



Pacific States Marine Fisheries Commission

2017 ANNUAL REPORT

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

70TH ANNUAL REPORT OF THE PACIFIC STATES MARINE FISHERIES COMMISSION

— Alaska, California, Idaho, Oregon and Washington —

2017

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 2017

STATE	COMMISSIONERS	ADVISORS	COORDINATOR
Alaska	Charles Swanton Cathy Giessel Paul Gronholdt	Terry Johnson Don Lane Matthew Moir Herman Savikko Beverly Hoffman	Trent Hartill (ADFG)
California	Charlton H. Bonham Barbara Emley Vacant	Jim Caito Ken Franke Donald K. Hansen Mike McCorkle Roger Thomas Kate Wing	Sonke Mastrup (CDFW)
Idaho	Virgil Moore Dan Johnson Jerry Meyers	Sharon Kiefer Ed Schriever Joe Stegner Jim Fredericks	Lance Hebdon (IDFG)
Oregon	Ed Bowles Caddy McKeown Jeff Feldner	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 Irene Martin 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 2017 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 NMFS 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 which combine 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.

The Commission also believes that the Salmon Management Activities line item of the NOAA Fisheries budget should be increased to reflect the importance of the Pacific Salmon Commission and the operation and maintenance of the Mitchell Act hatcheries, each of which is funded within this line item. The Mitchell Act funding levels have been static and are insufficient to meet the escalating costs of the production associated with mitigation for the construction and operation of the federal hydropower system, minimizing the adverse effects of this mitigation on stocks listed under the Endangered Species Act, and meeting international expectations for production

associated with implementing the Pacific Salmon Treaty. Washington State in particular is concerned about the insufficient funding for the maintenance, fish production, and mass marking of hatchery fish below the Bonneville Dam. Additional funding is also necessary for the United States to participate in the negotiation of the annexes to the Pacific Salmon Treaty and, in particular, for the voting-member States and Tribes to participate.

The Commission will submit line item-specific recommendations to your office on the NOAA Fisheries budget at a later date once we have a better feel for the final 2018 budget and the President's recommendations for 2019.

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 and 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.

WEST COAST AND ALASKA FISHERY OBSERVERS

The Commission has been tasked by its Commissioners to evaluate the current Observer Programs for the West Coast and Alaska to determine whether additional funding and/or program changes are necessary to meet the needs of the dependent fishing fleets, the two Regional Fishery Management Councils, and the federal and state fishery managers.

The North Pacific Fishery Management Council utilizes the North Pacific Observer Program to allocate resources for at-sea observers. All vessels are identified for either full coverage or partial coverage. The owner of a vessel included in the full coverage category contracts directly with a private sector observer company for 100% observer coverage. All other vessels are included in the partial coverage category. These include hook-and-line, pot, and small trawl vessels in Alaska. The partial coverage vessels are assessed a 1.25 percent fee based on the value of catch landings. The North Pacific Council then allocates these funds to a priority observation list. From 2013 to 2015, the NMFS supplemented this program to maintain higher levels of observer coverage. Beginning in 2016, NMFS eliminated supplemental funding and instructed the North Pacific Council to make do with the industry assessments. Coverage rates on pot gear, hook and line vessels and trawl vessels have dropped significantly. This in turn has undermined the industry's confidence in the fisheries dependent at-sea data.

An economic crisis has developed on the West Coast within the West Coast Groundfish industry. The Pacific Council has implemented an individual fishing quota catch share program for West Coast Groundfish. The observer

program for this new fishery regime received supplemental funding from NMFS during the initial implementation period, but NMFS insisted that the program be transitioned to 100% observer coverage paid for by the Groundfish IFQ fleet. This policy decision was based on the premise that the industry would become profitable and that the beneficiaries of the IFQ allocation would have the financial capability to cover observer coverage costs. The West Coast Groundfish Program has unfortunately been beset by a host of regulatory problems that have not yet been resolved by NMFS and the Pacific Council. These regulatory impediments have resulted in roughly 70% of the groundfish quota being unharvested by the IFQ fleet, yet there is mandatory 100% observer coverage for every vessel in the fleet and 100% dockside monitoring coverage in the shoreside processing plants. The Pacific Council is developing a host of trailing amendments to resolve these regulatory burdens preventing the industry from fully utilizing its IFQ quota. This process will likely take many years. Until then, the vast majority of the West Coast Groundfish fishermen are barely making ends meet and continue to have to bear the full brunt of observer coverage costs without the economic benefits that were promised to them when the IFQ Program was implemented in 2011.

The Commission believes that the Congress should identify additional discretionary funding to be allocated between the two regions to increase partial category observer coverage levels in the North Pacific, and to assist the full coverage West Coast Groundfish fishery meet its observer requirements while the regulatory morass is sorted out by the Pacific Council. Additionally, these funds could be made available for expanding electronic monitoring when doing so would expand coverage or reduce the costs to the dependent fleet. This could include funding for the third party review of camera observations in Alaska and the West Coast. We recommend that the Congress appropriate \$3 million per year to be equitably allocated by NMFS to these two regions.

Fishermen have also raised concerns that the use of private observer companies has unnecessarily increased the cost of at-sea observers, thus reducing coverage levels and raising the cost of observers being borne by the full coverage fleets. The Commission believes that the Congress should evaluate this issue as

part of the reauthorization of the Magnuson-Stevens Act (MSA) to determine whether there are circumstances which warrant the industry dealing directly with NMFS to obtain observers for both the full and partial coverage categories.

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 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 go forward.

COAST GUARD ALTERNATIVE SAFETY COMPLIANCE PROGRAM

The Congress tasked the US 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 20th, 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 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 US 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.

70TH ANNUAL BUSINESS MEETING SUMMARY

Pacific States Marine Fisheries Commission

Sheraton San Diego Hotel and Marina | San Diego, California | August 23, 2017

Chair Sonke Mastrup called the annual meeting to order at 7:30am. In attendance:

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

Ed Bowles, *Oregon Commissioner*

Jeff Feldner, *Oregon Commissioner*

Paul Gronholdt, *Alaska Commissioner*

Senator Dan Johnson, *Idaho Commissioner*

Sharon Kiefer, *Idaho Advisor, representing Idaho
Commissioner Virgil Moore*

Michele Culver, *Washington Commissioner*

Representative Brian Blake,
Washington Commissioner

Chair Mastrup: Requested a roll call for the States' present. All PSMFC Member States were present.

Idaho: Recognized Lance Hedbon as the new Idaho Coordinator.

Washington: Recognized Rich Lincoln as a new Washington Advisor.

Chair Mastrup: Asked for review and approval of the financial statements.

Idaho: Reported the Executive Committee reviewed the FY2018 budget and recommends adopting the FY2018 budget as presented. The FY2018 budget was unanimously approved.

Chair Mastrup: A review of the 2016 PSMFC Annual Business Meeting minutes. Idaho

moved that the Business Summary minutes be approved. The 2016 PSMFC Business Meeting minutes unanimously approved.

Chair Mastrup: Moved to vote on the PSMFC resolutions that were submitted by the states on Tuesday, August 22, 2017.

Issue 1. California Resolution:

Focus 2017

The State of California recognizes the important and valuable work PSMFC does in supporting the fisheries of the US Pacific coast and the five PSMFC member states. The annual meeting provides an opportunity for the state delegations to discuss issues of shared importance and satisfies the Compact's requirement that the Commission meet at least once a year.

Historically, the Commission has used a resolution process to identify priorities, with each state meeting independently to develop resolutions before a vote by the full Commission. There are now 40 resolutions in place, covering a wide range of topics, which must be revisited and potentially amended each year.

We question if the current resolution process is the best use of the Commission community's time, the most effective way to capture the concerns of the delegations (especially for issues that affect multiple states), or the most efficient way to focus the Commission's staff resources.

We propose that in 2018, the Commission present, for the consideration of all members, at least two options besides the status quo for setting priorities and directing the Commission's scientists, managers, and policy experts to serve the needs of the member states. These options could include reconfiguring the structure of the Annual Meeting and/or In-State meetings.

Discussion: Clarification by California of the issue was requested by the member states. It led to a discussion on how to narrow the focus of the Annual Meeting and resolutions. All the states agreed the strength of the five states are to work on issues as collective voice in Washington DC. PSMFC staff will develop a plan to review where each of the resolutions are in the process in terms of active legislation. This will help to streamline the resolutions and retire those that are no longer valid. The States agreed they need to be more involved and give direction to PSMFC Staff on topics for the Annual Meeting. The States agree that being able to streamline the process to show the value of PSMFC and what PSMFC does is needed to get new members up to speed. No motion was put forward for a vote.

Issue 2. Oregon Resolution:

Harmful Algal Bloom Research and Management Funding

HABs increasing in frequency and severity impacting economically important shellfish fisheries, particularly the Dungeness crab fishery.

- Additional funding to promote monitoring and implement new management strategies.
- Additional funding to promote basic research to identify and understand the ecology and develop predictive modeling tools.

Adopted Language: The States are looking to be pro-active and are noting the frequency of the HABs along with the lack of capacity at the testing labs and product tracking testing continues to be an issue. The focus will be to find funding for future testing that will allow safe product for public consumption and tainted product to be flagged that will become a public health issue. The resolution passed unanimously.

Issue 3. Washington Resolution:

Proposed amendment to Resolution 19 (from 2016)

Per the memo from Brad Gilman (dated 1/23/17), vessels pay into the North Pacific Observer Fund 1.25% of the ex-vessel value of their harvest to pay for the partial observer coverage. West Coast shore side trawl vessels through the National Marine Fisheries Service (NMFS) cost recovery program currently pay 3% of the ex-vessel value of their harvest. For example, \$20 million in ex-vessel revenue is assessed \$600,000 in cost recovery fees. The Northwest Fisheries Science Center estimates about \$500,000 of that is used for the West Coast Groundfish Observer Program (WCGOP). Washington does not support the additional observer fund but would support increased flexibility in utilizing WCGOP observers for coverage in the Individual Fishing Quota (IFQ) Fishery.

Chair Mastrup: Clarification of Issue Resolution 3 was requested.

Washington: At the 2016 Annual Meeting there was a proposal that came forward from the State of Oregon. The question was raised how to have greater flexibility and efficiency for the WCGOP. Thru further investigation and research, the Commission received a summary.

1. Washington did not want the lobbyists to get a revision to the Magnuson Stevens Act (MSA) to create a new fund.
2. To reiterate, what was heard from Oregon last year, which was to have greater efficiency and flexibility that the West Coast vessels are paying for what is currently in place.

Discussion: Agreement by all states, they want to move toward more efficiency and flexibility without any revisions to the MSA.

Oregon made a friendly amendment to help re-focus the issue as follows:

Adopted Language: 2016 Resolution 19 should be amended to shift focus on an additional observer fund to instead support increased flexibility in utilizing the West Coast Ground Fish Observer Program, observers for coverage of the IFQ fisheries including exploring ways to remove existing barriers that prevent NMFS ability to receive money directly from the industry. Revised language was voted yes unanimously.

Issue 4. Alaska Resolution:

Pacific Salmon Treaty Implementation Funding

Support for increased annual funding for implementation of the Pacific Salmon Treaty for FY2019 and beyond.

Chair Mastrup: This issue had broad support, as long as the funds come from new funding sources. No discussion. Resolution 4 passed unanimously.

Adopted Language: Support for increased annual funding for implementation of the Pacific Salmon Treaty for FY2019 and beyond, as long as the funds come from a new funding source.

Issue 5. Alaska Resolution:

Supplemental Observer Funding

The Commission directs staff to work with stakeholders from each region nationwide to determine interest in increasing funding for, or establishing new federal funding to supplement existing federal groundfish fishery observer programs. If there is sufficient national support for increasing federal funds for observer programs, PSMFC also directs staff to work with the Council Coordination Committee to establish criteria for distributing appropriated funds to each region.

Adopted Language: The Commission was in support of a new funding source and reaching out to other regions to find out if they would be interested in pursuing new funding collectively.

Randy Fisher: “As you know, the three Commissions go up on the hill together and meet with the Apportions Staff. We would communicate with the other commissions to

find out if there was an interest in pursuing more money. It would be new funding source, at your direction.”

Chair Mastrup called for a vote. Resolution 5 passed unanimously.

Chair Mastrup: Thanked everyone for attending and announced the meeting for next year is in Boise, Idaho.

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 2017 Award to:



PETER HALMAY

Peter Halmay started fishing commercially in California in 1970. Since 1976, he has been diving for sea urchins and you can find him in the water 150 to 200 days a year. Since 1978, he has been involved in building social capital in the Sea Urchin fishery. This included being a founding member of two mutual benefit-fishing associations, two anglers' marketing associations, various advisory committees and commissions. The latest project is the anglers' market in San Diego, Tuna Harbor Dockside Market. "The community is waking up to the idea that a vibrant fishing community exists in San Diego and a wide variety of local and sustainable fish is available. Our Chef to Fisherman connection has also been integral to the market's success. The market is a powerful marketing tool for fishermen and its greatest success is when the chefs and fishermen take their relationships to the next level."



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 US 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 at the NPFMC office, Seattle at the AFSC and Portland at the 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, 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 13,000 Answers queries in 2017.
- 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 2017 included confidential reports to support an annual seabird publication, and prohibited species catch for council staff. The application is available through the AKFIN website, or directly at (reports.psmfc.org/akfin/).
- A web application for NMFS Office of Law Enforcement (OLE) in Alaska was developed in 2017 to help identify and track in-season fishing violations. In collaboration with NMFS Alaska Region and OLE, the AKFIN data warehouse was used to develop standardized queries based on business rules from OLE agents. These queries were used as the basis for the application where OLE agents can view and edit violation records to set status, make assignments, add notes, and associate them to an OLE case number. The AKFIN application is

strictly a data management tool and not used for official enforcement actions. The application has been successful in reducing the time agents spend on identifying violations. Additional violation types will continue to be added in the future.

- 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, see 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. The site gives you the ability to view key indicator of fisheries dependence and other economic and demographic characteristics for Alaska communities -(<https://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/communities/snapshots.php>).
- Annual Data Requests in Support of National Reports:
 - Annual data call for the Fisheries of the US.
 - 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 -(http://www.nmfs.noaa.gov/sfa/fisheries_eco/bycatch/nationalreport.html).
 - Annual data call for the US 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** and the Bering Sea/Aleutian Islands **BSAI Crab Economic Status Report** 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.

2017 Highlights Include:

- A database software update and disk storage reorganization was completed. Significant staff time was needed to plan, debug, and test the new version before migrating to production.
- Staff programmed and delivered over 250 data products of varying complexity, each taking anywhere from a few hours to multiple days to complete.
- Approximately 110 data requests 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 or 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 2017 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/z0e48c2_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 2017, PSMFC sponsored a Rapid Response Table - Top exercise October 3-5, 2017 at Wenatchee, WA. The exercise addressed containment of a theoretical dreissenid mussel infestation in the Columbia River near Wenatchee. Further information on PSMFC rapid response exercises can be found at <https://www.westernais.org/rr-plans-exercises-groups>.

In 2017 PSMFC entered into an agreement with the USFWS to lead an effort to produce the background information for a manual that will help inform Section 7 consultation with the USFWS and 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 the end of 2018.

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 of 2014 (updated in January of 2017). This document and other assessment related documents can be accessed at <https://www.westernais.org/vulnerability-assessments>.

WATERCRAFT INSPECTION/ 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 @ <http://psmfc.maps.arcgis.com/apps/webappviewer/index.html?id=aa6a6527a26a44ddbff097b99241462e>). In FY2016, US Army Corps of Engineers (USACE) “Water Resources Developmental Act (WRDA)” funds (aka 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. The 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 the four CRB states and administer approximately \$4.1 million in watercraft inspection station funding.

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 US 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 110 WIT training courses have been delivered in 19 western states and Canada to approximately 4,800 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, viewing of the “Don’t Move a Mussel Video,” hands on watercraft inspection 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 and 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 Dee 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, and Salt Lake City, Utah. In 2015, PSMFC added a Level III course, which serves as a “trainer training” and in 2017 we added WIT IV (“Advanced Decontamination”). For further information on the WIT program go to www.westernais.org/ and see the “Training” tab.

COORDINATION

The ANS program is providing 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; Quagga Zebra Action Plan Committee and the Green Crab Technical Group.

PSMFC compiles, maintains and shares information on regulations each state implements to combat AIS, creating efficiencies among the states by avoiding duplication of effort. The site also includes a National Sea Grant Law Center searchable compilation of western states AIS laws and regulations relevant to watercraft inspection programs. The regulation information is updated regularly. See <https://www.westernais.org/regulations> for further information.

In FY2016, USACE “WRDA” funds (aka WRRDA or WIIN) were appropriated to support expansion and establishment of watercraft inspection stations and monitoring in the CRB. The PSMFC entered into a cooperative agreement with the USACE (Walla Walla District) on April 4, 2017. PSMFC was designated as the “non-federal sponsor” to represent the four CRB states and administered over \$4.0 million in watercraft inspection stations and monitoring funding.

OUTREACH AND EDUCATION

Recreational watercraft are the most likely 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 15 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 most likely 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 the latest news associated with AIS. Past issues can be found @ <https://www.westernais.org/news>.

MONITORING

For the past 14 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 US 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 – see <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. WRDA cost share monitoring funds resulted in an approximate doubling of dreissenid monitoring efforts by the states in 2017.

WEBSITE

PSMFC renovated its invasive species website in 2014. The new website can be found at <http://www.westernais.org/> and 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.



California/Idaho Fisheries Support 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 them 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 and 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.

PSMFC continued to provide technical assistance and field staff for collecting and compiling data on the movement and timing of juvenile Chinook and Coho salmon and other species in the **Humboldt Bay Tributary Estuary Sampling Program**. Funding for this program ended in 2017.

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 assisting 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, habitat assessment and collecting biological data.

PSMFC provided technical assistance and field staff for the **Coastal Restoration Monitoring and Evaluation** project. Staff monitors pending and completed coastal watershed restoration projects in California, collects habitat information and compiles 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, Chinook salmon carcass survey, spawning Merced River Hatchery fall-run Chinook salmon, reading coded-wire tags, entering data, fish screening and monitoring entrainment of salmon into water diversions.

PSMFC's assistance contributed to the successful completion of the tenth 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 US 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 percent 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 and support of 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 the USFWS and CDFW collect data, monitor and report 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 River and Stanislaus River.

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

PSMFC provided administrative, coordination and technical support to the **Pacific Marine and Estuarine Fish Habitat Partnership** and the **California Fish Passage Forum Fish Habitat Partnership**.

PSMFC staff assisted the USFWS in arranging a tour of the **Elwha River** for Klamath Basin fisheries biologists. They discussed possible Klamath dam removal issues with staff working on the Elwha, where salmon and steelhead runs are being reestablished in historical habitat following the recent removal of two dams.

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**. A subcontractor for the first phase of this project was selected and work on a background synthesis report was completed.

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, and 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 the National Fish and Wildlife Foundation, PSMFC staff conducted and completed a short term monitoring of **Steelhead and Habitat in Manzana 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, 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 with collecting **DNA Genetic Samples in the Lower Columbia** for IDFG.

PSMFC ALSO PROVIDED:

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**.

PSMFC staff assisted, through a grant with Washington Department of Fish and Wildlife and the Environmental Protection Agency, to facilitate electronic transfer and sharing of fisheries data

from the **Coordinated Assessments (CA)** Project. This funded work was completed and the grant ended in 2016. The CA project continues, and focuses on the key population indicators for implementation of the Federal Columbia River Power System Biological Opinion.

PSMFC also 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.

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 2017, Newport Ageing Lab personnel:

- Production aged 23,149 and double read 6,280 age structures to support eight US West Coast groundfish stock assessments.
 - Released 32,102 age estimates from 10 species.
 - Added 39,652 specimen records from 66 different species collected from NWFSC programs. This archive now has 522,350 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 30,256 age structures from US west coast state agencies.
 - Collected 18,679 new otolith weights from nine different species. The total number of age structure weights totals 116,489 otolith weight records. 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.
- The Age Lab received a micromill and grinder in the fall of 2014. The equipment has been used to mechanically extract a portion of the otolith for subsequent radiometric analysis. The sample material can be extracted as either powder or as 'chunks' (e.g. first year). This will potentially allow for the validation of age estimates on a range of US west coast groundfish species. The lab extracted n=43 canary rockfish cores for radiocarbon validation. These cores were sent to Woods Hole Oceanographic Institution - National Ocean Sciences Accelerator Mass Spectrometry for analysis. Results will be reported as they become available.
 - Two Ageing Lab personnel participated in the 2017 NWFSC Acoustic survey aboard the NOAA research vessel Shimada. They had a combined 23 sea days.
 - The Ageing Lab ended 2017 with six staff (one supervisor and five full time age reading specialists).

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 2015-2017 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 2017 whiting and fixed gear EM EFPs lead to a regulation recommendation by the Council. The Council decided to extend the bottom trawl and non-whiting midwater trawl EM EFPs through 2018 to collect more information on whether or not regulations should be put in place for these fisheries in the future as well.

NORTH PACIFIC

The North Pacific Fishery Management Council (NPFMC) and National Marine

Fisheries Service (NMFS) are in the process of integrating electronic monitoring (EM) tools into the Observer Program. This program was initiated to enable data collection in the small boat (40-57.5 feet length overall) fixed gear fleet; the deployment of observers on these vessels is more challenging primarily due to space limitations. In 2016, NMFS and NPFMC commenced pre-implementation of EM into the longline fisheries. This pre-implementation program continued for a second year in 2017 on longline vessels and expanded onto pot vessels for the first of two planned pre-implementation years. As with the longline pre-implementation program, participation in the pot gear EM program is voluntary.

Under the regulated program, data collected using EM will supplement the data collected by observers that is used to manage fisheries, in particular to estimate at-sea discards. While in other regions, EM systems are mainly used to collect data for compliance programs, the goal of this program is to collect data for the estimation of catch and subsequent in-season management of fisheries. In January 2018, regulations for the EM program were in place (<https://www.federalregister.gov/documents/2017/08/08/2017-16703/fisheries-of-the-exclusive-economic-zone-off-alaska-integrating-electronic-monitoring-into-the-north>) and vessels participating in the EM program are required to comply with the federal regulations governing the program.

The NPFMC Fixed Gear Electronic Monitoring Workgroup (EMWG), an ad hoc committee established in 2014, was directed to work with the fleet to implement a program designed to test the functionality of available electronic monitoring systems. Starting in 2016 and continuing in 2017 while the EM program was operating under the 2017 pre-implementation plan, the EMWG worked to address implementation issues as they were identified, thus allowing continued stakeholder input to the final Program structure. The workgroup is comprised of agency staff, commercial fishing industry representatives and EM service providers. PSMFC Dave Colpo, Senior Program Manager and Courtney Paiva, Electronic Monitoring Project Manager are members of this Workgroup.

PSMFC is assisting the NMFS and the NPFMC in actively developing options for collecting fishery information by electronic monitoring. 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, and produces reports that have been used to inform next steps of the workgroup and develop recommendations on the regulatory process for NMFS and NPFMC. In addition, PSMFC 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.

PSMFC also continues to assist the 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. In addition to providing two research staff who collaborate with NMFS researchers, PSMFC subcontracts researchers at the University of Washington who are developing machine-learning algorithms that are foundational to the automation protocols.

PRE-IMPLEMENTATION DEPLOYMENT OF EM SYSTEMS IN THE NORTH PACIFIC

Data collected during the 2017 pre-implementation deployments were used by the NMFS, PSMFC and the EMWG to evaluate procedures and adjust the methods used in 2018 under the fully operational program. EM systems were deployed on 53 volunteer longline and pot vessels in 2017. Fishing trips were randomly selected to have fishing activities recorded by the EM systems. EM video records were reviewed for 143 trips (12,467 hauls); 115 longline trips and 28 pot trips. These trips targeted halibut (55 trips, 403 sets), sablefish (45 trips, 401 sets) and Pacific cod (45 trips, 11,663 hauls). PSMFC staff worked with our NMFS partners to develop and document data collection protocols, data transfer methods and database structures. Additional details of the pre-implementation methods can be found in Appendix B of the North Pacific Observer Program 2017 Annual Report (<https://www.afsc.noaa.gov/Publications/ProcRpt/PR2018-02.pdf>).

Although in 2017 EM deployments continued to be voluntary and the program was in a pre-implementation phase, the deployment of EM has also been incorporated into the NMFS Observer Program Annual Report; the evaluation of EM deployments is included in chapter 3: <https://www.afsc.noaa.gov/Publications/ProcRpt/PR2018-02.pdf>.

Pre-implementation deployments will continue to be conducted in Alaska in 2018 on vessels fishing pot gear and volunteering into the program, with expected full integration of EM for pot vessels into the Observer Program as a data collection tool in 2019.

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, Oregon 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 the most committed to adopting e-tix to replace all paper tickets. California has proposed voluntarily accepting electronic fish tickets for all ticket types starting July 1, 2018 with mandatory reporting in July 2019.



Fisheries Economics Data Program

Alaska Economic Data Report Collection Project

FISHERIES ECONOMICS DATA PROGRAM (EFIN)

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 2017, EFIN staff worked on the following:

- **2016 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 contacts.
- **EFIN Web Page:** The program continued to collect data and update the EFIN web page. Updates include Gross Domestic Product data, Consumer Price Index, Producer Price Index, State Labor Data and the Employment Cost Index.

- **Tri-State Crab Website Maintenance:** The program also archived the prior year's website and created a new website for the 2017-2018 season that was updated with reports from California, Washington and Oregon.

ALASKA CRAB RATIONALIZATION ECONOMIC DATA REPORT (EDR) COLLECTION PROGRAM 2017

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 the 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.

The 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 2016 EDR was collected in June and July 2017. 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 2016 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, standardized variables and conducted 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 measure 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 2017, the 2016 annual EDRs were mailed to catcher/processors, catcher vessels and processors and 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, standardized variables and conducted 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, the NPFMC asked the Alaska Fisheries Science Center 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. Because 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 2017, the 2016 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, standardize variables and conduct metric analysis to help describe the data. Reports and forms are being built to allow researchers access to the data.



Fish Habitat Program

The **Pacific States Marine Fisheries Commission (PSMFC) Fish Habitat Program** works to protect and restore fresh, estuarine and marine habitats that supports salmon and many other fish species of commercial, recreational and ecosystem importance. In 2017, the Habitat Program was supported through funding from the Wallop-Breaux Sport Fish Restoration program managed by the US Fish and Wildlife Service (USFWS) and from National Oceanic and Atmospheric Administration (NOAA) inter-jurisdictional funds. Additionally, funds from National Marine Fisheries Service's (NMFS) Bycatch Reduction Engineering Department supported work to reduce marine mammal entanglement in crab gear.

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

Activities in 2017 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 is focusing 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 supporting restoration and conservation projects focused on these topics with funding from the National Fish Habitat Partnership.

Fran Recht serves with Stan Allen, PSMFC Senior Program Manager, on the governance committee, as well as, participating on the education, science and data committees. PSMFC's Van Hare, Brett Holycross and Kate Sherman provide research and Geographic Information System (GIS) services and are working on a PMEP data system. PSMFC also provides fiscal services to the group and hosts the group's website.

In 2017, collected regional information on the role of eelgrass as juvenile fish habitat and mapped eelgrass extent and analyzed historical estuarine loss on the west coast. This information will be readily useable to the public on "DataBasin" in the form of a West Coast Estuaries Explorer and be presented in 2018 at the Restore America's Estuaries Conference. PMEP also hired a new executive director, and funded three habitat restoration projects: a native oyster habitat/eelgrass restoration effort in Newport Bay, CA; a juvenile coho habitat access and improvement project on two tributaries of the Elk River in Oregon; and an estuary habitat restoration and connectivity project on the Eel River in California.

SEA LEVEL RISE (SLR) IN ESTUARIES

PSMFC managed a project for the MidCoast Watersheds Council regarding sea level rise impacts on tidal marshes and swamps, important nursery grounds and habitat for salmon, crab, sturgeon and many species. The project, funded by the Oregon Watershed Enhancement Board (OWEB), the USFWS's coastal and sport fish restoration programs, was completed in 2017. It shows the impact of five different sea level rise scenarios on 23 of Oregon's estuaries south of the Columbia. However, as sea levels rise and storm surges increase, our tidal wetlands will be inundated more and more of the time and will, over time, not be able to persist in their

current locations. If there is higher elevation ground that is currently outside the highest of tides, these areas may become our future tidal wetlands. However, with the steep coastal topography in most places, tidal wetland areas may become squeezed. The project maps areas that may become submerged, and areas, at higher elevation, which could become our future marshes or the landward migration zone (LMZ). Maps, tables, GIS data layers, a report, and presentations were provided to watershed councils, land trusts, government planners and scientists and are available to others: <http://www.midcoastwatersheds.org/>.

Results: A 21% loss of tidal wetlands is predicted at the 4.7' sea level rise scenario (approx. year 2100). At 4.7 ft SLR, of the 34,229 acres of potential tidal wetlands, only 11,362 acres (33%) are in the same locations as our current tidal wetlands.

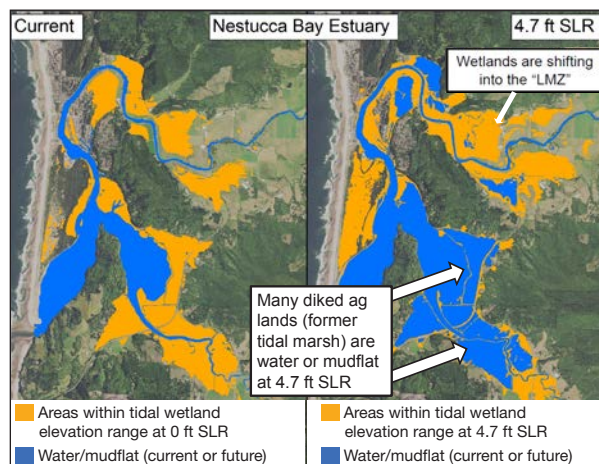
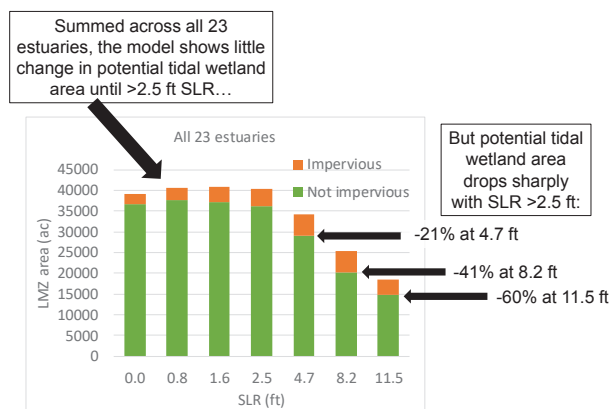


Photo courtesy of MidCoast Watersheds Council

ESTUARY PLANNING

The Habitat Program also participated in and assisted the Oregon Central Coast Estuary Collaborative in planning and priority setting. This effort led by The Nature Conservancy, has 42 federal, state, agency, tribal governments, academic scientist and non-profit participants. The group works to prioritize and coordinate efforts in the hopes of funding and implementing larger scale estuary restoration projects, including those that address state, county and city road and rail passage barriers to migrating fish.

WATERSHED RESTORATION PROJECTS

Small Grant Team: The Habitat Program helped watershed councils, soil and water conservation districts and tribal groups put restoration projects 'on the ground' by managing the OWEB's North Coast small grant team. In 2017, it oversaw the grant review and approval process for four grants involving about \$40,000 for fish passage, large wood placement, erosion control and riparian planting work.

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 the 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; by helping direct the groups' staff. It also reviewed restoration plans and drafted documents and proposals outside of these meetings. Through this work in 2017, over \$598,000 worth of technical assistance and restoration project for new work was secured.

US Forest Service (USFS) Stewardship Group: The Habitat Program also helped 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 2017, 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, now in its 35th year. In 2017, the conference was held in Davis, California. It’s theme was Restoring Watersheds and Rebuilding Salmon Runs. Field Tours included a Stanislaus River restoration site tour, a tour of the Yolo Bypass and the Putah Creek restoration project, a “Fins, Feathers, Farms and Floodplain Fecundity” tour emphasizing the multi-use value of floodplain projects in the lower Sacramento Valley, and a tour of work in the American River involving gravel augmentation and floodplain restoration. Each full-day tour was attended by 20-30 restoration practitioners. The tours allowed those working on restoration projects to learn from each other and encourage new participants in these important efforts.



Floodplain Restoration photo Brian Cluer, courtesy NMFS

MARINE DEBRIS

PSMFC continues to serve on the Marine Debris Alliance, set up initially under the West Coast Governors Alliance on Ocean Health. Fran Recht served as co-chair of the steering committee in 2017 and promoted work towards curtailment of land-based and ocean-based debris. Monthly calls allow members of the team to share information on programs and policies.

WORKSHOP “INNOVATIONS TO REDUCE WHALE ENTANGLEMENT IN POT GEAR”

Working in conjunction with the Marine Debris Alliance, PSMFC received a NOAA Bycatch Reduction Engineering Program grant to deal with whale entanglements. Entanglements have dramatically increased in recent years, with the majority in crab pot gear. A workshop was held in March 2017 in Portland, Oregon that involved fishermen from Washington, Oregon and California, gear specialists, marine mammal specialists, non-governmental organizations and agency representatives to learn about and discuss innovations that could reduce entanglements of marine mammals, particularly humpback whales in Dungeness crab pot gear. The most promising ideas will then be tested working with willing fishermen and others.



Humpback with crab line through mouth and around left pectoral flipper, trailing towards tail. Photo courtesy NMFS

PACIFIC FISHERY MANAGEMENT COUNCIL

Fran Recht 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 Dave Hanson also serves on the Council as a non-voting member and parliamentarian as well as chair of the Council’s Legislative Committee. Habitat issues discussed in 2017 included Groundfish Essential Fish Habitat updates; Columbia, Sacramento, and Klamath water and habitat issues; NOAA’s aquaculture policy; mollusk aquaculture expansion in Humboldt Bay; offshore wind energy proposals; fishery specific habitat objectives; fishery ecosystem planning and ocean acidification.

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 and in particular, 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 41 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 five trainings certifying a total of 16 new CMs who are also trained as at-sea observers. In addition to this, the program also trained four dockside CMs at the request of industry. These individuals work only on shore and monitor deliveries primarily from vessels with Electronic Monitoring Systems. This brings the total of certified CMs for 2017 to 59.

For the 2017 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 either with regards to CM data quality, first receiver problems or any other concerns that may have been encountered. Program staff completed 58 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 45 IFQ first receivers located from Bellingham to Morro Bay and conducted site visits at 30 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 looking 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 2017 season marked the 27th 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 2017 season ran from May 1 through September 30.

Highlights of the 2017 Season Include:

A season total of 196,727 fish were harvested in the sport reward fishery.

Vouchers for 189,517 fish of the 196,727 total catch were submitted for payment with rewards totaling \$1,541,852.

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 1,490 anglers who registered were successful in catching one or more fish in 2017. The top Pikeminnow angler for 2017 caught 10,277 fish and was paid \$83,877 for his efforts.

A total of 269 tagged fish were caught. Anglers were issued a special tagged fish voucher for all tagged fish brought to the registration station. The tag voucher was then sent in with the tag for verification. A payment of \$500 was then made for each tagged fish. Vouchers for 266 (of the 269 total tagged fish caught) were submitted for payment with rewards totaling \$133,000.

A total of 134 tag-loss fish were paid a bonus reward of \$100. The total season tag-loss bonus totaled \$13,400.

System-wide exploitation of Northern Pikeminnow during the Sport Reward fishery was 17.4 percent (95 percent confidence interval; 10.8–24.0 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 2018 predation levels will be 32 percent (range: 17–49 percent) lower than pre-program levels.

PSMFC staff continued the maintenance and upgrading 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 promoted the program and assisted in obtaining and securing 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 2017 season.



photo courtesy of PSMFC

North Pacific Observer Program

NORTH PACIFIC OBSERVER PROGRAM OPERATIONAL AND ANALYTIC SUPPORT

The National Marine Fisheries Service (NMFS) Alaska Fisheries Science Center's Fisheries Monitoring and Analysis Division oversees the **North Pacific Observer Program (Observer Program)** which monitors groundfish fishing activities in the US Exclusive Economic Zone off the coast of Alaska. The role of the observers and the information they collect in the course of their official duties is central to the management of sustainable groundfish fisheries in the North Pacific. Fishery observers collect data that are used for quota monitoring, stock assessments, ecosystem investigations, documentation of incidental injury and mortality of marine mammals and various research investigations.

Pacific States Marine Fisheries Commission (PSMFC) works with Observer Program staff to support observer data collection activities in the Alaskan commercial groundfish fisheries in order to provide data of the highest quality possible given the logistical constraints of sampling in an industrial setting. This project supports 13 positions that augment NMFS Observer Program training, debriefing and operational staffing. In addition, this project funds a full-time statistician and database application developer. Both the statistician and application developer work primarily on Alaska fisheries projects but are also available to other projects, such as electronic monitoring, research or administrative projects.

In 2017, PSMFC helped Observer Program trainers as they prepared observers for deployment by assisting with training classes, briefing sessions and safety-emphasized water exercises. Eight three-week training classes for new observers were conducted in addition to 20 annual briefings 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; just over half of the 709 debriefings of observers returning

from their at-sea deployments were conducted by PSMFC staff. Throughout, PSMFC supported the Observer Program staff by assisting 411 observers with safety and sampling gear issue and check-in, maintenance of the safety and sampling gear and procurement of replacement safety and sampling gear.

PSMFC provided IT support to the Observer Program by maintaining and updating existing database and web applications and developing new database and web applications as requested. PSMFC analytic support included developing and evaluating sampling methods, analyzing sampling results, providing analytic and statistical consulting and providing outreach to observers.

In addition, PSMFC is currently working with the NMFS Alaska Regional Office and the Observer Program to evaluate the procedures used to estimate total catch and discard for Alaskan groundfish fisheries and devise new estimation routines that incorporate statistically valid variance estimates into the estimation process.



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 supporting the management of the West Coast groundfish fisheries during 2017 by working collaboratively with National Oceanic Atmospheric Administration (NOAA) Fisheries. 2017 was the sixteenth 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 2017, Pacific States Marine Fisheries Commission (PSMFC) worked with NOAA Fisheries to administer five 3-week trainings to prepare observers to collect data in the field. A total of 28 new observers were trained in 2017, 14 of whom were for the catch share fisheries not including the at-sea hake fisheries and 14 for the Non-Catch Share fisheries (NCS). In addition, 60 experienced observers were briefed for redeployment in 2017, 35 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 54 observers for deployment. Nearly every catch share observer is also trained to serve as a catch monitor by PSMFC's Catch Monitor Program (CMP) 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 CMP 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 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 2017, several observers tested the software developed to allow electronic tablets to be used on deck by observers to collect data on fishing activities and catch.

In 2017, WCGOP observers spent 5,914 days at sea: 3,524 in the catch share fisheries (excluding hake and Exempted Fishing Permit (EFP) trips), 58 days on at-sea hake vessels, 264 in the shoreside hake fishery, 220 on various EFP trips, 499 on Limited entry trips, and 1,671 on Open-Access vessels. For the ASHOP component of the program in 2017, there were 1,902 sea days (two observers per vessel) on catcher processors and Motherships. In 2017, 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 2017 the PacFIN office updated the central database with regular datafeeds from nine data sources and responded to various requests for information. PacFIN reports were generated daily and uploaded to the Pacific States Marine Fisheries Commission (PSMFC) and PacFIN website.

Following are highlights of PacFIN central office activities in 2017:

PACFIN DATABASE MIGRATION

The PacFIN database was migrated to a new server during this period. After extensive testing of all software and file systems in a test environment, the production PacFIN database began operation on the new server in January.

INTERNAL SYSTEM UPGRADES

Internal system upgrades were performed. These activities included database performance improvements, new production automation and retrieval scripts, new documentation and metadata. In addition, an intensive redevelopment of the loading software to accommodate California Department of Fish and Wildlife (CDFW) source fish ticket data from a new agency database environment was completed.

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 Biological Data Systems (BDS) and Groundfish Trawl Logbook data systems in the new production environment continued during this period, including the coordination of enhanced data structure and delivery systems with the source agencies,

creation of new support tables in the PacFIN database and imports of electronic logbook data from the CDFW. The BDS redevelopment in PacFIN is in the final stage of testing, with a rollout expected in 2018.

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 DEVELOPMENT

The APEX reporting system on the PacFIN web site has continued its expansion of both public and password protected confidential reports designed for various applications, including federal Office of Law Enforcement vessel and port summary landings, Regional Fishery Management Organizations active vessel and permit monitoring reports, Highly Migratory Species (HMS) landings, permits and logbook compliance reports and Coastal Pelagic Species landings data.

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.

GROUNDFISH MANAGEMENT TEAM (GMT) SCORECARDS IN ANSWERS

Pacific Fishery Management Council Fisheries Management Plan 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 and the West Coast Groundfish Observer Program.

IN-SEASON REPORTING REDEVELOPMENT

The Quota Species Monitoring sub-system implemented new design features beginning

in January, including the incorporation of electronic fish ticket (eticket) data to improve on the current methodology of weekly estimates from port samplers as a component of the Best Estimate Report (BER) in-season management tool. Sourcing electronic dealer and agency fish ticket submissions has greatly reduced the workload of port samplers, formerly responsible for deliveries of weekly reported catch estimates. The electronic submissions are also expected to improve accuracy of the BER.

PACFIN WORKGROUPS

PacFIN workgroups active during this period included: HMS, working in support of Apex report development; GMT, working to plan and implement in-season reporting protocols; and PacFIN Data Management, coordinating data collection, delivery and validation operations between the PacFIN central office and all data sources.

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-individual fishing quota landings of commercial groundfish into eTIX 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

PacFIN staff meetings were conducted weekly. Work group meetings with PacFIN partners were conducted by teleconference as needed. The Annual PacFIN meeting was held on October 23 and 24, 2017 in Portland, Oregon.



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 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. Staff conducted six training sessions during the winter of 2017 to promote adoption of the new P4 tagging software which was released in 2016. Participant feedback led to significant enhancements of the software and five additional releases were made throughout the year to add functionality and fix issues. The use of P4 increased after the training sessions, and by the end of the year the majority of tagging data was being submitted from P4. PTAGIS plans to retire the legacy tagging software (P3) at the end of 2018.

Researchers from 36 organizations contributed just over 2 million fish marked with a PIT tag to the PTAGIS database in 2017 with a cumulative total of over 45 million records since 1987. The 309 interrogation sites contributing data to PTAGIS detected 821 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; 12.1 million detections were reported to PTAGIS in 2017 totaling 214 million detections since 1987. To give additional scope to the overall data management efforts in 2017: PTAGIS processed 422 thousand data files with 134 million database rows updated or inserted; 486 users executed 342 thousand queries resulting in 7.1 billion rows of data returned.

PTAGIS Operations and Maintenance (O&M) staff, based out of Kennewick, Washington, 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 214 million observation events available in the database system. PTAGIS also maintains the Separation by Code systems at eight 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.

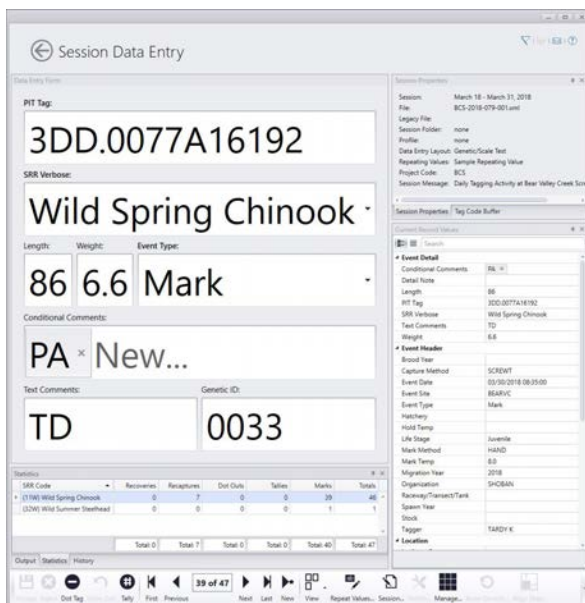
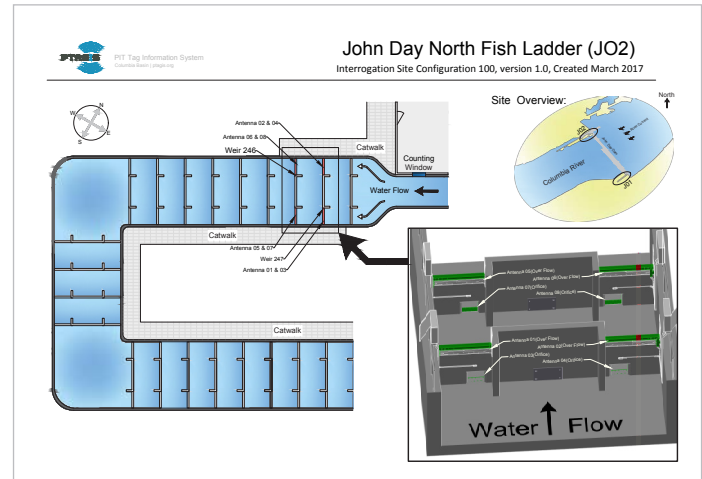


Figure 1. Data entry in PTAGIS P4 tagging software

PTAGIS O&M staff participate in the design, planning and installation of new interrogation sites and detection technology. The interrogation sites in the ladders at John Day Dam were operated in passive recapture mode during 2017 while the US Army Corps of Engineers completed construction. Staff once again participated in the Lower Granite Spillway Detection Project, which moved beyond the design phase into building and testing prototype antennas. The schedule for installation of this system is winter of 2018 - 2019.

PTAGIS O&M staff also completed testing for the BPA tag procurement contract. The ½ scale BCC antenna and automated read range equipment completed last year reduced the testing time significantly. During the previous tag testing in 2011, 18 tag types were tested over six and a half months, totaling 1,150 hours of test time. During the testing this year, 27 tag types were tested over three and a half months, totaling 778 hours of test time.

Four adult lamprey tagged with full-duplex tags and released below Prosser Dam passed into an area behind the picketed leads near the counting window; because of their proximity to the counting window antennas the tags were being continuously read, blocking detection of all other tags. The fish were removed with the cooperation of Bureau of Reclamation and the Yakama Nation, but the possibility of this occurring remains high if adult lamprey continue to be tagged with full-duplex tags. In response, PTAGIS considered switching all capable transceivers into dual-detection mode, which allows both full-duplex and half-duplex tags to be detected by the same equipment. Lab tests indicated that this should not reduce detection efficiencies, and a field test was conducted during the fall run at The Dalles Dam to confirm the lab results. The option to enable dual-detection mode at most adult ladder sites may be useful to lamprey and salmonid researchers alike, lamprey could be tagged with half-duplex tags and still get travel information through ladders, without the possibility of impacting adult salmonid detections.



South fish ladder at John Day (JO1) instrumented with PIT tag antennas

In 2017, 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 2017. 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 coast-wide marine recreational fisheries data system.
- Coordinate collection, management, and dissemination of Pacific Coast marine recreational fishery data.
- Provide the data in a central location on a timely basis in the format needed to support state and federal work on Pacific marine recreational fisheries.
- 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 coast-wide in the three states. Of these sites, approximately 57 percent are in California, 10 percent in Oregon and 33 percent in Washington.

2017 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. Almost 101,000 angler trips were sampled in 2017 from four distinct fishing modes— (private and rental boats, party and charter boats, man-made structures and beaches and banks) and three water areas (ocean offshore, nearshore and inland marine/estuarine). Of the catch that was retained, CRFS staff observed and identified over 192,000 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 35-40 percent of all ocean boat angler trips were sampled in both Oregon and Washington in 2017, generally from March through October.

Sampling programs in all three states conducted almost 225,000 angler trip interviews with over 700,000 individual specimens examined. Nearly 160,000 biological samples were taken coastwide. Estimates of total catch reveal over 8 million individual fish and invertebrates of 221 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 2017, 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 were added to the RecFIN APEX reporting system and a number of new data sources were integrated into the existing database structure.

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 2017. 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 16,000 laminated rockfish ID sheets and nearly 5,250 rockfish descending devices were made available to anglers throughout the Pacific coast and Alaska.



Treefish; photo, courtesy Ralph Pace Photography



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. The 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, the 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. The 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 US Fish and Wildlife Service and the Bonneville Power Administration (BPA). Over 60 million coded wire tagged fish are now released coast-wide every year, mostly from publicly funded fish hatcheries, with approximately 1,200 different tag codes.

DATABASE SOFTWARE CHANGE

2017 was the second 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 put into adding Global Positioning System (GPS) coordinates (latitudes and longitudes) for land-based release and recovery locations. GPS coordinates for the US locations were completed. Canadian locations will be completed in the future. This provides the ability to map the data.

MISSING RECOVERY DATA

Missing freshwater tag recovery data for certain areas have been identified. The 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 is an ongoing project to enhance the mapping of CWT release locations and recovery locations.

Photo by George Nandor, PSMFC

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 2017 Mark Meeting was held April 25 and 26, 2017, in Vancouver, British Columbia and was hosted by Fisheries and Oceans Canada. The meeting minutes and presentations are available at: <http://www.rmpec.org/rcmt-minutes.html>. Agenda items included updates of the RMPC activities, status of CWT data and updated RMPC publications. There were also updates on PSC Data Sharing Committee and the Data Standards Work Group activities and the PSC Selective Fishery Evaluation Committee. Northwest Marine Technology provided updates on some of their products, including a quad counter, a sub-sampling detector gate and other items.

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

- Update on mass marking, selective fisheries and agency tagging levels for 2017.
- Discussion on the use of full and half-length tags.

- Discussion on collecting length data from CWT adult fish.
- Discussion of the PST technical report regarding the feasibility of Radio Frequency Identification tags for replacing CWTs.
- Agency Updates: See meeting minutes on-line.

REGIONAL COORDINATION

RMPC staff participated in PSC committees and regional science and management teams to assist with coordinating CWT activities and providing CWT data. The RMPC continues working closely with IDFG in providing PSMFC staff to assist with their hatchery data under a contract with the Lower Snake River Compensation Plan. The RMPC also works with the Oregon and Washington Departments of Fish and Wildlife (ODFW 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 and 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.

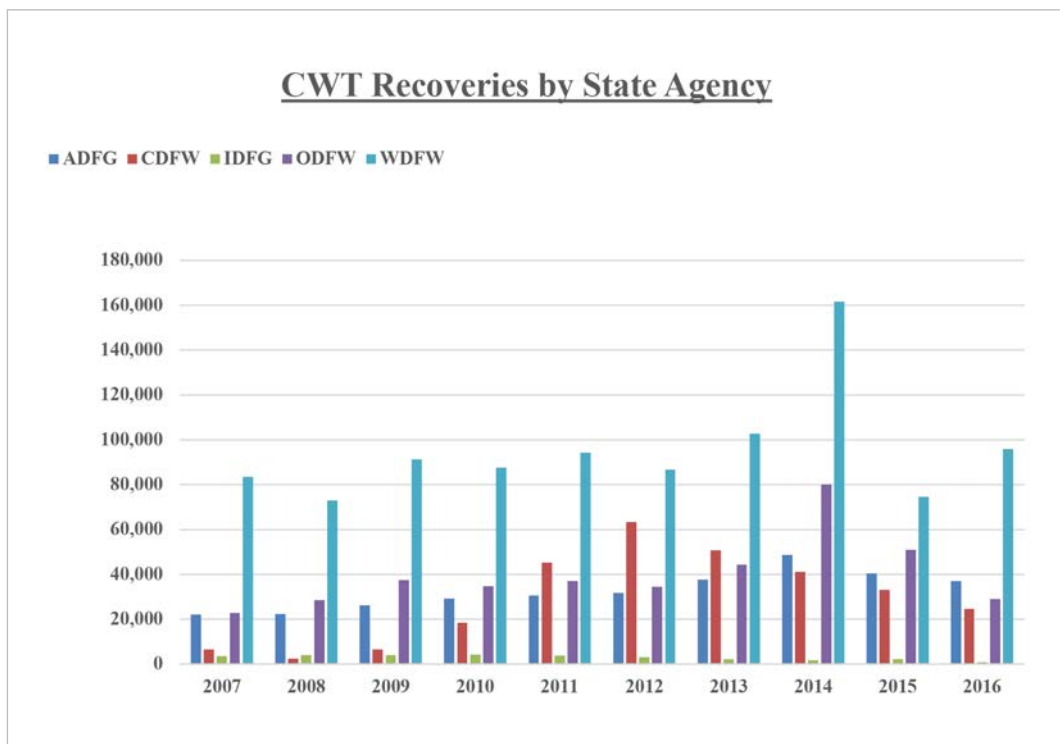
Number of new data rows in RMIS tables added during calendar year 2017:

Releases:	2,335 rows
Recoveries:	224,412 rows
Catch/Sample:	9,886 rows
Locations:	1,182 rows

Use of the RMIS database remains strong in the fisheries community. It is of interest that 642 different people logged-in to RMIS in 2017. Many of those people logged-in multiple times, with 448 people logging-in more than once and 146 people logging-in ten or more times over the year. One power user has logged-in 948 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 generate customized reports, etc.





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, 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 2017 StreamNet continued to help lead the Coordinated Assessments (CA) project. CA focuses on the key indicators and metrics for salmon and steelhead populations identified as priorities for reporting progress on implementation of the Federal Columbia River Power System Biological Opinion (BiOp). In 2017 BPA continued their request that StreamNet prioritize data collection for certain populations they determined were priorities, and StreamNet assisted in this effort.

States and Tribes continued to provide available data for these and other indicators to StreamNet in 2017, with an emphasis on the BPA priority populations. The following table shows the data flow for all populations, including Endangered Species Act - listed populations as identified by the Technical Recovery Teams (TRT); Staff at Pacific States Marine Fisheries Commission and subcontracting agencies also continued implementation of the BPA secure data repository initiative, and StreamNet maintained

						
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		

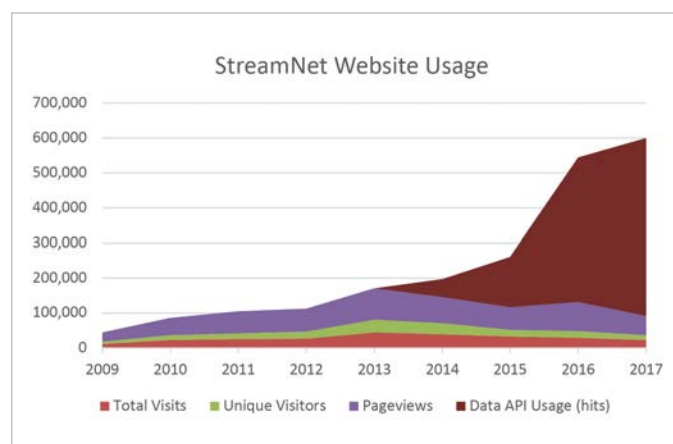
PUBLISHABLE COORDINATED ASSESSMENTS DECEMBER 29, 2017

Published Coordinated Assessments Records As of December 29, 2017					
High Level Indicator	Agency	Populations	Records Validated	Records w/HLIs	Records w/o HLIs
NOSA Natural Origin Spawner Abundance	ODFW	72	2,189	2,141	48
	WDFW	67	2,053	1,003	1,050
	IDFG	24	1,195	1,120	75
	CCT	1	12	12	
	All Agencies	158	5,449	4,276	1,173
R/S Recruits per Spawner	ODFW	42	1,799	1,728	71
	IDFG	18	1,001	890	111
	WDFW	27	293	292	1
	CCT	1	2	2	
	All Agencies	87	3,095	2,912	183
SAR Smolt to Adult Return Rate	PSMFC	26	663	663	
	ODFW	5	80	73	7
	WDFW	3	24	24	
	CCT	1	7	7	
	All Agencies	35	774	767	7
Juvenile Outmigrants	IDFG	21	472	462	10
	WDFW	25	319	307	12
	ODFW	5	100	92	8
	CCT	1	9	9	
	All Agencies	52	900	870	30
Presmolt Abundance	ODFW	4	81	65	16
	CCT	1	31	31	
	WDFW	2	20	20	
	All Agencies	7	132	116	16
All HLIs	All Agencies		10,350	8,941	1,409

"All Agencies" population numbers do not sum because of shared populations between agencies. The total number of populations with HLI data is currently 188.

the Data Store as a Repository for any BPA projects without available secure repositories. Staff provided leadership and support for a third workshop on hand held technology for fish data projects, in collaboration with the Western Forestry Association, the Pacific Northwest Aquatic Monitoring Partnership and Sitka Technologies. StreamNet partner staff participated in or presented findings at this workshop.

A wide variety of data types were disseminated through the StreamNet website in 2017 (www.streamnet.org). 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 that data.



PACIFIC STATES MARINE FISHERIES COMMISSION

**FINANCIAL STATEMENTS AND
SUPPLEMENTARY INFORMATION**

YEAR ENDED JUNE 30, 2017

**PACIFIC STATES MARINE FISHERIES COMMISSION
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**PACIFIC STATES MARINE FISHERIES COMMISSION
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JUNE 30, 2017**

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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 governmental fund, and the aggregate remaining fund of Pacific States Marine Fisheries Commission, as of and for the year ended June 30, 2017, 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, 2017, 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 17, 2017, 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 result 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 17, 2017

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2017**

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, 2017. 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, 2017**

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:

	2017	2016
ASSETS		
Other Assets	\$ 17,798,960	\$ 20,957,086
Capital Assets	2,044,768	1,054,189
Total Assets	\$ 19,843,728	\$ 22,011,275
LIABILITIES		
Current Liabilities	\$ 6,594,481	\$ 9,147,279
Long-Term Liabilities	2,188,985	2,885,727
Total Liabilities	8,783,466	12,033,006
NET POSITION		
Invested in Capital Assets, Net of Related Debt	2,028,803	1,022,567
Unrestricted	9,031,459	8,955,702
Total Net Position	11,060,262	9,978,269
Total Liabilities and Net Position	\$ 19,843,728	\$ 22,011,275

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, 2017**

Commission-Wide Condensed Financial Information (Continued)

The 2017 decrease in other assets and current liabilities was primarily due to the more timely receipt and payment of subrecipient invoices. Accounts payable was lower at June 30, 2017 due to fewer outstanding subrecipient invoices and cash on hand was lower due to the payment of subrecipient invoices submitted prior to the fiscal year-end. A secondary reason for the reduction in current liabilities was a decrease in payroll liabilities. A fiscal year 2016 surplus in the fringe benefit pool was utilized to offset a significant increase in fiscal year 2017 medical premiums requiring supplemental funding to the Health Benefit Trust.

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>2017</u>	<u>2016</u>
REVENUE		
Grants and Contracts	\$ 57,529,274	\$ 57,227,789
General Revenue	111,230	209,671
Total Revenue	<u>57,640,504</u>	<u>57,437,460</u>
EXPENSES		
Fisheries Related Programs	56,557,366	57,612,678
Other Expenses	1,145	31,995
Total Expenses	<u>56,558,511</u>	<u>57,644,673</u>
CHANGE IN NET POSITION	1,081,993	(207,213)
Net Position - Beginning of Year	<u>9,978,269</u>	<u>10,185,482</u>
NET POSITION - END OF YEAR	<u>\$ 11,060,262</u>	<u>\$ 9,978,269</u>

The net position increased by \$1,081,993 during the current fiscal year in comparison with a decrease in the prior year of \$207,213.

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

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 receivable consists of payments due to the Commission annually by December 1.

(7)

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2017**

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 \$9,031,459 as of June 30, 2017. 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, 2017, of \$2,306,128 for future payouts of vacation and sick leave liabilities to employees upon termination or retirement. During the fiscal year ended June 30, 2017, the cash balance increased by \$84,189 primarily as the result of an increase to accruals for vacation leave.

Capital Assets and Long-Term Debt

Capital Assets

The Commission's investment in capital assets, net of accumulated depreciation, amounted to \$2,044,768 and includes a broad range of assets (see the table below). Depreciation charges for this fiscal year totaled \$518,220.

	2017	2016
Computers	\$ 613,608	\$ 272,069
Furniture and Office Equipment	17,246	24,234
Leasehold Improvements	54,948	76,207
Field and Scientific Equipment	1,045,960	477,738
Truck/Boat	220,100	203,941
Construction in Process	92,906	-
Total	<u>\$ 2,044,768</u>	<u>\$ 1,054,189</u>

The additions to capital assets totaled \$1,508,799 for the year ended June 30, 2017. 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 2017.

**PACIFIC STATES MARINE FISHERIES COMMISSION
MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED JUNE 30, 2017**

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 changes to future funding levels. The Commission's prudent use of resources continues to position it well in providing services to its funders and member states of Alaska, California, Idaho, Oregon, and Washington.

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, 2017

	Governmental Activities
ASSETS	
CURRENT ASSETS	
Cash and Cash Equivalents	\$ 7,556,070
Receivables:	
Grants and Contracts	6,408,902
Other	3,492,891
Lease Receivable, Current Portion	66,000
Prepaid Expenses	168,165
Total Current Assets	17,692,028
NONCURRENT ASSETS	
Capital Assets, Net of Accumulated Depreciation	2,044,768
Lease Receivable, Less Current Portion	106,932
Total Noncurrent Assets	2,151,700
 Total Assets	 19,843,728
LIABILITIES AND NET POSITION	
CURRENT LIABILITIES	
Accounts Payable	4,808,359
Payroll Liabilities	764,849
Compensated Absences, Current Portion	228,349
Capital Lease Obligation, Current Portion	11,691
Long-Term Debt, Current Portion	66,000
Unearned Rent	321,006
Unearned Revenues	394,227
Total Current Liabilities	6,594,481
LONG-TERM LIABILITIES (Due in More than One Year)	2,188,985
Total Liabilities	8,783,466
NET POSITION	
Investment in Capital Assets, Net of Related Debt	2,028,803
Unrestricted	9,031,459
Total Net Position	\$ 11,060,262

See accompanying Notes to Financial Statements.

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**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF ACTIVITIES AND CHANGE IN NET POSITION
YEAR ENDED JUNE 30, 2017**

	Governmental Activities
PROGRAM REVENUES	
Grants and Contracts	\$ 57,529,274
PROGRAM EXPENSES	
Fisheries Management:	
Materials and Services	29,293,221
Personal Services	25,071,022
Sport Rewards	1,622,753
Capital Outlay Not Capitalized	52,150
Interest Expense	1,145
Depreciation	518,220
Total Program Expenses	56,558,511
NET PROGRAM REVENUES	970,763
GENERAL REVENUES	
State Dues	106,000
Interest and Other Income	5,230
Total General Revenues	111,230
CHANGE IN NET POSITION	1,081,993
Net Position - Beginning of Year	9,978,269
NET POSITION - END OF YEAR	\$ 11,060,262

See accompanying Notes to Financial Statements.

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PACIFIC STATES MARINE FISHERIES COMMISSION
BALANCE SHEET – GOVERNMENTAL FUNDS
JUNE 30, 2017

ASSETS	<u>General</u>	<u>Grants and Contracts</u>	<u>Total</u>
Cash and Cash Equivalents	\$ 5,249,942	\$ -	\$ 5,249,942
Due from Other Funds	6,408,902	394,227	6,803,129
Receivables:			
Grants and Contracts	-	6,408,902	6,408,902
Lease	172,932	-	172,932
Other	3,492,891	-	3,492,891
Prepaid Expenses	<u>168,165</u>	<u>-</u>	<u>168,165</u>
 Total Assets	 <u>\$ 15,492,832</u>	 <u>\$ 6,803,129</u>	 <u>\$ 22,295,961</u>
LIABILITIES, DEFERRED INFLOWS, AND FUND BALANCES			
Due to Other Funds	\$ 394,227	\$ 6,408,902	\$ 6,803,129
Accounts Payable	4,808,359	-	4,808,359
Payroll Liabilities	764,849	-	764,849
Unearned Rent	321,006	-	321,006
Unearned Revenues	-	394,227	394,227
Total Liabilities	<u>6,288,441</u>	<u>6,803,129</u>	<u>13,091,570</u>
 Deferred Items - Unavailable Revenue from Leases	 <u>172,932</u>	 <u>-</u>	 <u>172,932</u>
Nonspendable Fund Balances	168,165	-	168,165
Fund Balances - Unassigned	<u>8,863,294</u>	<u>-</u>	<u>8,863,294</u>
Total Fund Balances	<u>9,031,459</u>	<u>-</u>	<u>9,031,459</u>
 Total Liabilities and Fund Balances	 <u>\$ 15,492,832</u>	 <u>\$ 6,803,129</u>	 <u>\$ 22,295,961</u>

See accompanying Notes to Financial Statements.

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**PACIFIC STATES MARINE FISHERIES COMMISSION
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET
TO THE STATEMENT OF NET POSITION
JUNE 30, 2017**

Fund Balances - Governmental Funds	\$ 9,031,459
<p>Amounts reported for governmental activities in the statement of net position are different because:</p>	
<p>Capital assets used in governmental activities are not financial resources and, therefore, are not reported in governmental funds:</p>	
Capital Assets	5,820,831
Less: Accumulated Depreciation	<u>(3,776,063)</u>
Total	2,044,768
Deferred item from lease revenue not reported on the statement of net position.	172,932
Long-term debt obligations are not due and payable in the current period and, therefore, are not reported in the governmental funds	<u>(188,897)</u>
Net Position	<u><u>\$ 11,060,262</u></u>

See accompanying Notes to Financial Statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGE IN
FUND BALANCES – GOVERNMENTAL FUNDS
YEAR ENDED JUNE 30, 2017**

	General	Grants and Contracts	Total
REVENUES			
Grants and Contracts	\$ -	\$ 57,529,274	\$ 57,529,274
State Dues	106,000	-	106,000
Lease Income	1,029,310	-	1,029,310
Interest and Other Income	5,230	-	5,230
Total Revenues	1,140,540	57,529,274	58,669,814
EXPENDITURES			
Current:			
Personal Services	2,741,756	22,329,266	25,071,022
Materials and Services	1,151,639	28,141,582	29,293,221
Sport Rewards	-	1,622,753	1,622,753
Capital Outlay	100,052	1,460,897	1,560,949
Debt Service:			
Principal	1,029,310	15,657	1,044,967
Interest	-	1,145	1,145
Total Expenditures	5,022,757	53,571,300	58,594,057
EXCESS (DEFICIENCY) OF REVENUES OVER EXPENDITURES	(3,882,217)	3,957,974	75,757
OTHER FINANCING SOURCES (USES)			
Indirect Cost/Administration Transfers In	3,957,974	-	3,957,974
Indirect Cost/Administration Transfers Out	-	(3,957,974)	(3,957,974)
Total Other Financing Sources (Uses)	3,957,974	(3,957,974)	-
EXCESS OF REVENUES AND OTHER SOURCES (USES) OVER EXPENDITURES AND OTHER SOURCES (USES)	75,757	-	75,757
Fund Balance - Beginning of Year	8,955,702	-	8,955,702
FUND BALANCE - END OF YEAR	\$ 9,031,459	\$ -	\$ 9,031,459

See accompanying Notes to Financial Statements.

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**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, 2017**

Net Change in Fund Balances - Total Governmental Funds \$ 75,757

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	1,560,949
Less: Capital Outlay Not Capitalized	(52,150)
Less: Current Year Depreciation	<u>(518,220)</u>
Total	<u>990,579</u>

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	(1,029,310)
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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	<u>11,100</u>
Total	<u>11,100</u>

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	<u>1,033,867</u>
Total	<u>1,033,867</u>

Change in Net Position	<u><u>\$ 1,081,993</u></u>
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See accompanying Notes to Financial Statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF NET POSITION – PROPRIETARY FUNDS
JUNE 30, 2017**

	Governmental Activities- Internal Service Fund Type <hr/> Compensated Absences
ASSETS	
Cash and Cash Equivalents	<u>\$ 2,306,128</u>
LIABILITIES	
Accrued Compensated Absences	<u>2,306,128</u>
NET POSITION	
Unrestricted	<u><u>\$ -</u></u>

See accompanying Notes to Financial Statements.

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**PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF REVENUES, EXPENSES, AND CHANGE IN NET POSITION –
PROPRIETARY FUNDS
YEAR ENDED JUNE 30, 2017**

	Governmental Activities- Internal Service Fund Type <u>Compensated Absences</u>
OPERATING REVENUES	
Charges for Services	\$ 317,288
OPERATING EXPENSES	
Compensated Absences Expense	<u>317,288</u>
OPERATING INCOME	-
Net Position - Beginning of Year	<u>-</u>
NET POSITION - END OF YEAR	<u><u>\$ -</u></u>

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, 2017**

	Governmental Activities- Internal Service Fund Type <u>Compensated Absences</u>
CASH FLOWS FROM OPERATING ACTIVITIES	
Charges for Services	\$ 317,288
Cash Paid to Employees for Services	<u>(233,099)</u>
Net Cash Provided by Operating Activities	<u>84,189</u>
NET CHANGE IN CASH AND CASH EQUIVALENTS	84,189
Cash and Cash Equivalents - Beginning of Year	<u>2,221,939</u>
CASH AND CASH EQUIVALENTS - END OF YEAR	<u><u>\$ 2,306,128</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>84,189</u>
Net Cash Provided by Operating Activities	<u><u>\$ 84,189</u></u>

See accompanying Notes to Financial Statements.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

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, 2017**

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, 2017**

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, 2017**

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 – 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, 2017

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 \$8,537,928 in cash that was exposed to uninsured deposit risk at June 30, 2017. 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.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

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, 2017, there were 382 participants in the plan, and the Commission contributed \$70,819 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.

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, 2017:

Deposits with Financial Institutions:	
Demand Deposits	\$ 1,503,627
Money Market	10,268
Savings	<u>6,042,175</u>
Total Cash and Cash Equivalents	<u><u>\$ 7,556,070</u></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.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

NOTE 2 CASH AND INVESTMENTS (CONTINUED)

The Commission’s bank balance was exposed to custodial credit risk as follows at June 30, 2017:

Uninsured and Uncollateralized	\$ 8,537,928
Total	\$ 8,537,928

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 receivable consists of payments due to the Commission annually by December 1. Scheduled payments are as follows:

Year Ending June 30,	Amount
2018	\$ 66,000
2019	106,932
Total	\$ 172,932

PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017

NOTE 4 CAPITAL ASSETS

Capital asset activity was as follows at June 30, 2017:

	Balance June 30, 2016	Additions	Deletions	Balance June 30, 2017
Capital Assets:				
Computers	\$ 1,197,723	\$ 515,151	\$ 112,603	\$ 1,600,271
Furniture and Office Equipment	164,388	-	-	164,388
Leasehold Improvements	410,164	-	-	410,164
Field and Scientific Equipment	1,961,413	792,610	45,278	2,708,745
Truck/Boat	736,225	108,132	-	844,357
Construction in Process	-	92,906	-	92,906
Total Capital Assets	<u>4,469,913</u>	<u>1,508,799</u>	<u>157,881</u>	<u>5,820,831</u>
Accumulated Depreciation:				
Computers	925,654	173,612	112,603	986,663
Furniture and Office Equipment	140,154	6,988	-	147,142
Leasehold Improvements	333,957	21,259	-	355,216
Field and Scientific Equipment	1,483,675	224,388	45,278	1,662,785
Truck/Boat	532,284	91,973	-	624,257
Total Accumulated Depreciation	<u>3,415,724</u>	<u>518,220</u>	<u>157,881</u>	<u>3,776,063</u>
Total Assets	<u>\$ 1,054,189</u>	<u>\$ 990,579</u>	<u>\$ -</u>	<u>\$ 2,044,768</u>

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

The following is a schedule of the compensated absences as of June 30, 2017:

Balance - Beginning	\$ 2,221,939
Incurred	317,288
Retired	<u>(233,099)</u>
Balance - Ending	<u>\$ 2,306,128</u>
Due Within One Year	<u>\$ 228,349</u>
Long-Term Portion	<u>\$ 2,077,779</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

NOTE 5 LONG-TERM LIABILITIES (CONTINUED)

Capital Lease Obligation

The following is a schedule of the capital lease obligations as of June 30, 2017:

Balance - Beginning	\$ 27,065
Additions	-
Payments	(11,100)
Balance - Ending	<u>\$ 15,965</u>

The total interest incurred for the year ended June 30, 2017 was \$1,145.

Minimum future lease payments are as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2018	\$ 12,245
2019	4,323
Total Minimum Lease Payments	16,568
Less: Amounts Representing Interest	(603)
Present Value of Minimum Lease Payments	15,965
Less: Current Portion	(11,691)
Total Long-Term Portion	<u>\$ 4,274</u>

Long-Term Debt

The following is a schedule of the long-term debt as of June 30, 2017:

Balance - Beginning	\$ 1,237,817
Additions	-
Reductions	(1,064,885)
Balance - Ending	<u>\$ 172,932</u>

Long-term debt consisted of the following at June 30, 2017:

<u>Description</u>	<u>Security</u>	<u>Amount</u>
NW Marine, down payment of \$581,950 at lease inception and scheduled payments due on December 30th of each year. Remaining scheduled payments are: \$66,000 for fiscal year 2018 and \$106,932 for 2019	AutoFish System	<u>\$ 172,932</u>
Total Debt		172,932
Less: Current Portion		(66,000)
Total Long-Term Debt		<u>\$ 106,932</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

NOTE 5 LONG-TERM LIABILITIES (CONTINUED)

Long-Term Debt (Continued)

Scheduled principal payments of the long-term debt are as follows:

<u>Year Ending June 30,</u>	<u>Amount</u>
2018	\$ 66,000
2019	106,932
Total	<u>\$ 172,932</u>

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, 2017, the Commission contributed \$1,876,801 to the Plan, net of forfeitures. There were 360 participants in the Plan at June 30, 2017.

NOTE 7 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.

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO FINANCIAL STATEMENTS
JUNE 30, 2017**

NOTE 8 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 9 OPERATING LEASES

The Commission, as lessee, leases office space, vehicles, and equipment under various operating leases. The total amount expended under such leases was \$627,538 for the year ended June 30, 2017.

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>
2018	\$ 597,331
2019	484,894
2020	458,842
2021	456,477
2022	440,186
Thereafter	1,074,125
Total	<u>\$ 3,511,855</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, 2017, and the related notes to the financial statements, which collectively comprise the Commission's basic financial statements, and have issued our report thereon dated October 17, 2017.

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.

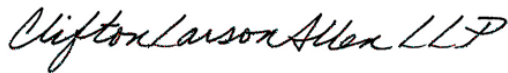
Board of Commissioners
Pacific States Marine Fisheries Commission

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 result 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 17, 2017



CliftonLarsonAllen LLP
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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 compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of Pacific States Marine Fisheries Commission's major federal programs for the year ended June 30, 2017. Pacific States Marine Fisheries 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 Pacific States Marine Fisheries 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 Pacific States Marine Fisheries 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 Pacific States Marine Fisheries Commission's compliance.

Board of Commissioners
Pacific States Marine Fisheries Commission

Opinion on Each Major Federal Program

In our opinion, Pacific States Marine Fisheries 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, 2017.

Report on Internal Control Over Compliance

Management of Pacific States Marine Fisheries 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 Pacific States Marine Fisheries 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 Pacific States Marine Fisheries 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 17, 2017

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
YEAR ENDED JUNE 30, 2017**

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	National Fish and Wildlife Foundation	0806.16.052336	\$ 90,697	\$ -
National Fish and Wildlife Foundation	10.683	National Fish and Wildlife Foundation	90113040245	20,245	966
	10.683 Total			<u>110,942</u>	<u>966</u>
Total U.S. Department of Agriculture				<u>110,942</u>	<u>966</u>
U.S. Department of Commerce (NOAA)					
Interjurisdictional Fisheries Act of 1986	11.407	Direct		424,896	325,988
	11.407 Total			<u>424,896</u>	<u>325,988</u>
Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	11.427	Direct		63,367	-
	11.427 Total			<u>63,367</u>	<u>-</u>
Columbia River Fisheries Development Program	11.436	Direct		1,131,894	1,013,731
	11.436 Total			<u>1,131,894</u>	<u>1,013,731</u>
Pacific Fisheries Data Program	11.437	Direct		23,191,363	6,991,245
	11.437 Total			<u>23,191,363</u>	<u>6,991,245</u>
Pacific Coast Salmon Recovery_Pacific Salmon Treaty Program	11.438	California Department of Fish and Wildlife	P1210327	69,430	-
	11.438	California Department of Fish and Wildlife	P1210328	75,972	-
	11.438	California Department of Fish and Wildlife	P1210516	36,826	-
	11.438	California Department of Fish and Wildlife	P1310520	176,777	-
	11.438	California Department of Fish and Wildlife	P1510507	1,284	-
	11.438	California Department of Fish and Wildlife	P1510551	13,347	-
	11.438	California Department of Fish and Wildlife	P1530409	4,310	-
	11.438	California Department of Fish and Wildlife	P1550011	7,087	-
	11.438	California Department of Fish and Wildlife	P1550013	2,890	-
	11.438	California Department of Fish and Wildlife	P1596008	88,315	-
	11.438	California Department of Fish and Wildlife	P1610501	1,957	-
	11.438 Total			<u>478,196</u>	<u>-</u>
Marine Mammal Data Program	11.439	Direct		330,317	192,289
	11.439 Total			<u>330,317</u>	<u>192,289</u>
Regional Fishery Management Councils	11.441	Pacific Fishery Management Council	05-16	24,356	-
	11.441	Pacific Fishery Management Council	05-17	21,551	-
	11.441	North Pacific Fishery Management Council	2016-4	35,592	-
	11.441	North Pacific Fishery Management Council	2017-04	5,298	-
	11.441 Total			<u>\$ 86,799</u>	<u>\$ -</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)
YEAR ENDED JUNE 30, 2017**

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 Industry Projects	11.452	Direct		\$ 1,730,072	\$ 1,720,776
	11.452 Total			<u>1,730,072</u>	<u>1,720,776</u>
Unallied Industry Projects	11.454	Direct		27,112	-
	11.454 Total			<u>27,112</u>	<u>-</u>
Congressionally Identified Awards and Projects	11.469	The Nature Conservancy	A102959-001	7,324	-
	11.469 Total			<u>7,324</u>	<u>-</u>
Interjurisdictional Fisheries Act of 1987	11.472	Direct		353,149	-
	11.472 Total			<u>353,149</u>	<u>-</u>
Total U.S. Department of Commerce				<u>27,824,489</u>	<u>10,244,029</u>
U.S. Department of the Interior					
Central Valley Project Improvement Act, Title XXXIV	15.512	Direct		2,039,118	-
	15.512 Total			<u>2,039,118</u>	<u>-</u>
Sport Fish Restoration Program	15.605	Oregon Department of Fish and Wildlife	41015	48,604	-
	15.605	California Department of Fish and Wildlife	ODFW 309-16	152,872	-
	15.605	Direct		255,799	-
	15.605 Total			<u>457,275</u>	<u>-</u>
Fish and Wildlife Management Assistance	15.608	Direct		1,029,417	35,190
	15.608 Total			<u>1,029,417</u>	<u>35,190</u>
Central Valley Project Improvement (CVPI) Anadromous Fish Restoration Program (AFRP)	15.648	Direct		466,884	-
	15.648 Total			<u>466,884</u>	<u>-</u>
Lower Snake River Compensation Plan	15.661	Direct		745,700	-
	15.661 Total			<u>745,700</u>	<u>-</u>
National Fish and Wildlife Foundation	15.663	Direct		9,096	434
	15.663 Total			<u>9,096</u>	<u>434</u>
Total U.S. Department of the Interior				<u>4,747,490</u>	<u>35,624</u>
Environmental Protection Agency-Office of Environmental Information					
Environmental Information Exchange Network Grant Program and Related Assistance	66.608	Washington Department of Fish and Wildlife	13-2095	23,513	11,595
	66.608 Total			<u>23,513</u>	<u>11,595</u>
Total Environmental Protection Agency-Office of Environmental Information				<u>\$ 23,513</u>	<u>\$ 11,595</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)
YEAR ENDED JUNE 30, 2017**

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		\$ 14,645,737	\$ 5,249,359
Bonneville Power Administration - Environment, Fish and Wildlife	81.999	Washington Department of Fish and Wildlife	16-06631	38,290	-
Bonneville Power Administration - Environment, Fish and Wildlife	81.999	Columbia RiverInter-Tribal Fish Commission	V1607	51,896	-
Bonneville Power Administration - Environment, Fish and Wildlife	81.999	Columbia RiverInter-Tribal Fish Commission	V1712	2,631	-
	81.999 Total			<u>14,738,554</u>	<u>5,249,359</u>
Total Department of Energy				<u>14,738,554</u>	<u>5,249,359</u>
Total Federal Assistance - All Awards				<u>\$ 47,444,988</u>	<u>\$ 15,541,573</u>

**PACIFIC STATES MARINE FISHERIES COMMISSION
NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
JUNE 30, 2017**

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, 2017. 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, 2017**

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 x no
 - Significant deficiency(ies) identified that are not considered to be material weakness(es)? _____ yes x none reported
3. Noncompliance material to financial statements noted? _____ yes x no

Federal Awards

1. Internal control over major federal programs:
- Material weakness(es) identified? _____ yes x no
 - Significant deficiency(ies) identified that are not considered to be material weakness(es)? _____ yes x 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 x no

Identification of Major Federal Programs

CFDA Number	Name of Federal Program or Cluster
81.999	Bonneville Power Administration
Dollar threshold used to distinguish between Type A and Type B programs:	<u>\$ 1,423,350 / \$355,837</u>
Auditee qualified as low-risk auditee?	<u> x </u> yes _____ no

**PACIFIC STATES MARINE FISHERIES COMMISSION
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED JUNE 30, 2017**

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 2017**

Section IV – Prior Year Findings

Our audit for the year ending June 30, 2016 did not disclose any matters required to be reported in accordance with 2 CFR 200.516(a).



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Board of Commissioners
 Pacific States Marine Fisheries Commission
 Portland, Oregon

We have audited the 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, 2017, and have issued our report thereon dated October 17, 2017. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America, *Government Auditing Standards*, and Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance), as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Pacific States Marine Fisheries Commission are described in Note 1 to the financial statements.

No new accounting policies were adopted and the application of existing policies was not changed during 2017.

We noted no transactions entered into by the entity during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimate affecting the financial statements is:

- Management's estimate of depreciation is based on estimated useful lives of capital assets. We evaluated the key factors and assumptions used to develop the depreciation in determining that it is reasonable in relation to the financial statements taken as a whole.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.



Board of Commissioners
Pacific States Marine Fisheries Commission
Page 2

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. The attached schedule summarizes uncorrected misstatements of the financial statements. Management has determined that their effects are immaterial, both individually and in the aggregate, to the financial statements taken as a whole.

Corrected misstatements

Management did not identify and we did not notify them of any financial statement misstatements detected as a result of audit procedures.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations

We have requested certain representations from management that are included in the attached management representation letter dated October 17, 2017.

Management consultations with other independent accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Significant issues discussed with management prior to engagement

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as the entity's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Board of Commissioners
Pacific States Marine Fisheries Commission
Page 3

Other information in documents containing audited financial statements

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the schedule of expenditures of federal awards (SEFA) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the SEFA to determine that the SEFA complies with the requirements of the Uniform Guidance, the method of preparing it has not changed from the prior period or the reasons for such changes, and the SEFA is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the SEFA to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated October 17, 2017.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

This communication is intended solely for the information and use of the Board of Commissioners and management of Pacific States Marine Fisheries Commission and is not intended to be, and should not be, used by anyone other than these specified parties.

**CliftonLarsonAllen LLP**

Bellevue, Washington
October 17, 2017

SUMMARY OF UNCORRECTED MISSTATEMENTS
Pacific States Marine Fisheries Commission
Year Ended June 30, 2017

Government Wide Financial Statements				
UNCORRECTED ADJUSTMENTS	Effect of misstatements on:			
Description	Assets	Liabilities	Fund Balance / Net Assets	Net Expense/Revenue and Change in Net Assets / Fund Balance
Correct prior year interest that was actually allocated to principal related to the IDFG and Northwest Marine Technology lease-purchase.	\$ 31,018	\$ (31,018)	\$ -	\$ -
Net current year misstatements (Iron Curtain Method)	31,018	(31,018)	-	-
Net prior year misstatements	-	-	-	-
Combined current and prior year misstatements (Rollover Method)	\$ 31,018	\$ (31,018)	\$ -	\$ -
Financial statement totals	19,843,728.00	(8,783,466.00)	(11,060,262.00)	(1,081,993.00)
Current year misstatement as a % of financial statement totals (Iron Curtain Method)	0%	0%	0%	0%
Current and prior year misstatement as a % of financial statement totals (Rollover Method)	0%	0%	0%	0%

General Fund				
UNCORRECTED ADJUSTMENTS	Effect of misstatements on:			
Description	Assets	Liabilities	Fund Balance / Net Assets	Net Expense/Revenue and Change in Net Assets / Fund Balance
Correct prior year interest that was actually allocated to principal related to the IDFG and Northwest Marine Technology lease-purchase.	\$ 31,018	\$ (31,018)	\$ -	\$ -
Subtotals	31,018	(31,018)	-	-
Income tax effect	-	-	-	-
Net current year misstatements (Iron Curtain Method)	31,018	(31,018)	-	-
Net prior year misstatements	-	-	-	-
Combined current and prior year misstatements (Rollover Method)	\$ 31,018	\$ (31,018)	\$ -	\$ -
Financial statement totals	15,492,832.00	(6,461,373.00)	(9,031,459.00)	(75,757.00)
Current year misstatement as a % of financial statement totals (Iron Curtain Method)	0%	0%	0%	0%
Current and prior year misstatement as a % of financial statement totals (Rollover Method)	0%	0%	0%	0%

Grants & Contracts Fund				
UNCORRECTED ADJUSTMENTS	Effect of misstatements on:			
Description	Assets	Liabilities	Fund Balance / Net Assets	Net Expense/Revenue and Change in Net Assets / Fund Balance
Prepaid Rent	\$ 33,522	\$ (33,522)	\$ -	\$ -
Subtotals	33,522	(33,522)	-	-
Income tax effect	-	-	-	-
Net current year misstatements (Iron Curtain Method)	33,522	(33,522)	-	-
Net prior year misstatements	-	-	-	-
Combined current and prior year misstatements (Rollover Method)	\$ 33,522	\$ (33,522)	\$ -	\$ -
Financial statement totals	6,803,129	6,803,129	0	0
Current year misstatement as a % of financial statement totals (Iron Curtain Method)	0%	0%	0%	0%
Current and prior year misstatement as a % of financial statement totals (Rollover Method)	0%	0%	0%	0%



PACIFIC STATES MARINE FISHERIES COMMISSION

205 S.E. SPOKANE STREET, SUITE 100 • PORTLAND, OREGON 97202-6487

PHONE: (503) 595-3100 • FAX: (503) 595-3232

www.psmfc.org

October 17, 2017

CliftonLarsonAllen LLP
10700 Northup Way, Suite 200
Bellevue, WA 98004

This representation letter is provided in connection with your audit of the financial statements of Pacific States Marine Fisheries Commission, which comprise the respective financial position of the commission-wide governmental activities, each major fund, and the aggregate remaining fund information as of June 30, 2017, and the respective changes in financial position and, where applicable, cash flows for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm, to the best of our knowledge and belief, as of October 17, 2017, the following representations made to you during your audit.

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated May 30, 2017, for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. The financial statements include all properly classified funds and other financial information of the primary government and all component units required by generally accepted accounting principles to be included in the financial reporting entity.
- We acknowledge and have fulfilled our responsibility for 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.
- We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.
- Significant assumptions used by us in making accounting estimates, including those measured at fair value, are reasonable.

“To promote the conservation, development and management of Pacific coast fishery resources through coordinated regional research, monitoring and utilization”

- Significant estimates have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP. Significant estimates are estimates at the financial statement date that could change materially within the next year.
- Related party relationships and transactions, including, but not limited to, revenues, expenditures/expenses, loans, transfers, leasing arrangements, and guarantees, and amounts receivable from or payable to related parties have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP.
- No events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to, or disclosure in, the financial statements or in the schedule of findings and questioned costs.
- The effects of uncorrected misstatements are immaterial, both individually and in the aggregate, to the financial statements for each opinion unit. A list of the uncorrected misstatements is attached to the representation letter. In addition, you have proposed adjusting journal entries that have been posted to the entity's accounts. We have reviewed and approved those adjusting journal entries and understand the nature of the changes and their impact on the financial statements. We are in agreement with those adjustments and accept responsibility for them.
- We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements in accordance with U.S. GAAP, or which would affect federal award programs, and we have not consulted a lawyer concerning litigation, claims, or assessments.
- Guarantees, whether written or oral, under which the entity is contingently liable, if any, have been properly recorded or disclosed in accordance with U.S. GAAP.
- The fact that the amount of "uncollateralized" deposits or "uninsured, unregistered securities held by the counterparty, or by its trust department or agent but not in the entity's name" during the period significantly exceeded the amounts in those categories as of the financial statement date was properly disclosed in the financial statements.
- Receivables recorded in the financial statements represent valid claims against debtors for transactions arising on or before the financial statement date and have been reduced to their estimated net realizable value.
- We have no plans or intentions that may materially affect the carrying value or classification of assets, liabilities, or equity.

Information Provided

- We have provided you with:
 - Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters.

- Additional information that you have requested from us for the purpose of the audit.
- Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.
- Complete minutes of the meetings of the governing board and related committees, or summaries of actions of recent meetings for which minutes have not yet been prepared.
- Access to all audit or relevant monitoring reports, if any, received from funding sources.
- All material transactions have been recorded in the accounting records and are reflected in the financial statements and the schedule of expenditures of federal awards.
- We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- We have no knowledge of any fraud or suspected fraud that affects the entity and involves:
 - Management;
 - Employees who have significant roles in internal control; or
 - Others when the fraud could have a material effect on the financial statements.
- We have no knowledge of any allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, grantors, regulators, or others.
- We have no knowledge of any instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, and grant agreements, or abuse whose effects should be considered when preparing financial statements.
- We are not aware of any pending or threatened litigation, claims, or assessments, or unasserted claims or assessments, that are required to be accrued or disclosed in the financial statements in accordance with U.S. GAAP, or which would affect federal award programs, and we have not consulted a lawyer concerning litigation, claims, or assessments.
- There are no other material liabilities or gain or loss contingencies that are required to be accrued or disclosed in accordance with U.S. GAAP.
- We have disclosed to you the identity of the entity's related parties and all the related party relationships and transactions of which we are aware.
- The entity has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets, nor has any asset been pledged as collateral, except as made known to you and disclosed in the financial statements.

- We have a process to track the status of audit findings and recommendations.
- We have identified to you any previous audits, attestation engagements, and other studies related to the audit objectives and whether related recommendations have been implemented.
- We are responsible for compliance with the laws, regulations, and provisions of contracts and grant agreements applicable to Pacific States Marine Fisheries Commission, including tax or debt limits and debt contracts; and we have identified and disclosed to you all laws, regulations, and provisions of contracts and grant agreements that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.
- There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.
- The entity has complied with all aspects of contractual or grant agreements that would have a material effect on the financial statements in the event of noncompliance.
- We have followed all applicable laws and regulations in adopting, approving, and amending budgets.
- The financial statements include all component units as well as joint ventures with an equity interest, and properly disclose all other joint ventures, jointly governed organizations, and other related organizations.
- The financial statements properly classify all funds and activities.
- All funds that meet the quantitative criteria in GASB Statement Nos. 34 and 37 for presentation as major are identified and presented as such and all other funds that are presented as major are particularly important to financial statement users.
- Components of net position (net investment in capital assets; restricted; and unrestricted) and equity amounts are properly classified and, if applicable, approved.
- Provisions for uncollectible receivables have been reviewed and determined that the likelihood of not collecting receivables is remote given the origin of receivables; therefore, there is no provision for uncollectible receivables at June 30, 2017.
- Expenses have been appropriately classified in or allocated to functions and programs in the statement of activities, and allocations have been made on a reasonable basis.

- Revenues are appropriately classified in the statement of activities within program revenues, general revenues, contributions to term or permanent endowments, or contributions to permanent fund principal.
- Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.
- Deposits are properly classified as to risk and are properly valued and disclosed.
- Capital assets are properly capitalized, reported, and, if applicable, depreciated.
- We have appropriately disclosed the entity's policy regarding whether to first apply restricted or unrestricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position is available and have determined that net position is properly recognized under the policy.
- We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.
- We acknowledge our responsibility for presenting the schedule of expenditures of federal awards (the supplementary information) in accordance with U.S. GAAP, and we believe the supplementary information, including its form and content, is fairly presented in accordance with U.S. GAAP. The methods of measurement and presentation of the supplementary information have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the supplementary information. If the supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date we issue the supplementary information and the auditors' report thereon.
- As part of your audit, you prepared the draft financial statements and related notes and schedule of expenditures of federal awards. We have designated an individual who possesses suitable skill, knowledge, and/or experience to understand and oversee your services; have made all management judgments and decisions; and have assumed all management responsibilities. We have evaluated the adequacy and results of the service. We have reviewed, approved, and accepted responsibility for those financial statements and related notes and schedule of expenditures of federal awards.
- We understand that as part of your audit, you prepared the adjusting journal entries and acknowledge that we have reviewed and approved those entries and accepted responsibility for them.
- We have evaluated the adequacy and results of the depreciation services performed and accept responsibility for the results. We acknowledge our responsibility for our depreciation schedules and have determined the methods and rates of depreciation and the salvage values used in the calculations. We have designated an individual who possesses suitable skill, knowledge, and/or experience to

understand and oversee your depreciation services; have made all significant management judgments and decisions; and have assumed all management responsibilities.

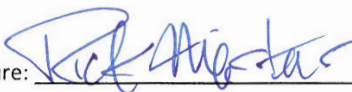
- In regards to the accounting services performed by you, we have:
 - Made all management judgments and decisions and assumed all management responsibilities.
 - Designated an individual who possesses suitable skill, knowledge, or and/or experience to understand and oversee the services.
 - Evaluated the adequacy and results of the services performed.
 - Accepted responsibility for the results of the services.
- With respect to federal award programs:
 - We are responsible for understanding and complying with, and have complied with the requirements of Title 2 U.S. *Code of Federal Regulations* (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) including requirements relating to preparation of the schedule of expenditures of federal awards.
 - We acknowledge our responsibility for presenting the schedule of expenditures of federal awards (SEFA) and related notes in accordance with the requirements of the Uniform Guidance, and we believe the SEFA, including its form and content, is fairly presented in accordance with the Uniform Guidance. The methods of measurement and presentation of the SEFA have not changed from those used in the prior period, and we have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the SEFA.
 - If the SEFA is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the SEFA no later than the date we issued the SEFA and the auditors' report thereon.
 - We have identified and disclosed to you all of our government programs and related activities subject to the Uniform Guidance compliance audit, and included in the SEFA expenditures made during the audit period for all awards provided by federal agencies in the form of federal awards, federal cost-reimbursement contracts, loans, loan guarantees, property (including donated surplus property), cooperative agreements, interest subsidies, insurance, food commodities, direct appropriations, and other direct assistance.
 - We are responsible for understanding and complying with, and have complied with, the requirements of federal statutes, regulations, and the terms and conditions of federal awards related to each of our federal programs and have identified and disclosed to you the requirements of federal statutes, regulations, and the terms and conditions of federal awards that are considered to have a direct and material effect on each major program.

- We are responsible for establishing and maintaining, and have established and maintained, effective internal control over compliance for federal programs that provides reasonable assurance that we are managing our federal awards in compliance with federal statutes, regulations, and the terms and conditions of federal awards that could have a material effect on our federal programs. We believe the internal control system is adequate and is functioning as intended.
- We have made available to you all federal awards (including amendments, if any) and any other correspondence with federal agencies or pass-through entities relevant to federal programs and related activities.
- We have received no requests from a federal agency to audit one or more specific programs as a major program.
- We have complied with the direct and material compliance requirements, including when applicable, those set forth in the *OMB Compliance Supplement*, relating to federal awards and confirm that there were no amounts questioned and no known noncompliance with the direct and material compliance requirements of federal awards.
- We have disclosed to you any communications from federal awarding agencies and pass-through entities concerning possible noncompliance with the direct and material compliance requirements, including communications received from the end of the period covered by the compliance audit to the date of the auditors' report.
- We have disclosed to you the findings received and related corrective actions taken for previous audits, attestation engagements, and internal or external monitoring that directly relate to the objectives of the compliance audit, including findings received and corrective actions taken from the end of the period covered by the compliance audit to the date of the auditors' report.
- Amounts claimed or used for matching were determined in accordance with relevant guidelines in OMB's Uniform Guidance (2 CFR part 200, subpart E) and OMB Circular A-87, *Cost Principles State, Local, and Tribal Governments*, and OMB Circular A-102 *Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments*.
- We have disclosed to you our interpretation of compliance requirements that may have varying interpretations.
- We have made available to you all documentation related to compliance with the direct and material compliance requirements, including information related to federal program financial reports and claims for advances and reimbursements.
- We have disclosed to you the nature of any subsequent events that provide additional evidence about conditions that existed at the end of the reporting period affecting noncompliance during the reporting period.

- There are no known instances of noncompliance with direct and material compliance requirements that occurred subsequent to the period covered by the auditors' report.
- We have disclosed to you whether any changes in internal control over compliance or other factors that might significantly affect internal control, including any corrective action we have taken regarding significant deficiencies and/or material weaknesses in internal control over compliance, have occurred subsequent to the period covered by the auditors' report.
- Federal program financial reports and claims for advances and reimbursements are supported by the books and records from which the basic financial statements have been prepared.
- The copies of federal program financial reports provided to you are true copies of the reports submitted, or electronically transmitted, to the respective federal agency or pass-through entity, as applicable.
- We have monitored subrecipients, as necessary, to determine that they have expended subawards in compliance with federal statutes, regulations, and the terms and conditions of the subaward and have met the other pass-through entity requirements of the Uniform Guidance.
- We have issued management decisions for audit findings that relate to federal awards made to subrecipients and such management decisions have been issued within six months of acceptance of the audit report by the Federal Audit Clearinghouse. Additionally, we have followed-up ensuring that the subrecipient has taken timely and appropriate action on all deficiencies detected through audits, on-site reviews, and other means that pertain to the federal award provided to the subrecipient.
- We have considered the results of subrecipient audits and have made any necessary adjustments to our books and records.
- We have charged costs to federal awards in accordance with applicable cost principles.
- We are responsible for and have accurately prepared the summary schedule of prior audit findings to include all findings required to be included by the Uniform Guidance, and we have provided you with all information on the status of the follow-up on prior audit findings by federal awarding agencies and pass-through entities, including all management decisions.
- We are responsible for and have ensured the reporting package does not contain protected personally identifiable information.
- We are responsible for and have accurately prepared the auditee section of the Data Collection Form as required by the Uniform Guidance.
- We are responsible for taking corrective action on each audit finding of the compliance audit and have developed a corrective action plan that meets the requirements of the Uniform Guidance.

October 17, 2017
CliftonLarsonAllen LLP
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- We have disclosed to you all contracts or other agreements with service organizations, and we have disclosed to you all communications from the service organizations relating to noncompliance at the service organizations.

Signature:  Title: SUPERVISORY ACCOUNTANT

Signature:  Title: Finance Officer

HEADQUARTERS STAFF 2017

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 70 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.

