

King County

# Small Habitat Restoration Program Annual Report 2016

*Enhancing streams and wetlands for community, fish, and wildlife*

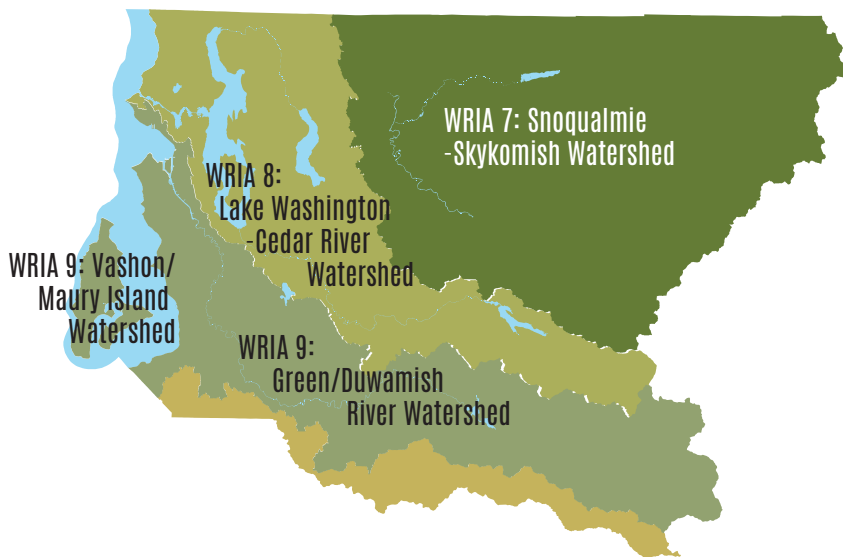


**King County**

Department of Natural Resources and Parks  
**Water and Land Resources Division**

[www.kingcounty.gov/shrp](http://www.kingcounty.gov/shrp)

## KING COUNTY



## PROJECT PARTNERS



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# 2016 Program Summary and Accomplishments

In 2016 the Small Habitat Restoration Program (SHRP) constructed and maintained 49 habitat projects to enhance and restore streams, wetlands, and riparian buffers throughout King County. SHRP staff worked with 41 private property owners to enhance fish and wildlife habitat on their property.

## PROGRAM HIGHLIGHTS:

**20** new construction or planting projects

**29** projects maintained and monitored

**13,782** native trees, shrubs and non-woody plants installed

**7,125** linear feet of riparian buffer enhanced or restored

**11.4** acres of riparian buffer enhanced or restored

**0.5** acre of floodplain restored via reconnection

**4.25** acres of wetland habitat restored or enhanced

**1,052** linear feet of nearshore or marine shoreline restored; and

**31** pieces of large woody debris installed

In 2016, grant funding for SHRP totaled over \$76,000. Forging new partnerships and strengthening relationships with grant agencies and private landowners allows the program to maximize limited public funding to improve water quality and enhance habitat for fish, wildlife and future generations.



Spotlight projects within King County's Watershed Resource Inventory Areas (WRIAs) showcase successful collaborations with private property owners, homeowner associations, community groups, and public agencies. These projects typically involve local community outreach, site planning and preparation, native plantings, placing wood in streams, invasive weed control and project maintenance.

## SPOTLIGHT PROJECTS INCLUDE:

### WRIA 7:

#### **Snoqualmie-Skykomish Watershed Anderson Patterson Creek Restoration Project**

Project manager Cindy Young implemented a two-acre wetland restoration project to establish native trees and shrubs and reduce the dominance of invasive species.

### WRIA 8:

#### **Lake Washington- Cedar River Watershed Cottage Lake Creek Enhancements 2015-2017**

Project manager Laura Hartema worked with twenty two property owners along Cottage Lake Creek to enhance stream buffers for fish and wildlife.

### WRIA 9:

#### **Green-Duwamish Watershed Coronado Springs Mallard Lake Enhancement**

Program manager Mason Bowles and project manager Cody Toal designed and installed a water quality and habitat improvement project for Mallard Lake in White Center.

#### **WRIA 9: Vashon-Maury Island Scott Judd Creek Habitat Enhancement Phase 2**

Project manager Paul Adler implemented Phase 2 of a project to enhance fish and aquatic habitat by placing woody debris in the estuary of Judd Creek.

# Project Spotlight: WRIA 7 Snoqualmie-Skykomish Watershed

## 1 Anderson Patterson Creek Restoration Project

Pat Anderson's property includes Patterson Creek and many acres of wetland dominated by reed canary grass. Pat has always enjoyed watching wildlife on her property including deer, coyote, bear and salmon, so it was important to her that the land be preserved in perpetuity. King County purchased a portion of the property and Pat generously agreed to bequeath the rest for public open space.

In the Patterson Creek Basin, the top three issues affecting salmon survival have been identified as high instream temperatures as a result of lack of streamside vegetation, lack of large wood in the creeks and fish passage barriers. Because of poor habitat, salmon populations are low relative to historic conditions.

Cindy Young, Snoqualmie Basin SHRP lead, implemented a two-acre wetland restoration project on Pat's property to establish native trees and shrubs and reduce the dominance of reed canary grass. The plants will help shade the creek to keep temperatures low for salmon, a place for salmon to hide, provide a future source of woody debris and food for insects that fish feed on and improve wildlife habitat. Many animals depend on the salmon runs for food. Plants benefit from the nutrients ultimately provided by decayed salmon carcasses.

Weed fabric was installed in the spring of 2016 to kill reed canary grass and reduce competition. In the fall of 2016, 1,050 trees and 1,350 shrubs were installed on about 86,000 square feet of wetland. The work was funded with SWM fees. Future planting efforts will restore additional areas.



**Anderson Patterson Creek  
Restoration Project - DURING**

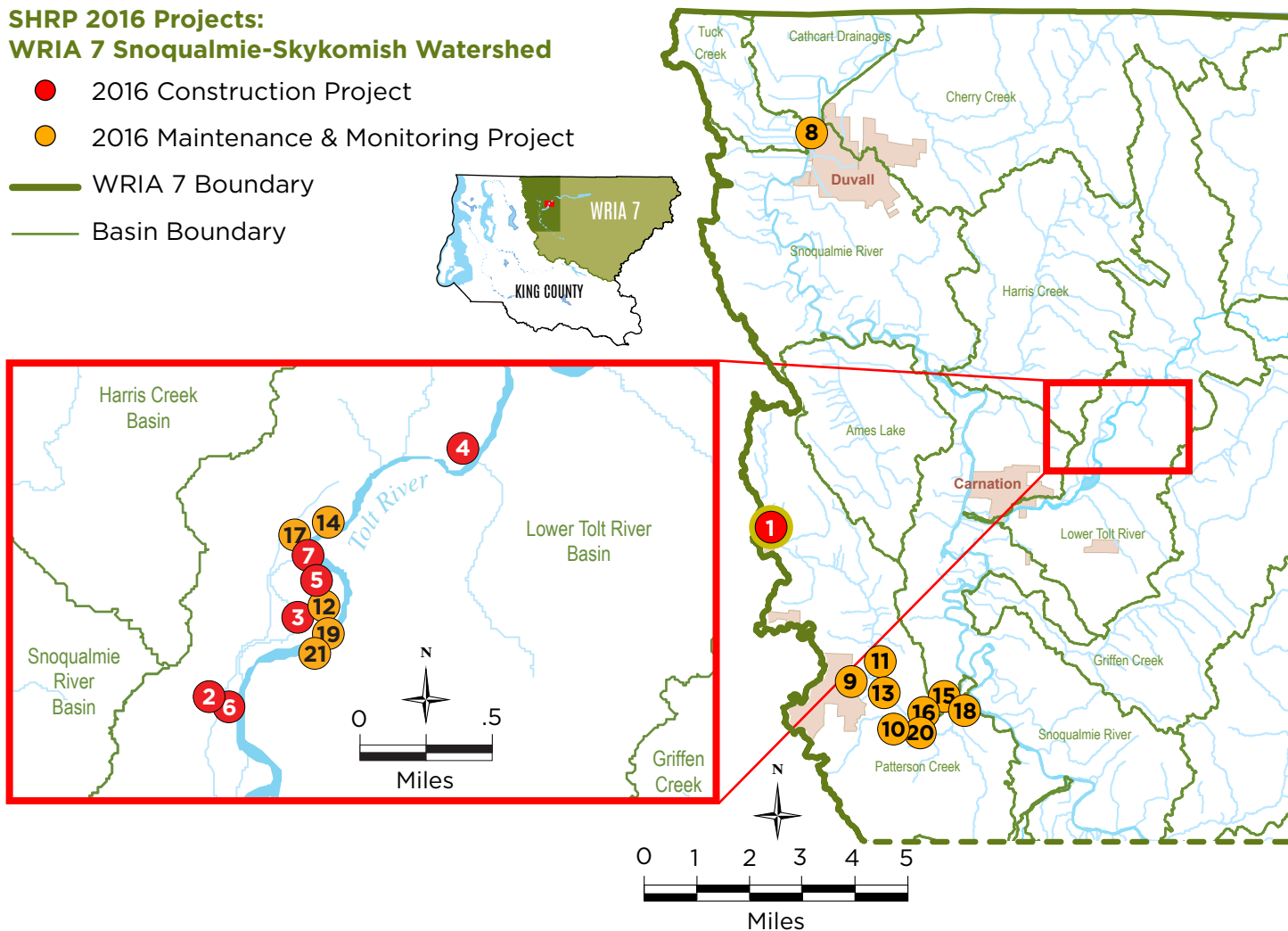


**Anderson Patterson Creek  
Restoration Project - AFTER.**  
*Small plants installed in weed fabric and  
plant stakes visible in the background.*



## SHRP 2016 Projects: WRIA 7 Snoqualmie-Skykomish Watershed

- 2016 Construction Project
- 2016 Maintenance & Monitoring Project
- WRIA 7 Boundary
- Basin Boundary



	Project Name	Property Ownership	Trees Planted	Non-woody plants installed	Shrubs Planted	Floodplain Restored Via Reconnection Acres	Wetland Habitat Restored or Enhanced Acres	Riparian Buffer Vegetation Restored Linear Ft	Riparian Buffer Vegetation Restored Square Ft
1	Anderson Patterson Creek Restoration	Private	1,050	0	1,350	0	4	500	86,000
2	Elves Tolt River Restoration	Public	200	0	0	0	0	200	7,200
3	Espinoza Tolt River Restoration	Public	800	50	540	0	0.25	260	45,000
4	Lyons Tolt River Restoration	Public	490	50	200	0	0	220	7,200
5	Rumel Tolt River Restoration	Public	390	100	600	0	0	150	32,600
6	Tolt River properties (Heintz/Mernikas/Valenta) Restoration	Public	150	0	0	0	0	0	0
7	Wagner Tolt River Restoration	Public	270	100	360	0.5	0	80	0
	<b>Total</b>		<b>3,350</b>	<b>300</b>	<b>3,050</b>	<b>0.5</b>	<b>4.25</b>	<b>1,410</b>	<b>178,000</b>

- 8 Andrews Tuck Creek Riparian Planting
- 9 Aldarra East Patterson Creek Restoration
- 10 Aldarra Patterson Riparian Planting
- 11 Crittenden Patterson Riparian Planting
- 12 Estepa Tolt River Restoration
- 13 Lee Patterson Riparian Planting
- 14 McClosky/Mouncey Tolt River Restoration

- 15 Mike Lein Patterson Creek Restoration
- 16 Montaine Patterson Creek Restoration
- 17 Moran/Wait Patterson Creek Restoration
- 18 Patrick Lein Patterson Creek Restoration
- 19 Stansbury Tolt River Restoration
- 20 Storybook Patterson Creek Restoration
- 21 Thornquist Tolt River Restoration

## Project Spotlight: WRIA 8 Lake Washington-Cedar River Watershed

### 1 Cottage Lake Creek Enhancements 2015-2017

Project manager Laura Hartema worked with 22 property owners along Cottage Lake Creek to enhance their buffers for fish and wildlife. Invasive weeds were controlled (bittersweet nightshade, yellow-flag iris, Himalayan blackberry, holly, English ivy and others). The properties were planted with 1,104 trees and 2,300 shrubs along 3,015 linear feet (4.15 acres) of Cottage Lake Creek.

These projects were identified in 2015 during a public outreach effort along Cottage Lake Creek, an extension of a larger outreach restoration effort that began in 2008. In 2015, letters were sent to 100 private properties along Cottage Lake Creek to seek their interest in enhancing streamside habitat. About 25% of owners responded with a desire to participate in the SHRP program.

A King County Flood Control District Cooperative Weed Management grant partially funded the project.



*Temporary Plant storage at a participating property owner's tennis court*

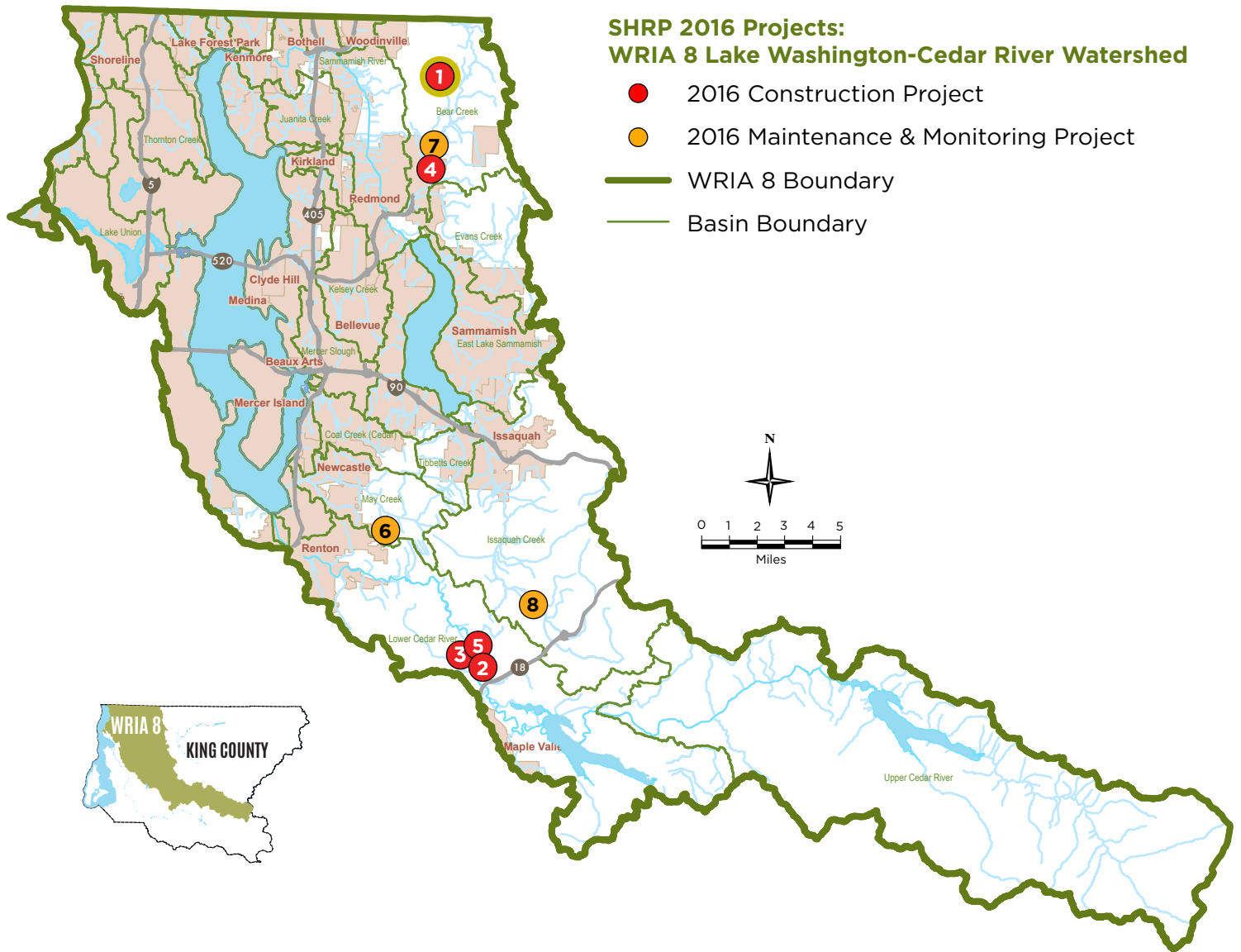


*Plants to be installed in eroding bank*



*Riparian buffer vegetation restoration after ivy removal.*





	Project Name	Property Ownership	Trees Planted	Shrubs Planted	Riparian Buffer Restoration Linear Ft	Riparian Buffer Restoration Sq Ft
1	Cottage Lake Creek SHRP 2015-2017	Private	1,104	2,370	3,015	180,825
2	Huselton and Dean Phase 1 Cedar River Planting	Public	185	545	0	0
3	Huselton Cedar River Phase 2	Public	275	0	0	0
4	Little Bit Bear Creek Knotweed Control	Private/ Public	0	0	1,700	87,120
5	Mourey Cedar River	Public	175	100	0	0
	<b>Total</b>		<b>1,739</b>	<b>3,015</b>	<b>4,715</b>	<b>267,945</b>

- 6 Coalfield Park Buffer Enhancement & Interpretive Signs
- 7 Craig property, Bear Buffer Enhancement SHRP
- 8 Ellis Middle Issaquah Bank Stabilization

# Project Spotlight 1: WRIA 9 Green-Duwamish River Watershed

## 1 Coronado Springs Mallard Lake Enhancement

The purpose of this project was to design and install a water quality and habitat improvement project for Mallard Lake, located in White Center. The project stabilized an eroding shoreline with native trees and shrubs, and reduced waterfowl fecal coliform. A potential future phase may deploy floating wetlands to treat high nutrient water, reduce bacteria and control harmful algal blooms.

Mallard Lake is a 2-acre lake located on private property and is part of the KC stormwater system. It is heavily used by urban waterfowl including Canada geese, gulls and mallard ducks. This project improves water quality to benefit both local residents and those downstream near Hicklin Lake. The project also benefits an underserved community and contributes to WLRD's Equity and Social Justice goals.



**Coronado Springs Mallard Lake Enhancement Project - BEFORE**



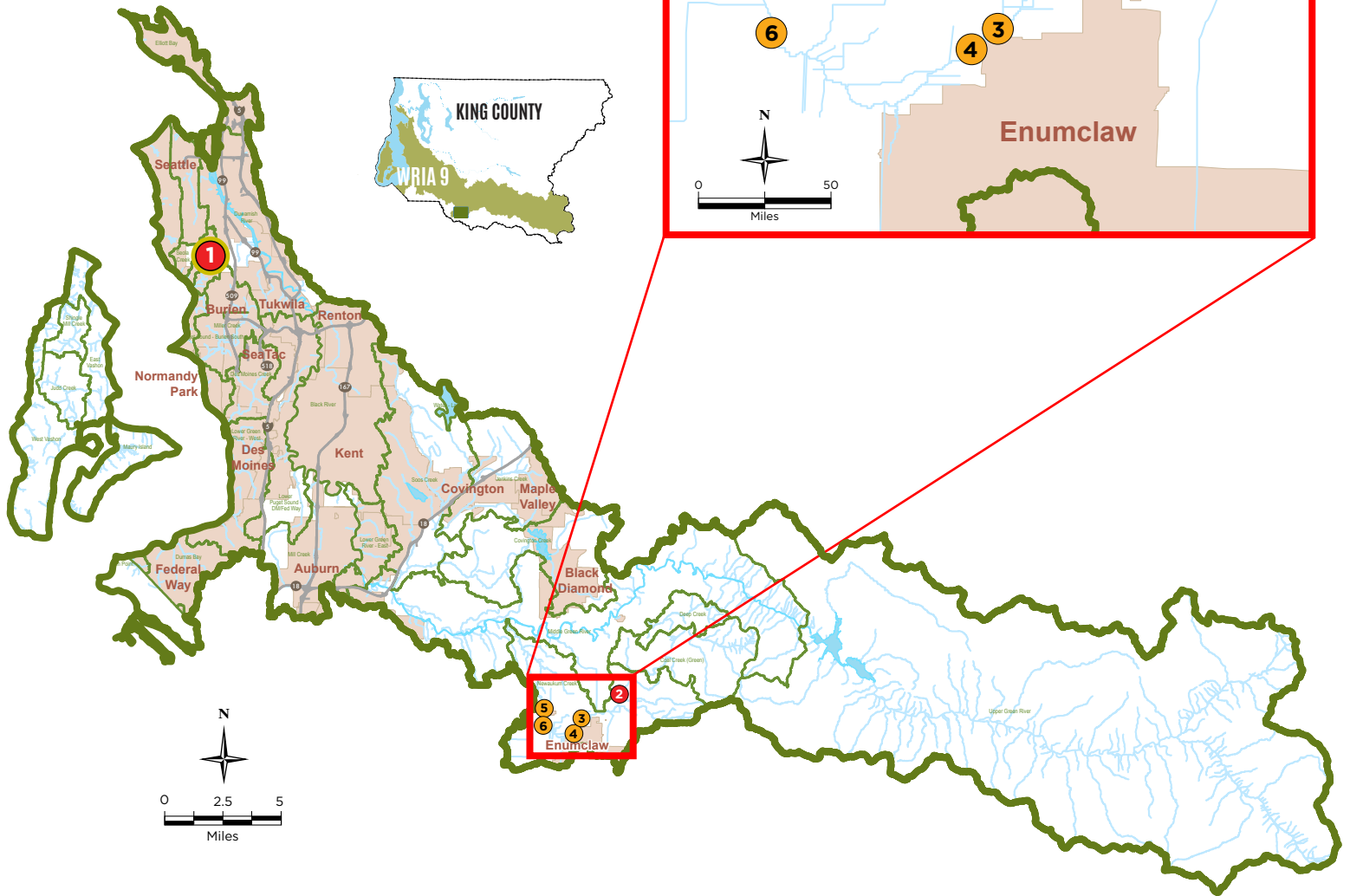
**Coronado Springs Mallard Lake Enhancement Project - DURING**



**Coronado Springs Mallard Lake Enhancement Project - AFTER**

**SHRP 2016 Projects:**  
**WRIA 9 Green/Duwamish River Watershed**

- 2016 Construction Project
- 2016 Maintenance & Monitoring Project
- WRIA 9 Boundary
- Basin Boundary



	Project Name	Property Ownership	Trees Planted	Shrubs Planted	Riparian Buffer Vegetation Restored Linear Ft	Riparian Buffer Vegetation Restored Square Ft
<span style="color: red;">1</span>	Coronado Springs Mallard Lake Enhancement	Private	45	795	0	7,845
<span style="color: red;">2</span>	Foothills Trail Stonequarry Creek Buffer Planting	Private	85	25	1,000	25,000
	<b>Total</b>		<b>130</b>	<b>820</b>	<b>1,000</b>	<b>32,845</b>

- 3 Collard Newaukum Buffer Enhancement
- 4 Magnusson Newaukum Creek Habitat Enhancement
- 5 Walker Newaukum Buffer Enhancement
- 6 Zech Newaukum Buffer Enhancement

## Project Spotlight 2: WRIA 9 Vashon-Maury Island

### 1 Scott Judd Creek Habitat Enhancement Phase 2

The Scott property is located at the mouth of Judd Creek and was acquired for open space and habitat enhancement. The purpose of the project is to conserve and restore natural processes by the placement of woody debris, naturally and historically more common along Puget Sound shoreline and within tributary streams.

In 2016, 36 habitat logs were placed and anchored along 400 feet of shoreline in the Judd Creek Estuary. The wood placements were designed to minimize construction impacts and to mimic existing wood found on the site, in reference reaches in Judd Creek and on shorelines on Vashon. Woody debris provides many habitat functions such as structure, cover and hydraulic complexity, substrate for organisms and spawning forage fish.

Judd Creek is the largest watershed on Vashon and is home to wild runs of coho, chum salmon and searun cutthroat trout. The lower reach of the creek is listed as critical steelhead habitat, and juvenile Chinook from other watersheds use the estuary of Judd Creek for rearing habitat.



*Scott property, Judd Creek stream reach, LWD placement*



*Scott property, Judd Creek stream reach LWD placement*

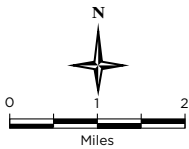


*Scott property, Judd Creek, estuary reach*



**SHRP 2016 Projects:  
WRIA9 Vashon/Maury Island  
Watershed**

- 2016 Construction Project
- 2016 Maintenance & Monitoring Project
- WRIA 9 Boundary
- Basin Boundary



	Project Name	Property Ownership	Trees Planted	Shrubs Planted	Riparian Buffer Vegetation Restored Square Ft	Large Wood Installed	Nearshore or Marine Shoreline Restored Linear Ft
1	Scott Judd Creek Habitat Enhancement	Private	0	0	0	31	400
2	Maury Island Marine Park	Public	753	100	0	0	230
3	Palmer Judd Creek Buffer Planting	Private	75	0	5,000	0	0
4	Raabs Lagoon Estuary Enhancement	Public	50	150	0	0	422
5	Ellis Creek Estuary Enhancement	Public	200	0	5,000	0	0
6	Timmons Point Heyer Enhancement	Public	35	15	7,100	0	0
	<b>Total</b>		<b>1,113</b>	<b>265</b>	<b>17,100</b>	<b>31</b>	<b>1,052</b>

- 7 Anderson and Eagleson Judd Creek Habitat Enhancement
- 8 Koch Point Heyer Ivy Control
- 9 Manzanita and Northilla Ivy Removal
- 10 Neill Point Ivy Removal and Invasive Weed Control
- 11 Piner Point Natural Area Restoration
- 12 Pt Heyer Ivy Control
- 13 Rohan Pt Heyer Ivy Control
- 14 Smith Raabs Lagoon Shoreline Enhancement

## Our Mission:

*"Enhancing streams and wetlands for community, fish, and wildlife"*

The Small Habitat Restoration Program (SHRP) works with local property owners and public agencies to design, permit, and construct habitat enhancement projects at no cost to the property owner.

[www.kingcounty.gov/shrp](http://www.kingcounty.gov/shrp)

Mason Bowles, program manager

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