



Small Habitat Restoration Program

Building effective and inexpensive projects that enhance aquatic ecosystems

Annual Report 2003



In 2003 the Small Habitat Restoration Program (SHRP) continued to build low-cost habitat restoration projects to enhance and restore streams and wetlands. SHRP worked to achieve this goal through habitat assessment, habitat restoration, scientific monitoring, and by working with watershed groups, providing volunteer opportunities and obtaining grant support. Since 1995 SHRP has performed over 113 projects in the White, Green, Puget, Cedar-Sammamish-Lake Washington and Snoqualmie basins.

In 2003 SHRP activities on 53 restoration projects improved streams, wetlands, and riparian buffers in the urban and rural service areas of unincorporated King County. SHRP leveraged public funds with grants, community volunteer planting events, and partnerships between landowners, local, state, and federal agencies. The SHRP Web site (<http://dnr.metrokc.gov/wlr/cposa/shrp/>) includes an on-line project application and technical assistance with guidelines for designing, planting, and maintaining habitat restoration projects.

Urban Projects in 2003

In the Urban Service Area the Small Habitat Restoration Program (SHRP) had 28 active habitat restoration projects, including 14 projects that were in construction phase, five projects in design and permit phase, seven projects that were maintained

and monitored, as well as two technical assistance projects. **SHRP restoration projects improved a total of 1.4 stream miles, 1.2 acres of wetland, and 12.2 acres of buffer in the Urban Service Area in 2003.**

Rural Projects in 2003

In the Rural Service Area, SHRP had 19 active habitat restoration projects, including 14 projects that were in construction phase, three projects in design and permit phase, and two projects that were maintained and monitored. **SHRP restoration projects improved a total of 4.75 stream miles, 37.42 acres of wetland, and 123 acres of buffer in the Rural Service Area in 2003.**

Mission

The Small Habitat Restoration Program (SHRP) constructs small-scale habitat restoration projects in stream corridors and wetlands. The goal of the SHRP program is to restore habitat-forming processes for fish and wildlife. Projects include stabilizing eroding streambanks, restoring fish access to upstream habitat, installing livestock fences, controlling invasive weeds, planting native vegetation and providing technical assistance to landowners. Individual project costs typically range from \$5,000 to \$50,000. Projects are constructed on private or public property as long as they provide benefits to the public at large.



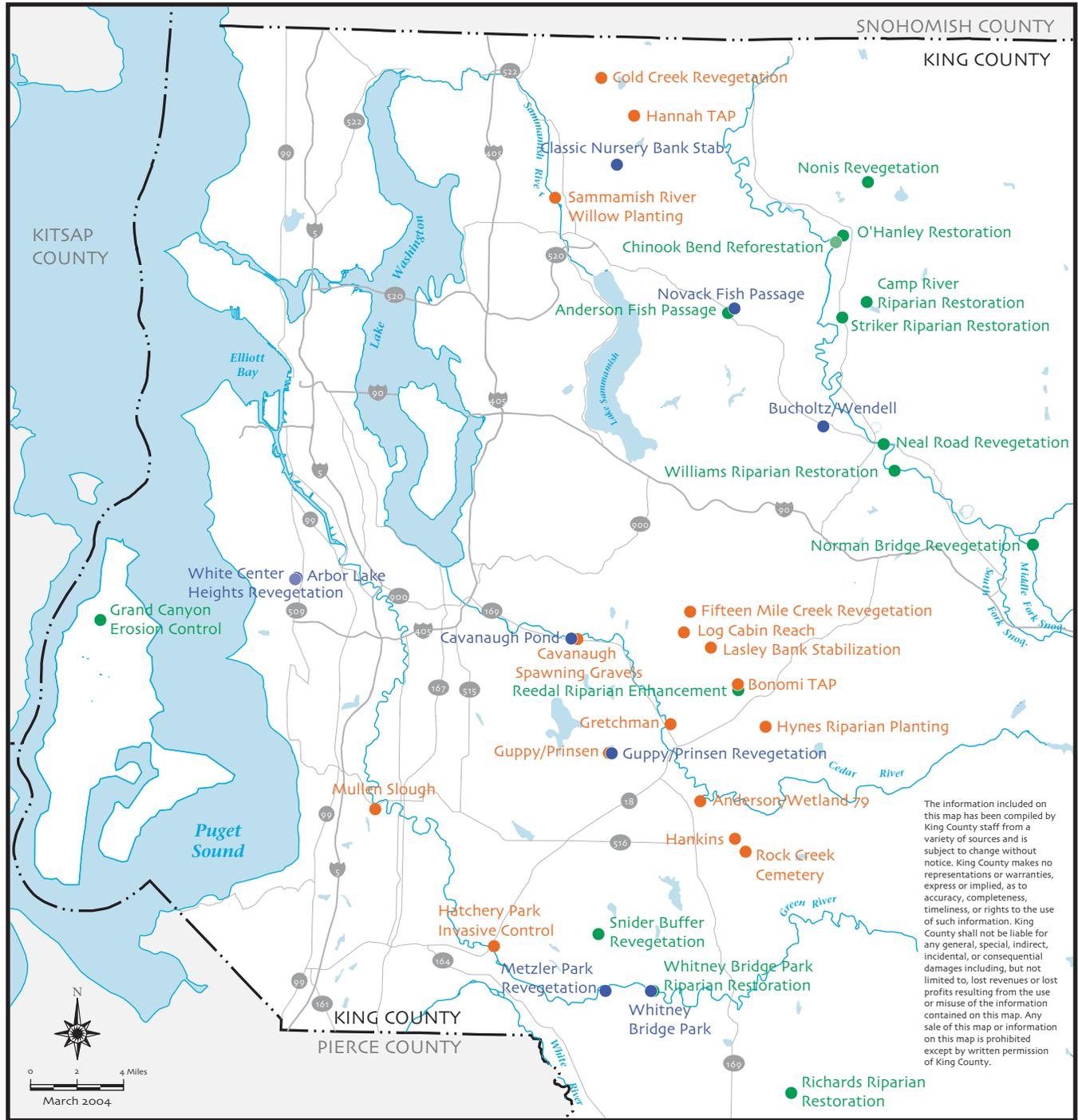
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2003 SHRP Construction, Monitoring, and Technical Assistance (TAP) Projects





Urban Service Area Projects

Mullen Slough Enhancement (KC ownership):

Blackberry was cut and weed control fabric was placed on approximately 35,000 square feet of buffer of Mullen Slough, near the Green River. Revegetation with native plantings began in January 2004.

Gretchman Homesite Restoration (KC Ownership):

Native plantings restored a former home site near the confluence of Taylor Creek and the Cedar River. This project enhanced 1.5 acres within the floodplain of the Cedar River, including buffer along 275 lineal feet of Taylor Creek, 275 lineal feet of an unnamed tributary of Taylor Creek, and 700 lineal feet of the Cedar River itself.

Anderson Wetland 79 Enhancement (Private Ownership):

Clearing of non-native vegetation was accomplished on 0.66 acres of this high-quality wetland along the Cedar River. Planting of the cleared areas will be completed during the winter or spring of 2004.

Rock Creek Cemetery Stream Enhancement (KC Ownership):

Invasive species (blackberry and reed canarygrass) were controlled on 6.88 acres of County property along Rock Creek. Native plants will be installed in 2004 and future project phases will continue to combine invasive weed control with native plant establishment in order to restore a riparian corridor to Rock Creek.



Hankins Stream Enhancement (Private Ownership):

Placing woody debris in the channel of Rock Creek enhanced 340 lineal feet of instream habitat. Plantings enhanced 0.7 acres of buffer. Further plantings will occur during early 2004.



Hankins Stream Habitat Enhancement Project

Lasley Bank Stabilization (Private Ownership):

Woody debris and plantings stabilized 175 lineal feet of streambank along Issaquah Creek. Approximately 13,000 square feet of buffer were planted with native species.



Lasley Streambank Stabilization project, prior to planting

Sammamish River Willow Planting (KC Ownership):

Willows planted along 480 linear feet of the Sammamish River enhanced a total of approximately 9,600 square feet of stream buffer.



Sammamish River Willow Planting



Cavanaugh Spawning Gravel Enhancement (KC Ownership):



Invasive weeds being removed by hand from Cavanaugh Pond.

Invasive reed canarygrass was removed by hand from valuable spawning habitat in Cavanaugh Pond. Appropriate native species were planted along the pool margins, improving about 3,000 square feet of wetland/

stream buffer. The site will be monitored for five years and invasive removal will be repeated as necessary.

Log Cabin Reach Revegetation (Private Ownership):

This project takes advantage of an opportunity to address small infestation of knotweed and large stands of blackberry in an otherwise pristine section of Issaquah Creek. Invasive species were removed and replaced with native plants over 1.15 acres of buffer along 500 lineal feet of Issaquah Creek.

Hatchery Park Invasive Control (KC Ownership):



Laying weed control fabric to eradicate Japanese Knotweed at Hatchery Park

GPS and GIS technologies were used to map stands of invasive Japanese knotweed in a King County Park near the mouth of Soos Creek. Approximately 10,000 square feet of knotweed was cut and covered with

weed control fabric. Planting and further invasive species control measures will continue in 2004.

Cold Creek Revegetation (KC Ownership):

This project was a collaboration of KC SHRP, KC Parks, and Restoration Logistics to restore a forested riparian buffer along Cold Creek. An old house site was replanted and invasives were removed. Parks will remove a culvert under a driveway after the project is completed. Nearly 7,100 square feet of buffer and 3,750 square feet of wetland were improved.



Plantings begin the restoration of a former homesite along Cold Creek.

Prinsen Invasives Control (Private Ownership):

Invasive species were controlled and plantings installed over 5,000 square feet of the buffer of Shadow Lake.

Hynes Riparian Enhancement (Private Ownership):

Native plantings enhanced 14,000 square feet of buffer along 325 lineal feet of Carey Creek.

Fifteen Mile Creek Revegetation (Private Ownership):

Approximately 1.5 acres of stream buffer along 780 linear feet of Fifteen Mile Creek was revegetated.



Volunteers restore streambank





Urban Project Design and Permitting

Loafing Logs Installation (KC Ownership):

This project will secure loafing logs for turtles, ducks and other waterfowl offshore at Marymoor Park.

Sternoff Fish Passage Restoration (Private Ownership):

Metal baffles will be installed inside an existing culvert outlet to reduce water velocities and restore upstream fish passage.

Peterson Fish Passage Restoration (KC Ownership):



Spawning salmon

This project will remove or backwater a culvert beneath an old road grade that is now a trail. The culvert could be replaced with a pedestrian/horse bridge or could be backwatered with

LWD and rock weirs to provide fish passage.

Taylor Mountain Revegetation (KC Ownership):

Landslide bowls and bank erosion caused by channel incision will be revegetated during the spring of 2004.

Erickson Fish Passage Restoration (KC Ownership):

The goal of this project is to eliminate a fish passage barrier without compromising the overall stability of this 60+ year old constructed channel. Spawning gravels and LWD will be installed to increase spawning and pool habitat in immediate vicinity of the barrier.

Urban Monitoring and Maintenance

Monitoring and maintenance activities on seven past SHRP projects within the Urban Service Area helped to ensure their success.

- *Barr Bank Stabilization and Classic Nursery*
- *Cavanaugh Pond*
- *Denny Creek Planting*
- *White Center Heights*
- *Arbor Lake*
- *Whitney Bridge Park*
- *Metzler Park*



Technical Assistance Projects (TAP)

SHRP provides technical assistance to landowners in the form of site visits and recommendations for restoring habitat.



River buffer planting and fencing

Bonomi TAP (Private Ownership):

SHRP staff provided advice to a landowner concerning buffer planting, fencing and streambank enhancement.

Hannah TAP (Private Ownership):

SHRP staff assisted a landowner along Cottage Lake Creek in coping with channel migrations and improving fish and wildlife habitat on the property.





Rural Service Area Projects

Grand Canyon Erosion Control (Maury-Vashon Island Land Trust Property):



Washington Conservation Corpsmembers use recycled Christmas trees to control erosion at the "Grand Canyon" on Vashon Island.

This project provided further stabilization to a rapidly eroding ravine that is a source of sediment to salmon-bearing Shinglemill Creek, downstream. This amends the terraces and willow fascines constructed during 2002 to establish vegetation on very steep, sandy hillsides. The project directly improves 3,100 square feet of stream buffer, and has beneficial effects for much of Shinglemill Creek, one of Vashon's few streams that support coho and chum salmon.

Chinook Bend Reforestation (KC Ownership):



Chinook Bend volunteer planting event

The goal of this ongoing project is to reforest 60-acres of floodplain along the Snoqualmie River. In 2003, approximately 10 acres were planted with 4,000 alder plantings. When plantings are completed, this project will improve 4,500 lineal feet of Class 1 stream.

Striker Riparian Enhancement (Private Ownership):

This project enhanced 1.7 acres of stream buffer on both sides of Langlois Creek with native plantings. Langlois Creek has high concentrations of coho spawning.

O'Hanley Restoration (Private Ownership):

The goal of this ongoing project is to restore fish and wildlife habitat on 153 acres of private property that includes Harris Creek, numerous Class 1 wetlands and the Snoqualmie River. In 2003, a successful volunteer planting event with KC Public Involvement and the Stilly-Snohomish Fisheries Enhancement Task Force helped to enhance 3.5 acres of riparian buffer along 1200 lineal feet of the Snoqualmie River. In addition, the project received a \$10,000 reimbursement grant from the Stilly-Snohomish Fisheries Enhancement Task Force. Routine maintenance was performed on previous work at the site. Volunteers and the Washington Conservation Corps may do more planting in this area in 2004.



Volunteers plant in the rain and mud to enhance riparian habitat along the Snoqualmie River on the O'Hanley SHRP Project

Neal Road Revegetation (KC Ownership):

A habitat management plan was prepared in 2001 to restore fish and wildlife habitat on property acquired by King County using early action salmon recovery funds. This 50-acre site contains Class 2 wetlands, 2000 lineal feet of Snoqualmie River streambank and an abandoned meander channel used by juvenile salmonids. Initial project construction/planting occurred in fall of 2001 and is ongoing. Approximately 10,000 square feet of river buffer was planted, replanted and maintained during 2003.





Anderson Fish Passage Improvement (Private Ownership):

A small gap through a relict beaver dam was widened to prevent re-damming by the beaver and to enable Patterson Creek to flow through a high-quality forested wetland rather than a reed canarygrass-infested field.

Reedal Riparian Enhancement (Private Ownership):



WCC Corpsmember, Brad Kwasnowski, builds a stout fence along the buffer of Carey Creek.

A fence was installed along the buffer of Carey Creek with funds provided by the King Conservation District (KCD). About 9.6 acres of buffer were planted and enhanced in the Spring of 2003; supplemental planting may occur during 2004.

Whitney Bridge Park Riparian Enhancement (KC ownership):

Planting on this project began in summer, 2001 and is ongoing. This project enhanced 29,250 square feet (0.67 acres) of streamside buffer along 1000 lineal feet of the Green River with a mixture of deciduous and coniferous trees. About 15,000 square feet of buffer were planted during 2003.

Norman Bridge Riparian Revegetation (KC Ownership):

This project removed approximately 1.5 acres of dense blackberry from the banks of the Middle Fork Snoqualmie River near the Norman Bridge and within the Three Forks Natural Area. An irrigation system was installed and the site was planted in early 2004 with native trees and shrubs to restore riparian habitat.

Snider Buffer Revegetation (Private Ownership):

This project improved 7,500 square feet of wetland and stream buffer by cutting and covering blackberry with mulch and installing native plants. Blackberry removal and weed fabric placement was completed during 2003; planting will continue into the winter of 2004.

Williams Riparian Restoration (Private Ownership):

Blackberry was removed from one half acre of a riparian/wetland area in the Snoqualmie River floodplain. The area was covered with weed-control fabric and planted during the fall of 2003. Further plantings will occur once shade has been established.

Camp River Riparian Restoration (Private Ownership):

A parking lot at a Girl Scout camp in the floodplain of the Tolt River was removed and replaced with native plantings, improving one acre of stream buffer. The camp includes more than a mile of river frontage on the Tolt River. Red alder will be planted in the buffer during the winter of 2004.

Nonis Buffer Revegetation (Private Ownership):

One acre of stream buffer along Harris Creek and a small wetland were planted with alders and conifers.

Richards Riparian Restoration (Private Ownership):

Over 4000 square feet along 165 linear feet of Newaukum Creek was planted during December, 2003. Much of the area is within BPA right-of-way and therefore required appropriate species selection to avoid interference with overhead power lines.





Rural Service Area Project Design and Permitting

Significant design and permitting was accomplished for four projects within the Rural Service Area during 2003.

Chinook Bend Wetland Restoration (KC and Private Ownership):

This project will restore the historic outlet of the open water wetland at Chinook Bend by plugging an existing culvert. The wetland may then provide off-channel rearing habitat for juvenile salmonids. Survey and design work was accomplished in 2003 and construction is scheduled for 2004.

Lower Griffin Creek Wetland Enhancement (Private Ownership):

Cottonwood and willow poles with beaver protection will be planted in the wetland buffer near the mouth of Griffin Creek, at the Snoqualmie River. Installation is scheduled for spring of 2004.

Ober Creek Fish Passage Restoration (Private Ownership):

Design and most of the permitting was completed during 2003 for this culvert replacement project on Vashon Island. The project will provide fish access to approximately 1000 linear feet of habitat upstream of the culverts. Construction is scheduled for the summer of 2004.



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Rural Monitoring and Maintenance

Monitoring and/or maintenance helped ensure the success of two past SHRP projects within the Rural Service Area.

- *Novack Fish Passage Project*
- *Bucholtz/Wendell*



To submit a project application contact **Mason Bowles** at (206) 296-8736 or mason.bowles@metrokc.gov. Or check out our Web site at <http://dnr.metrokc.gov/wlr/cposa/shrp/>



Initial plantings on terraces at the Grand Canyon Erosion Control stabilization project after one season. Further planting and brush dam construction was accomplished during 2003 and will continue in 2004.



Many thanks and much of the credit for the success of SHRP's projects must go to the Washington Conservation Corps crew sponsored by King County. They accomplish the lion's share of the real work, often in inclement weather and for pay that is a fraction of their true worth.