PACIFIC STATES MARINE FISHERIES COMMISSION

2022 - 2023
ANNUAL REPORT

PUBLISHED FOR THE CONGRESS OF THE UNITED STATES AND THE GOVERNORS AND LEGISLATURES OF
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75TH ANNUAL REPORT

2022 - 2023

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.

Pacific States Marine Fisheries Commission
205 SE Spokane Street, Suite 100
Portland, Oregon 97202

Barry A. Thom, Executive Director

MESSAGE FROM THE EXECUTIVE DIRECTOR

Greetings! This report covers our work from July 2022 through June 2023. Through that period, we have worked with many of you and accomplished great things as a Commission. I have always been impressed by both the magnitude and diversity of programs and services we work on as a Commission and the passionate and talented people who make it all happen. It all takes a great partnership between the Commission, our member states, federal and tribal governments, and the fishing industry. This year's report gives you a feel of all we do and all we accomplish across a breadth of program areas from aquatic invasive species to steelhead, and from the simplest field data recording of habitat to the video review of fishing effort and catch. We merge people and systems to achieve the end to end data that supports fisheries management and conservation across the Pacific.

We've had success implementing our resolutions and influencing policy, whether it be in shepherding in new funding such as the Inflation Reduction Act, helping coordinate response to whale entanglements in fixed gear, or shaping the analysis of potential wind energy projects on the fishing industry and our coasts.

We do so much as a Commission it is hard to capture it all in one space. I like to tell people that if a fish is caught, marked, tagged or trapped on the West Coast and Alaska the Commission has had a hand in it. We monitored over 2,000 offloads of catch, aged over 35,000 individual groundfish, marked and measured millions of fish, with over 50 million salmon marked in California and Idaho alone. We tracked millions of PIT tag interceptions and kept coded wire tag data accessible for all. We also conducted thousands of anadromous fish passage assessments.

We've coordinated and collaborated through the bi-annual steelhead meeting, the Lamprey summit, and the western groundfish conference this year and continue our efforts to strengthen data sharing and coordination in the Klamath. Our work with our National Fish Habitat Partnerships continue with our partnerships here on the West Coast and Alaska.

Our fisheries along the West Coast and Alaska face many challenges. They are also some of the most sustainable fisheries on the planet. The readily accessible and validated data we collect and manage at the Commission allows our partners to keep the fisheries sustainable, and for quick and responsible actions when concerns arise. We also support fisheries when they are facing disaster. We issued over $60 million this past year in fishery disaster and CARES Act (2020) relief and issued payments to over 16,000 individuals.

Looking ahead we'll continue to tackle the challenges that come at us in a manner that serves the States and our partners. I look forward to the potential for Hawaii to join the Commission, for our updated Goals and Objectives for the Commission and for seeing some monumental change on the landscape through the Klamath Dam removal.

In closing I'd like to extend my thanks and wish our two Senior Program managers that retired this past year well. David Colpo really built the Commission's capacity for electronic monitoring, data reporting and E-logbooks. Chris Wheaton helped transform our Pikeminnow rewards program and supported our recreational fisheries data efforts. May they have many good years of fun and relaxation. They deserve it.

All the best,

PACIFIC STATES MARINE FISHERIES COMMISSION

ANNUAL FEDERAL ACTIVITIES REPORT

July 1, 2022 to June 30, 2023

The Pacific States Marine Fisheries Commission (the Commission, PSMFC) monitors and supports major issues and developments related to federal oceans and fisheries policies. The following summarizes these polices and provides a progress update on federal legislative and regulatory actions, including topics identified by the Commission in recent annual resolutions.

FY 2023 APPROPRIATIONS

In the last quarter of 2022, Congress enacted omnibus appropriations legislation for FY 2023 (FY 2023 Consolidated Appropriations Act). The marine fisheries program line items supported by the Commission were either level funded or increased relative to the FY 2022 enacted amount.

- Regional Councils/Commissions: $44.297 million ($1.395 million increase)
- Interjurisdictional Fishery Act (IJA) Grants: $3.377 million ($5,000 increase)
- Fisheries Data Collection, Surveys, & Assessments: $203.851 million ($16.351 million increase)
- Salmon Management: $65.25 million ($2.2 million increase)
- Pacific Coastal Salmon Recovery Fund (PCSRF) $65 million (level funded)

Other specific items:

- Electronic Monitoring (EM) West Coast Groundfish Video Reviews: $600,000 ($200,000 increase)
- Pacific Salmon Treaty (Salmon Management line item): $41 million
- Fishery Information Networks (Data Collection, Surveys, & Assessments line item): $24 million
- Mitchell Act Hatcheries: $23.5 million
- Southern Resident Killer Whales (SRKW) Recovery: $2,250,000 ($250,000 increase)
- Pinniped Removals: $300,000 (same level as FY 2021)
- Hatchery and Genetic Management Plans: $6 million

FY 2024 APPROPRIATIONS

The Biden Administration's FY 2024 Budget Request was released March 9 with the following proposed budget amounts for Commission-supported line items. The numbers in parentheses reflect the difference as compared with FY 2023 enacted amounts.

- Regional Councils/Commissions: $45.753 million ($1.456 million increase)
- IJA Grants: $3.383 million ($6,000 increase)
- Fisheries Data Collection, Surveys, & Assessments: $208.593 million ($4.742 million increase)
- Salmon Management: $65.630 million ($380,000 increase)
- PCSRF: $65 million (level funded)

Neither the House nor the Senate Appropriations Committee has held a mark-up session to debate, amend, and/or rewrite the National Oceanic and Atmospheric Administration (NOAA) Fisheries' funding bill. Representative Jared Huffman (D-CA) and Senator Ron Wyden (D-OR) again submitted the Fisheries programs funding request letters to the Appropriations Committees for the FY 2024 funding cycle. A total of thirty-four Representatives signed the House letter, while the Senate counterpart received the support of six Senators.

ANNUAL RESOLUTIONS UPDATES

The following summarizes federal legislative and regulatory activity that PSMFC Commissioners sought to monitor or support.

Dungeness Crab Gear/Whale Entanglement. The request was not funded in FY 2023. A NOAA programmatic National Environmental Policy Act (NEPA) funding request of $2 million was added to the FY 2024 PSMFC House and Senate appropriations request letters.

Sea Otter Reintroduction. In June 2023, the U.S. Fish and Wildlife Service (USFWS) held sixteen open houses in Northern California and Oregon coastal communities to gather public and stakeholder comments to inform potential reintroduction of Southern sea otters on the West Coast. In its 2022 Feasibility Assessment, USFWS had concluded that reestablishment was achievable, but noted it could not quantify negative impacts to marine stakeholders.

Columbia River Basin (CRB) Hatcheries. Significant funding was included in the Inflation Reduction Act (IRA). (View page 6.)

Offshore Wind (OSW) Energy. From December 1, 2022 through June 2023, abundant whale and dolphin fatalities occurred in areas concurrent with OSW survey activity in the Mid-Atlantic region. Despite NOAA, the Bureau of Ocean Energy Management (BOEM), and the Marine Mammal Commission stating unequivocally that OSW activity has not contributed to these fatalities, numerous stakeholders continue to express concerns. NOAA has reported that approximately 60% of these animals have no assigned cause of death, either proximal or direct.

- **February 2023**. The National Congress of American Indians passed the Offshore Wind Moratorium, resolution #ECWS-23-005, to request suspension of all scoping and permitting of OSW activity pending a tribal marine resources impact analysis.

• **March 29**. Senators Robert Menendez (D-NJ), Cory Booker (D-NJ), Richard Blumenthal (D-CT), Sheldon Whitehouse (D-RI), and Jeff Merkley (D-OR) called on federal environmental agencies to address the increased number of whale deaths on both East and West Coasts in a transparent and timely manner.
• **March 30**. Originally introduced by Representative Jeff Van Drew (R-NJ-2nd), the House of Representatives passed H.R.1, the Lower Energy Costs Act. Provisions require the Government Accountability Office (GAO) to review BOEM's OSW plans in the Gulf of Mexico and in the Atlantic. In June, GAO announced it would undergo a formal study of the impacts of OSW energy development on the marine environment. The study was requested by Representative Chris Smith (R-NJ-4th).
• **June 6**. The House Natural Resources (HNR) Committee held a staff-only briefing with NOAA and BOEM officials on OSW issues. On June 15, the HNR Committee convened a staff briefing with major stakeholders from the commercial fishing industry, including East Coast and West Coast fishing industry reps, and two representatives from the wind energy sector. A formal House OSW oversight hearing is expected by September 2023.
• **June 9**. Oregon Governor Tina Kotek and four members of the Oregon Congressional delegation sent a letter to BOEM Director Elizabeth Cline voicing concern about the current process used to identify OSW areas off the coast of Oregon.

Automated Identification System Use in Tracking Fishing Gear. There have been no new developments from the Federal Communications Commission since last year.

West Coast and North Pacific Fisheries Surveys. In the FY 2023 Omnibus Appropriations Bill, NOAA Fisheries was directed to contract for not less than four vessels for West Coast Groundfish Surveys and six vessels for Alaskan bottom trawl surveys and cooperative research, including a survey to capture movement of fish populations located outside of historic survey areas.

Fishery Disaster Assistance – Funding and Reform. The Fishery Resources Disaster Improvement Act, S.2923, contained in the fisheries package of the FY 2023 Omnibus Appropriations Bill, allocated $300 million in national fishery disaster relief assistance to be combined with $50 million remaining from previously appropriated but unused disaster assistance funding. The Bill improved Magnuson-Stevens Fishery Conservation and Management Act (MSA) fishery disaster relief processes and specified allowable causes of disasters: hurricane, flood, harmful algal blooms (HAB), tsunami, hypoxic zone, drought, El Niño temperature effects, marine heat wave, and disease. It included consideration of direct losses to communities: a lost raw fish tax and Native subsistence and ceremonial losses. Subsistence payments are now exempt from revenue loss thresholds. The legislation caps the state/tribe administrative overhead at 5%.

On December 16, 2022, the U.S. Secretary of Commerce, Gina Raimondo, declared the following Alaska and Washington state fishery disasters.

• 2020 Alaska Copper River/Prince William Sound Coho and Pink Salmon Fisheries
• 2020/2021 Alaska Norton Sound Red King Crab Fisheries
• 2021 Alaska Chignik Salmon Fisheries
• 2021 Alaska Kuskokwim River Salmon, Norton Sound Chum, Coho Salmon Fisheries
• 2021/2022 Alaska Bristol Bay Red King Crab and Bering Sea Snow Crab Fisheries
• 2022/2023 Alaska Bristol Bay Red King Crab and Bering Sea Snow Crab Fisheries
• 2019 Washington Columbia River, Willapa Bay, Puget Sound Salmon Fisheries
• 2020 Washington Ocean Salmon Fisheries

The Secretary determined that without revenue loss, the 2018 Prince William Sound Chinook and Sockeye Salmon Fishery and the 2021/2022 Bering Sea Tanner Crab Fishery were ineligible for claims of commercial fishery failure and catastrophic regional fishery disaster.

On April 6, 2023, a formal fishery disaster declaration request was issued by California Acting Governor Eleni Kounalakis to the Secretary of Commerce for the closure of the 2023 California Chinook Fishery. A secretarial decision is pending.

Seafood Port Infrastructure Funding. Through the FY 2024 National Defense Authorization Act (NDAA), H.R.2670, ports are eligible for Maritime Administration Port Infrastructure Development Program grants that support the loading and unloading of commercial fish and fish products.

Steller Sea Lion Lethal Deterrence. On June 14, Representative Marie Gluesenkamp Perez (D-WA-3rd) presented an affirmatory floor speech for the expansion of sea lion lethal take authority to other areas in the CRB, specifically the Merwin Dam on the Lewis River.

Marine Mammals. The Marine Mammal Protection Act (MMPA) amendment sponsored by Representative Rick Larsen (D-WA-2nd) was successfully added to the FY 2023 James M. Inhofe NDAA that passed in Congress in December 2022 as PL 117-263/H.R.7776. The amendment requires NOAA to increase protections for Right whales and other large cetaceans through enhanced monitoring, disturbance protection, and the potential regulation of vessel speed limits in whale-occupied areas of the U.S. Exclusive Economic Zone (EEZ). These stipulations have not been fully implemented by NOAA.

Aquatic Invasive Species (AIS) Funding
(FY 2023 Omnibus Appropriations Bill).
• USFWS: $50.143 million
  ◦ Lake Tahoe Control: $5.038 million (in addition to $17 million provided in the 2021 Bipartisan Infrastructure Law

[BIL] for permanent watercraft inspection stations)
  - National Invasive Species Act State Planning: $2.834 million
  - Quagga and Zebra Mussel Control: $3.5 million
  - European green crab eradication in the Salish Sea; USFWS to continue its collaboration with NOAA Fisheries.
- Coastal Aquatic Invasive Species Mitigation Grant Program – Status: Although the Program was authorized in 2018, it has yet to be created or funded by NOAA and the National Fish and Wildlife Foundation (NFWF).
- CRB: U.S. Army Corps of Engineers (USACE) to administer $16 million for watercraft inspection stations and an additional $3 million for monitoring.

HAB Funding (FY 2023 Omnibus Appropriations Bill).
- National Ocean Service (NOS) Competitive Research: $22 million with $1 million of this amount allocated to the States for assessment of HAB domoic acid levels in the marine environment.
- NOS Integrated Ocean Observing System (IOOS): $3 million
  - USACE: $8 million for research and control; $5 million for ecological modeling; $5 million for implementation of a technology demonstration program to minimize HAB frequency.
  - Environmental Protection Agency (EPA): $2 million for toxicology research; $7.49 million for water quality research; $6 million for human health exposure research and detection
  - Center for Disease Control: $3.5 million
  - Congressionally-mandated report from the Department of Energy: Research and supercomputer capability options to combat HABs.

IRA. NOAA received $2.6 billion in appropriations to build climate resilience, protect coastal communities, and restore marine resources, with broad flexibility to allocate the funding across its mission lines of effort over a 5-year period. The Commission sent a proposal to the Secretary of Commerce requesting $1 billion for NOAA Fisheries. A decision is pending for the recommended IRA distributions listed below that are separate from annual appropriations and BIL funding.
- Fisheries Data Collections, Surveys, and Assessments: $80 million/year, $400 million total
- Salmon Management: $40 million/year, $200 million total
- Endangered Species Act (ESA) Pacific Salmon: $30 million/year, $150 million total
- PCSRF: $40 million/year, $200 million total
- Habitat Conservation and Restoration: $20 million/year, $100 million total

On June 6, NOAA announced its spending implementation plan for its IRA funds.
- Climate Ready Fisheries (West Coast): $349 million, inclusive of the following:
  - Expand/Modernize Stock Assessments: $145 million
  - Climate, Ecosystems, and Fisheries Initiative: $40 million
  - Regional Fishery Management Councils: $20 million
  - Pacific Salmon: $42 million
- Tribal Fish Hatcheries: $300 million
  - CRB Mitchell Act Hatcheries: $60 million
  - Non-Mitchell Act Hatcheries: $240 million
- Habitat Restoration and Fish Passage: $484 million
- Arctic Research: $2.9 million
- Efficient Permitting: $15.5 million
- Facilities: $95 million

The funding plan will also benefit IOOS, marine sanctuary designations, and technical assistance for states, localities, tribes, and other partners. Investments in NOAA Fisheries infrastructure include the NOAA Fisheries Northwest Fisheries Science Center (NWFSC) and construction of a new visitor center for the Olympic Coast National Marine Sanctuary.

OTHER FEDERAL FISHERIES AND OCEANS ACTIVITY

Legislative

MSA Reauthorization. Reform legislation failed to pass in 2022. It had been anticipated that the former Chairman of the Waters, Oceans and Wildlife Subcommittee, Jared Huffman (CA-D-2nd), would reintroduce his comprehensive MSA reauthorization legislation from last Congress. No MSA hearings have been planned for 2023.

December 14 - Alaska Salmon Research Task Force Act. Congress enacted S.3429 to prioritize research for Pacific salmon, to create a coordinated salmon research strategy, and to promote collaboration of Pacific salmon conservation efforts. The nineteen-member Task Force will be comprised of appointed representatives from NOAA, the North Pacific Fishery Management Council (NPFMC), the U.S. Section of the Pacific Salmon Commission (PSC), the State of Alaska, subsistence users, harvesters, processors, charter and recreational users, prohibited species salmon bycatch users, hatcheries, and scientists with specific expertise in Pacific salmon. The Act requires the Task Force to issue a report to Congress within one year of the enactment date. The first public meeting was held on June 23, 2023.

April 20 - Fighting Foreign Illegal Seafood Harvests (FISH) Act of 2023. Senator Dan Sullivan (R-AK) introduced S.1227 to combat illegal, unreported, and unregulated fishing at its sources globally. The FISH Bill has been referred to the Senate Commerce, Science, and Transportation Committee.

June 7 – Advancing the Quality and Understanding of American Aquaculture Act. Senators Roger Wicker (R-MS) and Brian Schatz (D-HI) reintroduced the bipartisan S.1861 to establish a national regulatory system for sustainable offshore aquaculture in the U.S. EEZ. The Bill defines “aquaculture stakeholder” as states, tribes,

and interstate marine fisheries commissions without a state opt-out provision.

June 9 – Sustaining Healthy Ecosystems, Livelihoods, and Local Seafood Act. Representatives Suzanne Bonamici (D-OR) and Rob Wittman (R-VA) introduced H.R.3951. The Bill would create an Office of Aquaculture within the U.S. Department of Agriculture at an annual, authorized funding level of $25 million. A fourteen-member, outside advisory committee will provide guidance.

June 21 – Southeast Alaska Chinook Troll Fishery Reinstatement. Citing economic harm without the certainty of benefit to SRKW, the U.S. Court of Appeals for the Ninth Circuit reinstated the salmon troll fishery for the 2023 season. The appellate judges' decision followed a March 2023 resolution passed by the Alaska State House of Representatives and subsequent appeals by fishers, the Tlingit and Haida Indian Tribes, the State of Alaska, and NOAA Fisheries. The Court disagreed with a lower court and an ongoing lawsuit by the Washington-based Wild Fish Conservancy contesting NOAA Fisheries' 2019 Biological Opinion that had extended ESA coverage to the Chinook fishery as a mitigation measure for the endangered SRKW. NOAA is required to amend its environmental analysis, and a ruling on the merits of the case is expected later in 2023.

NOAA

August 2 - U.S. Seafood Industry Labor Conditions Initiative. The Collaborative Accelerator for Lawful Maritime Conditions in Seafood is a new public-private partnership that promotes legal and safe working conditions within the fishing and seafood industry. NOAA has specified a 15-month implementation period to be completed by the end of 2024.

November 17 - Marine and Coastal Area-based Management Advisory Committee (MCAM AC). MCAM AC, also known as the NOAA 2030 Advisory Committee, was established to advise both the Under Secretary of Commerce for Oceans and Atmosphere and NOAA leadership on science-based approaches to area-based protection, conservation, restoration, and management in coastal and marine areas consistent with the America the Beautiful/Conserving Our Nation's Lands and Waters initiative, the Biden Administration's goal to conserve at least 30% of the U.S. EEZ by 2030. Appointment of the twenty, non-Federal voting members is anticipated in September 2023.

December 28 - Seafood Import Monitoring Program Expansion. NOAA published a proposed rule, 87 FR 79836, to add a number of species or species groups for importation: tuna, snapper, squid, eel, lobster/lobster families, and octopus. The amendment would additionally clarify importer responsibilities.

Fourth Quarter 2022 - Bering Sea and Aleutian Islands (BSAI) and Gulf of Alaska (GOA) Groundfish Fisheries. NOAA communicated its intent to reinitiate an ESA Section 7 consultation on the effects of BSAI and GOA groundfish on listed species and critical habitat. Analysis to occur in 2023 and 2024.

February 14 - National Seafood Strategy. On May 7, 2020, the Trump Administration issued Executive Order (EO) 13921 to promote American seafood competitiveness, economic growth, and expansion of sustainable U.S. seafood production. The 2023 penultimate draft outlines NOAA's five-year plan to support a thriving, domestic U.S. seafood economy and to enhance the resilience of the seafood sector: maintain or increase sustainable U.S. wild capture production; augment U.S. aquaculture production; cultivate access to domestic and global markets for the U.S. seafood industry; strengthen the entire U.S. seafood sector.

March 16 - Sunflower Sea Star Protection. NOAA requested comments for its proposed rule, 88 FR 16212, that recommends an ESA listing for the threatened *Pycnopodia helianthoides*, the only species of its genus and among the largest sea stars in the world. Once widespread from the Alaskan Aleutian Islands to Baja California, Mexico, Sea Star Wasting Syndrome reduced their numbers by 90% between 2013-2017, considered the largest marine wildlife disease outbreak on record. The ecological niche of the keystone species controls sea urchin populations in kelp forests and other vegetated nearshore habitats.

April 10 - BSAI Groundfish Fisheries Lawsuit. The Association of Village Council Presidents and the Tanana Chiefs Conference, represented by Earth Justice, filed a suit in the U.S. District Court in Alaska to reexamine the 2023-24 NOAA BSAI groundfish catch limits.

April 26 – Federal Management of Alaska Upper Cook Inlet Salmon Fishery. An amendment to the Salmon Fisheries Fishery Management Plan in the U.S. EEZ off Alaska has established Federal management for the Federal waters of the Upper Cook Inlet for compliance with MSA requirements of status determination criteria, annual catch limits, and accountability measures. NOAA Fisheries must implement the amendment by May 1, 2024.

May 2 – Five-Year Status Reviews for California Salmon and Steelhead. Central California Coast Coho salmon, South-Central California Coast Steelhead, and Southern California Steelhead are to remain as ESA-listed species after NOAA Fisheries completed five-year ESA reviews. Additional five-year reviews for remaining ESA-listed, West Coast salmonids will occur later in 2023.

May 15 – Proposed Revision Guidelines for National Standards 4, 8, and 9. NOAA announced a national guidance review to revisit a number of fishery management issues related to climate-ready fisheries, equity, and environmental justice that affect allocation, communities, and bycatch. NOAA's goal is to ensure future relevancy given the existing and emerging issues facing U.S. fisheries management.

75TH ANNUAL BUSINESS MEETING SUMMARY

Pacific States Marine Fisheries Commission

August 24, 2022 | Anchorage Hilton | Anchorage, Alaska

Chair Doug Vincent-Lang called the meeting to order at 8:00 a.m.

In attendance:

ALASKA COMMISSIONERS

Doug Vincent-Lang
Senator Peter Micciche
Casey Campbell

CALIFORNIA COMMISSIONERS

Craig Shuman, California Coordinator, representing Commissioner Charlton Bonham
Barbara Emley

IDAHO COMMISSIONERS

Ed Schriever
Ron Davies

OREGON COMMISSIONERS

Jeff Feldner
Curt Melcher

WASHINGTON COMMISSIONERS

Brian Blake
Nate Pamplin, representing Commissioner Kelly Susewind

Pacific States Marine Fisheries Commission

Barry Thom, Executive Director

Chair Vincent-Lang requested a roll call of each state. All PSMFC Member States were present.

Chair Vincent-Lang requested an introduction of new commission members to PSMFC.

- Alaska – No new members
- California – Craig Shuman, representing the California Department of Fish and Wildlife (CDFW)
- Idaho – No new members
- Oregon – No new members
- Washington – No new members

Chair Vincent-Lang: Called for a motion to approve the PSMFC Budget Fiscal Year 2023. The Commission's Executive Subcommittee approved it earlier in their Meeting.

Vote: Passed unanimously.

Chair Vincent-Lang: Called for a motion to approve the 2021 PSMFC Meeting Summary.

Vote: Passed unanimously.

Chair Vincent-Lang: Called to move onto voting on the PSMFC resolutions that were submitted by the States.

2022-A - BUDGET PRIORITIES

Through October 31, 2023, PSMFC reiterates its support for funding fishery independent monitoring surveys and further notes the importance of current surveys, shipboard operations, and collecting fisheries-independent data that allows the best available science to be used in managing fisheries. In addition, PSMFC strongly supports fisheries-dependent sampling and data management programs (e.g. Alaska Fisheries Information Network [AKFIN], Pacific Fisheries Information Network [PacFIN] Recreational Fisheries Information Network [RecFIN]), which are vital to keeping our fisheries sustainable and productive. These programs should be fully funded and account for inflation in the budget request. PSMFC also supports funding for IJA projects and programs.

Vote: Passed unanimously.

2022-B - CRAB/WHALE ENTANGLEMENT

Through October 31, 2027, PSMFC strongly supports sufficient federal funding necessary to meet NEPA requirements and for the development, implementation, and ongoing management of the West Coast Dungeness crab fishery under implemented Conservation Plans and ESA Section 10 incidental take permits. The management needs for the Dungeness crab fishery have become increasingly complex as the States transition management to meet the requirements of the MMPA and the ESA. Additional funding is necessary to complete the required NEPA process and support management that includes risk reduction measures, robust monitoring (such as line marking and EM), and adaptive management plans.

Vote: Passed unanimously.

2022-C - CRB HATCHERIES

Through October 31, 2027, PSMFC shall assist the States and the Columbia River Treaty Tribes in seeking funds to fully meet annual needs for implementation of hatchery programs in the CRB (Mitchell Act and other) as well as near-term significant investment to address deferred maintenance and infrastructure upgrades. CRB hatcheries play a critical role in maintaining fisheries into the future. Many facilities are several decades old, and maintenance and upgrade needs are significant. There is a need for significant infusion of one-time infrastructure funding and restoration of full, annual, operational funding to maintain the cultural and economic benefits of these mitigation programs.

Vote: Passed unanimously.

2022-D - OSW ENERGY

Through October 31, 2027, PSMFC will work to ensure that BOEM and other federal agencies will work with affected states, the commercial and recreational fishing industries, and tribes to help assess the impact on fishery and fishing operations; identify measures to avoid, minimize, and mitigate those impacts; and consult with fishing representatives throughout the siting process. Regulators and stakeholders should work in coordination on all aspects of review and approval processes so there is consistency for the commercial and recreational fishing industries related to the development of OSW and energy projects.

If offshore energy projects are approved, they must include long-term funding for mitigation, monitoring, and compensation to commercial and recreational/sport fishermen, seafood processors, and fishing communities for any short or long-term harm of their operations and loss of fishing grounds. Prior to approving potential wind energy areas or evaluating unsolicited lease requests, BOEM should complete a programmatic Environmental Impact Statement investigating cumulative effects of wind energy development on the West Coast, addressing concerns of affected states.

Vote: Passed unanimously.

2022-E - FUNDING FOR WEST COAST WHALE STOCK ASSESSMENTS AND LISTING STATUS UPDATES

Through October 31, 2027, PSMFC strongly encourages the National Marine Fisheries Service (NMFS) to secure sufficient federal resources to evaluate the ESA listing status of distinct population segments (DPS) of humpback whales and other large whales along the West Coast of the United States. Of particular management concern is the distribution of listed humpback DPS and refined West Coast stock composition. Where it is determined that a DPS is fully recovered or can be downlisted under ESA, consistent with the recovery plan, NMFS should allocate resources to pursue those administrative actions in a

timely manner and update the marine mammal stock assessment reports to align continued efforts to minimize entanglements per the requirements of MMPA in balance with conservation success.

Vote: Passed unanimously.

2022-F - MARINE MAMMALS

Through October 31, 2027, PSMFC is directed to seek Federal funding for states and strongly encourages NMFS to secure sufficient federal resources to address data and research needs; to continue efforts to implement pinniped removal in the Columbia River; and to examine potential remedies through amendments to the MMPA. The data and research needs are related to the impacts of marine mammals on existing and developing fisheries. Marine mammals are having a potentially large, but undocumented, impact on existing and developing fisheries in Alaska and on the West Coast. Data are needed to quantify the types and extent of this impact. Research is also needed to assess potential deterrents to reduce identified impacts.

Resolution was approved. California abstained.

2022-G - OCEAN CONDITIONS

Through October 31, 2027, PSMFC supports ongoing and expanded collection of oceanographic and fisheries data to assess offshore marine conditions and their impact on the marine ecosystem with particular emphasis on management implications. Warming ocean conditions are of concern to resource managers coastwide.

Vote: Passed unanimously.

2022-H - HABS

Through October 31, 2027, PSMFC supports funding for HAB research, testing, and management that optimizes the landings and value of safe products for public consumption.

Vote: Passed unanimously.

2022-I - AIS

Through October 31, 2027, PSMFC supports any future funding for prevention management and control of priority AIS for all Member States; full funding for NOAA's marine AIS program; and AIS funding to PSMFC to support States' AIS programs and projects.

Vote: Passed unanimously.

2022-J - WATERCRAFT INSPECTION

Through October 31, 2027, PSMFC urges mandatory decontamination of watercraft and other equipment at known locations of mussel infestations as well as at other infested federal facilities. The Commission directs PSMFC staff to work with the Western Association of Fish and Wildlife Agencies and other entities to coordinate interstate implementation of individual state plans and programs. PSMFC encourages the states to adopt a feedback program to determine the efficacy of decontamination efforts and monitoring programs, including PSMFC staff coordination of regionwide monitoring information.

Vote: Passed unanimously.

2022-K - EM

Through October 31, 2024, PSMFC strongly supports continued efforts to develop and implement an EM program for the West Coast Trawl Catch Sharing Fishery in a manner that meets the Pacific Fishery Management Council's (PFMC) EM program goals and objectives.

Vote: Passed unanimously.

2022-L - PREVIOUSLY PASSED RESOLUTIONS

All resolutions passed by the Commission prior to June 30, 2022 are hereby regarded as inactive for establishing PSMFC policy and priorities.

Vote: Passed unanimously.

2022-M - PORT FISHERIES INFRASTRUCTURE SUPPORT

Through October 31, 2027, port fisheries infrastructure needs should be an allowable use of infrastructure bill funding. PSMFC shall facilitate grant applications and management by states/ports to pursue port fisheries infrastructure funding. Additionally, PSMFC shall seek expansion of tonnage definition to include fish landings poundage as criteria for a port to qualify for funds.

Vote: Passed unanimously.

2022-N - OFFSHORE AQUACULTURE

PSMFC does not support offshore aquaculture without concurrence of the affected state(s). Through October 31, 2027, PSMFC will work to ensure that NOAA and other federal agencies will work with affected states, the commercial and recreational fishing industries, and tribes to help assess the impact on fishery and fishing operations; identify measures to avoid, minimize, and mitigate those impacts; and consult with fishing representatives throughout the siting process. Regulators and stakeholders should work in coordination on all aspects of the review and approval processes so there is consistency for the commercial and recreational fishing industries related to the development of offshore aquaculture. If offshore aquaculture projects are approved, they must include long-term funding for mitigation, monitoring, and compensation to commercial and recreational/sport fishermen, seafood processors, and fishing communities for any short or long-term harm of their operations and loss of fishing grounds.

Vote: Passed unanimously.

2022-O - NOAA FISHERIES SCIENCE CENTER PRIORITIZATION

Through October 31, 2027, the States recognize the importance of NOAA NWFSC's annual prioritization of activities and support the improved integration into the process to inform final rankings.

Vote: Passed unanimously.

2022-P - KELP RESTORATION

Through October 31, 2027, PSMFC will work to secure funding to support kelp habitat recovery. This should include funding for research, restoration, and management of kelp habitat.

Resolution passed. Alaska no opinion.

2022-Q - 30X30 CONSERVATION AREA DEFINITION

Through October 31, 2024, PSMFC shall foster adoption of the Council Coordination Committee definition of "conservation areas" relative to 30X30 in marine waters. (America the Beautiful per Presidential EO 14008).

Vote: Passed unanimously.

2022-R - FISHERY DISASTERS

Through October 31, 2027, PSMFC supports congressional funding for fishery disasters that have been recommended by Governors and other authorized entities and declared by the Secretary of Commerce. PSMFC shall also promote congressional and/or administrative actions that reduce the time it takes to administer disaster funds.

Vote: Passed unanimously.

2022-S - MARINE SANCTUARIES, MONUMENTS, AND CLIMATE-RESILIENT AREAS

Through October 31, 2027, PSMFC supports the Regional Fishery Management Council Resolution dated June 27, 2016 expressing support for the role of the MSA as the primary authority for federal fisheries regulations. Supports the rights of individual states to manage fisheries resources and activities under state jurisdiction within a marine sanctuary, monument, or climate-resilient area.

Vote: Passed unanimously.

Chair Vincent-Lang announced dates for the 76th Annual Meeting, October 15-18, 2023, in Gleneden Beach, Oregon.

Chair Vincent-Lang adjourned the meeting.

COMMISSIONERS, ADVISORS, AND COORDINATORS 2022 - 2023

STATE	COMMISSIONERS	ADVISORS	COORDINATOR
ALASKA	Douglas Vincent-Lang Sen. Peter Micciche Casey Campbell	Matt Alward Shannon Carroll Matthew Moir	Kendall Henry, ADFG
CALIFORNIA	Charlton Bonham Sen. Mike McGuire Barbara Emley	Jim Caito Ken Franke Mike McCorkle	Sonke Mastrup, CDFW
IDAHO	Ed Schriever Lee Heider Ron Davies	Jim Fredericks Pete Hassemer Lance Hebdon Joe Stegner	John Cassinelli, IDFG
OREGON	Curt Melcher Sen. Dick Anderson Jeff Feldner	Walter Chuck Steve Fick Liz Hamilton Richard Heap Dorothy Lowman Brad Pettinger Lori Steele	Caren Braby, ODFW
WASHINGTON	Nate Pamplin Brian Blake Phil Anderson	Robert Alverson Robert Jones Larry Phillips Al (Butch) Smith	Heather Hall, WDFW

ANNUAL AWARD RECIPIENTS

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

CHUCK BUNDRANT

In the winter of 1961, at age 19, Chuck Bundurant convinced three friends to leave college and Tennessee in search of adventure and fortune in the Pacific Northwest. He arrived in Seattle, WA, unfamiliar with boats or commercial fishing. His persistence in walking the docks at the city's Fishermen's Terminal soon led to a crab processing job in Alaska.

Chuck founded Trident Seafoods twelve years later in a desire to forge a strong, sustainable Alaska seafood industry benefitting all stakeholders. His innovations and risks solidified Trident's reputation and ranking as one of the largest seafood companies in the world and the largest vertically integrated seafood harvesting and processing company in North America.

For over five decades, North Pacific fisheries and resources became a fervent commitment. Chuck's egalitarian efforts resulted in equal consideration for his employees, Trident's independent fishers, the State of Alaska, and global customers and competitors. Although Chuck passed away in October 2021, his values continue to guide the multigenerational, family business. He is remembered for challenging convention with his astute business skills, toughness, and determination. Chuck's generosity and empowerment of others were similarly recognized as conducive to his success.

Chuck's widow Diane and his son Joe, current CEO of Trident, accepted the award at the August 2022 Annual Meeting in Anchorage, AK.

CONGRESSMAN DON YOUNG

Congressman Don Young moved from central California to Alaska in 1959. In Fort Yukon he taught fifth grade at the Bureau of Indian Affairs elementary school in addition to secondary occupations as a Yukon River tugboat captain of a village delivery barge operation, a fisher, a construction worker, a trapper, and a gold miner.

Don's meteoric political ascent commenced in 1964, when he was elected mayor of Fort Yukon. Three years later he won a district seat in the Alaska House of Representatives, followed in succession with victories in the Alaska State Senate (1971) and the U.S. House of Representatives (1973), where he remained in office until his demise in 2022.

During his lengthy career, Congressman Young made significant legislative contributions in support of North Pacific marine fisheries and tribal interests through his House committee assignments: the Committee on Natural Resources, which he chaired from 1995-2001, and its Subcommittee on Water, Oceans and Wildlife. Don was also a member of the Sportsmen's Caucus as well as the Congressional Sportsmen's Foundation.

Notable achievements include the Young Fishermen's Development Act (2019-20), the Billfish Conservation Act of 2012, the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, the Fishermen's Protective Act Amendments of 2000, the International Dolphin Conservation Program Act (1997-1998), the Fisheries Act of 1995, the Oceans Act of 1992, the High Seas Driftnet Fisheries Enforcement Act (1991-92), the Pacific Salmon Treaty Act of 1985, and multiple laws governing international fishery agreements.

H.R.1196 - Don Young Restoration Grants for Coastlines and Fisheries Act of 2023 was introduced in March 2023 to honor his legacy of protecting and improving fisheries in the U.S.

Congressman Young's daughters, Joni Nelson and Dawn Vallely, accepted the award at the August 2022 Annual Meeting in Anchorage, AK.

Program Accomplishments

Fisheries Disaster Relief

Pursuant to the MSA, the Fishery Disaster Program administers and allocates federal disaster relief to fishing communities and businesses affected by fishery failures originating from natural, undetermined, or, in certain circumstances, man-made causes. PSMFC collaborates with its Member States and NOAA Fisheries to financially support the fisheries, also implementing preventative measures to avoid similar failures in the future. Activities include habitat restoration, research, buybacks, job retraining, fishery-related infrastructure improvements as well as direct payments to fishers, businesses, and tribes.

In response to the COVID-19 pandemic, Round 1 of the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was enacted by the U.S. Congress to aid states, territories, and tribes that had been severely impacted. A subsequent bill, the Consolidated Appropriations Act, 2021, provided additional financial assistance for Round 2. Direct payments for lost revenues and funding for projects that mitigated cultural, ceremonial, and subsistence consequences due to the pandemic were disbursed by PSMFC to coastal Member States, Hawaii, the Pacific Island territories of Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands, and to numerous West Coast and Alaskan tribes.

The Fishery Disaster Relief program dispersed funds for eighteen federally designated fishery disasters in the form of direct payments to affected fishers and businesses and provided grant oversight and administration for numerous projects.

Additionally, CARES Act relief included:
- $44.8 million to 3,500 applicants from Alaska, California, and Hawaii for commercial and subsistence losses
- $16.8 million to 33 West Coast and Alaskan tribes

FUNDING SOURCE AND STAFF

NOAA Fisheries provides all funding. Staff consists of one Project Manager and two Program Assistants. Six temporary contractors reviewed and processed CARES Act applications.


ALASKA 'Round 2' CARES Act Fisheries Assistance
Provided by the Consolidated Appropriations Act, 2021
COMMERCIAL HARVESTING SECTOR

NAME LAST FIRST MI

BUSINESS (if applicable)

STREET PO BOX (if applicable)

CITY STATE ZIP

EMAIL PHONE

Section 1: Self-Certifications and Assurances

I am applying for Federal assistance from the Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, through the Pacific States Marine Fisheries Commission.

Please check all statements certifying that the following are true:

- I attest that I am an eligible recipient of assistance under the Consolidated Appropriations Act, 2021, the CARES Act (P.C. 116-136) Section 12005, and the approved Alaska spend plan;
- I attest that I am not a minor and I am over the age of 18 as of the signing of this application;
- I attest that I am not de-barred from receiving federal funds;
- I attest that I am not on the government's "do not pay list";
- I attest that I am a participant in a marine or anadromous fishery in the waters of Alaska;
- I attest that I am requesting funds to address fishery-related direct or indirect losses due to COVID-19 and the incurred economic revenue losses are greater than 30.0%;
- I attest to documenting the total loss difference in gross revenues, attributable to COVID-19 between March 1st and December 31st, 2020 and the average gross revenue for the same time frame across all fisheries during the comparison years;
- I attest to having documentation/records to support the losses claimed in this application, and that were used as the basis of eligibility. I agree to maintain these records until October 31, 2026. Records must be made available upon request from Pacific States Marine Fisheries Commission, the National Oceanic and Atmospheric Administration, or the U.S. Office of the Inspector General;
- I attest to documenting any "Round 1" CARES Act relief received that was issued by the Pacific States Marine Fisheries Commission (PSMFC);
- I attest that I have not applied for or received assistance under the California's Sec. 12005 CARES Act (Round 1), Consolidated Appropriations Act, 2021 (Round 2), or any other spend plan where applicants may have attested that they were only seeking funds from that spend plan;
- I attest that the sum of these funds combined with any additional COVID-19 related federal financial assistance that will not be repaid, unemployment benefits for fishing activity, and/or any other revenues for fishing activity received during 2020, will not exceed my average annual gross revenue earned across the previous 5-years, (or average used if not in operation for the full 5-years) and if they do I will repay the federal government through PSMFC for the surplus up to the amount received from PSMFC.

RETURN CLEAR FORM

Figure 1. Alaska Round 2 CARES Act Commercial Harvesting Sector application.

Fishery Dependent and Independent Data Collection and Management

Alaska Fisheries Information Network

AKFIN is one of five, regional, cooperative, state/federal programs that provides a framework to consolidate and sustain the collection, analysis, and reporting of varied and essential information for management of U.S. fisheries. AKFIN supports the data needs of fisheries analysts, managers, and economists by integrating and dispensing commercial fisheries data upon request utilizing custom programming services and online tools.

NOAA FISHERIES ALLOCATION POLICY DIRECTIVE

In April 2023, NPFMC assessed current processes of the 2016 NOAA Fisheries Allocation Policy Directive. The Council also evaluated the Allocation Review dashboards developed by AKFIN that visually display data for BSAI Pacific cod and Yellowfin sole allocations. Once approved for use as a new Directive tool, AKFIN initiated the additional creation of a GOA Pacific cod allocation dashboard.

HUMAN DIMENSIONS DATA EXPLORER (HD DATA EXPLORER)

In collaboration with the Alaska Fisheries Science Center (AFSC) Economic and Social Sciences Research Program (ESSRP), AKFIN launched the HD Data Explorer, an online portal for accessing North Pacific web applications and data reports relating to the human aspects of fisheries. The HD Data Explorer has since been upgraded with a new dashboard and new reports detailing Alaskan communities' engagement with and participation in fisheries. AKFIN provided additional support to ESSRP by updating the production of the economic Stock Assessment and Fishery Evaluation (SAFE) Reports for groundfish and BSAI crab within an R-based, reproducible reporting workflow.

SAFE WEB DATA MANAGEMENT TOOL

In cooperation with AFSC, AKFIN produced a web-based data management tool to facilitate data collection and compilation for SAFE's Ecosystem and Socioeconomic Profiles. The tool allows scientists to upload data, submit it for review and comments, and compile it into a final, accessible data source using a Representational State Transfer web service. A recent expansion of this data resource supports uploads of SAFE repository data. Future plans include the addition of Ecosystem Status Reports.

FUNDING SOURCES AND STAFF

An annual NOAA Fisheries grant for the AKFIN Support Center and a subcontract with the Alaska Department of Fish and Game (ADFG) provide funding. Five employees are funded by the AKFIN grant; two others receive funding through other NOAA Fisheries-sponsored projects. AKFIN's seven-member staff are positioned at three locations: Ted Stevens Marine Research Institute in Juneau, AK; AFSC in Seattle, WA; and PSMFC's headquarters in Portland, OR.

Pacific Fisheries Information Network

The nation's first, regional, commercial fisheries data network, PacFIN is a joint federal and Member State data collection and information management project that generates timely and accurate data essential for effective fisheries management. Cooperative agency and industry partners provide data from commercial fisheries off the coasts of California, Oregon, Washington, and British Columbia. These statistics are integrated in the PacFIN database to deliver precise 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 competently, while also facilitating research opportunities by industry, non-governmental organizations (NGO), and universities.

HIGHLY MIGRATORY SPECIES (HMS) DATA UPDATES

Projects were implemented to modernize data structures and improve data collection and reporting systems for the HMS observer, the HMS logbook, and sampling databases in association with NOAA Fisheries West Coast Region (WCR) and Southwest Fisheries Science Center.

PFMC FISHERIES MANAGEMENT PLAN GROUNDFISH SPECIES (SCORECARD) REPORT UPGRADE

The Scorecard was developed to provide the "best estimate" of total mortality of groundfish stock species and stock complexes for all West Coast commercial, tribal, and marine recreational fisheries.

GROUNDFISH TRAWL LOGBOOK DATABASE REDEVELOPMENT

To automate data delivery systems, PacFIN collaborated with state agency coastwide data sources.

FISHERY EFFORT MAPPING DATABASE

This database is in development to deliver critical assessments of OSW energy and other marine spatial planning efforts.

SPEX APPLICATION

As a specifications system, this application supports ongoing PFMC biennium planning efforts to produce and store final groundfish harvest specifications and management measures.

PACFIN APEX REPORTING SYSTEM

Designed for various applications in support of state and federal fisheries management and public access, expansion of both public and password protected confidential reports continues.

QUERYBUILDER APPLICATION

This program allows users with confidential data access to generate customized queries for extracting data from multiple, comprehensive datasets and download the results.

CLIENT ACCOUNT SUPPORT

Staff established user accounts, granted table access, and assisted with PacFIN data retrievals. Personalized accounts allowed authorized users access to confidential reports and query tools from the PacFIN Apex Reporting System.

FUNDING SOURCE AND STAFF

PacFIN is funded through a NOAA grant. Staff consists of a Program Manager and a part-time Data Analyst/Programmer in Portland and a Data Manager and a Data Analyst/Programmer in Seattle.

Economics Data Reports Program

NOAA designated PSMFC as the Independent Third-Party Data Collection Agent for Alaska Economic Data Reports (EDRs). EDRs gather data and information to improve analyses on the social and economic effects of the catch share (CS) or rationalization programs, from the economic performance of program participants to estimating the impacts of future issues or proposed revisions to the programs covered by the EDRs. These reports contain cost, revenue, ownership, and employment data, and are collected annually from the harvesting and processing sectors; participation is mandatory. The data are managed and hosted on PSMFC's AKFIN in a standardized database that supports metric analysis. Reports and forms are in development to permit researchers access to these data.

PSMFC EDRs collect data for BSAI Crab Rationalization (CR), Amendment 80 (A80), and Amendment 91 (A91).

- **BSAI CR**. Implemented in 2005 as the first EDR, the BSAI program is a limited-access, privilege management program. The Program applies to all BSAI federal crab fisheries except Norton Sound Red King crab and Pribilof Golden King crab.
- **A80**. Adopted by the NPFMC in 2008, A80 allocates BSAI non-pollock groundfish species (Yellowfin sole, Flathead sole, Rock sole, Atka mackerel, and Aleutian Islands Pacific ocean perch) among trawl fishery sectors and facilitates the formation of harvesting cooperatives.
- **A91**. NOAA Fisheries' 2010 EDR is administered through the American Fisheries Act Pollock Fisheries Management to balance the minimization of Chinook salmon bycatch in the Bering Sea pollock fishery with the potential costs of bycatch restrictions.

For the 2022 collection season, 100% of the A80 active vessel EDRs were received, with a preliminary 98% submission rate achieved for the A91 EDRs. A 100% return rate is anticipated for the BSAI Crab EDR collection. Following data review, flagged issues are discussed with the submitter and adjusted. This data is utilized in the North Pacific Crab and Groundfish SAFE Reports.

- 2022 Groundfish SAFE
- 2022 Alaska Crab SAFE
- 2022 Alaska Fisheries Economic Status of BSAI King & Tanner Crab

FUNDING SOURCE AND STAFF

Program funding is provided through a NOAA Fisheries Commercial Economic Data Collection grant. The EDR Program consists of one Project Manager located at PSFMC's headquarters in Portland, OR and two PSMFC staff working with NOAA Fisheries at AFSC in Seattle, an IT Applications Software Specialist and a Data Management Specialist.

Groundfish Age Reading Assistance Program

The Groundfish Age Reading Assistance Program (GARAP) is a cooperative program with NOAA's NWFSC. GARAP production ages groundfish from state and federal sources. Age data is required to sustainably manage fish stocks as mandated by the MSA. Fish age data obtained from federal surveys defines biological attributes of a population for robust stock assessments: mortality rates, growth rates, age at maturity, and age distribution. State fishery age data generates the age of young fish as they enter a fishery (recruitment); age-specific exploitation rates based on gear types or location; and the age distribution of the exploited population.

AGE ESTIMATES

GARAP aged eight species and supported seven West Coast stock assessments by producing 35,757 fish age estimates.

- Black Rockfish: Produced 4,753 ages from California commercial and recreational samples and participated in a structure exchange with state ageing labs in Alaska, Oregon, and Washington.
- Canary Rockfish: Produced 11,618 ages from California and Oregon commercial, Oregon recreational, West Coast federal surveys, and shoreside and at-sea hake bycatch samples.
- Copper Rockfish: Produced 2,484 ages from California commercial, California recreational, and West Coast federal surveys.
- Petrale Sole: Produced 6,727 ages from California and Oregon commercial samples and West Coast federal surveys.
- Pacific Whiting: Produced 4,820 ages from Oregon and Washington shoreside fishery and at-sea observer samples.
- Quillback Rockfish: Produced 475 ages from Oregon commercial and recreational sources in 2022. This species was not assessed in 2023.
- Rex Sole: Produced 759 ages from West Coast surveys.
- Sablefish: Produced 4,121 ages from West Coast federal surveys.

STRUCTURE PROCESSING

The lab primarily processes and ages otoliths (ear stones) and other structures such as fin rays, spines, and vertebrae. Structure attributes, like weight, are collected for quality control and future data modeling.

- Collected 37,907 otolith weights from nine species of groundfish.
- Cleaned and prepped 415 Spiny dogfish spines for future ageing.

• Pinned, glued, sectioned, and mounted 788 Ling cod fin rays for future ageing.

FUNDING SOURCES AND STAFF

NOAA and IJA grants fund this program. GARAP has eight staff members who are located at the NWFSC Barry Fisher Building at the Hatfield Marine Science Center in Newport, OR.

Individual Fishing Quota 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 Pacific Coast Trawl IFQ Fishery. Catch Monitors (CMs) conduct dockside monitoring of IFQ offloads to ensure that catch is accurately sorted, weighed, and recorded by first receivers (shoreside fish buyers). CMP data are used by NOAA Fisheries to substantiate that IFQ groundfish species, particularly overfished species and other species of interest such as Chinook salmon and Pacific halibut, are adequately monitored and acknowledged in IFQ landings. CMP's catch verification system maintains the integrity of vessel quotas to manage groundfish species and trip limits.

CATCH MONITORING (CM) STAFF

Seventy-seven CMs monitored 2,049 shoreside deliveries of IFQ catch between Bellingham, WA and Morro Bay, CA.

Training. Thirty-five new CMs were certified in five training sessions and became qualified at-sea observers. Four additional CMs were trained at the request of CM providers to work solely on shore and monitor deliveries primarily from vessels with EM systems.

Briefings. Forty-eight returning CMs participated in seven annual briefings. Thirty-five CMs attended six, preseason Pacific whiting fishery briefings. Each briefing included a review session and a discussion of any relevant changes to federal regulations and CMP protocols.

Debriefings. Fifty-nine debriefings were held for active and departing CMs. Debriefings confirm adherence to CMP protocols and facilitate the resolution of any remaining data quality concerns, regulatory compliance issues, or challenges at first receiver locations.

Data Quality Control. CMP staff review CM and first receiver data daily to identify and resolve discrepancies between data sets in coordination with CMs, first receivers, and NOAA Fisheries.

IFQ CM PLANS AND SITE VISITS

• Forty-four first receiver IFQ CM plans were reviewed.
• Twenty first receivers experienced on-site CMP staff visits; a virtual site visit was completed for one new applicant.
• During visits, staff worked collaboratively with fish buyers for ongoing compliance with federal regulations, emphasizing the necessity of clearly outlined offload and safety procedures in their CM plans.
• IFQ First Receiver Site Licenses are issued to qualifying first receivers upon NOAA Fisheries approval of their plans.

FUNDING SOURCE AND STAFF

IFQ CMP is funded with an annual NOAA Fisheries grant. Staff consists of two, full-time Portland, OR employees, an IFQ CMP Coordinator and an IFQ CMP Lead Trainer/Debriefer.

North Pacific Observer Program

The North Pacific Observer Program (Observer Program) monitors commercial groundfish fishing activities in the U.S. EEZ off the coast of Alaska. PSMFC provides logistic and analytic support to NOAA Fisheries AFSC Fisheries Monitoring and Analysis (FMA) Division that administers it. The Observer Program is one of the largest in the U.S., annually placing over 300 observers on Alaskan fishing vessels and in shoreside processing plants. The Program also positions EM systems on a portion of the Alaskan fishing fleet. The information collected by the Observer Program is crucial for informing in-season quota monitoring and sustainable groundfish fisheries management, supplying essential data for ecosystem investigations, scientific projects, compliance monitoring, and documentation of incidental injury and mortality of marine mammals and birds.

OBSERVER DEPLOYMENT PLANS

PSMFC staff facilitated the development and evaluation of the Observer Program's deployment process and fishery monitoring methods in collaboration with NOAA Fisheries AFSC FMA Division and Alaska Regional Office.

• **2023 Annual Deployment Plan**
• **2024 Observer Program Deployment Redesign**. Final evaluation of the following goals will be presented at the October 2023 NPFMC meeting.
  ◦ Full integration of EM into the monitoring program
  ◦ Assessment of potential cost efficiencies to increase fishery monitoring

OBSERVER DEPLOYMENTS

PSMFC Program staff assisted 359 observers through

training classes, briefing sessions, safety-emphasized water exercises, provision of sampling and safety gear, oversight, and post-deployment debriefings. To estimate annual prevalence of observer victimization, an analysis was completed of observer reports detailing sexual assault and sexual harassment experienced during 2021-2022 deployments.

DATA COLLECTION AND STORAGE INFRASTRUCTURE PLANS

Acquiring and processing high-quality data in near-real time is vital for Program functionality. Enhanced, specialized applications are required for observer debriefing and in-season advising, tracking and maintenance of observer gear, and observer data entry and transmission. Continuously improved technologies and database tools for expanding data capture and data quality needs are developed and maintained by PSMFC and AFSC FMA staff.

- Observer Statement and Affidavit Database: A component was redeveloped to capture and store reports of issues encountered by deployed observers.

ALASKA MARINE MAMMAL OBSERVER PROGRAM

Under the MMPA, NOAA Fisheries is authorized to administer an observer program for commercial fisheries that have frequent or occasional serious injury or mortality of marine mammals incidental to their fishing operations. Last implemented in 2012 and 2013, this Program will again collect information on protected species interactions occurring within the Southeast Alaska drift gillnet fishery, with significant focus on the harbor porpoise (*Phocoena phocoena*). Program scoping has commenced, and sample design recommendations are in development. A pilot monitoring program will be implemented in 2024, with at-scale monitoring planned for 2025 and 2026.

FUNDING SOURCES AND STAFF

The Observer Program is funded through NOAA grants and contracts awarded to PSMFC. Staff consist of a Project Manager for the Alaska Marine Mammal Observer Program as well as a Statistician, a Data Management Specialist, an IT-Database Software Specialist, and an IT-Applications Software Specialist. Additionally, two PSMFC positions assist NOAA Fisheries Observer Program's training, debriefing, and operational staffing.

West Coast Groundfish Observer Program

The West Coast Groundfish Observer Program (WCGOP) collects data for fisheries management in collaboration with NOAA Fisheries. Since 2001, WCGOP has deployed observers who compile technical, management, and other data through measurements: selected portions of catch and fishing gear; onboard interviews with vessel captains and crew; observations of fishing operations; and collection of biological samples. Additional statistics pertaining to protected species and species of concern (seabirds, marine mammals, sea turtles) are also documented. The Program remains adaptable in anticipation of revised data and scientific requirements for West Coast groundfish and other protected species.

TRAINING

PSMFC partnered with NOAA Fisheries to administer six, three-week trainings to instruct observers for field data collection.

New Observers. Thirty-eight were trained: twenty-three for the CS fisheries (not including the at-sea hake fisheries) and fifteen for the Non-Catch Share (NCS) fisheries.

Experienced Observers. Forty-three were briefed for reassignment: twenty-three for the CS fisheries and twenty for NCS fisheries.

The **At-Sea Hake Observer Program** (ASHOP). The catcher/processors and motherships component conducted four trainings that prepared fifty-two observers for deployment.

The majority of CS observers are also trained as CMs through PSMFC's CMP to provide dockside monitoring of CS trip offloads.

OBSERVER DAYS AT SEA

WCGOP - 3,282 days: 1,380 in the CS fisheries (excluding hake and Exempted Fishing Permit [EFP] trips); 65 days on at-sea hake vessels; 91 in the shoreside hake fishery; 387 on various EFP trips; 308 on Limited Entry trips; and 881 on open access vessels.

ASHOP - 1,650 days on catcher/procesors and motherships, two employees per vessel.

NCS MANAGEMENT

Observer efforts were organized by a PSMFC field coordinator who administered observer resources and coverage goals established for each fishery.

DATA

- WCGOP debriefers assured data quality through review of observer records and periodic in-person meetings with observers during the year.
- Observer-collected discard data for the CS fishery was combined with CMP's landing data in NOAA Fisheries' vessel account system.
- PSMFC, in conjunction with NOAA Fisheries, continued the development of an electronic data collection system through software updates.

PSMFC procured the gear, computers, and software used by the observers to complete sampling, data, and report activities within the NOAA observer database.

FUNDING SOURCE AND STAFF

WCGOP is funded through NOAA Fisheries. PSMFC employs ten, full-time staff (nine at WCGOP; one at ASHOP): debriefers, coordinators, a gear technician, and a program manager.

Columbia Basin Passive Integrated Transponder Tag Information System

The Columbia Basin Passive Integrated Transponder (PIT) Tag Information System (PTAGIS) is a Columbia Basin fisheries coordination and data management project that utilizes PIT tag data to monitor fish migratory habits in the Federal Columbia River Power System dams. PTAGIS develops software to collect and upload data; manages those data for download and querying through the PTAGIS website; and operates and maintains PIT tag detection sites in the Columbia Basin. Data collected from PIT tags and the PTAGIS data repository inform anadromous fish research conducted for the Bonneville Power Administration (BPA) Columbia Basin Fish and Wildlife Program.

Separation by Code (SbyC). A combination of software and hardware, SbyC allows researchers to target specific PIT-tagged fish who are automatically separated and diverted to designated locations during passage within a facility.

- Updated one site with industrial computers (IPCs), a programmable logic controller, electrically actuated slide gates, a touchscreen interface, and M5 software.

SOFTWARE DEVELOPMENT

M5. A community version of this automated data collection software was released for Windows and Linux operating systems in addition to two updates for enhancements and software errors elimination. An evaluation of M5 SbyC performance was completed during the 2022 season.

I5. This software utility package was developed to enable the download of interrogation data directly from transceivers; reconfigure records into the PTAGIS M5 file format; and submit records to PTAGIS. Seven updates were introduced.

P4. One maintenance update was performed for this data entry and management software.

P5. Initiated development.

HARDWARE UPDATE, DESIGN, AND RELOCATION

- Completed detection antennas designs for the Bonneville Dam Ice and Trash Sluiceway and Easton Dam; redesigns for the Washington Shore fish ladder serpentine weir and the Klickitat Hatchery.
- Relocated the Cascades Island detection site antennas and data collection platform.
- Finalized upgrade of all detection sites that do not perform SbyC with new IPCs.

PTAGIS Website. Released ten updates: enhancements, software errors elimination, new reports, and new methods for updating and requesting interrogation site metadata.

FUNDING SOURCE AND STAFF

PTAGIS is solely funded by the BPA Columbia Basin Fish and Wildlife Program. Five Portland staff members direct program management, software and web development, database and reporting system development, and data coordination and quality. The seven staff in Kennewick manage design and maintenance of large-scale PIT tag detection sites, PIT tag testing and distribution, and equipment maintenance and repair.

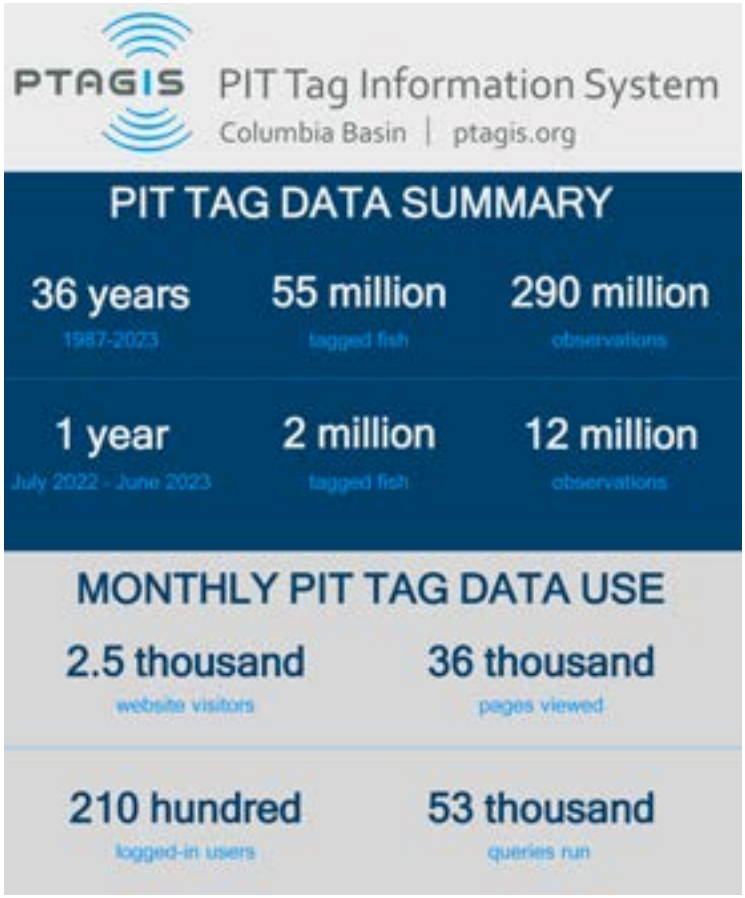


Figure 2. PTAGIS statistics.

Geographic Information System Center

The Geographic Information System (GIS) Center provides essential geospatial technology for PSMFC programs, projects, and partnerships with BPA, USFWS, NOAA, the U.S. Geological Survey (USGS), and BOEM. Staff coordinate access to shared GIS resources (e.g., ArcGIS Pro, ArcGIS Enterprise, ArcGIS Online), administer the system, and facilitate assistance with spatial data management, publishing, and application development. Additionally, GIS staff offer technical guidance and recommendations through active participation in program working groups and committees.

PSMFC PROGRAMS

The GIS Center strategically enhanced its capabilities to fulfill program requirements.

- **AIS Prevention Program**. Provided spatial data development and hosting for the West Coast European Green Crab database and the Watercraft Inspection Station Viewer.
- **Columbia Basin PTAGIS**. Updated and maintained spatial data and web services.
- **AKFIN | PacFIN**. Supported systems administration for a dedicated ArcGIS Enterprise used by program analysts to characterize and map fishing effort in regional fisheries management and marine spatial planning.
- **StreamNet**. Updated and maintained location referencing aspects of the StreamNet database, spatial data products, and mapping applications. Recommendations were collectively developed with state, tribal, and federal agencies through the Fish Monitoring Work Group to inform fish management boundaries used in map-based queries.

COLLABORATIVE PARTNERSHIPS

Technical expertise, development, and hosting of map-based tools were delivered to the following organizations.

- **Klamath Reservoir Reach Restoration Prioritization Project**. Conducted spatial analysis and created an application to identify cold water refugia on the mainstem of the Klamath River.
- **National Estuarine Research Reserve (NERR) Science Collaborative Project**. Mapped estuarine extents and habitats within the NERRs.
- **National Fish Habitat Partnership (NFHP)**. Upgraded their project tracking system to align with reporting needs of Congress and the NFHP Board.
- **Pacific Marine & Estuarine Fish Habitat Partnership (PMEP)**. Supported the Partnership's nearshore marine and estuarine habitat data and tools.
- Spatial data products were published through the GeoPlatform for the Alaska Fish Habitat Partnership, the California Fish Passage Forum (Forum), and the Coastal Cutthroat Trout Interagency Committee.

FUNDING SOURCES AND STAFF

BPA, USFWS, NOAA, USGS, and BOEM project-fund a Senior GIS Analyst and a GIS Specialist. PSMFC additionally funds a GIS Manager and a second GIS Specialist.

Figure 3. PSMFC's GeoPlatform hosts spatial data, web services, and map-centric applications.

The Regional Mark Processing Center

The Regional Mark Processing Center (RMPC) serves Pacific Coast federal, state, tribal, and private fisheries agencies by processing and exchanging information of fish inserted with a coded wire tag (CWT), including data on fish release location, size, recovery date, and summarized information about the number sampled.

CWT data inform management and the recovery of salmon protected under the ESA; inform mitigation for lost harvest and hatchery effectiveness under the Northwest Power Act; and are used by PSC technical committees to evaluate management actions, escapement goals, enhancement programs, and conservation efforts to prevent overfishing, ensuring appropriate harvest opportunity for all user groups.

RMPC adopts and coordinates the implementation of new data formats, software, hardware, and personnel training to meet evolving CWT informational needs by PSC in support of the Pacific Salmon Treaty and other management and mitigation agencies. RMPC, designated as the sole U.S. database to exchange CWT information with Canada

in PSC format, also maintains the Regional Mark Information System (RMIS) database, and coordinates the acquisition and validation of agencies' data submitted to RMIS.

RMIS UPGRADES

- A webservice application programming interface (API) was implemented for expeditious data uploads.
- Initiated expansion of the API's functionalities to support auto-validation of submitted data.
- Activated process to update the RMIS database for alignment with PSC-requested modifications.

ANNUAL RMPC MEETING

Fourteen agencies and tribes deliberated data integrity and explored opportunities to bring genetic sampling data into RMIS.

CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION (CTUIR)

CTUIR became a new RMIS reporting agency assigned responsibilities for submitting CWT hatchery fish release data, fish recovery data, and catch/sample data. CTUIR was provided with its own tag prefix for tagging hatchery release groups and a coordinator code for untagged groups.

FUNDING SOURCES AND STAFF

RMPC is funded by BPA, USFWS, and the NOAA Fisheries Federal Assistance Program under the Anadromous Fish Conservation Act (AFCA) and the IJA. Staff consists of one Program Manager, two IT Database Management Specialists, and one Data Management Specialist.

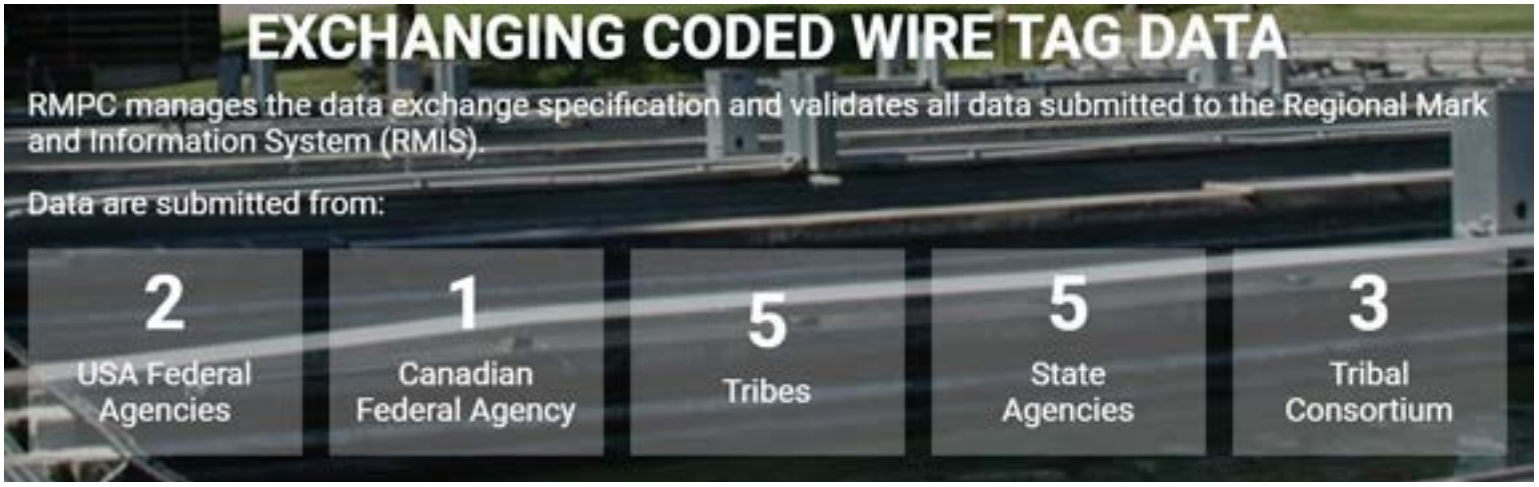


Figure 4. RMIS data contributors. Credit: Dan Webb/PSMFC

StreamNet – Fish Data For the Northwest

StreamNet is a collaborative program that enables access to regionally coordinated, fish-related data from tribal, state and federal agencies, and organizations. These data inform stock assessments and meet reporting requirements for BPA, NOAA Fisheries, and the Northwest Power and Conservation Council (NPCC). StreamNet also serves as a repository for non-standardized information for BPA, NPCC, the Hatchery Reform Project-Hatchery Scientific Review Group, and other entities. To advance the quality, management, and exchange of monitoring data, StreamNet supports data providers and co-leads a number of regional initiatives.

THE COORDINATED ASSESSMENTS PARTNERSHIP (CAP)

Equally administered by StreamNet and the Pacific Northwest Aquatic Monitoring Partnership (PNAMP), CAP efficiently shares and facilitates access to standardized derived information, such as fish population-scale high-level indicators (HLIs) and supplemental metrics.

Hatchery Coordinated Assessments Exchange (HCAX) Fish HLI Data Exchange Standard. This data system is currently in development, with expected use in 2024.

CAP Workshop. In Spring 2023, fifty-seven professionals representing twenty-four tribes and agencies convened to review and discuss HCAX successes and challenges. Concurrently, Dr. Sammy Matsaw, Jr. presented *Cultural Competency and Relevancy and an Indigenous Knowledge Workshop* for attendees representing twenty entities.

2022 Emerging Technologies Information Sessions. StreamNet and PNAMP co-hosted the hybrid event series with fifty-two local and international expert presentations attended by one hundred eighty participants.

FUNDING SOURCES AND STAFF

BPA funds StreamNet, with additional financial support secured from the NOAA Fisheries Federal Assistance

Program under the AFCA and the IJA, and EPA's Exchange Network grant for specific tasks. StreamNet's staff consists of an IT Database Management Specialist, an IT Applications Software Specialist, and a Data Management Specialist.

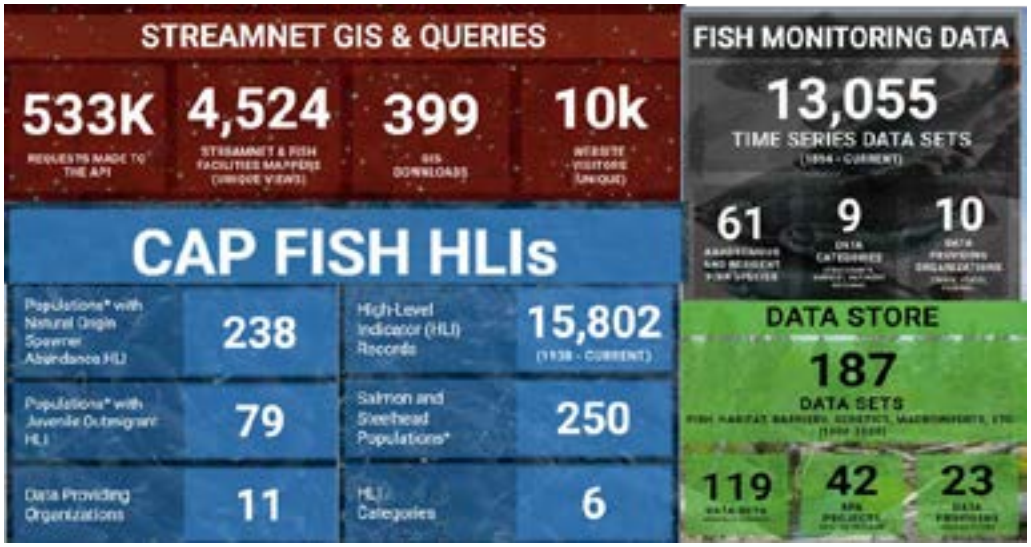


Figure 5. StreamNet statistics.

Collaborative Data Systems for Salmon Recovery

Mitigation and recovery efforts rely on shared data access to assess progress, inform decisions, and address uncertainties. The Fish Inventory System (FINS), the Klamath Basin Fisheries Collaborative (KBFC), and the Salmon Data Discovery Tool (SDDT) each support different collaborative needs for informed recovery and management along the West Coast. FINS stores standardized hatchery information for the Lower Snake River Compensation Plan (LSRCP), the Hells Canyon Settlement Agreement, and the Snake River Basin hatchery programs. KBFC's Database specializes in exchanging standardized fish data to evaluate the effects of fisheries management, ecosystem restoration, and impending dam removal. SDDT's ongoing development aligns with Open Source and Open Data principles by applying a standardized spatio-temporal enhanced metadata and grouping categories to facilitate discovery of saltwater, freshwater, and transitional data sets and derived indicators.

FINS

A new website was released to better communicate the program's purpose and tools. A Parentage-Based Tagging and Tracking Rate Tool (beta version) was added to the web-based query tools to visualize fish hatchery paths and to calculate rates.

KBFC

Operating guidelines were adopted that reflect the members' shared purpose, objectives, and data exchange agreement. A draft version of the KBFC Database's controlled vocabulary was developed.

SDDT

A functional prototype was completed that will be used to receive constructive review from NOAA, PFMC's Salmon Technical Team, and natural resources co-managers.

FUNDING SOURCES AND STAFF

The USFWS LSRCP Office, Idaho Power Company, the Idaho Department of Fish and Game (IDFG), and the Nez Perce Tribe fund FINS' staff: one Project Manager, one IT Supervisor Database Management Specialist, and two IT Application Software Specialists. A USFWS grant awarded to the Scott River Watershed Council supports KBSC's IT Application Software Specialist and two Data Management Specialists. NOAA subsidizes SDDT staff: one IT Application Software Specialist and two Data Management Specialists.

Figure 6. Website logos for the new KBFC website, FINS, and the SDDT prototype.

Recreational Fisheries Information Network

RecFIN coordinates the collection, integration, and reporting of marine recreational fisheries data and information for the U.S. West Coast. Working collaboratively with CDFW, the Oregon Department of Fish and Wildlife (ODFW), the Washington Department of Fish & Wildlife (WDFW), NOAA Fisheries, PFMC, and other fisheries organizations, RecFIN provides recreational catch/effort estimates and sample data for effective fisheries management and analysis at the state and federal levels. By consolidating and integrating disparate data sets from state and federal recreational sampling programs, RecFIN serves as the comprehensive repository for Pacific Coast marine recreational fisheries data: value-added analyses, interpretation, and accessible online reporting tools for fishery managers, stock assessors, economists, researchers, and the public.

With partner organizations, RecFIN developed new reports, tools, metadata products, and integrated additional data sources for an enhanced database and reporting system.

MEMBER STATE SURVEYS

Funds were distributed to California, Oregon, and Washington for their recreational fishery survey programs: coastwide dockside surveys and CDFW and ODFW onboard Commercial Passenger Fishing Vessel surveys. The three Member States are each approaching Marine Recreational Information Program (MRIP) survey certification by NOAA Fisheries. CDFW advanced in transitioning from telephone to online survey and estimation methods and continues efforts to employ electronic data collection. WDFW is progressing with implementation of video-based fishing effort estimation.

2023 REGIONAL IMPLEMENTATION PLAN

Members of the RecFIN Technical Committee revised the MRIP Regional Implementation Plan for the Pacific Coast. The Plan addresses the need to enhance data for regional fishery management and science, and integrates West Coast data collection and reporting efforts with the goals of the MRIP.

WDFW OCEAN SAMPLING PROGRAM WEB APPLICATION PROGRAMMING INTERFACE (API) DATA UPLOAD

Ocean Sampling Program data transfer was modernized with a web API, increasing data integrity, security, and availability. The automated process reduces manual workload and has resulted in improved reporting timeliness and data quality. The project serves as a proof of concept for future web API implementation with CDFW and ODFW.

FISH IDENTIFICATION MOBILE APPLICATION

RecFIN and WDFW launched the West Coast Fish ID mobile app for identification of marine fish species. It delivers high-quality images, illustrations, and descriptions for Pacific Coast fish, as well as a rockfish dichotomous key and interactive glossary. WDFW is pursuing the incorporation of artificial intelligence for advanced species identification from angler-provided images.

OUTREACH AND EDUCATION

Education of marine recreational anglers remained a fishery management priority for increasing use of barotrauma reduction devices and improving angler identification of harvested rockfish. PSMFC, state and federal managers, and private fishing organizations produced and distributed more than 6,000 laminated rockfish identification sheets and 3,000 descending devices to Pacific Coast anglers.

FUNDING SOURCES AND STAFF

RecFIN is primarily funded by the NOAA Fisheries MRIP, with additional resources obtained through the NOAA Fisheries Information System and the NOAA Fisheries Federal Assistance Program under the AFCA and the IJA. PSMFC staff includes one IT Database Management Specialist and three Oregon coast Fisheries Technicians. Partial funding is allocated for one IT Database Software Specialist, one Data Management Specialist, and one Administrative Support Specialist.

Collaborative Field Research, Monitoring, Management, and Coordination

PSMFC partners with federal, state, and tribal entities to more effectively and efficiently understand anadromous fish populations and their environments. Anadromous species are currently subject to extreme changes in historic, seasonal conditions, from weather to waterflow, and PSMFC provides staff in collaborative support of the ongoing monitoring of habitats, streamflow, and permeance, inclusive of genetic and parthenogenic analysis, in Idaho, Oregon, and Washington.

CRB

PSMFC data management personnel utilize collaborative data systems in Boise, ID.

EAGLE FISH GENETIC LAB (EFGL)

EFGL, primarily staffed by PSMFC personnel, provides comprehensive genetic information to biologists and managers for the conservation and management of Idaho's native fish species.

EAGLE FISH HEALTH LAB
Through the development of biosecurity measures and risk management strategies, this Lab predicts and prepares for diseases that threaten fish.

EAGLE FISH HATCHERY
The survival of Snake River Sockeye salmon and the conservation of critical genetic information have been the primary purposes of this IDFG hatchery since 1991.

NAMPA RESEARCH ANADROMOUS AGEING LAB (NRAAL)
NRAAL collects, processes, and ages fish structures for critical guidance on juvenile and adult life stages of Steelhead, Chinook, and Sockeye salmon.

PSMFC FISHERIES MONITORING AND RESEARCH EFFORTS
Data collection by PSMFC field staff is integral to long-term monitoring and research efforts with IDFG in Eagle, Lewiston, McCall, Nampa, and Salmon, ID, and with WDFW in Cathlamet, Pasco, and Ridgefield, WA.

STREAM-ROAD CROSSING ASSESSMENT
The FLOW PERmanence mapping platform was used to conduct surveys in Idaho and Oregon.

FUNDING SOURCES AND STAFF
Financial support was received from BPA, IDFG, NOAA, USGS, and the Columbia River Inter-Tribal Fish Commission. PSMFC staff includes three Supervisory Biologists, eight Fisheries Biologists, four Data Management Specialists, twenty-six Fisheries Technicians, and from four to nineteen seasonal Fisheries Technicians.

Figure 7. Top left: Fisheries Technicians clearing leaf debris from weir for post-spawn fluvial Bull Trout on Bear Valley Creek, Lemhi Watershed, ID. Credit: Alex Stacy/PSMFC 2023. Top right: Alex Stacy with a Steelhead on Upper Salmon River, ID, raft electroshocking for species abundance and salmonid tagging and monitoring. Credit: Hunter Distad/PSMFC 2023. Bottom left: Kaitlyn Wauhkonen transporting buckets of fish to tagging shed at South Fork Salmon River, ID, rotary screw trap (RST). Credit: Tyler Warner/PSMFC 2023. Bottom right: Kaitlyn Wauhkonen at Kokanee weir on North Fork Payette River, ID. Credit: Amber Young/PSMFC 2023.

Idaho Fish-Marking Program
Since 2009, the Idaho Fish-Marking Program has marked anadromous fish at nine Idaho fish hatcheries in cooperation with IDFG and organizes operations through a main office in Lewiston, ID. Quality control studies are conducted for each fin-clipped and coded wire tagged release group. Preliminary data reports that summarize numbers of fish handled, and the numbers and types of marks and tags applied by a hatchery are uploaded to IDFG's data storage location. PSMFC staff utilize marking and tagging trailers and associated equipment and provide technical and administrative services for recruiting, hiring, and purchasing supplies.

CWT/ADIPOSE FIN CLIP
17,443,418 anadromous fish received a CWT and had an adipose fin clipped.

- 10,967,929 Spring/summer-run Chinook salmon
- 852,812 Sockeye salmon
- 5,622,677 Summer-run Steelhead

PIT TAG IMPLANTATION
The Idaho Fish-Marking Program inserted 390,357 PIT tags.

FUNDING SOURCES AND STAFF
Funding is provided by USFWS through the LSRCP and Idaho Power Company. Staff consists of one Program Manager, one Supervisory Fishery Biologist, four Fishery Biologists, five seasonal Fisheries Technicians II, and nine seasonal Fisheries Technicians I.

California Constant Fractional Marking Program
Initiated in 2007, the Central Valley Constant Fractional Marking/Tagging Program (CFM) evaluates Central Valley Chinook salmon populations listed under the ESA: the genetic and ecological effects of Central Valley hatchery programs on natural Chinook populations; the relative impacts of water project operations on both hatchery and naturally-produced Chinook; the success of restoration actions designed to increase natural production; the recovery of listed stocks of Chinook salmon; and estimates both the rate of hatchery fish spawning in the wild and exploitation rates in ocean and inland fisheries. CFM is a cooperative effort of CDFW, the California Department of Water Resources (DWR), USFWS, the U.S. Bureau of Reclamation (USBR), the East Bay Municipal Utility District, and PSMFC.

The Program ensures the marking and tagging of a representative 25% of each hatchery release group.

FALL-RUN CHINOOK

- All 30,163,152 salmon production releases were successfully processed through automated and manual marking trailers.
- 8,830,113 (29%) were coded wire tagged and adipose fin-clipped.

SPRING-RUN CHINOOK

1,447,787 (60%) of the salmon produced at the Feather River Fish Hatchery were marked and coded wire tagged.

FUNDING SOURCES AND STAFF

CFM tagging operations are funded by California DWR, CDFW, the East Bay Municipal Utility District, and USBR. Staff is comprised of one Program Manager, one Supervisory Fishery Biologist, six Fishery Biologists, and eight seasonal Fisheries Technicians.

Figure 8: Chris Townsend/PSMFC within a tagging trailer at Iron Gate Fish Hatchery, Hornbrook, CA.
Credit: Lara Erikson, PSMFC 2023

Central Valley Steelhead Monitoring Program

The Central Valley Steelhead Monitoring Program (CVSMP) is responsible for collecting data to estimate abundance and abundance trends, and to identify the spatial distribution of threatened California Central Valley Steelhead (*O. mykiss*) as listed under the ESA. The compiled information fulfills ESA's reporting requirements for status and recovery assessments. CVSMP operates in accordance with The Implementation Plan for CVSMP, a collaborative effort of state and federal agencies. CDFW is the Program's primary partner.

MAINSTEM MARK-RECAPTURE STUDY

Sampling was conducted with the use of large wire fyke traps on both sides of the Sacramento River below the confluence of the Feather River. Biological samples were obtained from 38 migrating adult Steelhead (36 hatchery-origin and 2 wild-origin) destined for the Feather River and the Upper Sacramento River Basin (USRB).

- 23 of the sampled Steelhead were implanted with a PIT tag for recapture detection at antenna arrays along the upstream migration route.

TRIBUTARY MARK-RECAPTURE STUDY

Two hundred and thirty-two juvenile and adult Steelhead were sampled to identify life history patterns and spatial distribution within the USRB utilizing acoustic telemetry that provides essential presence/absence data for a specific area and time.

- 63 Juvenile Salmon Acoustic Telemetry System (JSATS) tags were deployed in juvenile Steelhead captured in RSTs.
- 20 Pulse Position Modulation tags were deployed in adult Steelhead subsequently released into Clear Creek and the mainstem Sacramento River.
- All 232 Steelhead were implanted with PIT tags for recapture recording at antenna arrays in tributaries.

BIOLOGICAL DATA COLLECTION

During both studies, length, sex, and scale samples were collected to determine anadromy and age.

FUNDING SOURCE AND STAFF

CVSMP is entirely funded by CDFW. PSMFC staff consists of one Fisheries Biologist II (Project Lead), three Fisheries Biologist I, and seven Fisheries Technicians operating out of offices in West Sacramento and Red Bluff, CA.

Ocean Salmon Project

The Ocean Salmon Project (OSP) is a California, marine fisheries monitoring program managed by PSMFC and CDFW. OSP provides estimates of salmon landings, fishing effort, stock assessments, and hatchery data to PFMC for in-season management. The Project utilizes inland hatchery and carcass surveys to collect escapement data and scale samples for use by OSP's Scale Age Project (SAP), PFMC, and PSMFC's CFM Program.

OSP staff facilitate Commercial Passenger Fishing Vessel (CPFV) sampling (*Figure 9*) and catch effort data collection, commercial sampling, CWTs processing, ocean and inland data management, scale age training, and the OSP Data Modernization project.

ADIPOSE FIN-CLIPPED SALMON

• July 1, 2022 to the end of season: 2,756 CPFVs and 395,536 pounds of salmon were sampled.
• July 1 – November 10, 2022: 10,213 heads were processed for CWT recovery; 10,272 CWTs were successfully read twice and entered into project databases; 1,488 salmon heads were missing a CWT.

SCALE AGE READINGS

• Assignments have been completed through 2020. Assignment generation for 2021 and 2022 is in progress pending data from inland surveys.
• 6,165 scales were mounted from 16 scale age assignments; 16,819 scales were imaged from 15 scale age assignments.
• Scale age training was completed by one staff member in September 2022 and is in progress for another three.

OSP DATA MODERNIZATION PROJECT

Data entry and management programs are being updated to align with database security protocols. Phase I, data systems migration, was achieved in December 2022. Phase II, user interface and data warehouse creation, is incomplete.

FUNDING SOURCES AND STAFF

USBR, California DWR, and the East Bay Municipal Utility District provide funding. PSMFC lab staff and CDFW Environmental Scientists are full-time personnel. Seasonal PSMFC Fisheries Technicians and California Recreational Fisheries Survey staff assist during the salmon season.

Figure 9. Sarah White/PSMFC collecting a commercial sample at Pezzolo Seafood, San Francisco, CA. Credit: Katherine Osborn, CDFW 2022

Feather River Program

The California DWR Feather River Program (FRP) conducts fisheries research, monitoring, and restoration in the Lower Feather (LFR) and Yuba Rivers (YR) in compliance with federal and state ESA regulatory requirements. PSMFC supports FRP with staff and the fisheries management data required for CDFW, USFWS, and NOAA Fisheries.

FRP PSMFC staff managed studies for existing projects on the LFR and implemented a new monitoring program on the YR.

2022 LFR CHINOOK SALMON ESCAPEMENT SURVEY

• Escapement estimate of 6,573 adults was reported to CDFW and NOAA Fisheries.
• 859 Chinook carcasses were handled.
• 628 Scale and otolith samples were collected for age determination.
• 394 Genetic samples were processed.
• 273 Fish heads received CWT extraction.

2022 LFR, YR CHINOOK AND STEELHEAD REDD SURVEYS

• LFR redds were mapped by a drone for aerial footage comparison with in-river mapping.
• In-river surveys identified 3,688 redds in the LFR and 184 redds in the YR.

LFR AND YR CHINOOK RST MONITORING

• Outmigration estimates were developed.
• Mucus swabs established a new length-at-date table, distinguishing spring and fall-run juveniles.

LFR BEACH SEINE AND SNORKEL SURVEYS

These were conducted to monitor spatial and temporal trends in distribution for juvenile Chinook and Steelhead.

2023 LFR PATHOGEN MONITORING: MYXOSPOREAN PARASITE (*CERATONOVA SHASTA)*

• January to April presence and density monitoring determined spatial and temporal trends.
• Water column samples were sent to Oregon State University for testing.
• Selected wild Chinook from RST catch were tested at the USFWS California-Nevada Fish Health Center Laboratory.

2022 CHINOOK SALMON SPAWNING AT FEATHER FISH HATCHERY (*Figure 10*)

• Salmon entering the hatchery were counted; select fish were sampled for scales, fork length, fin clips, body fat content, and heads for CWT extraction.
• 2164 Adult spring-run Chinook were externally tagged to distinguish from fall-run during the 2023 hatchery spawning.

• Spring-run Chinook were injected with thiamine to alleviate the effects of Thiamine Deficiency Complex.
• Hatchery origin fish were marked with a CWT.
• 588 Spring-run and 2860 fall-run salmon pairs were spawned.

CHINOOK AND STEELHEAD TELEMETRY STUDIES

• Adult and juvenile acoustic transmitter tags were deployed to track their movement and survival in the LFR downstream to the San Francisco estuary.
• A pilot study tagged additional juvenile Chinook with smaller tags developed for use in lampreys.

LFR LOW FLOW INVESTIGATION

To estimate the abundance of Steelhead, 115 trout were caught and marked in November and December 2022.

STOMACH CONTENT SURVEY

Steelhead stomach contents were examined as part of a predation study.

CDFW'S CLASSROOM AQUARIUM EDUCATION PROGRAM

PSMFC staff participated in teacher trainings, field trips, and materials distribution.

FUNDING SOURCE AND STAFF

California DWR provides all funding. PSMFC's staff in Oroville, CA includes one Supervisory Fish Biologist, one Fish Biologist III, one Fish Biologist II, five Fish Biologist I, two Fisheries Technician II, and two Fisheries Technician I, with funding available for six additional Fisheries Technician I positions as needed.

Figure 10: Blake Ramaglia/PSMFC assisting with spawning operations at Feather River Fish Hatchery.
Credit: Dani Hartwigsen, PSMFC 2022

Lower Feather River Sturgeon

The LFR Sturgeon program collaborates with California DWR for long-term annual monitoring of adult Green sturgeon in the LFR. The collection of baseline information evaluates adult migration barriers; the effects of Oroville, CA facilities operations on passage success and distribution; migration patterns including residence times and factors affecting them; distribution and habitat preferences; estimation of annual abundance; identification of potential spawning grounds for egg and larval surveys; and determination of spawning frequency. Resultant data is shared with California DWR, CDFW, the Federal Energy Regulatory Commission, and NOAA to inform management decisions for ongoing habitat enhancement.

BI-WEEKLY ADAPTIVE RESOLUTION IMAGING SONAR (ARIS) SURVEYS

Monitoring was conducted within ten survey areas.
• 109 Sonar surveys were implemented.
• 421 Sturgeon detections were recorded.
• Surveys documented passage success, distribution, and population size and identified spawning congregations.

ADULT STURGEON ACOUSTIC TELEMETRY STUDIES

Twenty-one acoustic receivers were deployed and maintained within the study area.
• Three sturgeon were captured, tagged, and monitored in 2023, in addition to 30 previously tagged adult sturgeon.
• California DWR and Environmental Science Associates Inc. were provided summary telemetry passage data from the Sunset Pumps rock weir, 2009 to the present.

SPAWNING SURVEYS

Initiated in May 2023, eight Green sturgeon eggs were sampled from two different spawning events using artificial substrates and D-style nets.

UNDERWATER VIDEO SURVEYS

These were used to elucidate species as needed.

DATA/METADATA

Data were archived into a cloud-based file sharing platform for long-term storage.

ADDITIONAL ROVING ARIS SURVEYS

In addtiion to LFR surveys, the Program estimated weekly populations of adult Chinook salmon at Fish Barrier Dam and Thermalito Afterbay Outlet.

FUNDING SOURCE AND STAFF

California DWR funds the LFR Sturgeon program. PSMFC staff consists of one Supervisory Fishery Biologist, one Fishery Biologist II, and two Fishery Biologist I, with funding available for an additional two Fishery Technician II positions.

Lower Yuba River Monitoring

The Lower Yuba River Accord (Accord) is a comprehensive settlement and flow agreement that ensures long-term sustainable water for agricultural and environmental needs on the lower YR in California. A monitoring and evaluation plan was developed to evaluate the efficacy of the prescribed Accord flow schedules and their protectiveness of lower YR aquatic resources. PSMFC staff partner with the Yuba County Water Agency (YCWA), USACE, and CDFW to analyze adult salmonid spawning and redd activity; study juvenile salmonid predation and survivorship; monitor river temperatures and turbidities; supplement salmonid spawning grounds with gravel augmentation; and digitally map river bottom elevations.

DAGUERRE POINT DAM (DPD)

Underwater video cameras recorded a net total of 3,155 upriver Chinook salmon passing through the north and south USACE fish ladders.

ENGLEBRIGHT DAM RESERVOIR (EDR)

Redd Monitoring Efforts enabled staff to map and measure 20 Chinook salmon redds below EDR.

Migration Corridor Water Temperature Monitoring. Groundwater substitution schedules were implemented for 2022 following collected data from 2021 that revealed dangerously high summer river water temperatures for migrating salmon. Staff maintained a 27-logger temperature array spanning the entire lower YR below EDR. Collected July-September 2022 data disclosed water temperatures nearly 7°C cooler.

DPD AND EDR MONITORING

JSATS study.

- 2022:
  - In the second year of a three-year study, six acoustic hydrophone receivers were added for an array total of 24 receivers.
  - Cumulative survival along 23 river miles was estimated at 32%.
- Spring 2023: JSATS monitoring efforts continued with 474 fish tagged and 210 released at both EDR and DPD.

New turbidity probes were purchased and installed at both EDR and DPD for the ongoing collection of turbidity data.

FUNDING SOURCES AND STAFF

YCWA contributed the majority of staff funding, with additional financial support provided by USACE. Staff consists of one Data Management Specialist II, two Fishery Biologist 1, and two Fishery Technician 1.

Mendocino Coast Regional and Lifecycle Monitoring Program

The Mendocino Coast Regional and Lifecycle Monitoring Program (MCRLCMP) monitors three populations of salmonids that are listed as either threatened or endangered under the federal and State of California ESA: the Central California Coast Coho salmon (*O. kisutch*) Evolutionarily Significant Unit (ESU), the California Coastal Chinook salmon (*O. tshawytscha)* ESU, and the Northern California Steelhead trout (*O. mykiss*) DPS. Northern California rivers and streams in coastal Mendocino County are home to the freshwater life stages of these populations. MCRLCMP generates population estimates at multiple life stages and spatial scales, assesses status at ESU and DPS levels, and provides long-term trends and analysis for management agencies. CDFW, Redwood Timber Company, and Mendocino Redwood Company are partnering agencies.

ADULT MONITORING

MCRLCMP uses a two-stage approach to estimate adult spawning escapement, the primary measure of recovery as set by NOAA under the ESA.

First Stage Sampling. Regionwide spawning ground surveys are conducted on foot or by kayak to estimate escapement based on the observed count of redds, the gravel beds where salmonids lay their eggs. Each year, approximately 15% of the 522 miles of available spawning habitat is sampled bi-weekly.

Second Stage Sampling. Escapement estimates are collected from several Lifecycle Monitoring Stations (LCMs) through either mark-recapture studies or census counts. Second stage estimates represent true adult escapement, establishing spawner to redd ratios to calibrate first stage sampling.

- 1,161 miles of stream/redd counts were surveyed by Program personnel.

JUVENILE MONITORING

Annual estimates of smolt abundance, growth, and survival are derived from electrofishing and outmigrant trapping. This data produces measures of freshwater and marine influence on observed trends in abundance.

- 10,000 juvenile salmonids were marked with PIT tags at LCMs.

FUNDING SOURCES AND STAFF

Funds are awarded through the CDFW Fisheries Restoration Grants Program with additional contributions from CDFW, Mendocino Redwood Company, and Redwood Timber Company. PSFMC staff includes one Supervisory Fisheries Biologist, one Fisheries Biologist 1, and eight Fisheries Technicians.

Ten Mile River Restoration Effectiveness Monitoring

Since 2013, PSMFC and The Nature Conservancy (TNC) have collaborated with Mendocino County, CA landowners to restore degraded aquatic habitat in the Ten Mile River watershed for the recovery of the Central California Coast Coho Salmon (*O. kisutch*), an ESU under federal and state ESAs. PSMFC collects biological monitoring data to evaluate the success of restoration efforts and to inform future restoration planning. Large-scale juvenile rearing habitat improvement projects have been implemented since 2018. Although original restoration efforts were centered on the South Fork Ten Mile River, the Project has expanded to other areas within the Ten Mile River watershed.

RSTS - LOWER SOUTH FORK TEN MILE RIVER

Data collected from two traps generated annual outmigrant estimates and assisted the evaluation of residence time in the restored reach of habitat between the two traps.

PIT TAG ANTENNA ARRAYS

- Seven arrays operated within the basin to assess fish movement patterns, survival, and habitat utilization.
- Two additional arrays were constructed at the inlets of habitat restoration projects for expanded monitoring.

COHO SALMON PIT TAGGING - OUTMIGRATION PERIODS

- Summer and Autumn: 3,000 juvenile salmon, captured by electrofishing or seining surveys, were detected on arrays or in RSTs and released.
- Spring: 7,000 juvenile salmon were tagged.

SPAWNING GROUND SURVEYS - SOUTH FORK TEN MILE RIVER WATERSHED

Bi-weekly surveys were conducted to estimate adult escapement within 25 miles of spawning habitat.

FUNDING SOURCE AND STAFF

TNC provides funding through private donations and grants awarded by CDFW and NOAA. Project staff includes one Supervisory Fisheries Biologist, one Fisheries Biologist 1, and two Fisheries Technicians.

Figure 11. Biologist Nadia Brunner/PSMFC inspecting read range of PIT tag antennas in engineered off-channel pond on South Fork Ten Mile River, Medocino County, CA. Credit: Ellory Loughridge, TNC 2021

Sacramento Rotary Screw Trap Project

In association with the USFWS Comprehensive Assessment and Monitoring Program, PSMFC operates RSTs to monitor salmonids on the Lower American River at Watt Avenue and on the Stanislaus River at Caswell Memorial State Park (Caswell). The Project is conducted within NOAA Fisheries' Reasonable and Prudent Alternatives actions and the Central Valley Project Improvement Act to inform and evaluate management action effectiveness in habitat restoration and water flow management for Steelhead trout (ocean run *O. mykiss*) and fall-run Chinook salmon. Collected data generates counts of *O. mykiss* caught by the RSTs and estimates the total outmigration of juvenile fall-run Chinook salmon. Incidental catch data also informs estimates of outmigration for winter, spring, and late fall-runs of Chinook. Genetic samples are collected for analysis by other projects.

O. MYKISS TROUT AND UNMARKED JUVENILE CHINOOK CAPTURED

- Lower American River RST: 259 trout and 70,364 salmon
- Caswell RST: Two yearling trout and 2,293 salmon

GENETIC SAMPLES COLLECTED

Chinook. Upper caudal fin clips from unmarked salmon contributed to CDFWs genetic tissue archive, the single nucleotide polymorphism genetic run assignment, and the parentage-based tagging and early fry release study.

Lamprey. Opportunistic fin clips advanced the University of California Davis Genomic Variation Laboratory's gene flow and population structure study.

PROJECT COMMUNICATION

CalFish Webpages. Upgrades to both the Lower American River and Caswell RST pages better defined project goals and provided easier access to previous annual reports, raw and summary data, and other, important project information.

Stanislaus River Salmon Festival Facebook Page. Seasonal updates and educational information on Stanislaus River fisheries work were posted monthly.

FUNDING SOURCE AND STAFF

USFWS is the sole funding source and supplied additional trap operations assistance during the 2023 sampling season. PSMFC Project staff consists of one Supervisory Fishery Biologist, one Fishery Biologist, and six Fisheries Technicians.

Figure 12. Top Left: Juvenile Rainbow trout, Lower American River, Sacramento, CA. Bottom Left: Juvenile Chinook salmon, Stanislaus River near Caswell Memorial State Park, Ripon, CA. Right: RSTs, Stanislaus River near Caswell Memorial State Park, Ripon, CA. Credit: Hunter Morris, PSMFC 2023

Electronic Monitoring and Reporting

Alaska Fixed Gear Electronic Monitoring Program

The Alaska Fixed Gear EM Program was established by NPFMC and NOAA to address concerns raised by vessel owners and operators with space limitations on small vessels (less than 60 feet in length) who participate in the partial coverage category of the observer program. These vessels now have the option to join the EM selection pool and utilize an EM system, an onboard technology that records fishing activity using sensors and video cameras, for catch and bycatch monitoring in place of a human observer. Collected EM data supplements observer data compiled from other fixed gear vessels for use in catch estimation, fishery management, and stock assessment.

Table 1. Staff completed review of 276 trips and 4,948 hauls.

TRIP GEAR	TRIP COUNT	REVIEWED HAUL COUNT
Longline	175	625
Single Pot	33	4063
String Pot	68	260

FUNDING SOURCE AND STAFF

NOAA provides funding for this program. Staff is comprised of one Project Manager, three EM Reviewers, and one part-time Logbook Entry Technician.

Alaska Pollock Trawl Electronic Monitoring Program

In collaboration with NPFMC and NOAA Fisheries, participants in the Bering Sea and GOA pollock fishery operate under an EFP to evaluate the efficacy of using EM as a cost-effective and operationally efficient alternative to at-sea human observers for monitoring compliance with salmon PSC retention requirements.

To verify compliance with maximized retention requirements, staff review the EM video recordings to capture data of any at-sea discards, supplementing monitoring efforts of shoreside observers who collect catch and biological data. Implementation of compliance monitoring will reduce variance in salmon PSC estimates by shifting

at-sea observers to shoreside processing plants, thereby replacing at-sea samples with more accurate shoreside census counts. The Pollock Trawl EM program is anticipated to transition into a regulated program in January 2025.

Table 2. Staff completed review of the following.

FISHERY	TRIP COUNT	HAUL COUNT
Pollock Trawl	1266	3365

Dungeness Crab Vessel Tracking

Increased monitoring of the U.S. West Coast Dungeness crab fisheries has become essential due to elevated frequency of whale entanglements with fishing gear during the last decade. The use of cost-effective Global Positioning System (GPS) data loggers for vessel tracking provides information to decrease the interactions between whales and fishing activity. This marine monitoring also assures seafood safety when location-specific public health fishing closures are issued for high domoic acid levels in crabs. As all three West Coast states are in the process of requiring vessel tracking of their crab fleets, PSMFC is coordinating with state Dungeness crab fisheries managers to implement the combined administration of vessel monitoring, data transmission, and data management through PSMFC on an ongoing basis.

PSMFC has made significant progress in several major areas.

FIELD TESTING GPS LOGGERS

Units purchased from multiple vendors were placed on volunteer vessels for ease of use and data quality evaluation by fishers.

West Coast Electronic Fish Tickets and Logbooks

WEST COAST ELECTRONIC FISH TICKETS (E-TIX)

Fish tickets document commercial vessel landings from California, Oregon, and Washington fish buyers receiving these landings. In 2008, PSMFC developed and currently maintains an E-Tix system as a paper ticket alternative for all twenty-seven U.S. West Coast fish ticket types. Maintenance and upgrades of the E-Tix system occur annually and as requested by E-Tix users.

FUNDING SOURCE AND STAFF

NOAA funds three, part-time PSMFC staff members in Portland, OR.

FUNDING SOURCE AND STAFF

This program is funded by United Catcher Boats from a NFWF grant. Staff consists of a Project Manager, an EM Reviewer and a part-time Logbook Entry Technician. Additional EM personnel periodically assist with tasks.

STATE COLLABORATION

Regular and iterative work with each of the West Coast state agencies has developed and established specific goals and requirements for each management agency.

BUILDING DATA AND ANALYSIS INFRASTRUCTURE

A new vessel tracking process was initiated to automatically retrieve and store location information in a secure database. PSMFC is testing analytical methods to filter these data: by vessel speed, heading, or other characteristics to identify fishing activity.

VESSEL LOCATIONS TOOL

A GIS portal was created to view the locations of vessels.

FUNDING SOURCES AND STAFF

The NOAA Information System Program and the NOAA Fisheries Federal Assistance Program under the AFCA and the IJA fund two part-time staff at PSFMC's Portland headquarters. Pivotal support is received from Commission subcontractors.

Figure 13. Smartphone logbook application window.

WEST COAST ELECTRONIC LOGBOOKS

Completed fisherman logbooks support analyses of catch locations and bycatch hotspots, analyses on gear usage by area, stock assessments, and other related requirements. NOAA's January 2023 electronic logbook regulation for the Pacific Coast Groundfish fishery directly applies to open access and limited entry fixed gear sectors, as well as those vessels that fish with non-trawl gear in the shore-based IFQ Program.

NON-TRAWL GROUNDFISH FISHERY - NEW ELECTRONIC LOGBOOK APPLICATION

PSMFC's non-trawl groundfish electronic logbook and associated database were designed in conjunction with NOAA and launched in January 2023. The application is compatible with smartphones, tablets, and personal computers and regularly updated with new features.

Collaboration.

- NOAA and state fisheries managers were consulted for specific information to be collected.
- Contractors assisted with the application's design and development and contributed to the associated Structured Query Language relational database.
- Fishers provided fishery methodology and recommendations for simplified recording and field-tested the application for improvement.

Ongoing Support. Fishers receive logbook assistance and report problems. Approximately sixty-four users have submitted logbooks through the application.

FUNDING SOURCE AND STAFF

Funding is provided by NOAA. Two part-time staff receive significant support from contractors.

West Coast Electronic Monitoring Program

Developed under the guidance of NOAA Fisheries WCR and PFMC, the West Coast Groundfish EM Program serves as an alternative monitoring solution for vessel owners participating in the Groundfish Trawl CS Program. The CS Program mandates 100% at-sea monitoring for every fishing trip, relying on IFQs to track all catch and bycatch of fishery-managed species. This requirement has imposed financial burdens on some vessel owners due to the high cost of human fisheries observers. The West Coast EM Program was established to offer a cost-effective and operationally flexible substitute for human observers while maintaining vessel compliance with the CS Program requirements.

The EM systems are comprised of video cameras, a GPS, and gear sensors. They record fishing activity onto removable hard drives that are reviewed by EM staff to collect species discard data.

Table 3. Staff completed review of 1,644 trips and 6,378 hauls.

FISHERY	TRIP COUNT	HAUL COUNT
Bottom Trawl	226	1370
Midwater Trawl	1304	3903
Pot	114	1105

FUNDING SOURCE AND STAFF

NOAA funds this program. Staff consists of one Project Manager, four EM Reviewers, one part-time Data Analyst, and one part-time Logbook Entry Technician.

Habitat

Caltrans Fish Passage Assessment Program

The California Department of Transportation (Caltrans) Fish Passage Assessment Program operates as a Highways Code requirement to identify in excess of 6,000 anadromous fish passage barriers in the California State Highway System. The Program evaluates and measures the effectiveness of all crossing facilities within the present and historical range of salmon and Steelhead for potential barriers to upstream spawning habitat. Caltrans partners with PSMFC and the California Conservation Corps (CCC) to collect and manage the assessment data used by the California Fish Passage Advisory Committees (FishPAC) to prioritize and complete remediation of fish passage barriers.

PASSAGE ASSESSMENT COMPLETION

Between January 1, 2022 and December 31, 2022, PSMFC staff and CCC performed 1,190 First and Second Pass Assessments of State Highway System fish crossing facilities.

FUNDING SOURCE AND STAFF

California state funds support the Caltrans Fish Passage Assessment Program. PSMFC staff is comprised of three Fishery Biologists and two Fisheries Technicians who conduct fish passage assessments in Northern California, the Central Valley, and Southern California. Two Data Management Specialists perform quality assurance/quality control for all assessment data. One Applications Software Specialist enters and manages data for the CDFW Passage Assessment Database (PAD).

Figure 14. Pre-construction (barrier), Stonybrook Creek, Highway 84, Alameda County, CA. Credit: Caltrans 2018

Figure 15. Post-construction (remediation), Stonybrook Creek, Highway 84, Alameda County, CA. Credit: Caltrans 2021

Fish Habitat Program

Through diverse projects, PSMFC's Fish Habitat Program initiates, protects, and restores fresh, estuarine, and marine water habitats that impact fish survival and reproduction. Habitat conservation, an essential element of regulatory and non-regulatory federal and state fishery programs, supports implementation of MSA's mandate to protect Essential Fish Habitat and Habitat Areas of Particular Concern. The Habitat Program advises leaders, informs policy, and fosters collaboration with federal, state, and tribal entities, watershed councils, forest service stewardship groups, estuarine and Coho salmon associations, land conservancies, and the general public. Partnering with the recycling industry, the Program actively assists coastal communities and fishers to reprocess fishing nets, gear, and other marine debris.

CLIMATE PLANNING AND RESILIENCY

The Habitat Program addresses climate change impacts involving ocean acidification, hypoxia, and sea level rise that affect already threatened or endangered fish species. Kelp and sea grass conservation has been a continuous issue of concern.

BEAVER DAM CONSERVATION AND RESTORATION

Ongoing efforts conserved and restored Beaver-modified areas. Beaver dam construction improves water quantity and habitat for threatened Coho salmon and Steelhead.

PMEP

PSMFC staff led a significant tidal swamp restoration survey project whose research is anticipated to influence successful tidal swamp efforts on the U.S. West Coast. The results will be published and distributed to regional restoration groups and presented at the Coastal and Estuarine Restoration Conference in November 2023.

YAQUINA AND ALSEA BAYS TIDAL SWAMP AND MARSH PROJECTS

The Habitat Program interacted with the Oregon Watershed Enhancement Board, landowners, and other community partners to map, model, plan, and prioritize long-term tidal swamp and marsh conservation and restoration projects in landward migration zones that are future tidal wetland habitats for juvenile salmonids under sea level rise.

FUNDING SOURCES AND STAFF

The Fish Habitat Program receives funds from the USFWS Wallop-Breaux Sport Fish Restoration program and from the NOAA Fisheries Federal Assistance Program under the AFCA and the IJA. Project funding was provided by the Oregon Watershed Enhancement Board and the Siuslaw and Coos watersheds. The Program is administered by a Program Manager.

Monitoring and Evaluation of Salmonid Habitat Restoration

The Monitoring and Evaluation of Salmonid Habitat Restoration (MESHR) program independently evaluates restoration projects in cooperation with the CDFW Fisheries Restoration Grant Program (FRGP). FRGP improves habitat quantity and quality of declining California salmonid populations in coastal counties including Del Norte, Humboldt, Marin, Mendocino, Napa, Siskiyou, Sonoma, and Trinity.

MESHR staff conduct pre-treatment monitoring of restoration project areas prior to project implementation, but during the same year as construction. A random sample of at least 10% of projects must be monitored each year based on region and project type; the project sampling rate is routinely higher. Project monitoring concentrates on the structural integrity and stream morphology responses

to restoration work. Post-treatment effectiveness monitoring occurs three years after project completion to document the effects of high winter flows. Results are reported to permitting agencies and the restoration community.

FRGP RESTORATION PROJECTS MONITORING

- 50% of implemented restoration projects were monitored in 2022.
- 41.67% of implemented restoration projects were selected for monitoring in 2023.

VALIDATION MONITORING - SNORKEL AND SPAWNER

Surveys validated presence or absence of fish in previously inaccessible habitat.

- 18 validation surveys were scheduled for 2023.

CASE STUDIES

Annual reports summarize project objectives and outcomes following post-treatment effectiveness monitoring.

EFFECTIVENESS MONITORING DATA

MESHR provides quality control oversight of all WebGrants implementation data each year. An annual report summarizing monitoring data and required permits is submitted to USACE, NOAA Fisheries, and the Regional Water Quality Control Board.

FUNDING SOURCE AND STAFF

MESHR is funded by a CDFW FRGP grant that is resubmitted and approved every one to three years. PSMFC staff is comprised of three Fisheries Biologists and one seasonal Fisheries Technician.

National Fish Habitat Partnership

Since its establishment as a federal program in 2006, NFHP has been entrusted to conserve healthy aquatic systems through national leadership and ongoing coordination with federal and state agencies, tribes, regional associations and commissions, universities, NGOs, and private companies. In 2020, the National Fish Habitat Action Plan was codified by America's Conservation Enhancement Act: National Fish Habitat Conservation Through Partnerships, resulting in enhanced NFHP goals to restore the overall health of fish and other aquatic organisms by increasing the quality and quantity of fish habitats.

REGIONAL FISH HABITAT PARTNERSHIPS (FHPs)

NFHP and its network of twenty FHPs have directly contributed project funding to 1,283 projects in 50 states. PSMFC is the fiscal agent for the following three.

PMEP released a state of the knowledge report, *U.S. West Coast Nearshore Fish Habitat Use by Fish Assemblages & Select Invertebrates* and supporting 2023 biotic and substrate spatial data developed by PMEP and PSMFC that NOAA Fisheries is applying to West Coast rocky reefs information updates.

The **Forum** and the Salmonid Restoration Federation organized the Klamath Fish Passage Summit to celebrate the pending removal of four, Klamath River Dams to restore natural migration.

The **Pacific Lamprey Conservation Initiative (PLCI)**, a collaboration of Native American tribes, federal, state, municipal and local agencies, and NGOs, protects viable populations. The culturally significant lampreys are listed as a tribal trust species by USFWS. PLCI hosted both the Lamprey Summit V and the 6th Annual Lamprey Information Exchange in December 2022.

NFHP PROJECT TRACKING SYSTEM

PSMFC's GIS Center administers and maintains NFHP's GeoPlatform and their related database which, in partnership with USGS, was updated to better align with ongoing requirements and improved reporting capability to Congress and NFHP's Board.

FUNDING SOURCES AND STAFF

USFWS, NOAA Fisheries, and USGS contribute funding; USFWS specifically funds FHP coordination contracts. A PSMFC Senior Program Manager serves on PMEP's Board and FHP committees. PSMFC GIS personnel provide data management support at national and regional levels. Three FHP regional partnership coordinators are contracted through PSMFC.

Figure 16. NFHP project locations and funds status.

Non-natal Rearing

The Non-Natal Rearing project was established in 2022 to evaluate ephemeral tributaries of California's USRB that had been identified as potentially valuable salmonid nursery habitat, providing refugia during winter and spring months for migrating and over-wintering fry, parr, and smolt. Tributaries are assessed for restoration potential to inform restoration measures and enhanced fish passage, stream flow, and degraded habitat. Flow regime is analyzed in creeks - discharge, volume, and timing of commonly wetted channel - during and above winter base flows, temperature, and quantitative and qualitative habitat attributes. The collected data serves as the basis for viable restoration actions.

PROJECT DEVELOPMENT AND ACHIEVEMENT

Salmonid presence was confirmed in three non-natal tributaries through eDNA and snorkel surveys. Favorable habitat attributes for salmonids were determined through hydrology and macro mapping data of each creek.

- Access to creeks was secured from private landowners.
- Survey sites were established at three locations.
- Protocols and datasheets were created for eDNA collection and processing, macro habitat mapping, snorkel surveys, and discharge recording.

eDNA

- A polyvinyl chloride/plastic manifold was built for processing.
- 40 eDNA samples were collected, processed, and subsequently analyzed by Cal Poly Humboldt University, confirming the presence of Chinook salmon in Dye Creek.

SNORKEL SURVEYS

- April 26 to June 22: Weekly data confirmed the presence of four juvenile Rainbow trout in Dye Creek; 14 juvenile fall-run Chinook and 183 juvenile Rainbow trout in Churn Creek; and two juvenile fall-run Chinook and 29 juvenile Rainbow trout in Stillwater Creek.
- Twelve other species were documented in these creeks.

PRESSURE TRANSDUCERS (PT)

- Housings were built and installed in all three tributaries.
- April 12 to June 30: Discharge was recorded weekly until receding water necessitated PT removal.
- Hydrographs were produced from PT and water elevation data recorded by CDFW engineers.

DATABASES

GIS, Landowner Access, Discharge, Snorkel, eDNA, and NOAA Weather databases were created and maintained.

FUNDING SOURCE AND STAFF

USFWS funds the Non-Natal Rearing project. One PSMFC Fisheries Biologist serves as staff.

Figure 17. Mark Gard/CDFW, Jules Brizuela/PSMFC, and Bill Cowan/CDFW installing the first, seasonal PT and recording water surface elevation at Dye Creek, Tehama County, CA. Credit: Kaitlin Whittom, PSMFC 2023

Passage Assessment Database

The PAD program compiles and maintains anadromous fish passage data and assessments in California through a cooperative, interagency agreement to identify and remove migration barriers for habitat restoration. PAD collects, standardizes, and prioritizes data from multiple agencies, tribes, local watershed groups, and other entities (*Table 4*) for barrier removal efforts by CDFW, Caltrans, and the Forum, an association of public, private, and government organizations, and additional alliances.

DATA REVISION

Areas primarily updated: California's Central Coast, parts of the Central Valley and Sierra Nevada, and the Bay Area.

- Internal data reviews were performed to improve data quality.
- Outreach efforts engaged local fish passage experts to review the data.
- PAD was updated, and the results were posted online.
- In collaboration with the Forum, webinars were conducted to explain this effort.
- CDFW's Central Coast staff received the revised data to prioritize barriers for remediation.

DATA SUPPORT

Caltrans: PAD staff reviewed, vetted, and reported fish passage assessments along the California highway system. Over 2,570 PAD records and locations were verified.

Forum Advisory Committees: Supplied relevant information.

County of Santa Cruz: Provided data quality control and submission training.

Southeast Aquatic Resources Partnership: PSMFC staff participated in meetings as PAD's data is incorporated into a national barrier prioritization tool.

FUNDING SOURCES AND STAFF

Caltrans, CDFW, and USFWS contribute funding. PAD's staff consists of a Data Management Specialist II and a Data Management I.

Table 4. PAD summary of barriers.

STATUS OF BARRIERS	COUNT
Known	7,644
Potential	8,976
Non-barriers/Remediated Barriers	4,826

Upper Sacramento River Basin Chinook Salmon Escapement

The USRB Chinook Salmon Escapement program in Northern California determines annual abundance and distribution of adult Chinook salmon returning to the USRB to spawn. The Program also monitors the effectiveness of Upper Sacramento River restoration efforts by PSMFC and CDFW who jointly coordinate carcass mark-recapture (*Figure 18*), redd and snorkel surveys, and tributary video monitoring to estimate adult escapement during seasonal Chinook and Steelhead runs. Snorkel surveys of control sites and restored impact sites are essential to assess restoration effectiveness. Continuous video monitoring captures fall, late-fall, and spring-run Chinook counts for approximating entire stream populations. Through the collaborative efforts of USBR, CDFW, and PSMFC, the Program monitors water levels; predicts emergence dates of juvenile salmonids from gravel nests known as redds; and forecasts which redds will dewater prior to emergence at specific water flows. Geospatial habitat data is collected from restoration sites to illustrate relative habitat quality.

REDDS DEWATERING

- 52 Winter-run redds were tracked through some of the lowest recorded summer flows in the Sacramento River.
- Summer 2022: Dewatering loss was successfully limited to only four redds (approximately 0.15% of the spawning population).

RESTORATION WORK

- December 2022: A side channel was created in the Kapusta Open Space area off the mainstem river; spawning gravel was added.
- January 2023: The new side channel was completed and connected to the mainstem of the Upper Sacramento River.
- PSMFC field staff mapped depth, velocity, and cover to identify salmonid habitat.
- May 2023: The first post-project snorkel abundance index survey was performed; 315 juvenile salmonids and 1151 non-target juveniles were observed.

CARCASS PROGRAM

The 2022 winter-run and fall-run, and the 2023 late-fall spawning were surveyed.

- 2,871 Carcasses sampled
  - 219 Heads collected for mark identification.
  - 1,252 Scales sampled for age.
  - 1,209 Tissue samples
- Scale samples: 333 adult Steelhead samples were mounted; 269 were digitized and read.

FUNDING SOURCE AND STAFF

USBR solely funds this Program. Staff includes four Fishery Biologists and eleven Field Technicians.

Figure 18. Winter-run carcass surveyor spearing a female salmon. Credit: Anton Ebenal, PSMFC 2023

Aquatic Nuisance Species Program

The Aquatic Nuisance Species (ANS) Program prevents and minimizes the impacts of those species that affect fisheries and the habitat upon which those fisheries depend through prevention, research, monitoring, education and outreach, and interjurisdictional planning and coordination efforts.

MUSSEL RAPID RESPONSE PLANNING

- ANS led zebra and quagga (dreissenid) mussel rapid response planning in the CRB.
- In collaboration with USFWS, ANS produced background information for a CRB Dreissenid Incident Response Toolkit manual to inform Section 7 consultations

with USFWS and NOAA Fisheries.
• A CRB rapid response exercise was organized with the Nevada Department of Wildlife, the Shoshone Paiute Tribes of Duck Valley, USFWS, and USBR at Wild Horse Reservoir, NV.

OUTREACH AND EDUCATION

• *Aquatic Invasive Species News*, currently in its 19th year, continues to inform AIS specialists.
• Call Before You Haul (CBYH) offers support for individuals planning to transport watercraft from outside of the Pacific Northwest to the CRB. The CBYH program is active in 43 states.

WATERCRAFT INSPECTION AND DECONTAMINATION TRAINING (WIT)

The WIT program provides training to improve the effectiveness of watercraft inspections. Over 5,000 individuals, representing 100 different state, federal, local, tribal agencies, and organizations, have attended 145 virtual and in-person training sessions in nineteen western U.S. states and Canada.

EUROPEAN GREEN CRAB (EGC)

For the last twenty years, ANS has supported coastwide, EGC monitoring.
• The Metlakatla Indian Community in Alaska and Oregon State University's Hatfield Marine Science Center were sponsored monitoring partners.
• PSMFC's GIS staff launched the West Coast EGC Database.

FUNDING SOURCES

The ANS program is funded by BPA, USFWS, USACE, and the NOAA Fisheries Federal Assistance Program under the AFCA and the IJA.

Predator Control

Northern Pikeminnow Management Program

Since 1991, the Northern Pikeminnow Management Program (NPMP) has reduced juvenile salmonid predation during their emigration from natal streams in the CRB to the ocean. Northern Pikeminnows (*Ptychocheilus oregonensis*) consume millions of salmon and Steelhead juveniles each year. Modeling studies, conducted prior to the Program's inception, indicated that a 10-20% removal of predacious-sized Northern Pikeminnows would decrease salmonid predation up to 50%. Through PSMFC administration, NPMP has successfully met its exploitation rate objective for the 25th consecutive year. Predation reduction, compared to pre-program levels, is currently estimated at 31%.

The 2022 Pikeminnow Annual Report is comprised of seasonal data, May 1 to September 30, 2022. All stated 2023 data is preliminary. (*Table 5*)
• The top Pikeminnow angler landed 6,858 fish and was compensated $69,230 in 2022. The same angler currently leads in 2023 harvest with 4,854 fish vouchered for a total of $48,500.
• Systemwide exploitation of Northern Pikeminnow during the 2022 Sport-Reward Fishery was 14.9% (±5.9; 95% confidence interval). It is projected to reduce predation by 34% (range: 11-47%) in 2023 compared to pre-program levels. Field reports are issued to interested parties.

FUNDING SOURCE AND STAFF

NPMP is an approved program of the Northwest Power and Conservation Council funded by BPA. PSMFC staff consists of a Data Management Specialist and an Administrative Support Specialist who work in partnership with WDFW and ODFW to ensure accurate and timely distribution of funds to participating anglers.

Figure 19. Northern Pikeminnow. Credit: PSMFC

Table 5. 2022 Statistics and 2023 Year to date.

PAYMENT TIERS & PROMOTIONS	TIER 1 1-25 FISH	TIER 2 26-200 FISH	TIER 3 201+ FISH	TAGGED EXTERNAL	TAGGED INTERNAL	COUPONS
COST/FISH	$6	$8	$10	$500	$200	$10
Amount Claimed 2022	$1,316,928			$18,500	$28,200	$3,770
	Total Fish Harvested: 140,121					
Amount Claimed 2023 YTD	$459,144			$0	$4,400	$1,730
	Current Fish Harvest: 65,130					

STAFF

Barry Thom, Executive Director
Ngu Castro, Fiscal Officer
Shannon McKewon, Human Resources Manager
Chris Matthews, IT Manager

Stan Allen, Senior Program Manager

California Constant Fractional Marking: Braden Buttars, Program Manager
Caltrans Fish Passage Assessment: Steve Akana, Tanielle Redman, Rachael Riley, Project Leads
Central Valley Steelhead Monitoring: Aaron Vierra, Project Lead
Collaborative Field Research and Monitoring: Lara Erikson, Program Manager
Columbia River Monitoring & Coded Wire Tag Recovery Project: Ken Keller, Project Lead
Eagle Fish Health Genetics Lab: Katharine Coykendall, Project Lead
Feather River: Alana Imrie, Project Manager
Idaho Fish-Marking: Braden Buttars, Program Manager
Lower Feather River Sturgeon: Matt Manuel, Project Manager
Lower Yuba River Monitoring: Colin Laubach, Project Manager
Mendocino Coast Regional and Lifecycle Monitoring: James McGuire, Project Lead
Monitoring and Evaluation of Salmonid Habitat Restoration: Nathan Harris, Tanielle Redman, Kori Roberts, Project Leads
Nampa Research Lab: Micah Davison, Project Lead
National Fish Habitat Partnership: Kate Sherman, Project Lead
Non-natal Rearing: Darin Olsen, Project Manager
Ocean Salmon Project: Sarah White, Project Lead
Passage Assessment Database: Anne Elston, Project Lead
Ten Mile River Restoration Effectiveness Monitoring: James McGuire, Project Lead
Upper Sacramento River Basin Chinook Salmon Escapement: Darin Olsen, Project Manager

Caren Braby, Senior Program Manager

Alaska Fisheries Information Network: Bob Ryznar, Program Manager
Bycatch Reduction Research: Mark Lomeli, Project Manager
California Groundfish Port Sampling: Brenda Erwin and Mike Fukushima, Project Managers
Dungeness Crab Tri-State Management: Caren Braby and Aileen Smith, Project Managers
Economic Data Reports: Geana Tyler, Project Manager
Electronic Fish Tickets: Siobhan Óberg, Project Lead
Electronic Monitoring: Courtney Paiva, Project Manager
Electronic Reporting: Aileen Smith, Project Manager
Groundfish Age Reading: Patrick McDonald, Program Manager
Individual Fishing Quota Catch Monitoring: Kelsey Lawson, Program Coordinator
Marine Spatial Planning Support: Caren Braby and Bob Ryznar
North Pacific Observer: Jen Cahalan, Project Lead
Pacific Fisheries Information Network: Bob Ryznar, Program Manager
West Coast Groundfish Observer: Jim Benante, Program Coordinator

Nancy Leonard, Senior Program Manager

Fish Inventory System: Tara Garrison, Project Manager
Klamath Basin Fisheries Collaborative: Monica Diaz, Project Lead
Northern Pikeminnow Management: Allan Martin, Project Manager
Recreational Fisheries Information Network: Jason Edwards, Project Lead
Recreational Fisheries Monitoring
Regional Mark Processing Center: Monica Diaz, Project Lead
Salmon Data Discovery Tool: Monica Diaz, Project Lead
Smolt Monitoring Program: Allan Martin, Project Manager
StreamNet: Mari Williams, Project Lead
Tacoma Power Fish and Wildlife Monitoring

Stephen Phillips, Senior Program Manager

Aquatic Nuisance Species

Columbia Basin Passive Integrated Responder Tag Information System: John Tenney, Program Manager

Fish Habitat: Fran Recht, Program Manager

Fisheries Disaster Relief: Brian Bissell, Project Manager

Geographic Information System Center: Van Hare, Project Manager

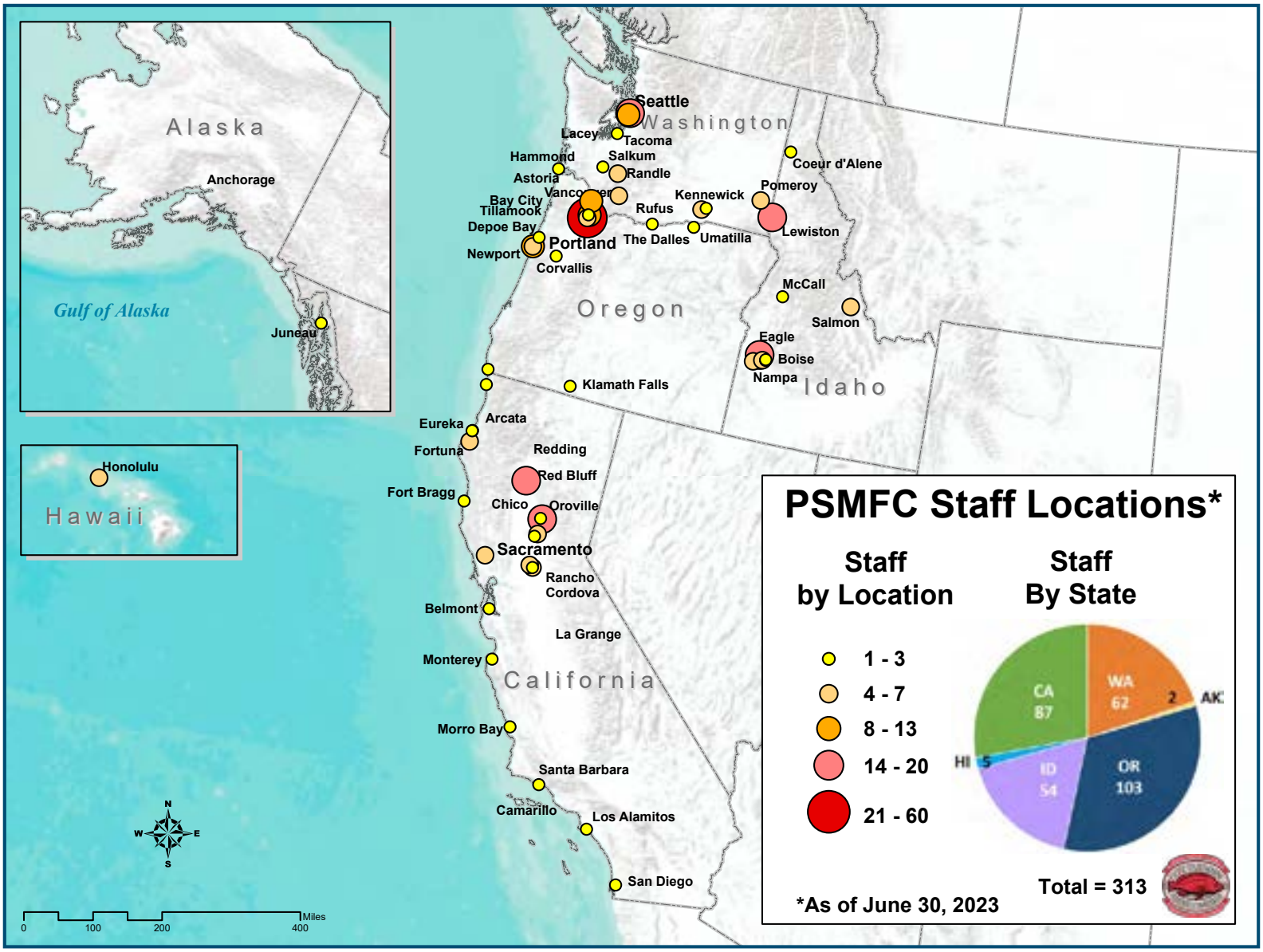


Figure 20. Credit: PSMFC GIS Center 2023

OREGON PHOTO ACKNOWLEDGEMENTS - PSMFC EMPLOYEES

Front Cover - Kelsey Lawson, Yaquina Bay Harbor, Newport 2022

Page 2 - Chris Matthews, Lost Lake, Mt. Hood National Forest 2019

Page 3 - Chris Wheaton, Chinook Salmon, Willamette River, Portland 2022

Page 8 - Chris Matthews, Sunset, Seaside 2018

Page 37 - Chris Wheaton, Paddlers, Rogue River 2021

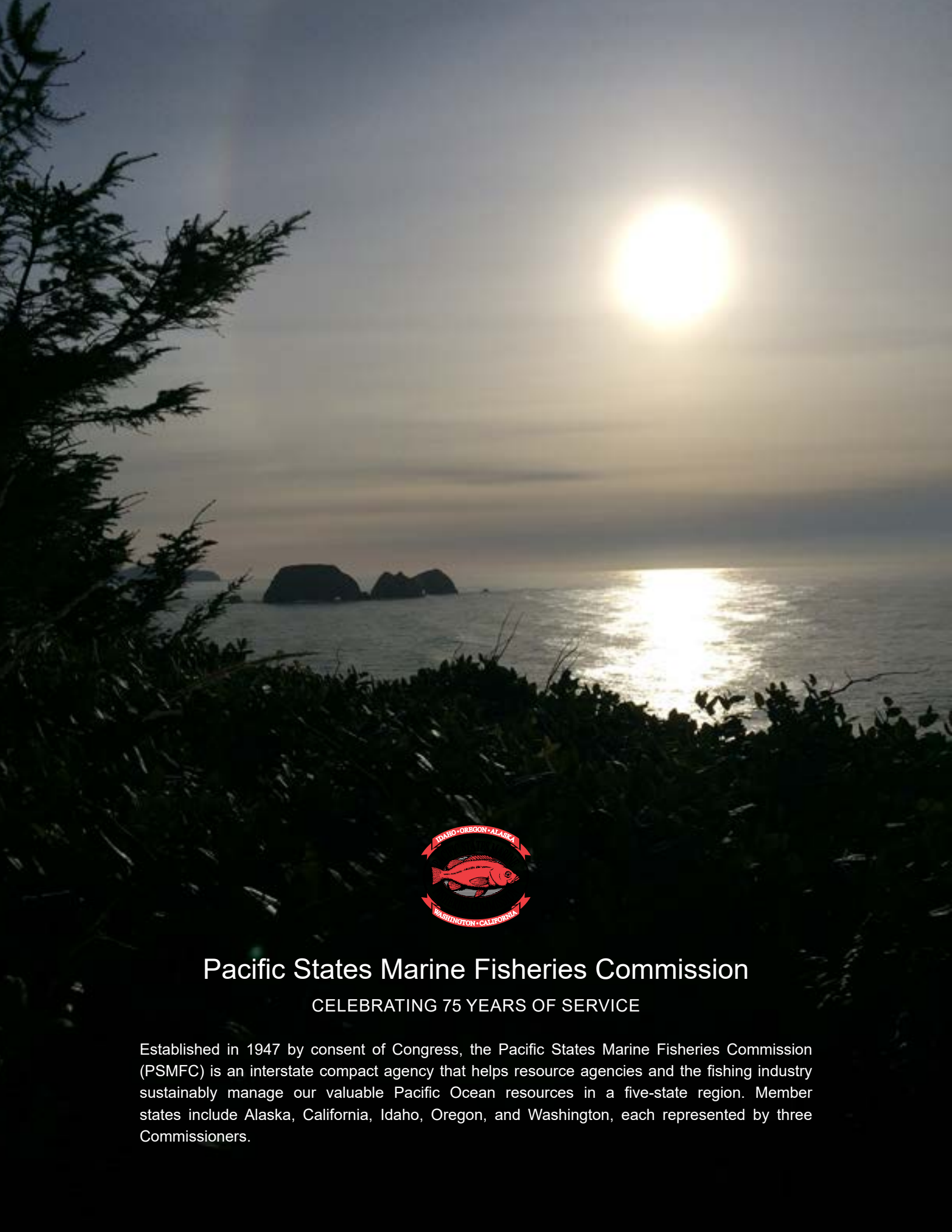
Back Cover - Stan Allen, Sunset, Waldport 2017

PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF NET POSITION
JUNE 30, 2023

	Governmental Activities
ASSETS	
CURRENT ASSETS	
Cash and Cash Equivalents	$ 10,868,802
Receivables:	
Grants and Contracts	13,482,213
Other	8,274,272
Prepaid Expenses	239,634
Total Current Assets	32,864,921
NONCURRENT ASSETS	
Capital Assets, Net of Accumulated Depreciation	1,110,193
Right-of-Use Assets, Net of Accumulated Amortization	1,424,909
Total Noncurrent Assets	2,535,102
Total Assets	$ 35,400,023
LIABILITIES AND NET POSITION	
CURRENT LIABILITIES	
Accounts Payable	$ 14,420,566
Payroll Liabilities	1,128,244
Compensated Absences, Current Portion	230,782
Unearned Rent	87,102
Unearned Revenues	597,633
Other Liabilities	159,599
Current Portion of Long-Term Debt	795,729
Total Current Liabilities	17,419,655
LONG-TERM LIABILITIES (Due in More than One Year)	
Finance Purchase Agreements, Long-Term	63,266
Lease Liability, Long-Term	519,356
SBITA Liability, Long-Term	144,738
Compensated Absences, Term Liabilities	2,613,554
Total Long-Term Liabilities	3,340,914
Total Liabilities	20,760,569
NET POSITION	
Investment in Capital Assets, Net of Related Debt	1,012,013
Unrestricted	13,627,441
Total Net Position	$ 14,639,454

PACIFIC STATES MARINE FISHERIES COMMISSION
STATEMENT OF ACTIVITIES AND CHANGE IN NET POSITION
YEAR ENDED JUNE 30, 2023

	Governmental Activities
PROGRAM REVENUES	
Grants and Contracts	$ 116,752,182
PROGRAM EXPENSES	
Fisheries Management:	
Personal Services	24,907,419
Fishery Disaster/Cares Act Relief	50,385,936
Materials and Services	37,090,064
Sport Rewards	1,501,360
Capital Outlay Not Capitalized	84,923
Interest Expense	86,857
Depreciation/Amortization	1,170,406
Total Program Expenses	115,226,965
NET PROGRAM REVENUES	1,525,217
GENERAL REVENUES	
State Dues	106,000
Interest and Other Income	2,349
Miscellaneous	(7,106)
Gain on Sale of Assets	22,000
Total General Revenues	123,243
CHANGE IN NET POSITION	1,648,460
Net Position - Beginning of Year (as previously reported)	9,624,381
Prior Period Adjustment - See Note 10	3,366,613
Net Position - Beginning of Year (restated)	12,990,994
NET POSITION - END OF YEAR	$ 14,639,454



Pacific States Marine Fisheries Commission

CELEBRATING 75 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 Alaska, California, Idaho, Oregon, and Washington, each represented by three Commissioners.