Pacific States Marine Fisheries Commission

CONTREGON - MARKET

58th Annual Report 2005

PUBLISHED FOR THE CONGRESS OF THE UNITED STATES AND THE GOVERNORS AND LEGISLATURES OF WASHINGTON, OREGON, CALIFORNIA, ALASKA AND IDAHO

58TH ANNUAL REPORT OF THE PACIFIC STATES MARINE FISHERIES COMMISSION

To the Congress of the United States and the Governors and Legislatures of the Five Compacting States of Washington, Oregon, California, Idaho, and Alaska, by the Commissioners of the Pacific States Marine Fisheries Commission in Compliance with the State Enabling Acts Creating the Commission and Public Laws 232; 766; and 315 of the 80th; 87th; and 92nd Congresses of the United States Assenting Thereto.

> Respectfully submitted, **PACIFIC STATES MARINE FISHERIES COMMISSION** Randy Fisher, *Executive Director*

Headquarters

205 SE Spokane Street, Suite 100 Portland, Oregon 97202-6413 2005

2 Pacific States Marine Fisheries Commission, 58th Annual Report, 2005

COMMISSIONERS, ADVISORS AND COORDINATORS

State	Commissioners	Advisors	Coordinator
Alaska	Doug Mecum Stephanie Madsen Ben Stevens	Liz Cabrera Terry Johnson Don Lane Matthew Moir Gabe Sam	Herman Savikko
California	Lorris Ryan Broddrick LB Boydstun Thomas Harman	Robert Fletcher Jim Caito Donald K. Hansen Kate Wing Roger Thomas Mike McCorkle	Vacant
Idaho	Steve Huffaker George Eskridge Cameron Wheeler	Marcus Gibbs Alex Irby Wayne Wright	Sharon Kiefer
Oregon	Paul Heikkila Wayne Krieger Ed Bowles	Nick Furman Brad Pettinger Frank Warrens Rod Moore Liz Hamilton Bob Jacobson Steve Fick	Patty Burke
Washington	Dr. Jeff Koenings Harriet A. Spanel Jim Buck	Mark Cedergreen Marion Larkin Jim Lone Bill Robinson Irene Martin Lisa Pelly Terry Wright	Phil Anderson

SUMMARY OF PSMFC ANNUAL BUSINESS MEETING

August 24, 2005

The 58th Annual Meeting of the Pacific States Marine Fisheries Commission was held on August 22-24, 2005 in Girdwood, Alaska. Stephanie Madsen, Chair of the North Pacific Fishery Management Council, served as Chairperson.

During the August 24th business meeting, the Commission made decisions on the following issues:

Peer Review and Total Allowable Catch—The Commission agreed that there should be a process established by the eight regional fishery management councils (North Pacific, Pacific, Western Pacific, Gulf, South Atlantic, Mid-Atlantic, New England, and Caribbean) under the Magnuson Act for peer review of science information with the Councils to determine when that peer review process should be employed. The Commission agreed with the language to "establish after considering the recommendations of the Council's Scientific and Statistical Committee, total allowable catch that shall not be exceeded by a fishery". **Vote: 5-0**.

Training for Council Members—The Commission supported the staff draft's requirement to establish a training program for Council Members; that it be mandatory; but that a member is not precluded from voting if that training is not immediately available. **Vote: 5-0**.

NEPA Sufficient Process—The Commission supported the Council Chairs' position on the NEPA sufficient process. **Vote: 4-1, with California voting no**.

Ecosystem Management—The Commission supported the concept of ecosystem management, but agreed with the Council Chairs position that it need not be included in the Act. **Vote: 5-0**.

Cooperative Research Program—The Commission supported the Cooperative Research Program as outlined in the Stevens Staff Draft and supported the focus on fisheries industry participation; but seeks a clarification that NGOs would not be excluded from being partners and that Treaty Tribal managers would be included. **Vote 5-0**.

Bycatch Reduction Program—The Commission supported the Bycatch Reduction Program but noted that it should be developed in a 12-month timeframe rather than a six-month timeframe. **Vote: 5-0**.

Cooperative Enforcement Program—The Commission supported the Cooperative Enforcement Program elements in the draft, but suggested that all states, including Idaho, should be represented on regional fishery management councils and Treaty Tribal entities should be included so they will receive information. **Vote: 5-0**.

Overfishing and Rebuilding Time Line—The Commission supported the Council Chairs' recommendation on overfishing, but noted that the rebuilding plan should be part of the effort to end overfishing in one year. **Vote: 5-0**.

Limited Access Programs—The Commission supported the Stevens Staff Draft on Limited Access Programs that allow all the tools to be available to the regional fishery management councils, but urges that the details of how those tools will be applied and other criteria will be handled at the regional fishery management councils. **Vote: 4-1 with Oregon voting no.**

Data Reporting and Confidentiality—On the data reporting portion, the Commission supported expanded authority for collection of data at the regional fishery management council level. The Commission supported the need for strong confidentiality standards and protections. **Vote: 5-0**.

Marine Mammal Protection Act Amendments—The Commission supported the proposed amendments to the Marine Mammal Protection Act on research for non-lethal deterrents and gear development programs. **Vote: 5-0**.

Management Authority and the Regional Councils—The Commission supported amending both the Magnuson-Stevens Act and the National Marine Sanctuary Act to insure that management authority for fish shall be under the jurisdiction of the regional fishery management councils. **Vote: 5-0**.

State Management of Dungeness Crab—The Commission supported the continuation of authority for the states to manage Dungeness Crab. **Vote: 5-0**.

Aquaculture Legislation—The Commission voted not to support the current version of the Administration's Aquaculture bill and leave it up to the individual states to address their specific concerns. **Vote: 5-0**.

State vs. Federal Management of Dungeness Crab—The Commission supported clarifying the issue of State versus Federal jurisdiction under state management authority for Dungeness crab in the Magnuson-Stevens Act Reauthorization. **Vote: 5-0**.

Robust Marine Mammal Species and Predation Monitoring—The Commission voted to support the restoration of program funding for West Coast "Robust Marine Mammal Species/Predation Monitoring". **Vote: 5-0**.

Fish Passage Center Funding—The Commission supported full funding for the Fish Passage Center and asked staff to send a letter as soon as possible to the Congressional delegation and the Energy Appropriations Subcommittee stating the Commission's support. **Vote: 5-0**.

PacFIN and RecFIN Funding—The Commission supported seeking increases in both PacFIN and RecFIN program funding, but asked that AKFIN also be mentioned to recognize that it is one of the programs. **Vote: 5-0**.

Reconciliation of Federal Statutes—The Commission supported seeking reconciliation of the Magnuson-Stevens Act, the National Environmental Policy Act, and the Administrative Procedures Act, etc., in the interest of a more efficient process. **Vote: 5-0**.

Natural Impacts and Overfishing—The Commission supported seeking to change the definition of overfishing to acknowledge that stocks are depressed for a number of reasons, including natural and human-induced impacts. **Vote: 5-0**.

Federal Funding of VMS (Vessel Monitoring System) and GMDSS (Global Maritime Distress and Safety System)—The Commission supported federal funding of VMS, as proposed by Alaska, and stated that it should be up to the regional fishery management councils to determine when and where VMS is used. **Vote: 5-0**.

Mass Marking Plans—The Commission took no position on this issue and instead suggested that the individual states write letters to the Northwest region of the Fish and Wildlife Service requesting information about what has been done to date on mass marking and how funds will be prioritized to meet the objectives of the program. The Commission also asked staff to arrange for a presentation on mass marking from the Fish and Wildlife Service at the next PSMFC annual meeting.

Data Quality Act and Management of Science—The Commission supported the staff draft—that the SSCs should be the peer review body to make determinations of the best available scientific information prior to Council decision-making. The SSC should provide the Council with assessments of the soundness of the scientific conclusions and the uncertainty of the science. Substantial amendments affecting policy would be appropriate for outside peer review authority. **Vote: 5-0**.

Idaho and the Cooperative Enforcement Agreement—The Commission supported language to allow Idaho to be eligible in the cooperative enforcement agreements. **Vote: 5-0**

Pacific Coastal Salmon Recovery Fund—The Commission supported clarifying the language to identify Idaho as a state currently involved in the PCSRF, but noted the importance of ensuring that the 1999 Agreement is retained as the basis for the program. **Vote: 5-0**.

Capital Construction Fund Reform—The Commission voted to continue support of the Capital Construction Fund reform. **Vote: 5-0**.

Mitchell Act Funding—The Commission voted for continued support of lobbying efforts to restore the current level of funding for the Mitchell Act hatcheries in FY 06. **Vote: 5-0**.

Oregon will be the host of the 59th Annual Meeting which will be held at the

Embassy Suites Portland, Oregon August 21-23, 2006

ANNUAL AWARD RECIPIENT

2005 PACIFIC STATES MARINE FISHERIES COMMISSION AWARD FOR CONTRIBUTIONS TO PACIFIC COAST FISHERIES

The Commission's 2005 Award for outstanding contributions in support of Pacific coastal marine fisheries resources was presented to:

Ted Stevens U.S. Senator

It gives the Pacific States Marine Fisheries Commission great pleasure to recognize the contributions of **Senator Ted Stevens** through this award for 2005.

ALASKA FISHERIES INFORMATION NETWORK

The Alaska Fisheries Information Network (AKFIN) provides a framework that consolidates and supports the collection, processing, analysis, and reporting of a variety of information important for management of North Pacific fisheries. Funding is provided by an annual grant award from National Marine Fisheries Service (NMFS) to the Pacific States Marine Fisheries Commission. These funds support an AKFIN Support Center (AKFIN-SC) and an annual subcontract with the Alaska Department of Fish and Game (ADFG) for related tasks.

The AKFIN-SC is a cooperative data program that maintains a fisheries information system composed of state and federal data for Alaska fisheries. Information is aggregated from the State of Alaska, Alaska Department of Fish and Game (ADFG), Commercial Fisheries Entry Commission, NMFS Alaska Region, Alaska Fisheries Science Center, North Pacific Fishery Management Council (NPFMC), and PSMFC.

In 2005, AKFIN-SC provided datasets/reports to the following organizations:

- **Fisheries of the U.S.:** A newly automated process that builds six data feeds, integrating data sources that are used for reporting on national fisheries statistics by state and federal waters, disposition, port of landing, and month.
- **Department of Labor:** A series of reports summarizing pounds, value, and permit information by fishery that are used to report Alaska fisheries labor statistics submitted in an annual report by the state.
- **Pacific Coast Fisheries Information Network:** A newly automated process that builds monthly summarized Alaska groundfish data provided to the Pacific Fisheries Information Network (PacFIN).
- North Pacific Fishery Management Council (NPFMC): Several value-added datasets supporting Council analysis that includes a new report on prohibited species harvest of halibut.
- **NMFS Alaska Region:** Several datasets supporting NMFS analyses for the Vessel Monitoring System, including the environmental assessment (EA)/initial regulatory flexibility analysis (IRFA) for the Total Allowable Catch Specifications for 2006/2007; small entities in the catcher/processor fleet; and several other analyses based on the new yearly vessel diversification dataset.
- **Oregon Department of Fisheries and Wildlife:** Several datasets summarizing pounds and value used to analyze harvest by Oregon-based vessels participating in the Alaska fisheries from 1998 2003.

In 2005, AKFIN-SC enhanced the following software:

- **Extraction Translation Load System:** Used to automate the collection and different versions of data from participating fisheries agencies. The ETL system was enhanced to improve usability and performance.
- **Analytical Domain Builder:** Used to populate an analytical database that contains consolidated fisheries data with built-in code translations, standardized code descriptions, and complex reporting rules. The domain builder was enhanced to facilitate reporting catch and gross revenues by vessel.

AQUATIC NUISANCE SPECIES

The Aquatic Nuisance Species (ANS) project works to prevent the spread of nuisance species through education, monitoring and research related to targeted nuisance species. In 2005, the Aquatic Nuisance Species prevention program employed a wide range of tactics to address the problems caused by several nuisance species, including zebra mussels, mitten crab, green crab, and Atlantic salmon.

ANS provided administrative support and staffing for numerous ANS inter-jurisdictional efforts, including the Columbia and Missouri River Basin 100th Meridian Initiative Groups, the Pacific Ballast Water Group, West Coast State Ballast Water Administrators, and Green Crab Technical Group. ANS staff also continued to provide ANS program support for the states of Idaho, Oregon and Montana.

ANS hosted an international ballast water workshop, "Evaluating Ballast Water Treatment Systems Onboard Ships: Technical and Scientific Approaches," in Portland, Oregon. The purpose of the workshop was to develop consensus recommendations for technical methods, experimental design, and key measures for full-scale, ship-board evaluation of ballast water treatment technology.

ANS conducted education and outreach work focusing on zebra mussels and mitten crab in the Missouri and Columbia River basins and California. Activities included distributing educational materials at sportsmen's shows (WA, OR, MT, CO, and UT), as well as through print and electronic media at boat ramps, marinas, schools, etc.

ANS continued to provide support for monitoring several nuisance species, including:

- Zebra mussels (Portland State University)
- Chinese mitten crab (Portland State University)
- Green crab (Oregon State University, University of California, Davis)
- Atlantic salmon (Washington Department of Fish and Wildlife)

ANS completed four issue papers: "Environmental Impacts of Marine Aquaculture," "Marine Aquaculture," "Potential Zebra Mussel Impacts," and "Ballast Water," available on the ANS website.

FISHERIES ECONOMICS DATA PROGRAM (EFIN)

The Fisheries Economics Data Program is a cooperative data collection effort that addresses the needs of fisheries managers and industry for economic data and information for the West Coast and Alaska. This project is conducted by the Pacific States Marine Fisheries Commission as part of a cooperative agreement with the National Marine Fisheries Service and with the help of the Pacific and North Pacific Fishery Management Councils. its goal is to provide reliable and timely data to assist with the monitoring and measuring of the economic performance of the harvesting and processing components of West Coast and Alaska fisheries.

In 2005, EFIN worked on:

- **2004 Fuel Report:** Continued collection and maintenance of the West Coast and Alaska monthly fuel price survey. Produced a 2004 annual summary that was sent out to survey participants and other interested parties.
- Web page maintenance: Continued to collect data and update the EFIN web page. Reworked several of the data to update Statistical Package for Social Sciences (SPSS) programs to make them more efficient. These included Gross Domestic Product (GDP), Consumer Price Index (CPI), Producer Price Index (PPI) and Employment Cost Index (ECI).
- **Tri-State Crab Website maintenance:** Archived previous year's website and created a new website for the 2005 season that was updated with reports from California, Washington and Oregon.
- **Cost/Earnings Survey of Oregon Limited Entry Trawlers:** Completed in-person cost and revenue surveys of Oregonbased Limited Entry trawlers. This work will continue in 2006 and be expanded to include Washington and California Limited Entry trawlers as well as Limited Entry Fixed gear harvesters from all three West Coast states.
- **Fish Research West Website Maintenance:** Made changes to the website as requested by the Pacific Marine Conservation Council (PMCC).
- Fish Ticket (FT)-Fish Ticket Line (FTL) monthly Statistical Package for Social Sciences (SPSS) table updates: Continued download and creation of "user friendly" West Coast fish ticket tables for local PSMFC use.
- **Finalized Alaska Charterboat Survey Document:** The final report for the 2001 Alaska Sportfishing Charter Operator Survey was completed and posted to the EFIN website.
- **Fishery Economic Assessment Model (FEAM):** Sent copies of the budgets used in the FEAM model to all West Coast harvesters who were active in 2004. This information provided budgets for the 17 classes of fishing vessels identified in the model.
- Streamer Line project: 107 pairs of streamer lines were distributed in 2005.

PACIFIC FISHERIES INFORMATION NETWORK (PACFIN)

The Quota Species Monitoring (QSM) subsystem was enhanced with the incorporation of discard rates and discard estimates, lowest-level catch areas for California Department of Fish and Game (CDFG), data for Pacific cod, and projected catch. The system was modified to handle preliminary/final at-sea data from the North Pacific Database Program (NORPAC) database. The at-sea tribal catches were moved from the at-sea column to the tribal column.

Work continued on the proposed, de-facto Pacific Coast Fisheries Data Committee (PCFDC) policy on Access to Confidential Data with the goal of agreement by all parties.

The Biological Data System (BDS) improvements included: transforming the data in the FREQ column; consistent use of Species ID (SPID) codes; setting fish-weight to null instead of zero; standardizing the use of fish_age_final; and setting age to null instead of zero.

The Washington Oregon California (WOC) Permit subsystem became a reality when Washington Department of Fish and Wildlife (WDFW) submitted its first datafeed.

A standard report displaying depth information from the WOC Trawl Logbook subsystem was developed and is now posted regularly on the website.

Consultations with NMFS/Financial Services Division (FSD) staff were conducted and additions made to the Office of Management and Information Buyback Fee (OMIBBFEE) table which was re-summarized for 1987-2005. Four additional columns were added to the Vessel and Fish Ticket Categories Rockfish Distributed (VFCMRFD) table in response to the Pacific Fishery Management Council (PFMC) request to split catch and revenue into nine commercial sectors. Retrievals for a Pacific whiting oceanographic study were developed for Northwest Fisheries Science Center (NWFSC) (Newport) staff. Datasets needed to determine "directed open access" landings were developed for the Northwest Region (NWR). This NWR application required the development of the VDRFD table, which is a daily version of the VFCMRFD table. For the Southwest Fisheries Science Center's (SWFSC) economics staff, data sets were designed and completed to provide a comprehensive picture of coastwide fishing activity at the trip and vessel level, and demonstrate how trends in activity in the various fisheries have affected the processing infrastructure of fishing communities.

Standard reports were developed for NOAA-Enforcement's Vessel Monitoring Systems (VMS) enforcement unit. Vessel characteristics by port were developed for the U.S. Coast Guard (USCG) and stored in a production table for the USCG.

The PacFIN Office processed 208 data feeds from eight data sources and responded to 152 requests-for-information. There were 501,935 visits to the PacFIN website for an average of 41,828 visits per month. This compares to 17,021 per month in 2004 and 14,283 per month in 2003.

COLUMBIA RIVER PIT TAG INFORMATION SYSTEM (PTAGIS)

The Columbia River PIT Tag Information System (PTAGIS) is a data collection, distribution and coordination project. The project saw over 1,889,000 juvenile salmonids marked with passive integrated transponder (PIT) tags, for the 2005 outmigration through the Columbia and Snake River systems, compared to over 2,017,000 in 2004 (Table 1). In 2005, over 651,000 tagged fish were detected (Table 3). These fish generated over 8,012,000 interrogation records (Table 4). One fish can generate many interrogation records, depending upon how many interrogation sites or monitors 'saw' the fish.

In 2005, the PTAGIS project, in cooperation with the US Army Corps of Engineers, completed work on the installation of vertical slot PIT-tag detection systems within the Washington Shore fish ladders at Bonneville Dam. In addition, work was completed on the installation of a full-flow bypass PIT-tag detector system at Ice Harbor Dam. The PTAGIS project installed PIT tag detectors in fish ladders at Prosser Dam on the Yakima River in cooperation with US Bureau of Reclamation.

PTAGIS continues to support a number of agencies utilizing the "Separation by Code" (SbyC) system capability. This system has the capability to divert PIT-tagged fish in various directions based upon distinct tag code. The PTAGIS project implemented support for 14 separate SbyC projects for various agencies in 2005.

The PTAGIS project completed system testing of a new world-wide-web interface to PTAGIS project data and resources in Summer 2005. The PTAGIS website (www.ptagis.org) went live on September 7, 2005.

TABLE 1



TABLE 2



TABLE 3



TABLE 4



RECREATIONAL FISHERIES INFORMATION NETWORK (RECFIN)

The Recreational Fisheries Information Network (RecFIN) is a cooperative effort between the state fishery agencies in Washington, Oregon, and California, the Pacific States Marine Fisheries Commission (PSMFC), and National Marine Fisheries Service (NMFS). The four goals of RecFIN are as follows:

- Develop and implement a State/Federal cooperative program for a coastwide marine recreational fisheries data system;
- Coordinate collection, management, and dissemination of Pacific coast marine recreational fishery data;
- Provide the data in a central location on a timely basis in the format needed to support state and federal work on Pacific marine recreational fisheries; and
- Reduce and avoid duplication of data collection efforts between RecFIN members.

The database contains recreational fishery data for the years 1980-89 and 1993 to the present. The primary source of data in the RecFIN database comes from the following five state sampling programs:

- Oregon: Oregon Recreational Boat Survey (ORBS) and the Oregon Shore and Estuary Boats Survey (SEB);
- Washington: Washington Ocean Sampling Program (OSP) and the Washington Puget Sound Boat Survey
- California: California Recreational Fisheries Survey (CRFS).

These programs are funded by NMFS along with state agency funding in all three states. The survey is spread over 800 fishing sites coastwide in the three states. Of these sites, 57% are in California, 10% in Oregon and 33% in Washington.

In 2005:

- The state of California and PSMFC conducted the CRFS in California in 2005. Over 100,000 angler trips were sampled during the 12-month sampling program.
- A total of 40% of all ocean boat angler trips were sampled in Oregon in 2005. Sampling occurred from March through October in 2005
- The state of Washington conducted its Ocean Boat Survey and the Puget Sound Boat Surveyi. Sampling occurred throughout the year in Puget Sound and from April to early October on the coast. Sampling rates were in about 40% of all ocean boat trips.
- Two states utilize their angler license frame for estimating fishing effort in certain modes of fishing. These include Puget Sound Boat trips in Washington and shore and private access and night boat effort in California. All other modes of fishing in the three states are estimated from direct field counts.

All catch and effort information for each sampling month from the various surveys are loaded into the RecFIN database maintained at PSMFC with a one-month lag time. Catch and effort information for all three states is available on the PSMFC website or at: www.recfin.org. Detailed explanations of the samples conducted, methodology and statistics of the various sampling programs and other additional data are available on the RecFIN website.

REGIONAL MARK PROCESSING CENTER (RMPC)

The Regional Mark Processing Center (RMPC) provides services to state, federal, tribal and non-governmental agencies involved in marking anadromous salmonid fishes on the West Coast, including Canada. Services include coast- wide coordination of tagging and fin marking programs and maintenance of a regional database for releases and recoveries of coded wire tag (CWT)-marked salmonids. RMPC also serves as the sole US database to exchange CWT information with Canada for Pacific Salmon Treaty purposes. The CWT data can be accessed online through PSMFC's Regional Mark Information System (RMIS) at www.rmpc.org or www.psmfc.org.

Regional Coordination:

- Annual Mark Meeting: The 2005 Mark Meeting was hosted by Canada Dept. Fisheries and Oceans (CDFO) and held in Tofino, British Columbia on April 20-22, 2005. Key issues included discussions and updates on coastwide mass marking and selective fisheries activities. In addition, considerable discussion focused on the dynamics of marking and identifying salmonids returning to the Snake River system. Issues involving blank CWT wire as a mark were also explored at some length.
- Mark Selective Fisheries Issues: The Selective Fisheries Evaluation Committee (SFEC) Analytical Working Group reported to the Mark Meeting on their work this year. Special attention was given to the goals and needs of Double Index Tagging.
- The SFEC also met in Seattle, Washington on December 15-7, 2005 to evaluate new selective fishery proposals and mass marking proposals, with Ken Johnson assisting the discussion. These proposals comprehensively represent all salmon mass marking programs on the West Coast that have international ramifications.
- Data Management: In addition to the normal work flow of the Mark Center's data management operations, a great deal of RMIS development work was done in 2005 as were a number of incidental projects.

Developments in RMIS:

- Work neared completion on the RMIS "Analysis Reporting System": The new application is based on the Coded Wire Tag Retrieval and Analysis System (CRAS) application from the Northwest Indian Fisheries Commission (NWIFC). This new system will be a major improvement to RMIS as the Standard Reporting System does not have the reporting capability to map individual recoveries to management areas. Another new feature is the ability to aggregate data in multiple ways in a single report by using grouped criteria defined by the user (i.e., sets of tag codes or management fisheries).
- Specialized Data Requests: SFEC activities (as described in the "Regional Coordination" section above) warranted development of a summary report serving specialized requests for all CWT recoveries of specific sets of tag codes. This report was based on a generalized version of the Pacific Salmon Commission Region and classified recoveries into sport and commercial fisheries across all recovery years. It was completed in late 2005 and used by many agencies to estimate coastwide encounter rates of mass marked fish.
- Querying "BLANK" and Agency-Only Wire in RMIS: Data users could not easily retrieve "BLANK" and Agency-Only wire recoveries via RMIS even though the recovery data had passed validation. A similar problem existed in trying to retrieve the corresponding release records. This situation had arisen because these particular tags are treated as non-tags in the release table and as tags in the recovery table due to conflicting and confusing data exchange rules. Programming changes to address this were undertaken and completed by the Mark Center staff by mid 2005.
- Data Validation / Data Integrity Issues: Significant time was spent working with the data reporting agencies to resolve various inconsistencies found in the CWT data sets. While the number of errors was small (less than 1,500 out of 6+ million records), it was an involved process to identify the reasons for the errors and then to correct them.

STREAMNET

StreamNet is a cooperative venture among the Northwest Power and Conservation Council's Fish and Wildlife Program and the region's state, tribal and federal fisheries management agencies. StreamNet is funded by the Bonneville Power Administration and administered by PSMFC. StreamNet supports staff at management agencies to obtain, georeference and standardize primary data used in fisheries management. The standardized data is available to the public at www.streamnet.org. StreamNet also provides data related services, including custom data development, data tool development, and assistance with data management.

2005 was successful for StreamNet.

- A major Quality Assessment was made of the data in the StreamNet database at all levels of the project.
- Significant progress was made in updating the existing data in the StreamNet database, involvement with and support of other regional programs increased, and technological improvements were implemented.
- Data system reliability was excellent and on-line data query system data reports increased.
- Routine work accomplished included update of data sets, management of the StreamNet database system, management of the StreamNet website and data query system, and ongoing operation of the StreamNet Library.

Notable accomplishments include:

• A total of 735,262 page views were recorded during the year, a decline from last year (Fig. 1). Actual use of the tabular data query system to obtain data remained consistent with recent years, however, and increased from last year (Fig. 2). Use of the interactive map applications increased, but that use is not reflected in these figures. Total use may be increasing as more people use the map interfaces. Use of the interactive maps will be tracked in the future.



Figure 1. Annual use of the StreamNet website



Figure 2. Number of actual data returns viewed

Routine data updates were received from project partners and loaded into the StreamNet database (Table 1.). Some of these records are annual updates, while others relate to the wide QA review of data conducted this year.

Table 1. Summary of significant data records added to or updated in the StreamNet database.

Data Category	Records	Data Category	Records	
Location codes	14,362	Reference documents	4,038	
Barriers	13,412	Peak spawning counts	3,266	
Trend series	12,021	Est. of spawning population	2,375	
Fish distribution	8,784	Dam/weir counts	318	
Hatchery returns	6,310	Barrier fish impacts	294	
Redd counts	4,860	Habitat restoration projects	159	
Age	4,847	Dams	144	

PROGRAM SUMMARIES

All state StreamNet projects maintained and updated fish distribution records this year. Bull trout distribution data were posted online. Work continued on developing new fish distribution data for various species such as white sturgeon and west-slope cutthroat trout and redband trout. New federal westslope cutthroat trout data were obtained, but in unusable format. These data will be converted and exchanged in FY-2006.

Work continued on developing a mixed-scale hydrography. All data in StreamNet have been tied to the hydrography (GIS stream layer) at the 1:100,000 scale, but there is growing demand for data at the 1:24,000 scale. Unfortunately, a regional 24K routed hydrography is not available yet, and may not be available for several years. In the meantime, we are developing a mixed scale hydrography consisting of 100K streams plus those 24K streams that have StreamNet data associated with them. We will use this approach until the regional 24K layer is completed.

We created a computer tool to facilitate submission of data sets in native format to StreamNet for posting in the Independent Data Sets searchable archive. We posted 20 data sets, including resident distributions, temperature data, and stock status data, and worked with other entities to promote posting of data. Links to various online data sources were also added to the IDS archive, with searchable indexes. IDFG posted the 5-year bull trout status review dataset as an Independent Data Set

Idaho StreamNet made significant progress in developing an internal information management system in cooperation with the IDFG Fish Bureau. We believe that this kind of collaborative system development would be of high value to all of the agencies we work with.

The StreamNet Library provided storage and retrieval services for data source documentation for all data in the StreamNet database, plus full library services with an emphasis on fish and wildlife literature.

More details of work done in FY-2005 are available from our quarterly and annual reports at the Reports and Publications page of the StreamNet website:

http://www.streamnet.org/about-sn/project_management.html.

ALASKA CRAB RATIONALIZATION PROGRAM

Pacific States Marine Fisheries Commission (PSMFC) functions as the Independent Third Party Data Collection Agent (ITP-DCA) for the Bering Sea/Aleutian Islands (BSAI) Crab Rationalization Program. The purpose of the economic data collection is to aid the North Pacific Fishery Management Council (NPFMC) and National Marine Fisheries Service (NMFS) in assessing the success of this Program and developing amendments necessary to mitigate any unintended consequences. Specifically, the data will be used to examine two aspects of the program: 1) the distribution of benefits between harvesters and processors arising under the harvest share/processor share allocations and arbitration system, and b) the distribution of landings of different harvest share types.

The North Pacific Fisheries Management Council (NPFMC) is interested in ensuring that it will be able to adequately assess the impact of the program on affected parties, which includes harvesters, processors and communities. Existing data collection programs have not provided the information required to understand the economic performance of crab fishermen, let alone determine how this performance has changed after rationalization or what aspects of these changes are specifically attributable to crab rationalization. This data collection program will substantially reduce the types of analytical difficulties that were encountered in the past when attempting to examine the effects of the halibut/sablefish Individual Fishing Quota (IFQ) program and the American Fisheries Act.

There are two variations of Economic Data Reports (EDRs) an Historic EDR and an Annual EDR. The first requires submission of historical-based economic data from 1998, 2001 and 2004. Historical EDRs capture pre-Program implementation data for comparison to the economics of harvesting and processing before and after Program implementation. The annual EDR captures economic data on an annual basis at the conclusion of each calendar year's crab fisheries. Historical EDRs were collected in June and July 2005. The first Annual EDRs will be collected in 2006 for the 2005 crab fisheries. Participation in the data collection program is mandatory for all participants in the BSAI crab fisheries. Any owner or leaseholder of a vessel or plant that harvested or processed crab in any of the Bering Sea and Aleutian Islands crab fisheries during the years 1998, 2001, or 2004 is required to submit an historical report for all three years.

In 2005, data collection for the Alaska Crab Rationalization Program was started at PSMFC. EDRs were mailed to crab processing plants and vessels, collected, tracked, reported to RAM for permit and quota issuance, and reviewed for completeness. The EDR data was entered, archived and submitted to NMFS for analysis.

CALIFORNIA DATA AND TECHNICAL ASSISTANCE PROJECTS (CALFISH)

The California Cooperative Fish and Aquatic Habitat Data Program (CalFish) website (www.calfish.org), a multi-agency cooperative fisheries information site, was opened to the public in 2004. CalFish provides access to a growing number of fish and aquatic habitat datasets. The data are available through both geographical and tabular queries. The data may be viewed and analyzed using an interactive ArcIMS platform, in conjunction with the other datasets available. Many of the following projects have data/information available through the CalFish site.

The Anadromous Fish Database was updated and enhanced as time and funding allowed. All of the fisheries data are organized into datasets which are made available through the CalFish website.

The California Habitat Restoration Project Database (HRPD) effort continued to focus on maintaining and adding data for projects funded through the California Anadromous Fish Restoration Grants Program. Work also continued with CALFED, a state/federal partnership conducting restoration efforts in the Central Valley. HRPD data is being made available via the CalFish web site.

PSMFC continued to assist the California Coastal Watershed Planning and Assessment Program by providing field and technical staff and assistance to conduct stream habitat surveys and prepare watershed assessment plans.

PSMFC continued work with the California Department of Fish and Game to assist them with the administrative aspects of conducting the Adaptive Watershed Program. In addition to the 2004-05 approved projects, PSMFC administered contracts for two engineering internships to evaluate habitat restoration and watershed projects that were completed (or in progress) in coastal watersheds of California.

Continuing assistance was provided to the California Ocean Salmon Program by employing fisheries technicians at various coastal ports to sample commercial salmon fisheries, collect biological data and coded-wire tag information. Data collected are incorporated into the management and season setting for salmon fisheries coastwide.

The California Passage Assessment Database (PAD) (over 13,000 sites have been identified) was further developed to locate and document anadromous fish passage "sites" in all California coastal watersheds. Initiated and funded by the California State Coastal Conservancy, this multi-agency cooperative effort has led to better information on known (and suspected) fish passage issues, and ultimately the correction of them through prioritized restoration projects and funding. The PAD is available through the California through the California coastal watersheds.

PSMFC provided technical assistance and field staff for collecting and compiling data on the movements of juvenile Chinook and Coho salmon in the Freshwater Slough Estuary Sampling Program for the spring/summer field season.

Coho Presence Surveys were completed in 2004-05. PSMFC provided technical assistance and field staff for collecting and compiling data and information on the presence of coho salmon in hundreds of streams (600+). This was the final year of a three year effort to document coho salmon presence.

PSMFC provided biological and technical support to hatchery staff (located at the Warm Springs Hatchery facility) for all spawning and rearing operations at the facility, and conducting biological monitoring of hatching, rearing, planting of fish, and adult returns from the Coho Broodstock Program.

PSMFC Geographic Information System and Data specialists assist the CDFG Marine Region with Marine Nearshore Habitat Data and Technical Assistance. These positions provide daily technical assistance to staff responsible for the management of California marine species, habitat, and fisheries.

With funding provided by the California Department of Water Resources (CDWR), PSMFC assisted CDWR and CDFG with the Lower Central Valley Data and Technical Assistance project. Work included data compilation and analysis for the Feather River Hatchery (and Central Valley) and seasonal Fisheries Technician assistance with carcass surveys on the American and Yuba Rivers.

PSMFC fisheries technicians on the Upper Sacramento Technical Assistance project (Upper Sacramento River, Battle, Deer, Mill Creeks) helped CDFG with running fish traps, conducting salmon carcass surveys, and collecting biological data.

PSMFC also began work with the California Department of Fish and Game to assist in the administrative aspects of conducting the Resource Assessment Program. PSMFC administered contracts for nine resource assessment projects that were completed (or in progress) statewide.

PSMFC provided marine-specific GIS training for resource management through a Marine GIS Curriculum Development and Training Workshop held in June, 2005. Curriculum materials are being finalized to provide to universities, agencies, etc. for continued education.

PSMFC provided technical assistance and field staff for the Coastal Restoration Monitoring and Evaluation project. Staff monitored pending and completed coastal watershed restoration projects in the North and Central Coast region of California, collected habitat information and compiled data.

COOPERATIVE AGEING PROJECT

The Cooperative Ageing Project (CAP) was established to age marine groundfish structures. It is a collaboration between the Oregon Department of Fish and Wildlife (ODFW), NMFS and PSMFC. Otoliths, the earbones of fish collected from federal surveys and commercial catch, are the primary structures aged by this lab and provide the basis for U.S West Coast stock assessments. Age data help determine the biological attributes of a population such as mortality rate, growth rate, age at maturity, etc. While this lab is primarily a production age reading lab, there are opportunities on an annual basis to conduct age-related research and assist in NMFS-directed at-sea surveys.

In 2005, CAP personnel:

- Aged 28,761 structures from nine species of U.S. West Coast groundfish, including Pacific hake, Dover sole, sablefish, darkblotched rockfish, Pacific ocean perch, canary rockfish, petrale sole, English sole and spiny dogfish. This includes all types of ageing; production, double reads for quality control, recalibration, training and research reads.
- Inventoried and tracked structures from 69 species of US West Coast groundfish.
- Two personnel participated in the First International Symposium on the Management and Biology of Dogfish Sharks *Squalus acanthias*. This symposium was meant to bring concerns about over exploitation of the spiny dogfish to the fore-front and included a workshop on age and growth.
- Completed a study that compared two different structures and two different ageing methods on English sole *Parophrys vetulus*. The study determined that otoliths are the preferred structure and they should be prepared using the break and burn technique.
- Two personnel were sent to the Department of Fisheries and Oceans Canada in Nanaimo, BC for an informal workshop on ageing methodology of Pacific Ocean perch and Pacific hake. Both labs produce ages for the Pacific hake stock assessment and workshops like this ensure that both labs are using the same ageing criteria.
- Began to explore the possibility of using the thin section method to age species in cases where the break and burn technique doesn't work well. Supplies were procured and several procedures were explored.
- Collaborated in writing Interannual changes in Pacific hake (*Merluccius productus*) growth in relation to oceanographic conditions. Colbert J.J., M.J. Schirripa, and O. Rodriguez. Submitted to NOAA in-house review.

FISH HABITAT EDUCATION PROGRAM

The PSMFC Fish Habitat Program works to protect habitat for salmon and other marine fish species by supporting conservation and restoration activities, promoting essential fish habitat and ecosystem based management policies and conducting watershed tours. The Commission's habitat efforts are funded primarily by the Wallop-Breaux Sport Fish Restoration program and the National Marine Fisheries Service.

The program works with many partners to further its objectives including: Pacific Fishery Management Council (Habitat Committee), non-profit groups such as MidCoast Watersheds Council, Shared Strategy for Puget Sound, The Wetlands Conservancy, Institute for Fisheries Resources, The Nature Conervancy, LightHawk, local governments, and collaborative groups working with the U.S. Forest Service (Alsea Stewardship Group). Work is conducted mostly to Oregon, Washington, and California, though fish net recycling work has an Alaska focus.

Accomplishments:

Conservation of areas of key salmon habitat:

- 1. Beaver Creek is a key coho producing watershed on the central Oregon coast. This project provided guidance and technical assistance to a local outreach coordinator and helped to conduct and interpret visits to key sites. This work has resulted in two offers to donate conservation easements (a 15 acre and a 60 acre parcel) to protect the wetlands and has initiated contacts with non profit and state groups to conserve another parcel consisting of 160 acres of fresh water marsh and about 170 acres of marsh land, adjacent to the above-mentioned parcels. In addition to the landowners, partners were The Wetlands Conservancy, Central Coast Land Conservancy, and Lincoln County.
- **2.** Marsh conservation in Yaquina Bay: Worked with The Wetlands Conservancy and Lincoln County to conserve a 35-acre parcel in Yaquina Bay consisting of salt marsh tidal sloughs, high salt marsh areas and a spruce forest buffer essential for five species of salmon. This parcel was protected through a conservation easement held by the The Wetlands Conservancy for conservation (with the help of USFWS wetland grants, Title III funds, and an in-kind match).

Established new funding source for habitat/watershed restoration projects:

3. Promoted the formation of a Stewardship Group for the central Oregon coast to be able to retain forest receipts to accomplish high value restoration projects on USFS lands and private lands influencing USFS. lands (instead of revenues going back to the general fund), while also promoting local economic benefit. As a result, an application was submitted to the USFS in 2005 for stewardship authority (also see item 5 below).

Conducted habitat tours:

- **4.** In Washington State, four aerial tours (and pre- and post-flight discussions) were conducted in the Nooksak Watershed, Puget Sound, in an effort coordinated with LightHawk, the non-profit "environmental airline" and the state Shared Strategy for Puget Sound. The tours and information highlighted priority focus areas, restoration opportunities, and resource needs for decision makers. Twelve people participated in these tours, including Lummi and Nooksak tribal resources managers, the log manager for the Great Western Timber Company, a city administrator and a city environmental resource manager, county agency resource managers, and a watershed group and State fish and game representatives. The goal of these flights was to build an understanding of the factors which have resulted in the many listed aquatic species in the Nooksak River. Restoring fish passage is key to the North/Middle Fork listed chinook while the critically endangered South Fork Chinook need restoration actions that address instream habitat, high summer stream temperatures, sedimentation, riparian conditions and hatchery strays as well as potentially creating a gene bank to preserve the native genetic pool. The Nooksack River is also home to local populations of threatened bull trout, as well as coho, fall chum and odd-year pink salmon, summer and winter steelhead, coastal cutthroat and Dolly Varden. Mainstem habitat restoration is critical to all the listed species. Because most of the mainstem of the Nooksack is already leveed or armored to guard against flooding, creation of primary pools and off-channel habitat will be critical.
- 5.A field tour was sponsored on the Oregon coast and conducted by the MidCoast Watersheds Council and the Siuslaw National Forest to observe projects generating revenue for and being accomplished through the Stewardship Contracting programs of the U.S Forest Service. The tour, attended by 14 people, was held on Oregon's south central coast to learn from the Siuslaw Stewardship Group's pilot project. Participants included two watershed group coordinators, two Siuslaw Soil and Water Conservation Service representatives, a BLM representative, three Forest Service representatives, a consulting forester, a repre-

sentative of Georgia Pacific (who bought the timber on the thinning and did ancillary restoration projects, including culvert replacement to offset timber costs and promote restoration), an environmental group representative, the landowner from the Alsea basin, a Siuslaw area landowner and a University of Oregon professor who is providing facilitation services to the new group. The tour highlighted visits to areas where thinning to promote older forest structure was being conducted. This activity generated revenue, through the contracting agreement, that could be used either on the forest directly or on private lands influencing forest resources for revenue. Money not used or earmarked for such habitat restoration activities would be sent back to the federal treasury general fund. The participants also visited an area where riparian area restoration was being accomplished and discussed road decommissioning projects to reduce erosion into a salmon stream and large woody debris placement where structure was needed to retain bedload and provide back eddies and cover. As a result of the tour, participants felt comfortable in recommending establishment of a Stewardship Group on the central coast.

• Pacific Fishery Management Council's Habitat Committee was involved in work this year that protected essential fish habitat for groundfish, promoted the protection of krill as a key food web item, and promoted policies for wise water use, flow and passage for salmon in the Columbia and Klamath systems.



Yaquina Bay, Oregon, tidal marsh and surrounding forest lands protected.



Conservation of this 15-acre freshwater marsh on Beaver Creek will help maintain high quality coho over-wintering habitat.



The aerial tour of the Nooksak watershed highlighted restoration needs for endangered Chinook salmon.

NORTHERN PIKEMINNOW MANAGEMENT PROGRAM

The Northern Pikeminnow Predator Control Program is a joint effort between the fishery agencies of the states of Washington and Oregon, and the Pacific States Marine Fisheries Commission (PSMFC). This year, 2005, marked the 15th consecutive year of the program. The Washington Department of Fish and Wildlife operated the sport-reward registration/creel check stations throughout the river and handled all fish checked into the program. Oregon Department of Fish and Wildlife provided fish tagging services, population studies, food habit and reproductive studies, as well as exploitation rate estimates. The Pacific States Marine Fisheries Commission provided fiscal and contractual oversight for all segments of the Program and processed all reward vouchers for sport-reward anglers.

During the 2005 season:

- A program record total of 241,357 fish were harvested in the sport-reward fishery.
- Vouchers for 239,345 fish of the 241,357 total catch were submitted for payment with rewards totaling \$1,546,232.
- Rewards were paid at \$4 for the first 100 fish caught during the season, \$5 for fish caught in the 101-400 range, and \$8 for all fish caught by an angler above 400 fish during the month of May. Tagged fish rewards were \$500.
- A total of registered 1,724 anglers were successful in catching one or more fish in 2005. The 2005 season ran from May 2, 2005 through September 25, 2005.
- A total of 171 tagged fish were caught.
- Anglers were issued a special tagged fish voucher for all tagged fish brought to the registration station. The tag voucher was then sent in with the tag for verification and payment of \$500 was made for each tagged fish. This resulted in tag reward payments of \$85,500.
- Northern pikeminnow abundance index values in Bonneville reservoir were the lowest observed since 1991. Northern pikeminnow year-class analysis downstream of Bonneville Dam showed considerable variation in the percentage of age 2 and 4 fish from year to year. The percentage of age 5 Northern pikeminnow has remained relatively stable since 1993, accounting for 15 17% of the total number of pikeminnow in the reservoir. The overall exploitation rate in 2005 was 19%, the highest rate since inception of the program. This compares to the program goal of removing 10-20% of the predator-sized pikeminnow each year.

WEST COAST GROUNDFISH OBSERVER PROGRAM

The West Coast Groundfish Observer Program (WCGOP) provides coastwide estimates of discards across fisheries throughout the year. These estimates are important to stock assessments and the management of groundfish stocks on the West Coast. Observers collect scientific, management, and other data through on-board interviews with vessel captains and crew, observations of fishing operations, measurements of selected portions of the catch and fishing gear and collection of samples.

2005 was the fourth year the West Coast Groundfish Observer Program (WCGOP) actively deployed observers in a variety West Coast groundfish fisheries.

In January 2005, the program held its 4th Annual Observer Meeting in Portland. The agenda included presentations from observers, staff, port samplers, and a stock assessment author. Topics included safety, sampling, conflict resolution, database, stock assessments, and fish identification. The staff and observers had the ability to work as a group to solve sampling issues and participate in a lab practical in fish identification. A consultant created a custom lesson plan that WCGOP staff will continue to use to train observers in techniques and strategies for dealing with conflict on the job.

In February 2005, the program completed training 20 seasonal observers that were deployed throughout the coast on March 1, 2005 to assist the 23 year-round observers. Employing seasonal observers allows the program to efficiently match observer resources to meet the demands of the sampling plan created by the WCGOP with help from stock assessment authors and the Pacific Fisheries Management Council (PFMC). From March-October, the program operated with up to 43 active observers in the field collecting data.

In September 2005, the program gathered the year-round observers in Newport, Oregon for an annual briefing and safety training. Safety refresher training included: donning immersion suits, fighting fire, in-water safety exercises while wearing an immersion suit, fire drills aboard a commercial fishing vessel, and a variety of discussions to raise safety awareness. The program utilized a commercial vessel from the Newport fleet to conduct drills. In addition, observers donned their immersion suits and conducted drills in Yaquina Bay and practiced their survival skills and life raft and heli-basket boarding. USCG representatives provided a guided dock walk and answered a variety of questions about safety.

While there is no way to ensure safety aboard a commercial fishing vessel at sea, the program aims to promote awareness to avoid accidents and improve safety and survival skills in the case that an emergency occurs.

The table below shows the sea time observers were onboard each type of gear by state from January 2005-December 2005. A total of 3,201 days at sea were completed in 2005.

State	Trawl	Longline	Pot	Shrimp	Open Access
California	576	107	60	39	374
Oregon	963	133	131	164	165
Washington	253	200	28	5	3
Total	1792	440	219	208	542

The WCGOP Data Reports and Summary Analyses for 2005 can be found at:

http://www.nwfsc.noaa.gov/research/divisions/fram/observer/datareport/index.cfm.



INDEPENDENT AUDITORS' REPORT

To the Board of Commissioners Pacific States Marine Fisheries Commission Portland, Oregon

We have audited the accompanying basic financial statements of the Pacific States Marine Fisheries Commission (the Commission) as of and for the years ended June 30, 2005 and 2004 as listed in the table of contents. These financial statements are the responsibility of the Commission's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the basic financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the basic financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Pacific States Marine Fisheries Commission as of June 30, 2005 and 2004 and the results of its operations for the years then ended in conformity with accounting principles generally accepted in the United States of America.

In accordance with *Government Auditing Standards*, we have also issued a report dated November 7, 2005 on our consideration of the Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in conjunction with this report in considering the results of our audit.

Management's Discussion and Analysis are not a required part of the basic financial statements, but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

FINANCIAL REPORT

Our audits were conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by U.S. Office of Management and Budget Circular A-133, Audit of States, Local Governments, and Non-Profit Organizations, and is not a required part of the basic financial statements. The information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

aldrich Hillride & Jatone LLC

Salem, Oregon November 7, 2005

2005 HEADQUARTERS AND STAFF

Randy Fisher, Executive Director Pam Kahut, Fiscal Manager/Trasureer Elizabeth Graves, Personnel/Payroll Manager Todd Kaehler, Computer Services Manager Sharon Perkins, Executive Assistant

Renee Barrett, Accountant Kristen Kanahele, Grants Accounting/Assistant Rick Masters, Supervisory Accountant Kim Nenn, Administrative Accounting Asst. Nancy Walters, Grants/Contracts Specialist Glenda White, Accounting Assistant Matt Robertson, Personnel/Payroll Specialist Wanda Swainson, Payroll/Benefits Coordinator Willy Kelly, PC/LAN Systems Administrator Karen McGill, Technical Information Specialist Teresa Fairchild, Clerical Specialist Kathy Shimojima, Clerical Specialist

PSMFC Program Staff

Stan Allen, Program Manager Stephen Phillips, ANS Program Coordinator Fran Recht, Habitat Education Coordinator

Regional Mark Information System

Ken Johnson, Program Manager Jim Longwill, Computer Specialist Dan Webb, Assistant Data Manager

PacFIN

William Daspit, Program Manager Jason Sawicki, Data Analyst/Programmer Brad Stenberg, Assistant PacFIN Data Manager

PTAGIS

Carter Stein, Program Manager Allen Brower, Field Engineering Technician Darren Chase, Field Systems Engineer Nadia Gruman, Computer Software Engineer Troy Humphrey, Field Engineering Technician Scott Livingston, Field Systems Engineer John Tenney, Computer Software Engineer Don Warf, Field Systems Engineering Supervisor

Stream Net

Bruce Schmidt, Program Manager Mike Banach, Fishery Biologist Travis Butcher, GIS Data Technician Bill Kinney, Data Manager Adam Vellutini, GIS Data Technician GregWilke, Programmer/Analyst

EFIN

Dave Colpo, *Program Manager* Jennifer Langdon-Pollock, *EFIN Project Assistant* Geana Tyler, *EFIN Project Assistant*

RecFIN

Russell Porter, Program Manager Wade Van Buskirk, Programmer/Analyst Craig Miller, Field Programs Data Technician

N. Pikeminnow Predator Control Program

Russell Porter, Program Manager Craig Miller, Data Technician Darla Voyce, Data Entry

California Fisheries Database Projects

Stan Allen, Program Manager Robin Carlson, Data Analyst/Programmer Connie Shannon, Data Analyst/Programmer

West Coast Groundfish Observer Program

Jim Benante, Program Manager Kate Guthrie, Data Editor Gillian Stoker, Assistant Data Editor

AKFIN

Peggy Murphy, Program Manager Bob Ryznar, Data Manager Brad Neufeld, Data Analyst/Programmer

