



PACIFIC STATES MARINE FISHERIES COMMISSION

2018 ANNUAL REPORT

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

ALASKA • CALIFORNIA • IDAHO • OREGON • WASHINGTON



71ST ANNUAL REPORT OF THE PACIFIC STATES MARINE FISHERIES COMMISSION

— *Alaska, California, Idaho, Oregon and Washington* —

2018

Presented 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.

Respectfully submitted,

PACIFIC STATES MARINE FISHERIES COMMISSION

RANDY FISHER, *Executive Director*

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COMMISSIONERS, ADVISORS, AND COORDINATORS 2018

STATE	COMMISSIONERS	ADVISORS	COORDINATOR
Alaska	Charles Swanton Cathy Giessel Paul Gronholdt	Matt Alward Shannon Carroll Don Lane Matthew Moir	Trent Hartill (ADFG)
California	Charlton H. Bonham Barbara Emley Vacant	Jim Caito Ken Franke Donald K. Hansen Mike McCorkle	Sonke Mastrup (CDFW)
Idaho	Virgil Moore Lee Heider Jerry Meyers	Sharon Kiefer Ed Schriever Joe Stegner Jim Fredericks	Lance Hebdon (IDFG)
Oregon	Ed Bowles Jeff Feldner Caddy McKeown	Walter Chuck Steve Fick Liz Hamilton Dorothy Lowman Lori Steele Brad Pettinger Richard Heap	Caren Braby (ODFW)
Washington	Michele Culver Brian Blake Phil Anderson	Robert Alverson Dale Myer Robert Jones Al (Butch) Smith Steve Watrous Rich Lincoln	Heather Reed (WDFW)



MESSAGE FROM THE EXECUTIVE DIRECTOR

Randy Fisher, *Executive Director*

It is a pleasure to provide the 2018 Annual Report of the Pacific States Marine Fisheries Commission (PSMFC).

In addition to the PSMFC work that is reported here, we also joined with our sister Commissions to present our joint view to Congress regarding future funding priorities for the core missions of National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS).

The following are the Commissions' views and comments on federal issues before Congress.

NOAA FISHERIES BUDGET

The Commission strongly supports full funding for the National Marine Fisheries Service in the Fiscal Year 2019 appropriation bill for the Commerce-Justice-Science line items. In an era of reduced federal and state spending, the Commission believes that funding for basic long-term fisheries management programs should be given priority over new initiatives. These priority programs include stock surveys, fisheries research, collection of fishery-

dependent data, in-season management, and observer sampling programs. Adequate funding should be provided to the States when Federal fisheries management or initiatives have been delegated to the States for implementation.

The Commission supports identifying new funding to address ecosystem management plan development and implementation activities associated with building the capacity to address issues associated with climate change. The Commission also believes that new funding should be identified to augment coast-wide research and monitoring addressing changing ocean conditions, harmful algal blooms, and ocean acidification.

We recommend that the Congress continue to place special emphasis on collaboration programs such as the Inter-Jurisdictional Fisheries Act (IJFA) which combines State and Federal funding for fishery and ocean projects. The Commission also supports full funding for the Regional Fishery Management Councils (RFMCs) and the NMFS Regions. Fisheries conservation and management programs are administered regionally. Stable funding for the States, RFMCs, and the NMFS Regions is critical to successful fishery management.

The Commission strongly supports the continuation of NOAA funding for habitat



conservation and restoration. NOAA awards collaboration grants from funds appropriated under the Sustainable Habitat Management line item for habitat restoration grants. These federal funds are leveraged with state, local, and private contributions for restoration projects. Each project has robust volunteer and community involvement.

HARMFUL ALGAL BLOOM TESTING AND MONITORING

The West Coast and Alaska are facing significant issues relating to the growing incidence of harmful algal blooms (“HAB”). The HABs are massive toxic blooms of the marine diatom *Pseudo-nitzschia*. The HAB produces a potent neurotoxin, domoic acid, which can accumulate in shellfish, other invertebrates, and fish. Consumption of domoic acid can cause death in seabirds and marine mammals, and it can result in Amnesic Shellfish Poisoning when consumed by humans.

A significant HAB event was detected in 2015. Scientists were able to track its extent from the Channel Islands in California to Alaska. There appears to be a nexus between the HAB occurrences, ocean acidification, and warming ocean trends. The HABs are suspected of contributing to Unusual Mortality Events (die-off

of 30 large whales in the Western Gulf of Alaska; sea lion strandings in California); lethal levels of toxins (10 to 30 times higher in Monterey Bay, California); shellfish closures (Puget Sound and Northern California razor clams; West Coast Dungeness crab); and fishery closures (anchovy and sardines in California). NOAA is still calculating the economic impacts of these closures. Information relating to the magnitude of marine life, sea birds, and marine mammals is anecdotal.

NOAA has funded programs in Alaska and the West Coast to begin to track HAB hot spots and monitor the domoic acid levels in HAB species. The States also engage in tracking and testing. The States periodically test for levels of domoic acid in clams and mussels. The States also receive limited federal grants to take plankton samples offshore.

The long-term objective is to gather data and develop scientific protocols to better predict the occurrence of HABs. The Commission believes that additional funding should be provided to NOAA to expand its collaboration with state, tribal, academic, and other partners to monitor, predict, track, and respond to HAB events.

The Congress enacted the Fiscal Year 2019 Health & Human Services appropriations bill.

The funding section for the Centers for Disease Control includes \$1,000,000 to enhance harmful algal bloom exposure activities, including surveillance, mitigation, and event response efforts, with a priority given to geographic locations subject to a state of emergency designation related to toxic algae blooms within the past twelve months.

AQUATIC INVASIVE SPECIES

The Congress has enacted the Water Resources Development Act reauthorization. The bill increases the authorization for watercraft inspection stations intended to prevent the spread of aquatic invasive species across the Columbia River Basin, Upper Missouri River Basin, Upper Colorado River Basin, and South Platte and Arizona River Basins. The authorization provides \$30 million each for Columbia River Basin, Upper Missouri, and Upper Colorado (including South Platte and Arizona River).

WEST COAST WHALE ENTANGLEMENTS

NOAA Fisheries has been using funds from the Bycatch Reduction Engineering Program to initiate collaborative efforts between marine mammal researchers and West Coast pot and longline fishermen to better understand the increase in the number of large whales that have become entangled in recent years. A NOAA grant to the Commission allowed us to bring fishermen and marine mammal specialists together to explore new gear configurations or practices that may help reduce entanglements last March. Subsequent to the meeting, the Center for Biological Diversity sued the State of California under the Endangered Species Act for its alleged failure to reduce interactions with threatened whale species. The Center has also petitioned NOAA under the Marine Mammal Protection Act to place the West Coast Dungeness Crab fishery into "Category I" status, in an effort to trigger a Take Reduction Team process. The Commission remains concerned about the impact of these lawsuits on the West Coast crab fleet.

NPDES VESSEL INCIDENTAL DISCHARGE PERMIT MORATORIUM

The Commission continues to strongly support legislation to make permanent the moratorium

on National Pollutant Discharge Elimination System ("NPDES") Vessel Incidental Discharge Permits for commercial fishing and small passenger fishing vessels regardless of size and for all commercial-use vessels less than 79 feet in length. S.371 was not enacted because it became politically intertwined with efforts by large vessel operators to pre-empt State regulation of ballast water discharges in favor of a uniform international standard. The States of Alaska, California, Oregon, and Washington voted in prior Commission meetings to oppose Federal pre-emption of State ballast water management.

The NPDES Incidental Discharge Permit Moratorium expired on January 19, 2018. We again urge the Congress to permanently resolve this issue.

"REFI LEGISLATION"

Congress enacted the "Revitalizing the Economy of Fisheries in the Pacific Act" (commonly referred to as the "REFI" bill) as part of the Fiscal Year 2015 National Defense Authorization Act. The legislation would allow for the refinancing of the Pacific Coast Groundfish Fishing Capacity Reduction Loan (longer term, reduced repayment fees, and the current low Treasury rate). The federal Office of Management and Budget has ruled that the Congress must appropriate \$10 million to offset the revenues lost to the Treasury from accelerated repayment of principle; and an additional \$300,000 to meet the fiscal set-aside requirements of the Federal Credit Reform Act to secure the new loan refinancing. The REFI Legislation is an important element of the long-term plan to stabilize the West Coast groundfish industry and its dependent coastal communities. The Commission urges the Congress to either enact a waiver of the offset requirement or appropriate the \$10 million so that the refinancing can move forward.

COAST GUARD ALTERNATIVE SAFETY COMPLIANCE PROGRAM

The Congress tasked the U.S. Coast Guard with working with the commercial fishing industry to develop an alternative safety compliance program ("ASCP") for vessels in excess of twenty-five years of age. The Coast Guard initiated the development of a mandatory

alternative safety compliance program in 2016 to mixed results, triggering significant opposition from a wide swath of the commercial industry. On July 20, 2016, the agency announced that it was discontinuing efforts to develop a mandatory program in favor of a voluntary Enhanced Oversight Program. In doing so, the Coast Guard appears to have reserved the right to resume future development of a mandatory ASCP.

The Commission is supporting the position that the Coast Guard's Enhanced Oversight Program should remain voluntary on a permanent basis. The Commission supports the introduction and enactment of legislation to retain the voluntary nature of the program.

MARINE SANCTUARIES AND MONUMENTS

There continues to be concern expressed within the Congress about the use of executive authority to establish marine national monuments or marine sanctuaries. Both President Bush and President Obama have used Antiquities Act authority to establish large segments of the marine environment as National Monuments, with fishing activity either eliminated entirely or severely restricted. The Magnuson-Stevens Act ("MSA") reauthorization bill passed in the House in 2017 contained a provision which would require the MSA conservation and management regime be used in regulating fishing within National Marine Monuments established unilaterally by the President pursuant to the Antiquities Act.

The eight U.S. Regional Fishery Management Councils sent a letter to the President on June 26, 2016 urging the continuing use of the MSA to regulate fishing activities in any future protected area designation. The Commission supports the resolution issued by the eight Regional Councils. We believe the established and transparent scientific MSA regional management process is the best approach to regulating commercial and recreational fishing activities within protected marine sanctuaries and monuments.

NORTH PACIFIC GROUND FISH SURVEYS

The National Marine Fisheries Service is reviewing budget options for the North Pacific region which could result in a reduction in the groundfish surveys traditionally performed off the coast of Alaska. Five charter vessels have

been traditionally used to conduct two annual surveys on the Bering Sea shelf and three Gulf surveys during odd numbered years. During even numbered years those three surveys are shifted to the Aleutian Island and the Bering Sea slope. NMFS is considering reducing those surveys to three or four vessels. Additionally, the NOAA survey ship R/V OSCAR DYSON is down for emergency repairs. NMFS is having internal discussions about whether to shift the R/V SHIMADA to the North Pacific to replace the DYSON.

PACIFIC SALMON TREATY

The Pacific Salmon Commission has recommended to the governments of Canada and the United States a 10-year conservation and harvest sharing agreement under the Pacific Salmon Treaty. The proposed agreement covers the five Pacific salmon species from the Pacific Northwest, Canada, and Alaska and will go into effect January 1 if approved by U.S. and Canada diplomatic officials. The new agreement calls for a 7.5 percent reduction in Alaska king salmon harvest, a 12.5 percent reduction for Canada, and 5 to 15 percent reductions for Washington and Oregon depending on species abundance.

SALTONSTALL-KENNEDY GRANTS ADVISORY COMMITTEE

The Senate has passed legislation authored by Senator Sullivan to establish an outside advisory committee to provide greater oversight over NMFS' awarding of funding from the Saltonstall-Kennedy grants program.

MARINE DEBRIS

Congress has passed legislation (The Save Our Seas Act) to reauthorize NOAA's marine debris program. It emphasizes marine debris clean-up, promotes greater inter-agency coordination on debris prevention and removal, and more concerted international action on reducing marine debris.



71ST ANNUAL BUSINESS MEETING SUMMARY

Pacific States Marine Fisheries Commission

Boise Centre | Boise, Idaho | August 22, 2018

Chair Sharon Kiefer called the annual meeting to order at 7:30 a.m. In attendance:

Charles Swanton, *Alaska Commissioner*

Senator Cathy Geissel, *Alaska Commissioner*

Paul Gronholdt, *Alaska Commissioner*

Sonke Mastrup, *California Coordinator representing California Commissioner Charlton Bonham*

Barbara Emely, *California Commissioner*

Sharon Kiefer,
Idaho Advisor, representing Idaho Commissioner Virgil Moore

Senator Lee Heider, *Idaho Commissioner*

Jerry Meyers, *Idaho Commissioner*

Ed Bowles, *Oregon Commissioner*

Jeff Feldner, *Oregon Commissionerr*

Michele Culver, *Washington Commissioner*

Representative Brian Blake, *Washington Commissioner*

Phil Anderson, *Washington Commissioner*

Chair Kiefer requested a roll of call of each state. All PSMFC Member States were present.

Chair Keifer introduced Idaho's newest members Sen. Lee Heider and Jerry Meyers. No other states had a new member to introduce.

Chair Keifer requested a motion to approve the Fiscal Year 2019 financial Statement.

Alaska Second: the motion. 2019 fiscal year financial statement was approved unanimously.

Chair Kiefer requested a motion to approve the 2017 Business Summary.

Oregon requested a motion to approve.

California second: 2017 Business Summary was unanimously approved.

Chair Kiefer: Moved to voting on the PSMFC resolutions that were submitted by the states on Tuesday.

Oregon Issue 1 - HABs Monitoring Grant Program

PSMFC will initiate a collaborative effort to develop a framework for a sustained, non-competitive grant program to support state monitoring of freshwater and marine HABs. This approach may include federal legislation and appropriations to implement such programs.

Vote: Passes unanimously.

Oregon Issue 2 - PBT Coordination and Expansion

Support continued development and refinement of genetic stock identification and parental-based tagging tools; facilitate the coordination and expansion of the use of these tools, as appropriate, into additional management areas consistent with the work being done in the Columbia and Snake basins.

Adopted language: Support continued development and refinement of genetic stock identification and parental-based tagging tools; facilitate the coordination and potential expansion of the use of these tools, as appropriate, into additional management areas consistent with the work being done in the Columbia and Snake basins.

Vote: Passes unanimously.

Alaska Issue 3 - Aquaculture (a modification of the 2013 standing resolution)

PSMFC supports States' abilities to "opt-out" of aquaculture operations by time, area, species, and/or gear throughout the exclusive economic area (EEZ).

Further, any federal framework for EEZ aquaculture should:

- Ensure that funding for any aquaculture initiative, including the marketing of farm-raised seafood, come from new sources, not existing federal fisheries, research, management, or marketing funds;
- Recognize that aquaculture is not a "commercial fishery" under the Magnuson Stevens Act (MSA) and requires its own distinct statutory and regulatory structures;

- Recognize that salmonid hatchery programs are not aquaculture;
- Require meaningful consultation with regional fisheries management councils and affected states;
- Require the National Environmental Policy Act (NEPA) (or equivalent) analysis of socio-economic and environmental impacts;
- Require a contingency plan that lays out the response to accidents that could cause harm to wild fish stocks, fisheries, habitat, or coastal communities.
- This should require that the permittee post sufficient bonding to cover the cost of potential impacts; and
- Include direct funding of a national wild seafood marketing initiative funded through an industry tax on sales of aquaculture.

Amended Resolution:

PSMFC supports States' abilities to opt-out/in of aquaculture operations by time, area, species, and/or gear throughout the exclusive economic area (EEZ).

Further, any federal framework for EEZ aquaculture shall:

- Ensure that funding for any aquaculture initiative, including the marketing of farm-raised seafood, come from new sources, not existing federal fisheries, research, management, or marketing funds.
- Recognize that aquaculture is not a "commercial fishery" under the MSA and requires its own distinct statutory and regulatory structures;
- Recognize that salmonid hatchery programs are not aquaculture;
- Require meaningful consultation with regional fisheries management councils and affected states;
- Require NEPA (or equivalent) analysis of socio-economic and environmental impacts;
- Require a contingency plan that lays out the response to accidents that could cause

harm to wild fish stocks, fisheries, habitat, or coastal communities.

- This should require that the permittee post sufficient bonding to cover the cost of potential impacts; and
- Include direct funding of a national wild seafood marketing initiative funded through an industry tax on sales of aquaculture.
- Requires an explicit aquaculture product label.

Vote: Passes unanimously.

California Issue 4 - Establish MSA as Controlling Authority in Federal Waters.

Magnuson Stevens Act (MSA) should be the controlling authority relative to fishing activities in all federal waters.

Adopted language: Washington's Amendment. The MSA should be specified as the controlling law in cases of conflict with NMSA, ESA, and Antiquities Act as per the language that was removed from the proposed HR 200 that had been supported by the RFMCs.

Vote: Passes unanimously.

Idaho Issue 5 - Support of the Renewal of the Columbia River Treaty

PSMFC supports renewal of the Columbia River Treaty with appropriate consultation with affected state interests.

Adopted language: *The States of the PSMFC have large interests surrounding the Treaty outcomes. PSMFC will develop a preamble that supports the Treaty implementations.*

Vote: Passes unanimously.

Alaska Issue 6 - State of Alaska Salmon Management

The Commission supports the enactment of Federal statutory authority to delegate to the State of Alaska the conservation and management of salmon in the EEZ off the coast of Alaska.

In **Alaska** there are three areas in the state that fit under federal exemptions, and one is related

to the Pacific Salmon Treaty. This resolution is seeking permanent exemption of those areas.

In **Washington** there is a process outlined in MSA to delegate authority to the States. The North Pacific would develop that framework of a fishery management plan, then delegate authority implementation to the state of Alaska.

Vote: Alaska, yes. California, Idaho, Oregon and Washington vote no. Motion fails.

Alaska Issue 7 - Pacific Salmon Treaty (modification of standing resolution from 2017)

PSMFC supports increased annual funding for implementation and mitigation of the Pacific Salmon Treaty for FY 2020 and future years.

Adopted language: Combined AK Issue 7 and Washington Issue 9.

PSMFC supports increased funding package for the implementation of the Pacific Salmon Treaty.

Vote: Passes unanimously.

Oregon Issue 8 - Groundfish Capacity Reduction (Buyback) Resolution Update

Due to the failure of Congress to exempt the buyback Refi from the Federal Credit Reform Act of 1990, support for the appropriation of \$10 million to reduce the loan amount, consistent with the FY 2019 CJS report language, impacts the West Coast buyback loan refinancing program.

Vote: Alaska, California, Oregon, and Washington, yes. Idaho, abstains. Motion passes.

Washington Issue 9 - Pacific Salmon Treaty Funding Package

PSMFC to distribute draft Pacific Salmon Treaty funding package when it is available for comments by the States. If the majority of the States support the funding package, the Commission will assist in obtaining those funds from Congress.

Washington Issue 9 was combined with Alaska Issue 7.

Washington Issue 10 - Southern Resident Killer Whales Prey Base

PSMFC to support funding to increase the prey base for the SR Killer whales through appropriate increases in hatchery production.

Adopted language: PSMFC to support funding to increase the prey base for the SR Killer whales through appropriate increases in hatchery production and fish survival improvements.

Vote: California, Idaho, Oregon, and Washington, yes. Alaska, no. Motion passes.

Washington Issue 11 - Additional Disaster Relief Funding for Washington Fisheries

PSMFC to support additional funding from the \$20 million of remaining funding to support the 2016 Washington ocean troll/ocean charter/Puget Sound charter salmon fishery disaster.

Adopted Language: PSMFC would support additional funding from the \$20 million of the remaining funding to support fishery disasters of the PSMFC member states.

Vote: Passes unanimously.

Alaska Issue 12 - NPDES Permit Moratorium

PSMFC reaffirms previous resolutions relative to the Vessel Incidental Discharge Act/Vessel Discharge Reform Act (VIDA/VDRA).

Adopted Language: In light of recent developments, PSMFC reaffirms previous resolutions relative to VIDA/VDRA.

Vote: Passes unanimously.

Chair Kiefer: Closes the meeting with thank you and appreciation to Randy and his staff.

Meeting Adjourned.

ANNUAL AWARD RECIPIENT

The Pacific States Marine Fisheries Commission presents an annual award that honors an individual, agency, or organization from the host state for outstanding contributions in support of the Pacific Coast marine fisheries resources.

The Pacific States Marine Fisheries Commission is pleased to present the 2018 Award to:

NOAA'S WEST COAST REGION ANADROMOUS PRODUCTION AND INLAND FISHERIES DIVISION

PSMFC's purpose shall be "to promote the better utilization of fisheries – marine, shell, and anadromous, which are of mutual concern" to the member states. Inherent in this purpose is managing sustainable fisheries. In the Columbia River Basin, hatcheries play a key role in providing and sustaining salmon fisheries. Many of these fisheries also walk the tightrope of protecting weak or Endangered Species Act (ESA) listed salmon and steelhead stocks.

Over the past year, the staff working in NOAA's West Coast Region Anadromous Production and Inland Fisheries Division have efficiently and effectively engaged the State and Tribal staff to complete the ESA compliance needed to operate the hatchery programs and the fisheries that rely on them. The programmatic reviews that are part of the ESA compliance process provided an opportunity for evaluation of program operations against the newest science and policy standards while providing additional transparency through the public review process. We would like to express our sincere appreciation to the staff in the Anadromous Production and Inland Fisheries division for their hard work and dedication in the responsible management of fish and fisheries in the Columbia River Basin.



Alaska Fisheries Information Network

The **Alaska Fisheries Information Network (AKFIN)** is one of five, regional co-operative state/federal programs that provide a framework to consolidate and support the collection, analysis, and reporting of a variety of information important for management of U.S. fisheries. Funding for the program is provided by an annual grant from National Marine Fisheries Service (NMFS) to the Pacific States Marine Fisheries Commission (PSMFC). These funds support the AKFIN Support Center (AKFIN-SC) and an annual subcontract with the Alaska Department of Fish and Game (ADFG) for related tasks.

The AKFIN-SC supports the data needs of fisheries analysts and economists by consolidating commercial fisheries data and dispensing those data upon request using custom programming services and online tools. Information is aggregated from the ADFG Division of Commercial Fisheries, Commercial Fisheries Entry Commission, NMFS Alaska Region, Alaska Fisheries Science Center (AFSC), North Pacific Fishery Management Council (NPFMC), and PSMFC. AKFIN-SC reports catch data, harvest, and value from commercial fisheries in Alaska using the best available data from data source agencies. Once these data are incorporated into its system, AKFIN reports information which are used to identify and quantify impacts related to changes in fisheries management. These include species, area, gear, vessel, processor, community, fleet, and fishery participants by season.

STAFF

AKFIN is comprised of a small cohesive team of five located in Anchorage, AK at the NPFMC office, Seattle, WA at the AFSC and Portland, OR at PSMFC's head office. Four staff are funded by the AKFIN grant and one by other NMFS sponsored projects.

PRODUCTS SUPPORTED BY THE AKFIN SUPPORT CENTER

- The AKFIN website (akfin.psmfc.org) contains the program background and latest announcements, news, and metadata, as well as links to applications and related websites.
- AKFIN Answers is an online reporting tool that provides authorized stock assessors, social scientists, and economists with direct access to the program's analytical database and metadata resources. This tool allows users to access prepared reports and to formulate ad hoc queries that can be saved and shared with other analysts. Users performed over 10,000 Answers queries in 2018.
- The AKFIN APEX Reports application was developed to provide data to public and authorized users. The system provides easy navigation of various categories of reports and allows users to quickly filter and download data in common formats. Development in 2018 included public and confidential reports to support IFQ, SAFE, and communities reports. The application is available through the AKFIN website, or directly at reports.psmfc.org/akfin/.
- AKFIN provides data services for the Economic Data Reporting (EDR) project. This includes hosting the data and data management and validation applications. For a complete description of the EDR project, view the Fisheries Economics Data program summary.
- In cooperation with the NPFMC staff, AKFIN developed a web-based application to allow council staff, committee members, and stakeholders to track and prioritize research projects of interest to the NPFMC. AKFIN continues to maintain and enhance the application, which is available at research.psmfc.org.

- AKFIN provides annual data support for the community snapshots available on the AFSC website (<https://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/communities/snapshots.php>). The site provides visitors with the ability to view key indicator of fisheries dependence and other economic and demographic characteristics for Alaska communities.
- Annual data requests in support of national reports:
 - Annual data call for the fisheries of the U.S.
 - Fisheries One-Stop Shop – A single data report that summarizes data by species that are used to source an NMFS Science and Technology online reporting system.
 - National Bycatch Report (https://www.nmfs.noaa.gov/sfa/fisheries_eco/bycatch/nationalreport.html)
 - Annual data call for the U.S. Coast Guard to support vessel safety inspections
 - Catch Share and Non-Catch Share Performance Indicators
- AKFIN provides comprehensive data management and data analysis services supporting production of the Groundfish SAFE Economic Status Report (<https://www.afsc.noaa.gov/refm/docs/2017/economic.pdf>) and the Bering Sea/Aleutian Islands (BSAI) Crab Economic Status Report (https://www.afsc.noaa.gov/refm/socioeconomics/safe/crab_safe/crab_economic_safe_2017.pdf) by the AFSC and Economic and Social Science Research Program. These annual reports compile economic statistics on the federally managed groundfish and crab fisheries off Alaska and serve as the primary venue for publication of data from the EDR programs for BSAI crab, Gulf of Alaska trawl groundfish, and Amendment 91 Chinook Salmon.

2018 Highlights Include:

- Significant progress was made on integrating environmental and fisheries data into the AKFIN data warehouse. Database sources for environmental variables such as sea surface temperature (SST), bottom depth, sea surface height, and chlorophyll have been identified, and SST and bottom depth are now linked to specific landings and survey data tables.
- Staff programmed and delivered over 280 data products of varying complexity, each taking anywhere from a few hours to multiple days to complete.
- Approximately 130 data requests were completed in support of over 15 distinct NPFMC issues.



Aquatic Nuisance Species Program

Aquatic nuisance (or invasive) species (ANS or AIS) are non-indigenous species that threaten the diversity or abundance of native species; the ecological stability of infested waters; or commercial, agricultural, aquacultural, or recreational activities dependent on the region's waters. These species may occur in inland, estuarine, and marine waters and can threaten ecological processes and natural resources. In addition to adversely affecting activities dependent on waters of the United States, invasive species can adversely affect individuals and their health. One important criterion that the Pacific States Marine Fisheries Commission (PSMFC) uses to judge a species as a nuisance is whether it can harm commercial and recreationally important fisheries.

Highlights in 2018 for the Commission's Aquatic Nuisance Species Program Include:

RAPID RESPONSE PLANNING

With funding from Bonneville Power Administration (BPA) and U.S. Fish and Wildlife Service (USFWS), PSMFC continued to lead the effort for zebra and quagga (dreissenid) mussel rapid response planning in the Columbia River Basin (CRB). The plan can be viewed at http://docs.wixstatic.com/ugd/0e48c2_7c4f1faa1538443da76593b2e8a827b8.pdf. Related to the rapid response plan is the eradication of a dreissenid mussel population if discovered in the CRB. Ensuring that best management practices are implemented throughout the sequence of control actions for a dreissenid introduction will maximize cost-effectiveness of actions, minimize impacts to non-target organisms and the environment, and result in a coordinated, effective response that achieves the goal of controlling the

introduction, where it is possible. In 2014, PSMFC developed "Best Management Practices and Effects Analysis" and "Decision Matrix" tools to help in the response to a mussel control action. In 2018, PSMFC sponsored a Rapid Response Tabletop exercise September 11-13, 2018 in Kalispel, MT. The exercise addressed containment of a theoretical dreissenid mussel infestation in Flathead Lake. Further information on PSMFC rapid response exercises can be found at <https://www.westernais.org/rr-plans-exercises-groups>.

In 2018, PSMFC continued to work with the USFWS, leading an effort to produce the background information for a manual that will help inform Section 7 consultation with USFWS and the National Marine Fisheries Service. This manual will delineate a suite of most likely rapid response eradication actions for a potential dreissenid introduction in the CRB and associated states and assess the potential for those actions to affect associated Endangered Species Act (ESA)-listed species and critical habitat (e.g., impacts of the biocide potash on the threatened bull trout and its critical habitat). We anticipate this project to be completed by fall 2019.

VULNERABILITY ASSESSMENT

PSMFC has also led the preparations of the region's hydro and fish facilities for a potential dreissenid mussel invasion. Vulnerability assessments itemize and inspect all hydropower facility structures and components that come into contact with raw water and determine the degree to which dreissenid mussels could impair the performance of the structures and their components. Understanding these factors in advance of an introduction can best prepare the facility to both prevent and deal with an introduction. A Vulnerability Assessment Team was formed after the May 15, 2013 regional "Preventing an Invasion" meeting. The team, led by PSMFC ANS program contractor Lisa DeBruyckere, completed "Strategies To Conduct Vulnerability Assessments for High Priority Columbia River Basin Hydropower and Dam Facilities" in April 2014 (updated in June 2018). This document and other assessment related documents can be accessed at <https://www.westernais.org/vulnerability-assessments>.

WATERCRAFT INSPECTION AND DECONTAMINATION TRAINING

It is generally agreed that the most effective means to prevent the spread of dreissenid mussels is by mandatory inspection stations at key highway points for all recreational watercraft. (Note: In 2017 PSMFC added a regional watercraft inspection station viewer at <http://psmfc.maps.arcgis.com/apps/webappviewer/index.html?id=aa6a6527a26a44ddbff097b99241462e>.)

Resource managers have been increasing the capacity of state law enforcement and marine safety personnel to detect and intercept contaminated watercraft. The expansion of these programs has increased the need for the **PSMFC Watercraft Inspection Training (WIT)** program. WIT began in 2006, with USFWS and BPA funding, to train boating law enforcement personnel in the western U.S. on the background, biology, and impacts of zebra mussels; how to identify high risk watercraft and conduct an inspection of all types of watercraft; how to perform a vessel decontamination; and the legal authority to stop, detain, and require decontamination of watercraft suspected of harboring zebra mussels. To date, over 120 WIT training courses have been delivered in 19 western states and Canada to over 5,000 individuals representing well over 100 different state, federal, local, and tribal agencies and organizations.

Beginning in April 2007, training was divided into two levels. Level I (or basic) trainings are usually a one-day class and consist of an overview on the dreissenid threat, basic mussel biology, distribution, transport vectors, the “Don’t Move a Mussel” video, direct watercraft inspection experience, and a written exam. Level II training is more intensive and is designed for professionals in all fields that expect to be involved in the inspection and decontamination of trailered watercraft, including those who wish to become trainers within their state or work group. Level II training is delivered over two days (12 hours) at Lake Mead on the Nevada/Arizona border near Las Vegas and is instructed by Debra Davis. This course focuses on actual field inspection of various types of watercraft which may be contaminated with quagga mussels and the decontamination of those watercraft requiring it. In recent years, Level II trainings have expanded and have been held at

Lake Powell, UT; Lake Pleasant, AZ; Kalispel, MT; Salt Lake City, UT; Navajo Lake State Park, NM; and Castaic Lake, CA. In 2015, PSMFC added a Level III course, which serves as a “trainer training,” and in 2017 we added the WIT IV (“Advanced Decontamination”) course. For further information on the WIT program visit www.westernais.org/.

COORDINATION

The ANS program provides administrative support, staffing, and participation in numerous ANS interjurisdictional efforts, including the Columbia and Missouri River Basin 100th Meridian Initiative Groups, the Pacific Ballast Water Group, the Western Regional Panel on Aquatic Nuisance Species, WGA Invasive Mussel Leadership Forum, Department of Interior’s Safe Guarding the West initiative, Quagga Zebra Action Plan Committee, and the West Coast Green Crab Technical Group. View <https://www.westernais.org/regional> for additional information about these groups.

PSMFC compiles, maintains, and shares information on the regulations each state implements to combat AIS, creating efficiencies among the states by avoiding duplication of effort. The subpage of our website (<https://www.westernais.org/regulations>) includes a National Sea Grant Law Center searchable compilation of western states AIS laws and regulations relevant to watercraft inspection programs and a list of AIS related federal legislation (updated regularly).

In FY2016, U.S. Army Corps of Engineers (USACE) “Water Resources Developmental Act (WRDA)” funds (a.k.a. Water Resources Reform and Developmental Act (WRRDA) or Water Infrastructure for Improvements to the Nation (WIIN)) were appropriated to support expansion and establishment of watercraft inspection stations and monitoring in the CRB. PSMFC entered into a cooperative agreement with the USACE (Walla Walla) on April 4, 2017. PSMFC was designated as the “non-federal sponsor” to represent and coordinate the efforts of the four CRB states. In 2018, it administered approximately \$4.8 million in watercraft inspection station and monitoring funding.

OUTREACH AND EDUCATION

Recreational watercraft are the obvious means by which zebra/quagga mussels will be spread into other western watersheds. PSMFC and cooperating agencies have ANS information and education campaigns that target recreational anglers, boaters, marinas, enforcement personnel, and others on the zebra/quagga mussel threat. For the past 16 years, PSMFC has attended sport and commercial fishing shows throughout the region (e.g., Boise, Portland, Seattle, Sacramento), exhibiting its booth and distributing information to those inclined to come into contact with nuisance species. Since 2008, PSMFC has produced the electronic newsletter *AIS in the News* to inform interested AIS practitioners about updates associated with AIS. Past issues can be found at <https://www.westernais.org/news>.

MONITORING

For the past 15 years, PSMFC has partnered with Portland State University (PSU) in a zebra mussel monitoring program. Beginning in 2010, with funding from BPA and PSMFC, PSU began partnering with the USACE to expand monitoring at Corps' projects in the CRB. In 2010, PSMFC, in cooperation with U.S. Geological Survey, also began to host a monitoring database and map for the CRB states. By 2014 the monitoring data included Idaho, Washington, Oregon, Montana, Wyoming, Utah, and British Columbia. In 2016, PSMFC created a new monitoring website (<http://www.westernais.org/monitoring>). PSMFC also manages the WRDA monitoring funding for the four states in cooperation with USACE (Walla Walla District). Monitoring work was conducted by the Montana Fish Wildlife & Parks, Washington State University, Oregon Department of Fish and Wildlife, PSU, and Washington Department of Fish and Wildlife (WDFW). WRDA cost share monitoring funds resulted in an approximate doubling of dreissenid monitoring efforts by the states in 2018 as compared to 2016.

Green Crab: Monitoring (Oregon, Washington, California): For the past 16 years, PSMFC has supported coast-wide green crab monitoring. In 2018, we have been supporting monitoring in Washington (WDFW) and Oregon (Oregon State University). Data collected by PSMFC-supported researchers has yielded important insight into the

abundance and population structure of the green crab in California, Oregon, and Washington. This information is of critical importance as resource managers and the commercial shellfish industry develop management options to address the threat posed by this species. We will continue to support a temporary monitoring staffer at WDFW with funds in 2019. Additionally, PSMFC and its GIS Services staff are in the initial phases of setting up an EGC database for the West Coast. We have also formed an EGC database committee.

WEBSITE

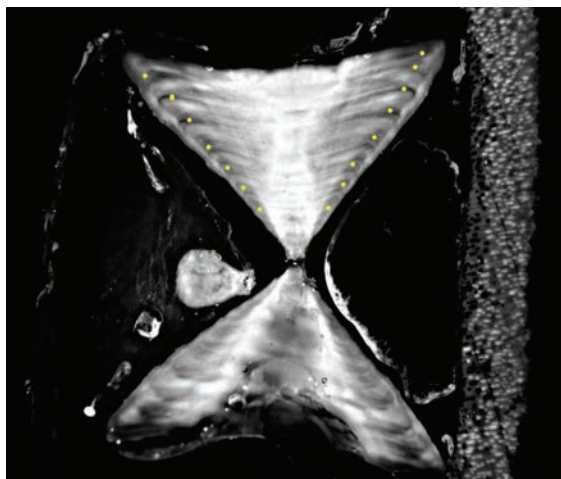
PSMFC renovated its invasive species website in 2014. This website can be found at <http://www.westernais.org/>. It also includes the Pacific Ballast Water Group website, as well as information on WIT, Rapid Response, economic impacts of invasive species, particularly zebra and quagga mussels, and an archive of state and federal AIS regulations.

Cooperative Ageing Project

The **Newport Ageing Lab** is a collaborative effort between the National Oceanic and Atmospheric Administration (NOAA) and Pacific States Marine Fisheries Commission. It was established to production-age marine groundfish structures. The lab is located in Newport, Oregon at the Northwest Fisheries Science Center (NWFSC), Barry Fisher Building. Age structures collected from federal surveys, observer programs, and commercial catch are aged by this lab and are used to directly support West Coast stock assessments. Age specific estimates of biomass, mortality, and population trends are required to rigorously estimate the status of a fish stock. 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 National Marine Fisheries Service directed at-sea surveys.

In 2018, Newport Ageing Lab personnel:

- Production aged 11,728 and double read 5,163 age structures to support four U.S. West Coast groundfish stock assessments.
- Processed 1,561 skate vertebra for production ageing. This involved thawing, de-fleshing, embedding in cyano-acrylate glue, and sectioning (see image to the right of a vertebral thin section).
- Released 10,176 age estimates from four species.
- Added 15,299 specimen records from 53 different species collected from NWFSC programs. This archive now has 537,649 records of age structures collected from 87 species between 1983 and 2017. The sources of these structures are from the following: At-Sea Hake Observer Program, West Coast Groundfish Bottom Trawl Survey, Pot Survey, Acoustic Survey, and the Hook & Line Survey.
- Received 20,516 age structures from U.S. West Coast state agencies.
- Collected 10,994 new otolith weights from three different species. The Ageing Lab has collected weight data on 127,483 otoliths. These weights might be used to develop mathematical relationships to allow weight to be used as a proxy for age. These relationships are being explored by NWFSC scientists.
- Two age reading specialists traveled to Seattle for a 2-day workshop and training to learn how to age skate vertebra in anticipation of supporting the big skate stock assessment.
- The Ageing Lab ended 2018 with five staff (one supervisor and four full-time age reading specialists).



A big skate vertebra thin section with annotations (yellow dots) of annuli counts of either 7 or 8 yrs of age. Caught in 2010 NWFSC Combined Slope and Shelf Survey. Photo courtesy of Tyler Johnson

Electronic Monitoring and Reporting

CAMERAS WEST COAST

Pacific States Marine Fisheries Commission (PSMFC) launched the **Electronic Monitoring (EM)** program in 2012 in anticipation of the Pacific Fishery Management Council (PFMC) considering EM as a compliance-monitoring tool in the newly implemented Pacific Trawl Rationalization Program. The original objective of the EM program was to prove the efficacy of EM as a source of data to document individual accountability of catch and bycatch in the Pacific Trawl Rationalization Program.

After PSMFC successfully proved the efficacy of EM, the PFMC approved four Exempted Fishing Permit (EFP) applications that were implemented in the 2015-2018 fishing years, permitting EM to be used on vessels in the whiting, fixed gear, and bottom trawl fleets. These EFPs allow participants to fish using EM as a substitute for an onboard human compliance monitor, although scientific observer coverage is still required on fixed gear and bottom trawl fishing trips for scientific sampling. EM data reviewers at PSMFC view 100% of fishing activity to report Individual Fishing Quota (IFQ) discards, and results were compared to fisher-reported logbooks. If the comparison shows that there is a 10% or higher difference between EM and the logbook, or one source reports discards and the other source does not, the higher of the two numbers will be reported to the Vessel Account System (VAS) and ultimately debited from the vessel's quota.

The results from the 2015 through 2018 whiting and fixed gear EM EFPs lead to a regulation recommendation by the Council, with regulation implementation slated to begin in 2021. The Council decided to extend the bottom trawl and non-whiting midwater trawl EM EFPs through 2019 to collect more information on whether or not regulations should be put in place for these fisheries in the future as well.

NORTH PACIFIC

Fisheries Monitoring: The North Pacific Fishery Management Council (NPFMC) and National

Marine Fisheries Service (NMFS) have integrated electronic monitoring (EM) into the North Pacific Observer Program. While in other regions EM systems are mainly used to collect data for compliance programs, the goal of the North Pacific fixed gear program is to collect data for the estimation of catch and bycatch, and subsequent in-season management of fisheries. After a multi-year pre-implementation period, EM became an integrated part of fisheries monitoring in the North Pacific in 2018. Federal regulations for the longline portion of the EM program were in place by January 2018, while EM monitoring for pot gear will become part of the regulated program in 2019. Under the regulated EM programs, data collected using EM will supplement the data collected by observers that is used to manage fisheries, in particular to estimate at-sea discards. PSMFC is working with NMFS to actively develop methods for the deployment of EM systems and collection of fishery information using electronic monitoring.

The NPFMC Fixed Gear Electronic Monitoring Workgroup (EMWG) was established in 2014 to work with the fixed gear fleet to implement a program designed to test the functionality of available electronic monitoring systems. The workgroup is comprised of agency staff, commercial fishing industry representatives, and EM service providers, the PSMFC Senior Program Manager, and the PSMFC Electronic Monitoring Project Manager are members of this workgroup. Additional details about this workgroup can be found on the North Pacific Fisheries Management Council website (<https://www.npfmc.org/observer-program/>). With the integration of the EM longline program and the final year of pre-implementation of EM on pot vessels, the EMWG was reconfigured in 2018 to focus on areas where EM can be incorporated into monitoring of trawl fisheries in Alaska.

Each year the Observer Program's Annual Deployment Plan (ADP) describes deployment strata and rates for the upcoming monitoring year while the North Pacific Observer Program Annual Report evaluates the previous year's deployments relative to the ADP. Both reports include the deployment of EM systems into the groundfish fisheries in addition to the deployment of observers. In particular, Chapter 3 of the Annual Report evaluates the effectiveness of monitoring relative to the sample design specified in the Annual Deployment Plan.

As a part of the North Pacific EM program, PSMFC advises, reviews video, subcontracts for installation and field support of EM systems on participating vessels, analyzes the data, produces reports detailing monitoring results (i.e. system performance), and develops recommendations for program improvement. PSMFC staff work closely with our NMFS partners to develop and document data collection protocols, data transfer methods, and database structures. PSMFC also provides analytic support for this program by developing analytical methods and documentation for the estimation of catch and discard to be used with these new data types.

Research and Development Program:

PSMFC continues to assist NMFS in the ongoing development of hardware and associated software control systems for open source image-based remote monitoring systems. Research efforts are focused on the automation of species identification of catch, enumeration of catch, and collection of length measurements. The long-term goal of this research is to provide systems capable of capturing data on species identifications, species enumeration, and derived length/weight measurements, thereby providing the data elements needed to estimate total discarded catch and length compositions necessary for stock assessments.

In 2018, the project continued to improve hardware design and real time processing of image and sensor data across three specific fishery objectives: 1) camera chute for on deck sorting of Halibut in the trawl fishery, 2) stereo rail camera systems for the multispecies longline fishery, and 3) truth-of-concept development of automated compliance monitoring systems in plants to detect salmon in deliveries of groundfish catch. Field testing of research-EM systems occurred under all three objectives and initial analyses of the results are promising.

EM Research Publications (2018)

- Wang, G., J. N. Hwang, Y. Xu, F. Wallace, and C. S. Rose. 2018. Coarse-To-Fine Segmentation Refinement and Missing Shape Recovery for Halibut Fish. Pages 370-374 in Proceedings of the 2018 IEEE Global Conference on Signal and Information Processing (GlobalSIP); November 26-29, 2018, Anaheim, California.
- Huang, T. W., J. N. Hwang, S. Romain and F. Wallace. 2018. Fish Tracking and Segmentation from Stereo Videos on the Wild Sea Surface for Electronic Monitoring of Rail Fishing. IEEE Transaction on Circuits and Systems for Video Technology, doi: 10.1109/TCSVT.2018.2872575.

Additional Information: The North Pacific Observer Program 2018 Annual Report contains additional details about the North Pacific fixed gear EM program in Appendix B, and details about the EM Research and Innovation Program in Appendix C. The Annual Report is available at <https://www.afsc.noaa.gov/Publications/ProcRpt/PR2019-04.pdf>.

Alaska Fisheries Science Center and Alaska Regional Office. 2019. North Pacific Observer Program 2018 Annual Report. AFSC Processed Rep. 2019-04, 148 p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle, WA 98115.

The Annual Deployment Plan for Observers can be viewed at <https://www.fisheries.noaa.gov/resource/document/2019-annual-deployment-plan-observers-groundfish-and-halibut-fisheries-alaska>

NMFS (National Marine Fisheries Service). 2018. 2019 Annual Deployment Plan for Observers in the Groundfish and Halibut Fisheries off Alaska. National Oceanic and Atmospheric Administration, 709 West 9th Street, Juneau, Alaska 99802.

WEST COAST LOGBOOKS

A system for remote data entry of paper logbooks is used by PSMFC groundfish port samplers to electronically capture groundfish trawl logbooks for California vessels. This system is also used by the EM group at PSMFC Headquarters in Portland, OR to electronically capture paper logbooks of vessels using EM in California, Washington, and Oregon with data entry occurring within two business days of arrival. As a precautionary measure, this is a linked database to ensure there is no duplication of logbooks. As described in the above “**Cameras**” section, the data from EM logbooks are compared to the data collected by EM video reviewers and the higher-reported IFQ weight is then debited from the vessel’s quota.

WEST COAST ELECTRONIC FISH TICKETS (E-TIX)

Fish tickets are used to document landings by commercial vessels to West Coast ports. Historically, these tickets were collected from fish buyers by the three states using a paper reporting system. Starting in 2008, PSMFC developed and currently maintains an electronic fish ticket system to replace paper tickets for all 27 West Coast fish ticket types. Adoption of E-Tix is mixed across the states with Oregon historically the most committed to adopting E-Tix to replace paper landing receipts. Beginning July 1, 2018, California, for the first time, accepted electronic fish tickets for all ticket types in lieu of paper landing receipts. Regulations for mandatory reporting for all landings are in place and will take effect starting July 1, 2019.



Fisheries Economics Data Program (EFIN)

Fisheries Economics Data Reports (EDRs) Program

The **Fisheries Economics Data Program (EFIN)** 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 being conducted by Pacific States Marine Fisheries Commission (PSMFC) as part of a cooperative agreement with the National Marine Fisheries Service (NMFS) and with the help of the Pacific and North Pacific Fishery Management Councils (PFMC and NPFMC). The goal is to provide reliable and timely data to assist with monitoring and measuring the economic performance of the harvesting and processing components of West Coast and Alaska fisheries.

In 2018, EFIN staff worked on the following:

- **2017 Fuel Report:** An annual summary of collected fuel price data from the prior year was prepared and distributed to survey participants and other interested parties.
- **Fuel Price Collection:** Program staff continued collection and maintenance of the West Coast and Alaska monthly fuel price survey through monthly phone and email contact.
- **Tri-State Crab Website Maintenance:** The program also archived the prior year's website and created a new website for the 2018-2019 season that was updated with reports from California, Washington, and Oregon.

ALASKA SALTWATER SPORTFISHING CHARTER BUSINESS SURVEY

In 2011, a Catch Share Plan was adopted for the guided sport and commercial fisheries for Pacific halibut in waters of International Pacific Halibut Commission Regulatory Areas 2C (Southeast Alaska) and 3A (Central Gulf of Alaska). This catch sharing plan changed the annual process of allocating halibut between the guided sport and commercial fisheries in those areas, established allocations for each sector, and specified harvest restrictions for guided sport anglers that are intended to limit harvest to the annual guided sport fishery catch limit. In order to provide flexibility for individual commercial and guided sport fishery participants, the catch sharing plan authorized annual transfers of commercial halibut quota to charter halibut permit holders for harvest in the guided sport fishery. This action was necessary to achieve the halibut fishery management goals of the council.

To evaluate the economic impact of this share plan, the Alaska Fisheries Science Center (AFSC), Economics and Social Sciences Research Program developed a survey research project that collected voluntary economic information from Alaska sportfishing charter boat operators about their costs, earnings, and employment during the 2011, 2012, 2013, 2015, and 2017 seasons. The program designated PSMFC to administer the survey.

PSMFC's role is to:

- Develop a .NET web application based on the science center questionnaire and database design and integration.
- Administer full implementation of the mixed-mode survey with web-based and paper forms. This included reproduction and distribution of respondent mailings, phone support with calls made to non-respondent contacts, and data entry with data integrity protocol design and implementation.
- Prepare a summary report documenting survey implementation milestones, paradata, and problems and recommendations identified by PSMFC staff and survey respondents during the course of the survey administration process.

For the 2017 data collected in 2018, 963 phone calls were made and over 1,558 individual items were mailed. The survey response rate was 21% with 83 completed survey submissions out of the 412 recipients. The survey was administered to 75% of the businesses that possessed a 2017 Alaska Charter Business License and were active during the charter season.

ALASKA CRAB RATIONALIZATION ECONOMIC DATA REPORT (EDR) COLLECTION PROGRAM 2018

PSMFC functions as the Independent Third Party Data Collection Agent for the Bering Sea/Aleutian Islands (BSAI) Crab Rationalization Program. The purpose of the economic data collection is to aid NPFMC and NMFS in assessing the success of this program and to provide data that are used in developing amendments necessary to mitigate unintended consequences of management decisions. 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 (2) the distribution of landings of different harvest share types.

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

At the beginning of this program in 2005, historical EDRs were collected for the years 1998, 2001, and 2004. In each subsequent year, EFIN staff collected data in an annual report. Historical EDRs captured pre-program implementation data for comparison to the economics of harvesting and processing before and after program implementation. The annual reports capture economic data on an annual

basis at the conclusion of each calendar year's crab fisheries. The 2017 EDR was collected in June and July 2018. Participation in the data collection program is mandatory for all participants in the BSAI crab fisheries. All owners and leaseholders of a vessel or processor that harvested, processed or had crab harvested and processed for them in any of the BSAI crab fisheries during 2017 were required to submit an annual report.

EDR online login and passwords were mailed to crab processing plants and vessels and submitted EDRs were collected, tracked, and reported to the Restricted Access Management Program (RAM) for permit and quota issuance. They were also reviewed for completeness. The EDR data were entered, archived, and submitted to NMFS for analysis.

Alaska Fisheries Information Network (AKFIN) built a database to house data, to standardize variables, and to conduct metric analysis to help describe the data. Reports and forms are being developed to allow permitted researchers to access the data.

AMENDMENT 80 AND GULF OF ALASKA (GOA) TRAWL ECONOMIC DATA REPORTS

Amendment 80 was adopted by the NPFMC in June 2006. The final rule implementing Amendment 80 was published in the Federal Register on September 14, 2007. This action allocates several BSAI non-pollock trawl groundfish species among trawl fishery sectors and facilitates the formation of harvesting cooperatives in the non-American Fisheries Act (non-AFA) trawl catcher/processor sector. As of January 1, 2016, a new reporting requirement under 50 CFR 679.110 went into effect which changed the EDR for the Amendment 80 Catcher Processor participants and brought participants in the groundfish trawl fisheries in the GOA into the EDR program.

In December 2014, NMFS issued a final rule to implement the GOA Trawl EDR Program to evaluate the economic effects of current and potential future fishery management measures for the GOA trawl fisheries. This data collection program will provide the NPFMC and NMFS with baseline economic information on harvesters, crew, processors, and communities active in the GOA trawl fisheries, which will be used to

assess the impacts of anticipated future GOA trawl groundfish management measures on stakeholders.

The Council adopted Amendment 80 to meet the following broad goals: (1) improving retention and utilization of fishery resources by the non-AFA trawl catcher/processor fleet by extending the groundfish retention standard to non-AFA trawl catcher/processor vessels of all lengths; (2) allocating fishery resources among BSAI trawl harvesters in consideration of historical and present harvest patterns and future harvest needs; (3) authorizing the allocation of groundfish species to harvesting cooperatives and establishing a limited access privilege program for the non-AFA trawl catcher/processors to reduce potential Groundfish Retention Standard compliance costs, encourage fishing practices with lower discard rates, and improve the opportunity for increasing the value of harvested species; and (4) limiting the ability of non-AFA trawl catcher/processors to expand their harvesting capacity into other fisheries not managed under a limited access program.

The groundfish species in the BSAI areas directly affected by Amendment 80 include: Atka mackerel, Aleutian Islands Pacific Ocean perch, Flathead sole, Pacific cod, Rock sole, and Yellowfin sole.

In addition, Amendment 80 would modify the management of halibut and crab prohibited species catch limits.

PSMFC has been designated by NMFS as the Data Collection Agent for the Amendment 80 program. The first annual Amendment 80 reports were collected in June 2010 for the 2009 calendar year. The first annual GOA Trawl EDR reports were collected in June 2017 for the 2016 calendar year.

In 2018, the 2017 annual EDRs were mailed to catcher/processors, catcher vessels and processors; these were collected, tracked, and reported to RAM for permit and quota issuance. They were reviewed for completeness. The data were entered, archived, and submitted to NMFS for further analysis.

AKFIN built a database to house data, to standardize variables, and to conduct metric analysis to help describe the data. Reports and forms are being developed to allow permitted researchers to access the data.

AMENDMENT 91 CHINOOK EDR FOR THE AFA POLLOCK FISHERY ECONOMIC DATA REPORTS

Amendment 91 to the BSAI Fishery Management Plan established a hard cap of 60,000 Chinook salmon caught per year for the Bering Sea pollock fishery beginning in 2011, with the additional requirement that annual Chinook bycatch must not exceed 47,591 more than twice in any 7-year period. The bycatch quota is allocated to sectors of the fleet proportional to both the pollock allocation and historic bycatch. The bycatch quota can be allocated by cooperatives to individual vessels and is transferable across the fleet which will improve economic efficiency.

Following the recommendation of Amendment 91 in April 2009, NPFMC asked AFSC to develop “a data collection program for the pollock fleet that would provide the information necessary to evaluate the salmon bycatch program to ensure that it is meeting the Council’s intent.” The goal of this project is to collect information on the amount of money vessel operators are paying to acquire salmon bycatch quota and assess the way in which fishing changes as a result of the new restrictions on salmon bycatch. Since there is the potential for large financial impacts to some vessel operators who will have to purchase salmon bycatch quota to harvest their allocation of pollock and who may have to incur additional travel expenses to fish in areas where salmon are less concentrated, an additional goal of this project is to estimate how costs of salmon bycatch avoidance may increase in the pollock fishery. In addition, this data collection effort is aimed at understanding the steps vessel captains undertake to avoid salmon bycatch during the fishing seasons.

PSMFC has been designated by NMFS to be the data collection agent for the Amendment 91 EDR program. The first annual Amendment 91 EDRs were collected in June 2013 for the 2012 calendar year.

In 2018, the 2017 data were collected, tracked, and reviewed for completeness. This data collection has a June 1 deadline and is repeated every year for the prior year’s fishery.

A database was built on AKFIN servers to house collected data, to standardize variables, and to conduct metric analysis to help describe the data. Reports and forms are being built to allow researchers access to the data.

Fisheries Support Projects in California, Idaho, and Washington

CALIFORNIA PROJECTS

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, and perform lab work. Data collected are incorporated into the management and season setting for salmon fisheries coastwide.

Pacific States Marine Fisheries Commission (PSMFC) worked with California Department of Fish and Wildlife (CDFW) 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, and using the aging data in combination with coded-wire tag recovery data to reconstruct the size of each returning brood year.

The **California Passage Assessment Database (PAD)** locates and documents anadromous fish passage sites in all California coastal watersheds. This multi-agency cooperative effort has led to better information on known and suspected fish passage issues and ultimately the correction of these issues through prioritized restoration projects and funding.

The **California Cooperative Fish and Aquatic Habitat Data Program (CalFish)** website (www.calfish.org), a multi-agency cooperative fisheries information site, is designed to gather, maintain, and disseminate fish and aquatic habitat data and data standards; it provides access to a growing number of fish and aquatic habitat datasets, through both geographical and tabular queries. Many of the following projects have data and information available through the CalFish site.

With funding provided by the California Department of Water Resources (CDWR), PSMFC assisted CDWR and CDFW with the **Feather River Monitoring** project. Work

includes salmon and steelhead data collection and analysis for the Feather River and Central Valley and assistance with sturgeon monitoring.

PSMFC fisheries technicians on the **Upper Sacramento Technical Assistance** projects continued to assist CDFW and the Bureau of Reclamation with running video monitoring stations and fish traps, conducting salmon carcass surveys, performing habitat assessment, and collecting biological data.

PSMFC provided technical assistance and field staff for the **Coastal Restoration Monitoring and Evaluation** project. Staff monitor pending and completed coastal watershed restoration projects in California, collect habitat information, and compile data. This information is used by managers to assess the success of restoration activities.

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

In the **San Joaquin River Basin**, PSMFC assisted in collecting and managing water temperature data, conducting Chinook salmon carcass surveys, spawning Merced River Hatchery fall-run Chinook salmon, reading coded-wire tags, entering data, and monitoring entrainment of salmon into water diversions.

PSMFC's assistance contributed to the successful completion of the eleventh year 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 and fin clipping 100% of the steelhead 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 (USFWS) mark and coded-wire tag juvenile winter-run and late-fall Chinook salmon and steelhead.

PSMFC assisted with **Constant Fractional Marking (CFM) at Iron Gate and Trinity River Hatcheries** and provides staff and equipment to clip and tag 25% of all Chinook salmon released

from the facilities, which will provide critical harvest information to coastal Chinook life cycle monitoring programs.

PSMFC conducted **Yuba River Monitoring** in cooperation with the Yuba County Water Agency, CDFW, and other partners to implement field studies, monitoring, and other projects on the Lower Yuba River, including rotary screw traps, escapement surveys, and the operation of the VAKI Riverwatcher installation. PSMFC also worked with the U.S. Army Corps of Engineers to survey, monitor, and map Yuba River redds to evaluate the success of their gravel augmentation program.

PSMFC staff assisted the **USFWS Comprehensive Assessment and Monitoring Program** by providing statistical analysis and database development to support California Central Valley monitoring efforts.

PSMFC provided staff assistance to conduct monitoring studies for **South Fork Eel River Coho**.

PSMFC provided assistance to complete the **Big Basin/San Mateo Regional Area Spawning Ground Surveys** in order to estimate salmonid escapement in coastal streams.

PSMFC assisted with the installation and implementation of **DIDSON Monitoring Stations** on Southern California streams and assisted with field implementation of the **South Coast Steelhead Monitoring Plan**.

PSMFC will be providing assistance to the **Battle Creek Fish and Ladder Monitoring Program** once several restoration projects are completed.

PSMFC assisted USFWS and CDFW by collecting data, monitoring, and reporting on **Salmon Redd Dewatering** on the upper mainstem of the Sacramento River.

PSMFC provided personnel assistance for the **Lower Eel and Van Duzen Rivers Salmonid Spatial Structure Project for Coho Salmon**.

PSMFC personnel assisted USFWS with their **Rotary Screw Trap Assistance and Monitoring Program** to assess the abundance and production of juvenile Chinook and Steelhead on the American and Stanislaus Rivers.

PSMFC provided staff and technical expertise to conduct **Salmonid Habitat Enhancement and Monitoring** for Trout Unlimited, The Nature Conservancy, and CDFW in the Pudding and Caspar Creeks.

PSMFC is collaborating with USFWS, National Marine Fisheries Service (NMFS), and Basin partners to develop an **Integrated Fisheries Restoration and Monitoring Plan for the Klamath Basin**. The first phase of this project was completed, and work is underway on the second phase, the identification of habitat restoration actions necessary for the recovery of eight focal species in the Klamath, including salmon, steelhead, sturgeon, trout, and lamprey.

PSMFC staff assisted USFWS in touring the **Elwha River** with Klamath Basin fisheries biologists working on the Klamath Plan. A final report on this successful tour was submitted and the project concluded.

PSMFC is providing support funding for local watershed council personnel to participate in the Klamath planning process through the administration of a grant program funded by the National Fish and Wildlife Foundation (NFWF).

PSMFC is working with USFWS to develop and populate a **California Central Valley Adult Salmon Escapement Database** to store adult salmon data collected for watersheds that include the American River, Clear Creek, Sacramento River mainstem, and Stanislaus River, along with the development of several analytical tools that help to automate data analyses and reporting; PSMFC also provides tools that ensure that stored data are complete and accurate.

PSMFC provided personnel to assist NMFS in estimating smoltification rates in the Ventura River and two main rearing tributaries by establishing a PIT tag array network for the **Ventura River PIT Tagging Project**.

Collaborating with NFWF, PSMFC staff conducted and completed a short-term monitoring of **Steelhead and Habitat in Manzanita Creek**.

IDAHO PROJECTS

PSMFC provided personnel to assist the **Idaho Department of Fish and Game (IDFG) Nampa Research Lab** with their fisheries research, field activities, and data management needs.

PSMFC provided personnel and technical and administrative support to implement and conduct the **IDFG Marking and Tagging Program**.

PSMFC provided personnel and technical support to assist the **Lower Snake River Fish and Wildlife Compensation Plan** in managing hatchery data used for monitoring and evaluating hatchery efforts and meeting program goals.

PSMFC provided personnel to assist with the implementation of fisheries management and research activities in the **IDFG Natural Production Section, Fisheries Management Section, and Eagle Fish Genetics Lab**.

PSMFC provided personnel to assist IDFG with collecting **DNA Genetic Samples in the Lower Columbia**.

WASHINGTON PROJECTS

PSMFC provided personnel and technical and administrative support for the **Lower Columbia River Coded-Wire Tag Recovery and Population Monitoring and Analysis Project**.

PSMFC provided personnel and technical and administrative support to **Evaluate Spawning of Fall Chinook and Chum Salmon Just Below the Four Lowermost Mainstem Dams**.

PSMFC provided personnel to assist the Washington Department of Fish and Wildlife with the **Chum Salmon Restoration in the Tributaries Below Bonneville Dam** project.

PSMFC provided personnel and technical and administrative support to assist the Columbia River Inter-Tribal Fish Commission with collecting **Lower Columbia River Genetic Stock Identification** samples.

ADDITIONAL PSMFC PROJECTS

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

PSMFC provided data stewardship and technical services for the **NMFS Habitat Restoration Project Tracking Database** and the **Salmon Population Summary Database**.

PSMFC manages a project funded by Bonneville Power Administration to build and update **High Level Indicators** and **Sub-basin Dashboards** that depict the status of fish populations on the Northwest Power and Conservation Council website.

PSMFC provided administrative assistance to NMFS and project partners for San Francisco Bay Habitat Improvement, SE Alaska Fish Habitat Partnership, Washington Veterans Corps Assistance, Hosting Shorezone, Bar-Built Estuaries Guidance, PMEP Spatial Data Project, Assessing Eel Grass in Morro Bay, and Monitoring Small Dam Removal in Southern California.

PSMFC staff is providing assistance to NMFS in completing **Hatchery and Genetic Management Plans** for fish propagation programs in Puget Sound and the Mokelumne River in California. Subcontracts with the Northwest Indian Fisheries Commission and a private consultant are supporting production of these plans, which are required by NOAA for continued operation of fish propagation facilities.

PSMFC provided administrative, coordination, and technical support to the **Pacific Marine and Estuarine Fish Habitat Partnership, California Fish Passage Forum Fish Habitat Partnership, and the Pacific Lamprey Fish Habitat Partnership**. Additionally, PSMFC assists with the National Fish Habitat Partnership and the 20 Fish Habitat Partnerships.



Fish Habitat Program

The **Pacific States Marine Fisheries Commission (PSMFC) Fish Habitat Program** works to protect and restore fresh, estuarine, and marine habitats that support salmon and many other fish species of commercial, recreational, and ecosystem importance. In 2018, the Habitat Program was supported through funding from the Wallop-Breaux Sport Fish Restoration program managed by the U.S. Fish and Wildlife Service (USFWS) and from National Oceanic and Atmospheric Administration (NOAA) inter-jurisdictional funds. Additionally, funds from NOAA's Bycatch Reduction Engineering Department supported work to reduce marine mammal entanglement in crab gear.

The Habitat Program supports the efforts of multi-stakeholder groups working on cooperative, non-regulatory programs and projects to advance habitat conservation and restoration actions, science, and policies. The Fish Habitat Program manager works with collaborative groups as well as with non-profit and inter-agency groups, attending meetings, serving on committees and boards, and taking on duties and projects for the groups.

Activities in 2018 Included:

PACIFIC MARINE ESTUARINE FISH HABITAT PARTNERSHIP (PMEP)

PSMFC is an active member of PMEP (<http://www.pacificfishhabitat.org/>), one of 20 National Fish Habitat Partnerships. PMEP is a diverse partnership that includes federal, tribal, state, and non-governmental members

in Washington, Oregon, and California. The partnership focuses its work on juvenile fish habitat in estuarine and nearshore areas, assuring connectivity between nearshore and tidal wetland areas and maintaining water quality and fresh water inflow into these estuarine and nearshore environments. It advances scientific information about estuaries, eelgrass, and fish use, as well as supports restoration and conservation projects focused on these topics with funding from the National Fish Habitat Partnership.

The Fish Habitat Program Manager is a member of the steering committee of PMEP and serves with the PSMFC Senior Program Manager on the governance committee, as well as participates on the communications and governance committees, and helps to review restoration funding proposals. PSMFC's staff provide research support and Geographic Information System (GIS) services and are working on a PMEP data system and website. PSMFC also provides fiscal services to the group.

In 2018, PMEP finalized its work mapping eelgrass, a key habitat element of estuaries. It also received funding and worked to assess restored tidal wetlands efforts (as a part of its efforts to document the current extent of tidal wetlands and the amount of loss over time). It began work to expand its spatial data framework to include the nearshore area and received funding to assess the location and impacts tidal connectivity barriers (e.g., roads, undersized culverts, tide gates) in a cooperative project with other fish habitat partnerships: the California Fish Passage Forum and the Pacific Lamprey Fish Habitat Partnership. PMEPS's work and mapping tools regarding estuary types, fish habitat use, stressors, and estuary extent were presented in an interactive workshop at the Restore America's Estuaries Conference, highlighting the ways the information could be used to answer questions or obtain site specific information. PMEP also updated its strategic action plan for the 2018-2022 period and funded three habitat restoration projects for Bear River Estuary Restoration in California; an Oregon Tidal Restoration Project in Yaquina Bay; and a project to help Managing European Green Crab in Makah Reservation Estuaries.

WATERSHED RESTORATION PROJECTS

Watershed Council support: The Habitat Program provided administrative and technical

support for groups working on the ground to conserve and restore fish habitat on the Oregon coast. It provided support by direct engagement on the boards, committees, and working groups of non-profit organizations. The program worked with the MidCoast Watersheds Council and the Salmon Drift Creek Watershed Council to assure that high priority projects were designed and put in place. It did this by participating in meetings, conference calls, and email communications, and by helping direct the groups' staff. It also reviewed restoration plans and drafted documents and proposals outside of these meetings. Through this work, over \$1.63 million of funding for technical assessment and restoration project implementation was secured. Additionally, PSMFC worked closely with the MidCoast Council and federal, tribal, and state partners to plan and fund a 55-acre tidal wetland restoration project, which among other things will remove dikes to increase sediment input for sea level rise resilience, increase channel extent, provide large wood for salmon habitat benefit, and enhance elevations to establish a gradient of habitat types.

Living with Beaver for Coho and watershed health: PSMFC is also involved with helping to promote the whys and hows of “living with beaver.” Beaver dams create ponds that are ideal over-wintering habitat for Coho fry and also help store water both in the ponds and adjacent floodplain soils that is released over the dry season, helping to keep water temperatures in tolerable limits for fish. In 2018, PSMFC finished the production of the last two videos (of four) in the Living with Beaver series. One video focuses on the relationship between beavers and salmon; the other focuses on beavers helping to improve water quantities in working landscapes (as well as providing benefits for Coho). These videos can be found at the following link: <http://habitat.psmfc.org/living-with-beaver/>

U.S. Forest Service (USFS) Stewardship Group: The Habitat Program also helped to advise restoration work through the Alsea Stewardship Group, a multi-party group that works cooperatively with the USFS to put habitat restoration projects on the ground. Under the federal stewardship contracting authority (commonly termed the Wyden Authority), a portion of timber sale receipts from commercial cuts or thinning sales can be re-invested in habitat restoration projects within National Forests and on surrounding private lands that

have a direct benefit to the forest watershed and its fish and wildlife. In 2018, it reviewed national forest restoration projects such as road decommissioning for erosion control and large wood placement projects. It also reviewed projects for funding on private lands for riparian planting, invasive plant control, and culvert repair for fish passage.

FISH HABITAT RESTORATION - FIELD TOURS

Each year, the Habitat Program helps sponsor watershed tours for restoration practitioners at California's Salmonid Restoration Federation (SRF) conference. In 2018, the conference was held in Fortuna, California. Its theme was The Art and Science of Watershed Restoration, focusing on landscape scale work, including floodplain restoration and state zero restoration. The field tours explored river restoration, flood reduction, and habitat connectivity in the Lower Eel River; process-based tidal wetland restoration on working landscapes in the lower Eel River; Salmonid Habitat Restoration Tidal, Off-Channel, Instream, and Upslope Restoration in Humboldt Bay; and Instream Restoration and Groundwater Recharge in the Mattole Headwaters. Each full-day tour was attended by about 25 restoration practitioners. The tours allow those working on restoration projects to learn from each other and encourage new participants in these important efforts.



Photo courtesy of Fran Recht, PSMFC

MARINE DEBRIS

PSMFC continues to serve on the Marine Debris Alliance (MDA), set up initially under the West Coast Governors Alliance on Ocean Health. The Fish Habitat Program manager served as

co-chair of the steering committee in 2017 and promoted work towards curtailment of land-based and ocean-based debris. In 2018 the MDA changed orientation since there are individual state marine debris action plans. The focus moving forward into 2019 will be to hold semi-annual webinars highlighting innovative work or progress. Bi-monthly calls will allow MDA members to continue communicating about progress and barriers.

WHALE ENTANGLEMENT

NOAA's Bycatch Reduction Engineering Program grant funded PSMFC to organize a "forensic workshop" in August 2018. This workshop, conducted in partnership with NMFS West Coast Region, brought together whale experts, whale disentanglement specialists, managers, gear specialists, and fishermen to look at how and where whales get entangled in fishing gear and what type of gear and to make recommendations on ways to reduce these entanglements. One of the promising ideas from that workshop was to pursue the testing of the hollow sleeves manufactured by Novabraid. These sleeves, also called "Yale Grips," had been designed and tested by Massachusetts fishermen and are in use there. The sleeves, which can be used to join shots of crab line, become tighter as line is pulled, so gear isn't lost. This creates a weak link in the line that whales could break, but still would allow crabbing in most, later season conditions.



Vertical line with sleeve. Photo courtesy of John Haviland



REPORT Entangled Whales IMMEDIATELY

1-877-SOS-WHALE (1-877-767-9425) or hail the U.S. Coast Guard on Channel 16

- DO Report** Immediate reporting is critical to give the best chance for response teams to remove life-threatening gear from the whale and gather information to understand where, when and how entanglements occur to prevent future ones.
- DO Stand By** If possible please stand by and keep sight of the whale. It is difficult and rare to relocate an entangled whale if a boat does not stay with the whale. Stay at least 100 yards away.
- DO Photograph Entangled Whales** WHALE: flukes (especially if underside is raised); side view of dorsal fin (or hump); head; any part of the body where gear may be present. ENTANGLEMENT: buoy(s); tags; lines on the body; trailing lines (including distance from whale); netting or other gear (if present).
- DO Respond Promptly if Contacted** If you are contacted about a whale entangled in your gear, please respond. You can help prevent future entanglements by providing as much information as possible about your fishing gear and practices.
- DO NOT ATTEMPT to disentangle the whale** Removing the easily accessible lines at the surface will leave the life-threatening lines attached to the whale and may make it impossible for responders to detect and remove these. Entangled whales are very rarely in immediate danger of drowning.

PSMFC also convened and facilitated three meetings of the Washington Whale Entanglement working group to bring together federal and NGO whale specialists, tribal and state managers, fishermen, conservation entities, and gear developers to work to reduce entanglements. Among other items, a best management practice document for Washington and a reporting placard (to encourage people to report, stand-by, and photograph entangled whales) were developed.

Information on these meetings, gear innovations, and best management practices are posted on the PSMFC website: <http://habitat.psmfc.org/preventing-whale-entanglement/>.

PACIFIC FISHERY MANAGEMENT COUNCIL

The PSMFC Fish Habitat Program Manager serves on the Council's Habitat Committee which advises the Council on policies and actions affecting the essential fish habitat of managed species. PSMFC's Special Assistant to the Executive Director also serves on the Council as a non-voting member and parliamentarian as well as chairs the Council's Legislative Committee. Habitat issues discussed in 2018 included Groundfish Essential Fish Habitat; Columbia, Sacramento, and Klamath water and habitat issues; Deep Sea Coral Initiative; ecosystem based fishery management, climate shifts, and salmon rebuilding plans.

Individual Fishing Quota Trawl Rationalization Catch Monitor Program

The **Individual Fishing Quota (IFQ) Catch Monitor Program (CMP)** provides accurate, timely, and independent third party verification of catch landed in the IFQ Trawl fishery. Catch monitors (CMs) conduct dockside monitoring at first receivers who land IFQ catch. They verify the sorting, weighing, and recording of catch as it is offloaded by first receivers. The CMP was created in 2008 to monitor the whiting fishery and then expanded to include all trawl landings when the IFQ program was implemented in January 2011.

The IFQ trawl fishery has a catch verification system in place to ensure IFQ Groundfish species, particularly overfished species, as well as Chinook salmon and Pacific halibut, can be adequately monitored and accounted for in-season to maintain the integrity of vessel quotas used to manage Groundfish species and trip limits.

During the course of the year, the CMP conducted annual briefings for 43 returning CMs to ensure they have the tools they need to effectively complete their job duties, including a review session as well as a discussion of any applicable changes to federal regulations and CMP protocol.

The CMP completed four trainings certifying a total of 28 new CMs who are also trained as at-sea observers. In addition to this, the program trained three dockside CMs at the request of a CM provider. These individuals work only on shore and monitor deliveries primarily from vessels with Electronic Monitoring Systems. This brings the total of certified CMs for 2018 to 74.

For the 2018 fishing year, debriefings were conducted with each CM in the field. This is to ensure data quality and resolution of any problems that may not yet have been addressed with regards to CM data quality, first receiver problems, or any other concerns that may have been encountered. Program staff completed 57 debriefings during the calendar year for CMs in the field and those leaving the program.

Program staff completed a review of Catch Monitor Plans for 42 IFQ first receivers located from Bellingham to Morro Bay and conducted site visits at 14 of the locations. During these site visits, program staff work with fish buyers to ensure they have the ability to comply with federal regulations and also that offload and safety procedures are clearly outlined in the Catch Monitor Plan and submitted to National Marine Fisheries Service prior to issuance of their annual IFQ First Receiver Site License.

The CMP reviews CM and first receiver data as it enters the data system, searching for any anomalies between the data sets. Staff work with the CMs, first receivers, and NMFS to resolve data issues in a near real time setting to the extent possible.

The IFQ CMP is comprised of two full time Pacific States Marine Fisheries Commission employees who work solely on this project.

Northern Pikeminnow Sport Reward Program

The **Northern Pikeminnow Sport Reward Program** is a joint effort between the fishery agencies of the states of Washington and Oregon and the Pacific States Marine Fisheries Commission (PSMFC). Funding for the program is provided by the Bonneville Power Administration (BPA). The 2018 season marked the 28th consecutive year of the Sport Reward Fishery program. The Washington Department of Fish and Wildlife (WDFW) operated the sport reward registration/creel check stations throughout portions of the Columbia and Snake Rivers and handled all fish checked into the program. Oregon Department of Fish and Wildlife (ODFW) provided fish tagging services, population studies, food habit and reproductive studies, as well as exploitation rate estimates. PSMFC provided fiscal and contractual oversight for all segments of the program and processed all reward vouchers for sport reward anglers. Maintenance of the website (www.pikeminnow.org) is provided by PSMFC. The 2018 season ran from May 1 through September 30 and could be characterized as an average harvest year with a higher percentage of the overall catch coming from below Bonneville Dam than in past years.

Highlights of the 2018 Season Include:

A season total of 180,273 fish were harvested in the sport reward fishery.

Vouchers for 178,292 fish of the 180,273 total catch were submitted for payment with rewards totaling \$1,426,992.

Rewards were paid at \$5 for each of the first 25 fish caught by an angler during the season; \$6 for each fish caught in the 26-200 range; and \$8 for each fish caught by an angler above 200 fish.

A total of 1,301 anglers who registered were successful in catching one or more fish in 2018. The top Pikeminnow angler for 2018 caught 8,686 fish and was paid \$71,049 for his efforts.

A total of 198 tagged fish were caught in 2018. 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 by ODFW. A payment of \$500 was then made for each tagged fish. A total of \$99,000 was paid for all specially tagged fish submitted for payment in 2018. A total of 126 tag-loss fish were also paid a bonus reward of \$100. The total season tag-loss bonus totaled \$12,600.

System-wide exploitation of Northern Pikeminnow during the Sport Reward fishery was 16.8 percent (95 percent confidence interval; 12.1–21.5 percent). Again this year, we met the goal of an annual exploitation of between 10 and 20 percent. Using the model of Friesen and Ward (1999), we estimate 2019 predation levels will be 29 percent (range: 13–41 percent) lower than pre-program levels.

PSMFC staff continued the maintenance and content development of the Northern Pikeminnow Sport Reward Program's website (www.pikeminnow.org) including regular updates of top-20-angler catch and payment numbers and enhanced visual graphics.

Vaunt Marketing facilitated program promotion and assisted in obtaining regular promotion of the Northern Pikeminnow Sport Reward Program on NBC Outdoor GPS, ESPN Radio Outdoorline in Seattle, and Northwestern Outdoors Radio. Expanded use of print media advertising and participation in numerous outdoor shows across the Northwest were all part of our successful effort to improve catch and participation in the 2018 season. Again this year, the Northern Pikeminnow Sport Reward Program purchased advertising space in the ODFW and WDFW Regulations pamphlets prominently emphasizing angler participation in the program.



Photo courtesy of PSMFC

North Pacific Observer Program

NORTH PACIFIC OBSERVER PROGRAM OPERATIONAL AND ANALYTIC SUPPORT

The National Marine Fisheries Service's (NMFS) Alaska Fisheries Science Center's (AFSC) Fisheries Monitoring and Analysis (FMA) Division oversees the **North Pacific Observer Program (Observer Program)** which monitors groundfish fishing activities in the U.S. Exclusive Economic Zone (EEZ) off the coast of Alaska. Pacific States Marine Fisheries Commission (PSMFC) staff work alongside Observer Program staff to support fisheries monitoring activities in the Alaskan commercial groundfish fisheries. The Observer Program is one of the largest in the U.S., deploying over 400 observers annually along with deployments of electronic monitoring (EM) systems into a portion of the Alaskan fleet.

The information fisheries observers collect in the course of their official duties is critical to the sustainable management of groundfish fisheries in the North Pacific. In addition to data collected in support of in-season quota monitoring and stock assessments, observers also collect data used in ecosystem investigations, compliance monitoring, documentation of incidental injury and mortality of marine mammals and birds, and a range of scientific activities.

In 2018, PSMFC helped Observer Program training staff as they prepared observers for deployment by assisting with training classes, briefing sessions, and safety-emphasized water exercises. Ten three-week training classes for new observers were conducted, in addition to 26 annual briefings and 30 fish identification classes for returning observers. PSMFC and Observer Program in-season advising staff worked together to provide oversight to observers during their deployments, both at-sea on fishing vessels and while deployed to shoreside processing facilities. PSMFC staff are an active part of the debriefing team; 67% of the 699 debriefings of observers returning from their at-sea deployments were conducted by PSMFC staff. Throughout, PSMFC supported the Observer Program staff by assisting observers deployed through the Observer Program with safety and sampling gear issue and check-in,

maintenance of the safety and sampling gear, and procurement of replacement safety and sampling gear.

Core to the mission of the Observer Program is the ability to house large quantities of data (NORPAC database), apply quality control measures (QA/QC) to incoming data, and to provide data to users in near-real-time. Data collected by observers are transmitted to the AFSC either daily (larger vessels) or at the end of each fishing trip. Data are available for either immediate use or post-final QA/QC upon the observer's return, depending on the management need. This functionality requires a suite of IT and database tools. PSMFC provides IT support to the Observer Program by maintaining and updating existing database and web applications, increasing data transmission capabilities, and developing new database and web applications as needed.

PSMFC analytic support included developing and evaluating sampling methods, analyzing sampling results, providing analytic and statistical consulting, and providing outreach to observers. This includes assisting with the North Pacific Observer Program Annual Report (<https://www.afsc.noaa.gov/Publications/ProcRpt/PR2019-04.pdf>; <https://www.npfmc.org/observer-program-annual-report/>) and providing input to an analysis of the partial coverage observer fee (<https://www.npfmc.org/observer-fee-analysis-2/>).

This project supports nine PSMFC observer support positions that augment NMFS Observer Program training, debriefing, and operational staffing. In addition, this project funds a statistician, database application developer, two data analysts, and two programmers, all of whom work primarily on Alaska fisheries and observer-related projects, but are also available to support other activities such as electronic monitoring, research, or administrative projects.



West Coast Groundfish Observer Program

WEST COAST GROUND FISH OBSERVER PROGRAM

The **West Coast Groundfish Observer Program (WCGOP)** continued its efforts to collect data to support the management of the West Coast groundfish fisheries during 2018 by working collaboratively with National Oceanic Atmospheric Administration (NOAA) Fisheries. 2018 was the seventeenth year the program has deployed observers in a variety of West Coast groundfish fisheries. The program remains flexible and prepared to provide the data needed to support the management and science needs of West Coast groundfish and other protected species. Observers collect scientific, management, and other data through measurements of selected portions of the catch and fishing gear; on-board interviews with vessel captains and crew; observations of fishing operations; and collection of biological samples. In addition, a variety of other information is collected by observers on protected species and species of concern, including seabirds, marine mammals, and sea turtles.

In 2018, Pacific States Marine Fisheries Commission (PSMFC) worked with NOAA Fisheries to administer four, three-week trainings to prepare observers to collect data in the field. A total of 30 new observers were trained in 2018: 20 for the catch share fisheries (not including the at-sea hake fisheries) and 10 for the Non-Catch Share fisheries (NCS). In addition, 54 experienced observers were briefed for redeployment in 2018: 29 for the

catch share fisheries and 25 for the NCS fisheries. The At-Sea Hake Observer Program (ASHOP) component (Catcher Processors and Motherships) conducted three trainings that prepared 46 observers for deployment. Nearly every catch share observer is also trained to serve as a catch monitor by PSMFC's catch monitor program which provides dockside monitoring of catch share trip offloads. In addition, observer-collected discard data for the catch share fishery is combined with landing data from the catch monitoring program in the NOAA Fisheries Vessel Account System.

PSMFC debriefers assure observer data quality through review of observer data and periodic in-person meetings with observers during the year. NCS observer effort is coordinated by a PSMFC field coordinator who manages observer resources to meet the coverage goals established for each fishery.

PSMFC manages the gear, computers, and software used by the observers to complete sampling activities and to access the NOAA observer database to enter their data and report activities. PSMFC is assisting NOAA Fisheries with the development of an electronic data collection system. In 2018, observers tested the software developed to allow tablets to be used on deck by observers to collect data on fishing activities and catch. The 2018 testing has allowed the program to plan for more widespread use of tablets by observers in 2019, which will aid in data quality and data collection efficiency.

In 2018, WCGOP observers spent 5,741 days at sea: 2,975 in the catch share fisheries (excluding hake and Exempted Fishing Permit (EFP) trips), 58 days on at-sea hake vessels, 182 in the shoreside hake fishery, 320 on various EFP trips, 676 on Limited Entry trips, and 1,770 on Open-Access vessels. For the ASHOP component of the program in 2018, there were 2,024 sea days (two observers per vessel) on catcher processors and Motherships. In 2018, PSMFC had 12 full-time staff working for the program (10 with WCGOP, 2 with ASHOP), including debriefers, coordinators, a gear technician, a data analyst, and a program manager.



Pacific Fisheries Information Network

The **Pacific Fisheries Information Network (PacFIN)** provides timely and accurate data essential for effective fisheries management. The nation's first regional fisheries data network, PacFIN is a joint federal and state data collection and information management project. It is funded by a grant from the National Marine Fisheries Service (NMFS). Cooperative agency and industry partners supply data from commercial fisheries off the coasts of Washington, Oregon, California, and British Columbia. These statistics are recorded in the PacFIN central database, which includes fish-ticket and vessel registration data from state fishery agencies in Washington, Oregon, and California and species-composition and catch-by-area proportions from port sampling and trawl logbook data systems. NMFS supplies the central database with limited-entry permit data and daily summaries for the West Coast at-sea fishery developed from tow-by-tow observations. The Network combines the collected information in order to provide accurate estimates of commercial catch and value for the West Coast. This regional data source allows state and federal fisheries agencies to manage regional fisheries and fishery resources more effectively and enables research by industry, non-governmental organizations, and universities.

In 2018, the PacFIN office updated the central database with source data from state and federal data sources and responded to various requests for information. PacFIN reports were maintained on the Pacific States Marine Fisheries Commission (PSMFC) and PacFIN websites.

Following are highlights of PacFIN central office activities in 2018:

INTERNAL SYSTEM UPGRADES

Internal system upgrades were performed. These activities included database performance improvements, new production automation and retrieval scripts, new documentation, and metadata. The application server was migrated from WebLogic to Oracle Rest Data Services (ORDS).

ORACLE DATABASE SUPPORT

Contracted services were employed to provide database administration support including Oracle software maintenance services to apply critical patches and database upgrades when necessary; database monitoring to include regularly scheduled checks of logs; backup procedures; and statistics and consultation regarding performance, upgrades, and database tools and functionality.

PACFIN USER SUPPORT

PacFIN staff worked with clients to establish new accounts, grant table access, and assist with data retrievals from the PacFIN server environment. In addition, personalized accounts allow authorized users access to web based query tools.

SOFTWARE DEVELOPMENT SUPPORT

Contracted services were retained for software development and varied programming support.

DATABASE REDEVELOPMENT

The redevelopment of the Biological Data System (BDS) neared completion during this period with a new table structure design in place in the BDS_DEV schema. A comprehensive BDS table was developed and made available to a select user group. In addition, a prototype for Apex reports has been created in a development structure and will be available in the near future. Fixed gear logbook data structures have been shared by Oregon Department of Fish and Wildlife (ODFW) with the design and implementation of a data capture and loading (ETL) process slated for future development.

HIGHLY MIGRATORY SPECIES DATA COLLECTION AND REPORTING

PacFIN now houses both the West Coast Highly Migratory Species (HMS) logbook and observer databases. The gillnet observer database was successfully migrated to PacFIN in 2018. The database contains data taken from onboard observers, along with information on specimen samples later processed at the NMFS Southwest Fisheries Science Center (SWFSC) in La Jolla, CA. The HMS observer database redevelopment is nearly complete. The new database will also house observer data from the new deep-set buoy gear fishery. A new but temporary data entry application was developed for the deep-set buoy gear observer data collections. This work is funded by a NOAA Fisheries Information System (FIS) program grant. The HMS logbook and sampling database is in the final phase of redevelopment. Data entry applications are under development and testing. This database will contain data from multiple HMS fisheries: albacore troll, large-mesh drift gillnet, deep-set buoy, recreational, harpoon, and hook and line. A project to integrate the gillnet observer and logbook databases with landings and Vessel Monitoring System data (2013 – 2018) is in its final phase. Information from this integrated data will be used to estimate total catch and effort and test for observer bias in support of the NMFS Biological Opinion update for the large-mesh drift gillnet fishery.

PRICE ESTIMATION ALGORITHM AND PRICE OUTLIER REDEVELOPMENT

The PacFIN algorithm to estimate prices for null prices when appropriate, based on a set of business rules to use the best available surrogate value, has been under review and is in the process of redevelopment to address potential changes in agency business rules for pricing. The price estimation algorithm is based on condition, disposition, grade, period, port, and gear of known prices for a species to be used as a surrogate price when the price is unknown. The method for flagging outliers for prices expected to be errors has also been under review.

ISSUE TRACKING TOOL

An issue tracking system developed in Jira is now in operation and serves as a shared web interface to track data issues allowing users to

report what they expect are data issues and to follow the progress toward resolution as PacFIN staff as “data wranglers” assign issues to source agency “data stewards” for review, assessment, and action when warranted. Users can follow the progress as “watchers” as the process moves toward resolution.

WEBSITE ENHANCEMENTS

The PacFIN website continues to expand in content and scope of reporting including the addition of restricted access confidential Apex Reporting System reports.

APEX REPORTING SYSTEM

The Apex reporting system on the PacFIN website has continued its expansion of both public and password protected confidential reports designed for various applications, including federal Office of Law Enforcement (OLE) vessel and port summary landings; Regional Fishery Management Organizations (RFMO) active vessel and permit monitoring reports; Highly Migratory Species (HMS) landings, permits and logbook compliance reports; Coastal Pelagic Species (CPS) landings data; Groundfish Management Team (GMT) reports; and, more recently, Economic and Social Sciences reports drawing from the U.S. Census Bureau’s American Communities Survey.

PACFIN ANSWERS TOOL DEVELOPMENT

Development of Oracle Business Intelligence software to query the PacFIN database continued during this period. Oracle Answers software was used to develop various user-specific queries and build customized user dashboards for generating specific reports and data sets on demand.

GROUND FISH MANAGEMENT TEAM (GMT) SCORECARDS IN ANSWERS

Pacific Fishery Management Council (PFMC) Fisheries Management Plan (FMP) Groundfish Species “scorecard” report development with Oracle Answers software continues to expand, using varied data sources, including PacFIN’s Comprehensive Fish Ticket dataset, PacFIN’s Comprehensive NPAC dataset (at-sea whiting), Recreational Fisheries (RecFIN), and the West Coast Groundfish Observer Program (WCGOP).

IN-SEASON REPORTING REDEVELOPMENT

A new in-season reporting “scorecard” has been developed in Apex for the GMT. This new report, which includes all FMP groundfish stocks, is under review by the GMT with future changes planned for the new year. Once the confidential report is finalized, a public non-confidential report will follow.

SPEX APPLICATION

The SPEX, or Specifications application, in support of PFM/GMT planning, has continued development over the last year. PacFIN, Zirous, and Resource Data team members have collaborated to usher the application along to its current test-able state. The end users are currently reviewing and entering data in the system with the goal of having it production ready in time for the 2021-2022 biennium planning effort which will begin in September 2019. Additional testing, issue resolution, and addition of final functional components are planned for the period between now and next September.

PACFIN WORKGROUPS

PacFIN workgroups active during this period included:

- Highly Migratory Species (HMS), working in support of Apex report development
- HMS logbook and observer database redevelopment, and other varied cooperative efforts
- GMT, working to plan and implement in-season reporting protocols, scorecard applications, and SPEX application development
- PacFIN Data Management, coordinating data collection, delivery, and validation operations between the PacFIN central office and all data sources
- Review of agency business rules in support of PacFIN price estimation and outlier detection procedures, and the introduction of an issue tracking system

REPORT FROM GROUND FISH CATCH MONITORING AND DATA SYSTEMS IN CALIFORNIA

The program monitors and provides California commercial groundfish data for effective fisheries management. Fisheries technicians enter all non-IFQ landings of commercial groundfish into E-Tix within two days of receiving the landing receipt. They sample commercial groundfish landings to determine species compositions of landings and collect biological data on size, sex, and reproductive condition of those species. They key that data into a statewide groundfish sampling program database. They also key groundfish trawl logs into eLogbook. The data analyst and managers generate monthly and annual estimates of species, age, length, and sex composition from the statewide groundfish sampling program and submit the data to PacFIN. Considerable effort must be expended to satisfy in-season and between-season management needs dictated by the Groundfish Fishery Management Plan.

MEETINGS AND SEMINARS

Internal meetings with PacFIN staff and the PacFIN Program Manager were conducted weekly. Workgroup meetings with PacFIN partners were conducted by teleconference as needed. Various other conferences, trainings, and collaborative meetings across agencies were attended by individual PacFIN staff over the course of this period. The PacFIN Annual Meeting was conducted October 23-24, 2018 in Portland, OR.



PIT Tag Information System

Columbia Basin | ptagis.org

Columbia Basin PIT Tag Information System

The **Columbia Basin PIT Tag Information System (PTAGIS)** is a coordination and data management project of the Pacific States Marine Fisheries Commission (PSMFC). PTAGIS develops and maintains software used to collect and contribute Passive Integrated Transponder (PIT) tag data; manages and makes those data available for download and reporting via the PTAGIS website; and operates and maintains large scale PIT tag detection sites throughout the Columbia Basin. This project is an important prerequisite component of all PIT tag research conducted for the Bonneville Power Administration (BPA) Fish and Wildlife Program.

PTAGIS develops and maintains software for entering/collecting both tagging and detection data. Tagging data is collected when fish are first marked with PIT tags or recaptured after having been previously PIT-tagged. Detection data is collected when PIT-tagged fish pass through automated antenna systems, called interrogation sites, installed in facilities or streams. Four new updates to the P4 tagging software were released in 2018, and the legacy P3 tagging software was retired at the end of the year. Scoping and planning for the next-generation interrogation field software began in 2018, along with an effort to enhance and expand interrogation site metadata.

Researchers from 34 organizations contributed just over 2 million fish marked with a PIT tag to the PTAGIS database in 2018 with a cumulative total of over 47 million records since 1987.

The 298 interrogation sites contributing data to PTAGIS detected 897 thousand uniquely tagged fish this year. One fish can generate many interrogation records as it passes through multiple PIT tag antennas at one or more detection sites; 16.8 million detections were reported to PTAGIS in 2018 totaling 231 million detections since 1987. To give additional scope to the overall data management efforts in 2018, PTAGIS processed 544 thousand data files with 146 million database rows updated or inserted; 566 users executed 510 thousand queries resulting in 8.8 billion rows of data returned.

PTAGIS Operations and Maintenance (O&M) staff, based out of Kennewick, WA, provide direct O&M of 29 large scale interrogation sites throughout the Columbia Basin, primarily at main stem dam locations. This involves daily monitoring and regular onsite visits to maintain the detection equipment that provides the majority of 231 million observation events available in the database system. PTAGIS also maintains the Separation by Code systems at nine locations, which can be used by researchers to selectively segregate individual PIT-tagged fish from other tagged and non-tagged fish. The detection and diversion efficiencies at these sites remained very high throughout the year.

PTAGIS O&M staff participate in the design, planning, and installation of new interrogation sites and detection technology. Installation of the communications equipment at John Day Dam was completed in early 2018, and real-time data collection and automated data file submissions began in February 2018. Three antennas were installed on the newly constructed full flow pipe at Lower Granite Dam (*Image 1*) and were operational prior to water up for the season.



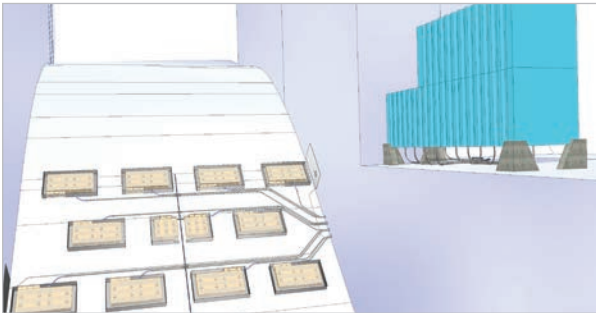
Installation of three antenna systems on new full flow bypass at Lower Granite Dam. Photo courtesy of Scott Livingston, PSMFC

Antennas were installed in the lamprey passage structures at Bonneville Dam and integrated into existing interrogation sites (*Image 2*).



Additional antennas added for Lamprey Bypass System at Bradford Island Ladder of Bonneville Dam. Photo courtesy of Scott Livingston, PSMFC

Staff once again participated in the Lower Granite Spillway Detection Project. Installation was postponed until fall/winter 2019, but weekly design and coordination meetings continued throughout the year to finalize technical details. Staff actively participates in these meetings, providing technical expertise and guidance along with conceptual drawings (*Image 3*) for aspects of the PIT tag portion of the project.



Conceptual drawing of antenna layout and electronic equipment containers at the Ogee spillway of Lower Granite Dam. Image courtesy of Alan Brower, PSMFC

The Automated PIT Tag Test System (APTTS), a custom system to test PIT tags purchased by BPA and distributed by PTAGIS before shipping them to researchers, was upgraded this year. To further increase tag testing efficiency, a new tag sorting system consisting of custom hardware and software was developed that allows up to 30 vials of 100 tags each to be combined and processed through the APTTS for QA testing. Upon completion, the system sorts the 3,000 combined tags back into their original vials.

PTAGIS O&M staff continued to work with lamprey researchers to provide alternatives to the use of full-duplex tags in systems that could be significantly impacted by a lamprey attaching to an antenna. After the successful test of dual-detection mode at the The Dalles Dam fish ladder in 2017, staff enabled dual-detection mode at all adult ladder interrogation sites managed by PTAGIS, except for John Day Dam. This will allow researchers planning to release lamprey below fish ladders to use half-duplex tags, which do not interfere with the full-duplex tags used in salmonids.

In June, a PTAGIS user experienced a safety issue with an older model portable PIT tag reader. PTAGIS issued an announcement to the community warning of the issue and worked with BPA to determine how many BPA-funded projects need to replace the old model readers. PTAGIS worked with the manufacturer to resolve outstanding performance issues before BPA procured and distributed replacements. PTAGIS also implemented a reader loan program that allows BPA-funded projects to borrow modern PIT tag reader models.

PTAGIS staff worked with the PIT Tag Steering Committee (PTSC) to publish the PTAGIS Data Specification. The specification provides data field definitions and requirements; detailed file descriptions; and a general introduction to PTAGIS data types and tools.

PTAGIS participated in the Independent Science Review Panel (ISRP) project review at the end of 2018, with final presentations to the panel being completed in January 2019. The ISRP indicated that PTAGIS meets the scientific review criteria.

In 2018, PTAGIS continued to provide high quality data collection, validation, management, and reporting of PIT tag data for the Columbia River basin. Hundreds of users from dozens of fisheries organizations utilized PTAGIS on a daily basis to collect, contribute, and retrieve PIT tag data for salmonid and other fish species of interest in the region.



Recreational Fisheries Information Network

The **Recreational Fisheries Information Network/Program (RecFIN)** continued in 2018. The Pacific States Marine Fisheries Commission (PSMFC) works cooperatively with the National Marine Fisheries Service (NMFS) and state fish and wildlife agencies from California, Oregon, and Washington to maintain robust and accurate recreational fishery data collection and database programs for the Pacific Coast. The four goals of RecFIN are:

- 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.
- 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: the Oregon Recreational Boat Survey; the Oregon Shore and Estuary Boats Survey, currently inactive due to funding shortage; the Washington Ocean Sampling Program; the Washington Puget Sound Boat Survey; and the California Recreational Fisheries Survey (CRFS). These programs are partially funded by NMFS and supplemented with state

agency funding in all three states. The survey is spread out over approximately 800 fishing access points coastwide in the three states. Of these sites, approximately 57 percent are in California, 10 percent in Oregon, and 33 percent in Washington.

2018 Highlights Include:

The state of California, with partial funding from PSMFC, was responsible for the collection of recreational finfish harvest from six geographical districts through the CRFS program. Over 102,000 angler trips were sampled in 2018 from three distinct fishing modes (private and rental boats, party and charter boats, and man-made structures) and three water areas (ocean offshore, nearshore, and inland marine/estuarine). Of the catch that was retained, CRFS staff observed and identified over 194,000 finfish and invertebrates.

PSMFC provided partial funding for recreational fishery sampling in Oregon and Washington through RecFIN. Sampling was conducted by the state fish and wildlife agencies in both states. Approximately 35 percent of all ocean boat angler trips were sampled in both Oregon and Washington in 2018, generally from March through October.

Sampling programs in all three states conducted over 300,000 angler trip interviews with over 823,000 individual specimens examined. Nearly 150,000 biological samples were taken coastwide. Estimates of total catch reveal over 6.6 million individual fish and invertebrates of 216 different species were retained by anglers in Oregon, Washington, and California.

Catch, effort, and biological sampling data for all three states can be found in the RecFIN database (www.recfin.org) maintained by PSMFC. Detailed explanations of the sampling methodology and estimation statistics of the various sampling programs can also be found on the website. In 2018, PSMFC staff continued their efforts to improve and develop the RecFIN database and online reporting system. With the cooperation of state and federal partners, several new reports, tools, and metadata products were added to the RecFIN Apex reporting system, and a number of new data sources were integrated into the existing database structure.



Whittier Tunnel Sign. Photo courtesy of Ryan Ragan, ADF&G

Education of marine recreational anglers regarding the need for increased use of barotrauma reduction devices and accurate angler identification of harvested rockfish was again a priority for fishery managers in 2018. With funding from several different National Oceanic and Atmospheric Administration grants, PSMFC staff worked with state and federal managers and private fishing organizations to develop and distribute a number of education and outreach materials to anglers along the Pacific Coast. Over 8,500 laminated rockfish ID sheets, nearly 1,800 descending devices and over 200 rockfish ID posters were made available to anglers throughout the Pacific Coast and Alaska. In addition, four large aluminum signs (6 x 4 ft.) entitled “Save a Rockfish Practice Deepwater Release” were also purchased and placed at strategic locations to help inform Alaska rockfish anglers.



Regional Mark Processing Center

The **Regional Mark Processing Center (RMPC)** serves federal, state, tribal, and private fisheries agencies on the Pacific Coast by processing and exchanging Coded Wire Tag (CWT) release, recovery, and associated catch sample information. RMPC adopts new data formats and implements software, hardware, and personnel enhancements in order to meet evolving CWT informational needs by the Pacific Salmon Commission (PSC) and other agencies in support of the Pacific Salmon Treaty (PST). In addition, RMPC has the responsibility of serving as the single United States database to exchange CWT information with Canada in PSC format on a regular basis. RMPC maintains the Regional Mark Information System (RMIS) database and coordinates the acquisition and validation of these data from the various agencies. Funding is provided by the U.S. Fish and Wildlife Service (USFWS) and the Bonneville Power Administration (BPA). Over 60 million coded wire tagged fish are now released coastwide every year, mostly from publicly funded fish hatcheries, with approximately 1,200 different tag codes.

DATABASE SOFTWARE CHANGE

2018 was the third year of using PostgreSQL open source database software for running the RMIS. This has been very successful, and the new system is operating flawlessly. The change has also decreased costs and made good use of the available disk space on the PSMFC virtual servers.

DATA VALIDATION

The CWT data load programs were upgraded to perform more rigorous cross-table checks of tag releases in format version 4.1 when validating newly submitted tag recovery data sets. This is an ongoing project as data uploading errors are identified and corrected. The staff continues to work closely with several agencies to implement improved validation of new data before it is merged with RMIS and to correct historical data already in the database.

DATA INTEGRITY

Maintaining data integrity is an important aspect of maintaining large databases, and considerable time was spent working with the various data reporting agencies to resolve various inconsistencies found in the CWT data sets. While the number of errors was relatively small, it took considerable effort to resolve the causes of the errors and correct them. Also, substantial effort was placed into adding Global Positioning System (GPS) coordinates (latitudes and longitudes) for land-based release and recovery locations. GPS coordinates for the U.S. locations were completed. Canadian locations will be completed in the future. This provides the ability to map the data.

MISSING RECOVERY DATA

Missing tag recovery data for certain areas have been identified. RMPC continues to work closely with the responsible agencies to coordinate the filling of those data gaps.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) MAPPING OF RELEASE AND RECOVERY LOCATIONS

The mapping tool for viewing maps of specific CWT codes as points on a map that show the hatchery, release location, and subsequent recovery locations was updated and enhanced for use in PostgreSQL. This is available for release queries in RMIS. Latitude/Longitude of all release and recovery locations for the United States have been entered in the database having been identified using GIS mapping tools. This past year, Canadian release and recovery locations were mapped and have been



Photos courtesy of George Nandor, PSMFC

incorporated into the mapping database, now visible on the mapping results for CWT queries. This is an ongoing project to enhance the mapping of CWT release locations and recovery locations. Region and Basin maps are available at <http://www.rmpec.org/rmpec-domain-region-basin-maps.html>.

ANNUAL MEETING OF THE REGIONAL COMMITTEE ON MARKING AND TAGGING

The 2018 Mark Meeting was held April 24-25, 2018, in Friday Harbor, WA, at the University of Washington Friday Harbor Laboratories. The meeting was hosted by the Washington Department of Fish and Wildlife (WDFW), USFWS, and the Northwest Indian Fisheries Commission. The meeting minutes and presentations are available at: <http://www.rmpec.org/rcmt-minutes.html>.

Agenda items included updates of RMPC activities, status of CWT data, and updated RMPC publications. There were also updates on PSC Data Sharing Committee, Data Standards Work Group activities, and the PSC Selective Fishery Evaluation Committee. Northwest Marine Technology provided updates on changes in personnel, office locations, some products and services.

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, including:

- Updates on mass marking, selective fisheries, and agency tagging levels for 2018
- Presentations from several agencies on their methods of snout tagging, labeling, bagging, and tracking from sampling locations to CWT labs
- Implementation of Parental Based Tagging
- Discussion of Transboundary Rivers, Yukon River, and Salish Sea sampling protocols and how best to achieve cooperation between Canada and the respective states

REGIONAL COORDINATION

RMPC staff participated in PSC committees and regional science and management teams to assist with coordinating CWT activities and to provide CWT data. RMPC continues working closely with Idaho Department of Fish & Game (IDFG) in providing PSMFC staff to assist with their hatchery data under a contract with the Lower Snake River Compensation Plan. RMPC also works with the Oregon Department of Fish and Wildlife and WDFW to implement the CWT recovery program in sampling sport, commercial, and tribal fisheries for salmon and steelhead carrying tags under a BPA-funded contract. The recovered tags are read and decoded, then the information is added to the RMIS database for use by fish management agencies to make science-based decisions regarding populations of salmon and steelhead in the region. PSMFC staff also assisted research biologists in the region in acquiring the CWT data they need for a variety of projects.

CODED WIRE TAG DATA

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.

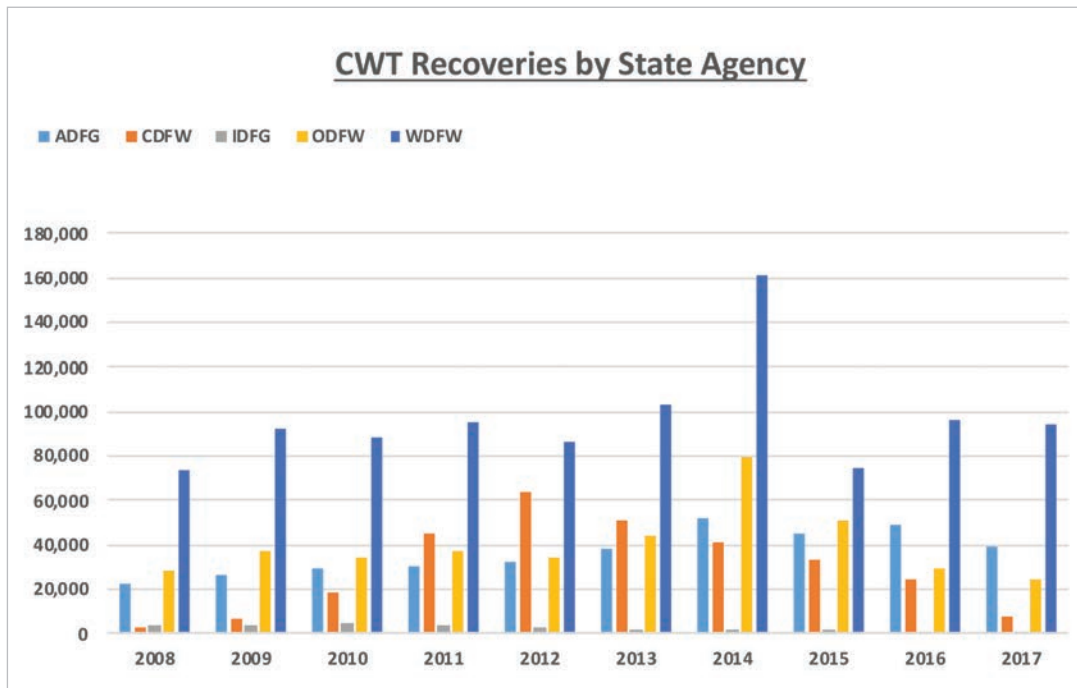
Number of new data rows in RMIS tables added during calendar year 2018:

Releases:	3,727 rows
Recoveries:	242,049 rows
Catch/Sample:	9,358 rows
Locations:	1,105 rows

Use of the RMIS database remains strong in the fisheries community; 691 different people logged in to RMIS in 2018. Many of those people initiated access multiple times, with 438 people logging in more than once and 152 people logging in 10 or more times over the year. One power user has logged in 1,096 times since registering on the RMIS site.

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 to generate customized reports, etc.



Note: 2017 California data is incomplete.



StreamNet

StreamNet

StreamNet provides access to regional fish data by maintaining a coordinated, standardized, web-based distributed information network. The need for regionally coordinated and readily accessible salmon and steelhead data has been identified by the Northwest Power and Conservation Council (NPCC), the Bonneville Power Administration (BPA), and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service. StreamNet works cooperatively with the agencies that create the data by supporting technical staff inside these agencies and by leading or coordinating a number of initiatives to implement regional approaches to data management.

During 2018, StreamNet continued to help lead the Coordinated Assessments (CA) project. CA is focused on the key population-level indicators and metrics that have been identified as priorities for reporting progress on implementation of the Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp). StreamNet's funder, BPA, has identified a need to gather as much data as possible for 69 populations they have determined are priorities.

States and Tribes continued to provide available CA data to StreamNet in 2018, with an emphasis on the BPA priority populations. Updates of other standard data "trends" related to the CA project or feeding the NPCC's dashboards were also a priority. The following table shows the CA data available for all salmon and steelhead populations as of the end of 2018.

Staff at Pacific States Marine Fisheries Commission and subcontracting organizations also continued implementation of the BPA secure data repository initiative, and StreamNet maintained the Data Store as a repository for BPA projects without other available secure repositories. Partner organizations funded through StreamNet are the Confederated Tribes of the Colville Reservation (Colville Tribes), Idaho Department of Fish and Game (IDFG), Montana Fish, Wildlife & Parks (MFWP), Oregon Department of Fish and Wildlife (ODFW), and

						
US Fish and Wildlife Service	Idaho Department of Fish and Game	Oregon Department of Fish and Wildlife	Montana Fish, Wildlife, and Parks	Washington Department of Fish and Wildlife	The Confederated Tribes of the Colville Reservation	Columbia River Inter-Tribal Fish Commission
StreamNet is funded by:		In support of:		A Fisheries Data Project of:		
						
Bonneville Power Administration		Northwest Power and Conservation Council		The Pacific States Marine Fisheries Commission		

**PUBLISHED COORDINATED ASSESSMENTS
DECEMBER 31, 2018**

Published Coordinated Assessments Records				
As of December 31, 2018				
High Level Indicator (HLI)	Agency	Populations	Records w/HLIs	Records w/o HLIs
NOSA Natural Origin Spawner Abundance	Colville Tribes	1	13	
	CTUIR	3	3	
	CTYIN	1	33	
	IDFG	24	1,151	75
	ODFW	78	2,293	54
	USFWS	2	33	
	WDFW	67	1,044	1,060
	All Agencies	166	4,570	1,189
R/S Recruits per Spawner	Colville Tribes	1	9	
	IDFG	18	909	111
	ODFW	42	2,066	87
	USFWS	2	12	1
	WDFW	27	311	
	All Agencies	87	3,307	199
SAR Smolt to Adult Return Rate	Colville Tribes	1	9	
	ODFW	14	225	10
	PSMFC	28	759	
	USFWS	2	16	
	WDFW	2	42	
	All Agencies	47	1,051	10
Juvenile Outmigrants	Colville Tribes	1	11	
	IDFG	23	484	11
	ODFW	17	297	11
	WDFW	25	328	19
	All Agencies	66	1,120	41
Presmolt Abundance	Colville Tribes	1	40	
	ODFW	4	69	16
	Terraqua Inc.	2	24	
	All Agencies	7	133	16
PNI Proportionate Natural Influence	WDFW	4	144	2
	All Agencies	4	144	2
All HLIs	All Agencies	212	10,325	1,457

"All Agencies" population numbers do not sum because of shared populations between agencies. The total number of populations with HLI data is currently 212.

Washington Department of Fish and Wildlife (WDFW). Approximately 75% of StreamNet funding is passed directly to the partners to support their data management activities.

A wide variety of data types were disseminated through the StreamNet website (www.streamnet.org) in 2018. Overall use of the site has been relatively stable over the last few years, except that automated data exchange via Application Programming Interface (API) has increased dramatically. This is an encouraging trend in that it indicates that StreamNet partners are building networks to exchange information efficiently and that data users are building automated systems to utilize those data.

StreamNet Usage Summary (PSMFC Only)	2018
Website Visits	2,399,444
Mapper Visits	5,729
CAX Downloads	79
GIS Downloads	1,150
Data Store Downloads	1,325
Help Desk Requests	34
Grand Total	2,407,761

PACIFIC STATES MARINE FISHERIES COMMISSION
FINANCIAL STATEMENTS AND
SUPPLEMENTARY INFORMATION
YEAR ENDED JUNE 30, 2018

**PACIFIC STATES MARINE FISHERIES COMMISSION
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**PACIFIC STATES MARINE FISHERIES COMMISSION
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JUNE 30, 2018**

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INDEPENDENT AUDITORS' REPORT

Board of Commissioners
Pacific States Marine Fisheries Commission
Portland, Oregon

Report on the Financial Statements

We have audited the accompanying financial statements of the commission-wide governmental activities, each major fund, and the aggregate remaining fund information of Pacific States Marine Fisheries Commission, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the entity's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit 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 audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Board of Commissioners
Pacific States Marine Fisheries Commission

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the commission-wide governmental activities, each major governmental fund, and the aggregate remaining fund information of Pacific States Marine Fisheries Commission as of June 30, 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 5 through 9 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Pacific States Marine Fisheries Commission's basic financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, and is not a required part of the basic financial statements.

The schedule of expenditures of federal awards is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Board of Commissioners
Pacific States Marine Fisheries Commission

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 2, 2018, on our consideration of Pacific States Marine Fisheries Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely 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 effectiveness of Pacific States Marine Fisheries Commission's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering Pacific States Marine Fisheries Commission's internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Bellevue, Washington
October 2, 2018

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2018**

This discussion and analysis of the Pacific States Marine Fisheries Commission's (the Commission) financial performance provides an overview of the Commission's financial activities for the year ended June 30, 2018. Please read it in conjunction with the accompanying basic financial statements and notes to the financial statements.

Overview of the Financial Statements

This discussion and analysis is an introduction to the Commission's basic financial statements, which comprise three components: 1) Commission-wide financial statements, 2) governmental fund financial statements, and 3) notes to the basic financial statements. This report also contains other supplementary information in addition to the basic financial statements.

Commission-Wide Financial Statements (Reporting the Commission as a Whole)

The Commission-wide financial statements are designed to be similar to private sector businesses in that all Commission activities are consolidated. These statements combine fund financial resources with capital assets and long-term obligations.

The statement of net position presents information on all the Commission's assets and liabilities, with the difference between the two reported as net position. Over time, changes in net position may serve as a useful indicator of whether the financial position of the Commission is improving or deteriorating. Assets and liabilities are generally measured using current values. One notable exception is capital assets, which are stated at historical cost less an allowance for depreciation.

The statement of activities and change in net position presents information showing how the Commission's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying events giving rise to the change occur, regardless of when cash is received or paid.

This report also includes two schedules that reconcile the amounts reported in the governmental fund financial statements (modified accrual accounting) with activities on the Commission-wide statements (accrual accounting).

The following summarizes the impact of transitioning from modified accrual-to-accrual accounting:

- Capital assets used in Commission activities are not reported on governmental fund statements.
- Unless due and payable, long-term liabilities such as capital lease obligations, notes payable, and others, only appear as liabilities in the Commission-wide statements.
- Capital outlay spending results in capital assets on the Commission-wide statements and are depreciated over their estimated useful lives, but are reported as expenditures on the governmental fund statements.
- Repayment of debt principal decreases liabilities on the Commission-wide statements, but is reported as an expenditure on the governmental fund statements.
- Gains and losses from disposal of capital assets are reported on the Commission-wide statements, but the total proceeds from such disposals are reported as other financing sources on the governmental fund statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2018**

Overview of the Financial Statements (Continued)

Fund Financial Statements (Reporting the Commission's Major Funds)

The fund financial statements provide information about the major individual funds. A fund is a fiscal and accounting entity with a self-balancing set of accounts that the Commission uses to keep track of specific sources of funding and spending for a particular purpose.

The Commission's basic services are reported in the funds, which focus on how money flows into and out of those funds and the balances left at year-end that are available for future spending. The fund financial statements provide a short-term view of the Commission's general operations and the basic services it provides. Fund information helps determine whether there are more or fewer financial resources that can be spent in the near future to finance the Commission's programs.

These funds are reported using modified accrual accounting, which measures cash and all other financial assets that can readily be converted to cash. The Commission's funds include the General, Grants and Contracts, and Proprietary funds.

Notes to the Basic Financial Statements

The notes provide additional information that is essential to a full understanding of the data provided in the Commission-wide and fund financial statements. The notes to the financial statements are a required part of the basic financial statements.

Commission-Wide Condensed Financial Information

The following table reflects the condensed statement of net position at June 30:

	2018	2017
ASSETS		
Other Assets	\$ 17,316,582	\$ 17,798,960
Capital Assets	2,233,065	2,044,768
Total Assets	\$ 19,549,647	\$ 19,843,728
LIABILITIES		
Current Liabilities	\$ 6,006,731	\$ 6,594,481
Long-Term Liabilities	2,275,718	2,188,985
Total Liabilities	8,282,449	8,783,466
NET POSITION		
Invested in Capital Assets, Net of Related Debt	2,228,791	2,028,803
Unrestricted	9,038,407	9,031,459
Total Net Position	11,267,198	11,060,262
Total Liabilities and Net Position	\$ 19,549,647	\$ 19,843,728

The Commission's net position, referred to as unrestricted, may be used to meet the ongoing obligations of the Commission. The remaining net position reflects investment in capital assets used to provide services to programs; consequently, these assets are not available for future spending.

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2018**

Commission-Wide Condensed Financial Information (Continued)

The decrease in other assets is primarily due to decreased cash on hand. In early 2018 Bonneville Power Administration ended its policy of advancing operating funds for programs managed by the Commission. This negatively affected cash on hand, however, the Commission maintains sufficient cash to meet operating cash flows.

The decrease in current liabilities is primarily attributable to two items: (1) The pay-off of an outstanding balance on a purchase agreement with Northwest Marine Technology originated on August 1, 2015; and (2) an under recovery in the fringe benefit pool resulting from decreased pension plan forfeitures. This under recovery will be recovered in future fringe benefit rates.

The following condensed financial information was derived from the Commission-wide statement of activities and change in net position and reflects how the Commission's net position changed during the fiscal year.

	<u>2018</u>	<u>2017</u>
REVENUE		
Grants and Contracts	\$ 61,901,417	\$ 57,529,274
General Revenue	108,742	111,230
Total Revenue	<u>62,010,159</u>	<u>57,640,504</u>
EXPENSES		
Fisheries Related Programs	61,802,669	56,557,366
Other Expenses	554	1,145
Total Expenses	<u>61,803,223</u>	<u>56,558,511</u>
CHANGE IN NET POSITION	206,936	1,081,993
Net Position - Beginning of Year	<u>11,060,262</u>	<u>9,978,269</u>
NET POSITION - END OF YEAR	<u>\$ 11,267,198</u>	<u>\$ 11,060,262</u>

The net position increased by \$206,936 during the current fiscal year in comparison with an increase in the prior year of \$1,081,993.

The difference in net position is primarily due to capital outlays of \$1,508,799 in 2017 vs. \$872,236 in 2018. While these are treated as program expenditures on the governmental funds statements, the Commission-wide statements require depreciation over their estimated useful lives. Accordingly, capital outlays are being depreciated over a period of 5 years and depreciation will increase expenditures in subsequent accounting periods on the Commission-wide statements.

A significant factor in the increase of revenues and related expenditures was a new program funded by the Corp of Engineers for watercraft inspection stations in Washington, Oregon, Idaho, and Montana. Associated receipts and expenditures during 2018 were approximately \$3,700,000 and are expected to continue in future accounting periods.

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2018**

Financial Analysis of the Commission's Funds

General Fund and Grants and Contracts Fund

The focus of the Commission's funds is to provide information on near-term inflows, outflows, and balances of spendable resources. Such information is useful in assessing the Commission's financing requirements. In particular, the unrestricted fund balance may serve as a useful measure of the Commission's net resources available for spending at the end of the fiscal year.

As the Commission completed the year, its general fund reported an unrestricted fund balance of \$9,038,407 as of June 30, 2018. This amount constitutes the unreserved fund balance, which is available for appropriation for the general purposes of the fund. The excess revenues of the special revenue fund (grants and contracts) are transferred to the general fund at the end of the year resulting in a zero fund balance at the end of the year. The Commission has no legal requirement for a budget, though budget estimates are prepared for the general fund. Certain contracts and grants have budget requirements, which must be monitored; however, these budgets are not program wide. Accordingly, budgetary information has not been included in the basic financial statements.

Proprietary Fund

The proprietary fund reported a cash balance at June 30, 2018, of \$2,462,624 for future payouts of vacation and sick leave liabilities to employees upon termination or retirement. During the fiscal year ended June 30, 2018, the cash balance increased by \$156,496; \$69,699 from increased accrued vacation leave and \$86,797 from increased accrued sick leave.

Capital Assets and Long-Term Debt

Capital Assets

The Commission's investment in capital assets, net of accumulated depreciation, amounted to \$2,233,065 and includes a broad range of assets (see the table below). Depreciation charges for this fiscal year totaled \$683,939.

	2018	2017
Computers	\$ 905,644	\$ 613,608
Furniture and Office Equipment	27,811	17,246
Leasehold Improvements	33,689	54,948
Field and Scientific Equipment	1,087,711	1,045,960
Truck/Boat	178,210	220,100
Construction in Process	-	92,906
Total	<u>\$ 2,233,065</u>	<u>\$ 2,044,768</u>

The additions to capital assets totaled \$872,236 for the year ended June 30, 2018. There are no planned future acquisitions of any significance.

Long-Term Debt

The Commission has encountered no problems in obtaining financing as needed. There was no new long-term debt issued during fiscal year 2018.

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2018**

Economic Expectations

The Commission receives the majority of its revenue from the administration of federal and state contracts and grants related to fisheries resources management. Funding has been stable and the Commission has not been notified of any significant decreases to future funding levels.

The National Oceanic and Atmospheric Administration (NOAA) has reached out to the Commission to administer \$119,000,000 of funds allocated for disasters that affected the West Coast and Alaska fishermen from 2014 to 2017. The Commission is working with states and tribes to develop spend plans for these disaster funds.

Requests for Information

This financial report is designed to provide a general overview of the Pacific States Marine Fisheries Commission's finances for all those with an interest in the Commission's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to the Department of Finance, Accounting Division, 205 SE Spokane Street, Suite 100, Portland, Oregon 97202-6413.

PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF NET POSITION
JUNE 30, 2018

	Governmental Activities
ASSETS	
CURRENT ASSETS	
Cash and Cash Equivalents	\$ 6,891,983
Receivables:	
Grants and Contracts	6,400,054
Other	3,857,706
Prepaid Expenses	166,839
Total Current Assets	17,316,582
NONCURRENT ASSETS	
Capital Assets, Net of Accumulated Depreciation	2,233,065
Total Noncurrent Assets	2,233,065
Total Assets	19,549,647
LIABILITIES AND NET POSITION	
CURRENT LIABILITIES	
Accounts Payable	4,747,958
Payroll Liabilities	571,048
Compensated Absences, Current Portion	186,906
Capital Lease Obligation, Current Portion	4,274
Unearned Rent	309,847
Unearned Revenues	186,698
Total Current Liabilities	6,006,731
LONG-TERM LIABILITIES (Due in More than One Year)	2,275,718
Total Liabilities	8,282,449
NET POSITION	
Investment in Capital Assets, Net of Related Debt	2,228,791
Unrestricted	9,038,407
Total Net Position	\$ 11,267,198

See accompanying Notes to Financial Statements.

(10)

**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF ACTIVITIES AND CHANGE IN NET POSITION
YEAR ENDED JUNE 30, 2018**

	Governmental Activities
PROGRAM REVENUES	
Grants and Contracts	\$ 61,901,417
PROGRAM EXPENSES	
Fisheries Management:	
Personal Services	26,268,547
Materials and Services	33,150,570
Sport Rewards	1,373,344
Capital Outlay Not Capitalized	326,269
Interest Expense	554
Depreciation	683,939
Total Program Expenses	61,803,223
NET PROGRAM REVENUES	98,194
GENERAL REVENUES	
State Dues	106,000
Interest and Other Income	2,742
Total General Revenues	108,742
CHANGE IN NET POSITION	206,936
Net Position - Beginning of Year	11,060,262
NET POSITION - END OF YEAR	\$ 11,267,198

See accompanying Notes to Financial Statements.

(11)

PACIFIC STATES MARINE FISHERIES COMMISSION
BALANCE SHEET – GOVERNMENTAL FUNDS
JUNE 30, 2018

ASSETS	General	Grants and Contracts	Total
Cash and Cash Equivalents	\$ 4,429,359	\$ -	\$ 4,429,359
Due from Other Funds	6,400,054	186,698	6,586,752
Receivables:			
Grants and Contracts	-	6,400,054	6,400,054
Lease	-	-	-
Other	3,857,706	-	3,857,706
Prepaid Expenses	166,839	-	166,839
Total Assets	\$ 14,853,958	\$ 6,586,752	\$ 21,440,710
LIABILITIES, DEFERRED INFLOWS, AND FUND BALANCES			
Due to Other Funds	\$ 186,698	\$ 6,400,054	\$ 6,586,752
Accounts Payable	4,747,958	-	4,747,958
Payroll Liabilities	571,048	-	571,048
Unearned Rent	309,847	-	309,847
Unearned Revenues	-	186,698	186,698
Total Liabilities	5,815,551	6,586,752	12,402,303
Nonspendable Fund Balances	166,839	-	166,839
Fund Balances - Unassigned	8,871,568	-	8,871,568
Total Fund Balances	9,038,407	-	9,038,407
Total Liabilities and Fund Balances	\$ 14,853,958	\$ 6,586,752	\$ 21,440,710

See accompanying Notes to Financial Statements.

(12)

**PACIFIC STATES MARINE FISHERIES COMMISSION
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET
TO THE STATEMENT OF NET POSITION
JUNE 30, 2018**

Fund Balances - Governmental Funds		\$ 9,038,407
Amounts reported for governmental activities in the statement of net position are different because:		
Capital assets used in governmental activities are not financial resources and, therefore, are not reported in governmental funds:		
Capital Assets		6,671,707
Less: Accumulated Depreciation		<u>(4,438,642)</u>
Total		2,233,065
Long-term debt obligations are not due and payable in the current period and, therefore, are not reported in the governmental funds		
		<u>(4,274)</u>
Net Position		<u><u>\$ 11,267,198</u></u>

See accompanying Notes to Financial Statements.

(13)

**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGE IN
FUND BALANCES – GOVERNMENTAL FUNDS
YEAR ENDED JUNE 30, 2018**

	General	Grants and Contracts	Total
REVENUES			
Grants and Contracts	\$ -	\$ 61,901,417	\$ 61,901,417
State Dues	106,000	-	106,000
Lease Income	172,932	-	172,932
Interest and Other Income	2,742	-	2,742
Total Revenues	<u>281,674</u>	<u>61,901,417</u>	<u>62,183,091</u>
EXPENDITURES			
Current:			
Personal Services	2,856,284	23,412,263	26,268,547
Materials and Services	1,292,249	31,858,321	33,150,570
Sport Rewards	-	1,373,344	1,373,344
Capital Outlay	90,324	1,108,181	1,198,505
Cost Share	26,154	(26,154)	-
Debt Service:			
Principal	172,932	11,691	184,623
Interest	-	554	554
Total Expenditures	<u>4,437,943</u>	<u>57,738,200</u>	<u>62,176,143</u>
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(4,156,269)	4,163,217	6,948
OTHER FINANCING SOURCES (USES)			
Indirect Cost/Administration Transfers In	4,163,217	-	4,163,217
Indirect Cost/Administration Transfers Out	-	(4,163,217)	(4,163,217)
Total Other Financing Sources (Uses)	<u>4,163,217</u>	<u>(4,163,217)</u>	<u>-</u>
EXCESS OF REVENUES AND OTHER SOURCES (USES) OVER EXPENDITURES AND OTHER SOURCES (USES)	6,948	-	6,948
Fund Balance - Beginning of Year	<u>9,031,459</u>	<u>-</u>	<u>9,031,459</u>
FUND BALANCE - END OF YEAR	<u>\$ 9,038,407</u>	<u>\$ -</u>	<u>\$ 9,038,407</u>

See accompanying Notes to Financial Statements.

(14)

**PACIFIC STATES MARINE FISHERIES COMMISSION
RECONCILIATION OF THE GOVERNMENTAL FUNDS STATEMENT OF REVENUES,
EXPENDITURES, AND CHANGE IN FUND BALANCES TO THE STATEMENT OF
ACTIVITIES AND CHANGE IN NET POSITION
YEAR ENDED JUNE 30, 2018**

Net Change in Fund Balances - Total Governmental Funds	\$	6,948
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Amounts reported for governmental activities in the statement of revenues, expenditures, and change in fund balances are different because:

Governmental funds report capital outlays as expenditures. However, in the statement of revenues, expenditures, and change in fund balances, the cost of those assets is capitalized and depreciated over their estimated useful lives.

Capital Outlay		1,198,505
Less: Capital Outlay Not Capitalized		(326,269)
Less: Current Year Depreciation		(683,939)
Total		188,297

Collection of lease receivable is revenue in the governmental funds, but the collection of the lease receivable reduces noncurrent assets in the statement of net position:

Lease Receivable Receipts		(172,932)
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Repayment of capital lease principal is an expenditure in the governmental funds, but the repayment of principal reduces long-term liabilities in the statement of net position and the amount representing interest is included as an expense in the statement of revenues, expenditures, and change in fund balances:

Capital Lease Payments		11,691
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Repayment of long-term debt principal is an expenditure in the governmental funds, but the repayment of principal reduces long-term liabilities in the statement of net position and the amount representing interest is included as an expense in the statement of revenues, expenditures, and change in fund balances:

Long-Term Debt Payments		172,932
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Change in Net Position		\$ 206,936
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See accompanying Notes to Financial Statements.

PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF NET POSITION – PROPRIETARY FUNDS
JUNE 30, 2018

	Governmental Activities- Internal Service Fund Type <hr/> Compensated Absences
ASSETS	
Cash and Cash Equivalents	<u>\$ 2,462,624</u>
LIABILITIES	
Accrued Compensated Absences	<u>2,462,624</u>
NET POSITION	
Unrestricted	<u><u>\$ -</u></u>

See accompanying Notes to Financial Statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF REVENUES, EXPENSES, AND CHANGE IN NET POSITION –
PROPRIETARY FUNDS
YEAR ENDED JUNE 30, 2018**

	Governmental Activities- Internal Service Fund Type <hr/> Compensated Absences
OPERATING REVENUES	
Charges for Services	\$ 373,108
OPERATING EXPENSES	
Compensated Absences Expense	<hr/> 373,108
OPERATING INCOME	-
Net Position - Beginning of Year	<hr/> -
NET POSITION - END OF YEAR	<hr/> <hr/> \$ -

See accompanying Notes to Financial Statements.

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**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF CASH FLOWS – PROPRIETARY FUNDS
YEAR ENDED JUNE 30, 2018**

	Governmental Activities- Internal Service Fund Type <u>Compensated Absences</u>
CASH FLOWS FROM OPERATING ACTIVITIES	
Charges for Services	\$ 373,108
Cash Paid to Employees for Services	<u>(216,612)</u>
Net Cash Provided by Operating Activities	<u>156,496</u>
NET CHANGE IN CASH AND CASH EQUIVALENTS	156,496
Cash and Cash Equivalents - Beginning of Year	<u>2,306,128</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u><u>\$ 2,462,624</u></u>
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES	
Operating Income	\$ -
Adjustments to Reconcile Operating Income to Net Cash Provided by Operating Activities:	
Changes in Assets and Liabilities:	
Increase in Compensated Absences	<u>156,496</u>
Net Cash Provided by Operating Activities	<u><u>\$ 156,496</u></u>

See accompanying Notes to Financial Statements.

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

The Pacific States Marine Fisheries Commission (the Commission) was authorized in 1947 by an act of the Congress of the United States of America granting consent and approval to an interstate compact. The Commission is composed of five member states: Alaska, California, Idaho, Oregon, and Washington. While the Commission has no regulatory or management authority, it was created to provide collective participation by states to work on mutual problems of fisheries resource management. The Commission's principal offices are located in Portland, Oregon.

Financial Reporting Entity

The Commission is a quasi-governmental corporation governed by a 15-member board. As required by accounting principles generally accepted in the United States of America, these basic financial statements present the Commission (the primary government) and any component units. Component units, as established by Governmental Accounting Standards Board (GASB) Statement No. 14, are separate organizations that are included in the Commission's reporting entity because of the significance of their operational or financial relationships with the Commission. The Commission has no reportable component units.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Basis of Accounting and Measurement Focus

The accounts of the Commission are organized on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures or expenses, as appropriate. Governmental resources are allocated to and accounted for in individual funds based upon the purpose for which they are to be spent and the means by which spending activities are controlled.

Commission-Wide Financial Statements

The Commission-wide financial statements include the statement of net position and statement of activities and change in net position. These statements present summaries of governmental activities for the Commission.

These statements are presented on an "economic resources" measurement focus and the accrual basis of accounting. Accordingly, all of the Commission's assets and liabilities, including capital assets and long-term liabilities are included in the accompanying statement of net position. The statement of activities and change in net position presents changes in net position. Under the accrual basis of accounting, revenues are recognized in the period in which they are earned, while expenses are recognized in the period in which the liability is incurred.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Commission-Wide Financial Statements (Continued)

Grants and contracts revenue are considered program revenues by the Commission.

Certain eliminations have been made as prescribed by GASB Statement No. 34 in regard to interfund activities, payables, and receivables. All interfund balances in the statement of net position have been eliminated.

Governmental Fund Financial Statements

Governmental fund financial statements include a balance sheet and a statement of revenues, expenditures, and change in fund balances for the following governmental funds:

General Fund – This fund accounts for all financial resources and uses which are not included in the special revenue fund. Resources of the general fund are typically not restricted for use within specific projects. The fund's principal revenue sources are indirect costs charged to the special revenue fund and state contributions.

Special Revenue Fund (Grants and Contracts) – This fund accounts for revenue and expenditures restricted for specific projects or programs. The fund's principal revenue sources are grants and contracts from various federal and member state agencies.

All governmental funds are accounted for on a spending or current financial resources measurement focus and the modified accrual basis of accounting. Accordingly, only current assets and current liabilities are included on the fund balance sheet. The statements of revenues, expenditures, and change in fund balances presents increases (revenues and other financing sources) and decreases (expenditures and other financing uses) in net current position.

Under the modified accrual basis of accounting, revenues are recognized in the accounting period in which they become both measurable and available to finance expenditures of the current period. Accordingly, revenues are recorded when received in cash, except that revenues subject to accrual (generally 60 days after year-end) are recognized when due. Most revenue sources have been treated as susceptible to accrual by the Commission as the amounts due are known at year-end. Interest revenue and some other miscellaneous revenues are not susceptible to accrual because they are usually not measurable until received in cash. Expenditures are recorded in the accounting period in which the related fund liability is incurred.

Unavailable revenues arise when potential revenues do not meet both the "measurable" and "available" criteria for recognition in the current period. Unearned revenues also arise when the Commission receives resources before it has a legal claim to them, as when grant monies are received prior to incurring qualifying expenditures. In subsequent periods, when both revenue recognition criteria are met or when the government has a legal claim to the resources, the unearned revenue is removed from the balance sheet and revenue is recognized.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Governmental Fund Financial Statements (Continued)

Reconciliation of the governmental fund financial statements to the Commission-wide financial statements is provided to explain the differences created by the integrated approach of GASB Statement No. 34.

Proprietary Funds

Proprietary funds account for the operations that are financed and operated in a manner similar to private business, where the determination of operating income, change in net position, financial position, and cash flows is necessary. These funds utilize the accrual basis of accounting.

Internal Service Fund

Internal service funds are used to account for goods and services provided by one department or agency to other departments or agencies of the Commission on a cost reimbursement basis. The internal service fund includes the compensated absences balance of the Commission.

Fund Equity

GASB issued Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions* (GASB No. 54), effective for reporting periods after June 15, 2011. The reporting standard establishes a hierarchy for fund balance classifications and the constraints imposed on the uses of those resources.

GASB No. 54 provides for two major types of fund balances, which are nonspendable and spendable. Nonspendable fund balances are balances that cannot be spent because they are not expected to be converted to cash or they are legally or contractually required to remain intact. Examples of this classification are prepaid items, inventories, and principal (corpus) of an endowment fund.

In addition to the nonspendable fund balance, GASB No. 54 has provided a hierarchy of spendable fund balances, based on a hierarchy of spending constraints.

- Restricted – fund balances that are constrained by external parties, constitutional provisions enabling legislation.
- Committed – fund balances that contain self-imposed constraints of the Commission from its highest level of decision-making authority.
- Assigned – fund balances that contain self-imposed restraints of the Commission to be used for a particular purpose.
- Unassigned – fund balances of the Commission that are not constrained for any particular purpose.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Fund Equity (Continued)

When an expenditure is incurred for purposes for which both restricted and unrestricted fund balances are available, it is the Commission's policy to use restricted first, then unrestricted fund balances. When an expenditure is incurred for purposes for which committed, assigned, and unassigned amounts are available, it is the Commission's policy to use committed first, then assigned, and finally unassigned amounts.

Budgets

The Commission has no legal requirement for a budget, though budget estimates are prepared for the general fund. Certain contracts and grants have budget requirements which must be monitored; however, these budgets are not program-wide. Accordingly, budgetary information has not been included in the basic financial statements.

Grants

Unreimbursed grant expenditures due from grantor agencies are recorded in the Commission-wide financial statements as receivables and revenues. Cash received from grantor agencies in excess of related grant expenditures is recorded as a liability, Unearned Revenues, in the statement of net position.

Capital Assets, Including Equipment Leased Under Capital Leases

Capital assets are recorded at original cost or estimated original cost in the statement of net position. Acquisitions of general capital assets are recorded as expenditures at the major program levels in governmental fund types at the time of purchase. Maintenance, repairs, and equipment replacements of a routine nature are charged to expenditures as incurred and are not capitalized. Upon disposal of capital assets, the related cost or estimated cost and any proceeds from such disposal are accounted for as other financing sources. At their inception, capitalized leases are recorded as capital assets at the net present value of future minimum lease payments to be made.

The portion of the payment applicable to principal, determined by using interest rates implicit in the lease, is reported as a reduction of the capitalized lease obligation.

Depreciation is recorded in the statement of activities and change in net position. The statement of net position reflects the cost of capital assets net of depreciation and is computed on the straight-line basis over the following estimated useful lives. Assets acquired by capital lease are amortized over their estimated useful lives using the straight-line basis. Amortization is included in depreciation expense in these financial statements.

Buildings and Improvements	30 Years
Computers, Furniture, Office, and Field Equipment	5 to 10 Years

Capital assets include assets which were purchased with funds from various federal and state agencies. Those funding agencies retain residual interests in certain assets, which are exercised upon disposal.

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Cash and Investments

The Commission maintains its cash either in bank deposit accounts that are insured by the Federal Deposit Insurance Corporation (FDIC) up to a limit of \$250,000 per depositor or in certain noninterest bearing accounts that are fully insured by the FDIC. The Commission had \$8,755,202 in cash that was exposed to uninsured deposit risk at June 30, 2018. To reduce its overall exposure, the Commission holds its funds in banks that participate in the Oregon Public Funds Collateralization Program. This program provides additional protection for public funds in Oregon, but does not guarantee the funds fully. The Commission has not experienced any losses in such accounts, and believes it is not exposed to any significant credit risk on cash.

Grants and Contracts Receivable

The majority of receivables are comprised of claims for reimbursement of costs under various federal and state grant programs. The Commission considers all receivables to be substantially collectible. Accordingly, no allowance for doubtful accounts has been established.

Accrued Compensated Absences

Vacation pay is vested when earned. Employees earn annual leave based on length of service to the Commission. Unpaid vested vacation and 50% of vested sick pay that is expected to be paid with current resources is shown as accrued compensated absences payable on the statement of net position and recorded as expenditures when earned.

Unearned Rent

The Commission recognized escalating rent provisions on straight-line basis over the lease term.

Retirement Plans

Commission employees meeting eligibility requirements are participants in a defined contribution pension plan. Contributions to this plan are made on a current basis as required by the plan and are charged to expenditures as the related liabilities are incurred.

Employees of the Commission are also allowed to participate in a Northwest Plan Services, Inc. IRC 457 Plan. The plan permits employees to voluntarily defer a portion of their compensation. The Commission makes no contributions to this plan. Northwest Plan Services, Inc., as the plan administrator, retains custody and fiduciary responsibility for all funds deposited into the plan.

Interfund Transactions

Activity between funds represent short-term receivables or payables in the normal course of the Commission's operations or are reimbursements for administrative expenses that are outstanding at the end of the fiscal year. All outstanding balances are reported as either due to or due from other funds in the fund financial statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Implementation of New Accounting Standards

The Commission implemented GASB Statement No. 75, *Accounting and Financial reporting for Postemployment Benefits Other Than Pensions*, effective for fiscal year 2018. There was no significant impact to the financial statements as a result of this implementation.

NOTE 2 CASH AND INVESTMENTS

The Commission maintains a cash pool that is available for use by all funds. Each fund type's portion of this pool is reported on the statement of net position as cash and investments.

Cash and investments (recorded at cost) consisted of the following at June 30, 2018:

Deposits with Financial Institutions:	
Demand Deposits	\$ 1,837,747
Money Market	9,600
Savings	<u>5,044,636</u>
Total Cash and Cash Equivalents	<u>\$ 6,891,983</u>

Custodial Credit Risk – Deposits. Custodial credit risk is the risk that in the event of a bank failure, the Commission's deposits may not be returned to it. The Commission does not have a deposit policy for custodial credit risk. To reduce its overall exposure, the Commission holds its funds in banks that participate in the Oregon Public Funds Collateralization Program. This program provides additional protection for public funds in Oregon, but does not guarantee the funds fully. The Commission has not experienced any losses in such accounts, and believes it is not exposed to any significant credit risk on cash.

The Commission's bank balance was exposed to custodial credit risk as follows at June 30, 2018:

Uninsured and Uncollateralized	<u>\$ 8,755,202</u>
Total	<u>\$ 8,755,202</u>

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018

NOTE 3 LEASE RECEIVABLE

On August 1, 2015, the Commission entered into a purchase agreement with Northwest Marine Technology, Inc. to purchase four AutoFish Systems for \$2,252,000. At the same time, the Commission entered into a lease-purchase option memorandum of understanding with Idaho Department of Fish and Game (IDFG) for the four AutoFish Systems for \$2,252,000. The payments to Northwest Marine Technology, Inc. match exactly the payments to be received from IDFG. The AutoFish Systems were recorded as an addition to capital assets as a result of the purchase and then recorded as a deletion as a result of the lease-purchase agreement with IDFG. The remaining balance of the lease was fully received as of June 30, 2018.

NOTE 4 CAPITAL ASSETS

Capital asset activity was as follows at June 30, 2018:

	Balance June 30, 2017	Additions	Deletions	Transfers	Balance June 30, 2018
Capital Assets:					
Computers	\$ 1,600,271	\$ 530,238	\$ 9,622	\$ -	\$ 2,120,887
Furniture and Office Equipment	164,388	18,337	6,712	-	176,013
Leasehold Improvements	410,164	-	2,193	-	407,971
Field and Scientific Equipment	2,708,745	285,344	2,833	92,906	3,084,162
Truck/Boat	844,357	38,317	-	-	882,674
Construction in Process	92,906	-	-	(92,906)	-
Total Capital Assets	5,820,831	872,236	21,360	-	6,671,707
Accumulated Depreciation:					
Computers	986,663	238,202	9,622	-	1,215,243
Furniture and Office Equipment	147,142	7,772	6,712	-	148,202
Leasehold Improvements	355,216	21,259	2,193	-	374,282
Field and Scientific Equipment	1,662,785	336,499	2,833	-	1,996,451
Truck/Boat	624,257	80,207	-	-	704,464
Total Accumulated Depreciation	3,776,063	683,939	21,360	-	4,438,642
Total Assets	<u>\$ 2,044,768</u>	<u>\$ 188,297</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 2,233,065</u>

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018

NOTE 5 LONG-TERM LIABILITIES**Compensated Absences**

The following is a schedule of the compensated absences as of June 30, 2018:

Balance - Beginning	\$ 2,306,128
Incurred	373,108
Retired	(216,612)
Balance - Ending	<u>\$ 2,462,624</u>
Due Within One Year	<u>\$ 186,906</u>
Long-Term Portion	<u>\$ 2,275,718</u>

Capital Lease Obligation

The following is a schedule of the capital lease obligations as of June 30, 2018:

Balance - Beginning	\$ 15,965
Additions	-
Payments	(11,691)
Balance - Ending	<u>\$ 4,274</u>

The total interest incurred for the year ended June 30, 2018 was \$554.

Minimum future lease payments are as follows:

<u>Year Ending June 30.</u>	<u>Amount</u>
2019	<u>\$ 4,323</u>
Total Minimum Lease Payments	4,323
Less: Amounts Representing Interest	(49)
Present Value of Minimum Lease Payments	4,274
Less: Current Portion	(4,274)
Total Long-Term Portion	<u>\$ -</u>

Long-Term Debt

The following is a schedule of the long-term debt as of June 30, 2018:

Balance - Beginning	\$ 172,932
Additions	-
Reductions	(172,932)
Balance - Ending	<u>\$ -</u>

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018

NOTE 6 PENSION PLAN

The Commission sponsors the Pacific States Marine Fisheries Commission Employees Pension Plan (the Plan), which is a defined contribution pension plan.

A defined contribution pension plan provides pension benefits in return for services rendered, provides an individual account for each participant, and specifies how contributions to the individual's account are to be determined instead of specifying the amount of benefits the individual is to receive. Under a defined contribution pension plan, the benefits a participant will receive depend solely on the amount contributed to the participant's account, the returns earned on investments on those contributions, and forfeitures of other participant's benefits that may be allocated to such participant's account.

Employees must meet eligibility requirements based upon hours and length of service to participate in the Plan. The Commission is required to contribute an amount equal to 14% of the eligible employee's gross earnings. Vesting is based on a schedule that provides 100% vesting at the end of five years of qualified employment. An employee who leaves the employment of the Commission is entitled to his or her vested interest in the Plan.

Forfeitures are used to reduce future contributions. For the year ended June 30, 2018, the Commission contributed \$1,887,873 to the Plan, net of forfeitures. There were 359 participants in the Plan at June 30, 2018.

NOTE 7 POST-EMPLOYMENT HEALTH PLAN

The Commission sponsors a Post-Employment Health Plan (PEHP), which helps participants pay for certain qualified medical expenses after their retirement or termination. Once an employee has qualified to be in the pension plan they can participate in the PEHP. The PEHP has two individual accounts: 1) Universal Reimbursement Account, in which the Commission contributes a fixed amount (\$10) each month for each eligible participant; and 2) Insurance Premium Reimbursement Account, which is funded at termination or retirement with a portion of accrued sick leave. To be eligible for the second account, the employee must be 100% vested in the Commission Pension Plan and have accrued sick leave at termination. Employees are responsible for directing their PEHP contributions among the various funds selected by the plan administrator. The participant's account is passed on to a spouse and/or dependents if the participant were to die. As of June 30, 2018, there were 399 participants in the plan, and the Commission contributed \$83,919 into the plan. The liability increased \$86,797 to an ending balance of \$909,762 as of June 30, 2018. This is included in the compensated absences liability (see Note 5).

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2018**

NOTE 8 RISK MANAGEMENT

The Commission is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees, and natural disasters. The Commission purchases commercial insurance to minimize its exposure to these risks. Settled claims have not exceeded this commercial coverage for any of the past three years.

NOTE 9 COMMITMENTS AND CONTINGENCIES

As discussed in Note 1, the Commission holds capital assets for which granting agencies, principally federal agencies, have residual interests. The granting agencies, at their discretion upon disposition of these assets, are entitled to possession of the assets or the proceeds from their sale.

Substantially all amounts received or receivable from grantor agencies are subject to audit and adjustment by grantor agencies, principally the federal government. Any disallowed claims, including amounts already collected, may constitute a liability of the applicable funds. The amount, if any, of expenditures which may be disallowed by the grantor cannot be determined at this time, although the Commission's management expects such amounts, if any, to be immaterial.

NOTE 10 OPERATING LEASES

The Commission, as lessee, leases office space, vehicles, and equipment under various operating leases. The total amount expended under such leases was \$661,157 for the year ended June 30, 2018.

Future minimum lease payments for the noncancellable leases with initial or remaining lease terms of one year or more are as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2019	\$ 549,205
2020	470,283
2021	469,537
2022	444,492
2023	428,504
Thereafter	576,371
Total	<u>\$ 2,938,392</u>



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**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL
 REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN
 AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH
 GOVERNMENT AUDITING STANDARDS**

Board of Commissioners
 Pacific States Marine Fisheries Commission
 Portland, Oregon

We have audited, in accordance with the 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, the financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of Pacific States Marine Fisheries Commission (the Commission), as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise Pacific States Marine Fisheries Commission's basic financial statements, and have issued our report thereon dated October 2, 2018.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Commission's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Commission's internal control. Accordingly, we do not express an opinion on the effectiveness of the Commission's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Board of Commissioners
Pacific States Marine Fisheries Commission

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Commission's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



CliftonLarsonAllen LLP

Bellevue, Washington
October 2, 2018



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**INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR
 FEDERAL PROGRAM AND REPORT ON INTERNAL CONTROL OVER COMPLIANCE
 REQUIRED BY THE UNIFORM GUIDANCE**

Board of Commissioners
 Pacific States Marine Fisheries Commission
 Portland, Oregon

Report on Compliance for Each Major Federal Program

We have audited Pacific States Marine Fisheries Commission's (the Commission's) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Commission's major federal programs for the year ended June 30, 2018. The Commission's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Commission's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Commission's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Commission's compliance.

Board of Commissioners
Pacific States Marine Fisheries Commission

Opinion on Each Major Federal Program

In our opinion, the Commission complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2018.

Report on Internal Control Over Compliance

Management of the Commission is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Commission's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Commission's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.



CliftonLarsonAllen LLP

Bellevue, Washington
October 2, 2018

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
YEAR ENDED JUNE 30, 2018**

Federal Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Organization (From)	Pass-Through Identifying Number	Total Federal Expenditures	Passed Through (to) Subrecipient
U.S. Department of Agriculture					
National Fish and Wildlife Foundation	10.683	Direct		\$ 70,577	\$ -
	10.683 Total			<u>70,577</u>	<u>-</u>
Total U.S. Department of Agriculture					
				<u>70,577</u>	<u>-</u>
U.S. Department of Commerce (NOAA)					
Interjurisdictional Fisheries Act of 1986	11.407	Direct		535,309	317,586
	11.407 Total			<u>535,309</u>	<u>317,586</u>
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	11.427	Direct		124,580	-
	11.427 Total			<u>124,580</u>	<u>-</u>
Columbia River Fisheries Development Program	11.436	Direct		944,039	857,365
	11.436 Total			<u>944,039</u>	<u>857,365</u>
Pacific Fisheries Data Program	11.437	Direct		21,795,129	5,764,232
	11.437 Total			<u>21,795,129</u>	<u>5,764,232</u>
Pacific Coast Salmon Recovery Pacific Salmon Treaty Program	11.438	California Department of Fish and Wildlife	P1310520	41,427	-
	11.438	California Department of Fish and Wildlife	P1596008	59,387	-
	11.438	California Department of Fish and Wildlife	P1510507	1,272	-
	11.438	California Department of Fish and Wildlife	P1550013	3,866	-
	11.438	California Department of Fish and Wildlife	P1610501	5,886	-
	11.438	California Department of Fish and Wildlife	P1510551	16,294	-
	11.438	California Department of Fish and Wildlife	P1550011	8,641	-
	11.438	California Department of Fish and Wildlife	P1530409	5,382	-
	11.438 Total			<u>142,155</u>	<u>-</u>
Marine Mammal Data Program	11.439	Direct		483,498	305,129
	11.439 Total			<u>483,498</u>	<u>305,129</u>
Regional Fishery Management Councils	11.441	Pacific Fishery Management Council	2016-05	19,986	-
	11.441	Pacific Fishery Management Council	2017-05	21,983	-
	11.441	North Pacific Fishery Management Council	2017-04	43,509	-
	11.441 Total			<u>85,478</u>	<u>-</u>
Unallied Industry Projects	11.452	Direct		3,652,992	3,599,526
	11.452 Total			<u>3,652,992</u>	<u>3,599,526</u>
Unallied Management Projects	11.454	Direct		23,961	-
	11.454 Total			<u>23,961</u>	<u>-</u>
Congressionally Identified Awards and Projects	11.469	The Nature Conservancy	A102959-001	42,675	-
	11.469 Total			<u>42,675</u>	<u>-</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)
YEAR ENDED JUNE 30, 2018**

Federal Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Organization (From)	Pass-Through Identifying Number	Total Federal Expenditures	Passed Through (to) Subrecipient
U.S. Department of Commerce (NOAA) (Continued)					
Unallied Science Program	11.472	Direct		\$ 139,452	\$ -
	11.472 Total			<u>139,452</u>	<u>-</u>
Atlantic Coastal Fisheries Cooperative Management Act	11.474	Atlantic States Marine Fish Commission	ASMFC 17-1002	9,664	-
	11.474 Total			<u>9,664</u>	<u>-</u>
Total U.S. Department of Commerce				<u>27,978,932</u>	<u>10,843,838</u>
U.S. Department of the Interior					
Central Valley Project Improvement Act, Title XXXIV	15.512	Direct		1,891,819	-
	15.512 Total			<u>1,891,819</u>	<u>-</u>
Fish and Wildlife Cluster					
Sport Fish Restoration	15.605	Direct		195,826	-
	15.605	Oregon Department of Fish and Wildlife	ODFW 309-16	54,144	-
	15.605 Total			<u>249,970</u>	<u>-</u>
Total Fish and Wildlife Cluster				<u>249,970</u>	<u>-</u>
Fish and Wildlife Management Assistance	15.608	Direct		1,260,503	206,772
	15.608 Total			<u>1,260,503</u>	<u>206,772</u>
Fish and Wildlife Management Assistance	15.628	National Fish Habitat Partnership	NFHP-1009 2017	7,338	6,300
	15.628 Total			<u>7,338</u>	<u>6,300</u>
Central Valley Project Improvement Act (CVPIA)	15.648	Direct		498,928	-
	15.648 Total			<u>498,928</u>	<u>-</u>
Lower Snake River Compensation Plan	15.661	Direct		838,934	-
	15.661 Total			<u>838,934</u>	<u>-</u>
National Fish and Wildlife Foundation	15.663	Direct		14	-
	15.663 Total			<u>14</u>	<u>-</u>
Total U.S. Department of the Interior				<u>4,747,506</u>	<u>213,072</u>
Environmental Protection Agency - Office of Environmental Information					
Puget Sound Action Agenda: Technical Investigations and Implementation Assistance Program	66.123	University of Washington	UWSC10379	3,873	-
	66.123 Total			<u>3,873</u>	<u>-</u>
Total Environmental Protection Agency - Office of Environmental Information				<u>3,873</u>	<u>-</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)
YEAR ENDED JUNE 30, 2018**

Federal Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Organization (From)	Pass-Through Identifying Number	Total Federal Expenditures	Passed Through (to) Subrecipient
Department of Energy					
Bonneville Power Administration - Environment, Fish and Wildlife	81.999	Direct		\$ 14,575,434	\$ 5,246,529
	81.999	Washington Department of Fish and Wildlife	17-09708	45,903	-
	81.999	Columbia River Inter-Tribal Fish Commission	V1712	69,222	-
	81.999	Columbia River Inter-Tribal Fish Commission	V18-06	16,501	-
	81.999 Total			<u>14,707,060</u>	<u>5,246,529</u>
Total Department of Energy				<u>14,707,060</u>	<u>5,246,529</u>
Total Federal Assistance - All Awards				<u>\$ 47,507,948</u>	<u>\$ 16,303,439</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
JUNE 30, 2018**

NOTE 1 BASIS OF PRESENTATION

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of Pacific States Marine Fisheries Commission under programs of the federal government for the year ended June 30, 2018. The information in this Schedule is presented in accordance with the requirements of 2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance)*. Because the Schedule presents only a selected portion of the operations of Pacific States Marine Fisheries Commission, it is not intended to and does not present the financial position, changes in net assets, or cash flows of Pacific States Marine Fisheries Commission.

NOTE 2 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Expenditures

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years. Pacific States Marine Fisheries Commission has elected not to use the 10-percent de minimis indirect cost rate as allowed under the Uniform Guidance.

Pass-Through Entities

Pass-through entity identifying numbers are presented where available.

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED JUNE 30, 2018**

Section I – Summary of Auditors’ Results

Financial Statements

- | | | |
|---|------------|---|
| 1. Type of auditors’ report issued: | Unmodified | |
| 2. Internal control over financial reporting: | | |
| • Material weakness(es) identified? | _____ yes | _____ <input checked="" type="checkbox"/> no |
| • Significant deficiency(ies) identified that are not considered to be material weakness(es)? | _____ yes | _____ <input checked="" type="checkbox"/> none reported |
| 3. Noncompliance material to financial statements noted? | _____ yes | _____ <input checked="" type="checkbox"/> no |

Federal Awards

- | | | |
|---|------------|---|
| 1. Internal control over major federal programs: | | |
| • Material weakness(es) identified? | _____ yes | _____ <input checked="" type="checkbox"/> no |
| • Significant deficiency(ies) identified that are not considered to be material weakness(es)? | _____ yes | _____ <input checked="" type="checkbox"/> none reported |
| 2. Type of auditors’ report issued on compliance for major federal programs: | Unmodified | |
| 3. Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)? | _____ yes | _____ <input checked="" type="checkbox"/> no |

Identification of Major Federal Programs

CFDA Number	Name of Federal Program or Cluster
11.437	Pacific Fisheries Data Program
11.452	Unallied Industry Projects: Alaska Chinook Salmon Disaster
Dollar threshold used to distinguish between Type A and Type B programs:	\$ <u>1,425,238 / \$356,310</u>
Auditee qualified as low-risk auditee?	_____ <input checked="" type="checkbox"/> yes _____ no

PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)
YEAR ENDED JUNE 30, 2018

Section II – Financial Statement Findings

Our audit did not disclose any matters to be reported in accordance with *Government Auditing Standards*.

Section III – Findings and Questioned Costs – Major Federal Programs

Our audit did not disclose any matters required to be reported in accordance with 2 CFR 200.516(a).

**PACIFIC STATES MARINE FISHERIES COMMISSION
SUMMARY SCHEDULE OF PRIOR YEAR AUDIT FINDINGS
YEAR ENDED JUNE 30 2018**

Section IV – Prior Year Findings

Our audit for the year ended June 30, 2017 did not disclose any matters required to be reported in accordance with 2 CFR 200.516(a).



HEADQUARTERS STAFF 2018

Randy Fisher, *Executive Director*

Pam Kahut, *Finance Officer*

Shannon McKewon, *Human Resources Manager*

— PROGRAM MANAGERS —

Stan Allen, *Senior Program Manager*

Fisheries/Habitat Assistance Programs

Dave Colpo, *Senior Program Manager*

Commercial Fisheries Data Programs

Stephen Phillips, *Senior Program Manager*

Aquatic Nuisance Species Programs

Steve Williams, *Senior Program Manager*

Recreational Fisheries Information Network
Northern Pikeminnow Sport Reward Program

Pacific States Marine Fisheries Commission

CELEBRATING 71 YEARS OF SERVICE

Established in 1947 by consent of Congress, the Pacific States Marine Fisheries Commission (PSMFC) is an interstate compact agency that helps resource agencies and the fishing industry sustainably manage our valuable Pacific Ocean resources in a five-state region. Member states include California, Oregon, Washington, Idaho, and Alaska. Each represented by three Commissioners.

