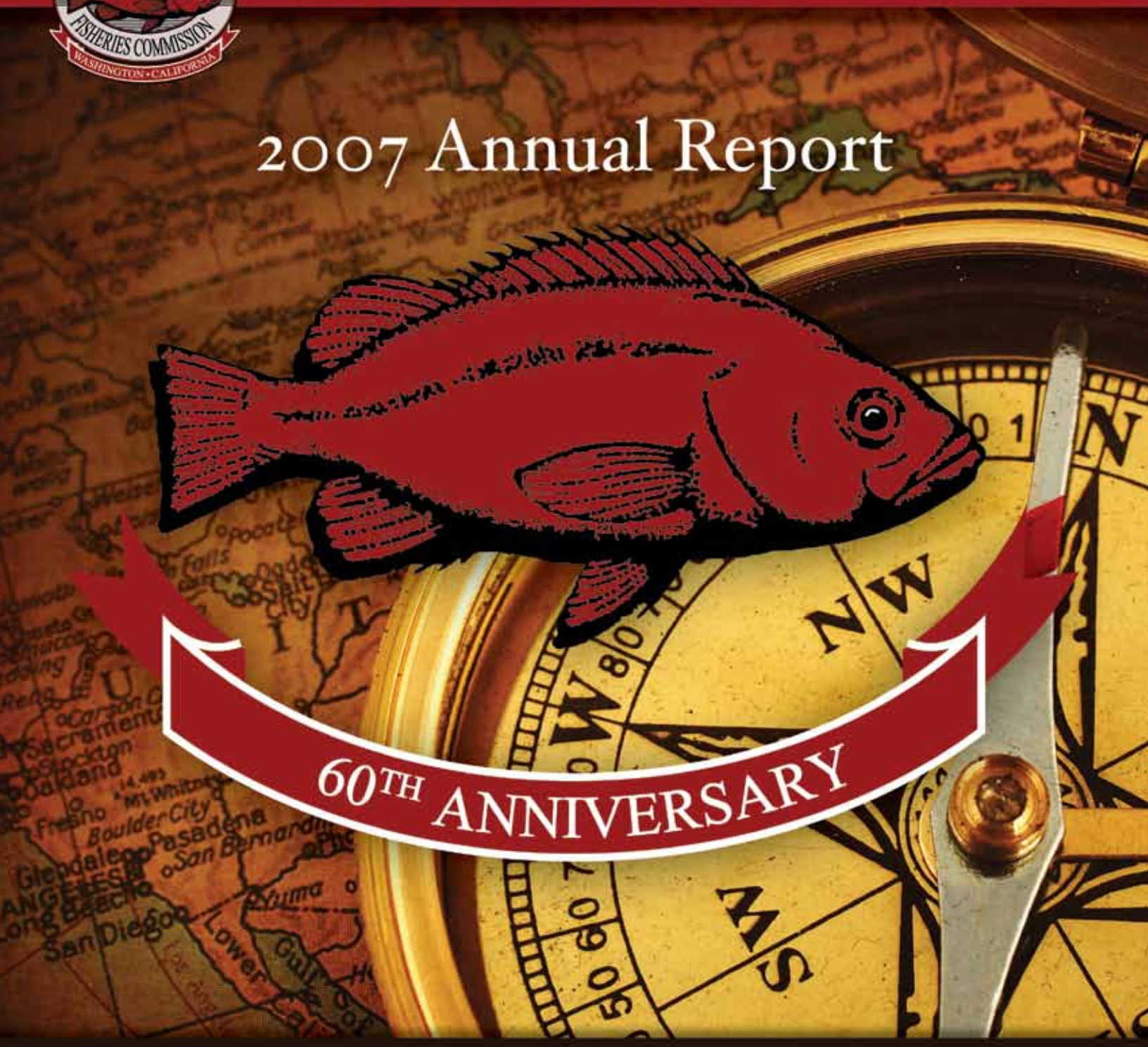
Pacific States Marine Fisheries Commission

2007 Annual Report



PUBLISHED FOR THE CONGRESS OF THE UNITED STATES AND THE GOVERNORS AND LEGISLATURES OF

WASHINGTON, OREGON, CALIFORNIA, ALASKA AND IDAHO

60TH ANNUAL REPORT OF THE PACIFIC STATES MARINE FISHERIES COMMISSION

To the Congress of the United States
the Governors and Legislatures of the Five Compacting States
—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 91st 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
2007

PACIFIC STATES MARINE FISHERIES COMMISSION MEMBERS 2007

State	Commissioners	Advisors	Coordinator
Alaska	Sue Aspelund Stephanie Madsen Bryce Edgmons	Terry Johnson Don Lane Matthew Moir Gabe Sam	Herman Savikko (ADFG)
California	LB Boydstun Thomas Harman	Jim Caito Robert Fletcher Donald K. Hansen Mike McCorkle Roger Thomas Kate Wing	Marija Vojkovich (CDFG)
Idaho	Cal Groen Joe Stegner Cameron Wheeler	Alex Irby Wayne Wright Steve Yundt	Sharon Kiefer (IDFG)
Oregon	Paul Heikkila Wayne Krieger Roy Elicker	Jeff Feldner Steve Fick Liz Hamilton Rod Moore Brad Pettinger Frank Warrens	Ed Bowles (ODFW)
Washington	Dr. Jeff Koenings Harriet A. Spanel	Mark Cedergreen Marion Larkin Irene Martin Lisa Pelly Bill Robinson Terry Wright	Phil Anderson (WDFG)

SUMMARY OF PSMFC ANNUAL BUSINESS MEETING

Paradise Point Resort
San Diego, California

September 19, 2007

The Pacific States Marine Fisheries Commission held its 60th annual meeting on September 17-19, 2007, in San Diego, California at Paradise Point Resort. The business meeting was held on September 19, with LB Boydstun, California Commissioner, serving as Chairperson. Present were California Commissioner Tom Harman; Alaska Commissioners Sue Aspelund, Bryce Edgmon, and Stephanie Madsen; Idaho Coordinator Sharon Kiefer; Oregon Commissioners Ed Bowles and Paul Heikkila; and Washington Commissioners Phil Anderson and Harriet Spanel. During the business meeting, the Commission considered and made decisions on the following issues:

Issue 1—National Recreational Fishing Regulatory Exemption for West Coast States and Idaho—That the Pacific States Marine Fisheries Commission (PSFMC) support an exemption from the registry requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) to Alaska, Washington, Oregon, Idaho and California by the National Marine Fisheries Service. In granting this exemption, these states remain open to an ongoing collaborative state-federal constituent process assessment of how to improve estimates of recreational participation, removals, and economic values through the Marine Recreational Information Program.

The Commission voted to support a regional and/or state specific exemption, but added "assuming that minimum federal information standards are met". The Commission also added language clarifying that "In granting this exemption, the states wish to remain engaged in an ongoing collaborative state-federal-constituent process to identify gaps in existing programs and secure necessary funding. **The vote was unanimous, 5-0.**

Issue 2—Should the Pacific States Marine Fisheries Commission endorse the West Coast Governors' Agreement on Ocean Health?—The Tri-State Agreement seeks to advance the following seven priority areas:

- Ensuring clean coastal waters and beaches;
- Protecting and restoring healthy oceans and coastal habitats;
- Promoting the effective implementation of ecosystem-based management of our ocean and coastal resources
- Reducing adverse impacts of offshore development;
- Increasing ocean awareness and literacy among our citizens'
- Expanding ocean and coastal scientific information, research and monitoring; and
- Fostering sustainable economic development throughout our diverse coastal communities.

"As Pacific States Marine Fisheries Commission and the three governors share a common interest in our regional ocean, we hope that you will consider supporting our efforts to make progress on these priority goals".

—Governor Ted Kulongoski and Jessica Hamilton, State of Oregon.

The Commission supported this issue, but amended Oregon's suggested language as follows:

The Pacific States Marine Fisheries Commission and the West Coast governors' agreement on ocean health share a common interest in the health of the Pacific Ocean, its fisheries resources, and the long-term economic viability of local and tribal communities that depend on these resources. The Commission supports the governors' efforts, will coordinate with them in areas of common concern, and encourages initial focus on comprehensive planning of the multiple activities that potentially affect access to and sustainability of ocean fishery resources. **The vote was 4-0, with Alaska abstaining.**

Issue 3—Should the Pacific States Marine Fisheries Commission ask the Directors of the fishery agencies of California, Oregon and Washington to recognize that a need exists for interstate cooperation in collection of fish tickets, logbooks, and other industry-provided data? The Directors recognize the gains in developing and implementing electronic data retrieval programs for these data. PSMFC requests that the Directors of the fishery agencies of California, Oregon and Washington declare it to be their intent to take mutually supportive actions to support the continued development of an electronic system to capture source data, submit it to the states and redistribute these data as needed.

The Commission supported this issue and substituted language to read: PSMFC encourages the States to support the implementation of real-time electronic systems to capture source data for use by the States, the Tribes and Federal management entities. **Vote was 4-0, with Alaska abstaining.**

Issue 4—Should the Pacific States Marine Fisheries Commission reconfirm last year's support to task its Washington, D.C. representative with monitoring and reporting on appropriations necessary to implement the Pacific Salmon Treaty? The Commission agreed with asking its Washington representative to continue monitoring and reporting on appropriations for Pacific Salmon Treaty implementation. In addition, the Commission inserted language stating that PSMFC will report such findings to its constituent states. **Vote was unanimous, 5-0.**

Issue 5—Should the PSMFC support state "opt-in" to offshore aquaculture by time, area, species, and/or gear? Rather than the current "opt-out" as proposed in the current offshore aquaculture bills. Instead of opposing the current federal offshore aquaculture legislation, consistent with the State of Alaska and recently adopted PFMC positions in support of state "opt-in" that provides for full or partial participation by time, area, species, and/or gears.

The Commission supported this issue but substituted new language to read: PSMFC supports the concept of the States being able to choose which types, kinds and locations of aquaculture, but this does not imply support of the aquaculture bill as currently written (HR-2010). **Vote was unanimous, 5-0.**

Issue 6—Should the PSMFC (and its member entities) immediately communicate with Congress seeking adequate time for input from affected constituents on proposed amendments to the Fishing Vessel Safety Act in the U.S.C.G. reauthorization bill? These amendments propose radical changes to the status quo. West Coast commercial fishing fleets have been out making a living and have not had adequate time to review and analyze the amendments being proposed. For example, one amendment would apply to all commercial fishing vessels, not just documented vessels as current laws do.

Since this issue and California's new issue no. 1 were similar, the Commission combined discussion of both, but used the language proposed by California: PSMFC will provide information relating to vessel safety and its impacts on commercial and recreational vessels. Once this information is obtained, the Commission would provide information on the impact of the regulation on Pacific Coast vessels (commercial and recreational). **Vote was unanimous, 5-0.**

Alaska Issue 1—Pacific States Marine Fisheries Commission will monitor and report to constituent states status of EPA's appeal on the National Pollutant Discharge Elimination System (NPDES) vessel discharge issue. PSMFC should engage with the states to craft appropriate exemptions by vessel class, activity, and type of discharge, in the event that the appeal is not successful. Alaska Issue 1,Washington Issue 1, and California Issue 2 were very similar in nature, and the Commission combined discussion of all three issues. The Commission unanimously supported Alaska's version of the language on monitoring and reporting the status of the EPA's appeal on the NPDES vessel discharge issue. **Vote was unanimous, 5-0.**

California Issue 2—Waste Water Litigation. PSMFC should investigate the status of EPA's National Pollutant Discharge Elimination System (NPDES) lawsuit and how it impacts recreational and commercial vessels on the West Coast. PSMFC should then make that information available and work with members on a response via the agency, the courts or other appropriate channels. This issue was combined into the discussion of Alaska Issue 1 and Washington Issue 1.

Idaho Issue 1—Should the Pacific States Marine Fisheries Commission lobby the Congressional delegations and Administration to not make the Pacific Coastal Salmon Recovery Fund (PCSRF) a 100% competitive grant process with no state allocations? The Commission asked PSMFC staff and its lobbyist to learn more about the competitive bid process for PCSRF funds and the criteria that would guide member states in making future decisions. Staff would provide the information to one member from each state. **Vote was unanimous, 5-0.**

Oregon Issue 1—Oregon asks that the Pacific States Marine Fisheries Commission promote stronger coordination with regard to GSI. In particular, this would be coordination of research and sampling, and securing the required funding. The Commission supported this issue with the addition of the words "for fisheries management" after "GSI" to clarify that GSI was a management tool. **Vote was unanimous, 5-0.**

Oregon Issue 2—Oregon requests Pacific States Marine Fisheries Commission to oppose HR 21 in its present form and commit to participating in future rewrites to improve the bill. The Commission supported this issue. **Vote was 4-1, with Idaho abstaining.**

Washington Issue 1—Should the Pacific States Marine Fisheries Commission work with EPA on rules implementing "draft" 72 FR 34241 to minimize impacts to sport and commercial boat owners by developing best management practices (BMPs) that are incorporated into each state's vessel registry requirements? This issue was combined into the discussion of Alaska Issue 1 and California Issue 2.

Washington Issue 2—Should the Pacific States Marine Fisheries Commission support full funding of the Mitchell Act Hatcheries? Since the Commission has historically supported this issue, it voted again to support full funding of the Mitchell Act Hatcheries. **Vote was unanimous, 5-0.**

Washington Issue 3—Should the Pacific States Marine Fisheries Commission continue the coordination of West Coast state Dungeness crab management through the Tri-State Dungeness Crab Committee process? The Commission reiterated its support for the Tri-State Dungeness Crab Committee process. **Vote was unanimous, 5-0.**

ANNUAL AWARD RECIPIENTS

The Commission's 2007 Award for outstanding contributions in support of Pacific coastal marine fisheries resources was presented to

Roger Thomas
Golden Gate Fishermen's Association
and
Donald K. Hansen
Dana Wharf Sportfishing

It gives the Pacific States Marine Fisheries Commission great pleasure to recognize the contributions of
Roger Thomas and **Donald Hansen**
with this award for 2007.

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 (PSMFC). 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 ADFG Division of Commercial Fisheries, Commercial Fisheries Entry Commission (CFEC), NMFS Alaska Region, Alaska Fisheries Science Center, North Pacific Fishery Management Council (NPFMC), and PSMFC.

A summary of work completed by the AKFIN-SC in 2007 includes:

- **Alaska Fisheries Science Center (AFSC) Alaska CGE Modeling Project—**Provided AFSC staff with 1998-2005 custom vessel level harvest data. Followed this up with the supplemental address, permit, vessel, and code mapping information.

- **AFSC communities profile project—**An initial data mart containing 2000-2005 communities data was developed. The Community Statistics request from AFSC is a comprehensive set of data products that will provide information about the Alaska commercial and sports fisheries and how they affect and are affected by communities both in Alaska and elsewhere. This information will include such topics as:

  - Demographics Profiles
  - Commercial Permitting and Licensing
  - Commercial Vessel Registration and Participation
  - Commercial Landings
  - Commercial Production
  - Sport Fishing Licensing

- **AFSC trip-level data integration project—**The goal of this project is to integrate fish ticket, vessel observer, port observer, VMS, processor, logbook and vessel registration data to improve our ability to easily ask economic questions about fisher behavior. An initial dataset containing 2000-2006 data was provided to AFSC staff for review. Enhancements to this project are expected.

- **Fisheries of the U.S. (FUS)—**The 2006 FUS report suite is a series of views and tables provided to the NMFS Headquarters. The data submitted provides the Alaska feed that is compiled into a larger process for reporting on national fisheries statistics. Six sources are provided to include: Alaska Landings by Distance from Shore, Alaska Landings by Disposition, Alaska Landings by Port, Vessel Licensing Data, Halibut by State, and Kodiak Fishmeal Data. This data product is provided on a yearly basis.

- **PacFIN Data feed—**The PacFIN data feed details in-season groundfish data for the state and federal systems. Three data feeds are provided on a monthly basis, including summary data for shore-based plants based on ADFG data, detailed data for shore-based plants (for use in identifying confidential records), and summary data for at-sea processors based on NMFS catch accounting data. This data product is provided on a monthly basis. Results from the data feeds can be viewed at http://www.psmfc.org/pacfin/npfmc.html..

- **VMS Fishing Data for EFH/HAPC (Essential Fish Habitat/Habitat Areas of Particular Concern) Revisions—**Two

datasets were developed to analyze changes in EFH/HAPC regulations to specify the requirement of VMS in state waters as well as federal waters. These are data related to 2004 vessels fishing:

- Aleutian Islands
- Gulf of Alaska Mobile Contact Gear

- **Various Value-added NPFMC Data Submissions—**A2006 Fish Tickets, 2005/2006 Weekly Production data, 2006 Catch accounting data, Prohibited Species Catch (PSC) data, Observer haul and species composition data, ADFG intent to operate and processor annual report data.

- **Implemented Oracle Discoverer Reporting Tool—**Oracle Discoverer is a web-based, ad-hoc query, reporting and data analysis tool that allows users to gain secure access to Oracle databases. The following reports are available to confidential users:

  - Alaska landings by port
  - Vessel diversification
  - Retained Catch by Vessel

- **North Pacific Communities Data Request—**Data for the communities of Adak, St. Paul, St. George, and Sand Point was completed for the Council. Part of a two-part, eight community report on the ties of these communities to the fisheries of the North Pacific are being compiled by Northern Economics.

AQUATIC NUISANCE SPECIES

Highlights in 2007, for the Pacific States Marine Fisheries Commission's (PSMFC) **Aquatic Nuisance Species (ANS) Program** include:

1. The PSMFC and U.S. Fish and Wildlife Service (USFWS) led the effort to develop a Columbia River Basin rapid response plan for zebra and quagga mussels. The purpose of the Plan, entitled *Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and Other Dreissenid Species* is to coordinate a rapid, effective, and efficient interagency response in order to delineate, contain, and when feasible, eradicate zebra, quagga, and other dreissenid mussel populations if they are introduced in Columbia River Basin (CRB) waters. The Plan recognizes that a dreissenid invasion is an environmental emergency and any hope of containment necessitates fast action. The provisions of this Plan are intended to enhance agency coordination beginning with the discovery of an infestation by implementing containment and control efforts as soon as an infestation is discovered. The latest draft of the plan can be viewed at http://100thmeridian.org/ColumbiaRT.asp.

2. In October 2007, the Pacific States Marine Fisheries Commission and U.S. Fish and Wildlife Service, in collaboration with the 100th Meridian Initiative Columbia River Basin Team, held a "table-top" exercise in Vancouver, Washington to evaluate the *Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and other Dreissenid Species*. In addition to providing training on the National Incident Management System (NIMS), the exercise helped evaluate whether the plan and its organizational framework can help enhance response to an invasive mussel introduction. This groundbreaking event sets the stage for future exercises to improve response readiness for invasive species introductions throughout the United States. Incident Solutions LLC, an emergency response training/consulting firm, helped design, facilitate, and evaluate the exercise. Over 40 individuals representing nearly 20 agencies and organizations participated.

3. Zebra and quagga mussels are spread on trailered watercraft moving from an infested to uninfested waterways. For the past three years, the PSMFC has been providing training for boating law enforcement personnel and others so that they can successfully intercept, inspect, identify, contain and decontaminate trailered watercraft suspected of carrying zebra mussels. In 2007, 20 training sessions were conducted in nine states with over 700 agency staff participating. PSMFC also began production of a new watercraft inspection and decontamination education and training video entitled "Don't Move a Mussel." (available in 2008).

4. Provided administrative support and staffing for numerous ANS interjurisdictional efforts—including the Columbia and Missouri River Basin 100th Meridian Initiative Groups, the Pacific Ballast Water Group, the Green Crab Technical Group—and continued to provide ANS program support for the states of Idaho, Washington, Oregon and Montana.

5. Conducted education and outreach work focusing on zebra mussels, mitten crab and other species in the Missouri and Columbia River basins and California. Activities included the distribution of educational materials at sportsmen's shows, boat ramps, marinas, schools, etc., as well as in the print and electronic media.

6. Continued to provide support for monitoring of veliger and adult zebra mussels (Portland State University), green crab (Oregon State University, Smithsonian Environmental Research Center, University of California, Davis) and Atlantic salmon (Washington Department of Fish and Wildlife). Funding for a zebra mussel veliger identification lab was provided to the Montana Department of Fish Wildlife and Parks in 2007.

FISHERIES ECONOMICS DATA PROGRAM (EFIN)

The **Fisheries Economics Data Program (EFIN)** is a cooperative data collection effort to address the needs of fisheries managers and industry for economic and socio-economic information on the West Coast and in Alaska. This project is being 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. The goal is to provide reliable and timely data to assist with monitoring and measuring the economic performance of the fishing industry and communities of the West Coast and Alaska fisheries.

On the West coast in 2007, the EFIN staff conducted the following tasks:

- **West Coast Limited Entry Trawl Gear Groundfish Cost and Earnings Survey:** During 2007, EFIN staff worked with NMFS to complete this cost/earnings survey of the trawl fleet. Information from this fleet was collected using an in-person survey. As with all our previous Cost/Earnings surveys, EFIN staff employs the Dillman methods to conduct field work.

- **West Coast Limited Entry Fixed Gear Groundfish Cost and Earnings Survey:** During 2007, EFIN staff worked with NMFS to complete this cost/earnings survey of the fixed gear fleet. Similar to the approach used for the limited entry trawl gear fleet survey, information from this fleet was collected using an in-person survey.

- **West Coast open access and Salmon Cost and Earnings Survey:** During 2007, EFIN staff worked to identify a survey research firm to assist in the data collection. ORC Macro was selected based on their response to a Request for Proposals. In addition, clearance for the Office of Management and Budget (OMB) Paperwork Reduction Act (PRA) was finalized and submitted. The field portion of this survey was completed in late 2007.

PacFIN fish-ticket data indicate that 1,345 vessels participated in the open access groundfish and salmon fisheries during 2005-6. Data from these fleets were collected using one of three protocols: an in-person survey, a telephone survey or a mail survey.

The results of the three different approaches to this task are below.

Survey type	Total sample	Completed surveys	Percent complete
Telephone	244	35	14.3%
In-person	410	157	38.3%
Mail	566	48	8.5%

Web page changes/updates:

- **Fuel/Input Cost Information:** EFIN staff continued the collection of Input Cost information relevant to harvesting and processing operations. Of particular value is the Monthly Fuel Price Report, an ongoing data collection program started in January 1999. Fuel is the second largest single variable expense, after labor, paid by harvesting vessels, estimated at 10-15% of operating expenses. This project tracks the after-tax cost of #2 Marine diesel fuel at ports from California to Alaska. Summary reports, with monthly prices by region, are available from the EFIN website or EFIN staff. These reports are available from 1999 to the present. Continued to collect data and update the EFIN web page. A report covering 2004-2007 was created and is available at http://www.psmfc.org/efin/docs/2006FuelPriceReport.pdf.

- **Secondary data reporting:** Reworked reporting of several of the secondary data sets based on users comments. 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 2008-2009 season that was updated with reports from California, Washington and Oregon.

In Alaska, EFIN staff conducted the following:

Alaska Crab Rationalization Program
Pacific States Marine Fisheries Commission functions as the Independent Third Party Data Collection Agent (ITPDCA) 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 to 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), a 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 were collected in 2006 for the 2005 crab fisheries and 2007 for the 2006 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 were required to submit a historical report for all three years.

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. PSMFC hired Aldrich Kilbride and Tatone LLC to conduct random and outlier audits on all historic and annual EDRs received to date. These audits were conducted to verify the quality of data collected in the EDRs as well as to provide guidance on improving future EDRs. This process is repeated every year for the previous year's fishery.

PACIFIC FISHERIES INFORMATION NETWORK (PACFIN)

The **Pacific Fisheries Information Network (PacFIN)** is the nation's first regional fisheries data network. Funded by a grant from the National Marine Fisheries Service (NMFS), PacFIN is a joint federal and state project focused on fisheries data collection and information management. PacFIN provides timely and accurate data to aid effective management of fisheries and fishery resources.

In 2007, the PacFIN Office processed 305 data feeds from eight data sources and responded to at least 105 requests-for-information. There were 440,527 visits to the PacFIN website for an average of 36,710 visits per month. Various selections of standard PacFIN reports were generated weekly or monthly and uploaded to the PSMFC and PacFIN website.

In January, through correspondence with Alaska Fisheries Science Center (AFSC), Northwest Fisheries Science Center (NWFSC), and Oregon Department of Fish and Wildlife (ODFW) staff, it became clear that much of the Biological Data System (BDS) sample data for 1990–1997, and all of the 1998-2001 data for the shoreside Pacific whiting fishery was missing from the PacFIN central database, which has been home to the West coast biological data since 1999. ODFW staff took the initiative to gather this data from various National Marine Fisheries Service (NMFS) locations and then deliver new refresh data feeds to PacFIN. Both ODFW and California Department of Fish and Game (CDFG) coordinators completed work to incorporate BDS data feeds into PacFIN sample data for sablefish that had also been missing from the PacFIN central database.

In another initiative, the ODFW Data Coordinator assembled "special" samples for incorporation into PacFIN BDS tables. These samples will be distinctly identified, separate from the standard sample data. They consist of samples that did not follow the regular random sampling design that may be used by assessors who need additional information on a less collected species. (There are also otoliths collected for these samples, so assessors could have these ages if desired). A PacFIN coding system for these samples is being developed with plans to load the special samples to the PacFIN central database.

Retrieval routine slct_bds_warn_ag_yr.sql was developed to produce a spool file of warning messages by data source and year for BDS data providers, to simplify selections from the source table bds_df_warning which is populated with data quality information related to BDS updates.

In February, the CDFG PacFIN Coordinator resolved a difference between summary catch data in PacFIN and the Calcom database, where estimated landings of some rockfish species, notably vermillion rockfish from Santa Barbara area ports (other than the Port of Santa Barbara), were consistently lower in PacFIN than landings for similar species in Calcom Santa Barbara area ports. It was determined that a port group code assignment change in Calcom had not been added to PacFIN. All data years were re-summarized in PacFIN following the new code assignment.

At various times during this year, enhancements were made to the Quota Species Monitoring (QSM) subsystem. Code changes were made to improve the QSM file entry process by removing the dependencies on usernames. The staff also worked with ODFW to complete the agency's implementation of the data file delivery method.

The project to convert all 'C' programs to Oracle software was completed. All report programs for Pacific Fishery Management Council (PFMC) reports and agency reports (WOC) can now be generated via the new code base. Production implementation of the report programs occurred on a new server, "prowfish", located in Portland. Enhancements completed this year include: physical data model changes, core data processing changes, SQL*Plus scripts for report printing, Perl scripts for automation, creation of report definitions for WOC agency reports, testing, debugging, system validation and additional tools for ease of use.

The web access retrieval functions available via a password-protected webpage were expanded. The new functionality included an extract of fish ticket data allowing the user to filter the data to a given species complex.

Internal System Upgrades related to maintaining the success of current production applications were performed. These activities are supportive in nature and included code list change monitoring, database performance improvements, new production automation and retrieval scripts, verifying production systems on new hardware, new code to ensure validity of source data, new improvements to security of data transmissions between the www.psmfc.org web server and the PacFIN production server, a new report for fish ticket last load statistics, documentation and metadata.

In April, PacFIN and PSMFC HQ staff developed a testing plan for a new central server on a Linux OS and Oracle database platform. Testing and development during the year included the following accomplishments: All pacfin schema Oracle objects and pacfin account UNIX files were imported to the new "prowfish" server. SQL was written to compare Oracle objects between servers after the export/import process. Utilizing test userid pftuser3, table and procedure privileges were verified. User account system settings in .login and .cshrc files were modified for the Linux OS and Oracle 10g environments. All options of the QSM command line interface were exercised. Updates to the central database were performed and a number of retrieval programs were exercised and modified as needed.

A new production script (refresh_lbkprmtlst.sql) was created. This script matches limited entry permit data to logbook records.

New table "sum_fous3" was developed to fulfill a request from the NMFS/ST group.

A number of new reports and reporting features were added to PacFIN web pages this year, including: Washington Tribal All Species Reports to the password protected pages, W-O-C Coastwide Albacore Delimited Data by State, Port Group and Port to the public pages and removal-type and product-use descriptions to the code list page.

A report titled "Disclaimers, Caveats, and Other Useful Information" was also added to the PacFIN website. This web addition was requested at the November 2006 Pacific Coast Fisheries Data Committee (PCFDC) meeting to address differences in report composition and content between PacFIN reports and reports posted on the NMFS web site.

The WOC Trawl Logbook section of the web site was updated with the addition of a description of "Database columns apounds and apounds_wdfw" under "notes and hints."

PacFIN staff worked with clients to assist in the application of new software to migrate from telnet and ftp connectivity to NMFS/AFSC/OFIS (Office of Fisheries Information Systems) systems to ssh and sftp/scp protocols as required by newly implemented NOAA security mandates. PacFIN staff also supported clients with VPN (Virtual Private Network) setting changes required by NOAA host systems.

The PacFIN office continued to respond to NOAA network "vulnerability scans" of PacFIN desktop computers that are connected to the host AFSC network. This requires ongoing software upgrades, additions and/or removals, in order to maintain compliance with NOAA rules and standards.

In November, the former Assistant Data Manager began duties as Program Manager.

PacFIN – California Port Sampling

- The California Sampling project is staffed by the Pacific States Marine Fisheries Commission. Similar duties are completed in Oregon and Washington by state staffs using PacFIN award funds. The California Port Sampling effort employs a data manager, a programmer analyst, two supervisors, and nine port samplers.
- The data manager performs data quality assurance and provides the programmer analyst with the monthly PacFIN data files.
- The programmer analyst reviews and revises existing landings data quality reports and ran 2006 data quality landing reports; created new GIS 10 fathom interval depth contours, to replace previously created 10 fathom contours, and detailed data extracts of landings for an analysis of the north-central marine protected areas; processed and matched 2006 and 2007 trawl logs; submitted semi-monthly landings updates and monthly updates of vessel, fish dealer and species comp data to PacFIN; created landings summaries of 2007 California salmon to support a request for federal disaster relief for salmon fishermen; and created a detailed analysis of gillnet and drift net gear codes for high migratory species and submitted data summaries to NMFS and CDFG for review.
- The supervisors direct the port samplers and data manager, provide data support for the California Department of Fish and Game (CDFG) Groundfish Management Team representative, National Marine Fisheries Service, PacFIN, and Pacific States Marine Fisheries Commission and deliver Quota Species Monitoring and Biological Data System data to PacFIN.

They assisted in multi-agency planning for the 2007 and 2008 Pacific Whiting seasons and exempted fishing permits. As supervisors, they review direct samplers' sampling effort and coordinated editing and data entry of Trawl logs. They make weekly phone calls to keep in touch and conduct quarterly site visits with employees. They interview, hire, and complete all personnel paperwork and budgets as necessary.

- The port samplers, located in Crescent City, Eureka, Fort Bragg, Bodega Bay, San Francisco, Monterey, Morro Bay, Santa Barbara and Los Alamitos, collect species composition and biological samples from rockfish, flatfish and roundfish market categories. In addition to their field duties, port samplers are responsible for data entering their sample data every month in to a web-based database. They edit landing receipts for completeness and send them to the CDFG Marine Fisheries Statistical Unit for data entry. They review receipts for quota species which they submit to the Central Supervisor. Finally, they edit and key the Trawl logs submitted by fisherman into the CDFG Commercial Fisheries Information System ORACLE database.

PIT TAG INFORMATION SYSTEM

The **Columbia River PIT Tag Information System (PTAGIS)** is a data collection, distribution and coordination project. The project marked over 1,495,000 juvenile salmonids with passive integrated transponder (PIT) tags for the 2007 out-migration through the Columbia and Snake River systems, compared to over 1,991,000 in 2006 (Tables 1 & 2). In 2007, over 626,000 tagged fish were detected (Table 3). These fish generated over 8,085,000 interrogation records (Table 4). One fish can generate many interrogation records, depending upon how many interrogation sites or monitors 'saw' the fish.

In 2007, the PTAGIS project, in cooperation with the US Army Corps of Engineers, installed PIT-tag detectors on the full-flow bypass flume systems at John Day Dam and Lower Monumental Dam. In addition, in cooperation with Yakama Tribe and Bureau of Reclamation, PTAGIS installed PIT-tag detectors in the adult fish ladder at Roza Dam on the Yakima River. PTAGIS O&M staff and software developers refined operations of a fifteen foot by fifteen foot PIT-tag detector installed at the corner collector bypass at Bonneville dam that was initially installed in 2006.

The PTAGIS project supported 14 separate Separation by Code projects for various agencies in 2007. Development of M4 windows client software, intended to detect PIT-tagged fish and separate them by code continued. Limited deployment of the new system is expected in 2009.

TABLE 1

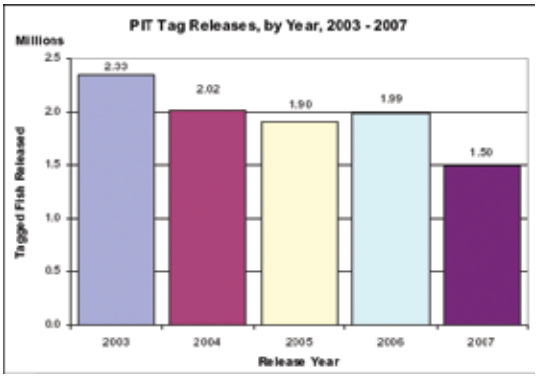


TABLE 2

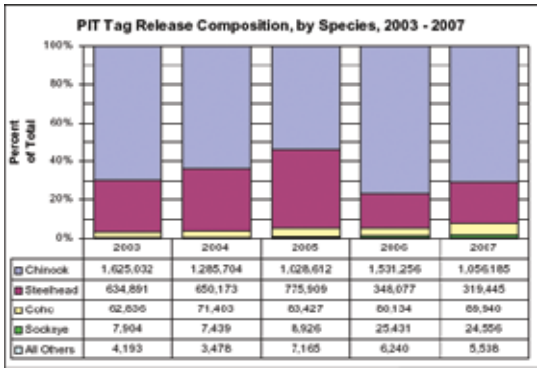


TABLE 3

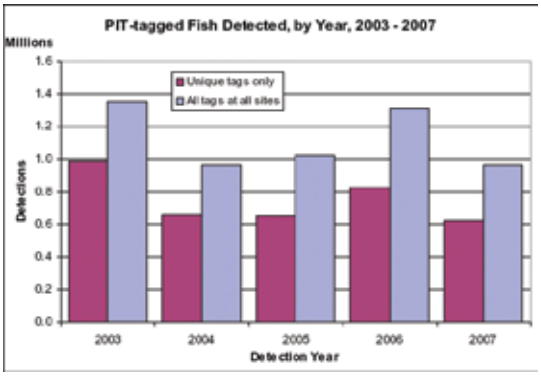
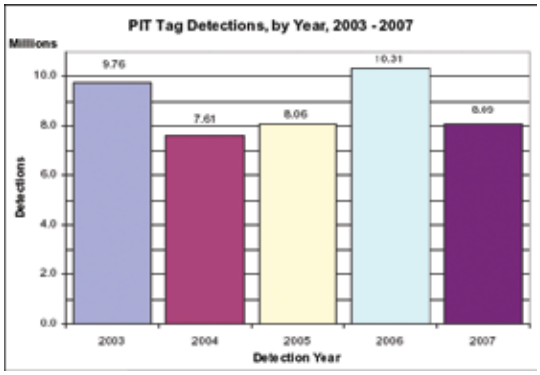


TABLE 4



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 coast-wide 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 Recreational Boat Survey (ORBS), Oregon Shore and Estuary Boats Survey (SEB), Washington Ocean Sampling Program (OSP), Washington Puget Sound Boat Survey, and the California Recreational Fisheries Survey (CRFS). These programs are funded by NMFS along with state agency funding from all three states. The survey encompasses over 800 fishing sites coast-wide in the three states. Of these sites, about 57 percent are in California, 10 percent in Oregon and 33 percent in Washington state.

In 2007:

- The state of California and PSMFC conducted the CRFS in California. Over 100,000 angler trips were sampled during the 12 month sampling program.
- PSMFC provided partial funding for sampling in Oregon and Washington through RecFIN. Sampling was conducted by the states. A total of about 40 percent of all ocean boat angler trips were sampled in Oregon in 2007; sampling occurred from March through October.
- The state of Washington conducted its Ocean Boat Survey and the Puget Sound Boat Survey in 2007. Sampling occurred throughout the year in Puget Sound and from April to early October on the coast. Sampling rates were at about 40 percent of all ocean boat trips.
- Two states utilize their angler license frame for estimation of 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 is loaded into the RecFIN database maintained at PSMFC with a one-month lag time. Access to the catch and effort information for all three states is available on the PSMFC website or at: www.recfin.org. Detailed explanations of the sampling conducted, sampling methodology and estimation statistics of the various sampling programs, along with catch and effort estimates by month, are available on the RecFIN website [www.recfin.org]. During 2008, the RecFIN website will undergo revisions to provide easier access to catch and effort data and include updates to match recent management changes by the states and the Pacific Fishery Management Council.

REGIONAL MARK PROCESSING CENTER (RMPC)

The **Regional Mark Processing Center (RMPC)** provides essential regional services to State, Federal, and tribal fisheries agencies involved in marking anadromous salmonids. These services include regional coordination of tagging and fin marking programs, maintenance of a regional database for coded-wire tag (CWT) releases and recoveries, and production of printed and/or machine readable data reports. The regional CWT database is accessed through PSMFC's web-based Regional Mark Information System (RMIS): http://www.rmpc.org

1. Data Management Accomplishments:

In addition to the normal flow of ongoing modifications to data management applications, there were several major improvements made to expedite the Mark Center's data management operations.

- **New Web-Based RMIS Date Retrieval Application**
  Regional data managers and researchers are using the new RMIS analysis tool. Some time was also spent in educating users in the use of the new tool. This new tool makes it easier for users to make very specific custom queries of the database.

- **GIS-Based Mapping of Regions and Basins**
  GIS maps of Regions and Basins for user reference and eventual interactive queries were developed in 2006 and are being updated and corrected in coordination with the Oregon Department of Fish and Wildlife (ODFW), Washington Department of Fish and Wildlife (WDFW) and Canada Department of Fisheries and Ocean (CDFO). Regions and Basins updates have been completed for the Columbia River, Oregon coast and Southwest Washington areas. A draft of the maps is available at: http://www.rmpc.org/files/PSC_All_Vers1_1_070126.pdf

- **Data Validation Issues**
  The CWT data load programs were upgraded to do more rigorous cross-table checks of tag releases in format version 4.0 when validating newly submitted tag recovery datasets. This is an ongoing project as data uploading errors are identified and corrected.

- **Data Integrity Issues**
  Significant time, again, was spent working with the various data reporting agencies to resolve inconsistencies found in the CWT data sets. While the number of errors was very small, it took considerable effort to resolve the reasons for the errors and to then correct them.

- **Backup and Recovery Procedures**
  Work also continued on developing and testing backup and recovery procedures for the CWT information stored in the Mark Center's various Oracle databases. All data programs at PSMFC are developing better documentation of data backup and recovery procedures specific to their data, software and hardware. This is crucial in order to not lose any of the data.

- **Routine Data Management**
  Work continued full time on expediting the processing of new data sets (CWT releases, recoveries, catch/sample, etc) as they were supplied by the various reporting agencies.

- **Specialized Data Requests**
  Throughout the year, specialized requests were received and processed for all CWT recoveries for specific sets of tag codes. These "brood reports" summarized tag recoveries across all fisheries, agencies, and recovery years. In addition, numerous data users were assisted in retrieving "raw" recovery records. These data subsets were then processed by the respective data users in a variety of ways to build their own in-house PC databases and generate customized reports, etc.

2. Regional Coordination Accomplishments

- **Mark Center Support in Implementing Recommendations of the CWT Expert Panel**
  George Nandor participated with the Coded Wire Tag Work Group that worked to address specific issues in the Expert Panel Report. The work group continues to work on a document detailing actions that need to be undertaken in response to the Expert Panel Report's recommendations. The final report should be completed this year.

- **Participation in the Regional Genetic Stock Identification Workshop**
  George Nandor participated in two GSI workshops held in Portland, Oregon and Vancouver, Canada. These workshops reviewed the feasibility of using genetic markers for identification of salmon stocks in ocean fisheries. Nandor participated in the Logistics sub-group which recommended using the RMPC as the primary location to house the regional GSI database if the system is implemented. Nandor made a presentation to the group and contributed to the Logistics group report. All the sub-groups are submitting their reports to the steering committee who will then issue a final report to the Pacific Salmon Commission regarding the use of GSI data for ocean salmon fisheries management.

- **Annual Mark Meeting**
  The 2007 Mark Meeting was held on April 25 & 26, 2007 at Warm Springs, Oregon and was jointly hosted by the Oregon Department of Fish and Wildlife (ODFW) and the Columbia River Inter-Tribal Fish Commission (CRITFC). Key issues on the agenda included discussions and updates on coast-wide mass marking and selective fisheries activities. In addition, considerable discussion focused on the RMPC's Strategic Plan, new GIS data queries, an update on the response to the Expert Panel Review and other pertinent topics. Minutes of the 2007 meeting are available at the RMPC website at: http://www.rmpc.org/files/mark-mtg-minutes/Mark_Mtg_Minutes_2007.pdf

In addition, a number of timely reports were presented to the Mark Committee to increase regional awareness of the various marking issues facing the fisheries agencies on the West Coast. Some of the key reports are listed below:

- **Improvements in processing Release datasets.**
  The RMPC is working on incorporating the ability to identify a full data submission vs. a partial submission and thereby allow for automatically identifying and purging an agency's invalid release records.

- **Discussion of RMIS GIS project and related map projects for CWT data.**
  The RMPC has new maps for RMIS Region/Basin codes—with proposed revisions to the coding system. This was presented, along with a request for agencies to review the Region & Basin definitions in their location codes, and to work with Jim Longwill to make any corrections needed to ensure that the codes correspond to the maps. The new availability of Pacific Salmon Commission (PSC) Format Location and Release data files on the RMPC FTP site was mentioned.

- **Update on mass marking and changes in agency tagging levels for 2007.**
  California: Greatly increased tagging levels: (now to tag 25% of all releases, etc.); Columbia River Chinook releases: now set to be 100% mass marked;Update sought regarding status of intended joint memorandum to program managers regarding de-sequestering of the LV clip on steelhead. Mark Kimbel pointed out that some of the mid-Columbia River Chinook releases in Washington are not mass marked yet due to funding shortages, but should be all mass marked next year. Paul Kline of Idaho Department of Fish and Game (IDFG) gave a brief update of marked releases in Idaho. He also stated that IDFG will no longer be using the LV clip as a flag for coded wire tagged steelhead, beginning with the 2007 brood year. Paul expressed IDFG's concern about the apparent lack of using electronic detection efforts to look for wire-tagged steelhead in the Deschutes River during the sport fishery creel survey.

- **Sequential coded-wire tags**
  Northwest Marine Technology gave a presentation on sequentially numbered coded wire tags and their uses. The Data Standards Committee needs to review tag issues and provide recommendations regarding the use of tag codes and/or sequence numbers for recoveries.

- **Review of PSC Activities**
  Primary Regional Coordination Work Group (RCWG) tasks include the annual coordination report, annual review of mass marking proposals to evaluate impacts on the CWT system, and miscellaneous assignments from PSC (none this year). The total percentage of fish that are mass marked is continuing to expand coast-wide.

- **Sampling methods—WA, OR, ID electronic; AK, OR coast, CA visual; Canada mixed.**

  Need to bring up the definitions of electronic and visual detection at the data standards meeting. There is a potential for misinterpretation if electronic detection equipment is used as a pre-screening tool where only ad-clipped beep-positive heads are processed. This should be coded as a 'visual' sample since only the CWTs from ad-clipped fish would be recovered. There needs to be an education process in place to ensure data are coded appropriately as there may not be a clear distinction for field personnel.

  For example, Canada introduced pre-screening on Chinook where all Chinook were tubed (due to mass marking) but only ad-clipped heads were processed. This is considered 'visual' even though tubes are used in the field. Likewise, if Alaska introduces electronic detection equipment due to mass marking of northern migrating Chinook and they only process ad-clipped fish, it would still be considered 'visual' sampling.

- **Mass Marking—**Total proposed mass marking is for 38 million coho and 87 million Chinook.

  No significant increases in coho mass marking.

  16.3 million (23%) increase in Chinook mass marking.

  Adequate sampling and reporting of CWT recoveries of unmarked Double Index Tag (DIT) releases is only occurring in WA; CWT still remains functional for ad-marked fish.

- **Recommendations**

  - The sampling programs are not sufficiently coordinated to support analysis by PSC technical committees.

  - PSC should continue to support technical and policy processes to develop agreements to clarify responsibilities for maintaining a functional CWT system.

3. Management and Administration Accomplishments

- Coordinated the development of the 2007 Statement of Work, for this program through Pisces.
- Coordinated the budget development for this project.
- Provided an updated inventory list as part of the budget package. This involved input from the three ODFW components, two PSMFC components and WDFW. Worked closely with the Contracting Officer Technical Representative (COTR), Jamie Swan, to finalize the complete funding package.
- Submitted a budget modification package through the Biological Oxygen Demand (BOD) process which was approved for FY 2007 and has been added to the base funding level for 2008.
- Meetings were held with WDFW and ODFW staff to coordinate budget and work activities to ensure that contract work and project goals were met.

4. Problems

- **Mark Center Funding**
  Due to delays in Congressional action on the Federal budget, the RMPC funding contract with the US Fish and Wildlife

Service for FY 2008 (October 1, 2007 to September 30, 2008) was delayed again, until Congress passes a budget. The good news this year is that the USFWS funding is now in the base budget.

NOAA Fisheries' funding contract is in place for FY 2008.

The BPA budget has been submitted and the Statement of Work (SOW) entered in Pisces. The FY 2008 BPA contract has been issued.

- **Missing Recovery Data**
  Lack of freshwater CWT recovery data for certain areas is still a problem. The RMPC continues making contact with the responsible agencies to coordinate the filling of those data gaps.

5. Personnel

No staff changes occurred at PSMFC's Regional Mark Processing Center.

Continued on page 22

6. Summary of Data Processed and Stored in the RMIS Database (Note that Year 2006 data was processed in 2007)

RMIS Data Summary (North American Pacific Coast Anadromous Salmonids), February 6, 2008

Area	Year	No. of Tag Groups Rel.	CWT's Released	Blank Wire Tags Released	Non-CWT's Released	Total Released
Columbia R Basin	2003	434	23,474,022	1,712,558	117,547,178	142,733,758
All Other Areas	2003	929	28,938,780	271,155	2,078,731,675	2,107,941,610
Totals		1,363	52,412,802	1,983,713	2,196,278,853	2,250,675,368
			2.33%	0.09%	97.58%	
Columbia R Basin	2004	413	23,987,450	981,440	116,091,432	141,060,322
All Other Areas	2004	913	27,450,880	282,842	2,227,653,682	2,255,387,404
Totals		1,326	51,438,330	1,264,282	2,343,745,114	2,396,447,726
			2.15%	0.05%	97.80%	
Columbia R Basin	2005	398	23,442,210	753,429	112,865,845	137,061,484
All Other Areas	2005	824	26,300,210	11,727	2,058,069,912	2,084,381,849
Totals		1,222	49,742,420	765,156	2,170,935,757	2,221,443,333
			2.24%	0.03%	97.73%	
Columbia R Basin	2006	360	21,952,216	559,240	110,458,361	132,969,817
All Other Areas	2006	704	25,320,202	76	1,891,322,384	1,916,642,662
Totals		1,064	47,272,418	559,316	2,001,780,745	2,049,612,479
			2.31%	0.03%	97.67%	

Recoveries and Catch

Area	Year	Total Catch*	Hatchery & Spawning	Total	Number of Fish Recovered with Tags
Columbia R Basin	2003	623,104	933,526	1,556,630	73,957
All Other Areas	2003	170,262,581	1,624,829	171,887,410	197,967
Totals		170,885,685	2,558,355	173,444,040	271,924
Columbia R Basin	2004	451,671	808,936	1,260,607	64,535
All Other Areas	2004	137,492,099	1,167,837	138,659,936	211,585
Totals		137,943,770	1,976,773	139,920,543	276,120
Columbia R Basin	2005	375,285	552,652	927,937	51,076
All Other Areas	2005	192,237,560	812,502	193,050,062	176,381
Totals		192,612,845	1,365,154	193,977,999	227,457
Columbia R Basin	2006	272,072	545,833	817,905	47,159
All Other Areas	2006	106,501,186	587,318	107,088,504	103,615
Totals		106,773,258	1,133,151	107,906,409	150,774

*Total catch as reported by the reporting agencies as "Number Caught" = PSC Format 4.0 field # 24 in the Catch/Sample Data records mbut does not include fishery codes 50, 51, 52, 53, 54, 57, 59 (hatchery returns, remote site traps, spawning ground counts, diversion screens, etc.

Note: Due to the delay that reporting agencies experience in compiling release and recovery data, 2006 data is still preliminary and subject to changes.

STREAMNET

The **StreamNet Project** 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. The project is funded by the Bonneville Power Administration and is administered by the Pacific States Marine Fisheries Commission. The project supports staff within the management agencies to obtain, georeference and standardize primary data used in fisheries management. The standardized data are then submitted to PSMFC for inclusion in the StreamNet database and made publicly available at www.streamnet.org through an on-line data query system and interactive map applications. The project also provides various data related services, including custom data development, data tool development, and assistance with data management.

During 2007, the project performed routine tasks, including 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. Some notable accomplishments include the following:

- Use of the StreamNet website, the data query system and the interactive map interfaces continued to be high. Details of Initiated work on a new, finer scale hydrography. This is a mixed scale hydrography that includes all 100K streams plus all 24K streams that have StreamNet data related to them. We will use this new hydrography until the USGS produces a stable, routed 24K hydrography for the Pacific Northwest.
- Promoted use of the "Data Store" on the StreamNet website, which allows people to upload and describe their data sets for easy access by others. These can be data of any type, and are fully searchable on line and are findable through online portals.
- Instituted use of new software to track use of the StreamNet website. Use remains high, but the new software will allow greater precision in tracking and eliminate counts of web crawlers or robots.
- Continued active involvement in regional collaborative efforts, including serving on the steering committees for the Northwest Environmental Data-network and the Pacific Northwest Aquatic Monitoring Partnership, and collaboration with the Columbia Basin Fish and Wildlife Authority on the CSMEP and SOTR projects.

More details of work done in FY-2007 are available through the BPA Pisces project tracking system, and will be available in our annual report, which will be published in November and made available at the Reports and Publications page of the StreamNet website at http://www.streamnet.org/about-sn/project_management.html.

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 is designed to gather, maintain, and disseminate fish and aquatic habitat data and data standards, and provides access to a growing number of fish and aquatic habitat datasets, 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 **California Habitat Restoration Project Database** (HRPD) effort continued to maintain and add 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 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 for both the Northern and Southern coasts.

PSMFC continued work with the California Department of Fish and Game to assist them with the administrative aspects of conducting the **Adaptive Watershed Program**, which facilitates the completion of watershed, riparian, and stream habitat improvement projects to benefit salmon and steelhead streams of coastal 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) locates and documents anadromous fish passage "sites" in all California coastal watersheds. Initiated and funded by the California State Coastal Conservancy, and continued by the Fisheries Restoration Grants Program, 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 CalFish web site.

PSMFC continues to provide technical assistance and field staff for collecting and compiling data on the movement and timing of juvenile Chinook and Coho salmon (and other species) in the **Humboldt Bay Tributary Estuary Sampling Program**.

PSMFC provides 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 **Russian River Coho Salmon Captive Broodstock Program**. The program produces and releases fish that are fit to survive and reproduce in the wild, in order to produce self-sustaining coho populations.

PSMFC's GIS 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 is assisting CDWR and CDFG with the **Feather River Monitoring** project. Work includes data compilation and analysis for the Feather River (and Central Valley).

PSMFC Fisheries Technicians on the **Upper Sacramento Technical Assistance** projects (Upper Sacramento River, Battle, Deer, Mill creeks) continue to assist CDFG with running fish traps, conducting salmon carcass surveys, and collecting biological data in order to estimate escapement, evaluate hatchery supplementation programs in assisting with recovery, and to collect tissue samples that will be used to genetically characterize populations to race.

PSMFC continued work with the California Department of Fish and Game to assist them with the administrative aspects of

conducting the **Aquatic Resource Assessment Program**. PSMFC administered contracts for 12 resource assessment projects that were completed (or in progress) statewide, and provided field technicians and research assistants for those projects to collect, compile, and analyze data and research on aquatic species, habitats, and natural communities.

PSMFC provides technical assistance and field staff for the **Coastal Restoration Monitoring and Evaluation** project. Staff monitors pending and completed coastal watershed restoration projects in the North and Central Coast region of California, collects habitat information, and compiles data.

PSMFC's **Southern California Habitat Assistant** identifies habitat restoration projects such as erosion control, removal of fish barriers, and removal of non-native vegetation, in order to improve fish habitat and establish funding for the projects.

PSMFC continues to provide fisheries technicians in Mendocino County to assist in conducting a pilot project designed to develop, test, and implement the sampling scheme and field surveys described in the **CA Coastal Salmonid Monitoring Plan**.

PSMFC assists in tracking and managing data quality and database accuracy for the **California Bay-Delta Authority**.

PSMFC assisted in escapement surveys on the **Lower American River** to generate an estimate of spawners and their distribution, and conduct coded-wire tag surveys to accurately estimate occurrence of CWT fish in river and to obtain detailed information on sex and spawning status.

In the **San Joaquin River Basin**, PSMFC assists in water temperature data collection, conducting Stanislaus River Chinook salmon carcass survey, spawning Merced River Hatchery fall-run Chinook salmon, reading coded wire tags, data entry, fish screening, and monitoring entrainment of salmon into water diversions.

PSMFC is working with CDFG to determine the **Age Structure of Central Valley Chinook Salmon Populations** by conducting scale analysis, assisting in the field collection of scales in Chinook escapement surveys, using the aging data in combination with coded-wire tag (CWT) recovery data to reconstruct the size of each returning brood year.

PSMFC provides technical assistance to the **Humboldt Bay Integrative Wetlands Strategy**, which is working to improve the regional management of wetland resources by developing a cooperative framework to formulate a regional wetlands strategy.

PSMFC Fishery Technicians are working in cooperation with CDFG to remove non-native trout from selected **Mountain Yellow-legged Frog Habitat Restoration** sites in the Sierra Nevada's.

PSMFC assisted in the purchase four Autofish Marking Trailers and provided on-going technical assistance to implement the first phase of the **Central Valley Constant Fractional Marking Program**. The program is responsible for annually coded-wire tagging/adipose fin clipping 25% of the Fall Chinook salmon production in the Central Valley hatcheries.

At the **Coleman National Fish Hatchery**, PSMFC provided seasonal personnel and services to assist the U.S. Fish and Wildlife Service mark and coded-wire tag approximately 1,100,000 juvenile Late-Fall Chinook salmon.

PSMFC provides technical assistance to ongoing **ROV Programs** of the Department of Fish and Game (CDFG) and Marine Applied Research and Exploration (MARE) by collecting and analyzing data on fish abundances and habitat, maintaining and operating equipment, and producing reports which will enable the continued gathering of information to aid fisheries management and monitoring of several nearshore fishes.

PSMFC provided assistance to the **California Steelhead Distribution Review** project to ensure that the statewide steelhead distribution dataset is accurate and complete.

CDFG's **Watershed Restoration Progra**m uses Fisheries Technicians provided by PSMFC to conduct salmonid surveys, biological sampling, and produce stream reports to determine habitat restoration and enhancement priorities.

PSMFC provides administrative support to facilitate the completion of **Klamath River Adaptive Watershed Improvement Projects**, which includes projects that have an immediate benefit to salmonids in the Klamath River Basin below Iron Gate Dam to the Pacific Ocean.

PSMFC assists in the implementation of the **Heritage and Wild Trout Program** by providing technical staff, expertise, supplies, and support services to assist with conducting high priority native trout resource assessment projects.

PSMFC administrative support assists the **Americorps Watershed Stewards Project** accomplish habitat restoration projects.

Fisheries Technicians from PSMFC are working to eradicate non-native predators and conduct **Habitat Restoration of Mountain Yellow-legged Frogs and Lahontan Cutthroat Trout** in lakes and streams in the Sierra Nevada's.

PSMFC is working with CDFG and the Ecosystem Restoration Program to develop a long-term **Comprehensive Central Valley Adult Chinook Salmon Escapement Monitoring Plan** and **Central Valley Steelhead Comprehensive Monitoring Plan** to estimate population status and trends in abundance in a statistically valid manner.

PSMFC is assisting CDFG with the development of a **Marine Research Implementation Plan** with both short-term and long-term perspective that focuses on key research priorities identified by the Department and the Marine Region.

Non-California projects

PSMFC provides technical expert assistance for the development of monitoring and evaluation strategies to support the **NMFS Salmon Recovery Plan** implementation.

PSMFC provides data stewardship services for the **NMFS Habitat Restoration Project Tracking Database**.

In cooperation with the HRPD Program, PSMFC is providing **NMFS Economic Data Assistance** for use in salmon recovery plan development.

COOPERATIVE AGEING PROJECT

The **Newport Ageing Lab** was established to age marine groundfish structures and is a collaboration between the NOAA Fisheries and PSMFC. The lab is located in Newport, Oregon, at the Northwest Fisheries Science Center (NWFSC) facilities. 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 helps 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 2007, CAP personnel performed the following tasks:

- Aged 28,080 otoliths from nine species of U.S. West Coast groundfish, including arrowtooth flounder, Dover sole, petrale sole, English sole, canary rockfish, darkblotched rockfish, Pacific Ocean perch, Pacific hake and sablefish. This includes all types of ageing, such as production, double-reads for quality control, recalibration, training and research reads.
- Lab personnel were involved in a NOAA-led research project that aimed to validate ageing methodology for petrale sole. Lab personnel independently aged otoliths through surface and break and burn techniques. Images were captured and annotated with notes to document current ageing methodology.
- Inventoried and tracked structures from 59 species of U.S. West Coast groundfish.
- Lab personnel coordinated with other members of the Committee of Age Reading Experts (CARE) in the planning, logo design and data format for the 2008 CARE meeting.
- Continued to add to the otolith image database. The database now contains over 1400 images from fish structures (spines, interopercles (bones that form the gill cover) and otoliths).
- Digitally archived age datasheets dating back to 1996. This preserves all original ageing data; age reader, date aged, multiple age counts for each structure and associated comments and codes. Much of the archived data is not currently entered into any database and the electronic format puts a complete back-up system in place.

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 in 2007 were funded primarily by the Wallop-Breaux Sport Fish Restoration program managed by USFWS, the National Marine Fisheries Service, and the Marine Conservation Alliance Foundation. Fran Recht, Program Manager, was profiled in the March/April 07 PSMFC newsletter.

Highlights of work during 2007 include:

Estuary protection

In December 2007, the long awaited acquisition of 420 acres of important fish habitat in the Yaquina Estuary was completed. The lands will be held primarily by The Wetlands Conservancy. The project which received funding in 2004 from U.S. Fish and Wildlife Service NCWCA (National Coastal Wetlands Conservation Act) and Oregon Watershed Enhancement Board (OWEB) conserves 200 acres of undisturbed tidal marsh, 35 acres of restored marsh, and 35 acres of marsh awaiting acquisition and 150 acres of forested uplands as buffer. PSMFC has been a key player in various aspects of the project.

This project ties in with other work PSMFC is involved in along the central coast of Oregon to conserve tidal and fresh water marsh habitat for salmon and steelhead and the myriad of other species that use these areas. Through PSMFC's assistance and technical support, the State of Oregon also acquired a 319 acre property in the Beaver Creek watershed north of Alsea Bay in 2007. This property includes a 100 acre fresh water marsh that is a key over-wintering area for coho.

A freshwater marsh in Beaver Creek, important for coho salmon that will be restored for enhanced habitat values.

Ecosystem Based Fishery Management

In 2007, a paper *Ecosystem-based fishery management: some practical solutions* by Richard Marasco, Daniel Goodman, Churchill Grimes, Peter Lawson, André Punt, Terry Quinn, was published in the Canadian Journal of Fisheries and Aquatic Science (64: 928-939 (2007). This paper was updated from a panel discussion about ecosystem based fishery managment among scientific experts also familiar with the North Pacific and Pacific Fishery Management Council process. It focused on practical ways to move forward from current single species dominated management processes to a more ecosystem based management framework. PSMFC served as the convenor of this group and helped in the logistics and editing of the paper for publication.

Marine Debris Work
In 2007, the National Fish and Wildlife Foundation which runs the NOAA Marine Debirs grant program, awarded PSMFC funding for efforts to re-establish the gillnet recycling program in Alaska (and reinvigorate programs in Washington and Oregon). Work will start in 2008 on this project.

PSMFC was involved in arranging an estuarine boat tour for the purpose of allowing regulatory agencies to assess the habitat and marine debris problems associated with the abandonment of thousands of plastic oyster culture racks and oyster bags, secured with heavy concrete anchors at the mouth of McCaffery Slough and in the nearby Yaquina mainstem. The tour was provided with the assistance of Oregon State Police boats. Participants included Oregon Department of State Lands and Oregon Department of Agriculture and the property owner. Oregon State Police is leading efforts to have the gear removed, but efforts are slow due to bankruptcy issues and the death of the landowner. PSMFC also helped removal efforts by identifying and arranging a boat tour (again through the Oregon State Police) for a plastic recycler and for a shellfish grower who may be able to help with the disposal/re-use of the gear once it is removed. Removal efforts are slated to occur through court order in July 08.

Watershed Council Support
This project provides administrative and technical assistance and support to help the MidCoast Watersheds Council (MCWC) achieve priority work for salmon and watershed health. Long recognized as one of the best in the state, it received and expended over 1 million dollars in 2007 on restoration projects that address the limiting factors in whole sub-basins (approximately 7th field). The group's annual report (for Fiscal year 2006/2007) features a review of the work which concentrated mostly on culvert repairs, large wood placement (with helicopter), and on removing dikes and ditches in Lint Slough on the Alsea. The report also includes a a summary of the estuarine conservation and restoration projects that PSMFC's work has spearheaded. A hard copy of that annual report is available from the MCWC's coordinator: Wayne Hoffman <mcwc@midcoastpartners.org>.

PSMFC has supported and furthered the work of the Alsea Stewardship Group since its inception in 2005. The Alsea Stewardship Group is a group that has worked with the U.S. Forest Service and U.S. Bureau of Land Management and multiple, diverse partners to achieve stewardship contracting authority for the Mid-Coast region. That authority was received in 2007 and as such will allow timber sale receipts (e.g. from thinning and commercial sales) to be retained in the Siuslaw National Forest for priority restoration projects (rather than going to the U.S. general fund). It also allows funds to be used on restoration efforts on surrounding private lands if there is a direct benefit to the forest watershed, fish and other species. In the meantime, until revenues begin to be generated from sales in this ranger district, project revenues from sales from the Siuslaw Stewardship Group will be used in 2008 for invasive species control and a fish passage project that involves culvert fixing and large woody debris placement work.

Watershed Tours
Washington tours called 'Flying for Fish Habitat' are aerial tours conducted with the assistance of small planes provided by the non-profit group, LightHawk and target key decision makers, funders, and restoration project planners. They are coordinated with local watershed, restoration, and non-profit groups. 16 flights were conducted in 2007, 15 in the Nisqually and Nooksak watersheds and 1 in the Hood Canal Watershed to focus in and build support for the Ohop restoration project (the largest restoration project planned for the state), salmon habitat restoration and conservation areas in Lily Point and Whatcom Lake, and flood-related water quality and land development issues, respectively.

California tours were conducted in conjunction with the Institute for Fisheries Resources and Pacific Coast Federation of Fishermen's Associations in 2007. Three ground tours were organized and targeted decision makers, representatives and the media. These tours highlighted issues on the Mid-Klamath including the importance of cold water refugia, the restoration work going on with road decommissioning and culvert repair, toxic algae issues and Klamath dam removal issues. The Tuolumen River tour highlighted issues with the river, the predominate tributary to the San Joaquin River which hosts the largest natural run of fall-Chinook salmon in the Central Valley, and provides 85% of San Francisco's municipal water. Twenty five participants viewed a successful wetland and streamflow restoration effort on a working farm, viewed an in stream spawning gravel restoration project and learned about riparian zone habitat enhancement projects and and invasive weed control. The group also heard a presentation about the San Joaquin River settlement and about salmon fisheries in the area. The Butte

Creek/Battle Creek tour allowed participants to observe fall chinook salmon spawning operations at Colman Hatchery, riparian and hydrological restoration efforts, learn about the Battle Creek dam removal efforts, and observe wild salmon in their habitat on Butte Creek while learning about challenges to restoration from inadequate flows, powerhouse operations, and from disturbances due to recreational use.

Restoration tour on the Mid-Klamath.

PSMFC also supported a tour held in 2007 that was organized by the Salmonid Restoration Federation for scientists and practitioners involved in watershed and salmon restoration efforts.

In Oregon, a tour was conducted of watershed restoration projects in the Hood River watershed in collaboration with the non-profit group Network of Oregon Watershed Councils. While legislators, county commissioners, city leaders, and the media were 'targeted' for enhanced outreach, participants were mostly watershed group leaders from around the state.

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, 2006, marked the 16th 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 2007 season:

- A program record total of 191,154 fish were harvested in the sport-reward fishery.
- Vouchers for 191,040 fish of the 191,154 total catch were submitted for payment with rewards totaling $1,285,971.
- 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 1,177 anglers who registered were successful in catching one or more fish in 2007. The 2007 season ran from May 14, 2007 through October 14, 2007.
- A total of 170 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 $85,000.
- System-wide exploitation in 2007 of northern pikeminnow 200 mm or greater in fork length was 15.3% (incorporating a tag loss of 5.3%). Sport-reward exploitation of fish > 250 mm FL(fork length) was 17.8%, the third highest exploitation rate since program inception.
- The 2007 estimated reduction in potential predation (63% of pre-program levels) was based on an updated Friesen and Ward (1999) predation model (ODFW, unpublished data). This is a greater reduction than observed previously (75%; Jones, et al., 2005), and is related to the updates made in the predation model.

WEST COAST GROUNDFISH OBSERVER PROGRAM

The **West Coast Groundfish Observer Program (WCGOP)** provides coastwide estimates of discards across fisheries throughout the year. The data used for these estimates are derived from data collected by observers at sea. These estimates are an important component 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 biological samples.

2007 was the sixth year the West Coast Groundfish Observer Program (WCGOP) actively deployed observers in a variety West Coast groundfish fisheries. The program has standardized its sampling and vessel coverage plans while remaining flexible to the needs of an evolving sampling plan created by the WCGOP with help from stock assessment authors and the Pacific Fisheries Management Council (PFMC).

In February 2007, the program held its 6th Annual Observer Meeting in Portland. The two-day meeting is unique among observer programs and has helped the WCGOP work through some of the many issues related to sending biologist to sea alone to collect information. Observer feedback and input allow program staff to stay current with the issues that observers face day-to-day in performing their jobs.

In March 2007, the program completed training of 22 seasonal observers who were deployed throughout the coast to assist the 24 year round observers. Employing seasonal observers allows the program to efficiently match observer resources to meet the demands of the groundfish fisheries off the West Coast. From late March thorough October, the program operated with up to 46 active observers in the field collecting data.

Safety at sea is a high priority for the WCGOP. Every observer in the program is required to have completed safety training and/or a safety briefing within the past year. In September 2007 the program gathered the year-round observers in Newport, Oregon, for an annual safety briefing. 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. US Coast Guard representatives provided a guided dock walk and answered a variety of questions about vessel 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 and each type of gear by state from January 2007-December 2007. A total of 2,689 days at-sea were completed in 2007.

State	Trawl	Longline	Pot	Shrimp	Open Access
California	523	197	44	8	202
Oregon	794	69	46	293	206
Washington	97	198	1	0	11
Total	**1414**	**464**	**91**	**301**	**419**

When completed. the WCGOP Data Reports and Summary Analyses for 2007 can be found at:
http://www.nwfsc.noaa.gov/research/divisions/fram/observer/datareport/index.cfm.

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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, 2007 and 2006 as listed in the table of contents. These basic financial statements are the responsibility of the Commission's management. Our responsibility is to express an opinion on these basic 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. 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 basic 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, 2007 and 2006 and the changes in its net assets 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 March 10, 2008 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.

The Management's Discussion and Analysis on pages 3-6 is not a required part of the basic financial statements, but is 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 required supplementary information. However, we did not audit the information and express no opinion on it.

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. Such 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.

AKT LLP

Lake Oswego, Oregon
March 10, 2008

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