

# Salmon Recovery 2016 GRANTS AWARDED



## Projects in Asotin County

**\$176,000**

### **Asotin County Conservation District Protecting the Shorelines of Asotin Creek**

**Grant Awarded: \$90,000**

The Asotin County Conservation District will use this grant to protect 3 miles of Asotin Creek shoreline from cattle. About 50 cattle use land on the north side of the creek for winter feeding and calving. In late spring, the cattle must wade through large, hazardous sections of the creek to get to a south side pasture. The conservation district will work with the landowner to develop alternative places for livestock watering, plant trees and shrubs along the shorelines, install fencing, and build a bridge for cattle to use. The landowner has agreed to enroll about 80 acres in the Natural Resource Conservation Service's Conservation Reserve Enhancement Program (CREP) to establish a buffer along this stretch of Asotin Creek. The river is home to Snake River steelhead, spring and fall Chinook salmon, and Columbia River bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Asotin County Conservation District will contribute \$24,000 in a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2092)

### **Asotin County Conservation District Tracking Fish and Habitat in Asotin Creek**

**Grant Awarded: \$86,000**

The Asotin County Conservation District will use this grant to support one year of ongoing monitoring in Asotin Creek. Asotin Creek and its tributaries are part of a 10-year intensively monitored watershed project that is planned through 2019. Scientists have been monitoring the creek to determine the effectiveness of logjams and if they will help restore habitat and fish populations in other watersheds. Funding by the Pacific State Marine Funding Commission has been reduced in 2016 and this grant will make up the difference. The conservation district will track juvenile steelhead using PIT (passive integrated transponder) tags and through recapture surveys. They also will monitor the habitat to see if it's improving in three tributaries: Charley, North Fork Asotin Creek, and South Fork Asotin Creek. These reaches of Asotin Creek are home to Snake River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. All data will be made publicly available. The Asotin County Conservation District will contribute \$25,000 in donations of labor and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2101)

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## Projects in Chelan County

**\$624,512**

### Chelan County

**Grant Awarded: \$149,778**

#### Designing the Reconnection of Nason Creek and an Oxbow

The Chelan County Natural Resource Department will use this grant to design a project to reconnect a side channel of Nason Creek on land owned by the Chelan-Douglas Land Trust, just upstream of Lake Wenatchee. The project calls for crews to excavate a small amount of land that contains a relic oxbow to connect the oxbow to Nason Creek at its downstream end. The County also will evaluate the feasibility of an upstream connection either by excavating or placing one to two logjams in the creek. This phase of the project will include permit submittal and final design. The river is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened with extinction. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1780)

### Chelan County

**Grant Awarded: \$169,484**

#### Restoring Water to Peshastin Creek

The Chelan County Natural Resources Department, working with the Peshastin Irrigation District, will use this grant to complete preliminary designs for a pump exchange facility that would deliver up to 30 cubic feet per second of water from the Wenatchee River to the Peshastin Irrigation District Canal in late summer. In exchange, the amount of water taken from Peshastin Creek would be reduced, increasing flow in the lower 2.4 miles of Peshastin Creek and a portion of the Wenatchee River. The exchange will help migrating salmon and trout and improve spawning and rearing habitat. Peshastin Creek is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened with extinction, as well as by bull trout. Chelan County will contribute \$29,909 from another grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1787)

### Chelan County

**Grant Awarded: \$140,000**

#### Studying Spring Chinook Survival in Lake Wenatchee

The Chelan County Natural Resources Department will use this grant to see what is killing spring Chinook salmon in Lake Wenatchee. Preliminary data suggests there may be low survival rates of juvenile spring Chinook as they emigrate downstream through Lake Wenatchee because there isn't enough food or there are too many predators. Preliminary studies indicate that food may not be the problem so scientists will track juvenile spring Chinook survival rates through the lake, document predator abundance and distribution, and evaluate predator gut contents. Chelan County will contribute \$570,125 in donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1783)

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### Chelan-Douglas Land Trust

**Grant Awarded: \$165,250**

#### Conserving the Sleepy Hollow Floodplain of the Wenatchee River

The Chelan-Douglas Land Trust will use this grant to buy 37 acres of the lower Wenatchee River, known as the Sleepy Hollow floodplain. The land is the largest undeveloped floodplain in the lower Wenatchee River and is only 10 minutes from downtown Wenatchee. The land includes more than a half-mile of riverfront and the inlets of two major seasonal channels, has good shoreline plantings that help shade and cool the water for salmon, and is 95 percent in the 100-year floodplain. All salmon species in the Wenatchee River basin spend part of their lives in this section of the river, where development, highways, and railroads have taken up much of the historic floodplain and channel migration zone. This is the final opportunity to protect a crucial piece, and is the keystone to future acquisitions with the two other owners of the connected floodplain. The landowner is a large developer that has obtained preliminary approval from Chelan County for a cluster development entirely within the floodplain. The threat to this highly functional floodplain is real and imminent. The land trust also would give the public access to 25 feet of fishing easements held by the Washington Department of Fish and Wildlife along the entire shoreline, which currently you can get to only from the river. The river is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened with extinction, as well as by upper Columbia River summer/fall Chinook salmon. The Chelan-Douglas Land Trust will contribute \$495,750 in a local grant and a grant from the state Washington Wildlife and Recreation Program. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1790)

## Projects in Clallam County

**\$835,795**

### Lower Elwha Klallam Tribe

#### Restoring Deep Creek

**Grant Requested:\$600,546**

The Lower Elwha Klallam Tribe will use this grant to place tree root wads and large logs in Deep Creek to improve salmon habitat and reconnect the creek to its floodplain. The wood will be placed at 15 sites in lower Deep Creek. Tree root wads and logs create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. The creek is used by steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, and by coho and chum salmon and cutthroat trout. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1427)

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### Quileute Tribe

**Grant Awarded: \$235,249**

#### Removing Barriers to Fish Migration under Thunder Road

The Quileute Tribe will use this grant to remove four barriers to fish migration under Thunder Road, in La Push, on the Quileute Reservation. The barriers will be replaced with larger or different types of culverts, which are structures that carry streams under roads. The streams flow into Smith Slough, which is at the mouth of the Quillayute River and is used by Chinook and coho salmon, steelhead, and sea-run cutthroat and resident cutthroat trout, none of which are listed under the federal Endangered Species Act. As the Quillayute River has moved around in its floodplain and widened, some off-channel habitat has been abandoned, making it not accessible to fish. Fixing the barriers at these four sites will open more than 22 acres of habitat for use in the winter. The Tribe also will improve 1 mile of road by laying gravel on the surface, improving ditches and drainage structures, and reshaping the forest floor to reduce runoff impacts to fish-bearing streams. The Quileute Tribe will contribute \$133,879 in cash and a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1231)

## Projects in Columbia County

**\$759,585**

### Columbia Conservation District

**Grant Awarded: \$304,775**

#### Continuing Restoration of the Tucannon River

The Columbia Conservation District will use this grant to build and place about 40 logjams in 1.5 miles of the Tucannon River and .5 mile of side channels to increase the types and complexity of habitat there, and to reconnect the river to its floodplain. The river has lost habitat because of past land management, straightening and confining of the river channel, and removal of tree root wads and logs from the river. Existing conditions provide limited winter rearing habitat and cause fish to leave the upper river reaches too early in search of habitats downriver, which can have detrimental conditions. Logjams create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, logjams change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. This is the second of a three-phase project to restore the river northeast of Dayton. The river is home to Snake River spring Chinook salmon and steelhead and Columbia River bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger, watershed-wide restoration effort. The Columbia Conservation District will contribute \$63,896 from a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2094)

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### **Confederated Tribes of the Umatilla Indian Reservation Grant Awarded: \$406,864** **Improving Tucannon River Habitat and Connection to its Floodplain**

The Confederated Tribes of the Umatilla Indian Reservation will use this grant to place large tree root wads and logs in the Tucannon River, in Columbia County. The roots and logs will create places for fish to rest and hide from predators. They also will slow the river, which reduces erosion and allows small pebbles to settle to the river bottom creating places for salmon to spawn. They will change the flow of the river, creating riffles and pools, giving fish more varied habitat. The Tribes also will excavate short pilot channels to reconnect existing side channels. The roots and trees will block some of the flow, spreading the river out over its floodplain. The river is home to Snake River spring Chinook salmon, steelhead, and Columbia River bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger, watershed-wide project. The Tribes will contribute \$90,000 in donations of cash. Visit RCO's online Project Snapshot [for more information and photographs of this project.](#) (16-2091)

### **Department of Fish and Wildlife** **Tracking Salmon in the Tucannon River**

**Grant Awarded: \$47,946**

The Washington Department of Fish and Wildlife will use this grant to conduct mid-winter surveys of fish in the Tucannon River near the Panjab Bridge. Scientists will use mobile equipment that tracks PIT tags (passive integrated transponder), which are inserted in fish and trigger antenna arrays in the river when they pass by. The data collected lets scientists better understand the movement and the types of habitat fish prefer in the winter and will increase the precision of the survival estimates between reaches. The river is home to Snake River spring Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger, watershed-wide program. The Department of Fish and Wildlife will contribute \$8,866 in a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project.](#) (16-2095)

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## **Projects in Cowlitz County** **\$97,316**

### **Cowlitz Conservation District** **Enhancing Kalama River Habitat**

**Grant Awarded: \$16,085**

The Cowlitz Conservation District will use this grant to place wood structures in the Kalama River and enhance shoreline habitat on land owned by the Gaddis Family near the city of Kalama. Wood structures create places for fish to feed, rest, and hide from predators. The structures also slow the river, which reduces erosion and the resulting loading of sediment into the river. Finally, the structures change the flow of the river, creating riffles and pools, giving fish more varied habitat. The project also will enhance side channel habitat complexity and connection by placing

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large wood structures in the channel and planting trees along the banks. The new plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. The river is used by lower Columbia River Chinook and coho salmon and steelhead, and by Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Cowlitz Conservation District will contribute \$7,900 in donations of labor and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1522)

### **Cowlitz Indian Tribe Restoring Fish Passage in Sarah Creek**

**Grant Awarded: \$698,824**

The Cowlitz Indian Tribe will use this grant to remove a fish passage barrier and enhance about a half-mile of Sarah Creek, west of Longview. The Tribe will use wood and boulders to build up the stream channel below a boulder rock fall that is blocking coho and steelhead, opening 1.72 miles of upstream habitat. The Tribe also will place wood structures upstream of the falls. The wood structures create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. The Tribe will plant trees along the creek shoreline, which will shade and cool the water, and drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Sarah Creek is used by lower Columbia River Chinook, coho, and steelhead, and by Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1533)

### **Lower Columbia River Fish Enhancement Group Adding Complexity to the Kalama River Tidal Zone**

**Grant Awarded: \$357,400**

The Lower Columbia River Fish Enhancement Group will use this grant to place large wood structures in the tidal zone of the lower Kalama River. The wood structures will create deep pools, giving fish places to rest, feed, and hide from predators. The pools also will provide cool water during the key migration periods. The tidal zone of the Kalama River provides cold water refuge to all salmon species produced in the basin as well as fish that migrate from other Columbia River tributaries. The project site includes land owned by the Port of Kalama, the Washington Departments of Fish and Wildlife and Natural Resources, and the Kalama Sportsmen Club. The river is used by lower Columbia River Chinook and coho salmon and steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The fish enhancement group will contribute \$88,125 in cash and donations of labor

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and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1532)

### **Lower Columbia River Fisheries Enhancement Group**      **Grant Awarded: \$97,316** **Designing a Project to Improve Habitat in the Coweeman River**

The Lower Columbia River Fisheries Enhancement Group will use this grant to design a project that will increase spawning habitat, stabilize riverbanks, create off-channel habitat, and improve shoreline plant conditions in about 4 miles of the Coweeman River, Baird Creek, and Skipper Creek, east of Kelso. In the early 1900s, temporary wooden dams were built to raise the water level in streams to float logs downstream to sawmills. This splash dam logging occurred in many of the lower Columbia River tributaries, including the ones targeted by this design project, and resulted in extreme bed scour. Today, there are extensive reaches of exposed bedrock, which provide limited benefits to fish. The fisheries enhancement group is working with the landowner, Weyerhaeuser, to design the project. If the warm water and drought conditions observed in 2015 represent the climate conditions in the future, then the cold water in rivers like the Coweeman will provide important spawning and rearing habitat for salmon and steelhead. The river is used by lower Columbia River Chinook and coho salmon and lower Columbia River steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1668)

### **Lower Columbia River Fish Enhancement Group**      **Grant Awarded: \$247,576** **Planting along the Toutle Rivers**

The Lower Columbia River Fish Enhancement Group will use this grant to plant 50,000 native trees and shrubs on 50 acres of shoreline and floodplain at the confluence of the north and south forks of the Toutle River. This area was destroyed completely by the 1980 eruption of Mount Saint Helens and limited plant re-establishment has occurred since then. The trees and shrubs will help shade the water, cooling it for fish. They also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the tree roots will help keep the soil from entering the water and burying spawning gravel. The river is used by Lower Columbia River Chinook, coho, and steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Lower Columbia River Fish Enhancement Group will contribute \$43,690 in staff labor, materials, and state grants. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1694)

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## Projects in Grays Harbor County

**\$509,493**

### **Chehalis Basin Fisheries Task Force**

**Grant Awarded: \$26,500**

#### **Removing Barriers to Fish Migration in Taylor Creek**

The Chehalis Basin Fisheries Task Force will use this grant to design and get permits to remove two barriers to fish migration on Taylor Creek, southeast of Elma. One of the barriers is a large concrete structure under Taylor Creek South Bank Road that is passable by only 33 percent of the salmon. It will be replaced with a structure that is passable to all salmon and opens access to 2.86 miles of excellent spawning and rearing habitat in forests. The second barrier is about 75 feet downstream on an abandoned railroad grade crossing private property. These two side-by-side cement pipes block about 67 percent of the fish and will be removed along with the abandoned railroad grade, and the area restored. Five species of fish will benefit from the improved habitat in the Chehalis River basin as a result of this project, including Chinook, coho, and chum salmon, and steelhead and cutthroat trout. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1776)

### **Chehalis River Basin Land Trust**

**Grant Awarded: \$200,000**

#### **Designing Restoration of the Middle Fork Hoquiam River**

The Chehalis River Basin Land Trust will use this grant to design a project to restore tidal action and fish passage to a railroad-impounded wetland along the Middle Fork Hoquiam River and the Hoquiam River, on land owned by the trust. The Hoquiam watersheds have spawning populations of Chinook, chum, and coho salmon and steelhead. The project's design will look at options for removing up to six fish barriers, installing fish-passable structures, and opening up two railway-impounded wetlands to tidal waters. That work would restore fish passage to 4 miles of river and restore 72 acres of surge plain to intertidal habitat. Design work will include an analysis of alternatives and preliminary designs for the preferred alternatives. A neighboring landowner intends to abandon five other fish-blocking culverts on the Middle Fork Hoquiam River soon. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1756)

### **Grays Harbor Conservation District**

**Grant Awarded: \$84,348**

#### **Removing a Barrier to Fish Passage in the North River**

The Grays Harbor Conservation District will use this grant to remove an aluminum pipe that carries a tributary of the North River under the C-400 road, just south of the town of Vista in Grays Harbor County. The conservation district will replace the pipe, which is blocking fish passage, with a bridge, opening 2.1 miles of habitat to coho salmon and cutthroat trout. Making small side streams like this one available to wild fish in the North River watershed will provide habitat so that the population density can improve over time. The landowner, Weyerhaeuser



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Corp., will contribute at least \$84,348. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2039)

### Quinault Indian Nation Designing Fish Passage in Halbert Creek

**Grant Awarded: \$48,645**

The Quinault Indian Nation's Division of Natural Resources will use this grant to complete engineering designs and a cost estimate for a project to remove a pair of barriers to fish passage in Halbert Creek, a tributary to the Moclips River, and replace them with a bridge. The barriers are culverts, which are large pipes that carry Halbert Creek under roads. The culverts are on Quinault Indian Reservation in Grays Harbor County. Replacing them will restore access to 2.2 miles of habitat for coho salmon and cutthroat trout. The Tribe also plans to assess stream habitat conditions and complete stream rehabilitation designs for up to .8 mile of the creek. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1322)

### Quinault Indian Nation Treating Invasive Knotweed in the Lower Quinault River Floodplain

**Grant Awarded: \$150,000**

The Quinault Indian Nation's Division of Natural Resources will use this grant to survey and treat 2,555 acres of invasive knotweed plants in the lower Quinault River floodplain. Knotweed grows vigorously, creating dense colonies that make it hard or impossible for native plants to survive. Its ability to out-compete other plants results in an altered natural landscape. Once established, they are very difficult to remove. The Quinault River is used by Chinook, chum, coho, and sockeye salmon, steelhead, and cutthroat trout. The Quinault Indian Nation will contribute \$26,471 in staff labor and a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1509)

## Projects in Island County

**\$175,144**

### Whidbey Camano Land Trust Conserving Barnum Point

**Grant Awarded: \$175,144**

The Whidbey Camano Land Trust will use this grant to buy 37 acres in the first phase of a larger project that will protect Barnum Point on Camano Island, directly across from the mouth of the Stillaguamish River, in Port Susan. The area contains upland, forested bluff, and tidelands on the east side of county-owned property. The larger project aims to conserve the entire point, 27 acres of which were purchased by Island County in 2012. When complete, the full purchase will conserve 129 acres and more than three-quarters of a mile of shoreline, including land along the mouth of Triangle Cove (one of the only non-diked estuaries in Island County), eroding bluffs that feed important sediments to Iverson Point and Livingston Bay to the northeast, and a forested bluff. The land trust, Island County, and The Nature Conservancy already have received

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more than \$2.4 million in grants to conserve 52 acres of the point and Island County is requesting an additional nearly \$4 million in state grants to complete the purchase of the point, which will be matched in part by more than 600 individual private donations. The water around the point is used by Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1429)

## Projects in Jefferson County

**\$1,553,093**

### Hood Canal Salmon Enhancement Group

**Grant Awarded: \$29,436**

#### Buying Land to Support Duckabush Estuary Restoration

The Hood Canal Salmon Enhancement Group will use this grant to buy 2.4 acres in the estuary and historic floodplain of the lower Duckabush River. The enhancement group also will demolish a building, decommission a well, remove a septic system, and plant the riverbanks. The overall goal is to restore the tides and reconnect the river to its floodplain to support rearing of young salmon in the Duckabush River. The river is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. This project is a part of a larger project. The Hood Canal Salmon Enhancement Group will contribute \$247,005 in grants from the state Estuary and Salmon Restoration Program and the Puget Sound Restoration and Acquisition fund. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1492)

### Hood Canal Salmon Enhancement Group

**Grant Awarded: \$725,473**

#### Planning Conservation and Restoration in the Big Quilcene Moon Valley Reach

The Hood Canal Salmon Enhancement Group will use this grant to buy about 100 acres of farmland in the Moon Valley reach of the Big Quilcene River. The enhancement group also will develop a plan to restore salmon habitat, water quality and flow, a functioning shoreline, flood resilience, and recreational access. The land is in the river's historic floodplain and channel migration zone. This project is the initial phase of restoring floodplain connectivity, spawning and rearing habitat, and shoreline vegetation in this reach of the Big Quilcene River. The river is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as by coho salmon, which are a federal species of concern. The Hood Canal Salmon Enhancement Group will contribute \$640,425 in a state grant, Conservation Futures,<sup>1</sup>

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<sup>1</sup>Conservation Futures are a portion of property taxes used by local governments to buy land or development rights to protect natural areas, forests, wetlands, and farms.

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and donation of labor and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1494)

### **Hood Canal Salmon Enhancement Group** **Grant Awarded: \$25,398** **Planning the Duckabush Oxbow Side Channel Restoration Project**

The Hood Canal Salmon Enhancement Group, in partnership with Jefferson County Conservation District and the Jefferson Land Trust, will use this grant to plan, design, and get permits for a project to restore habitat and remove fish traps in the lower Duckabush River. The work will be done on land owned by the Jefferson Land Trust and known as the Duckabush Oxbow property. The project being designed will reconnect about 200 feet of side channel, place large wood stems in the side channel to provide habitat features, excavate fill to allow the river access to more of the historic floodplain, and plant native trees and shrubs. The river is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The river also is used by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern and by pink salmon. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1472)

### **Hood Canal Salmon Enhancement Group** **Grant Awarded: \$17,609** **Studying Hood Canal Forage Fish**

The Hood Canal Salmon Enhancement Group will use this grant to study surf smelt and Pacific sand lance and their use of the nearshore in Hood Canal. These two fish are food for salmon and they spawn on beaches. While they play an important role in the food web, relatively little is understood about their basic ecology, particularly related to nearshore habitats. Shoreline development and sea level rise threaten the availability of nearshore habitat for these fish so knowing when, where, and how they use nearshore is critical to conserving these species and the salmon they support. The enhancement group will produce a technical report of findings, new data on the use of Hood Canal nearshore habitats by forage fish, updated maps of forage fish habitats, and a list of priority habitats for conservation and shorelines needing restoration. The data will be merged into a regional assessment of the potential effects of sea level rise on beach-spawning forage fish and updated shoreline habitat protection plans. Hood Canal is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. The Hood Canal Salmon Enhancement Group will contribute \$42,170 in a grant from the state Aquatic Lands Enhancement Account and donations of equipment and labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1474)

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### Jefferson County

**Grant Awarded: \$202,926**

#### Conserving Lower Big Quilcene Floodplain

Jefferson County will use this grant to purchase 1 acre of floodplain of the Big Quilcene River and restore the land by removing structures and planting native vegetation. The land will be added to the inventory of protected lands needed for a larger restoration project that will reconnect the lower river with its floodplain and distributary channels. The river is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. Jefferson County will contribute \$35,811 in a state grant. Visit RCO's online Project Snapshot [for more information and photographs of this project.](#) (16-1480)

### Wild Fish Conservancy

**Grant Awarded: \$389,251**

#### Restoring the Dosewallips Floodplain and Estuary

The Wild Fish Conservancy will use this grant to continue restoration of the Dosewallips floodplain and estuary in Dosewallips State Park. The Wild Fish Conservancy will remove all of the remaining revetment and dike downstream of U.S. Route 101 on the Dosewallips River, create a new distributary channel system in an area currently used by a park road and more than 20 campsites, build three logjams, place more tree root wads and large logs in the river, and plant the river banks with native trees and shrubs. This project is a continuation of a partnership with the Washington State Parks and Recreation Commission that started in 2002. During the past 14 years, the partners have removed a dike, revetment, and a levee; placed logjams; removed non-native invading plants; and replanted the area. The Dosewallips River is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The river also is used by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. The Wild Fish Conservancy will contribute \$373,185 in a state grant. Visit RCO's online Project Snapshot [for more information and photographs of this project.](#) (16-1482)

### 10,000 Years Institute

**Grant Awarded: \$163,000**

#### Removing Invasive Plants along the Hoh River

The 10,000 Years Institute will use this grant to remove invasive weeds along 38 miles of shoreline forest along the Hoh River's floodplain and seven large tributaries. The group will target knotweed, Scotch broom, reed canarygrass and herb Robert. Working from the Olympic National Park downstream to the Pacific Ocean, the group protects the bars and channels where native plants provide the structures, shade, nutrients, and bugs for world-famous wild Chinook and coho salmon, steelhead, bull trout, and cutthroat trout. The beauty and diversity of the watershed draws hundreds of thousands of outdoor enthusiasts each year to enjoy hiking, wildlife viewing, birding, hunting, fishing, camping, and boating. The river is used by Chinook and coho salmon, and steelhead, none of which are listed under the federal Endangered Species

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Act. The 10,000 Years Institute will contribute \$30,000 in a state grant and donations of labor and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1378)

## Projects in King County

**\$614,864**

### King County

**Grant Awarded: \$238,113**

#### Setting Back the Porter Levee

King County Water and Land Resources Division will use this grant to place logjams and build a backwater channel on the middle Green River, 2 miles upriver from Auburn. The work is part of a larger project to remove about 900 feet of the 1,400-foot-long Porter Levee along the Green River. The levee, built in 1961, has a near vertical bank, confines the river channel, and prevents habitat-forming processes in the floodplain. Removing a portion of the levee would restore river migration across 52 acres of floodplain and improve salmonid habitat. The County will build a new levee further back to protect a county road. This action will significantly improve spawning, rearing, and refuge habitat for Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act, and for steelhead. With this grant, the County will place large tree root wads and logs on the county-owned natural area on the left bank of the middle Green River and build a 1,000-foot back channel to promote rearing habitat for fish. The County will plant trees and shrubs along the back channel. King County will contribute \$42,945. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1852)

### Seattle

**Grant Awarded: \$315,218**

#### Designing Restoration of Lower Taylor Creek

Seattle Public Utilities will use this grant to complete designs for a project to restore the lower 600 feet of Taylor Creek, from Rainier Avenue South to Lake Washington. The scope also includes enhancing about 160 feet of the lake's shoreline and 8,500-10,000 square feet of lakeshore delta. Future restoration will restore this incised channel to a meandering creek with woody materials that give fish places to hide from predators and a replanted and accessible floodplain. The goal is to improve rearing and refuge habitat for juvenile Chinook salmon emigrating from the Cedar River. After completion, Seattle's Parks and Recreation Department will manage the project site as a passive-use natural area. Taylor Creek is used by Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act. Seattle will contribute \$87,500. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1213)

# Salmon Recovery

## 2016 GRANTS AWARDED



### Wild Fish Conservancy

**Grant Awarded: \$61,533**

#### Designing Restoration of Beckler River Confluence

The Wild Fish Conservancy will use this grant to develop preliminary designs for the construction of seven to ten engineered logjams in the confluence of the Beckler and South Fork Skykomish Rivers. The goal of the future constructed project will be to reconnect the lower Beckler River to its historic alluvial fan. Logjams create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. This project is a collaboration between the Mount Baker-Snoqualmie National Forest, Wild Fish Conservancy, and King County. The river is used by Puget Sound Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act. The Wild Fish Conservancy will contribute \$57,453 in a local grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1719)

## Projects in Kitsap County

**\$279,169**

### Hood Canal Salmon Enhancement Group Restoring Big Beef Creek

**Grant Awarded: \$229,840**

The Hood Canal Salmon Enhancement Group will use this grant to place tree root wads and large logs in key reaches below the Lake Symington dam and in productive tributaries of Big Beef Creek to enhance channel complexity, improve winter habitat conditions, and promote sediment stability. Tree root wads and logs create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. Work will include planting the shorelines and installing fencing in the Vine Maple tributary in the upper watershed. Riverbank plantings help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. Big Beef Creek is used by Puget Sound Chinook and Hood Canal summer chum salmon, and Puget Sound steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1477)

# Salmon Recovery

## 2016 GRANTS AWARDED



### Wild Fish Conservancy

**Grant Awarded: \$49,329**

#### Designing Restoration of Finn Creek

The Wild Fish Conservancy and partners will use this grant to produce preliminary design drawings for a project to remove a tide gate and culvert on Finn Creek, opening 2 miles of habitat to salmon and steelhead at risk of extinction. The work will occur at the downstream-most quarter-mile of Finn Creek where it is ditched next to Norwegian Point County Park in Hansville. The Wild Fish Conservancy will explore alternatives for restoring the habitat, which could include removing the tide gate at the stream mouth and removing the culvert, which is a large pipe carrying the creek under land. The culvert not only blocks fish passage but disturbs the natural flow of sediment on the beach. The design could include work that would restore tidal inundation at the stream mouth and naturalize the ditched creek through Norwegian Point County Park. The creek is used by Puget Sound Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act, and by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1596)

## Projects in Kittitas County

**\$697,938**

### Mid-Columbia Regional Fisheries Enhancement Group Restoring the North Fork Manastash Creek Floodplain

**Grant Awarded: \$204,495**

The Mid-Columbia Fisheries Enhancement Group and the Confederated Tribes and Bands of the Yakama Nation will use this grant to restore the floodplain of the North Fork Manastash Creek, a tributary to the Yakima River in the LT Murray Wildlife Area in Kittitas County. The partners will install tree root wads and large logs by helicopter along 4 miles of creek on land owned by the Washington Department of Fish and Wildlife. These woody materials create places for fish to rest, feed, and hide from predators. They slow the river, which reduces erosion and allows small rocks to settle to the riverbed, creating areas for salmon to spawn. They also change the flow of the river, creating riffles and pools, which give salmon more varied habitat. During seasonal high flows, the woody material will cause flood waters to leave the channel and disperse over large areas. This will reconnect the creek with its floodplain. The overland flow will recharge the groundwater, increasing flows to the stream during summer and reducing flood risk downstream. The North Fork of Manastash Creek is used by middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. The Mid-Columbia Regional Fisheries Enhancement Group will contribute \$62,005 in cash, a federal grant, and donations of materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1749)

# Salmon Recovery

## 2016 GRANTS AWARDED



### **Trout Unlimited Inc.**

**Grant Awarded: \$245,593**

#### **Restoring Flow to Upper Yakima River Tributaries**

Trout Unlimited's Washington Water Project and the Kittitas Reclamation District will use this grant to conserve water and restore critical fish habitat in tributaries to the upper Yakima River. The partners will line about one-third mile of an irrigation canal to eliminate water leaks. Saved water will be distributed to Manastash, Taneum, Big, and/or Little Creeks in Kittitas County during low flow periods. The partners expect to conserve and deliver about 260 acre-feet of water a year with this process. Putting more water in the rivers will improve fish habitat and access to high quality habitat during critical low flow periods. This project is part of a larger effort by the partners to conserve water and restore flows in upper Yakima River tributaries. The river is used by middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. Trout Unlimited will contribute \$43,340 in a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1760)

### **Washington Water Trust**

**Grant Awarded: \$247,850**

#### **Restoring Permanent Flow to Swauk Creek**

The Washington Water Trust will use this grant to buy a senior water right on First Creek, a tributary to Swauk Creek in the upper Yakima River basin. This will increase the amount of water left in both creeks for steelhead. In the summer, flows become so low that the creek becomes too warm for salmon and risks drying up. This project will benefit a highly productive fish-bearing reach, which begins near Liberty and extends downstream to where Swauk Creek joins the Yakima River near Cle Elum. It will add 1.71 cubic feet per second and 48.5 acre feet per year of permanent water flows to First and Swauk Creeks. Because water acquired will be entered into the Washington Trust Water Rights Program, it will be legally protected under Washington State law. This is a top-tier salmon recovery priority in the upper Yakima River watershed, offering benefits to listed steelhead and bull trout, reintroduced coho and Chinook salmon, and resident trout. Swauk Creek is used by middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. Washington Water Trust will contribute \$71,463 in state grants. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1606)



# Salmon Recovery

## 2016 GRANTS AWARDED



## Projects in Klickitat County

**\$480,197**

### **Columbia Land Trust Conserving Land in Klickitat Canyon**

**Grant Awarded: \$343,800**

The Columbia Land Trust will use this grant to conserve 2,760 acres of a diverse landscape in the transitional zone of the east Cascade Mountains. The land straddles the Wild and Scenic Klickitat River and includes 1.4 miles of Summit Creek and .1 mile of White Creek. White Creek provides 40 percent of observed spawning in the Klickitat River watershed by summer middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. White Creek also is used as over-summer rearing habitat for juveniles, with many of those fish using Summit Creek when White Creek goes dry. Summit Creek is one of only three perennial tributaries in the lower 40 miles of the Klickitat River watershed and provides critical refugia during high flow events. Also using the project area are mid-Columbia River spring Chinook, fall Chinook, coho, and cutthroat trout. This project is the second phase of a multi-phased effort to protect 5,600 acres that are threatened by land sales and development in what is a critical migratory corridor for many fish and animals. The project enjoys broad support including from the Confederated Tribes and Bands of the Yakama Nation, Klickitat County commissioners, state agencies, neighboring industrial forest owners, conservation nonprofits, and local community forest partners. The Columbia Land Trust will contribute \$112,671 in donations of cash. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1901)

### **Klickitat County Designing a Project to Reconnect Lower Spring Creek Floodplain**

**Grant Awarded: \$88,377**

Klickitat County will use this grant to design a project on lower Spring Creek Road that will remove a barrier to fish passage and replace it with a bridge over Spring Creek, near the community of Husum. The project design will include removing a culvert, which is a large pipe carrying Spring Creek under the road, and moving the road north of its current location so it's further away from the creek and its tributaries. The design also would include decommissioning the abandoned part of the original road and returning the land to wetlands and creek shoreline. The creek is a tributary to the White Salmon River, which is used by lower Columbia River Chinook and coho salmon and by Columbia River steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. Klickitat County will contribute \$59,500. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1998)

# Salmon Recovery

## 2016 GRANTS AWARDED



### **Mid-Columbia Fisheries Enhancement Group** **Grant Awarded: \$48,020** **Assessing Recovery of Salmon after Condit Dam Removal**

The Mid-Columbia Fisheries Enhancement Group will use this grant to monitor salmon species in the White Salmon River for a second year now that the Condit Dam has been removed. Using a rotary screw trap to track Chinook and steelhead recolonization, the fisheries enhancement group will assess recolonization success and adapt management decisions. The river is used by lower Columbia River Chinook and coho salmon, and Columbia River steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Mid-Columbia Fisheries Enhancement Group will contribute \$16,812 in donations of equipment. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2111)

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## **Projects in Lewis County** **\$31,040**

### **Lewis County** **Grant Awarded: \$31,040** **Designing a Project to Remove a Barrier to Coho Migration in Van Ornum Creek**

The Lewis County Public Works Department will use this grant to design a project to remove a 4-foot-round corrugated metal pipe that carries Van Ornum Creek under Bunker Creek Road. The pipe blocks 66 percent of the fish because the water rushes through too fast. Replacement of the pipe will restore access to 6.45 miles of habitat, including 2.83 acres of rearing habitat and .39 acre of spawning habitat for coho salmon and searun and resident cutthroat trout. Lewis County will contribute \$7,760 in staff labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1803)

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## **Projects in Mason County** **\$78,194**

### **Mason Conservation District** **Grant Awarded: \$78,194** **Designing the Restoration of Gosnell Creek**

The Mason Conservation District will use this grant to design the restoration of a reach of Gosnell Creek, near Shelton. The land along this reach has been converted to pasture, the shoreline trees are gone, and livestock wade in the stream. Immediately, upstream of this reach is some of the best spawning and rearing habitat in the watershed for coho salmon and steelhead. To improve Gosnell Creek, the district will design a project to place large tree root wads and logs in a half-mile of the creek, plant native trees and shrubs on 7 acres of its shoreline, install about 1 mile of fencing to keep livestock out of the creek, and replace a bridge. Placing tree root wads and logs in a creek will create places for fish to rest and hide from predators. It also slows the water, which reduces erosion and the amount of sediment in the creek and allows small gravel to settle to the creek bottom for spawning areas. Finally, it

# Salmon Recovery

## 2016 GRANTS AWARDED



changes the flow of the creek, creating riffles and deep cold pools, giving fish more varied habitat. The new shoreline plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects fish eat and places for them to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. The river is used by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; Puget Sound steelhead, which are proposed to be listed as threatened with extinction under the federal Endangered Species Act; and chum salmon. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1567)

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## Projects in Okanogan County \$795,488

### **Cascade Columbia Fisheries Enhancement Group** **Designing Restoration of the Chewuch River** **Grant Awarded: \$81,785**

The Cascade Columbia Fisheries Enhancement Group will use this grant to complete a floodplain restoration final design for the Burns-Garrity reach of the Chewuch River, near Winthrop in Okanogan County. This reach of the river suffers from limited floodplain connectivity and water that often is too warm and too low. The fisheries enhancement group will partner with the Washington Department of Fish and Wildlife, private landowners, and the Bureau of Reclamation to design the project, which will look at improving habitat complexity in the river, reconnecting floodplain and off-channel habitat, and restoring shoreline trees and shrubs. The river is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened with extinction. The Cascade Columbia Fisheries Enhancement Group will contribute \$95,550 in another grant and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1792)

### **Methow Salmon Recovery Foundation** **Buying the Silver Side Channel to the Methow River** **Grant Awarded: \$494,297**

The Methow Salmon Recovery Foundation will use this grant to buy 95.8 acres along the Silver side channel of the Methow River, between Twisp and Carlton. The purchase will eliminate restrictions on the land and allow the buildings to be moved and the floodplain and side channel to be restored. The Silver side channel is a more than 1-mile-long, groundwater-fed side channel of the Methow River and has potential to support a strong fish community. A century of grazing and farming simplified and degraded the channel and floodplain so they provide little to no fish habitat. The foundation will move the homes further upland to allow resale with the 42 acres of farmland near State Highway 153. The river is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened

# Salmon Recovery

## 2016 GRANTS AWARDED



with extinction. The Methow Salmon Recovery Foundation will contribute \$236,406 from another grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1795)

### **Methow Salmon Recovery Foundation Conserving Lower Twisp River Floodplain**

**Grant Awarded: \$219,406**

The Methow Salmon Recovery Foundation will use this grant to buy about 23 acres of waterfront, including about a quarter-mile of shoreline, on the south side of the lower Twisp River near Twisp. The land is next to land already protected, and when combined would total more than a mile of protected stream bank. The land also is next to a habitat project and the shoreline opposite the land is protected by a voluntary land preservation agreement, also called a conservation easement. If not protected, the land could be developed to support four homes. This acquisition will protect the investment in the restoration project and increase restoration opportunities for future projects. Buying the land will allow the foundation to address the loss of habitat on the property that impairs shoreline and floodplain function and to resell the upland areas. The river is used by upper Columbia River spring Chinook salmon, which are listed as endangered under the federal Endangered Species Act, and by upper Columbia River steelhead, which are listed as threatened with extinction. The Methow Salmon Recovery Foundation will contribute \$523,429 from a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1796)

## **Projects in Pacific County**

**\$1,024,474**

### **Columbia River Estuary Study Taskforce Designing an Estuary Off-Channel Fish Passage and Habitat Enhancement Project**

**Grant Awarded: \$185,952**

The Columbia River Estuary Study Taskforce will use this grant to complete designs for a project to improve fish passage and off-channel rearing habitat in Hungry Harbor, near Long Beach. The group will replace a 60-inch pipe that sits too high and prevents fish passage into streams and wetlands with a culvert that will allow year-round fish passage. The streams and wetlands are important habitats for juvenile salmon and steelhead and are lacking in the estuary. The designs will include excavation of sediment from the streams, tree and shrub plantings along the shorelines, and placement of large wood structures in the streams to create more varied habitat, feeding opportunities for fish, and cooler water temperatures. This project is the third and final phase of a larger restoration project on three tributaries to the Columbia River along the Washington shoreline, providing important off-channel, sheltered habitat in the estuary for rearing and migrating fish from across the Columbia River system. In earlier phases, an undersized culvert was replaced at Fort Columbia and another culvert will be replaced in Megler Creek. The river is used by lower Columbia River Chinook, coho, and steelhead and by Columbia River chum salmon, all of which are listed as threatened with extinction under the federal

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Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1524)

### **Cowlitz Indian Tribe**

**Grant Awarded: \$599,638**

#### **Enhancing the Lower South Fork Grays River**

The Cowlitz Indian Tribe will use this grant to enhance spawning and rearing habitat for winter steelhead and coho by installing engineered logjams in .6 mile of the lower South Fork Grays River and 900 feet of Blaney Creek in Pacific County. Logjams create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. The logjams will allow stable island formation and foster mature floodplain forest establishment. The shoreline plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. The river is used by lower Columbia River Chinook and coho salmon, steelhead, and Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Cowlitz Indian Tribe will contribute \$500,000 in a federal grant. Visit RCO's online Project Snapshot at Project Snapshot [for more information and photographs of this project](#). (16-1534)

### **Pacific County Anglers**

**Grant Awarded: \$238,884**

#### **Restoring Lower Green Creek**

The Pacific County Anglers will use this grant to complete restoration of Green Creek, a tributary to the Willapa River, in Pacific County. Crews will remove all the rip-rap at the mouth of the creek, slope the steep south bank to a gentler grade, place logjams in the creek and along the Willapa River shoreline, and replant the shorelines with native trees and shrubs. A small foot bridge that crosses Green Creek will be replaced when the banks are re-sloped. The creek is used by Chinook, chum, and coho salmon, and steelhead and cutthroat trout. The landowner will contribute \$42,157 from a federal Conservation Reserve Enhancement Program (CREP) grant, which will provide plantings and maintenance of the new trees and shrubs. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1683)

# Salmon Recovery 2016 GRANTS AWARDED



## Projects in Pend Oreille County

**\$261,860**

### Washington Department of Fish and Wildlife

**Grant Awarded: \$47,013**

#### Completing an Inventory of Cultural Resources on West Branch of LeClerc Creek

The Washington Department of Fish and Wildlife and the U.S. Forest Service at the Colville National Forest will use this grant to conduct a cultural inventory in advance of a project to remove a crib dam on the west branch of LeClerc Creek. The more than 100-year-old log crib dam blocks access to more than 18 miles of high quality bull trout and westslope cutthroat trout habitat. The partners will consult with the State Historic Preservation Office and the U.S. Fish and Wildlife Service, conduct all necessary biological assessments, develop and implement a blasting plan for dam removal and a mitigation and monitoring plan. The Forest Service will contribute \$8,297 in its Vegetation and Watershed funds. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2013)

### Washington Department of Fish and Wildlife

**Grant Awarded: \$214,847**

#### Restoring Ruby Creek Fish Passage

The Washington Department of Fish and Wildlife and the U.S. Forest Service at the Colville National Forest will use this grant to replace one partial fish barrier and one full fish barrier in a braided section of Ruby Creek and realign about .12 mile of Forest Service Road 2700101 Ruby Creek is critical habitat for bull trout. The partners will complete all design, cultural and biological assessments, implementation, and monitoring. The Forest Service will contribute \$38,625 in its Legacy Road and Trail funds. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2104)

## Projects in Pierce County

**\$876,982**

### Nisqually Land Trust

**Grant Awarded: \$123,178**

#### Conserving Middle Ohop Creek

The Nisqually Land Trust will use this grant to buy 32 acres along Ohop Creek, one of the two main tributaries to the Nisqually River. The creek provides spawning and rearing habitat for Chinook salmon and steelhead trout, both of which are listed as threatened with extinction under the federal Endangered Species Act, and for Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern. Permanent protection and floodplain restoration will allow natural stream and floodplain processes to occur. This project is part of a larger project that will include restoration. The purchase includes more than 1,000 feet of Ohop Creek, 6.5 acres of predominantly fallow pasture and old farmyard north of the creek, and 25.5 acres south of the creek, including fallow pasture in the Ohop floodplain and forested bluff. The land trust will demolish the four structures there, which are in poor condition, and remove the old

# Salmon Recovery

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farm bridge crossing the creek. The Nisqually Land Trust will contribute \$70,308 from another grant and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1453)

### **Puyallup Tribe of Indians**

**Grant Awarded: \$58,825**

#### **Assessing the Condition of Wild Salmon in the Puyallup River**

The Puyallup Tribe of Indians will use this grant to assess the health and condition of wild salmon in the Puyallup River. Scientists will collect and analyze data on the abundance, run timing, size, and other biological characteristics of Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act, of Puget Sound steelhead, which are proposed for listing, and of bull trout. The data will be used to support the protection of functioning, high priority salmon streams including South Prairie Creek, the Carbon River, and the upper Puyallup River. This Tribe will use a rotary screw trap that already is in the Puyallup River to collect the data. The Puyallup Tribe of Indians will contribute \$10,400 from a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1507)

### **South Puget Sound Salmon Enhancement Group**

#### **Restoring South Prairie Creek**

**Grant Awarded: \$349,979**

The South Puget Sound Salmon Enhancement Group and partners will use this grant to restore .6 mile of South Prairie Creek and its floodplain, east of Orting. The partners will create a side channel to the creek by grading and clearing trees and plants. Then they will install a channel-spanning engineered logjam in the creek at the inlet of the newly created side channel. The goal of this project is to improve habitat to support juvenile rearing, adult spawning, and egg incubation for Puget Sound Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act, for Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern, and for chum and pink salmon and cutthroat and bull trout, which use the creek. The South Puget Sound Salmon Enhancement Group will contribute \$291,779 from another grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1577)

### **South Puget Sound Salmon Enhancement Group**

#### **Restoring the Mashel River**

**Grant Awarded: \$180,000**

The South Puget Sound Salmon Enhancement Group and partners will use this grant to continue implementing the third phase of a decade-long restoration effort to improve salmon habitat in the Mashel River, near Eatonville. In the third phase, the team will install engineered logjams and wood crib walls in the river, reconnect a side channel, and plant about 5 acres of shoreline. This section of the Mashel River is a high restoration priority in multiple recovery plans. The loss of habitat diversity there is the single, largest limiting factor for salmon populations. Placing logjams in the river will create places for fish to rest, feed, and hide from predators. They also

# Salmon Recovery

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slow the river, which reduces erosion and allows small rocks to settle to the riverbed, creating areas for salmon to spawn. Finally, logjams change the flow of the river, creating riffles and pools, which give salmon more varied habitat. Reconnecting off-channel habitat increases the areas salmon can go to rest during high water flows. Planting trees and bushes along a shoreline helps shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat. Finally, the roots of the plants help keep soil from entering the water, where it can smother fish spawning gravel. The South Puget Sound Salmon Enhancement Group will contribute \$210,060 in federal and other grants and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (15-1231)

### Wild Fish Conservancy

**Grant Awarded: \$165,000**

#### Assessing Gig Harbor Peninsula Streams

The Wild Fish Conservancy will use this grant to ground truth and correct water type classification maps in at least six watersheds that drain the Gig Harbor peninsula. The work will occur in the watersheds that include Artondale, Crescent, Goodnough, McCormick, North, and Purdy Creeks. While there, the Wild Fish Conservancy also will collect data on fish species and distribution. The assessment will provide information to help manage the land and to identify the five highest priority habitat restoration projects. The data will be provided online as an interactive map, and the conservancy will work with cities and counties to incorporate the updated fish distribution information into their planning processes. Incorrect water type classifications can mean that fish-bearing streams are not protected enough from development. The area is used by Puget Sound steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. The Wild Fish Conservancy will contribute \$30,000 in a local grant and donations of labor and materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1599)

## Projects in San Juan County

**\$223,505**

### Friends of the San Juans

**Grant Awarded: \$18,192**

#### Planting the Shorelines of San Juan Islands

The Friends of the San Juans will use this grant to plant trees and shrubs along shorelines in three areas – northwest San Juan Island, north Orcas Island, and south Lopez Island. Planting the shorelines will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants stabilize the banks, keeping the soil from entering the water and burying spawning gravel, and reducing the demand for new shoreline armoring. The friends group also will provide technical training for professional landscapers and landowners on how to design effective shoreline planting projects. This is part of a larger project



# Salmon Recovery

## 2016 GRANTS AWARDED



in the area. The area is used by Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act, by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern, and by chum and pink salmon. The Friends of the San Juans will contribute \$20,090 from a private grant and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1701)

### **San Juan Islands Conservation District Conserving False Bay Creek Shoreline**

**Grant Awarded: \$39,865**

The San Juan Islands Conservation District will use this grant to buy a voluntary land preservation agreement, also called a conservation easement, along more than a half-mile of False Bay Creek. The creek is perennial, drains the largest watershed on San Juan Island, and has high potential for the restoration of fish. Unfortunately, it also has poor water quality because of high bacteria counts from surrounding farms and development and its shorelines have been degraded. The land being conserved connects to the University of Washington Biological Preserve and the San Juan County Land Bank's False Creek Preserve, doubling the contiguous miles protected and resulting in the permanent protection and subsequent restoration of 43 percent of the shoreline corridor bottom up from False Bay. This will re-establish the ecological connection between False Bay and 1.2 miles and 8 acres of protected shoreline habitat. In addition, this project will improve immediately the water quality by removing livestock from the stream. The creek is used by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern, and by Chinook and chum salmon. The San Juan Islands Conservation District will contribute \$22,700. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1670)

### **University of Washington Evaluating the Causes of the Decline of Pacific Herring**

**Grant Awarded: \$165,448**

The University of Washington will use this grant to evaluate the causes of the decline of Pacific herring, which are a key food for salmon in Puget Sound. Herring have been declining locally during the past 40 years, but there is little agreement on the primary cause of the declines or the best actions for recovery. The university will use a 25-year historical dataset to quantify changes in the abundance and distribution of eelgrass used as spawning habitat for herring, monitor herring spawning sites to measure early life stage mortality and predation, and convene a workshop of local experts to evaluate key threats to San Juan Island herring. Pacific herring rely on submerged plants, including eelgrass, in shallow habitats for spawning and egg incubation. The area is used by Puget Sound Chinook Salmon, which are listed as threatened with extinction under the federal Endangered Species Act. The University of Washington will contribute \$31,213 in donation of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1672)

# Salmon Recovery

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## Projects in Skagit County

**\$901,833**

### Seattle

**Grant Awarded: \$400,000**

#### Conserving Skagit River Watershed Habitat

Seattle City Light and the Skagit Land Trust will use this grant to buy 40 acres of high quality Chinook salmon and steelhead habitat in the Skagit River system. This purchase will put Skagit River shoreline, floodplain, and side channels into permanent protection. The Skagit River is used by Puget Sound Chinook salmon, Puget Sound steelhead, and coastal bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. Seattle City Light will contribute \$60,000 from a local grant. This project is part of a larger project, which is seeking additional grant funding. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1647)

### Skagit County

**Grant Awarded: \$50,000**

#### Restoring a Hansen Creek Reach

The Skagit County Public Works Department and the Skagit River System Cooperative will use this grant to complete permitting and temperature assessments for an upcoming project to restore a reach of Hansen Creek, which is a major tributary of the Skagit River in northern Puget Sound. The project area is between State Route 20 and Minkler Road. This will be the second major floodplain restoration project in this lower tributary, with the first occurring above State Route 20 in 2009. The full project will move the creek east from its current straightened and degraded location to an area that is lower in elevation and already chronically flooded, thus improving floodplain habitat and decreasing widespread flooding. The project also will plant native trees and shrubs in the new floodplain to help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel and reducing water quality. The work will increase habitat by creating more than a half-mile of new channel and restoring about 80 acres of rearing habitat in this key watershed for Puget Sound recovery. Hansen Creek is used by Puget Sound Chinook salmon and Puget Sound steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger project, which is seeking additional grant funding. The partners will contribute \$7,500 from matching grants. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1651)

### Skagit Fisheries Enhancement Group

**Grant Awarded: \$80,000**

#### 2016 Collaborative Riparian Stewardship

Partnering with the Upper Skagit Indian Tribe, the Skagit Fisheries Enhancement Group will use this grant to plant native trees and shrubs on 7.5 acres of floodplain and maintain 63.2 acres of

# Salmon Recovery

## 2016 GRANTS AWARDED



previously planted floodplain. The work will be done on lands owned by Skagit County, Seattle City Light, and the Nature Conservancy, in the Skagit River watershed. Plantings help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel and reducing water quality. The river is used by Puget Sound Chinook salmon, Puget Sound steelhead, and Coastal Bull Trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger project, which is seeking additional grant funding. The Skagit Fisheries Enhancement Group will contribute \$12,000 in a donation of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1650)

### **Skagit River System Cooperative Prioritizing Steelhead Fish Passage Projects**

**Grant Awarded: \$121,863**

The Skagit River System Cooperative, working with several partners, will use this grant to improve knowledge of fish barriers in the Skagit watershed in order to identify and scope eight to ten fish passage restoration projects on local government roads and private property with willing landowners. This project will fill an important knowledge gap about what fish barriers remain in the watershed and which ones will provide the most benefit to steelhead. The river is used by Puget Sound steelhead and Puget Sound Chinook salmon, both of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger project, which is seeking additional grant funding. The Skagit River System Cooperative will contribute \$35,259 from a private grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1642)

### **Skagit River System Cooperative Restoring Nookachamps Creek**

**Grant Awarded: \$50,000**

The Skagit River System Cooperative will use this grant to restore Nookachamps Creek near Barney Lake and at the confluence of its east and west forks. Near Barney Lake, the cooperative will plant native trees and shrubs on 25 acres along Nookachamps Creek and in the Skagit River floodplain, install fences to keep cattle out of the creek, and control invasive weeds. The new trees will be maintained for at least 3 years following planting. The new plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and reducing water quality. The river is used by Puget Sound Chinook Salmon, Puget Sound steelhead, and Coastal Bull Trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. This project is part of a larger project, which is seeking additional grant funding. The Skagit River System Cooperative will contribute \$7,500 in state and federal grants. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1653)

# Salmon Recovery

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### Washington Department of Fish and Wildlife Grant Awarded: \$199,970

#### Planning for Restoration of the Lower Cascade River Floodplain

Partnering with the Skagit River System Cooperative and the Upper Skagit Indian Tribe, the Department of Fish and Wildlife will use this grant to assess how to improve rearing habitat in the lower Cascade River floodplain and side channels near Marblemount in Skagit County. The team will look at restoration possibilities at a former channel of the Cascade River, at the department's Marblemount Hatchery, along Jordan Creek and its floodplain, along Clark and Hatchery Creeks, and along small tributaries to the Cascade River. The goals of this planning project are to design the removal of habitat constraints in the historic Cascade River floodplain to allow natural processes to create and maintain good habitat for young salmon and trout and to improve the efficiency of collecting adult fish at the hatchery while maintaining existing hatchery programs. The river is used by Puget Sound Chinook Salmon, Puget Sound steelhead, and Coastal Bull Trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1648)

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## Projects in Snohomish County \$751,613

### Snohomish County Grant Awarded: \$350,000

#### Breaching Dikes on Mid-Spencer Island

The Snohomish County Department of Public Works will use this grant to return full intertidal wetland function to Mid-Spencer Island, a 74-acre island east of Everett in the Snohomish River estuary. Historically the land, now owned by the county and managed for conservation, was diked and farmed. It was abandoned in the late 1960s and has remained unused since then. While the dikes along Steamboat and Union Slough have breached naturally at several locations, the breaches generally have been small and infrequent, preventing full tidal exchange, limiting fish access, and hindering full site restoration. The department hopes to enhance the overall tidal marsh habitat for juvenile salmon by increasing the number and size of tidal breaches and channels. This will increase tidal and stream inundation and improve tidal conductivity to the marsh habitat. The area is used by seven species of salmon including: Puget Sound Chinook and steelhead, both of which are listed as threatened under the federal Endangered Species Act; Puget Sound/Strait of Georgia coho salmon, a federal species of concern; chum and pink salmon and bull trout. Snohomish County will contribute \$700,000 in cash and a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1559)

# Salmon Recovery 2016 GRANTS AWARDED



## Stillaguamish Tribe of Indians Conserving Stillaguamish Floodplain

**Grant Awarded: \$401,613**

The Stillaguamish Tribe of Indians will use this grant to partially fund the purchase of 56 acres of priority floodplain along the Stillaguamish River. This purchase is a step toward the long-range goal of creating a corridor of protected lands along the Stillaguamish River and its forks. The corridor will be a place where natural river processes can be restored and allowed to proceed, uninhibited by infrastructure or bank armoring. The river is used by Puget Sound Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act; Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; and pink and chum salmon. The Stillaguamish Tribe of Indians will contribute \$72,000 in a federal grant towards restoration of the acquired land. The remaining funds for the land purchase will come from a previous Salmon Recovery Funding Board grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1638)

## Projects in Thurston County

**\$232,908**

### Capitol Land Trust Conserving Frye Cove Creek Habitat

**Grant Awarded: \$26,245**

The Capitol Land Trust will use this grant to appraise 40.5 acres and .8 mile of Frye Cove Creek shoreline, including the upper end of Frye Cove estuary, for future conservation. The land is next to Frye Cove County Park and has been managed as a family tree farm. A nearly half-mile long oxbow of the creek dominates the property. The land contains multiple priority habitats including nearshore, estuary, shoreline, and wetland. The creek is broad, estuarine, and rich in downed wood and mudflats in its tidally influenced lower portions. Above the tidal zone, the channel becomes more constrained. A buffer along both sides of Frye Cove Creek, ranging in width from 25 to more than 50 feet, has never been logged, and contains a forest with old-growth conditions, dominated by big leaf maple, Douglas-fir, and western red cedar. The site provides essential habitat for a wide diversity of bird, amphibian, and mammal species. The creek is used by Puget Sound chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act; Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; Puget Sound steelhead, which are proposed for listing as threatened; chum salmon; sea-run cutthroat trout; and steelhead. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1565)

### Capitol Land Trust Conserving Lower Henderson Inlet Habitat

**Grant Awarded: \$23,782**

The Capitol Land Trust will use this grant to buy about 2 acres on the southern end of Henderson Inlet, in Thurston County. The land contains an estuary, beach, wetlands, and

# Salmon Recovery

## 2016 GRANTS AWARDED



uplands. This purchase is part of a larger project to conserve just under 106 acres and more than a mile of Puget Sound shoreline. The full project consists of two adjacent properties, the Stillman Tree Farm (51 acres) and Harmony Farm (55 acres). Both contain multiple priority habitat types for many priority species including salmon, steelhead, forage fish, shellfish, and numerous birds. Specifically, Henderson Inlet is used by Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act; Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; Puget Sound steelhead, which are proposed for listing as threatened with extinction; and chum salmon. The Capitol Land Trust will contribute \$300,000 from a federal grant and Conservation Futures.<sup>2</sup> Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1404)

### Capitol Land Trust Restoring Harmony Farms

**Grant Awarded: \$117,881**

The Capitol Land Trust will use this grant to restore salmon habitat at Harmony Farms, a 55-acre farm with nearly a mile of shoreline on Henderson Inlet in Thurston County. The land trust will remove several dilapidated outbuildings and their infrastructure. On 20 acres of shoreline, the land trust will remove infestations of invasive plants and plant native trees and shrubs to create a forested shoreline. The new shoreline plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants keep the soil from entering the water and burying spawning gravel. Henderson Inlet is used by Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act; Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; Puget Sound steelhead, which are proposed for listing as threatened with extinction; and chum salmon. Capitol Land Trust will contribute \$22,500 in a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1409)

### Thurston County Designing Removal of a Fish Barrier on Hunter Point Road

**Grant Awarded: \$65,000**

The Thurston County Public Works Department will use this grant to develop preliminary designs to restore fish passage in an unnamed tributary to Eld Inlet in Puget Sound. The tributary runs through a large corrugated metal pipe under Hunter Point Road on the Steamboat Island peninsula in north Thurston County. The pipe is rusted through and sits 4 feet above the water, completely blocking fish from passing through. To design the pipe's replacement, the County will complete surveying, geotechnical studies, alternatives analysis, preliminary design calculations, selection of a preferred alternative, preliminary design, and a cultural and historical survey. Two streams merge just upstream of the pipe and continue to a

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<sup>2</sup>Conservation Futures are a portion of property taxes used by local governments to buy land or development rights to protect natural areas, forests, wetlands, and farms.

# Salmon Recovery

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wetland. Some of the land upstream has been conserved and protected from development by the Capital Land Trust and the Natural Resources Conservation Service. Fixing the pipe would open nearly 1 mile of stream habitat and about 25 acres of wetlands for salmon and trout. The Eld Inlet tributary is used by Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern, and by chum salmon and sea-run cutthroat and resident trout. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1568)

## Projects in Wahkiakum County

**\$361,786**

### Wahkiakum Conservation District

**Grant Awarded: \$67,000**

#### Designing a Project to Increase Habitat Complexity in the Elochoman River

The Wahkiakum Conservation District will use this grant to design complex wood structures for placement in the side channel and main channel of the Elochoman River, and a plan to plant trees along the shorelines, to increase spawning and rearing habitat for salmon and steelhead. The work will be done on land owned by the Elkinton family in the Elochoman valley just west of Cathlamet. The wood structures will be designed to improve two side channel connections. Large wood structures in water, slow the water and form pools, where fish can rest, feed, and hide from predators. The structures also will be designed to change the flow of the river, creating alternating riffles and pools, giving fish more varied habitat. The conservation district also will plan for planting trees along 1 mile of the Elochoman River and a quarter-mile each of Beaver Creek and side channels. The new riverbank plantings will help shade the water, cooling it for fish. The plants also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. The river is used by lower Columbia River Chinook and coho salmon, steelhead and Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1515)

### Wahkiakum Conservation District

**Grant Awarded: \$161,200**

#### Improving Habitat in Skamokawa Creek

The Wahkiakum Conservation District will use this grant to place large tree root wads and logs in nearly a quarter-mile of Middle Valley Skamokawa Creek and nearly a quarter-mile of side channel habitat. The wood will help create pools for fish to rest, feed, and hide from predators. Large wood also slows the river, which reduces erosion and the resulting loading of fine sediment into the river, which can fill in important pool habitat and cover spawning gravel. Finally, the logs and root wads change the flow of the river, creating riffles and pools, giving fish more varied habitat. The river is used by lower Columbia River Chinook, coho, and steelhead and by Columbia River chum salmon, all of which are listed as threatened with extinction under the

# Salmon Recovery

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federal Endangered Species Act. The Wahkiakum Conservation District will contribute \$32,000 in a state grant and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1520)

### **Wahkiakum Conservation District**

**Grant Awarded: \$82,800**

#### **Reducing Erosion and Protecting Skamokawa Creek Shorelines**

The Wahkiakum Conservation District will use this grant to place clusters of wood along the left bank of Skamokawa Creek, on land owned by the Baldwin family near the community of Skamokawa. The creek, downstream of the Peterson Road bridge, is eroding its left bank and removing established plants. Adding clusters of wood will slow the river, which reduces erosion and the resulting loading of sediment into the river. Wood placement also creates habitat where fish can rest, feed, and hide from predators. Finally, the project will redirect river flows, creating alternating riffles and pools, giving fish more varied habitat. The river is used by lower Columbia River Chinook and coho salmon, steelhead, and Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Wahkiakum Conservation District will contribute \$14,700 in a state grant and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1517)

### **Wahkiakum Conservation District**

**Grant Awarded: \$50,786**

#### **Restoring the Elochoman River and its Shorelines**

The Wahkiakum Conservation District will use this grant to plant native trees along more than a half-mile of stream bank, and to place large wood structures in three-quarter mile of the Elochoman River. Planted trees will shade the water, cooling it for salmon. The trees also drop branches and leaves into the water, which provide food for the insects salmon eat and places for salmon to rest and hide from predators. Finally, the roots of the plants help keep the soil from entering the water and burying spawning gravel. The large wood structures help form pools, which are important habitat for juvenile fish and they slow the river, reducing erosion and allowing fine rocks to settle to the bottom as spawning gravel. The river is used by lower Columbia River Chinook, coho, and steelhead and Columbia River chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act. The Wahkiakum Conservation District will contribute \$169,514 in state grant funds and donations of labor. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-1519)



# Salmon Recovery 2016 GRANTS AWARDED



## Projects in Walla Walla County

**\$227,073**

### Walla Walla County Conservation District Restoring McCaw Reach Habitat

**Grant Awarded: \$227,073**

The Walla Walla County Conservation District will use this grant to place large tree root wads and logs in the McCaw reach of the Touchet River and in the river's side channels, west of Waitsburg. The river has limited habitat, its shorelines don't have enough trees to shade and cool the water, and the channel is incised in some areas, creating water that can be too swift for some fish. Tree root wads and logs create places for fish to rest and hide from predators. They also slow the river, which reduces erosion and the amount of sediment in the river and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. By blocking the river, the woody materials will allow the river to spread out more and fill its side channels and floodplain, giving fish more varied habitat. During some parts of the year, the overall length of available side channel habitat will increase by more than half a mile. The river is home to middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, and by Columbia River bull trout. The Walla Walla County Conservation District will contribute \$45,670 in a state grant and donations of materials. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2099)

## Projects in Whatcom County

**\$517,519**

### Nooksack Indian Tribe Placing Logjams in the South Fork Nooksack River

**Grant Awarded: \$517,519**

The Nooksack Indian Tribe will use this grant to install five logjams in the South Fork Nooksack River, upstream of Acme. This project is the second of three phases of restoration in the broader Nessel reach of the river. The South Fork Nooksack River suffers from a lack of deep pools with hiding cover and water that is too warm for salmon. Logjams provide cover for fish to rest and hide from predators. They also slow the river, which reduces erosion and allows small gravel to settle to the river bottom for spawning areas. Finally, they change the flow of the river, creating riffles and deep cold pools, giving fish more varied habitat. This project implements high priority restoration in a high priority reach for South Fork Nooksack early Chinook salmon, which are essential for recovery of Puget Sound Chinook, which are listed as threatened with extinction under the federal Endangered Species Act. The South Fork Nooksack River also provides important habitat for Puget Sound steelhead and bull trout, both of which are listed as threatened; Puget Sound/Strait of Georgia coho salmon, which are a federal species of concern; sockeye, chum, and pink salmon; and cutthroat trout. The Nooksack Indian Tribe will contribute

# Salmon Recovery 2016 GRANTS AWARDED



\$91,330 from a federal grant. Visit RCO's online Project Snapshot [for more information and photographs of this project](#). (16-2049)

## Projects in Yakima County

**\$212,341**

### North Yakima Conservation District Restoring Fish Passage in Cowiche Creek

**Grant Awarded: \$212,341**

The North Yakima Conservation District will use this grant to modify the Naches Cowiche Canal Association siphon, which crosses under Cowiche Creek and blocks fish passage when flows are low. The conservation district will replace the cement siphon with a large pipe buried below the creek bed and modify the creek bed to create a more natural slope. This work will improve flood conditions, sediment transport, and fish passage. The City of Yakima water line about 20 feet upstream of the siphon also will be replaced as part of this project. The conservation district also will use this grant to begin changing nearby irrigators' points of diversion from Cowiche Creek to the Naches River. This will allow more water to remain in Cowiche Creek to benefit fish and flow. Cowiche Creek is used by middle Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, and by Chinook and coho salmon. The North Yakima Conservation District will contribute \$57,070 in a federal grant. Visit RCO's online Project Snapshot at [for more information and photographs of this project](#). (16-1753)