



# Water us Connects All



A Letter from Roy Elicker,  
Assistant Regional Director, Fish and Aquatic Conservation Program

Thank you for taking the time to look back with us on some of our Fish and Aquatic Conservation Program's proud aquatic conservation achievements over the past two years. I am glad



Roy Elicker lands a fall Chinook salmon near Buoy 10.

you are reading this because you – our partners, our volunteers, and of course, our exceptional employees -- were the momentum behind them.

These highlights celebrate just some of the collective contributions made by over 400 partners, 280 employees, and 876 tireless volunteers in 2018-2019. Together we worked across tens of thousands of miles of salt and fresh water that include four states, six time zones, 23 major Pacific Northwest watersheds, and the 365 perennial streams in the southern Hawaiian archipelago. All to ensure that native aquatic species and their habitats, from the iconic Chinook Salmon to lesser-known but equally important Hawaiian gobies, continue to be a central part of our way of life for generations to come.

This dedication to conservation brings together strong science, first-class field work, top-notch fish culture, and a genuine respect for our aquatic resources that underlies every part of our program. Because water connects us all. And because of each of you, the connection to water we all share--this community--remains strong, especially during these challenging times. I am proud to share this report with you, the co-authors of our success stories. Together we are building a legacy that no number of pages could hold.

“Far and away the best prize that life has to offer is the chance to work hard at work worth doing.”

–Theodore Roosevelt

PACIFIC

ISLANDS

3D Map and graphics: Matt How/USFWS

# Our Regions at a Glance

## Washington

- Western Washington Fish & Wildlife Conservation Office
- Mid-Columbia River Fish & Wildlife Conservation Office
- Columbia River Fish & Wildlife Conservation Office
- Little White Salmon National Fish Hatchery
- Spring Creek National Fish Hatchery
- Leavenworth National Fish Hatchery
- Abernathy Fish Technology Center
- Winthrop National Fish Hatchery
- Quilcene National Fish Hatchery
- Quinault National Fish Hatchery
- Willard National Fish Hatchery
- Entiat National Fish Hatchery
- Carson National Fish Hatchery
- Makah National Fish Hatchery

## Oregon

- Regional Office
- Eagle Creek National Fish Hatchery
- Warm Springs National Fish Hatchery
- Pacific Region Fish Health Program

## Hawaii

- Pacific Islands Fish & Wildlife Office

COLUMBIA

PACIFIC

NORTHWEST

- Acclimation Facility (AF)
- Satellite Facility (SF)
- State Hatchery (SH)

## Idaho

- Kooskia National Fish Hatchery
- Dworshak National Fish Hatchery
- Idaho Fish & Wildlife Conservation Office

## Lower Snake River Compensation Plan

- Lower Snake River Compensation Plan Office, ID
- South Fork Salmon River SF, ID
- East Fork Salmon River SF, ID
- Lower Crooked River SF, ID
- Upper Crooked River SF, ID
- Eagle Fish Health Lab, ID
- Magic Valley SH, ID
- Clearwater SH, ID
- Hagerman SH, ID
- Red River SF, ID
- Sawtooth SH, ID
- McCall SH, ID
- Powell SF, ID
- Curl Lake SF, WA
- Tucannon SH, WA
- Lyons Ferry SH, WA
- Cottonwood AF, WA
- Dayton Pond SF, WA
- Snake River Lab, WA
- Captain John Rapids AF, WA
- Little Sheep Creek SF, OR
- Lookingglass SH, OR
- Wallowa SH, OR
- Imnaha SH, OR
- Irrigon SH, OR

# Invasive Species Prevention and Control

Our connected waters are vulnerable to invasion from introduced species. Our daily work supports invasive species prevention and management efforts at local, regional, national, and international levels.

*Divers in Hawai'i inspect a vessel's hull as part of efforts to enhance marine biosecurity.  
Photo Hawai'i DNLB Division of Aquatic Resources*



## Columbia River Basin Rapid Response

A two-day workshop on aquatic invasive species was held for tribes represented by the Columbia River Inter-Tribal Fish Commission (CRITFC) (Yakama, Umatilla, Warm Springs, Nez Perce) in September 2019. This workshop was supported in partnership with CRITFC, the Bureau of Indian Affairs, U.S. Geological Survey, Washington State University, and the Service. The workshop included field-based sampling, laboratory analysis, and in-depth discussions about invasive species issues in the Columbia River Basin.

As part of the Columbia River Basin Inter-agency Rapid Response Plan for invasive mussels, Early Detection Rapid Response (EDRR) exercises were held in both 2018 and 2019. Participants represented agency partners and tribal governments. These exercises help streamline the complex multi-agency actions that would occur if invasive mussels were found in the basin.

## Controlling European Green Crab

The European Green Crab is one of the most ecologically and economically damaging invasive predators to North American coastal marine ecosystems. The Service provided funding to the Makah Tribe to help support eradication efforts and training for tribal staff to maintain and expand control efforts. Trapping Green Crab shows the extent of the invasion and helps reduce population growth.

## Safeguarding the West

The Service, Pacific States Marine Fisheries Commission, Creative Resource Strategies LLC, and other partners produced a manual to facilitate Endangered Species Act Section 7 consultations during rapid response actions for invasive Dreissenid mussels. The manual, created in support of the Department of the Interior's Safeguarding the West initiative, summarizes best available science for mussel control techniques, potential impacts to federally listed species and critical habitat, and best management practices.

## Pacific Islands Biosecurity

The Pacific Islands Fish and Wildlife Office, the State of Hawaii, Hawaii Invasive Species Council, and others are protecting marine and inland waterways from potential invasive species introductions by targeting vessel hull biofouling, ballast water discharges, and aquaculture operations. On-going efforts include training such as Hazard Analysis and Critical Control Point Planning workshops and active engagement in the Western Governors' Association Biosecurity and Invasive Species Initiative.



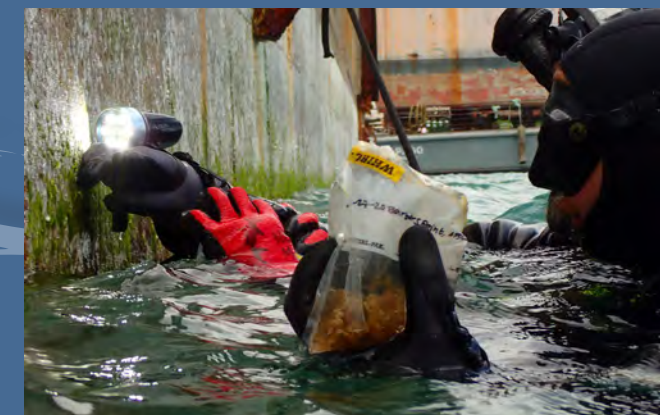
*Tribal staff review lab analysis techniques to identify and assist with aquatic invasive species detection and control efforts. Photo: Theresa Thom/USFWS*



*European Green Crab trapping and removal in Neah Bay, Washington on the Makah Indian Reservation. Photo: Theresa Thom/USFWS*



*Pressure-washing boats and equipment with hot water is one technique that can remove and kill invasive mussels. Photo: Theresa Thom/USFWS*



*Hull inspections of a vessel in Honolulu Harbor help determine if marine biofouling is present and poses a risk to Hawaii's waterways and native species. Photo Hawaii Department of Aquatic Resources.*

Klineline  
Pond Kids  
Fishing Day.  
Photo USFWS



**167 EVENTS**  
or activities promoting  
fishing, hunting, access

### 'Let's Go Fishing!' Program Debuts

The Columbia River Gorge Fisheries Complex debuted the Junior Ranger "Let's Go Fishing!" Program at area fishing events during National Fishing and Boating Week 2018. The Program is a Service-National Park Service collaboration that encourages kids and their families to get hooked on fishing. Geared toward children aged 8-12, participants complete an Activity Book that introduces fishing gear, angler tips, and fishing ethics. Area youth can turn in completed booklets at Spring Creek National Fish Hatchery to receive a badge and a Certificate of Achievement.

### Youth Fisheries Academy Milestone

Youth Fisheries Academy, a summer camp program designed to introduce youth to Pacific Salmon and fish conservation, reached a new milestone in its tenth year when the Academy was hosted for the first time at Quilcene National Fish Hatchery. Over 45 Skokomish Tribe youth attended one day-long camp: younger campers toured the hatchery, learned fish printing, and navigated a salmon survival obstacle course. Middle school-aged campers, meanwhile, dissected salmon, learned how to use GPS navigation and radio telemetry, and practiced archery using invasive carp targets as a way of highlighting the importance of invasive species control and prevention.

### Hatching Outdoor Skills

Leavenworth National Fish Hatchery is a special place. Not only does the hatchery raise more than 1.2 million spring Chinook Salmon every year, it also hosts the internationally-recognized Wenatchee River Salmon Festival. Its miles of recreation trails along Icicle Creek are also used year-round by hikers, birders, cross-country skiers, and snowshoers.

Leavenworth also hosts Camp Biota, an outdoor skills and science camp co-developed for Spanish-speaking migrant middle schoolers by hatchery staff and Washington's North Central Educational Services District. Now in its third year, the program graduated its first 20 students in 2018, many of whom had never before camped, practiced archery lessons, or visited a hatchery.



Campgoers take aim at aquatic invasive species targets during the 10th annual Youth Fisheries Academy. Photo USFWS



An angler fishes in the Methow River. In 2019 the Service finalized Fishing Plans for Spring Creek, Little White Salmon, Leavenworth, and Entiat National Fish Hatcheries. Photo USFWS

# Access to Fishing, Hunting, and Public Lands

Hunters, anglers, and outdoor enthusiasts are the backbone of conservation. We serve as a bridge between natural resources and recreation. From raising and releasing fish to teaching the joy of fishing and target shooting, we ensure that conservationists of all ages and abilities can connect to nature.



A snowshoeing tour at Leavenworth National Fish Hatchery. Photo USFWS

**8 HATCHERIES**  
allow on-site fishing

**173,000**  
Annual Visitors to our  
facilities

Students at Camp Biota, which is hosted at Leavenworth National Fish Hatchery every spring. Photo USFWS



# Maintaining & Modernizing Infrastructure

Our infrastructure includes 49 facilities in 22 key Pacific Northwest watersheds. Our priority is to design and continuously refine the infrastructure we manage to meet modern-day conservation challenges, with minimal adverse effects on the aquatic species and habitats we conserve and protect.

**\$1.27 BILLION**  
in physical assets

*Dworshak National Fish Hatchery in Orofino, Idaho. The hatchery is co-managed and co-staffed by the Service and Nez Perce Tribe, Photo: Dronekies*



## Powering Up Our Central Oregon Hatchery

In 2018, the Service replaced 40 year-old transformers and three-phase power lines that supply energy to Warm Springs National Fish Hatchery's chillers, pumps, computer systems, water alarms, residences, and other mission-critical equipment.

The hatchery's two emergency generators --installed in 1976 -- were also replaced to increase energy efficiency and ensure that full backup power is available when needed. The upgrades are vital for a facility that annually raises 750,000 Chinook Salmon in a high desert environment where yearly temperatures fluctuate between subfreezing and triple digits.



*Warm Springs National Fish Hatchery's energy network received several upgrades in 2018-2019. The hatchery also installed at Lamprey Passage System in 2018 that helps adult Pacific Lamprey access to the Upper Warm Springs River. Photo: Terry Freije/USFWS*

## New Permit, Chiller at Leavenworth NFH Means a Cleaner Icicle Creek

Leavenworth National Fish Hatchery installed an incubation chiller system in 2018 that is lowering the amount of phosphorous in Icicle Creek. The system delays development of hatchery spring Chinook Salmon eggs and fry by two additional months.

The extra time allows staff to clean raceways and release yearlings before 'ponding' the new fry outside, which reduces the amount of feeding required, lowers overall fish numbers in outside raceways, and decreases moving stress on young salmon. Less phosphorous entering the creek helps the hatchery address compliance requirements under its new National Pollutant Discharge Elimination System permit.



*Adult spring Chinook Salmon. Photo: Orlanda John/USFWS*

## Visitor Upgrades at Gorge Hatchery

Access within and interpretation about the nation's third oldest hatchery is even better thanks to a series of visitor-focused improvements at Little White Salmon National Fish Hatchery. In 2018-2019, the visitor center's interior was upgraded with digital and nature-themed features, while native plant gardens and a new salmon observation platform overlooking the Little White Salmon River were installed nearby.

The hatchery, which produces 9.4 million salmon annually, also added visitor information kiosks, expanded sidewalk access, picnic facilities, and additional parking during improvements to its one-mile entrance road adjacent to Drano Lake's western shoreline. Upgrades also include a new entrance gate and interpretive walking trail with engraved basalt guideposts showcasing the hatchery property's natural and cultural history.



*Little White Salmon National Fish Hatchery entryway with improved road access and signage. Photo: Bob Turik/USFWS*

**707 STRUCTURES**  
critical for fish rearing and  
water management

**368 BUILDINGS**

# Strengthening Federal Tribal State Partnerships

## HATCHERY PROGRAMS

We collaborate with states, tribes, and territories to conserve our aquatic resources. Our shared approach uses a landscape-level view in aquatic species and habitat conservation while honoring partners' jurisdictional authorities and sovereignty. Just as they help us, we help them protect, sustain, or rebuild populations of aquatic species and habitats that to them, and us, are ecologically, economically, and culturally important.

*A tribal angler harvests Coho Salmon at Quilcene National Fish Hatchery. The hatchery works with state and tribal co-managers to release or transfer more than 1 million fish and eggs every year. Photo: Ron Wong/USFWS*



*Salmon jumping in Drano Lake, Washington. Photo: Bob Turik/USFWS*

*Chum Salmon. Photo: Roger Tabor/USFWS*



### Supporting Propagation Programs

With 2018-2019 numbers of several returning Columbia River salmon stocks well below the 10-year average, the Columbia River Gorge Fisheries Complex worked closely with tribal, state, and public utility district (PUD) partners to ensure any surplus broodstock eggs were transferred to other hatchery programs experiencing production shortfalls. Complex hatcheries transferred surplus spring Chinook Salmon eggs to several Idaho Department of Fish and Game and Nez Perce Tribe hatcheries in the Clearwater River Basin, and to the Confederated Tribes of the Colville Reservation Tribes' Chief Joseph Hatchery.

The Service was also an exchange beneficiary: Little White Salmon National Fish Hatchery received Upriver Bright fall Chinook Salmon eggs from Priest Rapids Hatchery and Ringold Hatchery. Both are operated by the Grant PUD and Washington Department of Fish and Wildlife, and the exchange helped the hatchery meet its production targets.

### Diversifying Hatchery Production

After experiencing five years of extreme summer water temperatures, the Service and Makah Tribe worked together to identify current Makah National Fish Hatchery programs that are no longer viable and develop and implement alternatives. In spring 2018, Coho Salmon fry were planted into the upper Tsoo-Yess watershed, a year earlier than the traditional on-hatchery release. Hatchery co-managers also began capturing native Tsoo-Yess Steelhead Trout for hatchery propagation. These changes will aid co-managers' efforts to make Makah NFH fish available for tribal, sport, and commercial fishing opportunities.

**44 FEDERALLY  
Recognized Tribes**

**4 STATES**

**51 CO-MANAGED  
Hatchery Programs**

### Six Ways to Say 'Fish On!' for Entiat National Fish Hatchery Chinook

Record numbers of Entiat National Fish Hatchery summer Chinook Salmon returned in 2018 and 2019, creating fishing bonanzas for Central Washington tribal and non-tribal anglers. The strong runs enabled Washington Department of Fish and Wildlife to increase the harvest limit of hatchery Chinook to six fish per day. Entiat NFH salmon made up 14 percent of the region's 2019 summer Chinook Salmon run, notable considering the hatchery releases 400,000 smolts annually and was staffed by two people in 2016 when fish were released. The hatchery also surplussed nearly 1,900 adult fish to area tribes for subsistence and ceremonial use.

*Fishing brochures created under a Service-Washington Department of Fish and Wildlife partnership in 2019 to highlight fishing opportunities on or near 13 Washington-based Service hatcheries and wildlife refuges.*



# Strengthening Federal Tribal State Partnerships Continued

bbts

REGIONAL  
COORDINATION

## Pacific Lamprey Conservation Initiative Highlights

In 2018 and 2019, the Service led a coalition of tribes, hydropower producers, federal, state, and local agencies and hydropower producers to collaborate on range-wide habitat restoration, research, and outreach efforts to conserve Pacific Lamprey. The Pacific Lamprey Conservation Initiative funded 13 projects with \$431,800 in Bonneville Power Administration funding and \$65,000 from the National Fish Habitat Partnership Program. These projects will provide and enhance access to spawning habitat for adult lamprey, improve juvenile lamprey habitat, and increase our overall understanding of the distribution and health of our lamprey populations.



*U.S. Fish & Wildlife Service Biologist releases Pacific Lamprey. Initiative partners collaborate on monitoring efforts across the species' range. Freshwaters Illustrated/USFWS*



*In 2019, the Service, Oregon Zoo, and eight Northwest Tribes worked together to establish the Northwest's first full-fledged exhibit highlighting the ecological and cultural importance of Pacific Lamprey. Photo: Christina Wang/USFWS*

176 PARTNERS  
in the Pacific  
Lamprey  
Conservation  
Initiative

## Service Science Helps Guide Bi-Lateral, Domestic Salmon Management

Equitable ocean harvests of Pacific salmon provide the United States, Canada, and tribal nations with billions of dollars in revenue, thousands of jobs, and cultural connections for people that have fished in the region since time immemorial. The Service, in collaboration with the States of Alaska, Washington, and Oregon, the Northwest Indian Fisheries Commission, Columbia River Inter-Tribal Fish Commission, area tribes, and NOAA-Fisheries, provided technical and policy support that helped the Pacific Salmon Commission in 2018 develop a 10-year conservation and harvest plan and re-negotiate Coho and Chum Salmon Annexes under the Pacific Salmon Treaty. Service science and data, which includes the annual release of over 43 million hatchery fish and Coded-Wire Tagged returning adults, also helps West Coast States establish their own harvest management regulations and better protect ESA-listed stocks.



*Lower Snake River Compensation Plan partners work together to produce and release nearly 19 million Pacific Salmon, Steelhead Trout, and Rainbow Trout every year, monitor fish health, and evaluate the program's hatchery operations. 3D Graphics: Matt How/USFWS*

## Collaboration with States to Control Introduced Brook Trout

Brook Trout, an introduced char species, disrupt ecological systems and contribute to the decline of western native trout. That's why biologists from the Abernathy Fish Technology Center and Columbia River Fish and Wildlife Conservation Office began work in 2018 with the Western Association of Fish and Wildlife Agencies' YY Consortium and technical teams from States of Oregon, Washington, Idaho, and New Mexico to evaluate YY technology as a means to control Brook Trout from streams and lakes. YY technology is the genetic manipulation of sex genes, which can be deployed to create fish that only produce male offspring, preventing reproduction and reducing the population of non-native Brook Trout.

49 MILLION  
salmon and  
steelhead raised  
annually

538,000 PASSIVE  
Integrated  
Transponder tags

4,000,000  
Coded-Wire tags  
implanted

131,000 ADULT  
RETURNS to the  
Snake River Basin



# Science & Conservation Stewardship

RESEARCH  
AND  
DATA



Conserving marine and freshwater aquatic species and their habitats across the Pacific Northwest and Pacific Islands is fundamental to our mission. Using the best available science and strong partnerships is critical to our efforts. Our staff research and monitor the population status and health of wild and hatchery fish, conduct and evaluate species conservation and recovery actions, and restore habitat together with communities of partners as diverse as the ecological communities we cherish.

*Service fish biologists implant radio tags in Bull Trout at Fishtail Falls in Central Washington. Tracking movement of the federally-protected fish will help better inform state and federal conservation and recovery management decisions. Photo USFWS*

**90 NATIVE AQUATIC**  
Species conserved or protected

**350 CONSERVATION**  
Partners



## Pacific Region Fish Health Program Re-Structured

In 1957 the region's first Fish Health Center opened, and over time expanded to three centers staffed by fish health experts that worked in the field and ran tests in center laboratories. It was the perfect plan for the twentieth century. But the advent of overnight shipping advances, regulatory changes, and the increasing involvement of the veterinary profession brought profound changes to the fish health field.

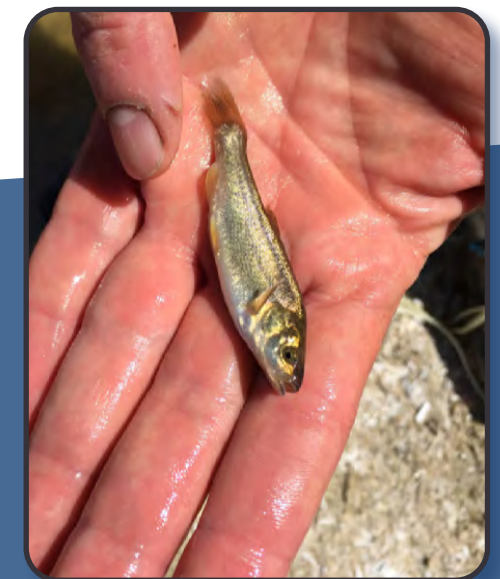
Today we employ a mixture of veterinarians and other fish health experts deployed near concentrations of Service and partner hatcheries. When testing is needed, these experts send samples by overnight express to the Washington State University College of Veterinary Medicine's diagnostic laboratory. This allows us to meet the new gold standard for fish health care, veterinary oversight and nationally accredited testing in a cutting-edge laboratory, while providing better disease prevention and management services at a lower cost to ourselves and our partners.

*A Service veterinarian checking the health of Quilcene National Fish Hatchery Coho salmon. Trichodina, a fish parasite (inset). Photos: Dan Fielding/USFWS*

**86**  
**SCIENTIFIC**  
Reports  
and articles  
published

## Unlocking Genetic Pasts To Guide Future Conservation of Native Chub

Alvord Chub and Borax Lake Chub, two native fish found in Oregon's Alvord Basin, were geographically isolated over 5 million years ago when volcanic flows formed the Basin's surrounding mountains. Both fish are highly vulnerable to potential effects of introduced species and habitat impacts, particularly the Borax Lake Chub, which is found nowhere else on earth. A 2018 Abernathy Fish Technology Center analysis of both species, which included 60 million DNA sequences taken from 136 fish collected across their ranges, revealed that the fish were genetically indistinguishable until a glaciation event that occurred approximately 10,000 years ago. Unlocking those patterns of genetic diversity and divergence between these species helps state and federal partners develop effective, science-based protection, management, and recovery efforts.



*Borax Lake Chub. Photo: Bridget Moran/USFWS*

## Improving Management of Hatchery Data

The Pacific Region has adopted the Fish Inventory System (FINS) as its single regionwide database for storing fish culture data for its 14 National Fish Hatcheries. Transition to FINS, an Internet-based system, provide the foundation for substantially improving our ability to manage and share with partners the Columbia - Pacific Northwest Region's hatchery data in a more holistic, effective, efficient, and timely manner.



*Chinook salmon. Photo: Roger Tabor/USFWS*



48 RESTORATION  
Projects

\$16 MILLION  
Leveraged

# Science & Conservation Stewardship Continued

HABITAT  
RESTORATION



Service staff from the Malheur National Wildlife Refuge, Columbia River Fish and Wildlife Conservation Office, and Abernathy Fish Technology Center are working together and with partners to restore the refuge's aquatic habitat. Photo USFWS

## Bringing Waterfowl Back to Malheur National Wildlife Refuge

Malheur National Wildlife Refuge is vital to migratory waterfowl and native birds. Common Carp introduced into the refuge's waterways last century have diminished water quality and decimated the aquatic vegetation upon which many birds depend. Total eradication of the nuisance fish, a decades-long challenge, is currently not feasible.

In 2018-2019, the Service conducted extensive field experiments in collaboration with the Harney Basin Watershed Council and High Desert Partnership, U.S. Geological Survey, and Oregon Watershed Enhancement Board to answer a key—and complex—question: to what level should the carp population be reduced to improve waterfowl habitat?

Researchers constructed several large enclosures in an isolated refuge pond and stocked them with varying numbers of carp. Using a blend of low and high tech methods, including aerial infrared drone imagery, scientists then measured over time the rate of aquatic habitat damage inflicted by different carp densities. The study results will help refuge managers evaluate and deploy strategies that ultimately help restore Malheur Lake.

## Fish Passage Program, Fish Habitat Partnership Restoration Milestones

Healthy fish and native mussel populations require access to high quality habitat. In 2018 and 2019, the Pacific Region Fish and Aquatic Conservation Program and its partners completed 48 restoration projects that resulted in the removal of 31 fish passage barriers, provided access to 92 miles of previously inaccessible stream habitat, and restored 17.5 miles of instream habitat. These projects benefitted many fish species, including threatened populations of Bull Trout, Chinook Salmon, and Coho Salmon. The Service's investment of \$3.1 million leveraged over \$16 million in partner funding to support community-based restoration in the Pacific Northwest and Pacific Islands.

## Restoring a Unique Island Aquatic Community

Anchialine pools are small bodies of water found only in tropical and subtropical coastal areas. Due to their underground connection to the ocean, they contain brackish water that in Hawaii supports a unique community of species including several species of endemic red shrimp called `ōpae`ūla. Many of these pools have been lost to development; many others remain at risk from invasive species like mosquito fish, which prey upon native invertebrates. Other introduced fish species, such as tilapia and guppies, outcompete native fish and pollute the pools with their waste.

With our partners in the Hawaiian Fish Habitat Partnership, we restored 6 anchialine pools on the Big Island in 2018-2019. Removing invasive vegetation, invasive fishes, biosolids, and sediments will allow native fishes and invertebrates like `ōpae`ūla to recolonize the anchialine pools to which they are uniquely adapted.

## Hancock Springs Restored to Original Splendor

A nearly 20-year effort to restore Hancock Springs is finally complete. This unique spring-fed tributary to the Methow River was partially restored in 2011 and rapidly provided new habitat for ESA listed steelhead, spring Chinook Salmon, and Bull Trout. Designed by Service staff, the lower reach was completed in 2019 using a combination of innovative construction techniques, lots of sweat equity, and great partnerships.

Located on a former dairy farm, the ranch is still actively farmed but protected by a conservation easement for its ecological values. A five-year effectiveness study demonstrated the success of the 2011 effort, which prompted the Service, Cascade Columbia Fisheries Enhancement Group, the Methow Conservancy, the Yakama Nation, many volunteers, and the landowners to rejoin forces and finish the job. The newly rebuilt streambanks and wetlands will further aid recovery efforts for some of the region's most iconic and imperiled native fish.

31 FISH-PASSAGE  
Barriers Removed



Sockeye Salmon. Photo USFWS



Removing invasive species and biosolids from anchialine pool. Photo: Gordon Smith/USFWS

92 MILES  
of Habitat Re-opened



Restoring wetlands and stream habitat at Hancock Springs. Photo: Katy Pfannenstern/USFWS

50  
unique fields of  
program expertise

3,000  
volunteers, 36,000  
hours of service

280  
employees

# People Power Our Programs

If water is the lifeblood for our Program, our 280 employees are the heartbeat. Our scientists, fish culturalists, administrative experts, maintenance crews, managers, interpreters, and volunteers every day share their expertise and passion, collaborate with conservation partners, and connect people with nature and the aquatic animals and habitats we are honored to conserve, protect, and restore.



## Employee Wins National Interpretive Award

Cheri Anderson, the Visitor Services and Information and Education Program Manager for the Columbia River Gorge Fisheries Complex, won the Service's national 2018 Rachel Carson Sense of Wonder Award. The award is the Service's highest honor for excellence in interpretation and educational programming. Cheri has managed the Complex's education and interpretation program for over 20 years, and has developed interpretive programs, such as Salmon in the Classroom, which are emulated across the nation.



Cheri Anderson at a school salmon release.  
Photo: USFWS



Staff from Eagle Creek National Fish Hatchery, the Columbia River Fish and Wildlife Conservation Office, Columbia River Gorge Complex, and Regional Office during one of the hatchery's Coho Salmon spawning days. Photo USFWS

## Volunteer Contributions Provide Key Support

Need proof volunteering makes a difference? In 2018-2019, nearly 3,000 volunteers, from northern Idaho retirees to 18-year old twins in western Washington, donated nearly 36,000 hours of time, energy, and expertise to support 20 stations and staff across the Pacific Northwest and Hawaii. With ages ranging from 10 to 80, our volunteer workforce contributed approximately \$1 million in donated labor, helping our staff repair buildings, extend trails, restore habitat, spawn fish, run tours, even assist with organizing and summarizing historical archives.



Volunteer Rodney Campbell regularly commutes long distances to help staff at Dworshak National Fish Hatchery spawn fish or conduct community outreach events. Photo USFWS

## FAC Teams Net Data Management Awards

Two FAC teams earned 2019 data management awards at the Region's 2019 Science of the Service information exchange. The Fish Inventory System Steering Committee, made up of staff in nine field stations and the Regional Office, was recognized for developing a strategic plan guiding management of hatchery data across the Region's 14 National Fish Hatcheries, the Abernathy Fish Technology Center, four Fish and Wildlife Conservation Offices and the Lower Snake River Compensation Plan Program. Five Columbia River Fish and Wildlife Conservation Office staff were also awarded for enhancing the Columbia River Information System's capacity to track and process fish production and fisheries management information.

