

NOAA
FISHERIES

Pacific Coastal Salmon Recovery Fund

FY 2022 Report to Congress

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Cover: WA Conservation Corps crew members plant Sitka spruce trees along a main breach site of the Middle Fork Hoquiam Tidal Restoration Project.
Credit: Marc Duboiski, WA Recreation & Conservation Office.



The headwaters of the Charley River in Yukon-Charley National Preserve. Credit: Nate Cathcart, Alaska Department of Fish & Game.

I. Executive Summary

Since 2000, Congress has provided funding for the protection, conservation, and restoration of Pacific salmon (*Oncorhynchus spp.*).¹ The Pacific Coastal Salmon Recovery Fund (PCSRF), administered by the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS), distributes funds to states and tribes through competitive grants. Eligible projects include all phases of habitat restoration and protection activities that contribute to recovering Pacific salmon listed under the Endangered Species Act (ESA) or supporting Pacific salmon species important to tribal treaty and trust fishing rights and Native subsistence fishing.

This fiscal year (FY) 2022 report to Congress documents the program's contributions to Pacific salmon restoration over the past 23 years (2000-2022). This report summarizes program-wide accomplishments, highlights the value of the Bipartisan Infrastructure Law (BIL), and features projects that demonstrate the geographic breadth and extent of work completed to improve salmon habitat, maintain healthy salmon populations, and recover Pacific salmon. The PCSRF program is vital to supporting state- and tribal-led restoration efforts and in fostering associated local partnerships to advance salmon recovery.



Duncan Green (center) leads a traditional ecological knowledge (TEK) meeting with Tanana subsistence fishers. Credit: Catherine Moncrieff, Yukon River Drainage Fisheries Association.

Since 2000,
PCSRF has:

Awarded
\$73.2 million
on average each year

Received
\$1.7 billion
in appropriations

Leveraged
\$2.1 billion
non-PCSRF contributions

Restored,
created, or protected
1,176,449 acres
of salmon habitat

Made
11,842 stream miles
accessible to salmon

Assisted partners in
leveraging resources
to implement
15,379 projects

II. Transformational Opportunities Through the Bipartisan Infrastructure Law

Today, 28 ESA-listed salmon species are at risk or likely to become at risk of extinction on the U.S. West Coast. Many other populations not listed under the ESA have experienced substantial reductions from their historic abundance levels and face many threats, including climate change. Pacific salmon are foundational to the region's ecology and Chinook salmon, in particular, are important prey for endangered Southern Resident killer whales² and may also be critical for endangered Cook Inlet beluga whales.³ Recovering abundant native salmon populations will benefit local communities through renewed commercial and recreational fishing opportunities and associated jobs. Many of these species are of profound cultural importance to Alaska Natives and Native American tribes of the Pacific Coast and Columbia Basin. Pacific salmon recovery is critical to meeting Federal obligations as stewards of tribal treaty and trust resources and to supporting tribal treaty fishing and Native subsistence fishing traditions.

In 2000, Congress established PCSRF to reverse the decline of Pacific salmon populations in California, Oregon, Washington, Alaska, and Idaho. PCSRF is a competitive grant program through which NMFS administers funding to states and tribes to protect, conserve, and recover these populations (Exhibit 1). PCSRF invests in declining Pacific salmon populations, resulting in stronger economies, communities, and ecosystems.^{4, 5, 6}

The passage and signing of the Infrastructure Investment and Jobs Act (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") presented an unprecedented opportunity to benefit Pacific salmon and their habitats. The bill provides nearly \$3.0 billion over 5 years for NOAA, with funding available for habitat restoration, conservation, and resilience efforts, including an additional \$172.0 million, or \$34.4 million per year, for PCSRF. During the FY 2022 grant competition, \$34.4 million in BIL funds and \$61 million in annual appropriation funding were awarded to 19 grant recipients. Half of the BIL funds were awarded to Columbia River and Pacific Coast tribes (including Alaska). Grant recipients and project partners are already implementing regionally significant projects that will improve the resilience of ecosystems facing climate change.

Millions of Dollars

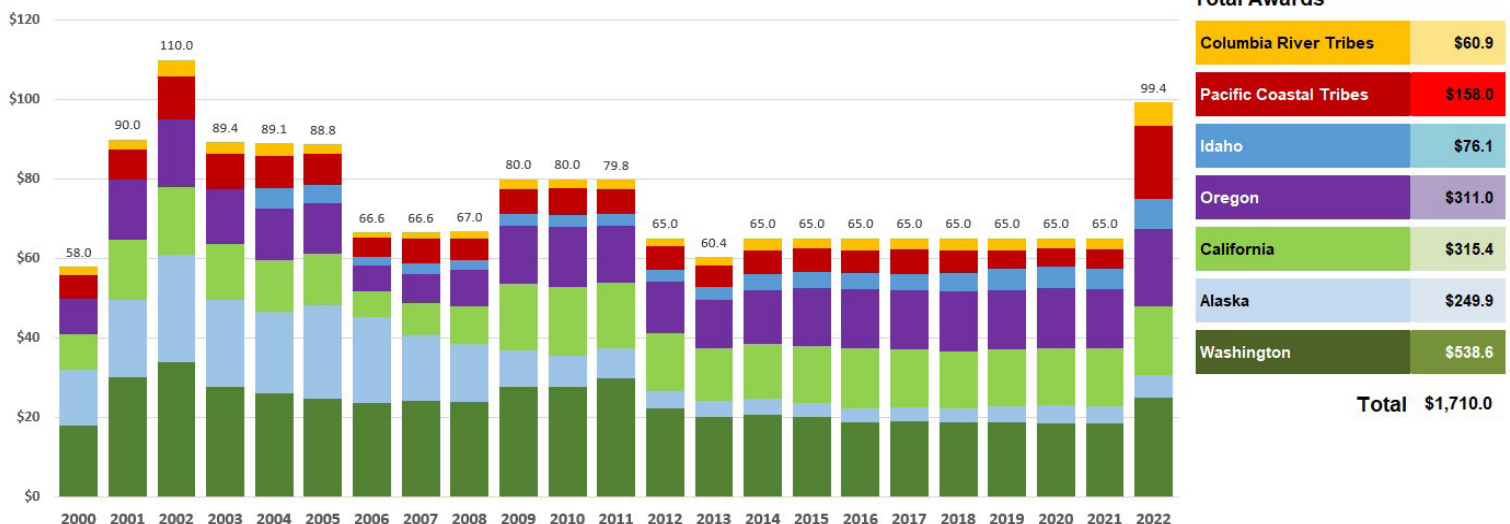


Exhibit 1: PCSRF Awards to States and Tribes (\$Millions)

Due to rounding to the nearest \$0.1M, the total does not equal the sum of the state and tribal award totals. FY 2022 awards are inclusive of the BIL funds.

III. Endangered Species Act 5-Year Reviews for Pacific Salmon

When Pacific salmon were ESA-listed, NMFS developed plans to outline their path to recovery, understanding that it will take many decades to reverse their decline. Recovery plans guide actions necessary to reverse species' decline. NMFS tracks changing threats and assesses species' viability every 5 years by conducting status reviews. The 5-year reviews determine whether a species is on track to recover and ensure the protected status of each species is appropriate. Currently the 5-year review process is underway. Review findings completed



thus far demonstrate that change has not been significant enough to alter the protected status of the species reviewed; however, this is a critical time. Many Pacific salmon populations are experiencing increased threats from climate change and human activities. To learn more about each species' status – including the most significant accomplishments since the last review and the recommended recovery actions to focus on in the next 5 years – visit the NMFS 5-Year Review Publications webpage.⁷

Juvenile Chinook salmon. Credit: Nate Cathcart, Alaska Department of Fish & Game

IV. Building Climate Resilience

Increasing pressure from climate change and other longstanding stressors continue to challenge the recovery of Pacific salmon. To advance recovery, NMFS incorporated considerations for future climate conditions into design guidance for engineered fish passage facilities and stream crossings.⁸ This new guidance provides restoration practitioners with the latest information and best practices, to better incorporate climate resilience into PCSRF funded fish passage projects.

PCSRF also supports and encourages habitat restoration projects that result in adaptive ecosystems in a changing climate. Salmon habitat restoration activities can reestablish certain ecosystem services that mitigate the impacts of climate-driven disasters. For example, restored riparian and wetland ecosystems can serve as important wildfire breaks that also provide refuge for plants, fish, and wildlife.^{9,10} Restoring, creating, and protecting refugia has growing importance as wildfire severity increases in the west. By restoring the habitats necessary to the viability of Pacific salmon, PCSRF funded projects contribute to more broadly adaptive and climate-resilient ecosystems.

A complex of beaver dams at Dixon Creek, a tributary of Boulder Creek in the NF Sprague River watershed in Oregon, keeps riparian habitat lush and green amid a landscape charred by the 2021 Bootleg Fire.

Credit: Charlie Erdman, Trout Unlimited.



V. Measuring Progress & Tracking Funding

To ensure we can measure and evaluate progress and outcomes from PCSRF investments, all PCSRF recipients report on a standard list of metrics for all projects (Exhibit 2). In aggregate, these metrics provide estimates of program-wide accomplishments funded with PCSRF, state-matching, and other partner funds. PCSRF's project and performance metrics database is available online at: www.webapps.nwfsc.noaa.gov/pcsrfr.

Project Type	Performance Measure	FY2022	FY2000-FY2022
Instream Habitat Projects	Stream Miles Treated	87	3,194
Wetland Habitat Projects	Acres Created	0	2,116
	Acres Treated	81	30,229
Estuarine Habitat Projects	Acres Created	0	2,353
	Acres Treated	2	7,403
Land Acquisition Projects	Acres Acquired or Protected	4,011	292,737
	Stream Bank Miles Acquired or Protected	30	5,330
Riparian Habitat Projects	Stream Miles Treated	114	13,656
	Acres Treated	1,314	152,141
Upland Habitat Projects	Acres Treated	1,858	673,985
Fish Passage Projects	Number of Barriers Removed	35	3,826
	Stream Miles Opened	147	11,842
	Number of Fish Screens Installed	40	2,036
Hatchery Fish Enhancement Projects	Number of Fish Marked for Management Strategies	6,261,008	390,075,415
Research, Monitoring & Evaluation Projects	Miles of Stream Monitored	8,798	580,636

Exhibit 2: Summary of PCSRF Program-wide Performance Measures, FYs 2000-2022

Reflects annual and accumulated totals at the time the database was queried for this report (November 21, 2022).

Exhibit 3 highlights funding allocations by project category. Since its inception, habitat restoration and monitoring have remained central emphases of the PCSRF program. While other project categories contribute to PCSRF goals, implementing on-the-ground restoration actions is vital to salmon recovery, and consistent monitoring ensures PCSRF investments are effectively meeting the needs of ESA-listed salmon over time. PCSRF funds continue to play a key role in advancing salmon recovery and improving the status of vulnerable populations in the face of climate change and other threats.

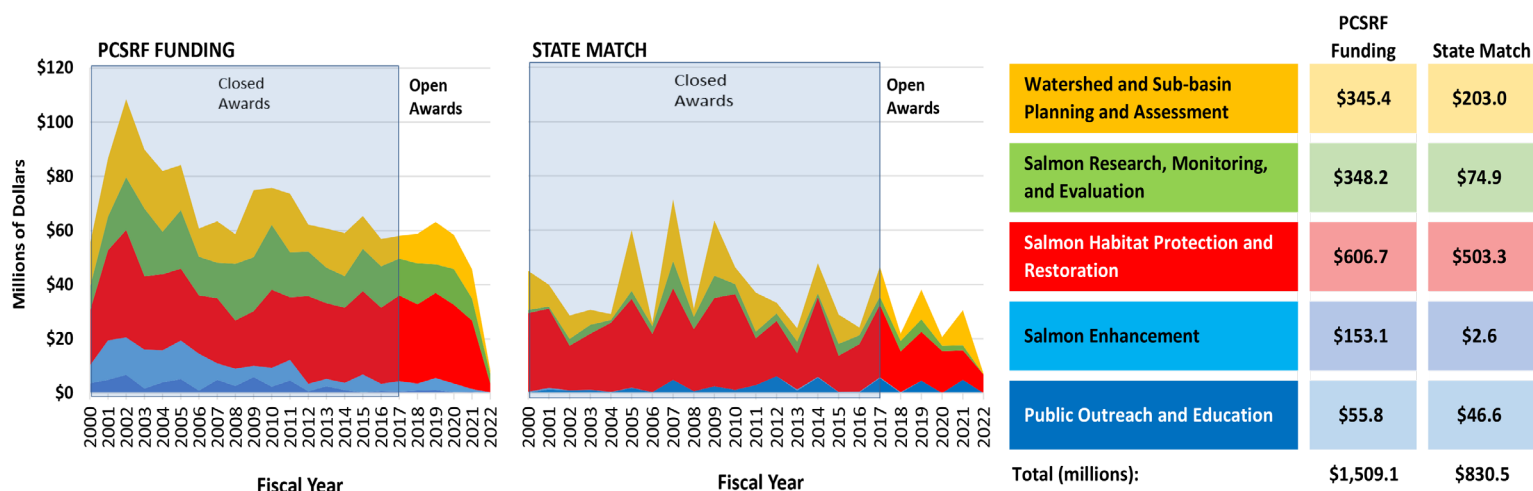


Exhibit 3: PCSRF and State Funding Allocations by Project Type

Due to rounding to the nearest \$0.1 million, the totals for the PCSRF Funding and State Match columns do not equal the sum of the categories. In addition, the sum of total funding allocated across project types does not equal the total PCSRF awards presented in Exhibit 1. Not all awarded funds have been allocated to projects for the more recent fiscal years (Open Awards). Most awards more than 5 years old have expended available funds (Closed Awards).

PCSRF at Work: Featured Projects

ALASKA

Project: Anadromous Cataloging in Arctic Alaska

PCSRF Funds: \$253,562

Matching & Other Funds: \$1,019,854

Targeted Species: Chinook, Coho, Sockeye, Chum, and Pink Salmon (non-ESA listed species)



CALIFORNIA

Project: Dutch Charlie Creek Instream Coho Habitat Enhancement

PCSRF Funds: \$34,068

Matching & Other Funds: \$552,403

Targeted Species: Southern Oregon/Northern California Coast Coho Salmon (T)

IDAHO

Project: Pratt Creek Channel Rehabilitation

PCSRF Funds: \$186,741

Matching & Other Funds: \$172,012

Targeted Species: Snake River Basin Steelhead (T), Snake River Spring/Summer Chinook Salmon (T)



OREGON

Project: Rock Creek Mainstem Restoration

PCSRF Funds: \$265,307

Matching & Other Funds: \$214,200

Targeted Species: Oregon Coast Coho Salmon (T)

For additional project information:
Visit FY 2022 Featured Projects at
www.fisheries.noaa.gov/west-coast/endangered-species-conservation/pacific-coastal-salmon-recovery-fund

(T) denotes species listed as "threatened" and (E) denotes species listed as "endangered" under the ESA

WASHINGTON

Project: North Fork Touchet Restoration

PCSRF Funds: \$324,105

Matching & Other Funds: \$668,549

Targeted Species: Middle Columbia River Steelhead (T)



References

- ¹ In this report, the reference to 28 species listed under the Endangered Species Act includes evolutionarily significant units and distinct population segments that are listed as threatened or endangered and the term “salmon” is inclusive of both salmon and steelhead.
- ² Lewis, NMFS. (2021). Southern Resident Killer Whale (*Orcinus orca*) 5-year Review: Summary and Evaluation. National Marine Fishery Service: West Coast Region. Seattle, WA. December 2021. (<https://media.fisheries.noaa.gov/2022-01/srkw-5-year-review-2021.pdf>)
- ³ Norman, S.A., et al. (2022). A systematic review demonstrates how surrogate populations help inform conservation and management of an endangered species: The case of Cook Inlet, Alaska belugas. *Frontiers in Marine Science*. March 3, 2022. (<https://doi.org/10.3389/fmars.2022.804218>)
- ⁴ Cullinane Thomas, C., C. Huber, K. Skrabis, and J. Sidon. 2016. Estimating the economic impacts of ecosystem restoration – Methods and case studies. U.S. Geological Survey Open-File Report 2016-1016, 98 p. (<http://dx.doi.org/10.3133/ofr20161016>).
- ⁵ Edwards, P.E.T., A.E. Sutton-Grier, and C.E. Coyle. 2013. Investing in nature: Restoring coastal habitat blue infrastructure and green job creation. *Marine Policy* 38:65-71.
- ⁶ Nielsen-Pincus, M., and C. Moseley. 2013. The Economic and Employment Impacts of Forests and Watershed Restoration. *Restoration Ecology* 21 (2), 207-214.
- ⁷ NOAA Fisheries. (2022). Resources & Services, Publications: Documents – ESA 5-Year Reviews. ([www.fisheries.noaa.gov/resources/documents?title=&field_category_document_value%5Besa five review%5D=esa five review&sort by=created](http://www.fisheries.noaa.gov/resources/documents?title=&field_category_document_value%5Besa%20five%20year%20reviews%5D=esa%20five%20year%20reviews&sort_by=created)).
- ⁸ NMFS (National Marine Fisheries Service), 2022. NOAA Fisheries West Coast Region Guidance to Improve the Resilience of Fish Passage Facilities to Climate Change – 2022. NOAA Fisheries West Coast Regional Office, 1201 Northeast Lloyd, Portland, Oregon 97232.
- ⁹ Sage Grouse Initiative. (2021). Beaver Breaks: How Beavers (and low-tech riparian restoration) Help Reduce Impacts from Fire. November 29, 2021. (www.sagegrouseinitiative.com/conserving-diverse-wet-habitats-keeps-western-rangelands-resilient/).
- ¹⁰ Fairfax, E., and A. Whittle. 2020. Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western USA. *Ecological Applications* 30(8):e02225. 10.1002/eap.2225 (<https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2225>).



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