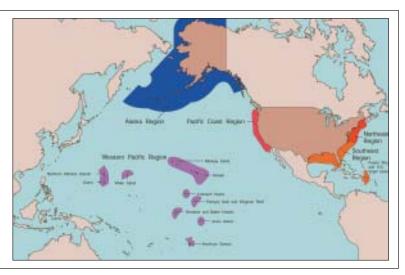
The United States Exclusive Economic Zone (EEZ) is the largest in the world, encompassing 1.7 times the area of the United States and its territorial land mass. Under the Magnuson-Stevens Fishery Conservation and Management Act, NOAA and regional fishery management councils. in association with several interstate marine fisheries commissions that have jurisdictions in state waters. manage fisheries within the U.S. EEZ.



B.4 National Marine Fisheries Service (NMFS)

The conservation and management, or "stewardship," of living marine resources in the United States is entrusted to NOAA's National Marine Fisheries Service (NMFS). Thus, the activities of NMFS combine a complex mix of research, regulatory, and enforcement functions, which are conducted under many laws, treaties, and legislative mandates.

Most of the living marine resources managed by NMFS occur within limited geographic ranges. Consequently, NMFS is organized on a regional basis—with oversight, review, and direction by NMFS Headquarters in Silver Spring, Maryland. The NMFS Headquarters includes offices in the following functional areas: sustainable fisheries, protected resources, habitat conservation, science and technology, law enforcement, and strategic planning and financial and information management. The field structure consists of five regional offices. Each office has a science center that conducts research and directs the work performed by other NMFS laboratories and special-purpose facilities in that region. Many activities—including research, data collection, analysis, and monitoring—are conducted by NMFS field elements at 63 locations nationwide.

Legal Mandates and NMFS

Direction for the research and other data-gathering programs conducted by NMFS is derived from numerous legal mandates, which determine the nature of NMFS biological and environmental management of programs. The majority of NMFS stewardship responsibilities come from the following statutes:

Magnuson-Stevens Fishery Conservation and Management Act

This law regulates fisheries within the U.S. Exclusive Economic Zone (typically extending from 3 to 200 nautical miles from shore) and establishes that fisheries shall be managed under a scientifically sound basis by the U.S. Secretary of Commerce through NMFS and eight regional fishery management councils. Presently, there are 39 approved and implemented fishery management plans, covering more than 800 species.

Examples of data types used in fishery management include catch statistics for Gulf of Maine cod from vessel logbooks and dockside dealer reports, shrimp-trawl surveys for the Gulf of Mexico, and hydroacoustic surveys of pollock stocks in the Gulf of Alaska and Bering Sea. An additional responsibility derived from the 1996 reauthorization of the Magnuson-Stevens Act is for NMFS to identify, describe, conserve, and enhance essential fish habitat, which is causing NMFS to collect and develop a new array of data and information on fish habitats.

STOCK ASSESSMENTS AND Monitoring **POPULATION MODEL SCENARIOS** and Fishery-dependent Data Fishery-independent Data Assessment Biological parameters Biological parameters Arena • Length frequency/ Spawning biomass length-weight Stock abundance • Fisheries catch-at-age • Recruitment predictors Indices of stock abundance (CPUE) Socio-Cultural Assessments **Economic Assessments** User group objectives Prices for Exvessel & Substitute Wealth maximization goods Imports/Exports Firm ownership Unit input costs (fuel, labor, etc) Historical participation in fisheries Vessel characteristics Multidisciplinary Approach to Management Recommendations Plan Team ndustry/Public Science & Advisory Panel Statistical Committee Fishery Council Management Arena Set Quota Quota Allocation

Flow of data in fisheries management. The process of fishery management is quite complex, involving the use of a wide range of data types.

Endangered Species Act (ESA)

The ESA protects species that are in danger of extinction. Under this act, NMFS is responsible for marine fish, marine mammals, and sea turtles. Accordingly, NMFS collects and analyzes data and information to determine whether a species qualifies for threatened or endangered status. If so, NMFS coordinates the development and implementation of a recovery plan for the species, and collects data to monitor Federal activities to ensure that the recovery of the endangered or threatened species is not hampered. Gulf sturgeon, nine runs of west coast salmon, northern right whale, and all six species of U.S. sea turtles are examples of marine species listed under the ESA. Many types of data are required for the listing process, as well as for monitoring the recovery progress for a listed species.

Marine Mammal Protection Act

This Act establishes that it is illegal to "harass, hunt, capture, or kill" any marine mammal including whales, dolphins, porpoises, seals, and sea lions. This act applies to all marine-mammal species, whether or not they are listed under the Endangered Species Act. The NMFS conducts aerial and shipboard marine-mammal surveys to

assess the status of stocks. Furthermore, NMFS conducts other research on feeding ecology, migratory movements, diseases, genetics, and interactions with human activities including fisheries, ship strikes, and whale watching. NMFS also issues annual permits to commercial fishers for the incidental taking or capturing of marine mammals during commercial fishing operations.

There are two other statutes that contribute significantly to defining the data types of the NMFS. The Fish and Wildlife Coordination Act authorizes the collection of fisheries data and coordination with other agencies for environmental decisions that affect living marine resources. The Federal Power Act provides concurrent responsibilities with the U.S. Fish and Wildlife Service for protecting aquatic habitats.

Increase in Data Load

More than 100 major data sets are routinely used by NMFS scientists, managers, and outside partners. The volume of these data sets now totals approximately 215 gigabytes. A conservative estimate is that the total volume of data housed at NMFS will more than double by FY2004 due to the addition of many more stocks being assessed, more species being listed under the Endangered Species Act, and the advent of ecosystem-based management. There will be a

corresponding increase in the use of these data and in the number of users, as well as a tremendous increase in the complexity of the processing to which these data are submitted.

VOLUME (GB) OF NMFS BIOLOGICAL DATA BY DATA TYPE 600 500 Gigabytes of Data 400 300 200 100 0 2002 2004 1999 2000 2001 2003 Year Socio-Economic Fisheries Statistics Environmental & Habitat Fisheries Management Protected Species Fisheries Biology

Data Rescue

Data rescue has been identified as an important need for NMFS. Data rescue may involve digitizing records on deteriorating physical media (e.g., commercial-vessel logbooks and old data sheets from fisheries-research vessels), acquisition of data sets that extend the data record back in time, transfer of digital data from obsolete to modern storage media, and cataloging and documenting such data sets.

Some transfer of NMFS data from deteriorating media has occurred. Recently rescued data sets include the critical sea-turtle data used to support Endangered Species Act decision-making, rare Russian fisheries data collected prior to passage of the Magnuson-Stevens Act, and certain historical commercial and recreational fisheries statistics and landings data.

Characterization of NMFS Digital Data

DATA TYPE	DATA SOURCE	SIZE (GB)		ALEXANDER OF MANAGEMENT	ATHEOREM PROPERTY.
		Current	Growth-Yr	ACCESS	METADATA
Fisheries Biology	NMFS research studies	90	18	х	х
Fisheries Management	Domestic and foreign public and private-sector agencies	40	8	x	х
Fisheries Statistics	Commercial and recreational fishing-industry statistics	35	7	х	х
Protected Species	Public & private sector-programs Statistics and Surveys	30	6	х	х
Environment & Habitat	Public & private sector-programs Statistics and Surveys	15	3	х	х
Socio-Economic	Commercial and recreational fishing-industry statistics	5	1	х	х

Integration of Needs and Information Technology Planning

Decision-makers require quick and easy access to comprehensive data and information, in order to identify and evaluate possible solutions to complex environmental issues. In recognition of this fact, NMFS is expanding its focus on data management, to preserve and update the approaches that have been effective, and to develop new approaches to better manage data.

NMFS continues to explore ways to improve user access to the data and information that NMFS collects, analyzes, archives, and disseminates. Use of Internet-related technologies and techniques will continue to increase. So, too, will the need to address issues such as security of the information, technology infrastructure, providing appropriate access to data sets, and standardization of the data set structure, so that relevant data sets from different sources can be readily identified, accessed, and analyzed together. Use of geographic information systems will increase dramatically as NMFS strives toward a holistic approach in analyzing spatial data from an ecosystem perspective.

NMFS continues to improve data stewardship. Subject to the limitations of available resources, NMFS is improving the documentation of its data sets by developing enhanced metadata. Where possible, metadata will comply with FGDC standards. In addition, NMFS is implementing strategies for archiving data that

comply with NOAA's and the National Archives and Records Administration's requirements. To address the internal challenges for improving data management and access, NMFS is implementing a principles-based "Enterprise Fisheries Information Technology Architecture." This approach provides an integrated framework for maintaining and evolving information technology (i.e., hardware and software) for achieving NOAA's strategic goals.

B.4.1 NORTHEAST FISHERIES SCIENCE CENTER (NEFSC)



The Northeast Fisheries Science Center, located at Woods Hole, Massachusetts, is a prominent participant in one of the most famous marine research communities in the world

The Northeast Fisheries Science Center (NEFSC) has facilities in Woods Hole, Massachusetts; Narragansett, Rhode Island; Milford, Connecticut; and Sandy Hook, New Jersey. NEFSC also supports staff at the National Systematics Laboratory that is housed at the Smithsonian Institution in Washington, D.C. Two NOAA ships (*Albatross IV* and *Delaware II*) are berthed at Woods Hole, Massachusetts. These two ships support the majority of the NEFSC's fishery surveys and research cruises.

NEFSC plans, develops, and manages a multidisciplinary program of basic and applied research to: (1) better understand living-marine resources of the Northeastern Continental Shelf Ecosystem (i.e., from the Gulf of Maine to Cape Hatteras), and habitat quality essential for their existence and continued productivity; and, (2) describe and provide to management (including the New England and Mid-Atlantic Fishery Management Councils), industry, and the public, options for the conservation and utilization of living marine resources, and options for the restoration and maintenance of marine-environmental quality. NEFSC's research includes:

- Analyzing data on fishery resources and the status and dynamics of their habitats; the ecological processes that control resource productivity, the performance of the fisheries, and other uses of the fishery resources. From these data collection efforts and analyses, NEFSC provides advice and information to fishery and habitat managers at the regional, national, and international levels.
- Evaluating economic and socio-cultural impacts of human interactions on fisheries, protected species, and marine habitats; increasing the understanding of the ecology, population dynamics, and anthropogenic impacts of marine mammal stocks (and other protected species) in the Northwest Atlantic.

National Marine Fisheries Service Data Sources

NOAA is involved in characterizing and mapping freshwater, estuarine, and marine species, communities, and their habitats. Data come from fishery-dependent and fishery-independent sources:

Fishery-Dependent

Fishery-dependent data are biological and socioeconomic fishery data observed or recorded in association with a directed effort of commercial, recreational, or subsistence fishers. Each network is based on a strong State-Federal partnership. Since the sources are diverse, they have been organized by region:

- Atlantic Coast Cooperative Statistics Program
- Gulf of Mexico Fisheries Information
- Pacific Fisheries Information Network
- Alaska Fisheries Information Network
- Western Pacific Fisheries Information Network

Fishery-Independent

These data monitoring systems are independent of recreational or commercial fishers. Scientists on fisheries research vessels obtain data through trawling and other fishing methods, as well as through indirect means (e.g., hydroacoustic surveys). Other monitoring systems include egg and larval surveys, and direct visual counts by aerial, scuba, and underwater-camera sleds. Data collected on protected species come from a range of sources including population surveys conducted from ships, airplanes, and fish ladders.



A trawl hauled aboard the NOAA fisheries research vessel Miller Freeman during a recent survey.



Another day of research on NOAA Ship Albatross IV.

- Developing technology for culturing over-exploited species and others amenable to aquaculture, improving existing aquaculture techniques and developing better broodstocks through genetics and bioengineering, enhancing hatchery techniques and the growth of high-value species, improving disease resistance and treatment, controlling reproduction, and evaluating habitat requirements of aquaculture species.
- Studying the reproductive activity and early life stages of living-marine resources that are generally most vulnerable to environmental variation, with the goal of predicting the effects of such variation on the composition, distribution, abundance, and production of fishery resources.
- Conducting taxonomic research on known and new species of fish, squids, crustaceans, and corals of economic or ecological importance to the United States; producing worldwide and regional taxonomic publications and identification guides.

B.4.2 SOUTHEAST FISHERIES SCIENCE CENTER (SEFSC)

The Southeast Fisheries Science Center (SEFSC) is located in Miami, Florida. Associated laboratories are located in Beaufort, North Carolina; Panama City, Florida; Pascagoula, Mississippi (with a field station at the Stennis Space Center); and Galveston, Texas (with a field station at Lafayette, Louisiana). Two NOAA ships (*Oregon II* and the *Gordon Gunter*) are assigned to fisheries research, and they are homeported in Pascagoula, Mississippi.

SEFSC is responsible for scientific research on the living-marine resources that occupy marine and estuarine habitats of the continental southeastern United States, as well as Puerto Rico and the U.S. Virgin Islands. SEFSC staff also prepare impact analyses and environmental assessments for the fishery management activities of NMFS (including support for international management activities, such as the International Commission for the Conservation of Atlantic Tunas) and three fishery management councils (South Atlantic, Gulf of Mexico, and Caribbean). SEFSC's research includes:

Assessing the status of managed fishery stocks, determining overfished conditions, and providing scientific input for the development of recovery plans and monitoring using state-of-the-art production, catch-at-age, and stock-recruitment models.

- Managing the Southeastern Area Monitoring and Assessment Program (SEAMAP) that involves Federal and State cooperation to collect, manage, and distribute fishery-independent data. At-sea data collected by research vessels are used to estimate distribution, abundance, and trends of fishery resources. SEAMAP is supported by all southern States, Puerto Rico, and the U.S. Virgin Islands, the Gulf and Atlantic States Marine Fisheries Commissions, the Gulf and South Atlantic Councils, and NMFS.
- Conducting gear-technology studies aimed at developing fishing devices to reduce bycatch of non-target species. These studies utilize gear experts, communication with the fishing industry, dive trips, and video to assimilate information on the types of gear and impact on the resources. SEFSC has been at the forefront in the development of the Turtle Excluder Device, and the SEFSC is pioneering the development, refinement, and certification of various Bycatch Reduction Devices.
- Identifying critical habitats and examining how they function for commercially and recreationally important fish, crabs, and shrimp; promoting and conducting habitat-restoration projects to compensate for the high rates of wetland loss in regional ecosystems.
- Directing the Cooperative Tagging Center (CTC). CTC responds to the recent expansion of tag, release, and recapture activities; data requests from other tagging agencies; and domestic and international tagging research needs. CTC is a joint research effort, by scientists and recreational and commercial fishermen, designed to provide information on the movements and biology of marine fish species in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea through the direct participation of the public in scientific research.
- Monitoring the migratory movements, habitat needs, and population dynamics of sea turtles, marine mammals, and other protected species in the Gulf of Mexico and the Atlantic Ocean through the Sea Turtle Ecology Program, Biodiversity Program, and the Marine Mammal Program. Also, the SEFSC determines the impact of any interactions between human activities and these species.
- Overseeing the removal of oil platforms in the Gulf of Mexico through the Oil Platform Ecology Program, and evaluating the impacts of these removals on fisheries and protected species.



Fishing gear experts evaluate the effectiveness of a turtle excluder device (TED) in action.

B.4.3 Southwest Fisheries Science Center (SWFSC)

The Southwest Fisheries Science Center (SWFSC) is located in La Jolla, California, and has three additional research laboratories located in Tiburon, California (being relocated to Santa Cruz, California); Pacific Grove, California; and Honolulu, Hawaii. The NOAA ships Townsend Cromwell (based at the Honolulu Laboratory) and the *David Starr Jordan* (which has San Diego, California, as its homeport) are the two research vessels assigned to support SWFSC's fisheries research.

SWFSC specializes in fisheries of the California Current, Pacific oceanic, and Antarctic regions. In the California Current system, SWFSC conducts research on the ecology and population dynamics of small coastal pelagic species, West Coast groundfish, billfish and tunas, and California salmon. SWFSC maintains and utilizes the largest database on tuna and tuna-related fisheries in the world.

SWFSC is considered the leader in survey design, conducting surveys to monitor early recruitment success of economically important fish stocks along the West Coast of the United States, using state-of-the-art survey methods developed by SWFSC. In the Pacific oceanic region, the SWFSC is the leading source of stock assessment expertise on tropical island and oceanic resources, especially bottomfish, lobster, tunas, and billfish. SWFSC's research includes:

- Assessing the biomass of Pacific groundfish and valuable coastal pelagic fish stocks and evaluating biological and environmental factors that affect their distribution. abundance, and survival; studying factors that affect the economics of fisheries supported by these fish; leading development and maintenance of economic databases within the Pacific Fisheries Information Network.
- Participating in the State-Federal California Cooperative Fisheries Investigations, a comprehensive long-term study of the biology and oceanography of the California Current.
- Providing information on the stock structure and dynamics, population abundance levels, distribution, and preferred habitat of Eastern Tropical Pacific dolphins, primarily off the coasts of Mexico and Central and South America; working with the Inter-American Tropical Tuna Commission in developing alternative fishing methods in the international yellowfin tuna fishery that will not affect dolphins; conducting studies on the distribution, abundance, and stock

- structure of dolphins, whales, and porpoises off the California continental shelf.
- Conducting research to support the management of California's valuable Coho and Chinook salmon resources, some of which are threatened or at low levels of abundance; contributing information used to set annual regulations for ocean salmon harvests from the Klamath and Sacramento River systems; conducting winter stream surveys of spawning adults and summer surveys of juveniles to determine the status of Coho salmon and steelhead populations in coastal streams, and determining the quality of stream and estuarine habitat for these fishes.
- Implementing the U.S. Antarctic Marine Living Resources Program. This program is mandated by the Antarctic Marine Living Resources Act of 1984. Research cruises organized by SWFSC staff obtain biological information to prevent the over-exploitation of fish and krill, and to protect seal, penguin, and pelagic seabird populations off the northernmost tip of the Antarctic Peninsula and South Georgia.
- Maintaining unique expertise in ocean climatology and access to ocean time-series databases and ocean index products, which SWFSC distributes to scientists worldwide for fisheries research applications.

B.4.4 Northwest Fisheries Science Center (NWFSC)

For more than 60 years, the Northwest Fisheries Science Center (NWFSC)—headquartered in Seattle, Washington—has been a focal point of marine fisheries research in the Pacific northwest. In addition to its headquarters near the University of Washington, NWFSC has five research stations located throughout Oregon and Washington. More than 250 scientists and support staff conduct applied research to resolve problems that threaten the northwest's and the Nation's vast wealth of living marine resources in our oceans and estuaries. Several small vessels are owned by NWFSC for conducting field studies in Puget Sound, Washington (RV *Harold Streeter*), and the Columbia River area (RV *Sea Otter*, RV *Nerka*, RV *Columbia*). NWFSC's research includes:

 Providing the scientific basis for decisions on conservation and recovery of severely declining Pacific salmon populations and on their designation under the Endangered



NOAA has completed its comprehensive scientific review of Chinook salmon along the entire West Coast. There are 15 distinct groups of evolutionary significant units. Several are currently classified as threatened or endangered.

- Species Act. Developing state-of-the-art genetics tools, electronic monitoring devices, and hatchery and captive-broodstock rearing techniques to help prevent species extinction and restore salmon stocks.
- Developing technology for guiding juvenile salmon safely past dams and reservoirs of the Columbia and Snake rivers during their migration to sea; investigating threats to their health and survival from disease and from in-stream habitat degradation, dredging and pollution in the lower Columbia River, estuaries, and nearshore habitats; and researching the impacts of global ocean change on Pacific salmonids.
- Assessing the health and abundance of the vast and valuable groundfish resource along the West Coast; investigating the impacts of wasteful bycatch in coastal fisheries; and developing new seafood technologies to more fully use bycatch species and reduce processing waste.
- Investigating how recent climate events (including El Niños) are impacting West Coast marine ecosystem; investigating how climate changes are altering predator-prey relationships and the availability of nutrients throughout the entire food web.
- Developing state-of-the-art techniques to detect and control dangerous biotoxins ("red" or "brown" tides) that cause fish mortalities and are suspected of causing marine mammal strandings and deaths, and may also endanger human health.
- Evaluating toxic-chemical pollution in critical marine habitats throughout the United States and associated disease and mortality in finfish, shellfish, and marine mammals; providing rapid assessments of injuries to marine life from catastrophic oil spills (such as *Exxon Valdez* in Alaska and *North Cape* in Rhode Island) and at Superfund sites such as Commencement Bay in Puget Sound.

Throughout the northwest, the NMFS and the public are evaluating the impacts of dams on salmon runs. This photograph shows the Sunbeam Dam in Idaho. It was constructed in 1910 and partially removed in 1934 to allow salmon upstream passage to spawning sites.



B.4.5 ALASKA FISHERIES SCIENCE CENTER (AFSC)

The Alaska Fisheries Science Center (AFSC) has facilities in Seattle, Washington; Newport, Oregon; Auke Bay, Alaska; and Kodiak, Alaska. The NOAA ships *Miller Freeman* and the *John N. Cobb*, supplemented by private charter vessels and foreign research vessels, support AFSC's at-sea fisheries-research activities. AFSC conducts fisheries research in coastal waters off Alaska and the West Coast of the United States. The Alaska region alone is nearly 3 million square miles and includes more than 50 percent of the United States coastline and more than 70 percent of the United States continental shelf.

The Gulf of Alaska and eastern Bering Sea support some of the most important and economically valuable commercial fisheries in the world, including groundfish, crabs, Pacific halibut, and Pacific salmon. These fisheries supply a myriad of industrial and food products to U.S. domestic and world markets. The fisheries also provide economic stability, employment, and trade opportunities to, among others, the remote villages and communities of rural coastal Alaska. These waters are also home to some of the world's largest populations of marine mammals and seabirds.

AFSC staff provides scientific data and technical advice to the Pacific and North Pacific fishery management councils, to U.S. representatives participating in international fishery negotiations, and to the fishing industry and its constituents. AFSC's research includes:

 Designing, implementing, and maintaining the Nation's largest fishery-dependent data collection program. This program includes databases from at-sea fishery observers,



This photograph of the NOAA Fisheries Research Vessel Miller Freeman was taken while the ship was conducting a fish survey on the Bering Sea for the Alaska Fisheries Science Center. NOAA fisheries research vessels, supplemented by chartered ships, spend more than 3000 days at sea per year collecting data to meet NOAA's living resource management data needs. This total is expected to nearly double in the next few years to meet the expanding responsibilities mandated by the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the Endangered Species Act.



Pollock, shown here being hauled in by a factory trawler, produces the largest catch of any single species in the U.S. Exclusive Economic Zone, averaging more than 1.1 million metric tons per year. Scientists from the Alaska Fisheries Science Center are working to minimize the potential impacts of this massive fishery on the highly endangered Steller sea lion.



Photo credit: Bob Wilson

- logbooks, and shoreside sampling. AFSC provides advice to constituents on all aspects of fishery-dependent data collection issues, including bycatch limitation, catch estimation, vessel monitoring, and electronic data reporting.
- Advising on the status of Steller sea lions, northern fur seals, and harbor seals; conducting research on the ecology, biology, and behavior of pinnipeds (e.g., ringed, ribbon, bearded, and spotted seals in the Arctic; crabeater, leopard, and Ross seals in the Antarctic) and the factors that influence the status and trends of these species; advising on the status of cetacean species including bowhead, beluga, gray, killer, and humpback whales.
- Analyzing data on fishery resources and the status and dynamics of their habitats, the ecological processes that control resource productivity, the performance of the fisheries, and other uses of fishery resources. From these data collection efforts and analyses, AFSC provides advice and information to fishery and habitat managers at the regional, national, and international levels. Also, AFSC provides advice to fishery managers on ecosystem impacts of alternative harvest policies. AFSC reports to Congress on the status of 100 species in the Gulf of Alaska, and 127 species in the Bering Sea and Aleutian Islands.
- Collecting and analyzing age and growth data of selected marine fish. AFSC also conducts research on advanced technology for improving age determinations of selected marine fish.
- Conducting trawl and longline surveys to assess the status, distribution, and abundance of groundfish and shellfish stocks; engaging in acoustic technology research for measuring stock abundance.
- Analyzing fishing gear performance, comparing new gear with standard survey gear, and studying fish behavior to reduce bycatch and bycatch mortality of prohibited, undersized, or unmarketable species.
- Collaborating with the Pacific Marine Environmental Laboratory (PMEL) of NOAA's Office of Oceanic and Atmospheric Research (OAR) and other research institutes under the aegis of Fisheries-Oceanography Coordinated Investigations. This project's goal is to gain a greater understanding of the influence of environmental variability on the abundance of various commercially valuable fish and shellfish stocks in Alaskan waters and on understanding their roles in the ecosystem.

- Evaluating impacts of human interactions on stocks of marine mammals and other protected species in the northern Pacific (including the West Coast and Gulf of Alaska) and the Bering Sea. AFSC provides advice to fisheries managers on reasonable and prudent alternatives to current harvest policies.
- Compiling economic and socio-economic data from commercial fisheries conducted in the EEZ off Alaska and the Pacific northwest. The AFSC analyzes and reports capacity, production, employment, and earnings statistics—as well as community impact information—in support of regional fisheries management and conservation.

B.4.6 REGIONAL OFFICES

The regional offices administer NMFS programs to manage living marine resources for optimum use. They represent the Assistant Administrator for Fisheries with other Federal, State, and private conservation agencies; commercial and recreational fishing industries and interests; consumers; other constituents; and the general public. The regional offices also conduct multidisciplinary research programs to provide scientific and technical information necessary to manage living marine resources and to support the information requirements and decision-making processes of fishery management councils. Operationally, regional offices are responsible for planning, organizing, and implementing programs for fishery management, resource allocations, and habit and protected species conservation. The regional offices administer grants and cooperative agreement programs; analyze trade and economic conditions and related opportunities and impacts associated with fishery management activities; implement programs to maintain robust habitats and stocks of living marine resources; coordinate State/ Federal cooperative programs with and among States, fishery management councils, marine fisheries commissions, and other Federal agencies.