



Small Habitat Restoration Program

Building effective projects that enhance aquatic ecosystems

Annual Report 2010

Summary of 2010 Accomplishments

In 2010 the Small Habitat Restoration Program (SHRP) constructed and maintained 30 projects to restore streams, wetlands and their buffers. Twenty two private property owners allowed the use of their property in exchange for several years of phased project construction and maintenance. Their contribution allows SHRP to build projects with limited resources (grants and public dollars) that will help conserve water quality and enhance habitat for fish, wildlife and future generations.

Program highlights include:

- 16 active restoration projects
- 14 maintained and monitored projects
- 1.7 miles of streambank restored
- 0.95 acres of wetland habitat restored
- 26.6 acres of riparian buffer restored
- 21,120 native shrubs and trees planted.

Spotlight: Newaukum Creek Stream Corridor Restoration



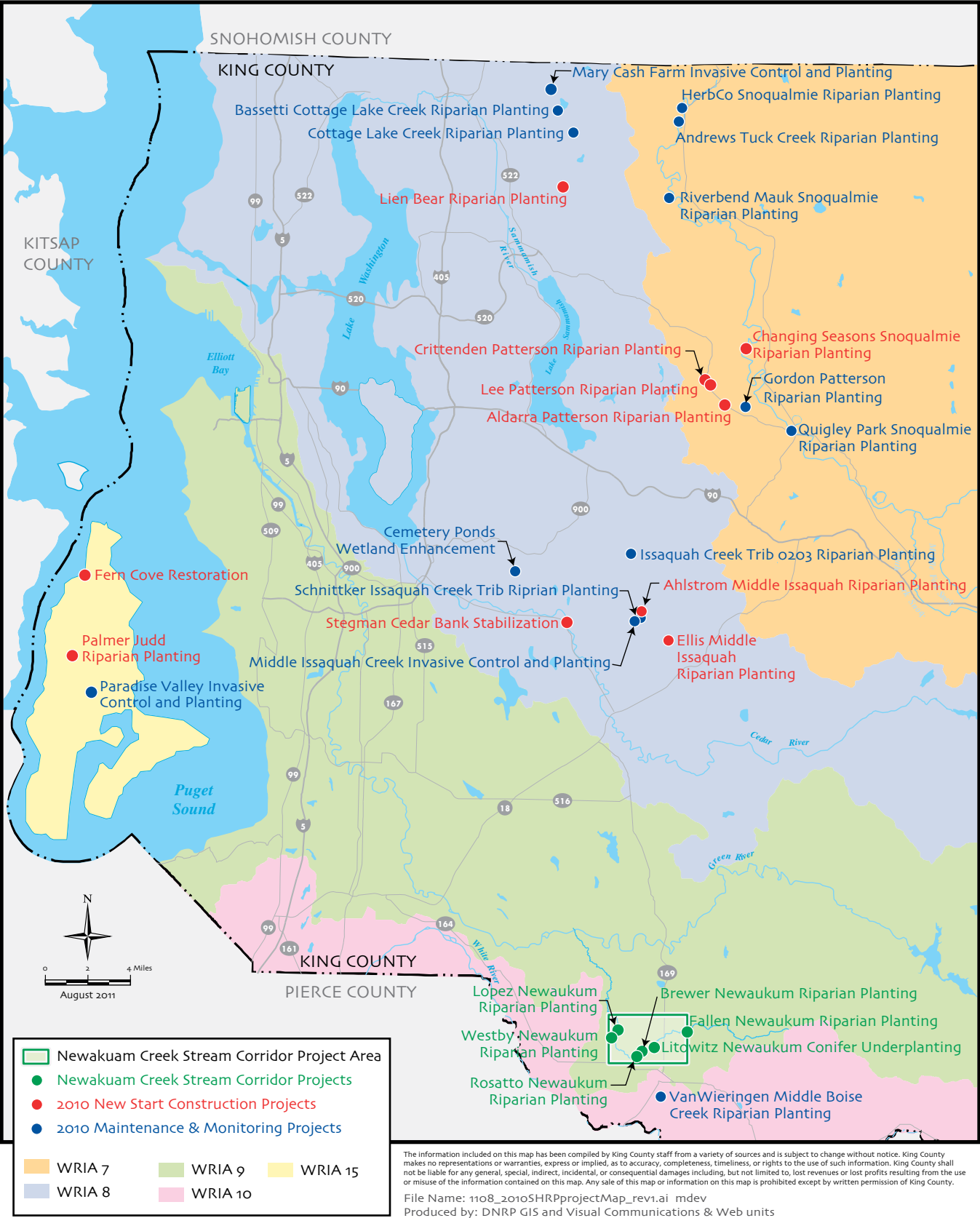
Rosatto Newaukum after restoration

In 2007, the Green-Duwamish Basin Steward, Josh Kahan, asked SHRP staff to help develop a long-term stream corridor restoration plan for Newaukum Creek. This significant tributary to the Green River provides habitat for threatened Chinook salmon, bull trout and steelhead trout as well as coho, chum, and pink salmon, coastal and resident cutthroat trout and rainbow trout. Historical land use practices had stripped the riparian vegetation from the buffer of much of Newaukum Creek, resulting in bank erosion, the establishment of invasive weeds, and a lack of shade and cover.

SHRP lead Cody Toal met with numerous property owners along the creek to identify restoration opportunities. Six private property owners agreed to work with SHRP to implement riparian planting projects. Pre-construction invasive weed control began in 2009. Project construction in 2010 resulted in the planting of native shrubs and trees on more than a mile of streambank, encompassing 17 acres of riparian buffer. In 2011 new and continuing phases of construction will add more riparian buffer plantings to Newaukum Creek. Citizen stewardship and participation has been critical to the success of the Newaukum Creek stream corridor restoration plan. (See map on page 2.)



2010 Active SHRP Projects



SHRP staff work with local property owners to design, permit, and construct projects. Washington Conservation Corps (WCC) crews, as well as volunteers, provide essential construction labor and skills to build fences and bridges, stabilize eroding streambanks, install native plants, control invasive weeds and water and maintain projects.

project costs typically range from \$5,000 to \$20,000 per year. Projects are constructed on public or private property as long as they provide benefits to the public at large. Since 1995 SHRP has completed well over 300 projects in the White, Green, Puget Sound, Cedar-Sammamish-Lake Washington and Snoqualmie River basins and along Puget Sound.

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 and agencies. Individual

The SHRP website (<http://www.kingcounty.gov/environment/animalsAndPlants/restoration-projects/small-habitat-restoration-program.aspx>) includes an on-line project application, archived annual reports, and technical assistance guidelines for designing, planting, and maintaining habitat restoration projects.

2010 SHRP Project Summary Table

WRIA	2010 New Start Construction Projects	Wetland Restored Acres	Streambank Restoration Lineal Feet	Riparian Buffer Restoration Square Feet (Sq Ft)	Native Trees and Shrubs Planted
WRIA 7: Snoqualmie-Skykomish	Aldarra Patterson Riparian Planting	0.23	300	4,500	800
	Crittenden Patterson Riparian Planting	0.10	100	9,000	1,812
	Lee Patterson Riparian Planting	0.12	150	10,500	3150
	Changing Seasons Snoqualmie Riparian Planting	0	600	24,000	1,011
Total WRIA 7	4	0.45	1,150	48,000	6,773
WRIA 8: Lake Washington-Cedar River	Ahlstrom Middle Issaquah Riparian Planting	0	1,100	158,575	2,351
	Ellis Middle Issaquah Riparian Planting	0	700	54,125	2,530
	Lien Bear Riparian Planting	0	80	1,600	225
	Stegman Cedar Bank Stabilization	0	80	3,000	225
Total WRIA 8	4	0	1,960	217,300	5,510
WRIA 9: Green River (Newaukum Creek Stream Corridor Projects)	Litowitz Newaukum Conifer Underplanting	0	900	672,000	5,320
	Brewer Newaukum Riparian Planting	0	300	1,000	180
	Fallen Newaukum Riparian Planting	0	2,000	10,000	240
	Lopez Newaukum Riparian Planting	0	220	3,500	50
	Rosatto Newaukum Riparian Planting	0	2,050	32,000	740
	Westby Newaukum Riparian Planting	0	400	24,000	115
Total WRIA 9	6	0	5,870	742,500	6,645
WRIA 15: Vashon-Maury Island	Fern Cove Restoration	0.50	100	21,780	0
	Palmer Judd Riparian Planting	0	300	130,000	2,192
Total WRIA 15	2	0.50	400	151,780	2,192
Totals	16 Projects	0.95 Acres	9,380 Lineal Ft	1,159,580 Lineal Ft	21,120 Plants
			1.7 Miles	26.6 Acres	



WRIA 7: Snoqualmie-Skykomish Watershed

In 2010 SHRP staff worked with three property owners on new habitat restoration projects, completed the second phase of a continuing project, and continued monitoring and maintenance on another five previously constructed projects within WRIA 7.

WRIA 7: New Restoration Projects



Restoring the riparian buffer at Patterson Creek

Weed fabric and plantings of willow and cottonwood were installed along 300 lineal feet of Patterson Creek to enhance 4,500 square feet of riparian buffer and restore approximately 0.23 acres of degraded wetland. Additional planting will occur in spring 2011 by adding beaver resistant species such as Pacific ninebark, Oregon ash and twinberry within the fabric-covered areas.



WCC crew planting willow and cottonwood stakes

WCC crews placed weed fabric along 100 lineal feet of both banks of Patterson Creek to suppress reed canarygrass. WCC crews planted 1,812 willow and cottonwood stakes within the weed fabric to restore 9,000 square feet of riparian buffer and 0.10 acres of wetland. Crews will

Aldarra Patterson Riparian Planting (Private Ownership):

Weed fabric and plantings of willow and cottonwood were installed along 300 lineal feet of Patterson Creek to enhance 4,500 square feet of riparian buffer and

restore approximately 0.23 acres of degraded wetland. Additional planting will occur in spring 2011 by adding beaver resistant species such as Pacific ninebark, Oregon ash and twinberry within the fabric-covered areas.

Crittenden Patterson Riparian Planting (Private Ownership):

WCC crews placed weed fabric along 100 lineal feet of both banks of Patterson Creek to suppress reed canarygrass. WCC crews planted 1,812 willow and cottonwood stakes within the weed fabric to restore 9,000 square feet of riparian buffer and 0.10 acres of wetland. Crews will

plant beaver-resistant shrubs and trees (Douglas spirea and Oregon ash) in 2011 to complete the planting.

Lee Patterson Riparian Planting (Private Ownership):

Weed fabric was placed to suppress reed canary grass along 150 lineal feet of the left bank of Patterson Creek in spring 2010. WCC crews planted 3,150 willow and cottonwood livestakes in the fall to enhance 10,500 square feet of Patterson Creek riparian buffer and restore 0.12 acres of wetland. More beaver resistant shrubs and trees will be planted in spring 2011.



Weed fabric along Patterson Creek

WRIA 7: Continuing Restoration Projects

Changing Seasons Snoqualmie Riparian Planting (Private Ownership)

WCC crews planted 1,011 native shrubs and trees along 600 lineal feet of the Snoqualmie River to restore 24,000 square feet of riparian buffer.

WRIA 7: Monitoring and Maintenance

Monitoring and maintenance continued at five project sites.

- **Herbco Snoqualmie Riparian Planting (Private Property)**
- **Andrews Tuck Creek Snoqualmie Riparian Planting (Private Property)**
- **Gordon Patterson Creek Riparian Planting (Private Property)**
- **Riverbend Ranch Snoqualmie Riparian Planting (Private Property)**
- **Quigley Park Snoqualmie Riparian Planting (Public Property)**



WRIA 8: Lake Washington-Cedar River Watershed

In 2010 SHRP staff worked with three private property owners on new habitat restoration projects, completed the second phase of a continuing project, and continued monitoring and maintenance on another seven previously constructed project within WRIA 8.

WRIA 8: New Restoration Projects



Installing landscape fabric at Bear Creek

1,100 LF of stream bank to restore 3.6 acres of riparian habitat.

Ellis Middle Issaquah Riparian Planting (Public Property)

Planting and invasive species removal has enhanced this 17.6 acre King County property. WCC crews planted 1,100 trees and 1,250 shrubs between February and October along 700 feet of streambank to enhance a total of 1.25 acres of riparian buffer. WCC crews installed temporary fencing to protect the plants from heavy deer and elk usage.



Ahlstrom Middle Issaquah Riparian Planting (Public Property):

SHRP enhanced this 10-acre, newly-acquired King County property by removing non-native species and replanting with 1,600 trees and 930 shrubs along

Lien Bear Riparian Planting (Private Property)

SHRP is working with the owners of Wood-N-Brook Farm to enhance a 650-foot reach of Bear Creek. In 2010, SHRP prepared the site by injecting 4,000 square feet of knotweed with herbicide and installing 1,600 square feet of landscape fabric and removing blackberry and other invasive weeds. An 80 foot section of bank was planted with 225 shrubs and willow live stakes to prevent further bank erosion. The remaining buffer planting is scheduled for the winter of 2011.

WRIA 8: Continuing Restoration Projects

Stegman Cedar Bank Stabilization (Private Property)

SHRP constructed a bioengineered demonstration project along 80 lineal feet of the Cedar River. Geotextile fabric "socks" were filled with compost and staked into benches that were planted with 225 shrubs. Cedar Grove Composting, Inc. donated the compost for this project.



Geotextile "socks" filled with compost

WRIA 8: Monitoring and Maintenance

Monitoring and maintenance continued at seven project sites.

- **Bassetti Cottage Lake Riparian Planting (Private Property)**
- **Cemetery Ponds Wetland Enhancement (Public Property)**



Enhancing Cemetery Ponds' wetlands



- Cottage Lake Riparian Planting (Private Property)
- Mary Cash Farm Invasive Control and Planting (Public Property)
- Middle Issaquah Invasive Control and Planting (Public Property)
- Schnittker Issaquah Trib Riparian Planting (Private Property)
- Issaquah Tributary 0203 Riparian Planting (Public Property)

WRIA 9: Green/Duwamish River Watershed

In 2010 SHRP staff worked with a private property owner on one active habitat restoration project and completed the second phase of five continuing projects.

WRIA 9: New Restoration Projects



WWC crew planting trees

Litowitz Newaukum Conifer Underplanting (Private Property):

WCC planted over 5,320 conifers on 16 acres to enhance the riparian buffer along 900 feet of Newaukum Creek that lacked conifers.

WRIA 9: Continuing Restoration Projects

Brewer Newaukum Riparian Planting (Private Property)

WCC planted 180 native trees along 300 lineal feet of both banks of Newaukum Creek to

enhance 1,000 square feet of buffer. Invasive reed canarygrass and Himalayan blackberries were controlled. More planting is scheduled for January 2011.

Fallen Newaukum Riparian Planting (Private Property)

WCC planted 240 native trees along 2,000 lineal feet of two forks of Newaukum Creek to enhance 10,000 square feet of buffer. A 50-foot temporary livestock fence was built to exclude goats. More planting and weed control is scheduled for January 2011.

Lopez Newaukum Riparian Planting (Private Property)

This is the third phase of a habitat enhancement project along 220 feet of Newaukum Creek. A total of 50 trees and shrubs were planted to complete the restoration of 3,500 square feet of riparian buffer. More planting is scheduled for January 2011.

Rosatto Newaukum Riparian Planting (Private Property)

This is the fourth phase of this invasive species control and riparian buffer restoration project that encompasses 1,025 lineal feet along both sides of Newaukum Creek. WCC crews planted 740 large trees and shrubs in December 2010. Crews also continued maintenance of previous plantings and control of invasive plant species including Himalayan blackberry and reed canarygrass.



Rosatto riparian buffer restoration project

Westby Newaukum Riparian Planting (Private Property)

WCC planted 115 native trees and shrubs along 400 feet of Newaukum Creek to restore 24,000 square feet of riparian habitat. More planting is scheduled for January 2011.



WRIA 10: White River Watershed

In 2010 SHRP monitored and maintained one habitat restoration project within WRIA 10.



Mowed blackberry bushes at VanWieringen

WRIA 10: Monitoring and Maintenance

Monitoring and maintenance continued at one project site.

VanWieringen Boise Enhancement Phase II (Private Property)

WRIA 15: Vashon/Maury Island

In 2010 SHRP staff continued to support the restoration efforts of the Vashon/Maury Island Land Trust on one new project and one continuing project as well as monitoring and maintenance work on one project. SHRP is working with private landowners to design two future projects.

WRIA 15: New Restoration Projects



New riparian buffer forest along Judd Creek

Palmer Judd Riparian Planting (Vashon/Maury Island Land Trust)

WCC crews planted nearly 3 acres of riparian buffer forest along Judd Creek. Crews removed invasive plant species including ivy, holly and blackberry, and planted 387 trees and shrubs and 1,805 Western red cedars.

WRIA 15: Continuing Restoration Projects

Fern Cove Restoration (Vashon/Maury Island Land Trust)

WCC removed invasive plant species and prepared the site for planting by volunteers working for the Vashon/Maury Island Land Trust. These volunteers planted 21,780 square feet of riparian buffer as well as 0.5 acres of estuarine habitat.

WRIA 15: Monitoring and Maintenance

Monitoring and maintenance continued at one project site.

Paradise Valley Riparian Planting (Vashon/Maury Island Land Trust)





Mission

The mission of SHRP is to build small low-cost habitat restoration projects to enhance and restore streams and wetlands and their buffers. The SHRP Program works closely with the Water and Land Resource Division's Basin Steward Program to identify projects and restoration priorities within King County's watershed resource inventory areas (WRIA's).

This ensures that SHRP projects fit into the broader plans for watershed restoration and build on the successes of other restoration and stewardship efforts. Surface Water Management funds are leveraged with grants, community volunteer labor, and partnerships between landowners, local, state, and federal agencies.



King County

Department of
Natural Resources and Parks
Water and Land Resources Division

Capital Projects Section

<http://dnr.metrokc.gov/wlr/cposa/shrp/>

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