TESTIMONY OF
MICHAEL SISSENWINE, PH.D.
CHIEF SCIENCE ADVISOR
NATIONAL MARINE FISHERIES SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

ON

DATA PROGRAMS FOR FISHERIES MANAGEMENT PURPOSES

BEFORE THE
SUBCOMMITTEE ON FISHERIES CONSERVATION, WILDLIFE AND OCEANS
COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

JUNE 16, 2004

Mr. Chairman and Members of the Subcommittee, I am Dr. Michael Sissenwine, Director of Scientific Programs and Chief Science Advisor at the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries). Thank you for inviting me to testify on the data collection programs that this Agency uses to support fisheries management at home and abroad.

NOAA Fisheries is a science-based agency. We maintain full service science centers with scientists, who, in many cases, are world-renowned in their field. Our scientists conduct monitoring and assessment programs to provide sound science to decision-makers and carry out strategic research as a long-term investment for improving our capability for conducting research in the future. Our goal is to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach. As such, NOAA Fisheries is entrusted with ensuring the health, productivity, and diversity of our Nation's ecologically and culturally valuable living marine resources. At the same time, NOAA Fisheries provides opportunities for maximizing the benefits of these resources to all Americans, balancing multiple needs and interests.

Producing the Best Science

Management of living marine resources is a complex enterprise requiring a reliable flow of high quality data. Collection, analysis, and integration of these data is fundamental to our mission. NOAA Fisheries is committed to carrying out both short and long-term research and monitoring efforts to ensure that the right data, collected using the right methods or protocols and at the appropriate sample sizes, are available to support management decisions. To ensure that management decisions are based on sound science, NOAA Fisheries undertakes rigorous quality assurance programs on our data and data collection systems. NOAA Fisheries uses standardized survey methodology to collect fishery-independent time series data, based on peer-reviewed protocols. Our programs also benefit from periodic, independent studies conducted by the National Research Council.

NOAA Fisheries also established the Center for Independent Experts to conduct independent peer reviews of our science products used for fisheries management. Under a competitive contract, the University of Miami manages a pool of experts composed of independent (non-NOAA Fisheries) members having the requisite technical and scientific expertise to provide impartial and comprehensive reviews and advice. The Center for Independent Experts has conducted 69 reviews since its inception. NOAA Fisheries has also established the Fisheries Assessment Computational Toolbox to develop standardized and validated software for conducting stock assessments, including modules for data input, formatting and error checking, and exploratory data analyses for a series of assessment approaches. I believe that through the use of peer review and other quality control processes, NOAA Fisheries' science and, in turn, decisions that affect our Nation, have benefited greatly.

Challenges of Meeting Data Needs

Changes in management approaches often require commensurate changes in how we must approach the science that supports management decisions. This is because as management decisions become more complex, managers ask new questions of existing data and call for new data to be generated. Constant

collaboration and communication between our management and science bodies and with our constituents is crucial to ensure that information requirements for management are met. Mechanisms for these exchanges include the Fishery Management Council process, as well as national meetings such as the recent Managing Our Nation's Fisheries conference, co-hosted by the Fisheries Management Councils and NOAA Fisheries in November 2003. With respect to recreational fisheries data, NOAA Fisheries recently held a Constituent Data Review workshop, attended by approximately 40 representatives from the recreational fishing industry, states, and interstate commissions. Discussions were productive, and we plan to make the workshop a regular event.

All federal government data collection systems and the data themselves are under close scrutiny by our constituents and management partners, and rightly so — there is a lot at stake. NOAA Fisheries responds to questions on a regular basis from members of the public, industry organizations, states, interstate commissions, environmental NGOs and members of Congress. We welcome these useful exchanges to ensure that our data are up to the task.

As members of the Subcommittee are well aware, fisheries management decisions can be particularly contentious. Recreational fisheries are no exception, and NOAA Fisheries data collection programs are frequently called into question. Controversy can be exacerbated when the data needs of managers exceed the ability of scientists to deliver data of the magnitude, precision, and timeliness necessary for decision-making, given the nature of the recreational fisheries and budget constraints. In addition, infrequent, but nevertheless problematic, lapses in quality assurance mechanisms can occur. While we believe our recreational fisheries data collection programs are generally sound and serve many important needs, we are also well aware that as these programs are carried out, problems can and do arise, and they must be corrected. To that end, we are taking a number of steps.

First, in order to provide further assurance that the current data collection and estimation methods are suitable for decision-making, NOAA Fisheries has asked the National Research Council to conduct a critical review of all the current recreational data collection methods, including evaluating the usefulness of different approaches for supporting different fishery types and different specific fishery management strategies. NOAA Fisheries will use these recommendations to determine and initiate improvements in the current methods and to facilitate more effective use of the resulting catch and effort statistics in fisheries management. Second, NOAA Fisheries will conduct a systematic review of existing quality assurance protocols to evaluate their adequacy. We will examine best practices in government and the private sector as models for improvements to our system. Third, constituent involvement in advisory roles for the data collection programs will be enhanced. We will hold regular constituent data reviews of recreational data to obtain input on the data and recommendations for improvement. Constituent outreach and education efforts will also be enhanced to build informed partnerships. I believe that taking these steps will position NOAA Fisheries' recreational fisheries data collection programs to better serve decision-makers and the American people.

NOAA Fisheries carries out a variety of research and monitoring programs that collect large quantities of data ? from onboard observer programs to fish and marine mammal surveys, from economic and social science data collection to fish stock abundance surveys. Because of the sheer volume of data collection programs at NOAA Fisheries, I will highlight only the programs that I believe are of particular interest to the Subcommittee, notably recreational fisheries data. I would be more than happy to provide you with detailed information on any of our existing programs.

National and Regional Fisheries Information Networks

To better inform the Subcommittee about our data collection programs, I offer the following overview of some of the key national and regional fisheries information management networks, as well as fishery-dependent and fishery-independent data collection programs. Sound fisheries management depends on several types of data, including fishery dependent data (i.e., information on fishing activity and performance), fishery independent data (i.e., surveys of abundance, distribution, and biological characteristics of fishery resource species), and ecosystem data. Collection of fishery dependent data must be tailored to the diverse nature of commercial and recreational fisheries. It also must involve partnerships between the fishing industry and many Agencies with a stake in fisheries management. Thus, these data collection programs vary regionally and between fisheries.

NOAA Fisheries supports a number of regional fisheries information systems that coordinate data collections, data management, and data dissemination among NOAA Fisheries, interstate commissions, state agencies, and regional councils. These programs (described below) were developed to provide a common framework for the monitoring and management of fisheries statistics needed to support both resource assessments and regional management strategies. NOAA Fisheries is developing a national Fisheries Information System (FIS) by building links for effective information sharing among these regional programs. FIS is an overarching program linking the existing regional fisheries information systems. This national system provides a context for the design, development, and implementation of data collection and data management for fishery dependent statistics nationwide. FIS will provide a portal that identifies the

existing federal and state fisheries information systems or databases and provides integrated business solutions for effective information sharing. FIS will also support fisheries management decisions by developing a virtual application environment and providing integrated business solutions and data sources in web browser interface. NOAA Fisheries also works with its partners to support the development of methodological and technological enhancements. These enhancements will greatly improve the quantity and the quality of all aspects on commercial and recreational fisheries data.

The regional information programs work cooperatively to determine appropriate data collection methods for effective monitoring of commercial and recreational fishery harvests. These regional programs are integrated to comprise comprehensive regional monitoring programs that support the data and statistical needs for stock assessments and fisheries management by all of the partners. Data are gathered, audited, and edited by one or more of the partners using rigorous quality control protocols. Partners participate in regularly scheduled reviews of data and/or preliminary catch and effort statistics to identify and resolve possible problems. Once data have been finalized by consensus, final catch and effort statistics are generated and integrated into the regional information system, where they can be accessed by stock assessment scientists and fishery managers. Statistics generated by the different recreational fishery surveys are segregated by state, fishing mode (shore, private/rental boat, charter boat, and/or party/headboat), fishing area, and time period. Stock assessment scientists and fishery managers have the ability to combine the statistics geographically, temporally, and spatially in different ways to support their analyses for different species or fishery segments.

Some of these regional programs include: the Atlantic Coastal Cooperative Statistics Program, Gulf of Mexico Fisheries Information Network, Pacific Recreational Fisheries Information Network, Pacific Fisheries Information Network, and Alaska Fisheries Information System. Brief descriptions of each follow.

Atlantic Coastal Cooperative Statistics Program (ACCSP)

The 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 management system that will meet the needs of fishery managers, scientists, and fishermen on the East Coast. The ACCSP is currently funded annually at $3.5M by two line items in the Congressional Budget. The “Fish Statistics – Atlantic States Marine Fisheries Commission” line item provides $2M, and the “Interstate Fish Commissions – Atlantic Cooperative Management” line item provides an additional $1.5M. ACCSP partners include NOAA Fisheries, the U.S. Fish and Wildlife Service (FWS), the Atlantic States Marine Fisheries Commission (ASMFC), and the marine fishery agencies of 15 Atlantic states.

Gulf of Mexico Fisheries Information Network (GulfFIN)

GulfFIN is a state-federal cooperative program for the collection, management, and dissemination of statistical data and information on fisheries in Texas through Florida. The GulfFIN is currently funded annually at about $4.2M by two line items in the Congressional Budget. The GulfFIN line item provides $3.5M, and the remainder is provided by the “Recreational Fishery Harvest Monitoring / Recreational Fisheries Information Network” (RecFIN) line item. Participating agencies include NOAA Fisheries, the Gulf States Marine Fisheries Commission (GSMFC), the FWS, the National Park Service (NPS), the Caribbean Fishery Management Council, the Gulf of Mexico Fishery Management Council, and the marine fishery agencies of Alabama, Florida, Louisiana, Mississippi, Puerto Rico, Texas, and the U.S. Virgin Islands.

Pacific Recreational Fisheries Information Network (Pacific RecFIN)

Pacific RecFIN is a state-federal cooperative program to coordinate collection, management, and dissemination of Pacific coast marine recreational fishery data. The Pacific RecFIN has been funded annually at $2.2M by as many as three line items in the Congressional Budget. In FY04, funding was provided by the RecFIN line item, the “Expand Stock Assessments – Improve Data Collections” line item, and the “Fish Statistics – National Fisheries Information System” line item. Participating agencies include NOAA Fisheries, the Pacific States Marine Fisheries Commission, and the state marine fishery management agencies of California, Oregon, and Washington.

Pacific Fisheries Information Network (PACFIN)

PACFIN is a state-federal cooperative program to coordinate collection, management, and dissemination of Pacific coast marine commercial fishery data. PACFIN is currently funded annually at $3M by its own line item in the Congressional Budget. Participating agencies include NOAA Fisheries, the Pacific States Marine Fisheries Commission, and the state marine fishery management agencies of California, Oregon, Washington, and Alaska.

Alaska Fisheries Information System (AKFIN)

AKFIN is a cooperative program involving PSMFC, ADFG, the Commercial Fisheries Entry Commission (CFEC), the North Pacific Fisheries Management Council (NPFMC), and NOAA Fisheries. AKFIN is currently funded annually at $3.2M by its own line item in the Congressional Budget. AKFIN supports the collection, entry, transfer, analysis, and management of Alaska fishery information.

Specialized Fishery-Dependent Data Collection Programs

NOAA Fisheries supports and conducts a number of data collection programs to monitor commercial and recreational fishery harvests in each region. The data collected by these programs are critical for supporting both stock assessments and fisheries management. Fisheries management is also dependent on several data collection programs lead for State agencies. These State programs are included in our description in order to be comprehensive.

Recreational Fishery Data Collection Programs

NOAA Fisheries supports or conducts various data collections to satisfy the recreational fishery monitoring requirements of the different regional fisheries information systems, as well as requirements for its own effective monitoring of recreational fishery harvests of highly migratory species. The Agency supports a variety of different surveys in collaboration with ACCSP, GulfFIN, and Pacific RecFIN.

On the Atlantic coast, the current survey program endorsed by ACCSP uses the Marine Recreational Fishery Statistics Survey (MRFSS) to monitor shore and private/rental boat fishing and the For-Hire Survey (FHS) to monitor fishing on charter boats and party/headboats. The MRFSS and FHS are briefly described in separate sections below. The catch and effort statistics generated by the MRFSS and FHS are integrated into the ACCSP and national information systems where they are readily available to both stock assessment scientists and fisheries managers.

On the Gulf coast, the current survey program endorsed by GulfFIN uses the MRFSS to monitor shore and private/rental boat fishing, the FHS to monitor fishing on charter boats in Louisiana through Florida and on offshore charter boats in Texas, and the NOAA Fisheries Southeast Headboat Survey (SEHS) to monitor fishing on party/headboats. GulfFIN plans to start using the FHS to cover party/headboat fishing in 2005. The SEHS is a mandatory logbook survey that includes dockside biological sampling to obtain weight/length data and samples for aging analyses. Texas Parks and Wildlife conducts its own surveys to monitor recreational fishing on private boats and nearshore for-hire boats. The catch and effort statistics generated by the MRFSS and FHS, EHS are integrated into the GulfFIN and National information systems where they are readily available to both stock assessment scientists and fisheries managers. Work is ongoing to also include the SEHS and Texas statistics into these information systems.

On the Pacific coast, the Pacific RecFIN currently supports a variety of state surveys to monitor marine recreational fishing in Washington, Oregon, and California. The Pacific RecFIN developed new data collection methods designed to meet the Pacific Fishery Management Council's needs for in-season quota monitoring of recreational fisheries. The Washington Department of Fish and Wildlife conducts (1) the Ocean Sampling Program to monitor private/rental and for-hire boat fishing along the Washington Pacific coast, (2) the Puget Sound Sampling Program to monitor shore and boat fishing in Puget Sound, and (3) mandatory catch card surveys of salmon and halibut landings in Puget Sound. The OSP design is based on an on-site, entrance count survey of effort and a port-based, access-point intercept survey that collects catch per unit effort data from boat operators. The Puget Sound Sampling Program includes a license-based, angler directory telephone survey of fishing effort, a boat directory telephone survey of for-hire boat fishing effort, and an access-point intercept survey to collect catch per unit effort data from boat operators. The Oregon Department of Fish and Wildlife conducts (1) the Ocean Recreational Boat Survey (ORBS) to monitor private and charter boat fishing in the Pacific Ocean and (2) the Shore and Estuarine Boat Survey (SEBS) to monitor shore and inland boat fishing. The ORBS is based on an on-site, exit count survey of fishing effort and a port-based, access-point intercept survey that collects catch per unit effort data from boat operators. The SEBS includes a license-based, angler directory telephone survey of fishing effort and an access-point intercept survey for catch per unit effort data. The California Department of Fish and Game is implementing a new California Recreational Fishery Survey (CRFS) Program to monitor its marine recreational fisheries. The CRFS covers for-hire boat fishing with the same FHS design used on the Atlantic and Gulf coasts, and it covers private/rental boat fishing in the Pacific Ocean with a survey design that includes an on-site survey of effort and an access-point intercept survey for catch per unit effort data. Other survey methods include a license-based angler directory telephone survey of effort, an on-site survey of pier/dock fishing, and access-point intercept surveys to collect catch per unit effort data from angler or boat operators.

NOAA Fisheries works with the Hawaii Department of Aquatic Resources to monitor shore and private boat fishing with the MRFSS and for-hire boat fishing with the FHS. In addition, the Agency works with the Commonwealth of Puerto Rico to conduct the MRFSS to cover all marine recreational fishing. Current plans are to extend the MRFSS to the U.S. Virgin Islands and to implement the FHS in both Puerto Rico and U.S. Virgin Islands as soon as funding allows.

Marine Recreational Fisheries Statistics Survey (MRFSS)

The MRFSS design generates independent estimates of effort and catch through two separate survey components — a bimonthly, household telephone survey and a continuous on-site, access-point intercept survey of angler fishing trips. The telephone survey uses standard random-digit-dialing methods to collect fishing effort data from coastal household residents. The intercept survey collects residence location, phone ownership, and catch data from anglers who have just completed fishing, as well as an effort adjustment factor to account for trips by anglers not covered by the telephone survey. The total number of fishing trips made by residents of coastal zone households from the telephone survey is combined with mean catch rates from the dockside survey to calculate total estimated catch, stratified by mode (shore and private/rental boats), state, fishing area, and two-month wave.

For-Hire Survey (FHS)

The FHS employs a design almost identical to that of the MRFSS, except that the FHS telephone survey uses a directory of charter boats and/or party/headboats as its sampling frame rather than a random-digit-dial survey of households. This new survey design provides much more efficient coverage of for-hire boat fishing effort than the MRFSS design, and resulting estimates of effort and catch are considerably more precise. Weekly, independent samples of boats are selected at random, and the operators of those boats are contacted to collect information on the number of boat trips and the number of anglers who fished. An intercept survey similar to the MRFSS collects the data needed to estimate mean catch per angler trip, as well as an effort adjustment factor to account for angler trips on boats not covered by the telephone survey. In addition, a dockside survey of boat slips is used to validate the phone-reported effort data and estimate appropriate corrections, while a representative sample of headboat trips is selected for at-sea data collection to get better information on catch that is released alive. Again, total effort (now boat trips) and estimated mean catch per trip are used to calculate the total catch of any one species, stratified by mode (charter and party/headboat), state, fishing area, and two-month wave mode.

NOAA Fisheries also supports or conducts other more specialized surveys to monitor recreational fishery harvests of highly migratory species (HMS). The Agency conducts (1) the Large Pelagics Survey (LPS) to monitor recreational fishery harvests of large pelagic species in Virginia through Maine, (2) the Recreational Billfish Survey (RBS) to monitor tournament catches of billfish species, (3) the Catch Card Surveys in Maryland and North Carolina to monitor recreational fishery landings of bluefin tuna and billfish species, and (4) the Automated Landings Report System (ALRS) to monitor landings of bluefin tuna and billfish species in other states. The LPS is described in a separate section below. The RBS is a mandatory reporting program used to monitor tournament fishing directed at marlins and sailfish, and it covers the Atlantic coast, Gulf coast, U.S. Caribbean, and the Bahamas. The Catch Card Surveys are also used to monitor recreational landings of bluefin tuna, swordfish, and billfish. Compliance rates for the Catch Card Surveys have been much higher than those for the ALRS. These surveys provide catch and effort statistics needed to support both the international management of HMS fisheries by the International Congress for the Conservation of Atlantic Tunas (ICCAT) and the Agency's domestic management of HMS fisheries.

Large Pelagics Survey (LPS)

NOAA Fisheries conducts an LPS to estimate annual recreational rod-and-reel catches of large pelagic species, especially school and medium size bluefin tuna. The LPS design includes two independent surveys — a telephone survey of permit holders and an access-point intercept survey of returning offshore boat trips that were directed at large pelagic species. The LPS has traditionally been conducted from June through October in Virginia through Maine. The telephone and intercept surveys are stratified to conduct separate surveys of fishing on for-hire boats (boats with the HMS charter/headboat permit) and on private boats (boats with the Angling HMS permit or the General Atlantic Tunas permit). The telephone surveys are used to collect the effort data needed to estimate the total number of large pelagic fishing trips made by permitted boats. The intercept survey data are used to estimate mean catch rates, as well as an effort adjustment factor that can be used to account for trips by boats not included in the telephone survey sampling frames.

Commercial Fishery Data Collection Programs

NOAA Fisheries also collects data from commercial fisheries. These data are vital to sound management choices and come from a wide variety of programs. For example, NOAA Fisheries uses permit data systems to register vessel owners, vessel operators, fishing vessels, fish dealers, and processors. Data collected about fishing vessels, fishery participants, dealer operations, and processor operations all work in concert in NOAA Fisheries' electronic database systems to improve the processing and issuing of fishery permits.

Dealer Reporting Systems

NOAA Fisheries works with state agencies to collect information on the quantity and value of seafood products that are sold at established wholesale and retail seafood dealers. Data include the date a product

is purchased, port landed, the vessel name and number, the dealer's name, address, signature, and permit number plus the pounds and value of each species purchased by market category.

Vessel Trip Reporting Programs

NOAA Fisheries conducts a number of mandatory trip reporting programs that require commercial fishing vessel operators to complete logbook records for each vessel trip. Most vessel trip reporting programs are designed to capture area and effort information and to augment the landings data collected on dealer reports. Vessel operators are asked to report the quantity of fish caught or landed, the types and quantity of gear used, the amount of fishing effort and the specific area where the fishing occurred.

The catch information obtained in trip reports can be used to validate the information reported by dealers and serves to document historical participation for vessel owners. The vessel trip reports are used by federal and state agencies, as well as the industry, to assess catch per unit effort, and the potential and actual impacts of management actions on fishing effort. The Agency is planning to develop electronic vessel reporting systems. Since all data reported in vessel logbooks are self-reported, the Agency is working toward developing survey methods for the effective validation of information provided by the vessel operators.

Biological Sampling Programs

NOAA Fisheries conducts a number of regional biological sampling programs to fulfill the requests and needs of stock assessment scientists. Biological sampling from fish houses, piers, and off-loading commercial vessels are used to supplement catch and effort data for use in stock assessments. In some regions, NOAA Fisheries is testing electronic sampling methods that allow the samplers to gather biological data on field computers and seamlessly transfer acquired data via the internet, to all end users, for immediate use.

Vessel Monitoring Systems and Days-at-Sea Reporting

NOAA Fisheries also takes advantage of Vessel Monitoring Systems to gather daily landings, discards, and bycatch of selected species in some commercial fisheries. Days-at-Sea Reporting Systems provide fishery managers with information related to fishing effort and latent capacity by requiring up-to-date reporting of days at sea for certain regulated commercial fisheries.

Observer Programs

Observers provide the most reliable source of high quality, objective, fishery-dependent data on the non-landed portion of the catch. Observers provide information on all aspects of fishing operations, including total removal levels of catch and bycatch, biological samples and weights and measurements for life history, temporal and spatial fishing strategies, and data on fish loss and, in some cases, operating costs. In the last three years, NOAA Fisheries has significantly increased the quality and quantity of catch and bycatch monitoring efforts using at-sea observers.

Economics and Social Sciences Program

NOAA Fisheries conducts its Economics and Social Sciences Program to support effective management of the Nation's living marine resources by assessing the cost and benefits of proposed management actions and existing policies. The goal of this program is to identify management options that maximize benefits to stakeholders, while still achieving conservation goals. This results in a resource management strategy consistent with both the long-term sustainability of the Nation's fisheries, as well as the betterment of fishing communities that depend upon this resource for a livelihood and as a way of life. Economic, socio-cultural and community profiling data collections enable the Agency to meet executive order and legislative mandates for cost-benefit analysis of regulatory actions. In addition, economic values obtained by this program provide a useful benchmark for valuing NOAA Fisheries' stock rebuilding, protected species recovery, habitat restoration and recovery efforts, which can aid the Agency in evaluating existing programs and help ensure that our research and management agenda is consistent with societal values. Social and economic data are also collected on commercial, as well as recreational fisheries.

One such example is NOAA Fisheries' Community Profiling & Socio-cultural Data Collections.
To meet its obligations under National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act, NOAA Fisheries has implemented a data collection program for identifying and profiling fishing-dependent communities. The identification phase of the research is primarily being performed using secondary data (e.g., census data, federal and state fisheries landing data, and federal and state permit and license data), which are then validated by conducting more in-depth community profiles. Through the examination of these types of social and economic data, NOAA Fisheries will have a greater understanding of how our Nation's fisheries impact the public at-large.

Fishery-Independent Data Collection Programs

Another critical component of NOAA Fisheries' decision-making is fishery-independent data collection. For example, the size of a fish stock or its index of relative abundance must be known to determine how much of a stock can be harvested while ensuring its long-term sustainability. Ideally, these stock abundance surveys are conducted using standardized gear, vessels and temporal and spatial coverage to maximize the precision of trend analyses. Target species, habitat, and the life stages being surveyed all determine the most appropriate survey method and platform type to be used. NOAA Fisheries strives to ensure that standardized methods and other appropriate parameters are adequately considered and utilized in these surveys.

Conclusion

With such a wealth of physical, biological, as well as social and economic data, NOAA Fisheries is poised to be a leader in the future of meaningful fisheries management. To fill this role, NOAA Fisheries will continue to improve and better integrate its data collection programs. To meet the challenges ahead, we are moving toward a more comprehensive ecosystem approach to fisheries management. I believe that this is something we should and must do. We must be adaptive, take account of what we do and do not know, consider multiple external influences, and strive to balance diverse societal objectives. With each vessel survey we learn new lessons, we fine-tune, we adapt. With each passing year, we find ways to modernize and enhance data collection and their uses. I can assure you that NOAA Fisheries scientists will continue to improve and adapt recreational fisheries data collection systems to provide managers with the right information tools to meet the evolving needs of the American people. I look forward to working with Congress, my colleagues here today, and our broader constituency to make these efforts successful.

This concludes my testimony, Mr. Chairman. I will be happy to respond to any questions that you or members of the Subcommittee may have.