



# Small Habitat Restoration Program

Building effective and inexpensive projects that enhance aquatic ecosystems

## Annual Report



In the Small Habitat Restoration Program (SHRP) performed work on 44 projects to restore streams, wetlands and their buffers to protect water quality and provide habitat for native fish and wildlife (Figure 1).

### Program highlights include:

- new construction projects
- 18 projects being maintained and monitored
- technical assistance projects
- 2.3 miles of streambank revegetated with native plants
- 12 acres of stream and wetland buffer revegetated with native plants

## Mission

The mission of SHRP is to build small low-cost habitat restoration projects to enhance and restore streams and wetlands. 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 \$20,000. Projects are constructed on private or public property as long as they provide benefits to the public at large. Since 1995 SHRP has performed over 300 projects in the White, Green, Puget Sound, Cedar-Sammamish-Lake Washington and Snoqualmie river basins.

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

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 watersheds. This ensures that SHRP projects fit into the broader plans for watershed restoration and build on the successes of other restoration and stewardship efforts.

SHRP leveraged public funds with grants, community volunteer planting events, and partnerships between landowners, local, state, and federal agencies. The SHRP website (<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.

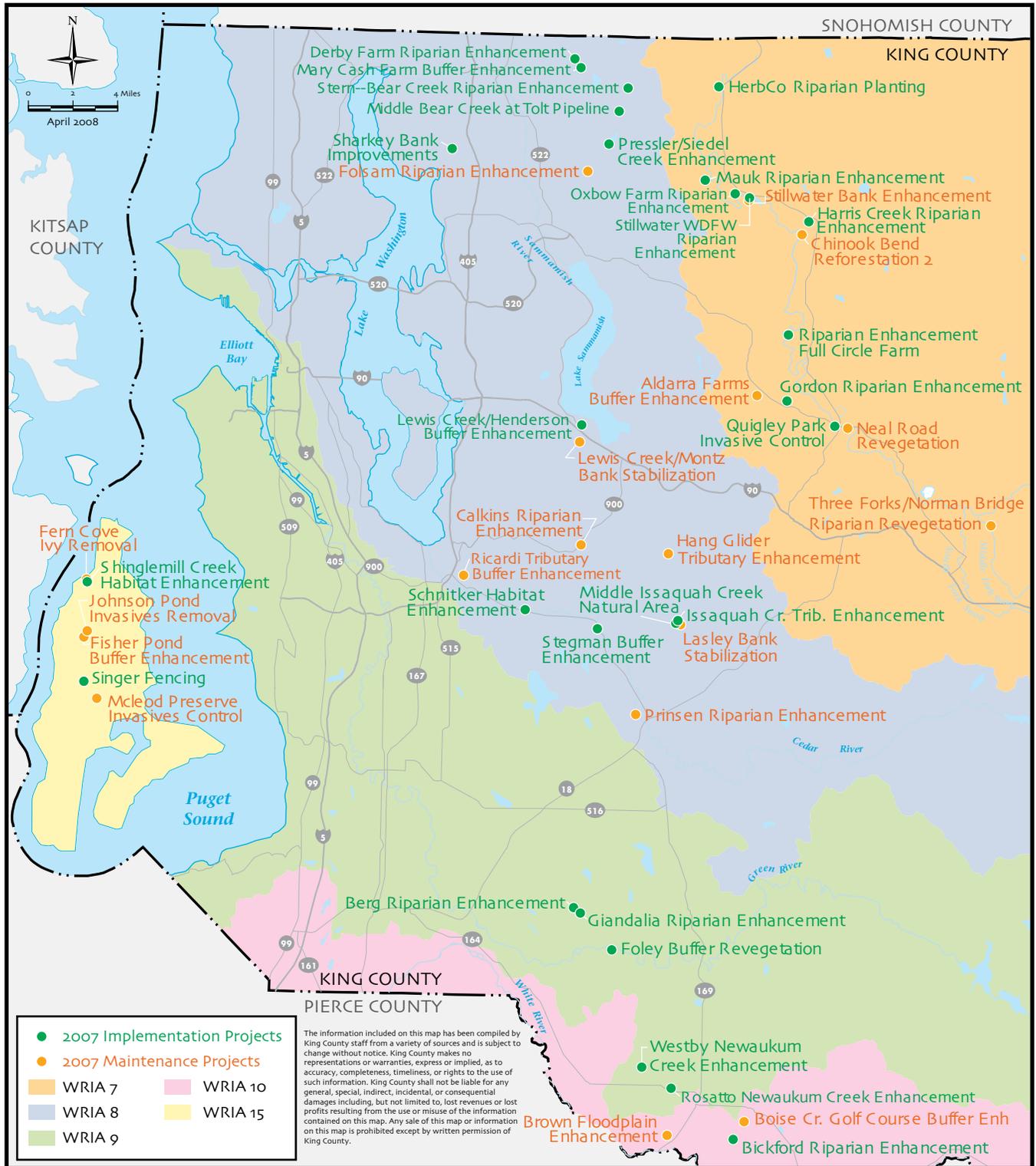


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# 2007 Active SHRP Projects



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## 2007 SHRP Project Summary Table

WRIA	New Projects	Monitoring & Maintenance	Technical Assistance	Riparian Buffer Restoration (LF)	Riparian Buffer Restoration (SF)
WRIA 7: Snoqualmie-Skykomish					
	Full Circle	Aldarra		100	2000
	Gordon	Chinook Bend		2000	30000
	Harris	Neal Road		450	33750
	Herbco	Stillwater		175	13125
	Mauk	Three Forks		200	3000
	Oxbow			200	5000
	Quigley			200	8000
	Stillwater WDFW			500	
Total WRIA 7	8	5	0	3,825	94,875
				0.72 Acres	2.18 Acres
WRIA 8: Lake Washington-Cedar River	Derby Farm	Calkins	Walla Tributary	240	7840
	Lewis Creek	Folsam		125	3200
	Mary Cash	Hang Glider		175	39204
	Middle Bear Creek	Lasley		280	26250
	Middle Issaquah Creek	Lewis Creek		450	22500
	Pressler/Siedel	Pinsen		130	4875
	Schnittker	Ricardi		250	16000
	Sharkey			80	2300
	Stegman			350	21780
	Stern			195	2850
Total WRIA 8	10	7	1	2,275	146,799
				0.43 Acres	3.37 Acres
WRIA 9: Green River	Berg		Floyd Pond	2640	66000
	Foley			100	1500
	Giandalia			200	5000
	Rosatto			1000	30000
	Westby			400	1,780
Total WRIA 9	5	0	1	4,340	124,280
				0.82 Acres	2.85 Acres
WRIA 10: White River	Bickford	Boise Creek GC		225	5625
		Brown			
Total WRIA 10	1	2	0	225	5,625
				0.04 Acres	0.13 Acres
WRIA 15: Vashon-Muay Island	Shinglemill Creek	Fisher Pond			
	Singer	Johnson Pond		1600	152460
		Fern Cove			
		Mcleod Preserve			
Total WRIA 15	2	4	0	1,600	152,460
				0.30 Acres	3.50 Acres
<b>Totals</b>	<b>26</b>	<b>18</b>	<b>2</b>	<b>12,265</b>	<b>524,039</b>
				<b>2.32 Acres</b>	<b>12.03 Acres</b>

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# WRIA 7: Snoqualmie-Skykomish Watershed

In 2007 the SHRP staff worked with public and private property owners on eight habitat restoration projects.

## Full Circle Farm (Private Ownership)

**28S007**

SHRP staff worked collaboratively with Stewardship Partners to restore approximately 100 lineal feet (LF) of riparian habitat on the Snoqualmie River.

## Gordon (Private Ownership)

**28S005**

WCC crews installed approximately 2,000 LF of weed fabric to suppress reed canarygrass on both banks of Patterson Creek. Native trees and shrubs were installed including red alder, Douglas hawthorne, Oregon Ash, black cottonwood, Sitka spruce, Western red cedar, Pacific willow, snowberry, twinberry, and red twig dogwood. Patterson Creek is a tributary to the Snoqualmie River and is important for spawning and rearing of Chinook and coho salmon. The project was designed to reduce the density of reed canary grass, shade the creek, provide cover for salmonids and restore 30,000 square feet (SF) of riparian buffer.



## Harris Creek (Private Ownership)

**28S006**

WCC crews planted 33,750 SF of buffer with native plants along 450 LF of the left bank of Harris Creek. The plants will provide shade to the creek and a future source of large woody debris.

## Herbco (Private Ownership)

**28S002**

WCC crews injected and sprayed invasive knotweed with herbicide and laid weed fabric along approximately 175 LF of the left bank of the Snoqualmie River. Approximately 1,420 native shrubs and trees were planted to restore 13,125 SF of riparian habitat.

## Mauk Riparian Enhancement (Private Ownership)

**28S003**

WCC crews cut blackberry and installed weed fabric along 200 LF of the left bank of a tributary stream to the Snoqualmie River. The goal of this project is to restore 3,000 SF of riparian buffer. Native trees and shrubs were planted, including Sitka spruce, Western red cedar, red alder, cottonwood, Pacific willow, twinberry, red twig dogwood, Pacific ninebark, snowberry, and salmonberry. Additional willows were also planted on the bank of the Snoqualmie River to supplement earlier plantings.



Mauk SHRP

## Oxbow Farm (Private Ownership)

**28S004**

WCC crews planted 1,000 willows along 200 LF of the right bank of the Snoqualmie River to create shade and help stabilize 5,000 SF of stream bank.





### Quigley Park (KC Ownership)

#### **28S010**

WCC crews cut blackberry and injected knotweed with herbicide prior to planting 200 LF of the Snoqualmie River levee at Quigley Park in Fall City. Nootka rose, snowberry, Sitka willow, and twinberry were planted in order to restore 8,000 SF of riparian buffer.

### Stillwater WDFW (Public Ownership)

#### **28S014**

WCC crews planted 1,500 willow and red twig dogwood live stakes along 500 LF of an abandoned oxbow of the Snoqualmie River as part of a joint project with the Washington Department of Fish and Wildlife. The goal of the project is to restore native scrub-shrub vegetation and enhance off-channel salmon rearing habitat.

## WRIA 7 Monitoring and Maintenance

Five projects were monitored and maintained in WRIA 7 in 2007.

### Aldarra Farms (Private Ownership)

#### **4G1798**

WCC crews removed weed fabric from a 30,000 SF riparian area on Patterson Creek that was planted with trees in 2005.

### Chinook Bend (KC Ownership)

#### **28S009**

WCC crews completed maintenance on this project by removing weed fabric from around 15 acres (AC) of alders and cottonwoods that were planted in 2002.



### Neal Road (KC Ownership)

#### **3M1798**

WCC crews completed maintenance on a project by removing weed fabric from 10,000 SF of previously planted native shrubs and trees in the floodplain of the Snoqualmie River at Fall City Natural Area.

### Stillwater (Private Ownership)

#### **3W1798**

WCC crews removed weed fabric from 10,000 SF of previously planted native shrubs and trees that are now established in the buffer of the Snoqualmie River.

### Three Forks (KC Ownership)

#### **2S1798**

WCC crews removed 1.5 AC of Himalayan blackberry and planted native trees and shrubs along 1,400 LF of the Middle Fork of the Snoqualmie River. The project was started in 2004 and maintained through 2007.

## WRIA 8: Lake Washington-Cedar River Watershed

In 2007 SHRP staff worked with public and private property owners on ten habitat restoration projects.

### Derby Farm Enhancement (Private Ownership)

#### **28C006**

Invasive blackberries were removed and native trees and shrubs were planted along 240 LF of Daniels Creek and a tributary in order to restore 7,840 SF of riparian habitat. The project was started in 2006 and will be maintained through 2008.



### Lewis Creek Buffer Enhancement / Henderson (Private Ownership)

#### 9A1095

WCC crews removed invasive blackberry along 125 LF of Lewis Creek a tributary to Lake Sammamish. The project will restore 3,200 SF of riparian buffer habitat.

### Mary Cash Farm (Private Ownership)

#### 28C008

In 2007 5,000 SF of blackberry was mowed and covered with landscape fabric to prepare for future planting. WCC planted 175 LF of buffer with native trees to restore a total of 39,204 SF of riparian habitat. The site will be monitored and maintained through 2010.

### Middle Bear Creek at Tolt Pipeline (Private Ownership)

#### 9H1095

Non-native weeds were removed, fencing was installed, and trees and shrubs were planted along 130 LF of stream buffer. An additional 150 LF (15,000 SF) of buffer was underplanted with 150 conifers. A total of 26,250 SF of riparian buffer was restored by this project. The project was started in 2004 and will be maintained through 2009.

### Middle Issaquah Creek Natural Area (KC Ownership)

#### 28C007

A five-year weed removal, planting and maintenance plan was developed for the Middle Issaquah Creek Natural Area. In fall 2007, 450 LF of stream was weeded and planted with native shrubs and trees. About 5,000 SF of Himalayan blackberry was removed and covered with fabric. The project will restore 22,500 SF of riparian buffer habitat.

### Pressler/ Siedel Creek Enhancement (Private Ownership)

#### 9G1095

This project was an expansion of a project started in 2004. WCC crews planted 130 LF of stream buffer with native shrubs and trees to restore 4,875 SF of riparian habitat



*Pressler SHRP before planting*



*Pressler SHRP three years later*

### Schnittker (KC, Private Ownership) 28C002

WCC crews planted native vegetation along 250 LF of an Issaquah Creek Tributary 0178 to restore 16,000 SF of riparian buffer. In 2006, SHRP removed partial fish passage obstructions in two locations along this low gradient spring-fed tributary to Issaquah Creek.

### Sharkey (Private Ownership)

#### 8S1095

WCC crews planted 80 LF of stream buffer with native vegetation to control erosion, provide vegetative diversity, future wood recruitment and shade to 2,300 SF of Cedar Creek ( a tributary to Juanita Creek). The project was started in 2004 and maintained through 2007.





## Stegman Buffer Enhancement (Private Ownership)



*WCC crews on steep slopes above the Cedar River using safety lines to install plantings on the Stegman project.*

**9D1095**  
WCC crews cut and grubbed invasive butterfly bush and blackberries from steep banks along the Cedar River. Native trees and shrubs were planted along 350 LF to restore 21,780 SLF of riparian buffer habitat.

## Stern Riparian Enhancement (Private Ownership)



*Stern SHRP before planting*

**9T1095**  
WCC crews injected 400 SF of knotweed with herbicides and planted 195 LF of buffer along Bear Creek with native trees and shrubs to restore 2,850 SF of riparian habitat. The project was started in 2005 and maintained through 2007.



*Stern SHRP 2 years later*

## WRIA 8 Monitoring and Maintenance

SHRP monitored and maintained seven projects in WRIA 8 during 2007.

### Calkins (Private Ownership)

**8Q1095**  
WCC crews removed blackberry, laid weed fabric and planted approximately 150 LF of the right bank of May Creek with 146 native plants to restore 2,250 SF of riparian buffer.

### Folsam Bear Creek Enhancement (Private Ownership)

**9U1095**  
WCC crews removed Himalayan blackberries, planted 200 LF of buffer, and controlled small patches of knotweed to restore 4,375 SF of riparian habitat on Bear Creek. The project was started in 2005 and will be maintained through 2008.

### Hang Glider Tributary Enhancement (KC Ownership)

**8Z1095**  
WCC and crews removed invasive blackberry, English ivy and Japanese knotweed, from along 840 LF of the Hang Glider tributary to Issaquah Creek to enhance 4,560 SF of riparian habitat. This follows work completed in 2004, when an eroding stream bank was stabilized using biotechnical treatments including coir logs, coir lifts and willow live-staking along 400 linear feet of the creek and buffer planting in 2005.





## Lasley



Montz May 2005



Montz Sept 2007

### 7V1095

Weed fabric was removed from 13,000 SF of native shrubs and trees previously planted in 2004. This work completed this bank stabilization and riparian planting project on Issaquah Creek.

## Lewis Creek/Montz (Private Ownership)

### 9S1095

WCC Crews removed invasive blackberry and morning glory along 125 LF of both banks of Lewis Creek on the Montz and Herold Properties. 5,000 SF of riparian buffer plantings were watered and maintained. In 2005, SHRP constructed 125 LF of biotechnical slope stabilization including placement of in-stream large woody debris anchored by duckbill anchors. In 2006, an additional 30 LF of bio-bank stabilization was installed on the right bank of Lewis Creek using coir lifts and native vegetation.

## Prinsen

### 7L1095

Maintenance included weed control and watering of 5,000 square feet of riparian buffer.

## Ricardi Tributary Buffer Enhancement (Private Ownership)

### 9B1095

SHRP removed invasive species including morning glory, blackberry and Japanese knotweed from along 320 LF of Ricardi Creek to restore 14,600 square feet of riparian buffer.

## WRIA 8 Technical Assistance

SHRP staff provided technical assistance to two property owners on an unnamed tributary to Issaquah Creek.

SHRP staff also advised a property owner on how to use bioengineering and native plantings to stabilize eroding stream bank stabilization on Thornton Creek. The property owner was referred to the City of Seattle programs and contacts. The property owner developed a restoration project design and was successful in receiving a grant from Seattle Public Utilities and from King County's Grant Exchange Program to implement the project.

SHRP staff provided materials on wetland restoration and contacts with programs in the City of Seattle and the City of Shoreline to members of the Paramount Park Neighborhood Group.

## Walla Tributary (Private Ownership)

### 1F1095

SHRP staff helped the property owner develop an affordable design solution and obtain the proper state and county permits to stop flooding associated with a failed fish pond. The project will also improve fish passage from the Cedar River to the off-channel pond in a future phase. The property owner successfully implemented the project on his own to solve the problem.





## WRIA 9: Green-River Watershed

In 2007 SHRP staff worked with public and private property owners on five habitat restoration projects.

### Berg Riparian Enhancement (Private Ownership)

#### 28G002

WCC crews planted 500 Douglas fir and Western red cedar trees along 2,640 LF of streambank on Covington Creek to restore 66,000 SF of riparian habitat.

### Foley Buffer Enhancement (Private Ownership)

#### 8X1095

Work on this project started in 2004 but significant plant mortality led to a project redesign. WCC crews planted 8 test plots on Mr. Foley's property in the Green River floodplain. The test plots were installed to see what species grow in the rocky soil. There were 8 plots, each with 32 trees, stakes and shrubs planted with an identical planting plan. Some had landscape fabric and others were bare ground. Irrigation was installed in some of the plots. Total project area is 3.8 AC but area actually planted for the test plots was only about 1500 SF.



### Giandalia Riparian Enhancement (Private Ownership)

#### 38G003

This project enhanced fish and wildlife habitat along 200 LF of Covington Creek. Invasive species were removed and 295 trees and shrubs were installed to restore the riparian corridor, stabilize the banks, and decrease erosion. The total new buffer area created is 5000 SF.

### Rosatto Newaukum Creek Enhancement (Private Ownership)

#### 28G005

SHRP staff worked with a private landowner to develop a planting plan. This project will occur along 1000 LF of Newaukum Creek on both sides of the creek. Reed canarygrass and blackberry will be controlled and the buffer will be planted in two phases with willow live stakes, trees and shrubs to stabilize the banks of the creek and establish a native buffer. The total buffer that will be established is about 30,000 square feet. The project is scheduled to be completed in early 2008.

### Westby Newaukum Creek Enhancement (Private Ownership)

#### 28G007

This project enhanced fish and wildlife habitat along 400 LF of streambank on Newaukum Creek. Work included grubbing out invasive reed canarygrass and blackberry and installing barb wire fence to keep cattle out of the buffer. A total of 1860 trees and shrubs were planted to help stabilize the banks of the creek and establish 21,780 SF of native buffer.



## WRIA 9 Technical Assistance

### Floyd Pond (Private Ownership)

SHRP staff provided technical assistance to private landowners who want to build a pond and enhance their property for fish and wildlife. SHRP staff worked with the Vashon Island Basin Steward to meet with the landowner and develop recommendations on permitting, planting plans and plant species.

## WRIA 10: White River Watershed

In 2007 SHRP staff worked with public and private property owners on one habitat restoration project.

### Bickford (Private Ownership)

#### **28W002**

WCC crews planted and staked 225 LF of stream buffer along Boise Creek to restore 5,625 SF of riparian buffer.

## WRIA 10 Monitoring and Maintenance

Two projects were monitored and maintained in WRIA 10 in 2007.

### Boise Creek Golf Course (KC Ownership)

#### **3Y1798**

WCC crews controlled Japanese knotweed and Himalayan blackberry along Boise Creek and planted 460 LF of stream to restore 14,650 SF of riparian buffer. The project was installed in 2005 and was maintained through 2007.

### Brown SHRP (Private Ownership)

#### **3T1798**

In 2004 the WCC planted 475 LF of reed canary grass dominated buffer. A combination of dense willow/dogwood staking and use of landscape fabric and fencing suppressed reed canary grass enough to establish shrub and tree cover and restore 28,750 SF of riparian buffer. The project was maintained through 2007.



*Brown SHRP in 2005*



*Brown SHRP two years later*





# WRIA 15: Vashon-Maury Island (Central Puget Sound Watershed)

In 2007 SHRP staff worked with private property owners on two habitat restoration projects.

## Shinglemill Creek (Vashon/Maury Island Land Trust)



*WCC Crews installing LWD in Shinglemill Creek*

upstream erosion sources.

**28V005**  
SHRP staff provided design and construction logistics to place 40 pieces of large woody debris (LWD) along 200 LF of Shinglemill Creek in order to create habitat structures and trap fine sediments from

## Singer (Private Ownership)



*Singer SHRP stream and wetland fencing project*

buffer and riparian area to restore 3.5 AC of Judd Creek.

**28V009**  
WCC crews installed 1600 LF of combination barb wire and livestock fence along both sides of Judd Creek that were previously being grazed by horses and cattle. 1250 trees and shrubs were planted in the wetland

## Vashon Island Monitoring and Maintenance

Four projects were monitored and maintained in WRIA 9 in 2007.

### Fisher Pond (Private Ownership)

**28V011**  
WCC crews performed maintenance on 2 AC of land that was cleared of Scot's broom and planted in 2005.

### Johnson Pond (Private Ownership)

**28V008**  
WCC crews weeded and watered native plantings.

### Fern Cove (Private Ownership)

**28V010**  
WCC crews continued English Ivy eradication efforts and weeded 5,000 SF of native trees and shrubs located at the mouth of Shinglemill Creek

### McLeod Preserve (Private Ownership)

**28V007**  
The project site was monitored for the presence of English ivy that had been removed in 2006.

## Naturescaping

SHRP staff co-led two Naturescaping Salvage events attended by 345 people. During the event participants salvaged native plants to take to their own planting projects.



*Loaded up with salvaged native plants for the ride home*



# Small Habitat Restoration Program

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## Annual Report

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/>

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