

# Salmon Recovery

## 2012 GRANTS AWARDED



## Asotin County Organizations

**\$703,449**

### Asotin County Conservation District Opening Headgate Dam Fish Passage

**Grant Awarded: \$166,600**

The Asotin County Conservation District will use this grant to improve fish passage over Headgate Dam, which is in the lower reaches of Asotin Creek. Three different efforts to fix passage over the dam have failed and a nearly 5-foot drop remains, producing a barrier to juvenile Chinook salmon, steelhead, and bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. The conservation district will remove about 3 feet from the crest of the dam, reducing the height fish have to jump to get over the dam. Upstream from the dam, a roughened channel will be created to maintain channel stability. The majority of the dam will remain intact to preserve its heritage. The conservation district will contribute \$29,400 in donated labor. See [more information](#) on this project. (12-1633)

### Tri-State Steelheaders, Inc. Restoring George Creek

**Grant Awarded: \$256,006**

The Tri-State Steelheaders will use this grant to restore George Creek within the George Creek Wildlife Area in Asotin County. The Tri-State Steelheaders will reshape the creek channel, place logjams in the creek, and plant the banks of the floodplain. The plantings will provide shade to cool the river for steelhead and enhance floodplain stability. The logjams will slow the creek, creating places for steelhead to rest, feed, spawn, grow, and hide from predators. The project area is nearly 1 mile of George Creek and more than 10 acres of floodplain. Previous uses of the land and recent floods have damaged the creek and its banks. Snake River steelhead, Chinook salmon, and bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as rainbow trout will benefit from improvements in this Asotin Creek tributary. The Tri-State Steelheaders will contribute \$45,176 in donations of labor and materials. This grant is from the salmon program. See [more information](#) on this project. (12-1657)

### Washington Department of Fish and Wildlife Restoring Charley Creek and the North Fork of Asotin Creek

**Grant Awarded: \$280,843**

The Washington Department of Fish and Wildlife will use this grant to place logs, posts, and tree root wads in Charley Creek and the north fork of Asotin Creek in the Asotin Wildlife Area. The logs will slow the creeks, creating more pools and places for salmon to rest, feed, spawn, grow, and hide from predators. The slower water also allows gravel, which salmon use for spawning, to settle to the river bottom. The creeks are used by Snake River steelhead, Chinook salmon, and bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as Pacific lamprey. The department will place about 200 wood structures per

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stream reach. The basic design is to drive 4-12 posts into the stream bottom in a zigzag pattern. The other logs and tree root wads are woven into the posts but not tethered in place. The department will contribute \$49,600 in staff labor and donations of equipment and materials. See [more information](#) on this project. (12-1637)

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## Chelan County Organizations \$1,215,675

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### **Cascade Columbia Fisheries Enhancement Group** **Grant Awarded: \$140,000** **Designing Lower White River Floodplain Restoration Projects**

The Cascade Columbia Fisheries Enhancement Group will use this grant to design projects to improve the health and function of about 700 acres managed by the Chelan-Douglas Land Trust and the Washington Department of Fish and Wildlife. The fisheries enhancement group will design forest and floodplain restoration scenarios and three preliminary designs. The White River is used by spring Chinook and sockeye salmon, steelhead, cutthroat, and bull trout and has one of the strongest, remaining sockeye salmon runs in the lower 48 states (also one of only two viable sockeye runs in the Columbia River Basin. Past logging and agricultural practices have significantly altered the forest and floodplain hydrology in the lower White River. See [more information](#) on this project. (12-1622)

### **Cascadia Conservation District** **Grant Awarded: \$204,000** **Upgrading Irrigation Systems to Save Water for Salmon**

The Cascadia Conservation District will use this grant to upgrade the irrigation systems of several landowners to save water for in-stream flow and salmon. The Chelan County Public Utility District owns and operates an irrigation system that delivers water to seven landowners through a pipeline and open channels by pulling water from the Entiat River. The system pulls twice as much water as needed for irrigation. The conservation district will decommission the irrigation pipeline and delivery system and upgrade to modern and efficient delivery systems located closer to the point of use. Taking less water from the river will improve habitat conditions and increase the amount of water in the river during the summer, keeping it cooler and cleaner for salmon. Water savings from this project will be enrolled in or dedicated to the Washington Water Trust program. The conservation district will contribute \$36,000 in cash donations. See [more information](#) on this project. (12-1646)

### **Chelan County** **Grant Awarded: \$199,900** **Designing Peshastin Creek Reconnection Project**

The Chelan County Natural Resource Department will use this grant to design a reconnection between Peshastin Creek and 35 acres of floodplain. State Route 97 construction in 1956 removed a bend in the river and the Department of Transportation re-constructed a

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straightened channel west of the highway to convey flows in Peshastin Creek. This project would reconnect the former main stem channel by creating a three-quarter mile long side channel east of the highway. Peshastin Creek is used by steelhead, spring Chinook salmon, and bull trout. Reconnecting the creek to the floodplain and creating side channel habitat would give fish places for rearing and resting. The department will work with landowners and stakeholders to select a preferred alternative from two alternative design concepts. Once the preferred alternative is selected, the department will prepare final designs, complete permitting, and begin construction in 2014. See [more information](#) on this project. (12-1447)

### **Chelan County** **Grant Awarded: \$223,542**

#### **Replacing the Mill Creek Pipe under Mountain Home Ranch Road**

The Chelan County Natural Resource Department will use this grant to remove a culvert in Mill Creek and replace it with a bridge to allow steelhead access to 2.2 miles of spawning and rearing habitat. The culvert conveys Mill Creek under Mountain Home Ranch Road. The culvert has a 2-foot-tall drop at one end, which prevents steelhead passage. Mill Creek is a tributary to Peshastin Creek, which is used by steelhead, spring Chinook salmon, and bull trout. The County will contribute \$99,000 from a federal grant. See [more information](#) on this project. (12-1620)

### **Chelan County** **Grant Awarded: \$338,233**

#### **Restoring Lower Nason Creek**

The Chelan County Natural Resource Department will use this grant to improve habitat for steelhead and spring Chinook salmon. The County will remove fill from the floodplain and place logs and tree root wads in an oxbow out of the main stem to create places for salmon to rest, feed, spawn, grow, and hide from predators. State Route 207 has disconnected Nason Creek from 77 acres of adjacent floodplain. The creek, a tributary to the Wenatchee River, contains spawning, rearing, and migration habitat for spring endangered Chinook salmon, endangered steelhead, and bull trout, which are listed as threatened with extinction under the federal Endangered Species Act. The County will contribute \$60,000 from a local grant. See [more information](#) on this project. (12-1438)

### **Chelan-Douglas Land Trust** **Grant Awarded: \$110,000**

#### **Conserving White River Tall Timber Ranch Shorelines**

The Chelan-Douglas Land Trust will use this grant to conserve more than 1 mile of shoreline along the White and Napeequa Rivers. The land trust will buy a voluntary land preservation agreement on 20 acres including nearly a quarter-mile of riverfront along the White River and nearly a half-mile along both sides of the Napeequa River. The voluntary land agreement, also called a conservation easement, restricts uses to protect habitat. This agreement connects 40 acres to the east and west of this site protected under a previous agreement, including more than 1.25 miles of shoreline along the two rivers. The White River watershed has some of the best habitat and

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healthiest native fish populations found in the Columbia River basin. The river is used for migration, spawning, and rearing by endangered spring Chinook salmon, endangered steelhead, and bull trout, which is listed as threatened with extinction under the federal Endangered Species Act. The river also provides some of the best spawning habitat and the largest runs of sockeye salmon, one of only two remaining stocks in the Columbia River Basin. The land trust will contribute \$119,500 from local and federal grants. See [more information](#) on this project. (12-1440)

## Clallam County Organizations

**\$1,169,524**

### Lower Elwha Klallam Tribe Designing the Pysht River Estuary Restoration

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

The Lower Elwha Klallam Tribe will use this grant to complete a final design and permitting for a project to remove dredge deposits placed on a historic salt marsh in the Pysht River Estuary. From 1915-1975, the estuary was used to transport logs. To do so, the lower river was dredged periodically and the materials piled on the salt marsh or placed along the river's edges. As a result, significant areas of the estuary were disconnected from the river. The dredge deposits form a series of interconnected, large mounds in the northwest portion of the estuary. Completion of this project will set the stage for project partners to remove the fill on 21.5 acres and reestablish a network of tidal channels in the salt marsh. These channels ultimately will benefit a multitude of species including forage fish, chum, coho, steelhead, and Puget Sound and Columbia River populations of Chinook salmon, both of which are listed as threatened with extinction under the federal Endangered Species Act. Project partners include Merrill & Ring, Washington Department of Fish and Wildlife, and Washington Department of Ecology, with additional funding from the National Oceanic and Atmospheric Administration through the Northwest Indian Fisheries Commission. See [more information](#) on this project. (12-1103)

### Lower Elwha Klallam Tribe Fixing a Barrier to Salmon Migration on the Hoko River

**Grant Awarded: \$288,950**

The Lower Elwha Klallam Tribe, in partnership with Rayonier Timber and the Makah Tribe, will use this grant to remove a culvert under a road that is blocking salmon migration, remove 40 feet of fill, and place a 90-foot-long steel bridge over the Hoko River. The 9000 Road was built in the 1930s as a railroad grade and then later converted to a mainline logging road in the early 1960s. Where it crosses the Hoko River, the river is channeled through a 7-foot-wide, metal culvert with an outlet drop of 5 feet and a steep slope. It completely blocks migrating salmon. In addition to removing the culvert and replacing it with a bridge, the tribe will place large logs and tree root wads in the river to minimize erosion and slow the river, creating places for salmon to rest, feed, and hide from predators. The 9000 road crossing is the most significant remaining human-caused barrier in the headwaters of the Hoko River, which is used by coho and Chinook,

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salmon, steelhead, and cutthroat. Correction of this long standing barrier will allow salmon access to nearly 2 miles of habitat. Rayonier Timber will contribute \$298,550 in cash and donated labor. See [more information](#) on this project. (12-1102)

### **Makah Tribe** **Replacing the Crooked Creek Tributary Culvert**

**Grant Awarded: \$179,245**

The Makah Tribe will use this grant to remove a large culvert blocking fish migration on a tributary to Crooked Creek, the second largest tributary watershed to Lake Ozette in Clallam County. The Makah Tribe will remove the culvert and replace it with a bridge, which will open up at least 1.25 miles of spawning and rearing habitat for coho salmon, steelhead, and cutthroat. The culvert is 6 feet above the river on one end, making it impossible for fish to pass through. Some of the sediment that has built up on the upstream side of the culvert will be removed. The Makah Tribe will contribute \$104,217 in donations of labor and materials. See [more information](#) on this project. (12-1390)

### **Makah Tribe** **Restoring the Big River Floodplain**

**Grant Awarded: \$44,445**

The Makah Tribe and Merrill & Ring will use this grant to remove bridge abutments and fill material from the Big River floodplain, about 1.5 miles upriver from the mouth of river. Big River is the largest tributary to Lake Ozette in the northwest corner of the Olympic Peninsula. It is critical habitat and is used by sockeye salmon, which are listed as threatened with extinction under the federal Endangered Species Act. The Makah Tribe will check for invasive species, assess current plant communities up and downstream of the abutments to develop a more detailed planting plan, determine the extent and need of engineered designs, and plant plants in the floodplain. The Makah Tribe will contribute \$9,526 in staff labor and donated materials. See [more information](#) on this project. (12-1389)

### **North Olympic Land Trust** **Conserving Land along the Clallam River**

**Grant Awarded: \$110,727**

The North Olympic Land Trust will use this grant to buy a voluntary agreement, also called a conservation easement, to prevent development on 34 acres of important salmon habitat in the Clallam River watershed. The land includes a very active floodplain along the Clallam River, two small wetlands, and Last Creek. Last Creek and its tributaries provide off-channel habitat used by juvenile and larger salmon to rest, feed, grow, take refuge from high winter stream flows, and escape predation by larger fish. Coho, chum, and Chinook salmon, steelhead, and cutthroat use the river and creek for spawning, rearing, and migration. The land trust will contribute \$19,541 from a local grant and the landowner will donate a portion of land value. See [more information](#) on this project. (12-1113)

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### **Pacific Coast Salmon Coalition**

**Grant Awarded: \$62,893**

#### **Fixing Unstable Roads along the North Fork of the Calawah River**

The Pacific Coast Salmon Coalition will use this grant to decommission just under 1 mile of Forest Service road, the 020 spur of Forest Service Road 2922, just above the north fork of the Calawah River in Clallam County. The work will include removing eight, large culverts, pulling back several sections of unstable slope, and replanting the area. This work will stabilize the road and prevent sediment and debris from sliding in the north fork of the Calawah River and smothering salmon habitat. The Calawah River is used by steelhead, cutthroat, and coho and Chinook salmon for spawning and rearing. The Pacific Coast Salmon Coalition will contribute \$11,099 in donations of labor and materials. See [more information](#) on this project. (12-1594)

### **Pacific Coast Salmon Coalition**

**Grant Awarded: \$116,737**

#### **Replacing the Sands Creek Drainage Pipe**

Pacific Coast Salmon Coalition will use this grant to replace an undersized culvert with a 100-foot-long bridge over Sands Creek. The creek is on Rayonier, Western Forest Resources land in Clallam County. The culvert is blocked on one end with rip rap, which is meant to delay erosion, but also blocks fish from migrating through the culvert when the water is low. The creek is important spawning and rearing habitat to coho and Chinook salmon, winter steelhead, and cutthroat trout. The small diameter of the culvert also means that water rushes through too quickly for fish. When the culvert is removed, fish will have access to the 1.25 miles of spawning and rearing habitat above the blockage. The coalition will grade the stream bank to a more natural slope as well as add logs and rock in the creek to slow the water and create more places for salmon to rest, feed, spawn, grow, and hide from predators. The coalition will contribute \$288,119 in donations of cash and materials. See [more information](#) on this project. (12-1408)

### **Washington Water Trust**

**Grant Awarded: \$166,527**

#### **Designing Projects to Store and Recharge the Dungeness River Aquifer**

The Washington Water Trust will use this grant to conduct a feasibility study and then complete design and engineering for two to three projects for storing water and then using it to recharge the Dungeness River aquifer. The projects are north of U.S. Highway 101 near Sequim. Dungeness River water will be captured when there is lots of water and then recharged or stored to be used later in the summer when the river doesn't have enough water to support salmon and steelhead. The project will benefit endangered Chinook and pink salmon in particular. Both recharge and off-stream reservoirs are integral components of comprehensive, irrigation improvement projects and the goal of this project is to pilot some of these new strategies as tools to restore stream flow. Project partners include the Clallam Conservation District and the Dungeness Water Users Association with technical support on hydrogeology from Clallam County Environmental Health. See [more information](#) on this project. (12-1107)

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## Clark County Organizations

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**\$322,008**

### **Lower Columbia Fish Enhancement Group** **Grant Awarded: \$112,900** **Designing a Restoration Project on the North Fork of the Lewis River**

The Lower Columbia Fish Enhancement Group will use this grant to design a restoration project to improve spawning and rearing habitat for Chinook, coho, and chum salmon and steelhead in the lower north fork of the Lewis River. The project site has been damaged by gravel mining and other activities. A technical team will be convened to provide guidance throughout the design process and to ensure that landowners and managers are involved. Products will include final designs, construction drawings, construction cost estimates, contractor bid packages, and permitting applications. See [more information](#) on this project. (12-1165)

### **Lower Columbia Fish Enhancement Group** **Grant Awarded: \$209,108** **Restoring a Cedar Creek Reach**

The Lower Columbia Fish Enhancement Group will use this grant to restore rearing habitat for six different populations of salmon and steelhead at the confluence of Cedar Creek and the north fork of the Lewis River in Clark County. The project is 4.5 miles downstream of Merwin dam. The fish enhancement group will install large logs and tree root wads donated by PacifiCorps in about a quarter-mile of Cedar Creek to slow the creek and increase places for salmon to rest, feed, grow, and hide from predators. The creek is used by Chinook, chum, and coho salmon and steelhead trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. Project partners include the Washington Department of Fish and Wildlife and PacifiCorps. The fish enhancement group will contribute \$100,420 in donations of equipment, labor, and materials. See [more information](#) on this project. (12-1170)

## Columbia County Organizations

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**\$497,279**

### **Confederated Tribes of the Umatilla Indian Reservation** **Grant Awarded: \$150,291** **Opening Fish Passage in the North Fork of the Touchet River**

The Confederated Tribes of the Umatilla Indian Reservation will use this grant to fix a fish passage barrier at Forest Road 6400-650 on the north fork of the Touchet River, in Columbia County. This barrier culvert is the last remaining fish passage barrier in the north fork. The culvert is about 121 feet long, steeply sloped, and has a small outlet drop. This combination of factors makes this culvert a severe fish passage barrier. The tribe will replace the culvert with a bottomless arch that allows for a natural stream. The north fork of the Touchet River is used by bull trout, which are listed as threatened with extinction under the federal Endangered Species Act, as well as rainbow trout. Other fish passage barriers have been eliminated by the U.S. Forest

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Service, the Washington Department of Fish and Wildlife, and Tri-State Steelheaders, Inc. The tribe will contribute \$49,479 in labor and donations of cash and labor. See [more information](#) on this project. (12-1635)

### **Dayton** **Designing Restoration of the Touchet River**

**Grant Awarded: \$82,140**

The City of Dayton will use this grant to complete the design for a final restoration project on the north fork of the Touchet River, from the Bailsburg Bridge nearly three-quarters of a mile downstream to the south fork of the Touchet Road Bridge in Dayton. Restoration actions could include removing riprap, building side channels, and placing logjams in the river to slow the river and create more places for steelhead to rest, feed, spawn, grow, and hide from predators. This section of the river used to have more side channels, fast and slow sections, and shorelines with many trees and plants. It was ideally suited for steelhead and spring Chinook spawning and rearing. Today, this section of the river is surrounded by homes and has been restricted by levees to prevent flooding. The river essentially shoots through the area, leaving few places to rest, feed, and spawn for steelhead, which are listed as under the federal Endangered Species Act, and re-introduced Chinook salmon. The proposed restoration actions would begin to change that by giving the river more room to meander and slowing it down in one small section. The reach has been assessed and the next step is to work with landowners on developing final restoration plans. See [more information](#) on this project. (12-1639)

### **Washington Department of Fish and Wildlife** **Restoring Project Area 14 on the Tucannon River**

**Grant Awarded: \$264,848**

The Washington Department of Fish and Wildlife will use this grant to build logjams, remove dredge spoil berms that constrict the floodplain, and plant the banks of the Tucannon River in the W.T. Wooten Wildlife Area. The logjams will slow the river, creating pools and more places for salmon to rest, feed, spawn, grow, and hide from predators. The plantings will provide shade to cool the river and enhance floodplain stability. Removal of the gravel berms will increase the connections between the floodplain and the river. The project reach is part of a 2-mile-long section of river known as Project Area 14, which is a high priority for Snake River steelhead, Chinook salmon, and bull trout, all of which are listed as threatened with extinction under the federal Endangered Species Act. The department will contribute \$47,000 from a federal grant. See [more information](#) on this project. (12-1641)



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## Cowlitz County Organizations

**\$1,238,898**

### **Cowlitz Conservation District**

**Grant Awarded: \$131,000**

#### **Removing Japanese Knotweed along the Coweeman River**

The Cowlitz Conservation District will use this grant to implement a comprehensive knotweed management program for the Coweeman River watershed. The conservation district will identify the extent and magnitude of knotweed invasion, treat shoreline areas, plant the shoreline with native plants, and educate landowners about continued monitoring and treatment. Knotweed can choke out native plants and shrubs that are more beneficial to salmon. In most areas where knotweed is established, the magnitude of the infestation is simply beyond the individual landowner's comfort level and ability to manage. Landowners have expressed their willingness to participate in a watershed approach for managing knotweed. The project will improve water quality and habitat for Chinook, coho, and chum salmon and steelhead, all of which are listed as threatened under the federal Endangered Species Act. The conservation district will contribute \$29,000 from a state grant, staff labor, and donations of equipment and labor. See [more information](#) on this project. (12-1382)

### **Cowlitz Indian Tribe**

**Grant Awarded: \$210,256**

#### **Restoring an Abernathy Creek Side Channel**

The Cowlitz Indian Tribe will use this grant to restore a 600-foot side channel on Abernathy Creek in Cowlitz County at the Abernathy Fish Technology Center owned by the U.S. Fish and Wildlife Service. The restored side channel will provide rearing habitat for coho and Chinook salmon, which are listed as threatened under the federal Endangered Species Act, as well as winter steelhead trout. The tribe will build logjams at the upstream end of the side channel to encourage high winter flows to occupy the new habitat. Logs and small logjams will be anchored throughout the side channel to provide complex habitat for multiple fish and wildlife species. The tribe also will plant western red cedar, grand fir, and Sitka spruce in the shoreline areas to provide large wood for the stream in the future. The Cowlitz Indian Tribe will contribute \$28,697 from a grant. See [more information](#) on this project. (12-1333)

### **Lower Columbia Fish Enhancement Group**

**Grant Awarded: \$75,000**

#### **Designing Habitat Projects for the Lower Kalama River**

The Lower Columbia Fish Enhancement Group, in partnership with the Port of Kalama, Washington Department of Fish and Wildlife, and Kalama Sportsman Club, will develop a final design to increase quality and quantity of habitat in the lower Kalama River, near the city of Kalama. The project will design the placement of logjams along 1.3 miles of the river, beginning at the Burlington Northern Santa Fe railroad crossing and extending downstream to the confluence with the Columbia River. The logjams will slow the river, creating places for salmon to rest, spawn, grow, feed, and hide from predators. The river is used by Chinook, chum, and

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coho salmon and steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The project compliments other habitat restoration projects adjacent to this area. The fish enhancement group will contribute \$25,000 in cash donations. See [more information](#) on this project. (12-1703)

### **Lower Columbia Fish Enhancement Group Enhancing Nutrients in Rivers**

**Grant Awarded: \$38,714**

The Lower Columbia Fish Enhancement Group will use this grant to place salmon carcasses in the headwaters and tributaries of the Kalama River, the east and north forks of the Lewis River, and the Washougal River. The fish enhancement group will place the surplus hatchery carcasses in 90 miles of river during three years. The carcasses break down and put nitrogen and phosphorus into the rivers, increasing food for Chinook, coho, and chum salmon and steelhead trout, all of which are listed as threatened under the federal Endangered Species Act. The project has been underway since 1999 resulting in a vast network of volunteers, landowners, students, and businesses engaged in returning tens of thousands of surplus hatchery salmon carcasses back to local streams. Project partners include the Washington Department of Fish and Wildlife, Coastal Conservation Association, U.S. Forest Service, Cowlitz Indian Tribe, Fish First, Northwest Steelheaders Association, Clark-Skamania Fly Fishers, Lower Columbia Fly Fishers, Washington State University Watershed Stewards, and Kalama Sportsmen Club. The fish enhancement group will contribute \$223,836 from state and other grants and donations of labor and materials. See [more information](#) on this project. (12-1168)

### **Lower Columbia Fish Enhancement Group Installing Logjams in the Coweeman River**

**Grant Awarded: \$348,200**

The Lower Columbia Fish Enhancement Group will use this grant to place logs in the Coweeman River in Cowlitz County. The fish enhancement group will install 150 large diameter logs in various configurations on the Coweeman River to capture spawning gravel. The logjams slow the river, creating places for salmon to spawn, rest, hide from predators, and feed. The river is used by Chinook and coho salmon and steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The project is in the lower Coweeman River on land owned by Longview Timber, which is donating some of the wood for the logjams. The fish enhancement group will contribute \$120,940 in donations of labor and materials. See [more information](#) on this project. (12-1169)

### **Lower Columbia Fish Enhancement Group Restoring the South Fork of the Toutle River**

**Grant Awarded: \$435,728**

The Lower Columbia Fish Enhancement Group will use this grant to restore about 1 mile of the south fork of the Toutle River, near the small town of Toutle. The fish enhancement group will install large logs and tree root wads in the river and along the shorelines and replant the shoreline with 10,000 native plants. The logs will slow the river and reduce erosion of the

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riverbanks. The area was damaged by the removal of large trees from the uplands, floodplain, and channels before and after the eruption of Mount Saint Helens. As a result, the channel has become unstable, frequently shifting and severely limiting habitat important for spawning, egg incubation and juvenile life history stages of Chinook and coho salmon and winter steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. Project landowners and partners are Weyerhaeuser and residents in the Steelhead Landing subdivision. The fish enhancement group will contribute \$107,295 in donations of equipment, labor, and materials. See [more information](#) on this project. (12-1166)

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## Garfield County Organization **\$283,272**

### Nez Perce Tribe **Grant Awarded: \$283,272** **Replacing a Fish Blocking Pipe in Pataha Creek**

The Nez Perce Tribe, in cooperation with the Umatilla National Forest, will use this grant to replace two fish passage barriers with bridges on Pataha Creek. The tribe also will modify or remove log weirs below each culvert. Pataha Creek is a tributary to the Tucannon River and is used by steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. The two barriers are culverts under a road. The culverts are too steep and water rushes too fast through for juvenile fish. These culverts are at the end of a 47-mile journey to the headwaters, and block access to nearly 4 miles of quality rearing. The tribe will contribute \$50,000 in donated labor. See [more information](#) on this project. (12-1653)

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## Grays Harbor County Organizations **\$669,754**

### Chehalis Basin Fisheries Task Force **Grant Awarded: \$175,151** **Opening Fish Blocking Culverts on the West Fork of Chenois Creek**

The Chehalis Basin Fisheries Task Force will use this grant to replace two undersized culverts blocking fish passage in the west fork of Chenois Creek where it crosses under Ocean Beach County Road. The work will open 6.5 miles of excellent spawning and rearing habitat for five species of salmon – coho, Chinook, and chum salmon, steelhead, and sea-run and resident cutthroat trout. The culverts block all young salmon and a third of adult salmon from reaching the rest of the creek. The fisheries task force will replace the culverts with a bottomless, arched culvert, 24 feet wide and 9 feet tall. At the same time, Rayonier Timber Company is planning to fix 10 other barriers upstream in an effort to eliminate all fish barrier culverts in the upper watershed. The fisheries task force will contribute \$178,449 in funding and donated Labor. See [more information](#) on this project. (12-1068)

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### Quinault Indian Nation

**Grant Awarded: \$170,440**

#### Controlling Knotweed along the Lower Quinault River

The Quinault Indian Nation will use this grant to restore the shorelines along the lower Quinault River floodplain that have been damaged by invasive knotweed. In this multi-year effort, the Quinault Indian Nation will control the plants using a top-down approach. In the first year, the Quinault Indian Nation will remove knotweed and other invasive plants from more than 7,800 acres along the upper 8 miles of the lower Quinault River. The Quinault Indian Nation will spray herbicide and document infestations. Knotweed causes great damage to salmon habitat by displacing native plants that are more beneficial to salmon, contributing to soil erosion, impairing water quality, creating a gap in the aquatic food web, and choking out stream channels that salmon species use for migration and overwintering. The lower Quinault River is used by Chinook, chum, coho, and sockeye salmon; bull trout; steelhead; and cutthroat trout. The Quinault Indian Nation will contribute \$35,000 in staff labor and materials. See [more information](#) on this project. (12-1155)

### Quinault Indian Nation

**Grant Awarded: \$32,000**

#### Designing a Project to Remove Fish Barriers on the Salmon River

The Quinault Indian Nation will use this grant to complete a final design for replacing two fish-blocking culverts in the Salmon Creek watershed. The culverts are on two, unnamed tributaries to the Salmon River. The Salmon River is a tributary to the Queets River in Grays Harbor County. The replacements will either be larger culverts or bridges. These streams have quite a drop in elevation from upstream to downstream. The Salmon River is used by coho salmon and cutthroat trout. See [more information](#) on this project. (12-1326)

### Quinault Indian Nation

**Grant Awarded: \$71,224**

#### Reclaiming Moses Prairie

The Quinault Indian Nation will use this grant to remove four culverts that are blocking fish passage in Moses Prairie, which is south of the Queets River on the Quinault Indian Nation Reservation in Grays Harbor County. The Quinault Indian Nation will remove three of the culverts and leave open channels and replace the fourth with a bridge. This project is the final phase of a larger project to remove fish blocking culverts and restore natural water flow to the prairie. The Quinault Indian also will remove a prairie overflow channel that could strand fish. The culverts were installed under the 4500 road, which cuts through Moses Prairie. By opening the north end of Moses Prairie and the tributaries to fish passage, a total of 3.54 miles of habitat will be available for fish. Removing the barriers on the tributary and on Moses Prairie would allow fish to migrate from the north fork of Whale Creek to spawning and rearing habitat in wetlands and the unnamed tributary. The Quinault Indian will contribute \$12,600. See [more information](#) on this project. (12-1325)

# Salmon Recovery

## 2012 GRANTS AWARDED



### Quinault Indian Nation

**Grant Awarded: \$16,598**

#### Restoring Fish Passage in the Quinault River Watershed

The Quinault Indian Nation will use this grant to replace a fish-blocking culvert with a bridge, giving coho salmon access to nearly a half-mile of habitat on an unnamed tributary to the Quinault River. The undersized culvert has a significant drop on one end and is steeply sloped. In addition to installing a bridge, the Quinault Indian Nation will remove sediment and other material that built up at one end of the culvert and place large logs and tree root wads in the river. The logs will slow the river, creating places for salmon to rest, feed, spawn, grow, and hide from predators. The Quinault Indian Nation also will place riprap from one abutment down the side slope. The Quinault Indian Nation will contribute \$81,631 from a federal grant. See [more information](#) on this project. (12-1323)

### Wild Fish Conservancy

**Grant Awarded: \$204,341**

#### Assessing Salmon Use of the Grays Harbor Estuary

The Wild Fish Conservancy will use this grant to continue its assessment of juvenile salmon's use of the near-shore habitat in the Grays Harbor estuary. Wild Fish Conservancy staff will sample at least 30 sites throughout Grays Harbor, twice a month, from February through September. In addition to fish usage data, staff will identify the type of salmon in the area, and collect information on the physical habitat and water quality to determine how these variables might be affecting salmon's use of the estuary. Staff will use the information to suggest habitat restoration and protection projects. The Wild Fish Conservancy will contribute \$40,000 from another grant and donated labor. See [more information](#) on this project. (12-1410)

## Island County Organizations

**\$278,350**

### Island County

**Grant Awarded: \$28,350**

#### Restoring Ala Spit

The Island County Health Department will use this grant to evaluate options for removing a rock groin and the final 435 feet of a bulkhead in Ala Spit County Park. Removal of the rock groin would help restore spawning habitat for fish that salmon eat. Ala Spit County Park lies on the northeastern shore of Whidbey Island and consists of an 8-acre sand and gravel spit, 4 acres of uplands, and nearly 1 mile of beach and tidelands in Skagit Bay. The spit and associated pocket estuary includes a lagoon, saltmarsh, and mudflats. The Skagit Chinook recovery plan identifies this area as a priority for early rearing of wild fry migrant Chinook salmon originating from the Skagit River. See [more information](#) on this project. (12-1260)

# Salmon Recovery

## 2012 GRANTS AWARDED



### Whidbey Camano Land Trust Conserving Land in North Livingston Bay

**Grant Awarded: \$250,000**

The Whidbey Camano Land Trust will use this grant to buy up to 48 acres of wet uplands and 45 acres of intact tidelands. The land will expand the area already protected at Livingston Bay and Port Susan Bay, which includes the land trust's 3,160-acre Livingston Bay Preserve, nearly 4,000 acres protected by The Nature Conservancy, and an additional 13,000 acres managed by the Washington Department of Fish and Wildlife. The tidelands at Livingston Bay are identified in the Island County Salmon Recovery Plan as a top priority for protection because they are used by salmon during their migration to and from the Stillaguamish River. Protection of the diked farmlands and estuary is the first phase of the Whidbey Camano Land Trust's larger North Livingston Bay wetlands project, which will result in the acquisition and restoration of up to 330 acres of former tidal estuary, wetlands, and tidelands. This project represents the largest opportunity for comprehensive estuary and wetland restoration on Camano Island. The Whidbey Camano Land Trust will contribute \$390,000 from a federal grant and donated property interest. See [more information](#) on this project. (12-1395)

## Jefferson County Organizations

**\$1,072,233**

### Jefferson County Conserving Land along the Big Quilcene River

**Grant Awarded: \$207,900**

Jefferson County will use this grant to buy 2 acres along the Big Quilcene River and estuary and restore it to improve the integrity and resilience of Hood Canal shorelines. The county will demolish structures on the land, removing invasive plants, and replant the area. The land is within the historic channel migration area of the river and abuts other land owned by the County. The county's goal is to support high quality, shoreline habitat for Hood Canal summer chum by restoring disturbed lands to health. Jefferson County will contribute \$50,000 in donated land. See [more information](#) on this project. (12-1384)

### Jefferson County Conserving Land along the Dosewallips and Duckabush Rivers

**Grant Awarded: \$345,275**

Jefferson County will use this grant to conserve 38.2 acres along the Duckabush and Dosewallips Rivers. Both rivers are home to endangered Puget Sound Chinook, as well as coho, chum, and pink salmon and steelhead. The land represents a significant portion of the shoreline, upland and wetland habitats surrounding the Duckabush River. About 1 acre of the land is in the Powerlines Reach of the Dosewallips River and is surrounded by floodplain already owned by the county. The county will purchase the land either directly or will conserve it using voluntary purchase agreements that prevent the land from being developed. Jefferson County will

# Salmon Recovery

## 2012 GRANTS AWARDED



contribute \$155,188 from conservation futures<sup>1</sup> and donated land. See [more information](#) on this project. (12-1385)

### **Jefferson Land Trust Conserving Snow Creek**

**Grant Awarded: \$126,100**

The Jefferson Land Trust will use this grant to buy 15.5 acres on Snow Creek to protect important salmon habitat, and restore about 5 of the acres. The land is at the junction of Highway 101 and West Uncas Road and has about 12 acres of forested creek shoreline and wetlands. Restoration work will include removing invasive plants and replanting the area. Local organizations have been working for more than a decade to protect and restore Salmon and Snow Creek watersheds, which are at the head of Discovery Bay. To date, more than 360 acres of critical shorelines, estuaries, wetlands, and farmland downstream are protected permanently through the state and land trust. Snow Creek is used by the summer chum salmon, which are listed as threatened with extinction under the federal Endangered Species Act, coho salmon, and cutthroat and steelhead trout. The Jefferson Land Trust will contribute \$24,900 in conservation futures<sup>2</sup>. See [more information](#) on this project. (12-1310)

### **North Olympic Salmon Coalition Removing the Discovery Bay Railroad Grade**

**Grant Awarded: \$288,680**

The North Olympic Salmon Coalition will use this grant is to remove a quarter-mile of railroad grade and water line and move the water line close to State Route 101 in lower Discovery Bay. The work will reconnect 22 acres Salmon and Snow Creek estuaries and create 1.5 acres of new estuary. The abandoned railroad causeway bisects the entire estuary and armors the shoreline. The estuaries are used by summer chum salmon. The coalition will contribute \$50,944 from a federal grant. See [more information](#) on this project. (12-1268)

### **Pacific Coast Salmon Coalition Opening Passage in the Christmas Creek Tributaries**

**Grant Awarded: \$104,278**

The Pacific Coast Salmon Coalition will use this grant to remove two culvers blocking fish passage on Christmas Creek tributaries to the Clearwater River. The coalition then will install a 26-foot-long bridge over the river and replace one of the culverts with a bigger one. The Christmas Creek tributaries comprise more than 2 miles of currently inaccessible stream. Within this stretch of habitat there is spawning, rearing, and overwintering habitat for coho salmon and

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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.

<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

## 2012 GRANTS AWARDED



steelhead and cutthroat trout. The coalition will contribute \$56,150 in donations of cash and donated materials. See [more information](#) on this project. (12-1428)

## King County Organizations

**\$1,343,892**

### **Adopt A Stream Foundation Restoring a Reach in Bear Creek**

**Grant Awarded: \$74,356**

Adopt A Stream Foundation will use this grant to restore a small section of Bear Creek that runs through Friendly Village in Redmond. The foundation will convert about a quarter-acre lawn into streamside habitat by planting 100 trees and 500 shrubs and widening the existing channel to reduce erosion, improve holding capacity during floods, and create space for a seasonal inundated plant community. Finally, the foundation will place logs and tree root wads in the creek to slow the creek, creating places for salmon to rest, feed, spawn, grow, and hide from predators. The Adopt A Stream Foundation will contribute \$13,120 in cash and donations of labor and materials. See more information on this project [here](#) and [here](#). (12-1282)

### **Auburn Building Phase 2 of the Fenster Setback Levee on the Green River**

**Grant Awarded: \$327,353**

The City of Auburn will use this grant to supplement a project to remove another 500 feet of the Fenster revetment berm and rock, and the gravel access road adjacent to the Green River, and build a new setback levee. The project will build on the success of three recent levee setback projects in the Auburn Narrows Reach, just upstream. Phase 1 of the Fenster Levee Setback Project, along with the Pautzke Levee Setback Project and the Auburn Narrows Floodplain Habitat Restoration Project, have allowed the Green River to form superior fish habitat and flood water storage in the Auburn Narrows Reach. This project will extend those characteristics for another 500 feet downstream into Auburn. The river will be reconnected with a portion of its historic floodplain and important habitat in the river and at its edges will be restored. The Green River is used by steelhead and chum, coho, and endangered Chinook salmon. The project is at the 2100 block of 2nd Street Southeast in Auburn's Fenster Nature Park. The City will contribute \$57,768 from a local grant. See [more information](#) on this project. (12-1444)

### **Issaquah Restoring Issaquah Creek**

**Grant Awarded: \$225,000**

The City of Issaquah will use this grant to supplement funding for a restoration project at the confluence of Issaquah Creek and the east fork of Issaquah Creek. The project will give the two creeks a more natural channel configuration and restore riparian and in-stream habitat. The City plans to remove about 1,000 feet of rock riprap, reconfigure more than a quarter-mile of channel, place eight logjams in the creeks, create more than a quarter-mile of side channel



# Salmon Recovery

## 2012 GRANTS AWARDED



habitat for juvenile salmon at two relic oxbows, plant more than 2 acres along the shoreline, and restore small wetlands. The creeks are used by Chinook, coho, and kokanee salmon, cutthroat, and steelhead. The City will contribute \$45,000. See more information on this project [here](#) and [here](#). (12-1285)

### King County

**Grant Awarded: \$279,423**

#### Acquiring the Riverbend Mobile Home Park to Restore Cedar River Floodplain

King County Water and Land Resources Division will use this grant to acquire .84 acre of the 18.64-acre Riverbend mobile home park on the Cedar River in Maple Valley, for future restoration of important salmon and floodplain habitat, and to connect the Cavanaugh Pond and Ricardi Natural Areas. Acquiring this land will set the stage for a salmon restoration project similar to large-scale floodplain restoration at the Rainbow Bend site upstream. The purchase involves one parcel, and an owner that intends to sell the property if the County purchases it or not. Acquisition of this property is considered a once in a generation opportunity. This property is a very high priority because of its size and it fills a gap in a nearly 5-mile stretch of protected land on the lower Cedar River. King County has identified this property as a high priority for acquisition because of the density of residents, the cost of maintaining lengthy revetments, the amount of land in the river's channel migration area, and the site's significant flooding. The County will contribute \$53,000 in local grant. This grant is from the Puget Sound Acquisition and Restoration fund. See more information on this project [here](#) and [here](#). (12-1278)

### King County

**Grant Awarded: \$287,760**

#### Conserving the Tolt River

The King County Department of Natural Resources and Parks will use this grant to purchase high quality habitat along the Tolt River, a tributary to the Snoqualmie River. The County will buy about 1.65 acres and remove a house from the river channel migration zone. The County's long-term goal is to buy and restore all the land in the San Souci Reach within the next ten years. Once all the land is bought, King County will remove an informal levee, the access road, and utilities. This will give the river full access to its floodplain, restoring its ability to form habitat. The river is used by Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act. It also is used by coho, chum, and pink salmon and cutthroat trout. This project is part of an overall strategy to protect and restore the lower 6 miles of the Tolt River. The department will contribute \$51,000 in conservation futures<sup>3</sup>. See [more information](#) on this project. (12-1153)

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<sup>3</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

## 2012 GRANTS AWARDED



### Seattle

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

#### **Conserving the Cedar River's Belmondo Reach**

Seattle Public Utilities will use this grant to buy 3.8 acres of a 12.65-acre property on the lower Cedar River in King County. This project is part of larger efforts to protect and restore habitat for Chinook, coho, and sockeye salmon, and steelhead trout in the Cedar River. The land is in the Belmondo Reach of the Cedar River, 4 miles north of the City of Maple Valley. The purchase will protect some of the best remaining salmon habitat in the lower Cedar River. Protection of this land will provide continuity in the larger reach, securing the missing link in a 1-mile chain of protected lands upstream and downstream, preventing development of three new homes where salmon use is well documented and habitat features and ecological function are relatively intact. The property contains high-quality side channel and backwater habitats, which serve as excellent resting places for salmon when the river is high. Seattle Public Utilities will contribute \$26,500. See more information on this project [here](#) and [here](#) on this project. (12-1191)

## **Kitsap County Organizations**

**\$25,000**

### **Suquamish Tribe**

**Grant Awarded: \$25,000**

#### **Removing Wood from a Marsh**

The Suquamish Tribe will use this grant to remove wood that has accumulated for the past century from 1.5 acres at Doe-Kag-Wats marsh to improve marsh conditions. The wood to be removed are cut logs, pieces of wood, any wood that didn't fall down with a root wad attached. Doe-Kag-Wats is on the Port Madison Indian Reservation about 1.5 miles east of Indianola in north Kitsap County. Removing the wood is expected to allow more native marsh plants and shrubs to establish, increase the amount of tidal water exchanged with Port Madison Bay, and increase the amount of food that salmon eat and places for them to rest. A secondary goal is to document and evaluate the benefits and risks of removing the wood as a restoration strategy in estuarine marshes in Puget Sound. The marsh is used by Puget Sound Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act, as well as chum, coho, and pink salmon, and coastal cutthroat trout. The Suquamish Tribe will contribute \$4,425. See [more information](#) on this project. (12-1458)

## **Kittitas County Organizations**

**\$159,980**

### **Kittitas County Conservation District**

**Grant Awarded: \$62,230**

#### **Developing Restoration Projects Yakima River from Hansen Pits to Ringer Loop**

The Kittitas County Conservation District will use this grant to identify and prioritize salmon habitat restoration projects in a 3-mile-long reach of the Yakima River south of Ellensburg. The

# Salmon Recovery

## 2012 GRANTS AWARDED



assessment will begin at Hansen Pits and extend downstream. The conservation district will identify priority locations for project that would result in significant increases in the quantity, diversity, and productivity of habitats for various life stages of salmon and steelhead. The final report will summarize existing conditions in the project reach, provide a clear set of selection criteria and a methodology to identify and prioritize projects, identify and prioritize potential projects (including the Hansen Pits Levee relocation), and develop conceptual designs and cost estimates for priority projects. The Yakima River is used by steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, along with spring Chinook and coho salmon. The conservation district will contribute \$15,200 in donations of labor and materials. See [more information](#) on this project. (12-1358).

### **Kittitas Conservation Trust**

**Grant Awarded: \$97,750**

#### **Designing a Restoration Project for Gold Creek Habitat**

Kittitas Conservation Trust will use this grant to assess habitat in the Gold Creek watershed and produce a conceptual design for one restoration project. Gold Creek is a headwaters tributary to the upper Yakima River that originates in the Alpine Lakes Wilderness and then flows into Lake Keechelus near Snoqualmie Pass in northern Kittitas County. This assessment will investigate why portions of Gold Creek go dry, how that affects bull trout, and whether and how restorations actions can improve habitat conditions and reverse the decline in the population. Bull trout were listed as threatened with extinction under the federal Endangered Species Act in 1998. The Gold Creek bull trout population became geographically isolated after completion of the Lake Keechelus Dam in 1917. Kittitas Conservation Trust will contribute \$17,250 in donations of cash and labor. See [more information](#) on this project. (12-1306)

## **Klickitat County Organizations**

**\$545,000**

### **Columbia Land Trust**

**Grant Awarded: \$527,000**

#### **Restoring the Klickitat River Floodplain**

The Columbia Land Trust, in partnership with the Yakama Nation Fisheries Program, will use this grant to remove fill and pull back a road to restore connectivity to the Klickitat River floodplain and soften the channel boundary along 1.33 miles of road. The partners also will replant the disturbed areas with native trees to improve the riverbank. This portion of the river has the greatest habitat complexity of any reach in the lower Klickitat River, is listed as a high priority reach in the Klickitat Lead Entity Recovery Strategy, and provides critical spawning, migration and rearing habitat for winter and summer steelhead, which are listed as threatened under the federal Endangered Species Act, as well as Chinook and coho salmon. This project continues work that began in 2004 with the acquisition of the Haul Road and three phases of restoration projects since. The project sponsors will contribute \$99,397 from a grant and donations of labor and materials. See [more information](#) on this project. (12-1644)

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Mid-Columbia River Fisheries Enhancement Group      Grant Awarded: \$18,000** **Assessing Benefits of Reintroducing Beavers in White Salmon River Basin**

The Mid-Columbia River Fisheries Enhancement Group will use this grant to evaluate habitat conditions in some tributaries of the White Salmon basin to identify sites where habitat for salmon species could benefit from beaver re-introduction. The fisheries enhancement group will inventory tributary habitats that could benefit from beaver re-introduction. Additionally, it will provide information to landowners on the habitat benefits created by beaver pools and beaver management options, and develop a list of potential sites with suitable beaver habitat, willing landowners, and aquatic conditions that could benefit from habitat modifications typically associated with beaver activity. The project will draw on the lessons learned from other successful beaver projects in eastern Washington and seeks to fill a data gap by developing more detailed and specific information necessary to proceed to a restoration project. One of the problems for salmon is that the rivers don't have enough pools, where salmon can rest and feed. The rivers also don't have enough water in the summer and too much in the winter, are too warm in the summer, and are not connected to floodplains. The fisheries enhancement group will contribute \$3,208 in donations of cash. See [more information](#) on this project. (12-1668)

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## **Mason County Organizations      \$460,152**

### **Great Peninsula Conservancy      Grant Awarded: \$97,500** **Designing the Restoration of Beard's Cove**

The Great Peninsula Conservancy will use this grant to develop the final design of a project to restore the shoreline at Beard's Cove at the toe of Hood Canal. The conservancy plans to remove recreation buildings and fill from a former tidal area, then restore up to 7 acres of estuary and up to a third of a mile of shoreline and 790 feet of tidal channels. The conservancy also plans to remove invasive plants and replant 4 additional acres. The cove is used by Hood Canal summer chum and Puget Sound Chinook salmon, both of which are listed as threatened with extinction under the federal Endangered Species Act. This work will complement the dike removal and wetland restoration completed on Great Peninsula Conservancy's adjacent 90-acre Klingel Wildlife Refuge in 2011. The proposed project will add more than 4 acres of important estuarine habitat to Hood Canal, and reconnect the Klingel Refuge and a large, adjacent Department of Fish and Wildlife property. The project site, which is on the Union River estuary and jointly owned by conservancy and the Beard's Cove Community Organization, is part of an 800-acre Lynch Cove Conservation Area. See [more information](#) on this project. (12-1312).

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Mason Conservation District Removing Cars and Restoring the Skokomish River**

**Grant Awarded: \$129,710**

The Mason Conservation District will use this grant to remove cars along about a third of a mile of the banks of the Skokomish River in central Mason County. The district also will plant the riverbanks. The work will restore the natural movement of the river in its channel, and allow the riverbank trees to shade and cool the water and drop their branches in the river to slow it down, creating great habitat for chum salmon, which are listed as threatened with extinction under the federal Endangered Species Act. The conservation district will contribute \$64,000 from a federal grant. See [more information](#) on this project. (12-1368)

### **South Puget Sound Salmon Enhancement Group Removing Barriers to Fish on Like's Creek**

**Grant Awarded: \$232,942**

The South Puget Sound Salmon Enhancement Group will use this grant to remove two sets of culverts that are preventing salmon from traveling up Like's Creek, a major tributary to Goldsborough Creek, west of Shelton. The first two culverts are under the Simpson railroad and are within 200 feet of the confluence of Like's Creek and Goldsborough Creek. The other two culverts are about 150 feet upstream and under Carman Road North, a county road. Because these culverts are near the creek's mouth, removing them would allow salmon to spawn and grow in Like's Creek, which has not been accessible to migratory fish for several decades. The project would open about 1 mile of habitat to salmon. The salmon enhancement group will build new culverts and place large logs and tree root wads in the creek to create more habitat for coho and other salmon species. This project would be the next key step in improving salmon habitat in the Goldsborough Creek watershed following other work completed during the past three years by multiple, local groups. The salmon enhancement group will contribute \$41,107. See [more information](#) on this project. (12-1459)

## **Okanogan County Organizations**

**\$737,325**

### **Cascade Columbia Fisheries Enhancement Group Planting the Banks of the Methow River**

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

The Cascade Columbia Fisheries Enhancement Group will use this grant to replant the banks of the Methow River. This project will take place on Washington Department of Fish and Wildlife lands in the Methow Valley. The land has been impaired from many years of agriculture and livestock grazing. The native shoreline vegetation, which at one point made the Methow such a suitable habitat for salmonids, generally has been removed, significantly diminished, or replaced by invasive plants and noxious weeds in many areas. The river is used by coho and Chinook salmon as well as steelhead and many resident fish species. The fisheries enhancement group will contribute \$15,000 from another grant. See [more information](#) on this project. (12-1651)

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Methow Salmon Recovery Foundation Conserving the Middle Methow River Reach**

**Grant Awarded: \$87,340**

The Methow Salmon Recovery Foundation will use this grant to buy a voluntary land agreement, called a conservation easement, which will prevent development of more than 13 acres of floodplain and wetlands along the Methow River. The land is next to land owned by the Washington Department of Fish and Wildlife. This agreement will allow restoration of the property so the floodplain wetland can be reconnected with the river during high spring flows. The river is used by endangered spring Chinook salmon and steelhead, which are listed as threatened with extinction under the federal Endangered Species Act. The foundation will contribute \$15,410 in donations of labor and land. See [more information](#) on this project. (12-1662)

### **Methow Salmon Recovery Foundation Conserving Twisp River and Poorman Creek Shorelines**

**Grant Awarded: \$359,550**

The Methow Salmon Recovery Foundation will use this grant to buy 33.52 acres, including nearly a half-mile of Twisp River shoreline, part of lower Poorman Creek, and wetlands. The purchase will protect the shoreline from development and allow wet pasture areas to be restored. The foundation will remove irrigation diversions in Poorman Creek and one pump station in a wetland and replace them with an irrigation well. The river and creeks are used by endangered spring Chinook salmon, as well as steelhead and bull trout. The land is next to 62 acres already protected. The foundation will contribute \$63,450 from another grant. See [more information](#) on this project. (12-1663)

### **Methow Conservancy Restoring Beaver Colonies in the Lower Chewuch River**

**Grant Awarded: \$44,652**

The Methow Conservancy will use this grant to re-establish beavers in the lower Chewuch River to restore habitat for salmon. The conservancy will work with landowners who have trouble with the beavers, trap the beavers, and then release them in the Chewuch River. The river provides spawning areas for about a quarter of the spring Chinook salmon in the Methow River watershed, and also is used for spawning by steelhead, cutthroat trout, and bull trout. Beaver dams in streams retain water during high flows and release more water during the late summer dry season. Beaver dams in side channels provide habitat where salmon can rest, feed, and hide from predators. Beaver dams also withhold sediment, keeping the river water cleaner for salmon. The Methow Conservancy will contribute \$194,000. See [more information](#) on this project. (12-1670)

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Trout Unlimited Inc. Restoring Ninemile Creek Shoreline**

**Grant Awarded: \$165,783**

Trout Unlimited will use this grant to replace two dilapidated road crossings on Ninemile Creek, improving steelhead access to the upper watershed. The culverts under the road crossings are undersized and the water travels through them too fast, creating a barrier to steelhead during migration. Improving the crossings will prevent backwatering upstream of the crossings and reduce sediment accumulation in the creek. A third stream crossing also will be improved. Trout Unlimited will install more than 2 miles of shoreline fencing to restrict livestock from entering the creek, which will allow more than 1 mile of the shoreline to heal. Ninemile Creek historically has low flows in the summer. The creek is a tributary to Lake Osoyoos and the Okanogan River and is upriver of Zosel Dam, just south of the Canadian border, making it the northernmost tributary for migrating fish in the United States. The creek is used primarily by steelhead but also is used by sockeye and Chinook salmon. Trout Unlimited will contribute \$29,300 in donated labor. See [more information](#) on this project. (12-1648)

## **Pacific County Organizations**

**\$250,348**

### **Lower Columbia Fish Enhancement Group Reducing Potential Landslides along the Grays River**

**Grant Awarded: \$112,500**

The Lower Columbia Fish Enhancement Group and its partner Rayonier Timber Company will use this grant to remove fill left on steep slopes after logging roads were built. The project will stabilize 47 erosive sites along the main stem and south fork of the Grays River. The road cuts and fill on unstable slopes often fail, pushing debris and sediment into the river. The sediment can smother spawning gravels and eggs. The work will benefit fall Chinook, coho, and chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as winter steelhead. The landowner, Rayonier Timber Company, will contribute \$112,500. See [more information](#) on this project. (12-1361)

### **Pacific Conservation District Opening Fish Passage on the Naselle River**

**Grant Awarded: \$137,848**

The Pacific Conservation District will use this grant to remove four barriers to fish migration on a tributary to the Naselle River in Pacific County. The conservation district will replace one barrier with a bridge, one barrier with a large culvert, and remove the remaining two barriers, leaving open river channels. The landowner is working to restore the riverbanks along the Naselle as well as along the tributary. The conservation district will plant the river banks after the barriers are removed. The tributary is used by coho and chum salmon, steelhead, and cutthroat trout. The conservation district will contribute \$82,960 from a state grant. See [more information](#) on this project. (12-1707)

# Salmon Recovery

## 2012 GRANTS AWARDED



## Pend Oreille County Organizations

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**\$353,303**

### **Pend Oreille County**

**Grant Awarded: \$51,000**

#### **Designing the Smalle Creek Fish Barrier Removal Project**

Pend Oreille County will use this grant to design a project to remove a large culvert that is blocking fish migration on Smalle Creek, a tributary in the Calispell sub-basin. The County will develop preliminary project designs and specifications and construction cost estimates, and secure environmental permits. The project will open up 6 miles of salmon habitat on Smalle Creek. See [more information](#) on this project. (12-1716)

### **Washington Department of Fish and Wildlife**

**Grant Awarded: \$302,303**

#### **Restoring Mill Creek Fish Passage**

The U.S. Forest Service, working with the Washington Department of Fish and Wildlife, will use this grant to remove three large culverts that are preventing bull trout and westslope cutthroat trout from reaching 6.75 miles of habitat on Mill and Wanless Creeks. The project is in the Colville National Forest, just east of LeClerc Creek Road in Pend Oreille County. These three barriers in the Mill Creek sub-basin are on roads jointly managed by the Colville National Forest and Stimson Lumber Company. These roads are not covered under the Forests and Fish Agreement and likely would not be replaced until they failed. The department will contribute \$53,348 in cash and donated labor. See [more information](#) on this project. (12-1625)

## Pierce County Organizations

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**\$1,099,083**

### **Great Peninsula Conservancy**

**Grant Awarded: \$135,570**

#### **Conserving a Rocky Bay Estuary**

Great Peninsula Conservancy will use this grant to buy 6.5 acres of a coastal inlet estuary at the head of Case Inlet's Rocky Bay in Pierce County. The purchase will conserve a near pristine Rocky Bay estuary that is used by Chinook and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act, as well as chum salmon, coho salmon, and cutthroat. Protecting this land will ensure the land remains undeveloped and will provide places for fish to rest, hide from predators, grow, and prepare for migration. The land includes a regionally significant stream and wetland complex that has been the target of about \$1 million in restoration activity during the past 10 years. Great Peninsula Conservancy will contribute \$23,925 in from a federal grant, cash, and labor. See [more information](#) on this project. (12-1424)



# Salmon Recovery

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### **Nisqually Land Trust** **Buying and Restoring Lower Ohop Creek**

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

The Nisqually Land Trust will use this grant to buy and restore 11 acres in the lower Ohop Valley near Eatonville. The land trust will reconnect an old pasture with Ohop Creek, plant native trees and shrubs, and remove buildings and roads. The creek is used by Chinook, coho, and chum salmon, cutthroat, and steelhead. The land has been damaged in the past by trespassers that have trampled plants, runoff of manure and sediment, and soil compaction. The land is next to 400 acres already owned by the land trust, and its restoration will enhance the planted buffer along the west side of the recently restored section of Ohop Creek. The land trust will contribute \$35,295 in donations of cash and labor. See [more information](#) on this project. (12-1369)

### **Pierce County** **Opening Fish Passage in Schoolhouse Creek**

**Grant Awarded: \$105,520**

Pierce County Surface Water Management Division will use grant to solve fish passage issues in Schoolhouse Creek on Anderson Island at the intersection of Oro Bay Road and Eckenstam-Johnson Road. The County will replace double barrel, undersized, roadway culverts with 4-foot-by-10-foot, concrete culverts at two road crossings. Schoolhouse Creek historically has been used by coho and chum salmon, and cutthroat. The small size of the culverts and the flat terrain mean that moderate to high water in the creek flows overtop Oro Bay Road and Eckenstam-Johnson Road. More water also means the creek moves faster through the culverts, preventing fish from passing through. Finally, water running on the roads can erode them and damage not only the road but also downstream habitat. The County will contribute \$28,490 in donated labor. See [more information](#) on this project. (12-1456)

### **Pierce County Conservation District** **Removing Japanese Knotweed along the Nisqually River**

**Grant Awarded: \$55,998**

The Pierce County Conservation District will use this grant to inventory and remove Japanese knotweed from the Nisqually River basin. The conservation district will update surveys on more than 75 miles of the Nisqually River and its tributaries, continue to eradicate all knotweed found in the basin beginning at the furthest upstream occurrence, replant native plants along the riverbanks where necessary, and educate residents about knotweed and other invasive plants. Crews will work in the summer to remove the knotweed through 2020, with a maintenance plan created for ongoing success of eradication efforts. The conservation district will contribute \$9,882. See [more information](#) on this project. (12-1372)

### **Pierce County** **Restoring the Puyallup River Floodplain at "South Fork"**

**Grant Awarded: \$229,621**

Pierce County Surface Water Management Division will use this grant to build a side channel in the Puyallup River floodplain at a location locally called South Fork, north of Orting. The side

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channel will become the largest side channel of its kind on the Puyallup River and will provide important spawning gravel for Chinook salmon, steelhead, and other salmon species. Gravel from the Puyallup River will readily transport through and deposit in the side channel. The County will build nearly .4 mile of side channel, and place several logjams and several clusters of large logs and tree root wads along the right and left banks of the newly created side channel. The County will also incorporate native plantings around the logjams and in disturbed areas adjacent to the side channel. Pierce County will contribute \$59,200. See [more information](#) on this project. (12-1576)

### **South Puget Sound Salmon Enhancement Group      Grant Awarded: \$332,395** **Placing Logjams in the Greenwater River**

The South Puget Sound Salmon Enhancement Group will use this grant to install up to five logjams in a 1-mile reach of the Greenwater River, near the town of Greenwater in Pierce County. The Greenwater River is used by White River spring Chinook, coho, and pink salmon, coastal cutthroat trout, bull trout, and steelhead. The logjams will slow the river, creating places for salmon to rest, feed, grow, and hide from predators. They also trap sediment, creating places for salmon to spawn. This grant is the third phase of a restoration effort on the Greenwater River. In the first two phases, 13 logjams were installed and nearly 1 mile of forest road was removed from the floodplain. The salmon enhancement group will contribute \$58,658 in donations of labor and materials. See [more information](#) on this project. (12-1288)

### **South Puget Sound Salmon Enhancement Group      Grant Awarded: \$39,979** **Removing the Filucy Bay Bulkhead**

The South Puget Sound Salmon Enhancement Group will use this grant to remove a vertical pile bulkhead and fill from the Filucy Bay shoreline in Carr Inlet, near Longbranch. The goal is to improve the ability of Filucy Bay to support rearing of Chinook, chum, and coho salmon and cutthroat trout. By removing the bulkhead, the beach will become more natural and will enhance spawning areas for the fish that salmon eat and provide places for salmon to rest and hide from predators. A secondary goal of the project is to provide a demonstration site to use as outreach to other landowners along the bay about natural management of the shoreline. The enhancement group will contribute \$7,055 in donated materials. See [more information](#) on this project. (12-1252)

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## San Juan County Organizations

**\$310,634**

### Friends of the San Juans

**Grant Awarded: \$44,525**

#### Planning the Restoration of Neck Point Lagoon and Pocket Beach

The Friends of the San Juans will use this grant to explore the potential for reconfiguring and restoring Shaw Island's Neck Point lagoon and pocket beaches to improve habitat for forage fish and salmon. In 1950, fill was placed over the historic lagoon and the northern spit to create an isthmus and roadway between Neck Point and Shaw Island. The friends group will conduct feasibility studies, complete conceptual designs and host community and partner meetings to advance this site toward restoration. The Friends of the San Juans will contribute \$7,858 from a federal grant and donated labor. See [more information](#) on this project. (12-1669)

### Friends of the San Juans

**Grant Awarded: \$149,889**

#### Removing Creosote Pilings in San Juan County

The Friends of the San Juans will use this grant to remove more than 100 creosote pilings in San Juan County. Creosote pilings can damage shorelines by leaching toxins into the water, poisoning sea life for many decades. The friends group recently mapped all of San Juan County's creosote pilings and degraded creosote docks, and compared those sites to locations of priority habitat and species, such as eelgrass, herring spawning grounds, and salmon habitat. The friends group will partner with the Washington Department of Natural Resources to remove half of the more than 236 creosote pilings in priority areas to improve the health of salmon and the fish salmon eat. The group will focus on areas where Pacific herring spawn and where there is low tidal flushing and high concentrations of creosote pilings. The group also plans to educate the public about creosote toxins and shorelines. The Friends of the San Juans will contribute \$26,450 from a state grant. See [more information](#) on this project. (12-1711)

### Friends of the San Juans

**Grant Awarded: \$38,000**

#### Studying Forage Fish Habitat in San Juan County

The Friends of the San Juans will use this grant to survey, document, and map the habitat of Pacific surf smelt and sand lance, two fish eaten by salmon, in San Juan County. Knowing this information will help salmon recovery experts better plan habitat restoration and acquisition projects that will improve protection of beach spawning areas for these fish. The Friends of the San Juans will survey beaches that either were not sampled previously or were under-sampled. The Friends of the San Juans will contribute \$6,710 from a private grant and donated labor. See [more information](#) on this project. (12-1680)

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### **Northwest Straits Marine Conservation Foundation**      **Grant Awarded: \$78,220** **Planning the Restoration of West Beach Creek**

The Northwest Straits Marine Conservation Foundation will use this grant to plan the removal of a barrier to fish passage in West Beach Creek on Orcas Island. The foundation will complete hydrology and sediment analysis, a final design, permitting, and cultural resources review. The barrier is created by twin culverts under a driveway to a private house and business, which also creates a dam for a small pond. The grant also would pay for planning to eliminate the fish passage barrier by de-watering the pond, restoring the natural stream channel, and replacing the dam with a bridge over the stream channel, opening access to a quarter-mile of the creek habitat for salmon. The stream then reaches a second fish passage barrier at the county road crossing of West Beach Road. Replacement of this second culvert is on the current San Juan County Public Works Plan. Once these two fish passage barriers are fixed, a full mile of stream will be accessible. See [more information](#) on this project. (12-1598)

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## **Skagit County Organizations**      **\$1,811,586**

### **Lummi Nation**      **Grant Awarded: \$61,382** **Designing Logjams for the Larson's Bridge Reach**

The Lummi Nation Natural Resources Department will use this grant to provide a preliminary design for up to eight logjams to restore habitat in the south fork of the Nooksack River. The work will occur at Larson's Bridge reach of the south fork, in the town of Hamilton in Skagit County. The logjams will slow the water and create more places for salmon to rest, feed, spawn, grow, and hide from predators. They also will create pools in areas of cool water during the summer and encourage flow onto the surrounding floodplain and off channels. The risk of inaction to the Chinook salmon population is great; the total population has been estimated to be as few as 19 fish. Ensuring that high quality, stable habitat is created as quickly as possible is critical to preserving the south fork stock. The Lummi Nation will contribute \$20,000 from a federal grant. See [more information](#) on this project. (12-1515)

### **Seattle**      **Grant Awarded: \$248,200** **Completing a Feasibility Study for Floodplain Restoration Near Mill Creek**

Seattle City Light will use this grant to complete a feasibility study to evaluate restoration options associated with the South Skagit Highway near Mill and Savage Creeks. The current highway isolates 62 acres of floodplain, disconnects and blocks fish access to 5.2 acres of wetlands, and significantly degrades stream and fish connectivity to an additional 21.7 acres of slough and wetland habitat. About 900 feet of Savage Creek runs in the highway ditch and Savage Slough flows under the highway through an undersized culvert that periodically is blocked by sediment from Mill Creek during floods. The Mill Creek bridge is too small resulting

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in numerous maintenance projects, including dredging. Seattle City Light will evaluate several solutions and complete preliminary design work for the preferred alternative. The alternatives include doing nothing, preserving the highway footprint with modifications, and moving about 1.5 miles of the highway outside the Skagit River floodplain. Seattle City Light recently bought 212 acres on the Skagit River near Mill and Savage Creeks and has been working with the Skagit River System Cooperative and Skagit County to demolish buildings, plant the riverbanks and remove culverts. Seattle City Light will contribute \$43,800 in cash donations. See more information on this project [here](#) and [here](#). (12-1209)

### **Skagit Fisheries Enhancement Group Enhancing Lower Day Creek Slough Habitat**

**Grant Awarded: \$87,216**

The Skagit Fisheries Enhancement Group will use this grant to replace an undersized culvert under a farm access road that blocks fish passage in the lower Day Creek Slough and to plant native trees and shrubs along the slough and Skagit River. The fisheries enhancement group will replace the culvert with either a larger culvert or a bridge. They will plant about 10 acres along the shores of the Skagit River, lower Day Creek Slough, the upstream end of Ross Island Slough, and a small unnamed slough. Together the sloughs provide 1.7 acres of high quality rearing habitat for Chinook salmon, steelhead trout, and other fish, while the adjacent Skagit River side channel (Kosbab Slough) is known to be an important Chinook spawning reach. The site is in the Day Creek community, about 10 miles east of Sedro Woolley. These projects were first identified in the Day Creek Feasibility Study and the fisheries enhancement group has been working with landowners to complete projects identified in that study since 2005. The fisheries enhancement group will contribute \$15,391 from a private grant and donated labor. See more information on this project [here](#) and [here](#). (12-1207)

### **Skagit Fisheries Enhancement Group Planning a Project to Replace a Fish Barrier in the Davis Slough**

**Grant Awarded: \$199,415**

The Skagit Fisheries Enhancement Group will use this grant to design a project to replace an undersized culvert under the South Skagit Highway that frequently is blocked with dirt and by beaver dams. The enhancement group plans to install a 60-foot-long bridge in place of the culvert. The enhancement group will complete final engineering designs, permitting, and preparation of a bid package for the bridge project. Davis Slough is in the middle Skagit River, east of the Day Creek community. When completed, the project will ensure connectivity between the Skagit River and at least 4.5 acres of high quality, off channel habitat in Davis Slough. Off-channel habitats associated with the middle Skagit River, such as Davis Slough, are used by all six Skagit River Chinook salmon populations for rearing and as refuge during high flows. See more information on this project [here](#) and [here](#). (12-1208)

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### **Skagit River System Cooperative Restoring the Upper Skiyou Slough Floodplain**

**Grant Awarded: \$215,373**

The Skagit River System Cooperative will use this grant to restore native vegetation on 28 acres of floodplain owned by the U.S. Forest Service along the Skagit River near the upstream inlet of Skiyou Slough. The project will enhance habitat and water quality for Chinook salmon and other species by controlling invasive species and replanting 28 acres of floodplain. The plantings will provide shade to cool the river for salmon, leaves and other materials for food for fish the salmon eat, and branches that drop into the water and slow the river, creating places for salmon to rest, feed, spawn, grow, and hide from predators. The Forest Service will contribute \$38,007 in donated labor. See more information on this project [here](#) and [here](#). (12-1211)

### **Washington Department of Fish and Wildlife Planning the Restoration of an Estuary on the Fir Island Farm**

**Grant Awarded: \$1,000,000**

The Washington State Department of Fish and Wildlife will use this grant to plan the restoration of an estuary on its Fir Island Farm. Fir Island Farm is on Fir Island between the north fork and south fork of the Skagit River in Skagit County and is managed as a snow goose reserve. The department will complete surveys, data collections, analysis, modeling, engineering, final designs, and permits for the project. The department's project would restore tidal flooding of 130 acres of the farm, restoring 126 acres of tidal marsh habitat. It also would create 17 acres of new tidal channel habitat, and provide habitat for an estimated 65,000 new Chinook smolts annually. The final design will maintain snow goose management, public access, agriculture capabilities at the farm, and drainage and flood protection for the remaining farmland and neighboring farmland. The department will contribute \$734,009 from local and federal grants and donated labor. The department also is using an additional \$112,863 in unused funding from another project. See more information on this project [here](#) and [here](#). (12-1205)

## **Skamania County Organizations**

**\$269,921**

### **Lower Columbia Fish Enhancement Group Designing a Restoration Project at Hamilton Creek near Ives Island**

**Grant Awarded: \$89,921**

The Lower Columbia Fish Enhancement Group will use this grant to create preliminary designs to improve access to spawning habitat in Hamilton Creek and the adjacent Columbia River near Ives Island. The project will evaluate lowering accumulated sediment ridges to provide better access to spawning habitat in Hamilton Creek and the adjacent Columbia River side channels during low water periods. The habitats are used by chum and Chinook salmon, both of which are listed as threatened under the federal Endangered Species Act. The fish enhancement group will contribute \$23,500 in staff labor and donations of cash. See [more information](#) on this project. (12-1164)

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### Lower Columbia Fish Enhancement Group Restoring a Woodard Creek Reach

**Grant Awarded: \$70,000**

The Lower Columbia Fish Enhancement Group will use this grant to increase the types and amount of habitat for salmon at the mouth of Woodard Creek in Beacon Rock State Park. The fish enhancement group will place 10-12 log structures, remove a relic flood protection berm, and create a small pond by using an existing depression. The work will increase stability of the creek channel, increase the amount of pools and riffles, and slow the river to create places for salmon to rest, feed, and hide from predators. The creek is used by coho and chum salmon and winter steelhead, all of which are listed as threatened with extinction under the federal Endangered Species Act. The fish enhancement group will contribute \$41,000 from a grant and donations of equipment, labor, and materials. See [more information](#) on this project. (12-1671)

### Mid-Columbia Fisheries Enhancement Group Planning the Lower White Salmon River Habitat Protection

**Grant Awarded: \$110,000**

The Mid-Columbia Fisheries Enhancement Group will use this grant to create a plan for protecting key habitats in the lowest 6 miles of the White Salmon River, with a focus on lands owned by PacifiCorp, now that Condit Dam has been removed. A short window of opportunity exists to identify the best salmon habitat and develop plans to protect them before PacifiCorp divests its lands. The fisheries enhancement group will involve stakeholders in the development of protection strategies to ensure that those strategies include community uses and address community issues, identify priority habitats that warrant protection, identify future risks to these habitats, analyze conservation alternatives and funding strategies for protecting the highest priority areas for conservation, and identify next steps. The fisheries enhancement group will contribute \$19,400 in donations of cash and labor. See [more information](#) on this project. (12-1667)

## Snohomish County Organizations

**\$888,136**

### Snohomish County Assessing Knotweed Infestation along Little Bear Creek

**Grant Awarded: \$30,000**

Snohomish County will use this grant to assess riparian conditions along Little Bear Creek, focusing on documenting the extent of invasive knotweed and developing a strategy for control and replanting. The County will identify partners and form a weed management area; survey the area for invasive knotweed and other invasive plants; document the conditions of trees; prioritize reaches for control; and develop a strategy and budget for long-term control, survey, and reforestation. Little Bear Creek is used by Chinook, coho, and sockeye salmon and steelhead. Knotweed, a non-native plant, crowds out native plants and trees and degrades streamside salmon habitat. Without trees to shade the water, the river becomes too warm for

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salmon. Trees also prevent erosion, keeping sediment from smothering salmon eggs. Trees also drop leaves that are eaten by the fish that salmon eat. Finally, trees drop branches in the river, which slow the river and create places for salmon to rest, feed, and hide from predators. The County has invested in preserving creek headwater areas through acquisition, fish passage improvements, and in-stream and streamside habitat projects. Uncontrolled spread of knotweed puts long-term success of these projects and investments at risk. The County will contribute \$5,300. See more information on this project [here](#) and [here](#). (12-1276)

### **Snohomish County** **Grant Awarded: \$84,500** **Assessing Restoration for the North Fork of the Stillaguamish River**

Snohomish County will use this grant to analyze how best to restore and design projects for a section of the north fork of the Stillaguamish River from the main stem confluence at Arlington, up to near Darrington. The County is considering projects that reduce erosion, place logjams in the river, connect the floodplain, and plant the shorelines. The County will collect data and analyze channel morphology, bank conditions, floodplain topography, hydrology, hydraulics, shoreline conditions, and habitat for salmon species in this reach. The river is used by Chinook salmon and steelhead, both of which are listed as threatened with extinction under the federal Endangered Species Act, as well as bull trout. The County will contribute \$15,000. See [more information](#) on this project. (12-1436)

### **Snohomish County** **Grant Awarded: \$254,057** **Designing Beach Restoration**

Snohomish County will use this grant to complete final designs for the restoration of four beaches between Mukilteo and Everett – in Howarth Park; along Powder Mill Gulch Creek; along Narbeck, Merrill, and Ring Creeks; and along Glennwood Creek. These Puget Sound beaches are all located along the railroad impounded shoreline. Restoration will include planting the shorelines. The creeks are used by Chinook salmon, and Pacific sand lance and surf smelt, which salmon eat. The County will contribute \$47,000 in cash and donated labor. See [more information](#) on this project. (12-1241)

### **Snohomish County** **Grant Awarded: \$51,950** **Designing the Lower Skykomish River Restoration**

Snohomish County will use this grant to develop the final design, engineering specifications, cost estimates, and bid documents for a project to create more habitat in the Skykomish River at Remlinger farm, near Monroe. The project will include planting the riverbanks, placing logs and tree root wads in the river, and placing flood fencing in the river. The shoreline plants shade and cool the water for salmon. They also drop leaves and other materials eaten by fish and insects that salmon eat. The logs placed in the river, slow the river, creating places for salmon to rest, feed, spawn, grow, and hide from predators. Once constructed, the project is expected to enhance rearing and resting habitat for Chinook salmon. The farm is on the Skykomish River,



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upstream of the confluence with the Snoqualmie and Snohomish Rivers. The County will contribute \$37,050. See [more information](#) on this project. (12-1251)

### **Snohomish County** **Grant Awarded: \$180,000** **Designing Placement of Logs and Tree Root Wads in Pilchuck Creek**

Snohomish County Department of Public Works will use this grant to complete final designs for a project to place logs and tree root wads at three sites in the lower Pilchuck Creek, near the mouth of the Stillaguamish River. The logs and root wads will slow the creek, creating places for salmon to rest, feed, spawn, grow, and hide from predators. Currently, the creek is too shallow in the summer, preventing salmon from migrating. The logs and root wads will slow the water, trap sediment and wood to form complex habitat and pools. Pilchuck Creek is the lowermost tributary to the Stillaguamish River and is used by Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act. See [more information](#) on this project. (12-1490)

### **Snohomish County Noxious Weed Control Board** **Grant Awarded: \$89,738** **Controlling Knotweed along the Stillaguamish River**

The Snohomish County Noxious Weed Control Board and the Snohomish County Department of Public Works' Surface Water Management Division will use this grant to restore the shorelines of the south and north forks of the Stillaguamish River. The County and the weed board will work with private and public landowners to control knotweed on their lands and replant treated areas with native plants. Knotweed, a non-native plant, is invading the shorelines. It crowds out native plants and trees and spreads easily from roots and stems. Without trees to shade the water, the river becomes too warm for salmon. Trees also prevent erosion, keeping sediment from smothering salmon eggs. Trees also drop leaves that are eaten by the fish that salmon eat. Finally, trees drop branches in the river, which slow the river and create places for salmon to rest, feed, and hide from predators. Stillaguamish River Chinook salmon are threatened with extinction, partly because of the poor condition of the shorelines. Project partners include Snohomish Conservation District and Sound Salmon Solutions. The weed board will contribute \$16,000 in cash and equipment. See [more information](#) on this project. (12-1406)

### **Stillaguamish Tribe of Indians** **Grant Awarded: \$117,348** **Conserving the Tree Farm Hole**

The Stillaguamish Tribe of Indians will use this grant to buy the remaining 14 acres of the 136-acre Tree Farm Hole property along the north fork of the Stillaguamish River outside of Arlington. The entire property includes a floodplain forest with more than a mile of shoreline on the north fork and more than a half-mile of side channel. The purchase will protect the land from logging and rural development. This property has some of the best in-stream and shoreline habitat on the north fork with high quality spawning and rearing areas for Chinook salmon, as well as pink, coho, and chum salmon, bull trout, and steelhead. In addition to the

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purchase, the tribe also will replant the former home site. This grant is one of five grants totaling more than \$1 million (including more than \$200,000 in match) that were used to purchase the entire 136-acre Tree Farm hole property. The tribe will contribute \$21,000 from a federal grant. See [more information](#) on this project. (12-1523)

### **Wild Fish Conservancy** **Grant Awarded: \$80,543**

#### **Mapping Stillaguamish River Tributaries and Streams**

The Wild Fish Conservancy will use this grant to document the water type of up to 25 miles of stream channels along the Stillaguamish River to verify and update Washington Department of Natural Resources, Snohomish County, and U.S. Forest Service stream classifications and water data for maps. The conservancy also will document fish species and abundance at selected areas to determine if Chinook salmon are present. The Wild Fish Conservancy hopes to produce accurate maps so the Stillaguamish River basin stream channels can receive appropriate protection, to document the use of non-natal tributaries by Chinook salmon, and to identify at least five restoration or protection opportunities and produce conceptual designs for at least one of them. The Wild Fish Conservancy will contribute \$14,300 in donations of cash and labor. See [more information](#) on this project. (12-1421)

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## **Thurston County Organizations** **\$830,928**

### **Capitol Land Trust** **Grant Awarded: \$365,323**

#### **Conserving Land along the Deschutes River**

Capitol Land Trust will use this grant to buy 112 acres along the Deschutes River, southeast of Olympia. The purchase will conserve 1 mile of Deschutes River shoreline, as well as 650 feet of Ayer Creek, including the mouth of the creek where it flows into the Deschutes on the northern part of the property. The property has mature plants along the riverbank and provides important off channel places for salmon to rest and hide from predators. The river is used by Puget Sound coho, which are listed as threatened with extinction under the federal Endangered Species Act, and winter steelhead and cutthroat trout. This project is part of the third phase of Capitol Land Trust's effort to conserve 427 acres of high priority salmon habitat on the Deschutes River, including 1 mile of shoreline, almost all of both Elwanger and Ayer Creeks, and more than 140 acres of wetlands that drain into the Deschutes River. Upon completion of this third phase, Capitol Land Trust will have conserved, permanently, 501 acres in this reach of the Deschutes River, including 2 miles of Deschutes River shoreline. The land trust will contribute \$64,469 from a private grant. See [more information](#) on this project. (12-1454)

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### **Heernett Environmental Foundation Conserving Riverbanks along Wein's Farm**

**Grant Awarded: \$304,800**

The Heernett Environmental Foundation will use this grant to conserve 50 acres and about 100 acre feet of active water rights along the Chehalis River in south Thurston County. This property supports about 1 mile of habitat for salmon species, more than 20 acres of habitat along riverbanks, and essential water flow in this basin. This project will help to establish a Chehalis water trust program, which will improve water flows and provide a means for future water conservation measures throughout this closed basin. Acquiring this property, with its high level of productive habitat and ground water connectivity, will provide abundant, long-term, functional benefits to both the lower reach of Scatter Creek and the upper Chehalis River. This project will provide protection of habitat for coho and chum salmon and cutthroat trout. The Heernett Environmental Foundation will contribute \$100,000 from another grant. See [more information](#) on this project. (12-1189).

### **Nisqually Land Trust Assessing Nisqually River Acquisition and Restoration**

**Grant Awarded: \$102,000**

The Nisqually Land Trust will use this grant to complete an assessment of 250 acres along the Nisqually River. The land trust will identify acquisition phases and tools and complete a purchase and sale agreement and an appraisal of the property. The land trust also will develop a strategy for restoring the land, including beginning conceptual designs for one or two alternatives. The land trust will work with the Nisqually Indian Tribe and South Puget Sound Salmon Enhancement Group to complete the assessment. The land includes habitat along the Nisqually River and floodplain, McKenna Creek's off-channel habitat, and Schorno springs, which is a series of natural springs that have been used in the past by the state and tribe to raise Chinook and coho salmon. This land is near the most rapidly urbanizing area along the Nisqually River and has significant habitat restoration potential. The land trust will contribute \$18,000 in donated labor. See [more information](#) on this project. (12-1542)

### **Nisqually Land Trust Conserving Powell Creek Wetlands**

**Grant Awarded: \$25,500**

The Nisqually Land Trust will use this grant to buy 7 acres next to its 452-acre Powell Creek Preserve. The preserve is along Powell Creek, a small but critical tributary and off-channel wetland to the Nisqually River. This creek provides spawning and rearing habitat for coho and chum salmon, cutthroat, and steelhead. This acquisition is one of the very last essential acquisitions needed to conserve the entire Powell Creek wetland complex. The land trust will contribute \$4,500 in donated labor. See [more information](#) on this project. (12-1378)

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### **Nisqually Land Trust** **Enhancing the Middle Nisqually River Shorelines**

**Grant Awarded: \$33,305**

The Nisqually Land Trust will use this grant to remove invasive plants on 3 acres and plant native trees and shrubs on 22 acres in the middle reach of the Nisqually River at the land trust's Powell Creek Preserve in Thurston County. The work will improve the shorelines of the Nisqually River, which is home to Chinook, coho, chum, and pink salmon, cutthroat and steelhead. The land trust will contribute \$14,169 in donated labor. See [more information](#) on this project. (12-1366)

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## **Wahkiakum County Organizations**

**\$786,313**

### **Columbia Land Trust** **Restoring the Upper Elochoman River Reach**

**Grant Awarded: \$438,008**

The Columbia Land Trust will use this grant to restore habitat functionality along 2.6 miles of the Elochoman River and on more than 130 acres of habitat. The project is on the upper Elochoman River outside of Cathlamet in Wahkiakum County. The land trust will place large wood and rock structures and tree root wads in the river to slow it down and allow accumulation of spawning gravel and create more places for salmon to rest, feed, and hide from predators. Old road fill will be removed, and tributary streams and wetlands will be restored. The land trust also will remove invasive knotweed, replant about 4 acres, and thin and plant another 130 acres along the stream. Finally, the land trust will remove an old railroad bridge and bank abutments. The Columbia Land Trust will contribute \$246,609 in cash, a federal grant, and donations of labor and materials. See [more information](#) on this project. (12-1334)

### **Wahkiakum Conservation District** **Managing Knotweed on Skamokawa Creek**

**Grant Awarded: \$205,250**

The Wahkiakum Conservation District will use this grant to implement a comprehensive knotweed management program in the Skamokawa Creek watershed. The work will improve water quality and habitat for coho, Chinook, and chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as for winter steelhead trout. The conservation district will identify the extent and magnitude of knotweed invasion, treat the shoreline, plant the shoreline with native plants, and educate landowners about continued monitoring and treatment. The extent of the Japanese knotweed infestation is a recurring concern to the community, the Lower Columbia Cooperative Weed Management Area, and Lower Columbia Fish Recovery Board. Knotweed can choke out native plants and shrubs that are more beneficial to salmon habitat. In most areas where knotweed is established, the magnitude of the infestation is simply beyond the individual landowner's comfort level and ability to manage. Landowners have expressed their desire to participate in a watershed approach for managing knotweed. The conservation district will contribute \$37,000 from a state

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grant, staff labor and donations of equipment and labor. See [more information](#) on this project. (12-1375)

### **Wahkiakum Conservation District Restoring Wilson Creek**

**Grant Awarded: \$143,055**

The Wahkiakum Conservation District will use this grant to place large logs in Wilson Creek, a side channel, and a small tributary stream. The district also will replant the shoreline with native plants. Wilson Creek is a tributary of Skamokawa Creek in Wahkiakum County. The placement of large logs will help reduce erosion and provide places for salmon to rest and grow. Plants along shorelines shade and cool the water, drop leaves and other sources of food for insects eaten by salmon, hold soil so that it doesn't cover salmon eggs, and drop branches that slow the river and create places for salmon to rest and hide from predators. The creek is used by Chinook, coho and chum salmon, all of which are listed as threatened with extinction under the federal Endangered Species Act, as well as winter steelhead. The conservation district will contribute \$25,245 from state and federal grants, equipment, and donated labor. See [more information](#) on this project. (12-1704)

## **Walla Walla County Organizations**

**\$114,400**

### **Tri-State Steelheaders, Inc. Designing Fixes to Mill Creek Fish Passage**

**Grant Awarded: \$114,400**

The Tri-State Steelheaders will use this grant to complete final designs for fish passage improvements in a 1,400-foot-long section of concrete flume on Mill Creek between Ninth and Sixth Avenues in Walla Walla. Preliminary designs for fish passage at the Fourth Avenue bridge pier also will be completed. To control flooding, Mill Creek runs through a concrete channel that extends more than 2 miles through Walla Walla. Steelhead and bull trout, both of which are listed as threatened with extinction under the federal Endangered Species Act, use the concrete channel, as do spring Chinook salmon. However, the water is often too shallow and lethally warm for juvenile fish while at other times, adults cannot ascend the channel due to a combination of high velocity and no resting pools. At certain times of year, the fish can become trapped in the channel, where they die. Mill Creek, upstream of the concrete channel, is a very productive yet under-used area for spawning and rearing. Fixing these problems will give the fish a better chance of increasing their numbers. The work will be done near the downstream end of the concrete channel. See [more information](#) on this project. (12-1634)

# Salmon Recovery

## 2012 GRANTS AWARDED



## Whatcom County Organizations

**\$723,772**

### **Nooksack Indian Tribe**

**Grant Awarded: \$100,000**

#### **Designing Restoration of the South Fork of the Nooksack River at Nessel Reach**

The Nooksack Indian Tribe will use this grant to develop restoration designs for a 1.7-mile reach of the south fork of the Nooksack River near the Nessel Farm upstream of Acme. The river is used by Chinook salmon, which are listed as threatened with extinction under the federal Endangered Species Act. The south fork has few deep pools and logjams, and water temperatures are high. Specifically, the Nooksack Indian Tribe will develop preliminary designs and conduct preliminary flood risk analysis for the whole reach, and develop construction-ready designs and permits for the first project phase. The project calls for logjams to be placed in the river to slow the water and create more places for salmon to rest, feed, spawn, grow, and hide from predators. Where possible, logjams will be located in cooler water to create areas where salmon can escape high temperatures in the main channel. The Nooksack Indian Tribe also will evaluate the feasibility of removing riprap in the lower sections of the reach and restoring downstream connectivity to Rothenbuhler Slough. See [more information](#) on this project.

(12-1511)

### **Nooksack Indian Tribe**

**Grant Awarded: \$215,435**

#### **Improving the Habitat in the North Fork of the Nooksack River**

The Nooksack Indian Tribe will use this grant to build 14 logjams and remove 150 feet of riprap in the north fork of the Nooksack River just downstream of Canyon Creek. The north fork is used by Chinook salmon which are listed as threatened with extinction under the federal Endangered Species Act. The main river channel is highly unstable. Side channels provide relatively stable areas for salmon to spawn and grow. This project is the third phase of a larger project designed to reconnect existing side channels and protect and encourage the growth of maturing forested islands to form new side channels. The Nooksack Indian Tribe will contribute \$199,170 in federal grant. See [more information](#) on this project. (12-1514)

### **Nooksack Salmon Enhancement Association**

**Grant Awarded: \$116,089**

#### **Designing a Restoration Project for the Middle Fork of the Nooksack River**

The Nooksack Salmon Enhancement Association and the Lummi Nation Natural Resources Department will use this grant to develop preliminary designs for a project to place logs and tree root wads in the lower middle fork of the Nooksack River in Whatcom County. The logs and tree root wads will slow the river and create more places for salmon to rest, feed, spawn, grow, and hide from predators. The two groups also will survey existing large woody material accumulations in the lower 5 miles of the middle fork. These naturally occurring, stable woody accumulations will be used as a reference to develop engineered designs for future placement of woody accumulations in the river. See [more information](#) on this project. (12-1524)

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Whatcom County Flood Control Zone District** **Grant Awarded: \$292,248**

#### **Placing Logjams in Lower Canyon Creek to Increase Habitat Diversity**

The Whatcom County Flood Control Zone District will use this grant to build seven logjams in lower Canyon Creek to create more types of habitat for salmon. Logjams slow the water and create pools that give salmon places to rest, feed, and hide from predators. Logjams also concentrate gravel used by salmon for spawning, and roughen the stream bank slowing erosion. Canyon Creek, a tributary to the north fork of the Nooksack River in Whatcom County, is used by Chinook salmon, which are listed under the federal Endangered Species Act, as well as steelhead, bull trout, and other salmon species. Restoration of the lower mile began in earnest in 2004 when Whatcom County and Whatcom Land Trust bought a small resort that was repeatedly flooded. This and the purchase of 27 other parcels has created the opportunity to restore habitat that had been degraded by debris-laden floods in 1989 and 1990 and by the flood levee built in 1994 to protect the Glacier Springs community, the resort, and State Route 542. In addition to the acquisitions, 525 feet of a levee that severely constricted the channel was removed in 2009 and a barrier to fish passage was fixed. This project is integral to a larger project that will remove and setback 93 percent of the existing levee, restore floodplain connections, and install an additional four logjams in 2013. Whatcom County will contribute \$73,062 from a federal grant. See [more information](#) on this project. (12-1521)

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## **Yakima County Organizations** **\$1,089,620**

### **North Yakima Conservation District** **Grant Awarded: \$574,600**

#### **Removing Barriers to Fish Passage on Cowiche Creek**

The North Yakima Conservation District will use this grant to remove a fish passage barrier, eliminate the need for two unscreened irrigation diversions, improve on-farm irrigation efficiencies, and keep more water in Cowiche Creek to benefit salmon and steelhead. The work will be done about 5 miles northwest of Yakima and involves an agreement between the Cowiche Creek Water Users Association, the Yakima Tieton Irrigation District, and the federal Bureau of Reclamation to use the irrigation district's existing infrastructure to transfer a new water right from the Tieton River to the Cowiche Creek Water Users Association, where a new pressurized irrigation pipeline will tap into the mainline and supply water to farms. The current Cowiche Creek Water Users Association's water right will be acquired by the Washington Water Project of Trout Unlimited and placed into trust, leaving it in the stream to benefit mid-Columbia River steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, and coho and Chinook salmon. The conservation district will contribute \$350,007 from three other grants. See [more information](#) on this project. (12-1328)

# Salmon Recovery

## 2012 GRANTS AWARDED



### **Yakima**

**Grant Awarded: \$209,620**

#### **Restoring the Yakima Floodplain**

The City of Yakima will use this grant to remove about a half-mile of armored and unmaintained revetment along the Yakima River in Yakima to allow more natural and unrestricted movement of fish, water, and sediment. A portion of the Yakima Greenway trail that runs on top of the revetment will be moved outside of the 100-year floodplain. This reach of the Yakima River once hosted thousands of acres of naturally functioning floodplain that provided diverse habitat for resident and migrating fish, and a high level of ecological resiliency that benefited multiple species. This project will lead to many additional acres of restored habitat in the Gap to Gap reach on property owned by the City, the Greenway, Yakama Nation, and Washington State Department of Transportation. The Yakima River is used by steelhead, which are as threatened with extinction under the federal Endangered Species Act, as well as coho and Chinook salmon, lamprey, and resident fish. The City will contribute \$88,776. See [more information](#) on this project. (12-1307)

### **Yakima County**

**Grant Awarded: \$57,000**

#### **Developing Side Channel Habitat on the Yakima River**

Yakima County Public Services will use this grant to develop side channel habitat by breaching a complex of point bar deposits in the Yakima River. The breach will reactivate old, and create new side channels. . The project will enhance habitat, facilitate natural channel forming processes, and evenly distribute water during floods through this reach of the Yakima River. This work will be done near the Washington State Park and Recreation Commission property and the Yakima Greenway. The County also will remove toe rock from a recently modified levee upstream of the Terrace Heights Bridge near Hartford Road. The Yakima River is used by steelhead and bull trout, both of which are listed as threatened with extinction under the federal Endangered Species Act, as well as Chinook and coho salmon. The County will contribute \$11,000 in labor. See [more information](#) on this project. (12-1317)

### **Yakima County Public Services**

**Grant Awarded: \$223,400**

#### **Reconnecting the Naches River with its Side Channels**

Yakima County Public Services will use this grant to buy 32 acres, including two houses, in preparation for reconfiguring levees. The County will remove 950 feet of private levee, create channels through areas of sediment accumulations, and remove 2,700 cubic yards of material from the floodway upstream of Nelson Dam in Yakima. The work will allow the Naches River to reoccupy old side channels previously restricted by the levee and sediment buildup. The Naches River is used by steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, as well as Chinook and coho salmon, and bull trout. This project is part of a larger floodplain restoration project planned for the Naches River. The County will contribute \$40,000 in labor. See [more information](#) on this project. (12-1327)



# Salmon Recovery

## 2012 GRANTS AWARDED



### **Yakima-Tieton Irrigation District**

**Grant Awarded: \$25,000**

### **Assessing Delivering Tieton River Water to Cowiche Creek Water Users**

The Yakima-Tieton Irrigation District will use this grant to study the feasibility of using the district's pipeline to supply Cowiche-area irrigators with water from the Tieton River. This would allow Cowiche Creek users to reduce the amounts they divert from Cowiche Creek. The Yakima-Tieton Irrigation District will evaluate options for delivering water from the Tieton River to the water users in the south fork and main stem of Cowiche Creek above Weikel Road. The goal would be to leave more water in Cowiche Creek for steelhead, which are listed as threatened with extinction under the federal Endangered Species Act, as well as for salmon and resident trout. This evaluation will be part of the irrigation district larger, comprehensive study to evaluate options to enhance or upgrade the main canal, which is more than 100 years old. This type of water exchange would not affect the total water supply available. The study also will address fish screening and fish passage concerns in the creek. The Yakima-Tieton Irrigation District will contribute \$75,000 from a federal grant. See [more information](#) on this project. (12-1350)