collection design. This is achieved by reviewing summarized survey data (e.g. number of completed interviews per site or stratum and/or times and locations of completed interviews) and conducting field visits to ensure that interviewers are at specified locations during specified times. Site visits by field supervisors also help ensure that data collection staff members are interviewing all eligible anglers and completing interviews as specified in statements of work, procedures manuals and training documents.

Site visits and observation of in-progress interviews, for both on-site and off-site surveys, are key components of MRIP's quality assurance/quality control program; monitoring encourages interviewers to follow protocols and also identifies deviations from protocols. Other components of the QA/QC program involve OST staff, data collection supervisors (either contractor or state personnel), representatives from stakeholder groups, and even recreational anglers or visitors to the MRIP website. Before catch and effort estimates are generated, raw survey data are reviewed, both manually and through automated processes, by OST, contractor staff and state natural resource personnel, to identify potential errors. Similarly, preliminary estimates and survey reports are reviewed by OST and data collection partners after each wave and during wave review meetings that occur every four months. Finally, preliminary estimates are posted to the MRIP website where the public has an opportunity to review and provide feedback. Any and all anomalous data and estimates are thoroughly reviewed to determine if they are indeed legitimate or a true error.

For the Atlantic and Gulf Coasts, Puerto Rico and HI, OST staff manage the production of catch and effort estimates. Estimation is a complicated process that involves transforming multiple survey datasets into appropriate formats, developing and applying appropriate weights to survey data and combining data and estimates from multiple surveys into catch and effort estimates. Currently, preliminary estimates are published 45 days following the end of each reference wave, and final estimates are published on or about April 15 of the following year.

Information Management

It is the policy of NOAA Fisheries that all data are made publicly available within one year of collection, regardless of whether the data were collected directly by NOAA Fisheries employees or through contracts or grants. To comply with this directive, MRIP estimates are posted to the MRIP website. For surveys administered by OST, preliminary wave estimates and raw survey data are available approximately 45 days following the end of each wave. Customers have the option of querying for specific estimates from the MRIP website or downloading estimate files or survey data in SAS or CSV format. OST, through the MRIP Information Management Team (IMT), has made significant upgrades to the MRIP website in recent years. Additional queries have been added, and standard

programs to address common data requests are available for download. In addition, specific data requests are addressed on an ad-hoc basis.

For surveys that aren't administered by OST, estimates are provided to OST by state natural resource agencies or interstate marine fisheries commissions at the conclusion of each calendar (or survey) year. These estimates are incorporated into the MRIP website and included in National- and summary-level queries and publications.

Research and Development

An ongoing research component is needed to ensure that recreational fishing surveys are effectively addressing customer needs for catch and effort statistics and employing best practices within the survey methods field. Potential opportunities for ongoing research include exploring alternative sample frames, testing alternative stratification and allocation schemes to optimize sampling, revising and testing survey instruments to minimize recall error, employing alternative contact and reporting options that utilize advances in technology to increase response rates and accuracy, and periodically conducting non-response follow-up studies to assess non-response error in ongoing data collections.

Compliance Monitoring and Enforcement

Fishery Management Plans (FMP) may require participants in a fishery to report trip and catch data to NOAA Fisheries or another regional management or data collection body. Needs for catch and effort data from a mandatory reporting program must be carefully considered and coordinated among managers, scientists and enforcement agencies prior to and during the FMP rulemaking process. For example, a monthly reporting requirement may not satisfy a management need to monitor landings relative to a catch limit. Such requirements are usually associated with a permitting requirement. The administrative burden and cost of administering both a permitting system and an associated reporting requirement—especially including the work of soliciting (including outreach to the regulated entities), receiving, editing and managing the data submitted—must be taken into account when approving a FMP requirement for mandatory reporting. Implementation of mandatory reporting requirements and associated permit requirements involves both rulemaking and enforcement of the resultant regulations. Ordinarily, rulemaking to implement FMP requirements is conducted in the Regions by NMFS Regional Offices or Regional Fisheries Science Centers, and by states. Federal rulemaking includes compilation of substantial analysis and documentation to comply with the requirements of the Information Quality Act, National Environmental Policy Act, Regulatory Flexibility Act, Executive Order 12866, Endangered Species Act, Marine Mammal Protection Act, Coastal Zone Management Act, and to obtain OMB Clearance under the Paperwork Reduction Act. The rulemaking package must justify the costs and burdens of the required reporting in the context of the various statutes and Executive Orders. In addition, a reporting requirement must be complied with to achieve its objectives. A commitment of support from NMFS Regional Law Enforcement and its partners in the U.S. Coast Guard, NOAA General Counsel, and states under their Joint

Enforcement Agreements, is essential to securing the necessary compliance with permitting and reporting requirements.

Utilization of this information as a tool for monitoring removals from or participation in a fishery, either as a census of catch and effort, or as a component of an estimation design, requires an ongoing assessment of reporting compliance. Data needs from the fishery will dictate the magnitude and timing of compliance monitoring activities. However, results from compliance monitoring, regardless of the scope, must be documented, incorporated into an appropriate electronic format and transmitted to a regional or national fishery monitoring program (e.g. ST, regional science center, FIN program) to be incorporated into the data collection and/or estimation design.

Participants in fisheries that require mandatory reporting must be notified of requirements prior to implementation, as well as throughout the course of the program. Outreach to participants may include public forums, participation in industry-sponsored meetings or events, written notices, signage at docks and tackle shops or postings on fishing message boards.

Outreach and Communications

MRIP must maintain a regular communications with data customers to ensure that needs for recreational fisheries statistics are satisfied. Two-way dialogue is needed to inform customers about data collection designs and the limitations of statistics, as well as collect feedback about the intended uses of statistics and needs for precision, resolution, timeliness and additional statistics or analyses. In addition, MRIP must conduct outreach with recreational anglers and stakeholder groups to build awareness of and support for the program.

Options for Meeting Operational Requirements

The options assessed below would generally include all operational aspects of recreational fisheries data collection, estimate production and data management as described in section 1 above for which NMFS OST (i.e. MRIP) provides funding support. Some of the options may involve only certain of the operational functions, as specified in the description of the option.

Model I - Centralized Approach

NMFS OST centrally manages recreational data collection and production of statistics for those regions in which ST provides funds for surveys. Elements of the work may be done under contract or subcontract (state partners may be contractors or subcontractors).

Pros:

- May achieve economies of scale and higher efficiency in procurement and contract management.
- Assures consistency in survey design and operations.

- Consistent, basic national-level statistics (e.g. basic FUS-tabulations of catch, effort and participation) would be readily achievable and simplifies compliance with information management policy directives.
- Assures consistency in communications with OMB for PRA clearances, improving success and reducing clearance time.
- Assures consistency in MRIP messaging and outreach activities.

Cons

- Regional partners may feel disenfranchised, and be less willing to contribute resources and support data collection program.
- Some choices that make sense in a national context may not be the most effective or efficient in a given region or sub-region.
- There is no effective mechanism for conducting compliance and enforcement centrally.
- Increases administrative burden for centralized staff, which could delay implementation of modifications.
- Increases the difficulty in tailoring outreach messages to address regional concerns and target key regional audiences.

Model II - Distributed Approach

Responsibility for managing recreational fishing data collections and completing operational requirements is distributed to regional and/or state data collection partners, fisheries management or science entities.

Option IIA - Regional FMC Operations

OST advances funds to NMFS Regions and/or Fisheries Science Centers where all operational aspects of survey operations are carried out for the affected region.

Pros:

- Regional specifications for data needs for stock assessment, management application and outreach are more likely to be satisfied.

Cons:

- States and Councils may not believe they are sufficiently involved in decision-making and data needs may focus on Federally managed species
- Regional conduct of R&D may result in duplication and lack of cost effectiveness.
- Creates additional administrative burden for regional staff.
- Loss of benefits of centralized approach.
- Methods not certified by MRIP may be selected. This is inconsistent with MRIP's approach and with the NRC recommendation for national coordination of survey methods.
- MRIP messaging may be inconsistent across the country. This could cause public mistrust of the program and a reluctance to participate in data collection.

Option IIB – Regional Fishery Information Network Operations

OST advances funds to Regional FINs where all aspects of survey operations are carried out for the affected region.

Pros:

- All regional partners are involved in operations, building support and assuring that Regional specifications for data needs for stock assessment, management application and outreach are satisfied.
- States may be more likely to contribute in-kind resources to enhance operations.

Cons:

- Loss of benefits of centralized approach
- Methods not certified by MRIP may be selected. This is inconsistent with MRIP's approach and with the NRC recommendation for national coordination of survey methods.
- MRIP messaging may be inconsistent across the country. This could cause public mistrust of the program and a reluctance to participate in data collection.

Option IIC – State Operations

OST advances funds to individual States, each of which will assume responsibility for survey operations.

Pros:

- States may be more likely to contribute in-kind resources to enhance operations.
- Outreach messaging can be tailored to each state's needs.

Cons:

- Multiple designs and inconsistent approaches to data collection, quality control and data accessibility and management in a region may occur and result in loss of utility to regional stock assessments and management application.
- Needs of Councils, NMFS regions and science centers may not be sufficiently addressed.
- Creates significant administrative burden to oversee individual state grants.
- Methods not certified by MRIP may be selected. This is inconsistent with MRIP's approach and with the NRC recommendation for national coordination of survey methods.
- MRIP messaging may be inconsistent across the country. This could cause public mistrust of the program and a reluctance to participate in data collection.

Model III - Distributed with Centralized Guidelines

Option IIIA – Centralized R&D

OST would retain primary responsibility for scientific development of methods and certification of new methods. Remaining components of program would be distributed.

Pros:

- Would assure consistency in decision-making standards and peer review methods used to certify methods, creating a strong scientific base for certified survey designs.
- R&D could be managed to assure cost effectiveness and lack of redundancy.
- Would achieve benefits of distributed operational components of program.

Cons:

- Loss of benefits of centralized approach.
- Some regional R&D needs may not be met.
- Potential inconsistency in QA/QC, information management.
- Creates additional administrative burden for staff responsible for completing operational requirements.

Option IIIB – Centralized Standards

In addition to research and development and certification, OST (via MRIP) would also establish national standards or best practices for survey operations (e.g. for QA/QC, information management). Funding would be contingent upon adherence to standards.

Pros:

- NMFS would have assurance that survey funding would be used consistent with a set of national standards that assure: effective QA/QC; database documentation, management and accessibility; survey coverage and production of basic recreational statistics for national-level (e.g. FUS) needs.
- Regional partners could select survey designs and choose options for supplemental coverage, timeliness and precision that best fit the region's needs.
- May get greater support for regional partner investment.
- Ensure compliance with, NMFS, NOAA, DOC and OMB information management policies.

Cons:

- Loss of benefits of centralized approach.
- May be less efficient and less cost-effective than centralized approach.
- May lead to some inconsistencies in data collection, and data composition and availability, which could create public perception problems and difficulties for assessing and managing trans-boundary stocks.

Model IV - Ad Hoc Approach

Provide for different combinations of options in different regions, based on the program management infrastructure present, and the details of regional partner contributions to funding and operations. For example, Option IIB may be workable in many Regions, but not in Regions that do not have functional Recreational FINs.

Pros:

- Provides flexibility for sub-regions that don't fit well into a current FIN model or where resources are insufficient to complete operational requirements.
- Most similar to current structure for fulfilling operational requirements of NMFS funded surveys.

Cons:

- May complicate centralized documentation of data collection designs and compilation of national-level statistics.