

2007 Salmon Recovery Grants Awarded

Asotin County

\$170,219*

Asotin County Conservation District Replanting George and Pintler Creeks

\$52,785

The Asotin County Conservation District will use this grant to replant the lower reaches of Pintler and George Creeks to stabilize the banks and shade the water, cooling temperatures for fish. Both streams are within a major spawning area for Snake River steelhead and Chinook salmon. The 1996-97 floods heavily impacted lower George Creek. To improve stream and riparian areas, the landowner enrolled 37 acres in Conservation Reserve Enhancement Program and the conservation district reconstructed the channel meander. Trees were planted in 2006. With this grant, the conservation district will plant and water 9,000 willows along the lower 2,500 feet of the meander reconstruction site. The goal is to establish ground cover as quickly as possible to stabilize the stream bank and shade and cover to stream, reducing stream temperatures. The conservation district will contribute \$40,365 in federal and state grants. (07-1896R)

Asotin County Conservation District Protecting the Creek Through Headgate Park

\$29,814

The Asotin County Conservation District will use this grant to reduce the negative effects of recreational vehicles in Headgate Park on the adjacent Asotin Creek. The district will place large boulders and fencing to eliminate access to the stream. It also will restore the creek banks by planting grass and trees. The creek is a major spawning area for steelhead. Hunters, anglers and campers use Headgate Park's pond, which is stocked with fish annually by the Washington Department of Fish and Wildlife. The park has no amenities, including water and restrooms. In addition, four-wheel drive vehicles run through the wetland near the stream, causing ruts and leaving it devoid of plants. The conservation district will contribute \$5,325 in donations of cash, equipment, labor and materials. (07-1521R)

Asotin County Conservation District Saving Water in Joseph Creek

\$48,620

The Asotin County Conservation District will use this grant to place a pipe in an irrigation ditch and provide alternative water for livestock at Joseph Creek, a tributary to the Grande Ronde River. Joseph Creek is in a major spawning area for steelhead. One of the things that limits the growth of steelhead populations in this area is low water levels in rivers and streams. The ditch will be piped for .75 mile, saving an estimated 1

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gallon per second of water. The project will eliminate a berm and pump station, allowing water will be withdrawn on demand rather than continuously, and a more efficient irrigation system will be installed. The continuous stock water right will be replaced by alternative water to further improve water savings. The conservation district will contribute \$8,580 in donated equipment and labor. (07-1882R)

Asotin County Conservation District **\$39,000**
Building a Bridge to Protect Tenmile Creek

The Asotin County Conservation District will use this grant to reduce the negative effects of livestock crossing a tributary of Tenmile Creek, which is a spawning area for Snake River steelhead. There are two pens that are used for feeding 70 cattle in the winter. Both pens are fenced from Tenmile Creek and have at least 35 feet of buffer that reduces the chance of waste and sediment entering the creek. However, the only source of water for these two pens is from a spring that runs between them and enters Tenmile Creek, providing cool water to the lower reaches of the creek. Work will include the installation of a bridge, berm and alternative source of water for the cattle. The landowner has worked with the district to relocate the majority (200) cattle to a new feeding area away from the stream and has agreed to eliminate use of the creek banks by livestock. The conservation district will contribute \$6,883 from a federal grant. (07-1902R)

Benton County **\$91,103**

Benton County Conservation District **\$36,427**
Assessing the Lower Yakima River

The Benton County Conservation District will use this grant to conduct a comprehensive inventory of the riparian restoration, fish screening, aquatic habitat needs and beneficial uses of the lower Yakima River basin. To date, salmon habitat restoration has focused on the upper Yakima River basin. This is the first step toward identifying and prioritizing high priority actions in the lower Yakima River basin. The conservation district will work with the Lower Yakima River Technical Advisory Group to prioritize potential projects, based on technical, financial and political feasibility and anticipated benefit to salmon and people. The conservation district will contribute \$28,623 in donations of equipment and labor. (07-1566N)

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Benton County Conservation District **\$54,676**
Restoring the Lower Yakima River

The Benton County Conservation District will use this grant to complete ten small diversion screening projects and five riparian enhancement projects, as a catalyst to future restoration. The projects will have been identified as a priority by a comprehensive assessment of the lower Yakima River basin. The conservation district will contribute \$13,124. (07-1899R)

Chelan County **\$1,987,395**

Cascadia Conservation District **\$283,824**
Conserving Water for the Entiat River

The Cascadia Conservation District will use this grant to abandon a leaking and inefficient irrigation pipeline and delivery system and convert irrigation water users to wells, saving water for steelhead in the Entiat River. To create improved off-channel habitat conditions year-round, flows in the canal will be reduced, saving additional water. The Entiat Public Utility District canal system is in the lower portion of the Entiat River. This project is expected to increase water quantity and water quality, help cool the water and help salmon species access spawning and rearing habitats. The conservation district will contribute \$212,760 in donations of labor and property interest. (07-1788R)

Cascadia Conservation District **\$164,705**
Restoring Keystone Canyon Habitat

The Cascadia Conservation District will use this grant to place boulders and logs in the lower Entiat River at Keystone Canyon to restore habitat complexity for Chinook salmon and steelhead, which are endangered, and bull trout, which are threatened with extinction. Land use and flood control measures have impacted the lower Entiat River, resulting in a simplified, steepened channel. There are few places where salmon can rest, grow and spawn. The lower Entiat River serves as a crucial migration corridor for salmon. The conservation district will contribute \$29,100 in a local grant. (07-1866R)

Cascadia Conservation District **\$122,069**
Removing Fish Barriers on Roaring Creek

The Cascadia Conservation District will use this grant to replace two ditches and leaking pipes and provide new wells for irrigators, saving water for endangered Chinook, steelhead, which are threatened with extinction, and bull trout in Roaring Creek. Roaring Creek is the only perennial tributary to the lower Entiat River available for Endangered

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Species Act-listed salmon spawning and rearing. Roaring Creek has limited water levels because of the ditches. The conservation district will contribute \$25,000 from a local grant. (07-1849R)

Chelan County **\$46,006**

Coordinating Restoration Work with Burlington Northern Santa Fe Railroad

Chelan County will use this grant to develop a project proposal and review process with the Burlington Northern and Santa Fe Railroad to help implement projects on railroad land. Work will include building a coalition of support, including stakeholders such as legislators and the tribes; identifying data requirements for engineering evaluations; determining project approval criteria; and establishing an official proposal, review and approval process. The construction of roads and railroads had constricted the Wenatchee River, simplified stream channels, isolated off-channel habitat and floodplains and generally degraded the habitat required to recover endangered salmon. By creating a review and approval process with the railroad, the County will be better able to gain access to valuable habitat. The county will contribute \$8,119 from a state grant. (07-1885N)

Chelan County **\$427,382**

Reconnecting the Harrison Side Channel

Chelan County will use this grant to reconnect a relict side channel and floodplain area of the Entiat River. Work will include removing part of a levee, excavating a portion of the middle side channel to ensure water flows to the main channel, adding tree root wads and logs to the excavated portion of the channel to improve habitat complexity, adding a structure in the Entiat River to redirect the river toward the side channel and planting plants on the south side riverbank. Grazing, agriculture, road construction, logging, flood control, channel straightening, residential development and recreation have modified the Entiat River watershed. The loss of connection to the floodplain has altered the natural river processes in the watershed. These changes have created a lack of winter habitat, which is likely the factor most limiting the ability of the Entiat River watershed to fully sustain salmon populations. The county will contribute \$270,105 in a grant and donated labor. (07-1761R)

Chelan County **\$290,390**

Breaching a Levee on the Lower Wenatchee River

Chelan County will use this grant to breach a levee to connect 1.7 acres of off-channel habitat in the lower Wenatchee River. Crews will cut two openings in the levee down to the height of the natural bar to allow water to flow through to the off-channel habitat. In addition, the grant will allow Chelan County to place tree root wads and logs in the river. This project, which will be constructed in 2009, will improve endangered spring Chinook

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and endangered summer steelhead trout habitat. The county will contribute \$51,245 from a local and other grant. (07-1771R)

Chelan County

\$653,019

Saving Water at the Peshastin Irrigation District Pipeline

Chelan County will use this grant to convert about 1.8 miles of the Peshastin Irrigation District canal from an open canal to a closed pipeline. The construction of a pipeline will eliminate leaking, saving an estimated 9 gallons per second of water for Peshastin Creek. After the project is completed, the downstream 3 miles of the Peshastin canal will have been converted from open canal to pipeline, saving an estimated 22 gallons per second. The water savings will result in reduced diversions from Peshastin Creek and enhanced passage for Chinook salmon and bull trout. The county will contribute \$225,000 in local, state and federal grants and donated labor. (07-1865R)

Clallam County

\$5,096,327

Clallam Conservation District

\$305,000

Decommissioning Goodman Creek Road

The Clallam Conservation District will use this grant to help the U.S. Forest Service remove 4 miles of Forest Service Road 2931-100 along Goodman Creek, which is a tributary of Sol Duc River and home to coho, Chinook, steelhead and cutthroat trout. Crews will remove culverts, fills and unstable banks; improve drainage from the former road bed; and control noxious weeds. The work will protect fish habitat by reducing the volume and frequency of erosion. Goodman Creek historically has recorded some of the highest spawning densities of medium-sized tributaries in the Quillayute basin. The forest service will contribute \$60,000 in labor and donations of equipment, materials and labor. (07-1601R)

Clallam County

\$953,200

Moving Lower Dungeness River Dikes

Clallam County will use this grant to plan, design and get the permits necessary for moving the dikes on both sides of the lower Dungeness River in Sequim and restoring habitat along 1.8 miles of the river. The channel is constrained along the east side by a dike constructed by the U.S. Army Corps of Engineers in 1963 and on the west by a privately built dike. Diking of the lower river has confined the river, raised the level of the streambed by depositing sediment and damaged water quality. Setting back the dike and restoring the river channel will create needed floodplain and side channel habitat for

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summer chum, lower river pink salmon, Chinook, bull trout, steelhead and other fish. The County will contribute \$100,000 in donated labor. (07-1874N)

North Olympic Salmon Coalition **\$380,250**
Restoring Pitship Pocket Estuary

The North Olympic Salmon Coalition will use this grant to replace an undersized culvert, restoring fish passage to Pitship Marsh. The marsh complex is a small embayment with a narrow spit. Freshwater enters the marsh from springs along the western edge. An undersized culvert beneath West Sequim Bay Road connects the marsh to Sequim Bay. Because the culvert is too small, some of the salt marsh has been converted to fresh marsh. Since 1870, the tidal lagoon has been reduced by more than half, and the tidal marsh area has been reduced by a quarter. Replacing the culvert with a bridge will add 4.2 acres of restored tidal (estuarine) function in the salt marsh for Endangered Species Act-listed summer chum. The upland area is zoned for commercial use and is scheduled for development soon. The coalition will contribute \$80,000 in equipment, materials and donated labor. (07-1884R)

Clallam Conservation District **\$380,000**
Piping Ditches in Sequim

The Clallam Conservation District will use this grant to replace seven open ditches (about 2.8 miles) with pipes, conserving water and reducing contamination of the water that then flows into Dungeness Bay. Work will include installing valves, appurtenances and flow measurement devices. A public-private partnership of the Cline Irrigation District, Clallam Ditch Company and the Dungeness Irrigation Group already has replaced about 17 miles of open ditches with 15 miles of pipelines. When completed, the entire project will save an estimated 44 gallons per second of water, increasing late summer and drought year flows in the river by about 10 percent. The Dungeness River is used by four species of salmon threatened with extinction – Puget Sound Chinook, Hood Canal summer chum, steelhead and bull trout. The conservation district will contribute \$300,000 from a federal grant. (07-1809R)

Clallam County **\$267,000**
Restoring the Elwha River Estuary

Clallam County will use this grant to begin restoring the Elwha River estuary. Work will include installing a fish passage structure, opening 7 acres of the west estuary to fish and investigating the feasibility of buying voluntary land preservation agreements for the west estuary. Dams and dikes on the Elwha River have severely disrupted habitat in the estuary. Removing the dam will reopen 70 miles of habitat in the river but does not restore the disrupted estuary functions that significantly impact the Elwha ecosystem. Long-term estuary restoration goals for the estuary include conservation easements and

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additional dike modifications. Local landowners have a strong interest in restoring fish access to the estuary. The County will contribute \$56,000 in labor and donated equipment. (07-1807R)

Ducks Unlimited Inc. \$67,991

Planning the Restoration of Meadowbrook Creek

Ducks Unlimited Inc. will use this grant to develop partners, complete biological and engineering designs and get permits for the restoration of Meadowbrook Creek. The creek is a tributary of the Dungeness River, which is used by fall Chinook, coho, pink, summer chum, steelhead, bull trout and cutthroat. The restoration is expected to include enhancement of adjacent Washington Department of Fish and Wildlife property, reconnection of the Meadowbrook Slough and Creek system to the Dungeness River and possible modification of a county bridge to allow for increased tidal flushing of Meadowbrook Creek. Data collection will consist of analyzing existing data as well as placing water level loggers in the creek. Ducks Unlimited will contribute \$11,999 in labor. (07-1820R)

Lower Elwha Klallam Tribe \$380,000

Studying Restoration Feasibility in the Pysht Estuary

The Lower Elwha Klallam Tribe will use this grant to complete an engineering feasibility assessment for four restoration scenarios for the Pysht River estuary. The estuary is the second largest in the Strait of Juan de Fuca and has altered and degraded habitat. The feasibility assessment will consider removal of dredge deposits lining both banks of the river, removal of suction dredge deposits, removal of log sheet pile on the lower river and removal of roads associated with log storage. These actions could result in the restoration of 60 acres of salt marsh and tidal channels, 20 acres of sand spit and more than 1 mile of floodplain. The tribe will contribute \$75,000 in donated labor. (07-1838N)

Lower Elwha Klallam Tribe \$337,000

Placing Large Woody Debris in the Pysht River

The Lower Elwha Klallam Tribe will use this grant to place large pieces of wood, including root wads and trees, in the Pysht River to create more complex habitat for Chinook, coho and chum salmon, steelhead and cutthroat trout. Large woody debris creates pools and places for fish to rest, feed and hide from predators. The tribe will contribute \$73,750 in donations of cash, labor and materials. (07-1848R)

Clallam County \$846,800

Acquiring Lower Dungeness River Floodplain

Clallam County will use this grant to purchase three properties to allow a dike to be set back. The river channel is constricted along the east side by a dike built by the U.S.

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Army Corps of Engineers in 1963 and a dike built by a landowner on the west bank to prevent flood damage. Moving the dike will provide needed floodplain and side channel habitat for chum, pink and Chinook salmon, bull trout and steelhead. The county will contribute \$145,000 from a federal grant. (07-1811A)

Lower Elwha Klallam Tribe **\$979,086**

Fixing Fish-Blocking Culverts in the Salt Creek Watershed

The Lower Elwha Klallam Tribe will use this grant to replace four culverts on two tributaries to Salt Creek. The culverts are too small, set on slopes that make it hard for fish to pass through because of the speed of the water or have too high of outfall drops. Replacing the blocking culverts will open up more than 5 miles of habitat for coho, cutthroat and steelhead. The tribe will contribute \$1 million in a federal grant and donations of cash and labor. (07-1887R)

North Olympic Salmon Coalition **\$200,000**

Designing Restoration of Morse Creek

The North Olympic Salmon Coalition will use this grant to develop final designs for restoration of Morse Creek, a tributary to the Strait of Juan de Fuca, and used by chum, pink and coho salmon, bull trout and steelhead. The creek has been severely altered. It is channelized, confined, over steepened, diked and depleted of wood. Restoration will include removing some of the dike, reconnecting the creek with its floodplain, placing wood in the river and reshaping the channel. (07-1817N)

Clark County **\$615,552**

Lower Columbia Fish Recovery Board **\$165,000**

Designing Restoration Projects for the East Fork of the Lewis River

The Lower Columbia Fish Recovery Board will use this grant to analyze existing data for the lower east fork of the Lewis River, develop a list of prioritized restoration projects and complete 90 percent of designs for the highest projects. The east fork Lewis River is critical to the recovery of salmon and steelhead in the lower Columbia River region. The area provides habitat to numerous fish on the federal Endangered Species Act list, including steelhead, Chinook, coho and chum. The recovery board will contribute \$29,130 from a federal grant. (07-1694N)

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Lower Columbia Fish Enhancement Group **\$168,605**
Restoring Lockwood Creek

The Lower Columbia Fish Enhancement Group will use this grant to restore Lockwood Creek. Work will include placing tree root wads and logs in the creek to create places for fish to rest, feed and hide from predators; creating off-channel rearing habitat; and planting the creek banks. The site, which is at the junction of Lockwood and Riley Creeks, contains nearly .4 mile of stream and covers 12 acres of floodplain habitat. The creek is home to Chinook, coho and steelhead, all listed under the federal Endangered Species Act. Restoration of this important salmon spawning stream began in 2000 with removal of a barrier at the confluence with the east fork of the Lewis River near La Center. Since then, restoration has progressed upstream several miles to this current site. The fish enhancement group will contribute \$106,500 in donations of equipment, labor and materials. (07-1691R)

Lower Columbia River Fish Enhancement Group **\$281,947**
Restoring Lower Dean Creek

The Lower Columbia River Fish Enhancement Group will use this grant to rehabilitate both sides of the lower .2 mile of Dean Creek and .3 mile of the east fork of the Lewis River. Work will include restoring 27 acres of floodplain riparian habitat on 52 acres owned by Clark County. Crews will place woody debris and plant more than 22,000 trees along nearly 1 mile of stream bank. The streams are home to several species of fish on the federal Endangered Species Act list, including Chinook, chum and coho salmon and steelhead. The project is a partnership with Vancouver-Clark Parks and Recreation Commission and Clark Public Utilities Watershed Enhancement department. The fish enhancement group will contribute \$282,000 from a state grant and donated labor. (07-1692R)

Columbia County **\$122,840***

Tri-State Steelheaders Inc. **\$122,840**
Little Tucannon Bridge

Tri-State Steelheaders Inc. will use this grant to replace an undersized culvert with a bridge on the Little Tucannon River, a steelhead and bull trout rearing stream. The undersized culvert limits fish migration and constricts the stream, interfering with natural processes and leading to concerns of a road washout. Partners include the U.S. Forest Service, Washington Department of Fish and Wildlife and Snake River Salmon

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Recovery Board. The project will open up 4 miles of high quality habitat in the Tucannon River drainage. The steelheaders will contribute \$21,678 in labor. (07-1913R)

Cowlitz County \$744,011

Cowlitz Conservation District \$103,700
Protecting and Restoring Abernathy Creek Habitat

The Cowlitz Conservation District will use this grant to install woody debris in Abernathy Creek to slow the creek, preventing erosion and increasing types of habitat for steelhead, coho, Chinook and chum. A mid-channel bar has diverted the creek into stream banks, wiping out up to 30 feet of land. An additional .3 mile of riparian area is threatened by this accelerated erosion. Crews will place logjams in several reaches of the creek to slow the creek and create places for fish to rest, feed and hide from predators. Slowing the creek also will prevent erosion and allow the plants along the stream bank to grow. The conservation district will contribute \$18,500 in a state grant and donated equipment, labor and materials. (07-1675R)

Lower Columbia Fish Recovery Board \$201,929
Assessing Fixes for Fish Passage on the North Fork of the Toutle River

The Lower Columbia Fish Recovery Board will use this grant to identify options for fish passage at the sediment retention structure and reduction of sediments at the fish collection facility below the dam on the north fork of the Toutle River. Work will include using radiotelemetry and acoustic camera technologies to monitor the movement of Endangered Species Act-listed steelhead and coho to see how well fish are captured by the fish collection facility and how well they move through the spillway around the dam. Engineering work will be done to determine how to reduce sedimentation in the collection facility and below the dam. The work will help identify future habitat restoration projects. The fish recovery board will contribute \$127,840 in donations of equipment and labor. (07-1693N)

Cowlitz Conservation District \$108,640
Restoring the Zmrhal/Rauth Section of the Coweeman River

The Cowlitz Conservation District will use this grant to restore a section of the Coweeman River. The work will reconnect .1 mile of a side channel to the main river, increase the stability of 400 feet of the channel and stream bank and increase habitat. Work will include placing tree root wads and logs in the river to slow the river and create places for fish to rest, feed and hide from predators. The project will be upstream of a geologic pinch point that has created a bar in the middle of the river and several side

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channels. The Coweeman River has eroded its forested buffer exposing soils in agriculture use and nearly has abandoned the side channel habitat. The river is home to Chinook, coho, steelhead, chum and sea-run cutthroat. The conservation district will contribute \$31,500 from federal and state grants and donations of materials and labor. (07-1674R)

Lower Columbia River Fish Enhancement Group **\$329,742**
Rehabilitating the Filla-Lower Cowlitz Habitat

The Lower Columbia River Fish Enhancement Group will use this grant to restore a connection to an existing, but disconnected side channel in the lower Cowlitz River, near Toledo. Work will include placing tree root wads and logs in the river and floodplain as well as planting the area. The root wads and logs will slow the river and create deeper pools and areas where fish can spawn, grow and hide from predators. The project will enhance nine habitat areas, benefiting coho and Chinook salmon, steelhead and chum. Fish biologists rescued 2,000 stranded species of salmon from the project site last spring. The fish enhancement group will contribute \$72,500. (07-1685R)

Grays Harbor County **\$899,750***

Hoquiam **\$362,592**
Removing the Dam on the North Fork of the Little Hoquiam River

Hoquiam will use this grant to remove a dam on the north fork of the Little Hoquiam River, allowing fish access to about 5 miles of river habitat and restoring about 800 feet of river. Work will include excavating the dam and restoring the grade and alignment of the channel back to more natural conditions. The city will remove accumulated sediment upstream of the dam and raise the riverbed downstream of the dam using rounded river rock and wood. The channel will be turned into a meandering, gravel-bedded stream with riffle pools and large woody debris, which provide a variety of habitat for salmon. The floodplain will be seeded and the uplands will be replanted with trees. The project will improve and increase habitat for coho and chum salmon as well as winter steelhead, which are considered depressed by the Washington Department of Fish and Wildlife. Hoquiam will contribute \$400,000. (07-1747R)

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Chehalis Basin Fisheries Task Force **\$142,000**
Removing Budd Creek Fish Passage Barriers

The Chehalis Basin Fisheries Task Force will use this grant to remove two culverts on Budd Creek on Middle Satsop Road. The work will open more than 2.5 miles of habitat for coho, Chinook, chum, cutthroat and steelhead. One culvert, which is under a county road will be replaced with a 20-foot-wide, 7-foot-high bottomless arch culvert to accommodate stream flow, fish passage and the low profile of the road. The second culvert, which is downstream from the first, will be bypassed by moving the stream channel back to its original location. The existing culverts are undersized, creating the only barriers to fish migration in this 12-foot-wide stream, which flows into the lower Satsop River. Grays Harbor County will contribute \$47,000. (07-1748R)

Quinault Nation **\$383,000**
Building Logjams in the Alder Creek Side Channel

The Quinault Nation will use this grant to build four engineered logjams and augment one natural logjam in the side channel of Alder Creek, a critical habitat for sockeye salmon and one of only five remaining locations where sockeye spawn in the upper Quinault River system. Logjams are put into rivers to slow them down and create places for salmon to spawn, rest, hide from predators and search for food. The project is a partnership with the Olympic National Forest and has support from private landowners adjacent to the area. The tribe will contribute \$60,000 from a federal grant. (07-1712R)

Quinault Nation **\$12,158**
Removing Fish-blocking Culverts on the 4600 Road

The Quinault Nation will use this grant to remove two culverts that prevent fish migration and help create a wetland flowing out of a historical and culturally significant prairie system. This is the final project in restoring the natural flow of the prairie system. The first culvert, which is buried, will be replaced with a new culvert while the second culvert will be replaced with a 30-foot bridge. Currently, water backs up until it flows over the road. Replacing the culvert with a bridge also will involve installing fish passage structures in the stream to maintain the current water levels and existing rearing habitat above the road. The tribe will contribute \$111,782 from a federal grant. (07-1861R)

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Island County

\$1,458,767

Whidbey Camano Land Trust

\$650,000

Protecting the Shorecrest Lagoon

Whidbey Camano Land Trust will use this grant to buy a voluntary land preservation agreement on 32 acres containing a former pocket estuary. The goal is to protect the degraded habitat of the lagoon and its connection to Skagit Bay from further damage. Future restoration plans call for reconnecting the lagoon to the bay. Work will include completing 30 percent of the designs for the restoration work. The land is within a day's migration from the Skagit River delta, which is very important for migrating Chinook salmon. The land includes 128 feet on Skagit Bay and is adjacent to more than 4,000 feet of Island County tidelands with eelgrass beds that are important herring and surf smelt spawning areas. Part of the property is zoned for high density rural residential homes. The land trust will contribute \$115,000 in donated property interest. (07-1591A)

Whidbey Camano Land Trust

\$510,000

Protecting Skagit Bay Nearshore

Whidbey Camano Land Trust will use this grant to buy 43 acres and about 40 acres of Skagit Bay tidelands to protect degraded habitat (diked land on Skagit Bay) from development. Future plans call for setting back dikes and taking out a dirt road to restore habitat functions. The nearshore is within a day's migration from the Skagit River delta and adjacent to eelgrass beds and areas where herring and smelt spawn. The property is for sale and development is imminent. The land trust will contribute \$90,000 in donated cash. (07-1592A)

Whidbey Camano Land Trust

\$59,000

Protecting the South Camano Nearshore

The Whidbey Camano Land Trust will use this grant to develop a list of priority properties on the southern tip of Camano Island to protect for salmon recovery and assess community and landowner willingness to protect and restore the habitat. Work will include developing a schedule for pursuing protection of important properties. The land trust will assess 2.5 miles of shoreline and the associated uplands. This area provides a number of important functions for salmon, riparian functions and a wetland. Most importantly, the bluffs within the area are exceptional sources of sediment for the nearshore. These habitats support Endangered Species Act-listed Chinook salmon and other fish as well as a plant combination of bigleaf maple, red alder, sword fern-fringecup that is listed in Washington's Natural Heritage Plan. The land trust will contribute \$11,000 in donated labor. (07-1590N)

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Skagit River System Cooperative **\$222,470**
Analyzing the Habitat Use and Origin of Chinook Salmon in Island County

The Skagit River System Cooperative will use this grant to analyze salmon nearshore habitat use and origins to enable lead entities to better prioritize ways to help recover endangered species act-listed Chinook salmon. Specifically, the cooperative will collect wild juvenile Chinook salmon in spring and summer from a range of locations, times and estuarine habitats; identify the origins of salmon using DNA analyses; synthesize all existing data for Island County from three different sources; and provide local, regional and international managers with information on stock-specific use of estuarine habitats. The results of this assessment will be translated into ranking criteria for projects evaluated for funding. The cooperative will contribute \$39,414 in federal and state grants and donated labor. (07-1589N)

Northwest Straits Marine Conservation Foundation **\$17,297**
Removing West Whidbey Derelict Fishing Nets

The Northwest Straits Marine Conservation Foundation will use this grant to remove abandoned fishing nets for five days in salmon migration routes west of Whidbey Island. The group will remove about 7.5 acres of derelict fishing nets. Abandoned fishing nets kill salmon, cover habitat, collect fine sediment and scour surfaces of algae, plants and other organisms. Of the 22 populations of Puget Sound Chinook salmon, 20 use the marine waters of Island County, mostly for migrating to and from the ocean. The group has identified 15 derelict nets on the west side of Whidbey Island and expects to find more. The Northwest Straits Initiative has removed more than 500 nets from Puget Sound since 2002 and has documented the deadly effects of this gear on more than 55 marine species, including Chinook, sockeye and chum salmon and bull trout. The foundation will contribute \$3,057 in cash donations. (07-1594R)

Jefferson County **\$3,472,642**

Hood Canal Salmon Enhancement Group **\$75,000**
Removing the Big Quilcene Estuarine Dike

The Hood Canal Salmon Enhancement Group will use this grant to remove about .4 mile of saltwater levee surrounding an abandoned fish pond and reestablish a properly functioning tidal network and plant communities. The restored wetlands will be conserved by using a land preservation agreement. This project is part of a larger effort to restore and protect 50 acres of coastal wetlands. The Hood Canal Water Resources Inventory Area 17 has identified this project as the most important project for recovering several Hood Canal salmon species listed as threatened under the Endangered

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Species Act. The salmon enhancement group will contribute \$150,000 from a state grant. (07-1635R)

Wild Fish Conservancy **\$80,000**

Protecting and Restoring Right Smart Cove

The Wild Fish Conservancy will use this grant to restore Right Smart Cove, an 11-acre pocket estuary 3 miles north of the Dosewallips River. Many of the cove's important functions have been disrupted, reducing tidal circulation. The cove has been partially filled and the uplands have been cleared and used for agriculture. Pocket estuaries are important places for young salmon to grow, feed and hide from predators. The conservancy will remove 1 acre of fill from the estuary and restore native plant communities. The conservancy will contribute \$122,000 from another grant. (07-1917R)

Hood Canal Salmon Enhancement Group **\$255,025**

Protecting Quilcene Bay by Purchasing the Ward Property

The Hood Canal Salmon Enhancement Group will use this grant to buy 80 acres along the north side of the Little Quilcene River and estuary. The acquisition will allow continuation of the breaching of the north Little Quilcene River dike as part of a project to protect vital salmon habitat. The Little Quilcene River, along with the Big Quilcene River estuary, represent some of the most significant estuaries and salt marshes and have been impacted by the dike built nearly 100 years ago. The estuary is home to Chinook, pink, chum, steelhead, coho, sturgeon and cutthroat. The dike limits the amount of habitat available to salmon fry, and the disturbance of the natural flow reduces juvenile chum access to the marshes. The salmon enhancement group will contribute \$50,000 from two grants. (07-1640A)

North Olympic Salmon Coalition **\$642,243**

Removing Wood Waste and Restoring an Estuary

The North Olympic Salmon Coalition will use this grant to remove toxic wood waste from the nearshore and increase the amount of estuarine habitat for young salmon, especially summer chum. Wood waste was placed atop the historic estuary at the head of Discovery Bay mid-century during a brief history of log peeling and veneer making at the site. Groundwater seeping through the wood waste leaches natural chemicals that become toxic in large quantities. The coalition will remove the wood waste and backfill the area. This project is critical to the success of other restoration work at this location, which includes removing collapsing buildings and the fill they were built on. Removing wood waste will improve water quality and support salmon species and their food sources. The coalition will contribute \$113,337 from two grants. (07-1632R)

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Jefferson County Conservation District **\$185,692**
Planting the Banks of Snow and Salmon Creeks

The conservation district will use this grant to plant native trees and shrubs along 2 miles of Snow and Salmon Creeks at the south end of Discovery Bay and to build fences and watering systems to prevent livestock from entering the creeks. The work will cool the water and provide different types of habitat for chum, coho, steelhead and cutthroat. Work will include building a bridge, water systems and fences to prevent livestock from entering the creeks and giving them a place to drink. The conservation district will contribute \$32,770 from two grants and cash donations. (07-1638R)

Hood Canal Salmon Enhancement Group **\$99,400**
Removing the Duckabush Robinson Road Levee

The Hood Canal Salmon Enhancement Group will use this grant to remove 565 feet of the Robinson Road levee on the Duckabush River to restore 2.6 acres of salt marsh. The project will restore natural tidal hydrology to one of Hood Canal's most pristine river delta systems, in a watershed that is home to Endanger Species Act-listed Chinook, steelhead, chum and bull trout. The salmon enhancement group will contribute \$200,000 from a state grant. (07-1636R)

Wild Fish Conservancy **\$202,000**
Restoring the Lower Dosewallips Floodplain and Estuary

The Wild Fish Conservancy will use this grant to remove nearly .2 mile of bank armoring and levee, and to recreate a natural shoreline with tree stumps, logs and plants. The work will restore natural processes to more than 5 acres of historic floodplain. The conservancy also will investigate the potential for work in the lowest reach. The project will continue the restoration work at the mouth of the Dosewallips River, which is the second largest tributary watershed to the Hood Canal and is home to three salmon species on the Endangered Species Act list – Chinook, steelhead and chum. Although the upper river basin is pristine because of its protection within Olympic National Park, the lower reaches of the river have experienced severe habitat degradation. Bulkheads, loss of trees and dredging have disrupted the natural processes of the river, leading to reduced habitat quality in the river and estuary. The conservancy will contribute \$609,000 from a state grant. (07-1916R)

Jefferson County **\$437,829**
Acquiring Mid-Hood Canal Land

Jefferson County will use this grant to buy 15.7 acres to permanently protect priority salmon habitat in the Dosewallips and Duckabush Rivers. The land contains important habitat elements such as streams or side channels used by six species of salmon including three listed as threatened under the Endangered Species Act – chum,

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Chinook and steelhead. The targeted Duckabush properties are at the upper end of the estuary and include a tributary, wetlands and floodplain forest. The Dosewallips target properties are next to more than 75 acres of floodplain habitat purchased by the county. This project will protect forests and slopes, remove improvements and threats to water quality from parcels at risk of continued flooding and prevent shoreline armoring and deforestation in an area that is increasingly popular with summer vacationers and home builders. The County will contribute \$74,252 from donated land. (07-1911A)

Wild Fish Conservancy

\$439,140

Designing Dosewallips and Duckabush Engineered Log Jams

The Wild Fish Conservancy will use this grant to design a program for large woody debris placement in the Dosewallips and Duckabush Rivers. Work will include producing site specific designs for up to ten, large, engineered logjams in the upper reaches of each of these rivers. Fish habitat in both rivers has been severely damaged by former land use practices, including logging. This project will consist of assessment and design work only. (07-1915N)

Jefferson Land Trust

\$96,347

Protecting the Chimacum Creek S Curve

The Jefferson Land Trust will use this grant to buy 2.3 acres and a land preservation agreement along Chimacum Creek. The lower main stem and estuary of Chimacum Creek are used by summer chum, coho, cutthroat trout and steelhead. The land provides forested riparian habitat and is part of a 155 acres that have been the focus of protection, enhancement and restoration efforts by many organizations, including Washington Department of Fish and Wildlife, Jefferson County, North Olympic Salmon Coalition, Jefferson County Conservation District, Trout Unlimited, Hood Canal Coordinating Council, Washington State University Cooperative Extension and Jefferson Land Trust. The land trust will contribute \$17,003 in donations of labor, property interest and cash. (07-1717A)

Northwest Watershed Institute

\$693,186

Purchasing and Restoring Tarboo-Dabob Bay

The Northwest Watershed Institute will use this grant to buy and restore 50 acres of high quality nearshore habitat for summer chum salmon, which are on the federal Endangered Species Act list, and Chinook salmon. Purchase of the land is the first step in forming a continuous nature preserve surrounding Tarboo-Dabob Bay to provide long-term and comprehensive protection for juvenile salmon in the Tarboo-Dabob estuary. This project is part of a larger project being conducted by the institute, Jefferson Land Trust, Jefferson County and The Nature Conservancy to protect the

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headwaters of the estuary. During the past 15 years, 875 acres have been purchased. The institute will contribute \$300,000 in donated property interest. (07-1660C)

State Parks and Recreation Commission **\$266,780**

Purchasing Port Townsend Bay Shoreline and Nearshore

The State Parks and Recreation Commission will use this grant to add property to Old Fort Townsend State Park, preserving an abundant, high quality, nearshore habitat that serves as a food source, refuge and nursery for the nearby Chimacum Creek native summer chum and coho salmon. Through a combination of purchases and voluntary land preservation agreements, state parks will protect 45 acres of tidelands along Glen Cove and 205 acres of wooded lands. The tidelands, shoreline and uplands offer natural habitats with naturally eroding bluffs and 25 acres of eelgrass beds. If this acquisition fails, the landowner likely will sell the property for development. State parks will contribute \$2.6 million in federal, state and local grants and donations of cash and labor. (07-1650A)

King County **\$7,092,423***

Department of Fish and Wildlife **\$550,000**

Acquiring Snoqualmie Floodplain at Cherry Creek

The Department of Fish and Wildlife will use this grant to buy nearly 143 acres of pasture spanning Cherry Creek to expand a wildlife area and allow for future restoration work. The property is composed of 37.2 acres of pasture spanning the mouth of Cherry Creek between State Route 203 and the Snoqualmie River, including 1.7 miles of river bank and 105.5 acres of pasture. The acquisition will enlarge the department's Cherry Creek Wildlife Area, allowing more opportunities for nature walks, observing wildlife, hunting, fishing and other outdoor recreation, as well as habitat restoration projects for threatened and endangered species. The department will contribute \$235,500 from a federal grant. (07-1713A)

Stewardship Partners **\$209,060**

Snoqualmie Riparian Restoration-Salmon Safe Farms

Stewardship Partners will work with agricultural landowners to restore the riparian habitat along 2.8 miles of the Snoqualmie River. Work will include removing invasive species and planting native plants. The target areas provide spawning habitat for Chinook salmon and rearing habitat for steelhead. The work will help farmers achieve

* See listing in Multiple Counties category at end of report.

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and maintain "Salmon-Safe" certification, an emerging Northwest labeling program that recognizes fish-friendly farming practices in the marketplace. Salmon-Safe certification provides credibility, exposure and marketing opportunities for farmers, and also serves to educate people about salmon recovery in farming. The projects will be incorporated into Salmon-Safe marketing and promotional efforts and also serve as demonstration and educational sites for other landowners, consumers and the public, resulting in improved public awareness of the compatibility between farming and salmon restoration efforts. The partners will contribute \$110,900 in private and state grants and donations of labor and materials. (07-1646R)

Wild Fish Conservancy

\$163,194

Designing the Restoration of the Stillwater Wildlife Area Floodplain

The Wild Fish Conservancy will use this grant to design a project to restore the natural processes of floodplain habitats in the Stillwater reach of the Snoqualmie River. The conservancy will use a geomorphic reach analysis to assess the location and extent of logjams, the amount of riprap removal needed and ideal locations for riverbank forest plantings. The Stillwater reach of the Snoqualmie River is significant because it includes the entire floodplain-wetland complex associated with the junction of Harris Creek, a major migratory pathway. Currently, habitat forming processes in the Stillwater reach are impaired by bank hardening, a lack of woody debris in the river to provide habitat diversity and reduced riverbank forests to provide shade. Project partners include the Washington Department of Fish and Wildlife, King County, the Stilly-Snohomish Fisheries Enhancement Task Force. The conservancy will contribute \$50,000 from a local grant. (07-1708N)

King County

\$171,481

Reconnecting Camp Gilead Off Channel Habitat

King County will use this grant to remove a 115 feet of a levee along the Snoqualmie River. The levee impounds a small tributary, wetland and a historic backwater channel of the Snoqualmie, severing the floodplain wetland from the Snoqualmie River. The two habitats are connected to the river for only a few hours to a few days a year. Chinook salmon have been found trapped in the wetland during summer. Removing a portion of the levee would restore 4 acres of off-channel habitat. Crews also will remove 300 feet of revetment adjacent to the levee. The wetland will provide excellent rearing and refuge habitat for juvenile salmon species. The project is near a heavily used spawning area on the Snoqualmie River and is on the migratory path for a vast majority of the Snoqualmie run of Snohomish fall Chinook. The county will contribute \$42,870. (07-1643R)

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King County

\$1 million

Reconnecting the Lower Tolt River Floodplain

King County and the City of Seattle will use this grant to reconnect the lower Tolt River with 48 acres of floodplain habitat. Project partners will remove a ½ mile section of levee along the right bank of the Tolt River, between State Route 203 and the confluence with the Snoqualmie River, and construct a levee about 800 feet behind the current levee. This will permanently restore the river's natural floodplain processes in this reach, allowing it to migrate and access its floodplain in high flows. The outcome will be greater and more complex habitat quantity and quality for Chinook salmon, steelhead trout and other species of salmon that use the Tolt River. Construction is planned to begin in mid-2008. The county will contribute \$2.3 million in state and local grants and cash. (07-1741R)

Wild Fish Conservancy

\$390,000

Restoring the Cherry Creek Floodplain

The Wild Fish Conservancy will use this grant to reconnect Cherry Creek with 2,800 feet of its intact historic channel and consolidate three floodplain ditches into a single 2,400 foot stream. As a result, the project will improve stream and floodplain habitat diversity and complexity for nearly 1 mile. These habitat improvements will benefit seven species of salmon including Chinook and steelhead. Cherry Creek is the Snoqualmie River's lowest, major tributary. The ditching and straightening of the creek's downstream reach has compromised salmon habitat in the Cherry-Snoqualmie floodplain, reducing the availability of spawning grounds and places where fish can rest, feed and hide from predators. The conservancy will contribute \$160,000 in federal and local grants. (07-1701R)

King County

\$1 million

Purchasing Cedar River Floodplain

King County will use this grant to buy 20.4 acres of floodplain along the lower Cedar River in an area surrounded by the most natural existing river and riparian habitat downstream from Maple Valley. The property is a 52-unit mobile home park that has experienced severe and repeated flooding, septic system failures and contamination of the park's water supply. Purchasing the park and relocating the residents will be accomplished in a partnership with the City of Seattle and other agencies that provide habitat conservation and enhancement, flood protection, disaster relief and protection and recovery of endangered species. Following acquisition, King County will pursue funding for a large restoration project to improve wildlife habitat. The property would

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become open space. The county will contribute \$4.5 million in local, state and other grants, council bonds and conservation futures.¹ (07-1531A)

King County **\$250,000**

Planning the Restoration of the Green River and Its Floodplain

King County will use this grant to design and get permits for a project to improve salmon habitat on 20 acres of Green River floodplain and .5 mile of the river. The site is used for spawning and rearing by fall Chinook and steelhead and is a migration corridor for all six salmon species. The restoration work would include removing the Pautzke Levee and relocating it, excavating 1.56 acres to create a backwater swale, building logjams in the reconnected floodplain areas and at the head of forested islands and replacing 15.2 acres of invasive plants with native trees and shrubs to provide shade, overhanging cover and future inputs of woody debris. The county will contribute \$45,000. (07-1627N)

King County **\$360,000**

Preserving Vashon Island Beaches

King County will use this grant to determine landowner willingness and begin buying undeveloped shoreline parcels along Vashon Island to help recover salmon species on the Endangered Species Act list, including Chinook and steelhead. The urbanization of beaches and estuaries has contributed to the decline in salmon populations. More than 70 percent of Puget Sound's coastal wetlands and estuaries have been lost to development and other shoreline modifications. Targeted parcels are along the eastern shoreline of Vashon Island, beginning at the southern shore of Vashon Landing and stretching to a large spit near the marsh inlet at Point Heyer. This shoreline is characterized by minimal modifications and eroding bluffs. The backshore contains dense, mature native riparian vegetation. Chinook, chum, coho, cutthroat, pink, sockeye and steelhead use this area. The county will contribute \$65,000 from a local grant. (07-1671P)

King County **\$975,450**

Conserving Cottage Lake Creek Habitat

King County will use this grant to protect about 35 acres along Cottage Lake Creek, the largest remaining opportunity to protect high quality salmon habitat on the creek. The land includes .55 river mile of regionally significant Chinook spawning habitat. Successful completion of the project will double the protected high quality, in-stream and riparian habitat in this reach of Cottage Lake Creek. Between 300 and 700 Chinook spawn annually in the Bear Creek basin, about two thirds of them spawn in Cottage

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

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Lake Creek. In addition to Chinook, Cottage Lake Creek supports sockeye, kokanee and coho salmon, and steelhead and cutthroat trout. King County will either directly purchase the land or purchase a voluntary land preservation agreement. The county will contribute \$1.1 million in cash, conservation futures² and a local grant. (07-1758A)

King County **\$950,000**

Restoring the North Wind's Weir

King County will use this grant to excavate 2 acres of off-channel, shallow water habitat in the Duwamish River. This transition habitat is critical to survival of young salmon migrating from the watershed headwaters, through the Howard Hanson Dam fish passage and the Green River, where they transition from freshwater to saltwater before heading to the ocean. Work will include improving river bank vegetation, expanding shallow habitats and marshes and enlarging the Duwamish River estuarine transition zone habitat. King County acquired the property in 2001, removed 4,500 cubic yards of contaminated soil in 2004, completed design in 2006 and plans to construct the restoration project in 2008. The county will contribute \$170,000. (07-1664R)

Issaquah **\$400,000**

Issaquah Creek Integrated Fish Passage Improvement

Issaquah will use this grant to plan and design changes to fish passage at the Issaquah Creek Dam. The dam's outdated ladder prevents many fish, including Endangered Species Act-listed Puget Sound Chinook salmon and steelhead, from successfully navigating the ladder and using more than 10 miles of spawning habitat. This grant will cover fish passage design and planning costs and result in a completed fish passage design and recommendations for a suite of habitat, hatchery and harvest management actions, including an adaptive management, monitoring and research plan. Issaquah will contribute \$70,600 in cash, labor and donated labor. (07-1669N)

Issaquah **\$250,000**

Purchasing Land Along Issaquah Creek

Issaquah will use this grant to buy 3.89 acres at the confluence of Issaquah Creek with its east fork. The property is an in-holding and its purchase will protect a total of 15 acres of wetland and riparian area. Purchase of the property will protect a significant reach of Issaquah Creek, which is used by Endangered Species Act-listed Chinook salmon, sockeye, coho, steelhead, kokanee and cutthroat. Issaquah will contribute \$2.2 million from a local grant and voter-approved bonds. (07-1533A)

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

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Cascade Land Conservancy **\$380,738**
Acquiring Beaconsfield on the Sound Bluff

The Cascade Land Conservancy will use this grant to buy property, voluntary land preservation agreements and bulkhead removal agreements from landowners along the Beaconsfield on the Sound feeder bluff in Normandy Park. The bluff is one of the last privately held, undeveloped and restorable feeder bluffs on the mainland of central Puget Sound. Feeder bluffs are important for providing a constant source of sediment and large wood for maintaining healthy shoreline habitat functions. The area consists of 4 acres of feeder bluff and more than ¼ mile of shoreline important for feeding, rearing and refuge for Chinook salmon. An 823-foot bulkhead disconnects much of the feeder bluff from the beach. The bluff ownership is divided into 26 small .1-acre parcels with 22 landowners. A study recommended removing 535 feet of bulkhead, which would result in a high rate of sediment input. The conservancy will contribute \$67,190 from a local grant. (07-1703A)

Tukwila **\$42,500**
Removing and Restoring Riverton Creek Flap Gate

Tukwila will use this grant to conduct a feasibility analysis and design to determine whether twin flap gates can be removed to connect Riverton Creek and the Duwamish River. Results of the analysis will be used to complete design work. Connecting the two water bodies will restore full fish access to more than .2 mile of off-channel, shallow water habitat. Off-channel and shallow water habitats in the estuarine transition zone, where freshwater and saltwater meet, is a critical factor in recovering Chinook salmon. This type of habitat will provide shelter from predators and refuge during high river flows for salmon species. The work also will involve removing invasive species, planting vegetation and placing woody debris. The city will contribute \$7,500. (07-1670N)

Kitsap County **\$1,055,641***

Suquamish Tribe **\$101,315**
Assessing Fish Use of the West Sound Nearshore

The Suquamish Tribe will use this grant to assess the distribution, timing, origin, health and habitat use of juvenile salmon species in the west Puget Sound. The tribe will use the information to prioritization protection and restoration actions for Kitsap County shorelines. The primary focus will be on salmon species and the fish they eat. Crews will identify, measure and check salmon for the presence of certain elements. Some will

* See listing in Multiple Counties category at end of report.

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be sampled to determine which watershed or hatchery they came from and when. Crews will collect DNA from chum salmon to identify whether any Hood Canal summer chum use northeastern Kitsap County waters. The tribe will coordinate with several partners including Washington Department of Fish and Wildlife, Bainbridge Island, National Oceanic and Atmospheric Administration-Fisheries, U.S. Geologic Society, Port Gamble S'Klallam Tribe, SeaGrant, West Sound Watersheds Council, several non-profit organizations and educational institutions and numerous volunteers to monitor the abundance and timing of all species collected along east Kitsap County. The tribe will contribute \$20,000 in donations of equipment and labor. (07-1898N)

Kitsap County **\$460,000**
Protecting Pilot Point

Kitsap County will use this grant to buy 34.5 acres at Pilot Point, protecting the habitat from development and adding to the 400 acres of protected land along the north Kitsap shoreline. The land and associated waters provide important nearshore habitat for bull trout, Chinook, chum and coho. The unspoiled shoreline supplies healthy eelgrass beds with nutrients, freshwater and refuge vital to migrating salmon. Pilot Point could be sold for up to six homes. The county will contribute \$1.5 million in donations of cash, labor and materials. (07-1766A)

Kitsap County **\$15,300**
Completing Pre-Purchase Tasks for Chico Estuary

Kitsap County will use this grant to complete tasks, such as appraisals and surveys, for the purchase of 1.1 acres of Chico estuary shoreline, and to create an access easement on 3.23 acres to enable the county to correct two fish-blocking culverts at the mouth of Chico Creek. The project will contribute to the conservation and restoration of an ecologically significant pocket estuary and salmon stream. As a result of this project Kitsap County will be able to seek funds to buy the 1.1-acre waterfront parcel to add to the county parks system and to design and permit a new driveway to enable the removal of Kitty Hawk Drive's blocking culverts. The county will contribute \$2,700 in labor. (07-1843N)

Kitsap County **\$125,000**
Surveying Chico Creek Estuary

Kitsap County will use this grant to complete some pre-design tasks needed to estimate the costs involved in removing two fish-blocking culverts at the mouth of Chico Creek. Work will include completing topographic surveys of Kitty Hawk Drive, the mouth of Chico Creek and portions of Chico estuary; stream cross-sections of a portion of Chico Creek and its floodplain; and survey and preliminary design of a 300-yard driveway for two parcels on the far side of Kitty Hawk Drive. As a result of this project, the

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Washington Department of Transportation will have survey data and maps essential for its preparation of a preliminary cost estimate for the Legislature's consideration of constructing a bridge over Chico Creek at State Route 3. This project will contribute to the restoration of an eco-regionally significant pocket estuary and salmon stream. (07-1729)

Mid Puget Sound Fisheries Enhancement Group **354,026**
Barker Creek Estuary Culvert Replacement

The Mid Puget Sound Fisheries Enhancement Group will use this grant to replace a culvert on Barker Creek. Chinook, coho, chum, cutthroat and steelhead use Barker and its main tributary, Hoot Creek. A culvert at Tracyton Boulevard constricts the creek and tidal inundation of the upper estuary. During high tide, the creek backs up at the culvert and floods the upper estuary with freshwater. Because water flows at such high speeds through the culvert, fish are prevented from migrating through the area at low and high tides. The full project proposes to install a large, more natural opening under the road, allowing the saltwater to migrate into the upper estuary unimpeded, providing proper mixing of freshwater and saltwater and ensuring unobstructed fish passage. The fisheries enhancement group will contribute \$62,500 from a federal grant. (07-1880)

Kittitas County **\$1,454,199**

Kittitas Conservation Trust **\$201,429**
Improving the Taneum Creek Fish Passage

The Kittitas Conservation Trust will use this grant to replace two ineffective and outdated fish passage structures in lower Taneum Creek by building new approaches at each diversion dam. Work will include finalizing engineering designs, getting construction permits, modifying the channel and replanting the work areas. Neither of the existing fish passage structures meets current standards. Modifying the stream channel will increase the ability of fish to access 30 miles of habitat during all water levels. The trust will contribute \$400,000 from a state grant. (07-1551R)

Kittitas County Conservation District **\$494,040**
Replacing Culverts on Indian and Jack Creeks

The Kittitas County Conservation District will use this grant to replace two culverts that block fish from migrating to the north fork of the Teanaway River. The culverts are on Jack and Indian Creeks, where each intersects Teanaway Road. Both creeks are small tributaries and both culverts are 6 feet in diameter with significant outfalls, no streambed material and too steep of slopes. Replacing the culverts will open up nearly 9 miles of

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habitat for steelhead, Chinook, coho and bull trout. Project partners include Kittitas County, U.S. Forest Service and Kittitas Conservation Trust. The conservation district will contribute \$250,000 from a federal grant and donated labor. (07-1517R)

Cascade Land Conservancy **\$355,000**
Protecting Big Creek Habitat

The Cascade Land Conservancy will use this grant to buy a stream corridor, which is about 25 acres, within a nearly 143-acre parcel. The 25-acre portion includes a 200-foot corridor on either side of Big Creek, a tributary of the upper Yakima River. The property is anchored to the Wenatchee National Forest on one side and proposed dense development on the other. The trust, and its partners, the Washington Department of Fish and Wildlife and Kittitas County Parks and Recreation District #1, are interested in reopening the property to public recreation. The remaining portion of the 143 acres will be purchased using other funds and a landowner donation. The property surrounding the creek is in unusually good condition, and the adjacent slopes are covered with willows and alders that create a canopy. Steelhead, Chinook and coho use the creek. Significant losses of steelhead have occurred because of the loss and degradation of important habitat. Acquisition of Big Creek ensures a significant step towards protecting the viability of salmon species in the upper Yakima River. The conservancy will contribute \$65,000 in donated land. (07-1578A)

South Central Washington Resource Conservation and Development **\$403,730**
Restoring Reecer Creek Floodplain

The South Central Washington Resource Conservation and Development will use this grant to improve the floodplain ecosystem function of Reecer Creek on 69 acres near its confluence with the Yakima River. Work will include relocating .7 mile of diked and channelized creek onto its re-contoured floodplain, stabilizing the channel and floodplain by planting plants and increasing the quantity and quality of habitat by increasing channel length to about 1 mile and adding off-channel habitat. The work will create habitat for Chinook, coho and steelhead. The conservation district will contribute \$490,747 from grants. (07-1519R)

Klickitat County **\$436,793**

Underwood Conservation District **\$91,191**
Restoring Simmons Creek

Underwood Conservation District will use this grant to place wood, plants and small rocks in 1.2 miles of Simmons Creek to create additional habitat and slow the creek to

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reduce erosion. Work will include building about 40 structures in the river to capture sediment and create habitat, installing cattle watering systems and planting the creek banks with willow, black cottonwood and other plants. The work is expected to stabilize eroding banks, increase groundwater recharge, reduce downstream sedimentation and increase the amount of water downstream in the summer. Simmons Creek feeds Snyder Creek, a tributary of the Klickitat River and home to Middle Columbia steelhead, which are listed under the federal Endangered Species Act. The upper reaches of Simmons Creek are on a relatively flat plateau with deep, fine-grained soils. At least a 1.2 miles of stream is moderately incised. Erosion occurs because water is unable to spread onto the floodplain. Rapid runoff results in poor groundwater recharge and low, warm summer flows in the downstream reaches of Snyder Creek. The conservation district will contribute \$23,950. (07-1722R)

Yakama Nation

\$345,602

Improving Upper Klickitat River Habitat

The Yakama Nation will use this grant to reconnect a side channel of the upper Klickitat River. Several side-channels of the river exist upstream of a bridge for the major road through the watershed. The largest side channel is deflected when it hits a bank associated with the bridge. Work will include perforating the embankment and installing a 60-foot bridge. Additionally, crews will place tree root wads and logs in the side channel both upstream and downstream of the road. The overall goal is to enhance spawning and rearing habitat for spring Chinook salmon and steelhead. The project area is in the upper Klickitat River – McCreedy Creek to Diamond Fork reach. The tribe will contribute \$143,000 in a grant and donated materials. (07-1725R)

Mason County

\$3,751,933*

Skokomish Tribe

\$1,012,100

Restoring Skokomish Estuary Island

The Skokomish Tribe, Tacoma Power and Mason Conservation District, along with the Puget Sound Nearshore Partnership and National Coastal Wetlands Conservation, will use this grant to restore natural tidal hydrology to the entire Skokomish estuary in Hood Canal. Crews will obliterate island dikes, levees, roads and borrow ditches, improving habitat and water quality and reducing flooding in the Nalley Island area. The tribe will contribute \$180,000 in a federal grant and donations of equipment, labor and materials. (07-1631R)

* See listing in Multiple Counties category at end of report.

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Skokomish Tribe **\$389,300**
Enhancing the South Fork of the Skokomish River

The Skokomish Tribe will use this grant to design and install logjams in the upper south fork of the Skokomish River, creating more habitat for bull trout. The south fork drains about 129 square miles. The primary reach targeted for logjams includes an area between the canyon and LeBar Creek (Homan Flats) that was cleared for a dam in the 1950s-70s but was never built. Streamside forests in this reach and throughout the basin have been logged, reducing the wood available for habitat. The tribe will contribute \$68,700 from a federal grant. (07-1657R)

Skokomish Tribe **\$596,150**
Looking for Solutions to Flooding Along the Skokomish River

The Skokomish Tribe will use this grant to develop solutions to restore the Skokomish River's ecosystem and reduce flooding. Work includes formulating alternative solutions, evaluating costs and benefits, preparing initial designs and environmental impact statements and recommending a plan. The study also will make a recommendation about federal authorization of an ecosystem restoration and flood damage reduction project. The tribe will contribute \$105,500 from a federal grant. (07-1644N)

Skokomish Tribe **\$445,126**
Designing the Restoration of the Skokomish Confluence Reach

The Skokomish Tribe will use this grant to assess current conditions and develop a comprehensive plan for restoring the reach at the confluence of the north and south forks of the Skokomish River. The assessment will consider removing more than .6 mile of levee, restoring more than 1.2 miles of new main stem channel, restoring nearly 1.8 miles of streamside habitats and helping plan potential channel improvements to the old channel. This is part of a large-scale effort to restore Endangered Species Act-listed Chinook salmon and chum, steelhead and trout. Decades of land use and levee construction have raised the streambed and caused the river to flow through an agricultural pasture. The streambed has gone dry for several years, creating a complete fish passage barrier and eliminating about 20 miles of spawning habitat in the south fork. Work will include determining potential restoration scenarios, defining the effects of flooding and producing a final construction plan. (07-1925N)

Skokomish Tribe **\$130,000**
Assessing the Vance River Reach

The Skokomish Tribe will use this grant to assess the Vance Creek watershed and develop and complete engineering designs for a project that will restore the natural function of the ecosystem. Work will include looking at existing studies and investigating the condition of the land and the river dynamics with an eye toward identifying areas for

2007 Salmon Recovery Grants Awarded

habitat and floodplain enhancement, restoration, acquisition and land preservation agreements. The watershed is home to three fish on the federal Endangered Species Act list – Puget Sound Chinook, Puget Sound steelhead and Hood Canal summer chum. (07-1659N)

Mason Conservation District **\$30,000**
Adding Logjams in 5-Mile Creek

The Mason Conservation District will use this grant to place about 320 feet of large, woody debris on the right bank of the confluence of 5-Mile Creek and the south fork of the Skokomish River to maintain the connectivity of the two rivers and to provide shaded habitat for endangered salmon, steelhead and bull trout. Work will include placing four logjams so the water naturally will scour a channel between the two rivers. This will help during the summer, when the mouth of 5-Mile Creek normally is blocked by sediment. Keeping the two rivers connected also will allow the cool, ground-fed water of 5-Mile to mix with the south fork, when its summer temperatures run too high, causing stress for fish. In extreme conditions, endangered fish become trapped in areas that are not connected to the main river channels. This project will correct this condition at the mouth of 5-Mile Creek. The conservation district will contribute \$59,476 from a federal grant. (07-1641R)

Capitol Land Trust **\$572,050**
Purchasing Twin Rivers Ranch

The Capitol Land Trust will use this grant to buy 127 acres, conserving just under 1 mile of freshwater shoreline along Deer and Cranberry Creeks, .6 mile of estuarine shoreline and 127 acres of highly functional coastal wetland habitat at the uppermost end of Oakland Bay in deep South Puget Sound. These habitats provide feeding, resting and transitioning habitat for coho, native winter steelhead, Chinook, coastal cutthroat and native summer chum. The property is an intact, natural estuarine and coastal wetland area once characteristic of the region. The owners wish to see the site conserved, and are working closely with project partners. The trust will contribute \$1 million in state and other grants. (07-1841A)

Capitol Land Trust **\$130,000**
Conserving Goldsborough Creek Habitat

The Capitol Land Trust will use this grant to conserve a 40-acre river-wetland complex containing high quality habitat on Goldsborough Creek, a stream of regional importance in South Puget Sound for salmon production. The property, located just below the confluence of the north and south forks provides quality summer rearing habitat for coho, steelhead and cutthroat in a 2000-foot channel of deep, cool, slow-moving stream with overhanging vegetation. The river-wetland has been identified as an area with high

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potential for protection because of its functioning habitat and intact condition. The wetlands have good connectivity with the channel and provide refuge for fish during winter high flows. Off-channel areas provide abundant food with fewer predators, reduced currents and good cover. Removal of the Goldsborough Creek dam in 2001 resulted in increased use of habitat in the upper watershed by coho salmon. Protection of this habitat will support the increased production of coho occurring in the reach. This project adds to 20 acres of similar habitat already conserved by the project partners 1/4 mile upstream on the south fork. The land trust will contribute \$49,600 in donated land. (07-1829A)

Capitol Land Trust

\$200,120

Preserving the Goldsborough Creek Salmon Corridor

The Capitol Land Trust will use this grant to conserve 9.4 acres of forested creek-side buffer along 1,100 feet of Goldsborough Creek, a stream of regional importance for salmon production. The property is threatened by commercial development. Purchasing the land will ensure continued access to spawning and rearing habitat for coho, cutthroat, steelhead and rainbow trout. The project builds upon the 2001 removal of the adjacent Goldsborough Creek dam, which restored access to more than 40 square miles of habitat upstream. The site's creek-side buffer provides shade and woody debris, which contribute to the holding habitat below the dam removal site. Acquisition will prevent removal of natural vegetation, introduction of paved surfaces and other adverse impacts to salmon habitat that would occur with development. The land trust will contribute \$287,000 in a local grant and donated land. (07-1839A)

Capitol Land Trust

\$137,827

Conserving East Hammersley Inlet Habitat

The Capitol Land Trust will use this grant to conserve about 16.25 acres and 700 feet of forested shorelines and nearshore habitat along east Hammersley Inlet, including habitat used for forage fish spawning, portions of a salmon-bearing stream, feeder bluffs and forests. The pocket estuary and nearshore areas provide habitat for migrating smolts originating from salmon spawning streams in Oakland Bay and Hammersley Inlet, including coho, steelhead, Chinook, chum and cutthroat. The beaches provide habitat for forage fish. The shoreline forest forms a buffer that provides shade, leaf litter, large woody debris, cover and insects for fish. There are eroding feeder bluffs that provide a source of sediment for nearshore deposition. The site also contains about 1,000 feet of freshwater stream that provides spawning and rearing habitat for coho, chum and cutthroat. The project will provide the highest level of protection for a highly-functional habitat system. The land is threatened by imminent sale. The land trust will contribute \$24,323 in donated property interest. (07-1846A)

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Squaxin Island Tribe **\$46,032**
Assessing Areas Used by Salmon in Mason County

The Squaxin Island Tribe will use this grant to conduct bi-monthly beach seine hauls for two years at six sites in the inlets and passages of Mason County. The goal is to identify which areas are used most by salmon so the tribe can prioritize restoration projects. The tribe will be looking to see which sites, when rehabilitated, will provide high quality rearing and migration corridors for juvenile salmon. The tribe will do two sets from each site from February through September, the time when young salmon have been documented in the nearshore of South Puget Sound. A specific emphasis will be placed on exploring the use of pocket estuaries by Nisqually River Chinook. The tribe will contribute \$52,264 in donations of equipment and labor. (07-1844N)

South Puget Sound Salmon Enhancement Group **\$63,228**
Restoring Big Cove

The South Puget Sound Salmon Enhancement Group will use this grant to remove shoreline armoring, a defunct tidal dam and sediment from a small estuary in Big Cove in Totten Inlet. The work will repair about 2 acres of habitat, improve access to a small freshwater stream, and reestablish a natural saltwater connection to the upstream habitat. Crews will remove tons of rip rap from the shoreline, rip out an abandoned culvert and grade portions of the embankment to create a stable slope. An earthen dam recently has failed and exposed this site. The upstream habitat has been under 10 feet of water for nearly 40 years. When the dam failed, boulders toppled and created a barrier to the saltwater. Upstream of the dam, there is a 2-acre flat area that has become infested with reed canary grass. Part of the salmon group's plan is to plant native plants in the disturbed area. The larger plants will out-compete the reed canary grass over time and re-establish a functional forested watershed. The salmon group will contribute \$11,168 from a state grant. (07-1822R)

Okanogan County **\$762,605**

Methow Conservancy **\$762,605**
Protecting Riparian Areas on the Twisp and Upper Methow Rivers

The Methow Conservancy will use this grant to protect 38 acres along the Twisp River and 54 acres along the upper Methow River by buying voluntary land preservation agreements. The agreements will permanently prohibit development on portions of the riverbanks. To date, the Methow Conservancy has protected more than 5,000 acres in the Methow watershed with land preservation agreements, and the organization has worked with more than 60 families to accomplish this work. This grant will add to the

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size and length of existing protected areas along the two rivers. Without protection, the riverbanks likely would be cleared for homes and access to the river. The proposed conservation easements would ensure that dynamic river processes important for maintaining fish habitat persist in perpetuity. The conservancy will contribute \$134,595 in donated property interest. (07-1699A and 07-1661A)

Pacific County \$554,900*

Pacific Conservation District \$79,000
Assessing Blocking Culverts

The Pacific Conservation District will use this grant to assess 25 culverts in the estuaries of the Naselle and Willapa watersheds for fish passage. After completion of the assessment, the district will complete the design, to a 90 percent level, for replacing the top five priority culverts. The district will contribute \$15,500 in donations of equipment and labor. (07-1892N)

Pacific Conservation District \$54,750
Designing Culverts for Willapa Bay

The Pacific Conservation District will use this grant to provide construction designs for fixing the top five fish-blocking culverts in the freshwater watersheds of Willapa Bay. In 2005, the conservation district completed an assessment of culverts that blocked fish migration in Water Resource Inventory Area 24. The assessment prioritized the culverts for replacement. The conservation district will contribute \$15,000 in donations of equipment and labor. (07-1893N)

Pacific Conservation District \$277,500
Naselle Knotweed Control Project

The Pacific Conservation District will use this grant to control Japanese knotweed, which is choking out native, riparian plants in the Naselle watershed. Conservation district staff and Pacific County Weed Management will use an integrated pest management approach, which includes herbicides, to control known infestations of knotweed along 40 miles of the Naselle River and Salmon Creek. This project will benefit all five salmon species within the Naselle watershed. The conservation district will contribute \$49,000 in donations of equipment and materials. (07-1894R)

* See listing in Multiple Counties category at end of report.

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Columbia River Estuary Partnership (CREST) \$143,650
Replacing a Chinook River Diversion

Columbia River Estuary Partnership (CREST) will use this grant to remove the diversion and fish ladder at the Sea Resources hatchery on the Chinook River. Work will include redesigning and building a passable diversion and planting the riverbanks. Since the mid 1970s, the hatchery has gotten water through a diversion/fish ladder about .3 mile upriver from the hatchery. The diversion blocks about 95 percent of adult chum from using the high quality habitat above the diversion. The diversion also might be inhibiting natural migration patterns of juvenile coho, Chinook, steelhead and cutthroat. The project is considered urgent because the river already has cut a side channel around the ladder during high flows, and the opposite bank has begun to erode around the structure. CREST will contribute \$25,350 in a grant and donations of cash, labor and materials. (07-1683R)

Pend Oreille County \$468,760

Washington Department of Fish and Wildlife \$88,441
Fixing Stagger Inn Fish Passage Barriers

The Department of Fish and Wildlife will use this grant to replace two fish passage barriers on Stagger Inn Campground Creek and one on an unnamed tributary, opening .5 mile of habitat to bull trout and westslope cutthroat trout. Bull trout spawn immediately downstream, in the north fork of Granite Creek. The department will contribute \$19,759 from a federal grant. (07-1775R)

Leonard Davaz \$17,049
Screening the LeClerc Creek Diversion

Leonard Davaz will use this grant to screen two surface water diversions on the east and west branches of LeClerc Creek, tributaries to the Pend Oreille River. The screens will prevent bull trout and other fish, such as westslope cutthroat trout from being attracted by flowing water into the diversion and becoming trapped. Bull trout, threatened with extinction and listed under the federal Endangered Species Act, use the LeClerc Creek sub-basin. The U.S. Fish and Wildlife Service has designated the project site, as well as several additional miles of stream in the LeClerc drainage, as critical habitat for bull trout. Both spawning and rearing have been documented just upstream of the project site. Mr. Davaz will contribute \$3,701 in donations of equipment and labor. (07-1781R)

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Kalispel Tribe **\$228,570**
Restoring the Upper West Branch of the Priest River

The Kalispel Tribe will use this grant to open more than 2.5 miles of habitat by decommissioning 8 miles of road, including converting 3 miles of road to a trail, and restoring about 5 acres of habitat along the upper west branch of Priest River. This will be the first significant restoration effort in the headwaters of this sub-basin. Currently, undersized culverts are restricting bull trout and cutthroat from migration into key habitat. The roads containing the culverts are poorly-maintained. In addition to the work, crews will remove eastern brook trout from strategic locations to better enable unique cutthroat populations to survive. The project is expected to improve the water quality and add habitat by removing fish passage barriers. The tribe will contribute \$94,000 from a federal grant and donated labor. (07-1858R)

Washington Department of Fish and Wildlife **\$134,700**
Replacing the Ruby Creek Culvert

The Department of Fish and Wildlife will use this grant to replace a culvert on Ruby Creek, opening 5 miles of habitat for bull trout, westslope cutthroat trout and other fish. Ruby Creek is a tributary to the Pend Oreille River. Historically, bull trout from Lake Pend Oreille in Idaho migrated down the Pend Oreille River and spawned and reared in tributaries to the river such as Ruby Creek. Recent road construction created some barriers to fish migration. The department will contribute \$30,300 in donated labor. (07-1782R)

Pierce County **\$3,529,498***

Squaxin Island Tribe **\$29,500**
Tracking Salmon in the Tacoma Narrows

The Squaxin Island Tribe will use this grant to modify attachment points on the new Tacoma Narrows Bridge to accept scientific monitoring equipment. Crews will place eight acoustic tracking sensors on mounts and retrieve six acoustic sensors from the seafloor. Recent advancements in acoustic telemetry use tags that emit a unique code to track individual animals in the water. In 2007, more than 1,200 acoustically tagged animals will be released into Puget Sound. For the first time, information is being gathered on the early marine behavior and survival of numerous Puget Sound species. This information will be critical in gauging the effectiveness of restoration efforts. During the past three years, information from the temporary listening lines placed by the tribe in

* See listing in Multiple Counties category at end of report.

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the Tacoma Narrows has shown high levels of death for salmon coming from South Puget Sound. The tribe will contribute \$6,500 in donated labor. (07-1886N)

Cascade Land Conservancy **\$35,000**

Purchasing Marine View property on Anderson Island

The Cascade Land Conservancy will use this grant to buy 21 acres of salmon habitat on Anderson Island. The purchase addresses the need to protect nearshore and estuary habitat on the island that is used by multiple species of fish including at least four salmon species. The site consists of relatively undisturbed woods and a small, freshwater stream that feeds into Carlson Bay. The permanent protection of high quality habitat that acts as a buffer to a high quality pocket estuary, as well as forested habitat for wildlife, is increasingly important in a rapidly developing area such as Anderson Island. The intention is to add these 21 acres to the adjacent 40-acre Andrew Anderson Marine Park, owned by the Anderson Island Park District. The addition of this property to the existing marine park will add more than 50 feet of protected shoreline in Carlson Bay as well as provide recreation opportunities for the public. The conservancy will contribute \$121,870 in conservation futures.³ (07-1795A)

South Puget Sound Salmon Enhancement Group **\$999,998**

Restoring Lower Ohop Creek

The South Puget Sound Salmon Enhancement Group will use this grant to fully restore 1 mile of Ohop Creek, a tributary to the Nisqually River near Eatonville. Work will include finalizing engineering plans; removing a portion of Peterson Road in the floodplain; excavating a new, 1-mile section of channel that is higher elevation and connected to floodplain and wetland areas; placing tree root wads and logs in the new channel to improve fish and wildlife habitat; replanting the valley floor with native vegetation; constructing water diversions to the new channel; backfilling the old, straightened channel; and maintaining the plantings for three years. Ohop Creek is used by Chinook, coho and pink salmon, steelhead and trout. The lower 6.3 miles of Ohop Creek was ranked among the highest priority tributary reaches needing restoration within the Nisqually basin. The salmon group will contribute \$293,000 in a federal grant and donated labor. (07-1908R)

Cascade Land Conservancy **\$700,000**

Protecting South Prairie Creek

The Cascade Land Conservancy will use this grant to acquire 95 acres of salmon habitat by buying land or purchasing voluntary land preservation agreements along

³ Conservation futures are a portion of property taxes used by local governments to buy land or development rights to protect natural areas, forests, wetlands and farms.

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South Prairie Creek. The creek, a tributary to the Carbon River, is the most important spawning area for salmon species in the Puyallup watershed, producing nearly half the wild steelhead in the Puyallup River system, the only significant run of pink salmon and important returns of Chinook, coho and chum salmon and sea-run cutthroat trout. The high quality habitat along the stream is threatened with immense pressures for development. The conservancy will contribute \$300,000. (07-1628A)

South Puget Sound Salmon Enhancement Group **\$340,000**
Adding Logjams in the Greenwater River

The South Puget Sound Salmon Enhancement Group will use this grant to place engineered logjams in the Greenwater River to increase the diversity of habitat for salmon. Large, mid-channel logjams and smaller wood structures will be positioned in the river to help restore the channel's elevation, allow the river to move and connect to its floodplain, and provide pools where fish can feed, rest and hide from predators. The watershed was altered in the 1970s when much of the tree root wads, logs and gravel were removed from the river. The logjams ultimately will re-create some historical habitat conditions needed to increase the capacity of the Greenwater to support fish populations. The salmon group will contribute \$60,000 in donations of labor and materials. (07-1867R)

Pierce County **\$500,000**
Purchasing Land along the Lower White River

Pierce County will use this grant to buy 175 acres near Buckley as part of the Cascade Land Conservancy's larger effort to buy 2,500 acres from Puget Sound Energy. Acquisition of this land will prevent development, protect water quality and habitat and connect the land to other properties in public ownership. This segment of the lower White River, including the floodplain and riparian area, is largely untouched and supports the White River spring Chinook population, as well as coho, chum and pink salmon and steelhead trout. The county will contribute \$500,000. (07-1895A)

Pierce County **\$425,000**
Building a Setback Levee on the Puyallup River at Fennel Creek

Pierce County will use this grant to design a setback levee or revetment along McCutcheon Road on the middle Puyallup River at the mouth of Fennel Creek to reconnect 54 acres of floodplain to the river. Design plans will include replanting the floodplain. The existing levee limits the physical and biological processes of the river and floodplains. Removing or breaching the levee will allow natural river processes to occur, improving habitat and creating off-channel habitats for Chinook salmon, bull trout, steelhead, coho and other salmon species. The county will contribute \$75,000. (07-1904R)

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Key Peninsula Metropolitan Park District **\$500,000**
Protecting Taylor Bay

The Key Peninsula Metropolitan Park District will use this grant to buy 34 acres surrounding Taylor Bay, protecting the largest pocket estuary on Key Peninsula in Kitsap County. The bay is integral to Chinook, chum, coho and cutthroat trout recovery. The land includes forested riparian and uplands protecting Taylor Bay Creek and estuarine conditions at the creek mouth. Acquisition of Taylor Bay property will prevent habitat degradation from development and maintain the pristine habitat. This purchase is part of a larger project to protect three parcels that include gravelly beaches, wetlands, pocket estuaries, mudflats, lagoon, salt marshes, creeks, forests, stream banks and patches of open meadow. The park district will contribute \$92,250 in donations of cash, labor and materials. (07-1762A)

San Juan County **\$1,861,570**

Skagit River System Cooperative **\$650,825**
Assessing Habitats of Juvenile Salmon in San Juan County

The Skagit River System Cooperative will use this grant to assess the presence of Chinook salmon and their use of certain types of habitat to better evaluate the types of restoration projects needed. The information will be used to make habitat type and place specific priorities for recovering Puget Sound Chinook salmon, which are listed under the federal Endangered Species Act, within the county. Resource managers only generally understand linkages between nearshore habitat and salmon, which doesn't translate into strategic recovery actions by habitat type or place within a diverse landscape. The results of this assessment will be translated into ranking criteria for projects evaluated for funding. Work will include classifying shorelines into habitat types and sampling fish within these types for six areas. The cooperative will contribute \$115,881 in donations of equipment and labor. (07-1863N)

KWIAHT **\$71,960**
Studying Juvenile Salmon Prey

KWIAHT will use this grant to study the food sources for salmon as a method to determining the location of salmon populations along San Juan County's 408 miles of shoreline. Previous studies found juvenile Chinook congregate on the shorelines much of the year, but are selective in their choice of habitats. Knowing which habitats are preferred by juvenile Chinook will give KWIAHT a geographical focus for protection and restoration actions. Using a combination of visual identification and biogeochemical methods, KWIAHT hopes to determine which prey were being used by the Chinook and

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the extent to which Chinook depend on land-based (thus more human-influenced) prey. The group plans to build on its “food security for salmon” community project on Waldron Island to engage landowners directly in research and formulating land-use actions, focusing on two juvenile salmon hot spots on President Channel (Waldron-Orcas) and south Lopez Island. KWIAHT will contribute \$15,910 in donations of labor and materials. (07-1770N)

Northwest Straits Marine Conservation Foundation **\$85,525**
Removing San Juan Derelict Fishing Nets

The Northwest Straits Marine Conservation Foundation will use this grant to remove abandoned fishing nets for 25 days in salmon migration routes in San Juan County. The group will remove about 37.5 acres of derelict fishing nets. Abandoned fishing nets kill salmon, cover habitat, collect fine sediment and scour surfaces of algae, plants and other organisms. One removed net contained 150 dead salmon. All 22 populations of Puget Sound Chinook salmon use the marine waters of San Juan County, mostly for migrating to and from the ocean. The group has identified 65 derelict nets in the county. The Northwest Straits Initiative has removed more than 500 nets from Puget Sound since 2002 and has documented the deadly effects of this gear on more than 55 marine species, including Chinook, sockeye and chum salmon and bull trout. The foundation will contribute \$15,100 in cash donations. (07-1845R)

San Juan County **\$225,000**
Replacing the Point Lawrence Road-Cascade Culverts

San Juan County will use this grant to replace two culverts with a larger one to carry flood flows and allow full fish passage and tidal exchange at the mouth of Cascade Creek on Orcas Island. The two culverts, one 30-inch diameter culvert and one 18-inch diameter culvert, will be replaced with a 12-foot-wide by 8-foot-high culvert, where Cascade Creek flows into Buck Bay under Point Lawrence Road. The project will allow coho and coastal cutthroat to use pristine shaded riparian habitat at the lower reaches of Cascade Creek. The county will contribute \$155,000. (07-1539R)

Friends of the San Juans **\$59,000**
Removing the Shoal Bay Tide Gate

The Friends of the San Juans will use this grant to remove a derelict tide gate, reconnecting nearly 5 acres of high quality coastal lagoon habitat to San Juan County nearshore. A large cement and metal tide gate is in the tide channel of the Shoal Bay lagoon. This derelict structure is constricting flow, impeding fish passage at low tides, creating water quality problems within the lagoon and eroding the upper beach and estuarine wetland habitat. Removal of the gate will provide improved areas for salmon and their food sources to feed and rest. The diverse nearshore marine environment of

2007 Salmon Recovery Grants Awarded

Shoal Bay off Lopez Island includes surf smelt, spawning habitat for Pacific herring, eelgrass prairies, shellfish beds, a sand spit and a coastal lagoon. Juvenile Chinook, coho and chum salmon use Shoal Bay and juvenile salmon have been observed in the lagoon. Friends of the San Juans is partnering with the Coastal Geologic Services, Wyllie-Echeverria Fisheries, landowners and community volunteers. The friends group will contribute \$10,500 in a federal grant and donated labor. (07-1740R)

San Juan County Land Bank **\$465,600**
Preserving Watmough Bay Salmon Habitat

The San Juan County Land Bank will use this grant to buy 7.29 acres, including 680 feet along Watmough Bay, on Lopez Island. The property contains an intact rocky intertidal zone and a 150-year-old forest. With one exception, the rest of the bay's shorelines are owned by the federal Bureau of Land Management and the San Juan County Land Bank. If the acquisition succeeds, the remaining landowner will donate another 5 acres, including 500 feet of shoreline, and two additional development rights to the land bank. As a result, the Watmough Bay watershed of about 400 acres will be preserved in its entirety. If the purchase fails, the property will be developed for a home, which could include clearing 60 percent of the property and development to within 50 feet of the shoreline. The land bank will contribute \$698,400 in cash and cash donations. (07-1785A)

San Juan County Land Bank **\$22,115**
Removing the Deer Harbor Pool and Restoring the Site

The San Juan County Land Bank will use this grant to remove a derelict concrete swimming pool that was built in 1935 along the easterly shore of Deer Harbor on Orcas Island. The 253 linear feet of wall has obstructed shoreline processes within the bay. Removal of the concrete pool walls will allow for natural shoreline processes and restoration of habitat linkages at this site. Long-term project benefits will be realized for Chinook and chum salmon, Pacific herring, eelgrass and bald eagles. The land bank will contribute \$12,821. (07-1784R)

Northwest Marine Tech In **\$44,874**
Restoring Neck Point Coastal Marsh

Northwest Marine Tech In will use this grant to remove a 55-cubic-yard berm that blocks flushing of the Neck Point coastal marsh on Shaw Island. Coastal salt marshes are important for salmon because they are a source of insects, which salmon eat. In a good salt marsh, streams flood the marsh bringing in fish and crustaceans during high tides and flush the marsh out during low tides. The neck Point salt marsh is flooded only at the maximum tides because the tidal channels are blocked from the neighboring cove by the berm. Juvenile salmon occupy the nearshore coastal zones during spring and

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summer and have been observed in the cove bordering this salt marsh. Removing the berm will reestablish flushing and drainage and access for fish. Work will include planting the site to stabilize the bank and add habitat for insects. The Northwest Marine Tech In will contribute \$8,069 in donated equipment and labor. (07-1801R)

Friends of the San Juans **\$90,000**

Restoring Smuggler's Cove Road Forage Fish Habitat

The Friends of the San Juans will use this grant to restore the beach near a county road, improving habitat for the fish salmon eat. Work will include completion of project designs, permitting, landowner outreach and engineering. Shoreline armoring associated with roads has been identified as the largest impact to forage fish spawning habitat in San Juan County. Restoration will address the negative impacts of shoreline armoring at Smuggler's Cove Road, on Blind Bay off Shaw Island. This project will remove riprap along the shoreline, replace vegetation and restore the beach for forage fish spawning. Partners include San Juan County and Coastal Geologic Services. The friends group will contribute \$16,000 in donated labor. (07-1744R)

People for Puget Sound **\$146,671**

Restoring Deer Harbor Estuary

People for Puget Sound will use this grant to begin restoring the Deer Harbor estuary, the largest estuary on Orcas Island. Until the mid 20th Century, the estuary supported chum and coho salmon as well as native oyster beds. Starting in the 1860s, logging, development, manipulation of the tributary streams and construction of the Channel Road Bridge altered the freshwater hydrology, plant communities and tidal flow patterns in the estuary. These impacts have lead to the elimination of shellfish populations in the lagoon, loss of salmon rearing and spawning habitat in the tributaries and degradation of salmon foraging habitats in the estuary. Work will include removing fish passage blockages to lagoon tributaries and planting native plants and trees to provide shade and attract insects, which salmon eat. People for Puget Sound will contribute \$25,900 in a federal grant and donated labor. (07-1649R)

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Skagit County

\$6,296,164*

The Nature Conservancy

\$1,965,880

Acquiring and Restoring the Skagit Floodplain

The Nature Conservancy will use this grant to determine high priority properties for purchase and buy those with willing sellers along the Skagit River in an effort to preserve the best salmon habitat. The Skagit River supports six of 22 stocks of Puget Sound Chinook and the largest bull trout and steelhead populations in the sound. The conservancy will evaluate targeted floodplain reaches that include the vast majority of Chinook spawning and freshwater rearing habitats in the basin. Work will include refining past property prioritization work and conducting landowner outreach and restoration planning if needed. An updated assessment will identify properties with the best salmon habitat or best potential for restoring salmon habitat or floodplain processes. Landowners of these priority parcels will be contacted and those with willing sellers will be acquired. Acquiring high quality properties will provide long-term protection of the best remaining spawning and rearing salmon habitat in the basin from future development and will enable restoration actions to occur. The conservancy will contribute \$346,920. (07-1783P)

Skagit Conservation District

\$395,000

Controlling Erosion on Bacon Creek Roads

The Skagit Conservation District will use this grant to control erosion on Bacon Creek roads to reduce the risk of road failures, erosion and subsequent damage to Bacon Creek and its tributaries and floodplain. Partnering with the U.S. Forest Service, the conservation district will replace culverts and stabilize ditches and fill on road 1060, and remove culverts and install rock-lined rolling dips on road 1062. Chinook salmon and Dolly Varden use this area as well as coho, chum and pink salmon, sea-run and resident populations of cutthroat and rainbow (steelhead) trout. The conservation district will contribute \$70,000 in donated materials. (07-1791R)

Skagit Fisheries Enhancement Group

\$45,762

Replacing the Morgan Creek Fish Passage

The Skagit Fisheries Enhancement Group will use this grant to replace a culvert with a bridge on a private driveway over Morgan Creek off the South Skagit Highway. The culvert is too small, forcing water to travel through it too fast for fish to use it. Replacing the culvert will open up 2 miles of habitat above the culvert, which occurs about 2.3 miles from the mouth of Morgan Creek. Chinook salmon as well as coho and cutthroat

* See listing in Multiple Counties category at end of report.

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use Morgan Creek. Reconnecting isolated habitat is considered a high priority and cost-effective way to restore habitat for salmon in the Skagit River watershed. This project not only will reconnect isolated habitat but will improve the movement of sediment and woody debris, both key elements in healthy salmon habitat. The fish enhancement group will contribute \$8,076 from a federal grant and donated labor. (07-1832R)

Skagit Fisheries Enhancement Group **\$304,172**
Restoring Skagit River Floodplain Riparian Areas

The Skagit Fisheries Enhancement Group will use this grant to restore the riparian areas of five floodplain properties owned by the U.S. Forest Service along the Skagit River and its junctions with major tributaries, including Diobsud Creek, Jackman Creek, Cascade River and the Sauk River. The restoration will enhance 74 acres of protected, river habitat. Work will include planting native trees and shrubs, removing and controlling invasive species and maintaining the sites. Crews also will construct tree root wads and log structures in nine floodplain areas. The woody debris creates places where salmon can rest, feed and hide from predators. This project will address several factors that limit the growth of the Chinook salmon population – degradation of riparian areas, loss of large woody debris in the river and eroding banks, which cause excessive sediment to deposit in the salmon-bearing waters of the Skagit, Sauk and Cascade Rivers. The fish enhancement group will contribute \$53,678 from federal and state grants and donations of labor and materials. (07-1831R)

Skagit Land Trust **\$73,940**
Acquiring Jungers Habitat

The Skagit Land Trust will use this grant to buy 5 acres of floodplain – one of the last pieces of the puzzle in the 240-acre Cumberland Creek Natural Area. The property is surrounded on three sides by protected lands, and if not acquired by the land trust, likely will be sold for houses. The property is the last remaining parcel north of the historic channel of Cumberland Creek where private ownership could conflict with future restoration efforts. The larger protected area contains high quality spawning and side channel rearing habitat. This acquisition will unify the management of the preserve; protect water quality by preventing land clearing, erosion and pollution; and protect the surrounding forest. The land trust will contribute \$13,050 in cash donations. (07-1812A)

Skagit River System Cooperative **\$265,812**
Planning the Breaching of the McGlenn Causeway-Swinomish Jetty

The Skagit River System Cooperative will use this grant to study the flow of sediment, mixing of freshwater and saltwater in the Swinomish Channel, and the pathways of juvenile Chinook salmon following the reconnection of the north fork of the Skagit River and the Swinomish channel. Construction of the Swinomish jetty and McGlenn

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causeway during the 1930s interrupted a significant salmon migratory pathway between the Skagit River and Padilla Bay. This is a second phase of feasibility analysis of breaching the jetty and causeway to help Chinook salmon reach important rearing habitat in Padilla Bay. Work will include developing a 90 percent-level engineering design for reconnecting the north fork of the Skagit River with the Swinomish channel. The cooperative will contribute \$47,515 in state and federal grants and donated labor. (07-1814N)

Skagit River System Cooperative **\$160,966**
Evaluating Dike Removal Risks on Illabot Creek

The Skagit River System Cooperative will use this grant to evaluate flood and erosion risks if the dikes on Illabot Creek are removed and the creek relocated to its historic channel. Work will include developing designs and submitting permit applications. Illabot Creek is a highly productive tributary of the upper Skagit River that supports relatively large populations of Chinook, chum, coho and pink salmon, native char and steelhead trout. Because of its importance in providing spawning and rearing habitat, much of the watershed already has been protected or restored. However, there is a half-mile reach of the creek that is heavily degraded. A previous study determined that straightening and diking of Illabot Creek near the Rockport-Cascade Road damaged habitat and recommended the dikes be removed and the stream be relocated to its historic channel. The cooperative will contribute \$28,506 in a local grant and cash. (07-1786N)

Skagit River System Cooperative **\$1,035,170**
Purchasing and Restoring Bryson Road Properties

The Skagit River System Cooperative will use this grant to buy 52.3 acres and remove homes and rip-rap to improve Sauk River habitat. For more than a decade, the Sauk River has been migrating toward the west near Bryson Road, threatening to erode property, homes and the county road. Government agencies have responded by placing rip-rap in the river to prevent erosion. Rip-rap reduces habitat complexity, degrades riparian functions and limits the formation of off-channel habitat. Once the area is cleared, work will include planting native vegetation. The Sauk River is the largest tributary of the Skagit River and is used by all five salmon species, cutthroat trout, steelhead and native char. The cooperative will contribute \$182,700 in cash and donations of cash, equipment and labor. (07-1825C)

Skagit River System Cooperative **\$302,600**
Reducing Sediment Erosion from Suiattle Roads

The Skagit River System Cooperative will use this grant to upgrade or decommission about 19 miles of forest service roads in the Tenas and Big Creeks watersheds,

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reducing the deposit of sediments to the creeks. The creeks are important spring Chinook spawning streams in the Suiattle River basin and also are used by pink, coho, steelhead, cutthroat and native char. Work will include upgrading 4.1 miles of road and decommissioning 3.9 miles near Tenas Creek and decommissioning 11.2 miles of road near Big Creek. Upgrading roads involves upgrading stream crossings, adding and upgrading drainage structures, cleaning ditch lines and removing or stabilizing hazardous fill material. Decommissioning includes removing stream crossing and drainage culverts, installing water bars and removing unstable road fill material. The cooperative will contribute \$53,625 in a federal grant and cash. (07-1789R)

Skagit River System Cooperative

\$495,000

Removing Fill and Restoring the Swinomish Channel

The Skagit River System Cooperative will use this grant to remove dredge spoils from 10 acres of historical tidal marshes in up to five sites along the Swinomish channel. Additionally, one tidal channel will be excavated on each site to create a total of .5 mile of channel. Crews will replant the marsh with native vegetation. While the restoration sites are relatively small, they are strategically located along the Swinomish channel, which connects the Skagit River to extensive salmon rearing habitat in Padilla Bay eelgrass. Rearing and refuge habitat along the Swinomish Channel is severely reduced compared to historical conditions. The cooperative will contribute \$90,000 in federal and state grants. (07-1827R)

The Nature Conservancy

\$352,844

Designing Fisher Slough Tidal Restoration

The Nature Conservancy will use this grant to develop final designs and get permits for the restoration of Fisher Slough. Restoration will include levee setbacks, installation of self-regulating tide gates and removal of antiquated culverts and fish passage barriers. The project is intended to break a long-standing deadlock between agriculture and conservation interests over estuary restoration and restore critical Chinook rearing habitat. Preliminary designs predict about 57 acres of habitat will be restored, providing enough habitat to support the production of more than 16,000 Chinook smolts and improving water quality and fish access to the 22-square-mile Carpenter Creek watershed. In addition, the restoration project will help prevent flooding. Project partners include Dike District #3, Skagit County, the Skagit River System Cooperative, Drainage District #17 and Western Washington Agriculture Association. The conservancy will contribute \$62,266 in a federal grant. (07-1833N)

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Skagit River System Cooperative **\$89,891**
Planning for Removing Turner's Bay Road

The Skagit River System Cooperative will use this grant to design and get permits for restoration actions that will restore pocket estuary habitat for Chinook salmon at Turner's Bay at the north end of Skagit Bay. The restoration work is aimed at connecting isolated marshes by removing or changing 290 feet of Similk Bay Road and its fill where it crosses the northern portion of Turner's Bay lagoon. A broken tide gate beneath the road would be removed and the road abandoned as a public roadway. The restoration is expected to increase estuarine habitat by 8.7 acres and channel habitat by nearly 2 acres. The cooperative will contribute \$15,864 in donated labor. (07-1808N)

Whatcom Land Trust **\$809,127**
Buying and Restoring the South Fork of the Nooksack River

The Whatcom Land Trust will use this grant to buy and restore 80 acres in the heart of the most productive Chinook salmon spawning reach of the south fork of the Nooksack River. The property is the site of a private compound including a 60-year-old cabin, three mobile homes, 30-40 derelict travel trailers that serve as temporary housing for visitors, numerous old or abandoned vehicles and a half century of accumulated tools, equipment, machinery, building supplies and debris. The current owners are allowing a local off-road vehicle club to operate on the property as well as a paintball group and recreational gold panning. Farm animals roam freely on the site. The property is severely degraded but within the best remaining Chinook salmon spawning habitat in the south fork of the Nooksack River. Chinook salmon and bull trout, both of which are listed as threatened with extinction under the Endangered Species Act, use the river, as well as coho, chum, pink, sockeye and steelhead. Once the property is acquired, the trust will restore it to naturally functioning habitat. The land trust will contribute \$142,787. (07-1805C)

Skamania County **\$642,913**

Lower Columbia Fish Enhancement Group **\$397,022**
Restoring the Upper Washougal River

The Lower Columbia Fish Enhancement Group will use this grant to place engineered logjams in the upper Washougal River. The logjams will increase the diversity of habitat in the river by slowing the river, creating places for fish to spawn and grow. It also will increase the depth of the river's pools, decrease the channel width and increase sub-surface flows. These changes will cool the water and allow for greater retention of organic material needed for increasing watershed productivity. The river is home to

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steelhead, Chinook and coho, which are on the federal Endangered Species Act list, as well as cutthroat and rainbow trout, mountain whitefish and Pacific lamprey. Project partners include the Washington Departments of Natural Resources and Fish and Wildlife, Longview Fiber and Skamania County. The fish enhancement group will contribute \$202,950 in donations of equipment and labor. (07-1689R)

Mid-Columbia Regional Fisheries Enhancement Group **\$245,891**
Restoring Trout Creek and Hemlock Dam

The Mid-Columbia Regional Fisheries Enhancement Group will use this grant to restore about .25 mile of lower Trout Creek, a tributary to Wind River. The restoration work is part of a larger project that removes Hemlock Dam, along with an estimated 50,000 cubic yards of sediment that have accumulated behind the dam. The restoration work involves building a new channel in the reach currently occupied by the reservoir. Trout Creek provides habitat for Lower Columbia River steelhead and once produced a disproportionately large share of the steelhead in the Wind River system. Upstream of the project reach are 15 miles of potentially excellent steelhead habitat, all of which are on national forest lands. Efforts have been underway for the past decade or more to restore healthy habitats in the upper watershed. Lower Trout Creek fish are exposed to a host of hazards resulting from the dam and reservoir, including lethally warm water temperatures and habitats devoid of cover and suitable surfaces where organisms can grow. This project will restore natural river processes in lower Trout Creek, reduce water temperatures, restore habitat diversity both in the reach and in the 2 miles of Trout Creek downstream of the reach and provide unobstructed passage to upper Trout Creek. The fisheries enhancement group will contribute \$1.3 million in federal, local and other grants and cash. (07-1678R)

Snohomish County **\$4,501,985***

Cascade Land Conservancy **\$270,000**
Acquiring Sauk River Darrington Park

The Cascade Land Conservancy will use this grant to protect 30 acres of critical salmon habitat on the Sauk River. The land is part of the Skagit River watershed, the most important salmon-producing river system in Puget Sound and the only watershed in the Pacific Northwest with all five species of salmon. Acquisition of the properties will protect about .2 mile of side-channel rearing habitat for spring Chinook. The property provides spawning and rearing habitat for all five salmon species, as well as steelhead

* See listing in Multiple Counties category at end of report.

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and bull trout, both of which are threatened with extinction. The conservancy is working with Darrington and the landowners to buy the properties for long-term public ownership and management by the town. This project is part of a greater protection and restoration effort on the Sauk River, including efforts to improve fish passage downstream, address storm water discharge from Darrington and protect salmon habitat on the adjacent mill site. The conservancy will contribute \$230,000. (07-1830A)

Tulalip Tribes **\$158,913**

Designing Restoration Projects for the Qwulooit Estuary

The Tulalip Tribes will use this grant to complete surveys and designs for a series of restoration projects that would restore function to more than 300 acres of isolated floodplain in the Snohomish River estuary and connection to two stream systems. Only 17 percent of the habitat remains in the estuary and Chinook production capacity is estimated at less than 62 percent of its historic level. Work will result in final project design drawings and technical specifications necessary for construction to begin next year. The Tulalip Tribes will contribute \$65,000 in a federal grant. (07-1624N)

Snohomish County **\$200,000**

Assessing the South Fork of the Stillaguamish River

Snohomish County will use this grant to collect and analyze data on the south fork of the Stillaguamish River below Granite Falls to better be able to prioritize restoration work. The river is used by Chinook salmon, steelhead and bull trout, all listed under the Endangered Species Act. The analysis will ensure that projects are integrated and that restoration funds are spent where they will have the greatest effect. Work will include data collection and analysis on channel morphology, bank conditions, floodplain topography, hydrology, hydraulics, riparian conditions and habitat for salmon. The county will contribute \$50,000 in donated labor. (07-1769N)

Snohomish County **\$325,619**

Placing Wood Debris in the South Fork of the Stillaguamish River

Snohomish County will use this grant to find a location, design and build four woody debris complexes in the lower south fork of the Stillaguamish River. The woody debris will increase the quantity and quality of habitat for Chinook salmon, sort out sediment and slow down the river, reducing its erosive power. The logjams will increase the habitat diversity by providing shade and places for fish to rest, feed, and hide from predators. The county will contribute \$65,000 in cash and donated materials. (07-1767R)

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Snohomish County **\$300,000**

Designing and Getting Permits for the Restoration of Smith Island

Snohomish County will use this grant to design and obtain permits for the restoration of Smith Island. The restoration work includes breaching dikes, building set back levees, filling a drainage ditch network, enhancing tidal channels and their connection to Union Slough, adding logjams, planting and providing a hiking trail, parking and interpretive signs. The project ultimately will restore more than 400 acres of tidal marsh, a significant percentage of the 1,200-acre target in the Snohomish Basin Salmon Conservation Plan. The project will help address the loss of about 85 percent of the basin's estuarine wetlands, a key factor contributing to the decline of Chinook salmon. The county will contribute \$55,000. (07-1705N)

Snohomish County **\$285,000**

Restoring the Skykomish Braided Reach

Snohomish County will use this grant to place wood complexes in the Skykomish River, providing places for fish to rest, feed and hide from predators. Crews also will install flood fencing at selected locations to increase river roughness and complexity. These projects are expected to increase habitat and reconnect side channels. Habitat had been diminished by railroad and highway construction, which has reduced overall floodplain area. The county will contribute \$65,000 in cash and donated materials. (07-1709R)

Stilly-Snohomish Fisheries Enhancement Task Force **\$200,000**

Restoring Pilchuck River Riparian Areas and Fish Habitat

The Stilly-Snohomish Fisheries Enhancement Task Force will use this grant to restore stream-side forests and enhance habitat for Endangered Species Act-listed Chinook salmon and steelhead, as well as chum, coho, pink salmon and cutthroat trout in the Pilchuck River near Lake Stevens. Work will include placing tree root wads and logs in the river to reduce bank erosion, planting native trees to establish buffers and excluding livestock from those buffers. Placing wood in the river, slows the river and creates places for fish to rest, feed and hide from predators. Slowing the river also slows erosion, decreasing the amount of sediment dropped on spawning areas. Planting buffers will shade the river, cooling it, and provide a long-term source of large wood and other organic material to the river. Excluding livestock will help the newly planted vegetation survive and minimize waste dropped by animals into the river. For landowners, the work is expected to reduce flooding impacts. The fisheries group will contribute \$40,000 in donations of equipment, labor and materials. (07-1714R)

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Stillaguamish Tribe **\$194,819**
Restoring the Lower Pilchuck Creek

The Stillaguamish Tribe will use this grant to restore the natural processes of a 65-acre floodplain along Pilchuck Creek, near its confluence with the Stillaguamish River. Work will include removing bank armor, planting the banks, restoring wetlands and placing logjams in the water. The work will help this reach of Pilchuck Creek return to properly functioning conditions and, in the process, create quality habitat for Chinook, coho, chum, pink, steelhead and bull trout/Dolly Varden. During the past 100 years, the property has been cleared, graded, farmed, turned into a dirt bike track and, in general, significantly altered from its historic condition. The banks of Pilchuck Creek have been hardened and pushed closer to the water, simplifying and constraining the channel. Adjacent wetlands have been ditched and drained, and the riparian vegetation has been removed except for a small strip of immature trees adjacent to the creek. In short, this reach lacks high quality habitat for Chinook salmon, which are threatened with extinction. The tribe will contribute \$60,755 in donations of labor and materials. (07-1736R)

Stillaguamish Tribe **\$634,044**
Supplementing the Chinook in the South Fork of the Stillaguamish River

The Stillaguamish Tribe will use this grant to help the Chinook salmon in the south fork of the Stillaguamish River survive. The current population is hovering around 100 fish, and risk of extinction is very high. By capturing 15-20 males and females, spawning them, rearing and acclimating them and releasing them in the late spring, (about 50,000-60,000 fry), their ability to survive long enough to migrate to the sea and return four years later will be increased. Data collected at a downstream smolt trap revealed that during large storms, survival in both the north and south forks is approaching zero. All outgoing juveniles will be tagged and marked for later recovery and catch analysis. Genetic analysis will be performed on juvenile Chinook migrating out to determine in which fork they were produced. The tribe will contribute \$112,000 in equipment and labor. (07-1751N)

Stillaguamish Tribe **\$340,560**
Reconnecting the Blue Slough Side Channel

The Stillaguamish Tribe will use this grant to reconnect a remnant side channel to the north fork of the Stillaguamish River. The side channel was disconnected several decades ago when the railroad built tracks between the channel and the river. The tribe will reconnect the channel on both ends to the north fork of the river, allowing salmon and trout to access summer and winter rearing and potentially spawning habitats. At the upstream connection, crews will excavate and install a culvert under the abandoned railroad line, now a trail. At the lower end, crews will retrofit a culvert and fish ladder to allow fish to pass in both directions. Numerous studies have shown a dramatic decline

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in the miles of side channel habitat throughout the watershed. This project will open up .4 mile of side channel with associated wetlands and riparian habitat. It also will create places for fish to rest during storms. Currently less than 2 percent of Chinook salmon juveniles rear in freshwater for a year before going out to sea. By re-connecting quality side channel habitat, the tribe hopes to increase the survival of fish. In addition to reconnecting the side channel, the tribe will place a logjam in the north fork of the Stillaguamish River at the inlet pipe and plant the banks along the entire north side of Blue Slough. The tribe will contribute \$80,000 in a federal grant, labor and materials. (07-1735R)

Stillaguamish Tribe **\$595,000**

Placing Logjams in the North Fork of the Stillaguamish River

The Stillaguamish Tribe will use this grant to install a series of logjams in the Stillaguamish River to create places for Chinook salmon to rest, feed and hide from predators. Locations for wood placement will be prioritized based on an analysis of data, including aerial and infrared photography. The north fork begins in the Cascade foothills of Skagit County and flows westerly to Arlington. One of the critical factors limiting Chinook populations is the lack of large, deep pools where fish can rest during upstream migration and rear after emergence from the gravel. The log jams will aid the creation of pools. The tribe will contribute \$105,000 in labor and materials. (07-1737R)

Stilly-Snohomish Fisheries Enhancement Task Force **\$100,000**

Controlling Knotweed on the South Fork of the Stillaguamish River

The Stilly-Snohomish Fisheries Enhancement Task Force will use this grant to restore salmon habitat in tributaries to the south fork of the Stillaguamish River, including Jim, Canyon and Turlo Creeks. With an average of only 246 spawners returning annually, Chinook salmon in the south fork of the Stillaguamish River are considered on the brink of extinction. Their habitat in these waterways is degraded. A lack of trees and the spread of invasive weeds have led to warmer temperatures, excessive sedimentation, reduced food supply and loss of places to hide from predators, all of which harm salmon. Knotweed, a non-native plant, is invading the area, and crowding out native vegetation. The task force will work with landowners to control knotweed on their properties. Community volunteers and local students will help restore stream habitat with native plants. This project will improve salmon habitat by increasing shade, leaf and wood input, improving bank stability and decreasing knotweed populations. Project partners include Snohomish County Noxious Weed Control Board and Surface Water Management and other Stillaguamish Cooperative Weed Management Area members. The task force will contribute \$100,000 in federal and other grants and donated labor. (07-1743R)

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Ducks Unlimited Inc. \$97,750
Restoring the Leque Island Estuary

Ducks Unlimited Inc. will use this grant to restore the Leque Island estuary. Historically, the property was an estuary wetland with associated tide flats. In the 1930s, dikes and tide gates were installed and the property was drained for agricultural use, resulting in the loss of estuarine marsh habitat, essential habitat for juvenile salmon and heavily used by waterfowl and other wetland-dependent species. The land is owned by the Washington Department of Fish and Wildlife and open for public recreation. Work will include removing portions of the dikes. Spoils from the dike removal will be used to create set back dikes to protect adjacent properties. The dike removal is expected to improve tidal flushing, sediment transport and other natural processes that promote a functional estuarine marsh with little management requirements. Ducks Unlimited will contribute \$17,250 from a state grant. (07-1759R)

Cascade Land Conservancy \$600,000
Buying and Restoring the French-Segelsen Reach

The Cascade Land Conservancy will use this grant to protect and restore critical salmon habitat on the north fork of the Stillaguamish River, in partnership with the Stillaguamish Tribe. The 2,030-acre project area provides floodplain and riparian habitat between Boulder and Squire Creeks for Endangered Species Act-listed Chinook salmon, steelhead and bull trout, as well as pink, coho, chum, sockeye and cutthroat. Work will include prioritizing parcels based on their habitat value for salmon species, development threats, and restoration needs; assessing landowner interest in conservation opportunities; buying land or purchasing voluntary land protection agreements for about 200-300 acres; and restoring the area to enhance habitat-forming processes. Timing is critical as rapid growth in the area is reducing the salmon habitat for protection. The conservancy will contribute \$195,400 from a state grant and donations of equipment, labor and materials. (07-1764C)

Cascade Land Conservancy \$200,280
Buying and Restoring Stillaguamish River Property

The Cascade Land Conservancy, and its partner, the Stillaguamish Tribe, will use this grant to buy and restore 19.35 acres of riparian floodplain on the north fork of the Stillaguamish River. The lower north fork is in severe need of large woody debris to provide essential salmon habitat. Large woody debris, such as tree root wads and logs, create places for salmon to rest, feed and hide from predators. Purchasing the land, called the Arney property, is necessary to allow placement of logjams in the river and to protect and enhance the floodplain and riparian habitat. The work also will benefit coho salmon, cutthroat trout and steelhead, which are threatened with extinction. The conservancy will contribute \$45,000 in donated labor and materials. (07-1870C)

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Thurston County

\$3,627,068

Heernett Environmental Foundation
Purchasing Wetlands and Forests

\$295,000

The Heernett Environmental Foundation will use this grant to buy 80 acres of wetlands and upland forest to conserve an intact, biologically significant portion of the Scatter Creek headwaters. All of the headwater tributaries, which cross this property, are used by coho and cutthroat. This is a vital piece of property for protection because of its strategic location and future phased wetland restoration possibilities. The foundation already owns 700 acres adjacent to this property and there are successful, ongoing, stream restoration projects upstream. Preserving the property will help the water quality and quantity of Scatter Creek and prevent degradation by development, fragmentation and compaction of soils. The foundation has a five-year enhancement plan that will include creating water storage areas, encouraging proper wetland function and establishing a new streamside buffer. The foundation will contribute \$100,000. (07-1749A)

Ducks Unlimited Inc.

\$2,452,165

Restoring Nisqually National Wildlife Refuge Estuary

Ducks Unlimited Inc. will use this grant to remove dikes, restoring 700 acres of estuary, in the Nisqually National Wildlife Refuge. By removing the dikes, the natural processes of the estuary will be restored. This is the single, largest estuary restoration project ongoing in the Pacific Northwest, and combined with recent smaller restorations by the Nisqually Tribe, will result in the recreation of an estuary. The Nisqually estuary provides important feeding and rearing habitat for a variety of fish and wildlife, including Chinook salmon and Puget Sound steelhead, both of which are threatened with extinction. This restoration project will contribute to the recovery of one of the most depleted wetland components in south Puget Sound. Restoring 700 acres of estuary would increase salt marsh habitat in south Puget Sound by 46 percent, a substantial increase in the Puget Sound region. Restoration of the Nisqually estuary is identified as the highest priority to recover threatened Nisqually River Chinook in the Puget Sound Salmon Recovery Plan and is expected to double the number of naturally spawning Chinook salmon in the watershed. The Nisqually watershed also provides important habitat for bull trout, which are listed as threatened with extinction under the federal Endangered Species Act. Ducks Unlimited will contribute \$422,999. (07-1901R)

Capitol Land Trust

\$400,000

Conserving Lower Eld Inlet Habitat

The Capitol Land Trust will use this grant to buy and conserve 55 acres and 1.25 miles of highly functional estuarine and marine nearshore habitat in lower Eld Inlet in Olympia.

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Lower Eld Inlet is a shallow, relatively undisturbed, estuarine complex consisting of extensive tidal marshes and mudflats. The project builds upon successful Eld Inlet conservation efforts that have protected more than 4 miles of marine shorelines and 500 acres of coastal wetland, nearshore and surrounding upland areas within the watershed. The property's rich tidal mudflats, vegetated shorelines and associated uplands provide feeding, resting and salinity-transitioning habitat for multiple salmon species: coho, steelhead and Chinook (both listed under the federal Endangered Species Act), cutthroat and native chum. Not surprisingly, the estuarine habitats are important for Pacific sandlance, Pacific herring and surf smelt, as well as for bald eagles and large populations of shorebirds and waterfowl. The land proposed for acquisition contains no bulkheads, docks or other modifications and is an outstanding example of an intact, natural estuarine and coastal wetland habitat once characteristic of the region. Acquisition will provide the highest level of protection to a highly-functional system. The land trust will contribute \$147,620 from a local grant. (07-1774A)

Wild Fish Conservancy

\$45,667

Snyder Cove Creek Fish Passage Project

The Wild Fish Conservancy will use this grant to replace a fish-blocking culvert on Snyder Cove Creek, do some minor restoration to the channel and monitor the project. Snyder Cove Creek is a perennial, fish-bearing watershed that flows into the east side of Eld Inlet. The watershed is largely intact, protected within The Evergreen State College forest. It offers excellent spawning and rearing habitat, and supports populations of cutthroat trout, sculpin and lamprey. Sunset Beach Drive crosses the creek at its mouth through an undersized culvert, creating a barrier to the upstream migration of fish, effectively blocking almost 1 mile of fish habitat. The watershed has the potential to support populations of coho, chum, resident and sea-run cutthroat and possibly steelhead. The existing 3-foot diameter culvert will be replaced with a 14-foot-wide and 10-foot-high culvert. The conservancy or the college will monitor the effectiveness of the culvert replacement for three years. The conservancy will contribute \$168,333 from a federal grant and cash. (07-1742R)

Capitol Land Trust

\$350,000

Conserving Budd Inlet Estuary

The Capitol Land Trust will use this grant to conserve highly functional estuarine and nearshore habitat functions at the mouth of Gull Harbor, a 30-acre estuary containing 2.2 miles of forested shorelines and intact nearshore habitat in Olympia. Gull Harbor is one of southern Puget Sound's most intact estuarine environments, providing high quality habitat for coho, steelhead, chum, sea-run cutthroat and Chinook salmon as well as important prey species such as sand lance, surf smelt and Pacific herring. The project will connect the open shoreline environment of Budd Inlet to the sheltered

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habitat of Gull Harbor, including the entire estuary mouth, bay mouth spit and protected lagoon. The site is threatened by residential development and impacted by livestock grazing in nearshore areas. The property will be conserved in two ways. The trust will purchase a voluntary land preservation agreement on one property, conserving more than .5 mile of intact nearshore habitat together with 17 acres of connected tideland and upland habitat. An amendment to an existing conservation easement on a second property (donated in 1997) will create a 250-foot protected buffer along 1,500 feet of intact nearshore habitat. The project is part of a multi-partner, multi-landowner effort to conserve ecosystem functionality and connectivity between Budd and Henderson Inlets in deep southern Puget Sound. The current project site is adjacent to about 2 miles of marine shorelines and 150 acres of upland habitat already protected with conservation easements through previous projects. The trust will contribute \$349,300 from a grant. (07-1773A)

Squaxin Island Tribe **\$46,031**
Conducting Beach Seines

The Squaxin Island Tribe will use this grant to conduct bi-monthly beach seine hauls for two years at six sites in the inlets and passages of Thurston County. The goal is to identify which areas are used most by salmon so the tribe can prioritize restoration projects. The tribe will be looking to see which sites, when rehabilitated, will provide high quality rearing and migration corridors for juvenile salmon. The tribe will do two sets from each site from February through September, the time when young salmon have been documented in the nearshore of South Puget Sound. A specific emphasis will be placed on exploring the use of pocket estuaries by Nisqually River Chinook. Work will include using the beach seine data to assess priority areas, identifying and ranking sites for restoration and conservation and refining the ranking by including private landowner considerations and potential partnerships. The tribe will contribute \$52,264 in donations of equipment and labor. (07-1821N)

South Puget Sound Salmon Enhancement Group **\$38,205**
Designing Improvements to the Beachcrest Estuary

The South Puget Sound Salmon Enhancement Group will use this grant to design and get permits for a fish passage solution at the Beachcrest Community near the mouth of the Nisqually River. A small stream and estuary was modified by filling in a historic tidal outlet channel, building an access road on the beach, impounding a freshwater pond and installing a culvert. These changes have blocked Chinook salmon access to 1.4 acres of habitat. The salmon group is planning to install a wider culvert that is connected to the Puget Sound by a semi-natural stream and tidal channel, remove a bulkhead and install logjams, rocks and plants to stabilize the community beach. (07-1819N)

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Wahkiakum County

\$1,439,075*

Columbia Land Trust

\$500,000

Purchasing Crazy Johnson and Grays River Reach

The Columbia Land Trust will use this grant to buy 326 acres of one of the most significant river reaches for chum spawning in the Columbia River basin. The purchase is part of a larger project in the middle or Gorley reach of the Grays River, where project partners are working to conserve and restore salmon habitat and river processes. The land to be purchased is along the Grays River and the Crazy Johnson Creek confluence and includes about 1.1 linear miles of the Grays River and about .4 linear mile of Crazy Johnson Creek. Work will include conservation stewardship to protect and enhance the habitat for critical species. The land trust will contribute \$598,600 in cash and a grant.

(07-1682A)

Wahkiakum Conservation District

\$110,000

Restoring Walters' Stream

The Wahkiakum Conservation District will use this grant to restore 600 feet of the bank along Skamokawa Creek, which runs through a farm managed by Kay Walters. Work will include placing tree root wads, logs and logjams in the stream to help stabilize the bank and slow the stream, creating places for fish to rest, feed and hide from predators. Crews also will shape the bank, plant it and add a fence to separate the farm from the stream, improving water quality. During the 2006 election day storm, 3,000 yards of fine sandy loam, two farm implements and several hundred feet of fence were washed into Skamokawa Creek, burying the creek's gravel bed and wiping out a strip of grass that once separated livestock holding areas from the creek. The conservation district will contribute \$21,500 from federal and state grants and donations of materials and labor.

(07-1673R)

Wahkiakum Conservation District

\$701,575

Restoring Historic Skamokawa Creek

The Wahkiakum Conservation District will use this grant to modify the tide gate and gate valves to allow Skamokawa Creek to flush its historic channel, improving water quality and allowing fish access. In the 1940s, dikes were built and a new channel created for the creek to reduce flooding of the town of Skamokawa. The lower 2 miles of the Middle Valley Skamokawa Creek were abandoned and the historic channel was reduced to a 250-acre watershed. A tide gate was installed at the outlet and an 18-inch pipe with a gate valve was placed at the upstream end. During the following 60 years, water quality

* See listing in Multiple Counties category at end of report.

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has declined in the historic channel and the upper half of the channel is filling. In the summer, creek temperatures increase and the oxygen needed to keep fish and plants alive depletes. This meandering reach of the Middle Valley Skamokawa would have provided habitat to coho, chum, Chinook and steelhead. Modifying the tide gate and values will allow for annual flushing, which would improve water quality and restore habitat. The conservation district will contribute \$150,000 from federal and state grants. (07-1676R)

Lower Columbia Fish Recovery Board **\$127,500**
Designing Restoration Projects for the Grays River

The Lower Columbia Fish Recovery Board will use this grant to complete designs for salmon restoration projects. The work will complete, to 90 percent, designs for the two top projects and, to 30 percent, designs for the remaining high priority projects in the lower Grays River watershed, home to Endangered Species Act-listed chum, fall Chinook, winter steelhead and coho. The fish recovery board will contribute \$22,500 from a federal grant. (07-1695N)

Walla Walla County **\$1,665,388***

Kooskooskie Commons **\$174,610**
Restoring Yellowhawk Riparian Area

Kooskooskie Commons will use this grant to remove non-native vegetation and plant native plants along 1.5 miles of Yellowhawk Creek on an 80-acre farm being converted to 60 homes. Yellowhawk Creek is a priority area for summer steelhead, which are listed under the federal Endangered Species Act, and reintroduced spring Chinook salmon. Yellowhawk Creek is the only migratory pathway in the summer and early fall from the Walla Walla River to the high quality habitat in Mill Creek. Through this project, a 6.6-acre riparian area is plated separately with a 30-foot buffer from property lines to the creek and homes are required to be back an additional 30 feet. Property owners also will be required to build fences along their property lines to reduce access to the creek. The riparian plat is held in common and managed through a homeowners' association. A walking path will be built along a .5 mile of the creek with educational signs explaining how the creek bank plantings protect fish and improve water quality. The commons will contribute \$53,000 in donations of cash, equipment and labor. (07-1869R)

* See listing in Multiple Counties category at end of report.

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Walla Walla Community College **\$153,901**
Restoring Titus Creek

Walla Walla Community College will use this grant to abandon a shallow, cement pond; divert the water into the natural channel; and improve fish passage and habitat on Titus Creek. The creek has high potential as a rearing area for Endangered Species Act-listed summer steelhead and spring Chinook. The pond heats water in this cold, spring-fed section of Titus Creek, a tributary to Mill Creek. The project will lower the temperature and improve water quality reaching Mill Creek. Crews also will replace the concrete pond with in-stream habitat and native riparian plantings. The project, which is within 50 yards of the nearly-finished Walla Walla Community College Water and Environmental Center, will provide a learning opportunity for future natural resource managers. The college will contribute \$28,000 in donated equipment and labor. (07-1878R)

Spring Rise Restoration **\$161,737**
Stabilizing Touchet River Banks

Spring Rise Restoration will use this grant to place logjams in the Touchet River and plant its banks with trees. In the past 10 years, the river has eroded 150 feet of stream bank and moved laterally to cause the loss of 60 trees. The wider more shallow river gets warmer and its water quality has decreased because of increased sediments. The restoration group will place a series of logjams on the floodplain and bars to stabilize 800 feet of river bank. The group also will plant 800 trees and shrubs to enhance river habitat. The Touchet River is used by steelhead. Spring Rise Restoration will contribute \$92,480 in donations of equipment, labor and materials. (07-1527R)

Inland Empire Action Coalition **\$290,712**
Upper Mill Creek Conservation Easement

The Inland Empire Action Coalition will use this grant to buy a voluntary land preservation agreement on one of the largest undeveloped stretches of upper Mill Creek, a prime spawning area for steelhead, which are threatened with extinction, and bull trout. Spring Chinook also have been reintroduced to this stream. This reach is a high priority for restoration and protection as well as a highly desirable area for new homes. It is under considerable development pressure and new houses are actively being built now. The project will permanently protect an about 300-foot-wide riparian zone on 1.5 miles of Mill Creek from development, grazing, logging, farming and activities that can damage the creek banks. The coalition will contribute \$52,900 in donated land. (07-1859A)

2007 Salmon Recovery Grants Awarded

Blue Mountain Land Trust **\$198,975**
Protecting Coppei Creek Riparian Areas

The Blue Mountain Land Trust will use this grant to buy a voluntary land protection agreement for a 75-foot buffer along Coppei Creek. This land is in Waitsburg and could be developed for up to 45 homes. Many years ago, the creek channel was manipulated and plants along the bank were removed. A Conservation Reserve Enhancement Program project, administered through the Walla Walla Conservation District, will restore a buffer with native plants. The land protection agreement will permanently protect the restored creek banks from future subdivision, development or agricultural uses and will protect the remaining floodplain from future development. The creek is used by summer steelhead. The trust will contribute \$81,560 in donations of labor, materials and property interest. (07-1810A)

Blue Mountain Land Trust **\$216,825**
Protecting Walla Walla River Riparian Areas

The Blue Mountain Land Trust will use this grant to purchase voluntary land protection agreements on 30 acres along the Walla Walla River, which is used by steelhead, bull trout and Chinook salmon. The land is between Mill Creek and the east Little Walla Walla River. Residential growth in this area is rapid. The landowners are interested in permanently protecting the habitat and unconfined river corridor that will allow the river space to shift during high flows. Knowing that additional homes on the land will increase impervious surfaces, impact the water quantity and likely destroy riverbank habitat, the landowners are interested in an easement that will restrict permanently subdivision and development of the land. Although the riparian habitat on this property is generally a large buffer and functioning well, the landowners are willing to expand the buffer in a small area where it is narrow. Partners include Tri State Steelheaders and community volunteers. The trust will contribute \$70,600 in donations of labor and property interest. (07-1834A)

Blue Mountain Land Trust **\$187,189**
Protecting Mill Creek Riparian Areas

The Blue Mountain Land Trust will use this grant to purchase voluntary land preservation agreements for 20 acres along ½ mile of the north side of Mill Creek, which is used by steelhead, bull trout and Chinook salmon. The land has been used for agriculture and cultivated nearly to the edge of the creek. A restoration of the creek bank was done 10 years ago, establishing a healthy 3.5-acre buffer. The buffer is no longer under contract and is therefore vulnerable to development. The land preservation agreement will prevent the development of up to three homes. The trust will contribute \$46,100 in donations of labor and property interest. (07-1888A)

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Walla Walla County Conservation District **\$155,204**
Assessing and Designing Touchet River Bank Stabilization Projects

The Walla Walla County Conservation District will use this grant to assess and design improvements to stabilize the banks of the Touchet River. Buffers along river banks are a key component of essential habitat for Endangered Species Act-listed fish. Groups in the area have planted 181 miles and 3,020 acres of river bank buffers. However, more work cannot continue unless a bank stabilization program is undertaken. Banks must be stable to allow trees and shrubs to grow and mature. This grant will allow the conservation district to assess the needed improvements. The conservation district will contribute \$58,528 in federal and state grants and donated labor. (07-1875N)

Spring Rise Restoration **\$126,235**
Assessing Touchet River Bank Stabilization

Spring Rise Restoration will use this grant to complete studies about how to stabilize 800 feet of riverbank and restore nearly .2 mile of the Touchet River channel. The river supports steelhead. In the past 10 years, the river has eroded 150 feet of bank, along with 60 trees, and is disconnected from its floodplain. Work will include conducting a cultural resource assessment, geomorphic reach analysis and bank stabilization design. The restoration group will contribute \$24,527 in donated equipment, labor and materials. (07-1549N)

Whatcom County **\$3,501,280**

Lummi Nation **\$350,593**
Boosting the South Fork of the Nooksack River Chinook Population

The Lummi Nation will use this grant to collect Chinook salmon, maintain weirs, and tag the salmon in an effort to boost existing populations. The early Chinook from the south fork of the Nooksack River are at high risk of local extinction. The tribe will collect adult salmon caught in a fish weir as broodstock for hatchery production, check DNA to ensure they are representative of the population, grow them to a size allowing the fish to receive identifying tags and then transfer them to the captive brood program. The grant will fund staff to assist in weir maintenance and collection of adults and the costs associated with juvenile rearing facilities, tagging and DNA analysis. The tribe will contribute \$63,530 in donations of equipment, labor and materials. (07-1847N)

2007 Salmon Recovery Grants Awarded

Nooksack Indian Tribe **\$635,375**
Restoring the South Fork of the Nooksack River

The Nooksack Indian Tribe will use this grant to design and construct four logjams within a half-mile segment of the lower south fork of the Nooksack River, near the mouths of Tawes and Caron Creeks. The goal of the project is to address the low habitat diversity, high summer water temperatures and lack of deep holding pools with cover. The logjams, the third in a series of logjam projects below the Acme Bridge, will create pools where fish can rest, feed and hide from predators as well as provide cover and access to relatively cool water in summer. The tribe will contribute \$112,125 from a federal grant. (07-1800R)

Lummi Nation **\$149,487**
Assessing Habitat in the Middle Fork of the Nooksack River

The Lummi Nation will use this grant to assess 18 miles of habitat in the middle fork of the Nooksack River. The assessment will characterize the habitat-forming processes that occur in the watershed, review and summarize existing data and develop recommendations for habitat protection and restoration projects for the recovery of endangered species. The assessment is being proposed in anticipation of future removal of the diversion dam fish passage barrier and to guide the development of other restoration projects in the watershed. The middle fork is the last of the three forks of the Nooksack River to be comprehensively assessed for habitat conditions, and with the impending restoration of fish passage in the upper 10 miles of the river, it is an important time to begin assessment work of future salmon habitat. The tribe will contribute \$37,000 from federal and local grants. (07-1804N)

Lummi Nation **\$160,842**
Stabilizing Wood Debris in Nessel's Reach

The Lummi Nation will use this grant to stabilize ten accumulations of large woody debris within the 1.7-mile-long Nessel's reach on the south fork of the Nooksack River. The woody debris creates habitats by providing places for fish to rest, feed and hide from predators. The river is used by Endangered Species Act-listed Chinook, bull trout, steelhead and other salmon populations. The reach is an active depositional area for wood, although the lack of large pieces has reduced the stability of logjams so that accumulations rarely function for more than a year. Because wood is a key component of habitat formation in the river, stabilizing the logjams will create pools and provide diverse habitat in a relatively cool reach of the south fork. Crews will use techniques such as pinning wood accumulations in place with pilings or adding large wood as ballast. The stabilized logjams will be expected to trap and hold additional wood moving along the river. The tribe will contribute \$120,000 from a federal grant. (07-1794R)

2007 Salmon Recovery Grants Awarded

Lummi Nation **\$546,167**
Restoring Skookum Reach

The Lummi Nation will use this grant to move a Whatcom County road running along .4 mile of the south fork of the Nooksack River to allow the river to migrate naturally. Moving the road also will allow for the placement of two logjams and the reforestation of 11.8 acres of near-stream habitat. The two logjams will be placed near the mouth of Skookum Creek, which provides the largest refuge from the relatively warm waters of the south fork of the Nooksack River. The project should address key factors limiting the recovery of the south fork Nooksack River Chinook salmon, bull trout, steelhead trout and other fish. The tribe will contribute \$401,340 from a federal grant. (07-1803R)

Whatcom County **\$588,240**
Placing Logjams near Acme to Recover Chinook

Whatcom County will use this grant to place logjams along 600 feet of the south fork of the Nooksack River and remove about 150 feet of riprap at the community of Acme. The logjams will increase the habitat diversity by creating pools, where fish can rest, feed and hide from predators, as well as cooling the water and promoting perennial flow into the seasonally dry lower reaches of Landingstrip Creek. The jams also will maintain the river's current path through a bend and under the State Route 9 bridge. The river is used Chinook salmon, bull trout, steelhead and other salmon species. The project complements other restoration projects in the area, including land acquisition, building removal, and replanting of riparian vegetation on a flood-prone property, downstream engineered logjams and tributary passage and riparian restoration projects in Landingstrip Creek. The county will contribute \$250,000 in equipment and a federal grant. (07-1790R)

Nooksack Indian Tribe **\$367,900**
Enhancing the Lone Tree Side Channel

The Nooksack Indian Tribe will use this grant to design and construct up to four engineered logjams on the right bank floodplain of the north fork of the Nooksack River. The logjams will encourage the river to flow into the disconnected Lone Tree side channel, which will increase spawning habitat and promote the continued growth of a channel island. A recent assessment of the north fork habitat demonstrated that channel islands, and the side channels associated with them, have been disappearing from the river during the past two decades, and that these areas often provide the best spawning and rearing habitat for Chinook salmon. Encouraging the natural formation of protected side channels is expected to boost salmon survival. The tribe will contribute \$65,000 from a grant. (07-1802R)

2007 Salmon Recovery Grants Awarded

Nooksack Salmon Enhancement Association **\$148,426**
Acquiring and Restoring Property Along the South Fork of the Nooksack River

The Nooksack Salmon Enhancement Association will use this grant to purchase 127.5 acres along the south fork of the Nooksack River and Landingstrip Creek. In addition, they will replace a culvert with a bridge, opening up more than 1 mile of rearing and spawning habitat for salmon species. The property contains more than 1.4 miles of stream channel, including Landingstrip Creek and two unnamed tributaries, 50 acres of wetlands, and nearly .4 mile of riverbank along the south fork of the Nooksack River. The association will contribute \$1 million in federal and state grants. (07-1842C)

Nooksack Salmon Enhancement Association **\$243,000**
Placing Logjams in the North Fork of the Nooksack River

The Nooksack Salmon Enhancement Association will use this grant to augment natural large wood accumulations in the north fork of the Nooksack River. The intent of the project is to protect and enhance the channel islands, and the back channels associated with them, to provide stable spawning and rearing habitat for Chinook salmon, which are on the federal Endangered Species Act list. The channel islands have been decreasing dramatically since the mid-1990s, implying a reduction in the protected back channels that provide the best rearing habitat for salmon, and in the case of larger back channels, the best spawning habitat as well. Because the population of returning Chinook adults can be closely related to the intensity of floods during their early days of life, creating more safe habitat for their use in the early stages of life should increase the population. The structures will be designed to collect and trap additional wood during floods to encourage island growth and stability. The association will contribute \$44,000 in a state grant, cash and donations of equipment, labor and materials. (07-1828R)

Whatcom County **\$311,250**
Removing a Portion of a Levee on Lower Canyon Creek

Whatcom County will use this grant to remove 520 feet of a .4-mile-long levee on lower Canyon Creek, a tributary of the north fork of the Nooksack River. The levee was built to protect a subdivision and county roads following three floods in 1989 and 1990. Canyon Creek provides key habitat for Endangered Species Act-listed Chinook salmon, bull trout, steelhead and other species of salmon. After levee installation, a partial barrier to fish migration developed at a bedrock notch. The barrier limits fish access to historic spawning and rearing habitats. Partial levee removal will allow the stream to migrate away from the bedrock notch and toward 18.4 acres already purchased by the county and Whatcom Land Trust to restore salmon habitat and reduce flood risk. The site will be monitored after levee removal to determine the need for additional treatments to ensure fish passage and promote restoration of habitat. The county will contribute \$103,750 in cash, equipment and donated labor. (07-1754R)

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Yakima County \$517,905

North Yakima Conservation District \$152,471

Modifying the North Fork of Ahtanum Creek Fish Passage

The North Yakima Conservation District will use this grant to remove or modify a gauging station weir and concrete apron at the north fork of Ahtanum Creek to allow fish to migrate upstream. The Yakama Nation has provided initial drawings for a passage design. Bull trout use the creek as well as summer steelhead, rainbow and cutthroat. The conservation district will contribute \$28,083 from a federal grant. (07-1567R)

North Yakima Conservation District \$88,294

North Yakima County Fish Screening

The North Yakima Conservation District will use this grant to design, build and install a fish screen on one of the remaining unscreened diversions on Cowiche Creek, a tributary to the Naches River. Screening of the diversion at the Cowychee ditch will decrease fish entrapment in this stream. The conservation district also is exploring options to abandon the diversion and provide another irrigation source as well as working with farmers to develop water efficiency programs to conserve water. The conservation district will contribute \$50,000 from federal and state grants. (07-1572R)

Cowiche Canyon Conservancy \$277,140

Protecting and Restoring Cowiche Creek

The Cowiche Canyon Conservancy will use this grant to buy and restore floodplain and riparian function on 26.73 acres along Cowiche Creek. The land will be purchased to eliminate future development. Restoration work will include removing a dike, planting the creek banks and removing septic tanks. Cowiche Creek has been listed as an impaired water under the federal Clean Water Act because of too high temperatures and too many nutrients. The property will be open to light recreational use when it is connected to the Cowiche Canyon Conservancy Trail, the Yakima Greenway Trail and the William O. Douglas Trail. The conservancy will contribute \$200,060 in state grants and donations of cash and labor. (07-1598C)

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Multiple Counties \$2,332,933

Asotin, Columbia, Garfield, Walla Walla and Whitman Counties

Walla Walla Community College \$232,258

Conducting an Inventory and Evaluating Culverts and Bridges

Walla Walla Community College will use this grant to inventory, evaluate and map culverts and bridges in fish-bearing waterways accessible from public right-of-ways in the Snake River Salmon Recovery Region. The college will assess how easily fish can travel through the culverts and under the bridges. The region will use that information to determine which culverts and bridges to fix. In the Snake River region, the extent, quantity and condition of culverts are unknown. Historically culverts were placed for ease of moving water and maintenance rather than the ability of fish to get through them. The college will contribute \$43,320 in donations of equipment and labor. (07-1881N)

Grays Harbor and Mason Counties

The Nature Conservancy \$89,000

Controlling Salmon Impeding Noxious Weeds

The Nature Conservancy will use this grant to remove noxious weeds and restore the banks of 101 miles of the Chehalis and Satsop Rivers. Work will include removing knotweed and other salmon impeding weeds, restoring the riverbanks, surveying the Chehalis River and tributaries for knotweed in partnership with the Washington Department of Fish and Wildlife and the Quinault Nation and treating Brazilian elodea in the main stem of the Chehalis River in partnership with the Thurston County Noxious Weed Board and the Chehalis Confederated Tribes. Invasive weeds destroy habitat and water quality. The Nature Conservancy will contribute \$42,105 from a federal grant and donations of equipment, materials and labor. (07-1746)

King and Pierce Counties

King County \$1,239,926

Modifying the White River Levee at the County Line

King County will use this grant to buy land and modify a levee on the left bank of the lower White River. The project will reconnect the White River to its floodplain by modifying a levee and establishing a buffer that more closely matches the floodplain terrace, and includes a setback levee. The goal of this project is to restore river processes and functions while reducing flood risks along the right bank and behind the existing levee. A new setback levee at the edge of the forested wetland complex may

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be necessary to protect private landowners. This project is important for providing rearing habitat for fall and spring Chinook, coho and steelhead. The acquisition includes about 15.2 acres in King County and 34.2 acres in Pierce County. These acquisitions include the remaining wetland and its buffer that is not in public ownership. With full public ownership, the upstream portion of the levee would be breached to allow side channel development. The county will contribute \$1.5 million. (07-1910C)

Mason and Kitsap Counties

Cascade Land Conservancy \$550,000 **Protecting the Headwaters of the Tahuya and Union Rivers**

The Cascade Land Conservancy will use this grant to buy 3,400 acres of forest near the Union and Tahuya Rivers, protecting 30 miles of tributaries. Protection of these lands and headwaters to the rivers will address long-term water quantity and quality issues, benefiting Hood Canal summer chum, coho, Chinook and steelhead. The conservancy will contribute \$4.4 million from state and federal grants. (07-1739A)

Pacific and Wahkiakum Counties

Lower Columbia Fish Recovery Board \$164,799 **Studying Sediment in the Upper Grays River**

The Lower Columbia Fish Recovery Board will use this grant to study the upper Grays River watershed from its boundaries to the top of the reach at Gorley to identify the top ten projects that will most reduce the amount of sediment entering the river. Work will include developing conceptual designs for the top projects. The Grays River watershed is one of two major chum spawning areas and also supports steelhead, coho and Chinook. Past logging has reduced fish habitat by altering stream flow, increasing the amount of sediment entering the river and degrading stream banks. According to a report, the amount of sediment is up to 20 times higher than expected for natural conditions. Overall, 61 percent of the stream reaches in the watershed have high to extreme impairment from sediment buildup. The excess sediment is destabilizing the river and contributing to the loss of important fish habitat. The fish recovery board will contribute \$29,100 from federal and state grants and donated labor. (07-1696N)

Skagit and Snohomish Counties

Wild Fish Conservancy \$56,950 **Assessing Stillaguamish River Low Water Levels and Water Rights**

The Wild Fish Conservancy will use this grant to evaluate the feasibility of projects to restore and protect water levels and habitat connectivity in the Stillaguamish River

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watershed. The watershed provides critical habitat to many fish and wildlife species including five salmon species, three of which are threatened with extinction (Puget Sound Chinook, Puget Sound steelhead and bull trout). There is no complete inventory or analysis of sub-basins within the watershed that have low water levels under current water rights. Existing registers of water-right holders need updating. Work will include updating the state Department of Ecology's water right database with current land ownership information, reviewing literature and investigating flow conditions to identify water right projects, prioritizing water rights actions on flow restoration projects and talking with landowners about potential projects. The conservancy will contribute \$10,050 in donations of equipment, labor and materials. (07-1760N)