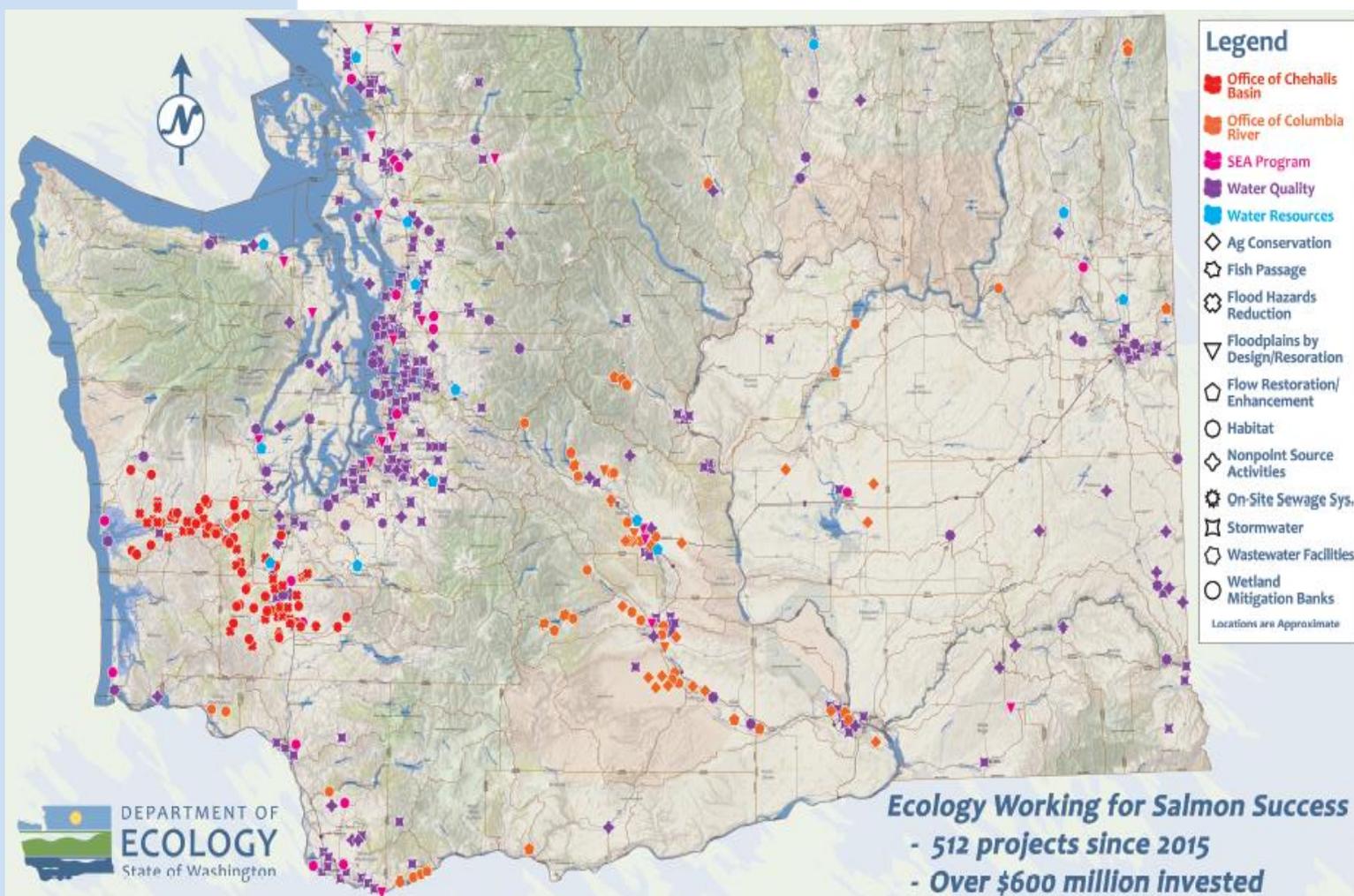




DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Ecology Working for Salmon Success

## 2019 Salmon Recovery Conference



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Across the state, we coordinate water quality improvement and shoreline management with local government partners to help make sure Washington's marine and fresh water resources meet state water quality standards. We protect stream flows that salmon and other aquatic species need for survival. We also have special emphasis programs in the Columbia and Chehalis river basins that emphasize protecting and restoring fish passage and habitat. All these efforts support the full spectrum of plants and animals that inhabit our lakes, streams, wetlands, and marine waters, which in turn, benefit salmon, orca, and other fish and wildlife.

### Clean Water Grants and Loans



*Diamond Fork Creek Tributary to Klickitat River*

Throughout their life cycle, salmon depend on clean, cool water to survive. As part of our strong support for management decisions about hatchery, harvest, habitat and hydropower activities in Washington, we administer funding for projects to improve and protect water quality throughout the state. We combine grants and loans from state and federal funding sources as well as provide technical assistance to our partners in local and tribal governments, public institutions of higher education, and, in some cases, public-benefit nonprofit organizations. We provide grant and loan assistance to support a wide range of water quality improvement projects such as wastewater and stormwater facilities, retrofits, and planning; on-site sewage system repairs, connections, and surveys; nonpoint source restoration, acquisition, and improvement plans; and green projects focused on water or energy efficiencies, and other innovative activities. We fund about 110 projects a year through four primary funding sources.

Annual funding levels are based on six-year averages and include:

- \$112 million annually through the combined state and federal Washington State Water Pollution Control Revolving Fund Program.
- \$33 million a year through the Stormwater Financial Assistance Program.
- \$18 million a year through the state Centennial Clean Water Program.
- \$1.6 million annually through the federal Clean Water Act Section 319 Program.

**For more information:** <https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Water-Quality-grants-and-loans>

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## Shoreline Management and Shoreline Master Programs

We work closely with local governments to help manage and protect Washington's more than 28,000 miles of lake, stream, wetland and marine shorelines. We provide guidance and technical assistance to about 260 city and county government partners across the state to help them develop local land-use policies and regulations—also called shoreline master programs—that apply to public and private uses of the state's shorelines. We also review and approve each shoreline master program to ensure they comply with the state Shoreline Management Act and applicable state rules.

These locally-tailored policies and regulations are designed to protect natural resources for future generations by ensuring a no net-loss of shoreline ecological functions, providing for public access to public waters and shores, and planning for water-dependent uses.

Shoreline master programs help local governments protect aquatic resources—including salmon habitat—by:

- Locating, designing, and mitigating future shoreline development to limit further degradation of the shoreline environment.
- Prohibiting shoreline uses that are not water-dependent such as new offices and multi-family housing.
- Designating and protecting unaltered shorelines.
- Requiring vegetated buffers and building setbacks to reduce the impacts of future development.



*White River - City of Buckley*

**More information:** <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning>

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## Streamflow Restoration Implementation Grant Program

To improve stream flows while providing water for rural homes, we are providing up to \$20 million in funding to local and tribal governments, state agencies, and non-profit organizations for 15 streamflow restoration projects located in 11 watersheds across the state.

The Washington Legislature created the grant program in 2018 as part of the new Streamflow Restoration law. We give priority to projects that will acquire existing water rights to offset new uses, develop infrastructure to store and release water, and alter how water is managed to align availability with demand. We know healthy levels of water flowing in state streams and rivers will benefit aquatic habitat that salmon and other species need to survive and thrive.



*Methow River*

The 15-year grant program will balance the need for secure water supplies for homes, farms, and businesses, while helping enhance and restore watersheds for threatened and endangered fish.

### **More information:**

<https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Streamflow-restoration-implementation-grants>

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*Mill Creek - Walla Walla*

## Office of Columbia River and Yakima Basin Integrated Plan

Our Office of Columbia River (OCR) is responsible for aggressively pursuing water supply solutions to meet current and future needs along the Columbia River and its tributaries—including water for salmon, steelhead, and bull trout that are endangered in much of the Columbia River Basin. Healthy watersheds are crucial for salmon recovery and survival—and we’re learning the best way to achieve balance for people, farms, and fish is to implement integrated water solutions.

As part of the Yakima Basin Integrated Plan, for example, irrigators are spilling water from their ditches into important salmon-bearing tributaries located in the upper Yakima watershed that might otherwise go dry.

Other projects focus on providing fish passage at Cle Elum Dam, and improving habitat by placing woody debris in creeks, and preserving and restoring the Teanaway Community Forest in the headwaters of the 6,000 square-mile watershed.

In the lower Yakima Basin, we’re studying warming waters and mapping places of refuge where water temperatures are cool to evaluate how we can support salmon passage from the Columbia River onward up the river. We use a fish atlas developed with the help of the Washington Department of Fish and Wildlife to help identify what areas up and down the Columbia River Basin would benefit most from our projects supporting fish.



*Sockeye - Cle Elum River*

**More information:** <https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-supply-projects-EW>

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## Office of Chehalis Basin and Chehalis Basin Strategy

Our Office of Chehalis Basin has a dual mandate to help restore, enhance, and preserve aquatic species habitat while working to reduce damages from catastrophic floods in the Chehalis River Basin. We are working closely with the legislatively-established Chehalis Basin Board, other local, tribal, and state leaders, and local salmon recovery groups to put the two-pronged Chehalis Basin Strategy in place.

The Strategy's robust collection of near- and long-term actions as well as small- and large-scale projects is vital because Washington's second largest watershed is at a turning point. For decades, peak seasonal flood levels have been rising—with five of the Basin's largest historical floods occurring during the last 30 years.

Flooding as well as droughts in the Basin are expected to get worse and more frequent with climate change. The Chehalis watershed is also one of the only river basins in the state without any federally-listed endangered salmon species. Fish, however, are still in trouble and many wild salmon runs are only a fraction what they were 100 years ago.

The Office of Chehalis Basin administers legislative funding to implement the Chehalis Basin Strategy and supports the Chehalis Basin Board in aggressively pursuing long-term flood damage reduction and aquatic species restoration projects. Since 2015, we have helped direct \$11.7 million in investments through our partners for 54 aquatic habitat restoration projects that will open up nearly 100 miles of Basin stream habitat for migrating salmon; supported \$40 million more in local and state funding for 39 flood hazard reduction projects; and invested \$740,000 to establish evacuation routes and install reusable, elevated farm pads at 22 basin locations.



*Chehalis River – Chehalis, WA*



### **More information:**

<https://ecology.wa.gov/About-us/Get-to-know-us/Our-Programs/Office-of-Chehalis-Basin>

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## Floodplains by Design Grant Program

Our competitive Floodplains by Design (FbD) grant program is a modern public-private partnership co-managed with The Nature Conservancy and Puget Sound Partnership that's focused on re-establishing floodplain functions in Washington's major river corridors. Floodplains provide important habitat for our salmon, rich soil for our farms, and beautiful backdrops for our lives. In the past, attempts were made to control rivers, thinking flooding could be simply stopped by walling off rivers with levees, straightening them, and laying out a grid of commercial and residential development across them. Now salmon runs are disappearing and more people live in the path of dangerous floodwaters.

The FbD program creates partnerships with tribal governments, floodplain managers, and farmers to design ways to return their rivers and floodplains back to nature. As a result of these partnerships, the program helps protect thousands of residences, farms, and businesses at risk from catastrophic flooding while restoring natural floodplain functions and aquatic ecosystems and habitat. FbD projects have included removing or setting back levees and other structures, planting native vegetation, building side channels for flood storage, placing engineered logjams in strategic locations, and improving agricultural drainage.

Since 2013, our \$115 million in FbD investments have:

- Reduced flood hazards in 38 Washington communities
- Reconnected more than 1,000 acres of floodplains
- Restored important salmon habitat in more than 10 miles of river systems
- Removed nearly 430 residences from the high-risk flood zone.



*Puyallup River - City of Orting*

By June 30, 2019, our FbD program will help remove another 270 homes from high-risk floodplain areas, reconnect another 1,500 acres of floodplains to state river corridors, restore 15 more miles of aquatic habitat, and protect an additional 500 acres of farm land.

**More information:** <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Floods-floodplain-planning/Floodplains-by-design>

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### Washington Conservation Corps

Our Washington Conservation Corps (WCC) is an AmeriCorps program that creates future leaders through community involvement and mentorship. We have more than 350 members and experienced staff statewide who restore critical habitat, build trails, and respond to local and national disasters. Through AmeriCorps, our WCC program provide hands-on experience, field skills, and training opportunities for young adults between 18 and 25 and military veterans. We work in partnership with nonprofit and governmental organizations that apply for WCC crews or individual placement members to complete projects.

Our WCC crews and individual members regularly support projects designed to help salmon recover. For example, we partner with the Yakama Nation, Nature Conservancy and Washington Department of Fish and Wildlife to supplement Oak Creek, a tributary to the Naches River, with woody debris to improve spawning grounds for young salmon. In Bellingham's Padden Creek, WCC crews planted and maintained new riparian zones after the city rerouted a large section of the salmon-bearing stream away from a concrete tunnel after 100 years. Crews then conducted surveys for spawning salmon and their nests.

Our WCC crews help remove barriers for fish migration, repair stream and riverside habitat damaged by unlawful uses of public lands, establish instream structures and channels, plant native trees and shrubs along rivers and streams, and construct livestock exclusionary fencing.



**More information:** <https://ecology.wa.gov/About-us/Our-role-in-the-community/Washington-Conservation-Corps>

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## Wetland Mitigation Banks



*Coweeman Wetland Mitigation Bank*

Washington's wetlands help protect water quality, reduce flooding, provide aquifer recharge for drinking water and other uses, and offer important habitat for wildlife and fish—including salmon. To achieve a no net loss in the overall amount and function of the state's remaining wetlands, we work in close partnership with local and tribal governments, federal agencies, non-profit entities, consultants, and entrepreneurs to create, restore, enhance, and preserve these vital aquatic resources. When public and private development proposals are likely to impact wetlands, we help ensure measures are put in place to offset unavoidable adverse environmental effects.

Wetland mitigation banks are an important tool for providing compensatory mitigation in advance of unavoidable impacts to wetlands. Since wetland mitigation banks are built before damage occurs to another wetland site, banks are more likely to succeed than projects in which the permittee is responsible for mitigation. Banks help harness the power of the marketplace by providing developers the option of purchasing third-party mitigation credits to offset wetland impacts.

Wetland mitigation banks consolidate many small wetland mitigation projects into a larger site with potentially more ecological value, more diverse habitat and wetland functions, and more sustainable ecosystems. Wetland banks have the potential to increase ecological benefits, save money for project applicants, and make the application and permitting processes more efficient.

Working in partnership with the U.S. Army Corps of Engineers, we have certified 17 wetland mitigation banks to restore, enhance, and protect about 4,600 acres of wetlands in 11 Washington counties—and we are reviewing another four bank sites.

**More information:** <https://ecology.wa.gov/Water-Shorelines/Wetlands/Mitigation/Wetland-mitigation-banking>

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## National Coastal Wetlands Conservation Grant Program

Managed by the U.S. Fish and Wildlife Service (USFWS), the National Coastal Wetlands Conservation grant program provides up to \$1 million in funding for individual wetland conservation projects in coastal and Great Lakes states as well as U.S. Territories.

The program is funded in part through taxes paid on equipment and fuel purchases by recreational anglers and boaters. While only states can apply for federal coastal wetlands grants, we work in close partnership with local trusts, local and tribal governments, and other entities to identify conservation projects—including salmon recovery activities—in Washington’s coastal areas and develop wetland restoration and protection proposals for consideration by USFWS.

In 2018, we secured more program grants than any other state agency in the nation. In past decade alone, we have helped secure federal funding and provided technical assistance for projects totaling nearly \$86 million to conserve more than 10,000 acres of coastal wetlands in Washington.



Big Beef Creek



Elwha River Delta

**More information:** <https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Wetlands-conservation-grants>

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- **Shorelands and Environmental Assistance Program**
  - Shoreline Management and Shoreline Master Programs
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  - National Coastal Wetlands Conservation Grant Program
  - Wetland Mitigation Banks
  - Washington Conservation Corps
- **Water Quality Program**
  - Clean Water Grants and Loans Program
- **Water Resources Program**
  - Streamflow Restoration Implementation Grant Program
- **Office of Columbia River**
  - Yakima Basin Integrated Plan
- **Office of Chehalis Basin**
  - Chehalis Basin Strategy

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