

The South Santiam Splash

Newsletter of the South Santiam Watershed Council

Mission: To involve local people to enhance and protect the natural resources of the South Santiam River watershed for the social and economic benefit of its land-owners, managers, and users.

Fall 2009

Stream Enhancement at Moose Creek

Moose Creek is an important winter steelhead spawning and rearing stream in the South Santiam watershed. While it is one of the few tributaries above Foster Dam where steelhead spawn, for many years it lacked high quality habitat for these ocean-going fish. Perhaps somewhat surprisingly given its forested location, one of the reasons why Moose Creek did not provide this habitat was the lack of large wood in the stream channel. This was caused by a series of catastrophic fires in the 19th century that burned streamside vegetation, and was followed by a series of floods that removed that vegetation from the stream system. Stream cleanouts and channel straightening by humans many decades ago only exasperated the problem. During a 2005 stream survey by the U.S. Forest Service (USFS), almost 90% of the observed wood in a two mile reach was less than 12" in diameter, too small to remain in the system for long and provide substantial habitat improvements. Large wood in the stream helps retain spawning gravels and provides refuge for juvenile fish from predators and turbulent water, and also an opportunity to forage on the macro-invertebrates found near down logs.



Chinook helicopter placing a log in Moose Creek

To enhance stream conditions, the USFS partnered with the South Santiam Watershed Council to implement a large wood placement in Moose Creek. In the summer of 2008, 65 full size trees were placed in a two mile reach severely lacking in large wood. Logs were placed using three methods. First, trees were "tipped" using cable assisted pulling with heavy equipment in order to preserve the tree root wads which will help keep the logs in place. Next, trees were directly felled into the stream to augment the log jams. Finally, 41 large trees were placed using a Chinook helicopter that quickly moved trees to the desired locations and placed them expertly.

The summer of 2009 presented an opportunity to assess the project and rearrange some of the placed logs to locations that will provide better habitat. Post-project monitoring of the project was conducted throughout the summer with snorkel surveys, pebble counts, and stream cross-sections. Initial analysis of the data show encouraging results with a 4.5% increase in spawning size gravels in 2009 compared to pre-project 2008.

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Message From the Coordinator

Greetings Watershed Enthusiasts!

As the leaves fall and the autumn rains sweep in from the Pacific Ocean, it is a good time to reflect on our watershed and some of the actions taken to improve conditions in the South Santiam.

Inside this issue, you will read about some of the projects recently implemented by the South Santiam Watershed Council. These projects span the upper and lower reaches of the watershed, and involve many different components. From using a helicopter to drop logs into Moose Creek to working with students to plant trees in riparian areas, an underlying theme is that of cooperation and partnership. These projects simply would not occur if it wasn't for the ability of stakeholders to find common ground, roll up their sleeves, and tackle the big projects together.

In the spirit of partnership, the South Santiam Watershed Council is pleased to announce that our collaboration with the North Santiam and Calapooia Watershed Councils has been selected by the Meyer Memorial Trust and the Bonneville Environmental Foundation to participate in the Willamette Model Watershed Program. The program recognizes the importance of long term planning and monitoring as a basis for stream restoration and will support our efforts in measuring what occurs after a stream restoration project is implemented. In order to accomplish this, we will assess current conditions in two priority sub-watersheds: Hamilton and McDowell Creeks. With landowner support, we will identify potential projects, implement, and scientifically monitor the outcomes over the long term. This will allow us to learn much more about our own restoration efforts, and make adjustments if necessary. In short, this program will allow the South Santiam Watershed Council to implement more effective restoration projects while strengthening our relationship with our neighboring Watershed Councils and other regional partners.

I hope you enjoy this issue of the *South Santiam Splash*, and thank you for your interest and support in the South Santiam Watershed Council.

Best Regards,



Eric Hartstein
Council Coordinator

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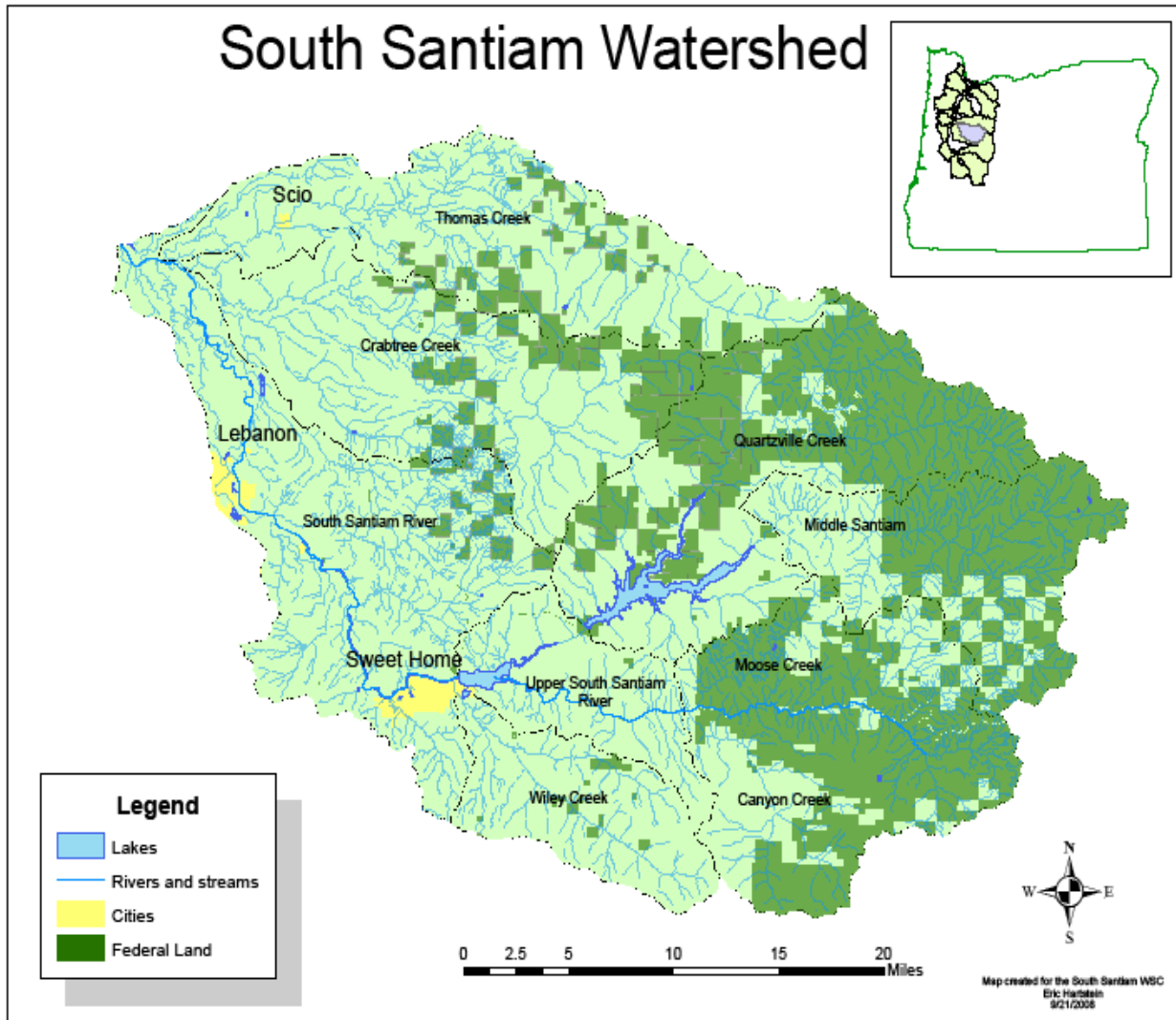
The project is providing an opportunity for local students to learn about the aquatic macro-invertebrates that utilize the placed wood, and are eaten by fish. Students from the Santiam Wilderness Academy have deployed “leaf packs” over the past two autumns that allow for the collection of a sample of macro-invertebrates. These small creatures are a key biological indicator of stream health, as they are sensitive to changes in the ecosystem and over time will help the project proponents evaluate project effectiveness.

Funding for the project is provided by the Oregon Watershed Enhancement Board, Linn County Resource Advisory Committee, and the USFS.



Example of Large Wood Placed in Moose Creek

South Santiam Watershed



Quick Watershed Facts:

- The South Santiam watershed covers approximately 1040 square miles.
- There are over 1,000 farms in the South Santiam watershed.
- The headwaters of the South Santiam River are the confluence of Seven Mile and Litiwi Creeks.
- Bull Trout once lived in the South Santiam watershed, the last known sighting was in 1953.
- Spring Chinook Salmon enter the watershed in the spring, and spend the summer in cool pools conserving energy until they spawn in the late summer. They do not eat all summer!

Board of Directors

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 Sarah Dyr Dahl *Regional Project Manager²*
 Krista Lopez *STEWARDS Coordinator³*

¹ Shared contractor between South Santiam, North Santiam and Calapooia Watershed Councils

² Shared employee of Calapooia Watershed Council with South Santiam and North Santiam Watershed Councils

³ U.S. Forest Service Employee

Restoration on McDowell Creek



McDowell Creek: Pre-project

With stunning waterfalls and quiet hiking trails, McDowell Creek is a locally renowned spot for recreating. McDowell Creek also provides spawning and rearing opportunities for winter steelhead and is the home of resident trout species. The McDowell Creek Restoration Project sought to restore a portion of McDowell Creek which lacked an adequate riparian area and in-stream habitat for fish. As demonstrated on the photo to the left, the lack of a healthy stream buffer can contribute to stream bank erosion as there are no root systems to help keep the soil in place. In addition to helping stabilize stream banks, the benefits of a properly functioning riparian area, with a diversity of plant species, and ages include providing stream shade,

habitat for fish and wildlife, and a natural filter of toxins.

The McDowell Creek Restoration Project consists of habitat improvements and biological engineering techniques like working the bank to a gentler slope and the placement of erosion control fabric to help stabilize the streambank. Habitat improvements included the installation of three “engineered log jams” which help slow stream velocity, provide bank protection, offer cover for fish, and contribute a nutrient source to the stream. In-stream work was completed during the summer months.

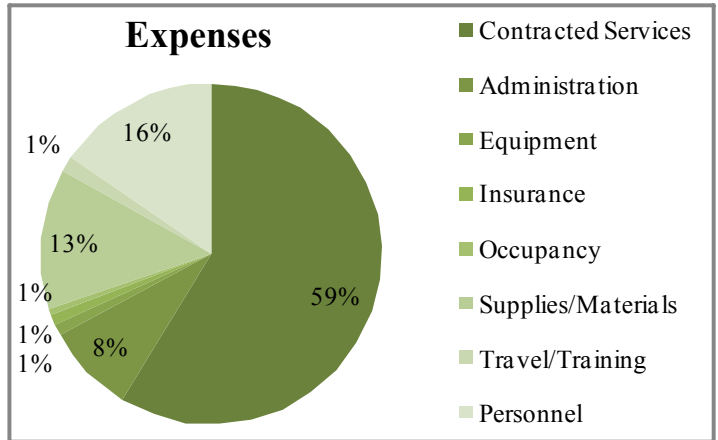
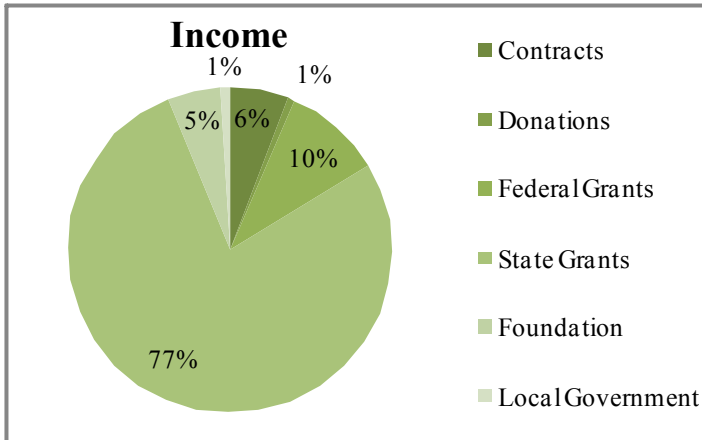
With in-stream work completed, the next critical step is to install a riparian buffer that will perform long term bank stability and provide fish and wildlife habitat. Willow stakes were collected on-site in the early fall and installed by students with the Santiam Wilderness Academy. Willow stakes are a cheap and effective way to quickly establish riparian vegetation as they will grow from cuttings provided there is an adequate water source. In addition to the willow staking, the landowner has enrolled in the Conservation Reserve Enhancement Program (CREP). CREP is an incentive program for landowners that assists with funding for establishing a functioning riparian area. In this case, the landowners will be planting a minimum 35 ft. riparian buffer and installing livestock exclusion fencing to protect the streambank and creek.

Project and funding partners for the project include the Oregon Watershed Enhancement Board, USDA Farm Service Agency, Oregon Department of Fish and Wildlife, U.S. Army Corps of Engineers, and the Community Services Consortium of Lebanon.



Project Site: September 2009

Fiscal Year 2008-2009 Status Report



Contracts	\$16,668
Donations	\$2,000
Federal Grants	\$27,753
State Grants	\$220,773
Foundation	\$14,910
Local Government	<u>\$2,500</u>

Contracted Services	\$175,557
Administration	\$24,948
Equipment	\$3,390
Insurance	\$3,073
Occupancy	\$1,701
Supplies/Materials	\$40,101
Travel/Training	\$4,121
Personnel	<u>\$46,189</u>

Total Income **\$284,604**

Total Expenses **\$299,080**

South Santiam Watershed Council Statement of Financial Position As of June 30, 2009

	Jun 30, 09
ASSETS	
Current Assets	
Checking/Savings	
11000 - Bank Accounts	
11500 - Petty Cash Account	100.00
Total 11000 - Bank Accounts	100.00
Total Checking/Savings	100.00
Accounts Receivable	
12000 - Accounts Receivable	24,242.31
Total Accounts Receivable	24,242.31
Other Current Assets	
13000 - Other Receivables	
13100 - Due From Cascade Pacific	19,456.60
Total 13000 - Other Receivables	19,456.60
Total Other Current Assets	19,456.60
Total Current Assets	43,798.91
TOTAL ASSETS	43,798.91
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
19000 - Accounts Payable	10,709.58
Total Accounts Payable	10,709.58
Other Current Liabilities	
21000 - Payroll Liabilities	
21300 - Taxes Payable	301.92
Total 21000 - Payroll Liabilities	301.92
Total Other Current Liabilities	301.92
Total Current Liabilities	11,011.50
Total Liabilities	11,011.50
Equity	
32000 - Unrestricted Net Assets	48,790.84
Net Income	-16,003.43
Total Equity	32,787.41
TOTAL LIABILITIES & EQUITY	43,798.91

South Santiam Watershed Council: Funding Partners 2008-2009

Cash

- City of Albany
- Linn County Resource Advisory Committee
- Meyer Memorial Trust
- National Fish and Wildlife Foundation
- Oregon Department of Agriculture
- Oregon Department of Environmental Quality
- Oregon Watershed Enhancement Board
- Sweet Home Community Foundation
- U.S. Forest Service

In-Kind

- Community Services Consortium
- City of Lebanon
- City of Sweet Home
- Lebanon High School
- Linn County
- Northwest Invasive Weed Partnership
- Oregon Department of Fish and Wildlife
- Oregon State University:
Biological and Ecological Engineering Department
- U.S. Army Corps of Engineers
- U.S. Forest Service

Brown Creek Restoration Project



Stream channel infested with reed canary grass

Brown Creek is a perennial tributary to McDowell Creek in the South Santiam watershed. Fish species observed in the creek include trout, lamprey, and sculpin. Prior to project implementation, the reach of Brown Creek was managed using intensive grazing practices. Livestock were present in the creek leading to problems with water quality, streambank erosion, and soil compaction. The streambank in one area was compacted to the point where water was flowing out of the stream channel and pooling in the pasture during the spring and summer of 2008. In addition, an undersized culvert contributed to water backing up during winter months. These conditions made it optimal for the growth of reed canary grass in the channel and in the riparian area, which further exasperated the problem of channel degradation.

In order to address these issues, the landowner enrolled in the Conservation Reserve and Enhancement Program (CREP) and worked with the South Santiam Watershed Council to obtain an Oregon Watershed Enhancement Board (OWEB) small grant to address the in-stream issues of the undersized culvert and reed canary grass. The canary grass was removed throughout the 370 ft. long channel in October, 2008. The streambank was also re-shaped to create a more natural meandering flow, and erosion control fabric installed to protect against winter flows in 2008-2009. Following completion of the streambank work, invasive weeds were treated in the riparian area and approximately 750 native plantings were installed through CREP in the winter of 2009. Species planted included Ponderosa pine, red cedar, white alder, Indian plum, Oregon crabapple, red osier dogwood, mock orange, pacific ninebark, elderberry, bigleaf maple, Oregon ash, Douglas fir, and cascara. In addition, a livestock exclusion fence was installed, returning at least 35 feet of riparian area on either side of the creek to native vegetation. In July 2009, the undersized culvert was removed and replaced with a 57" x 38" culvert that will easily pass winter flows. Rock was placed inside the culvert to help provide fish habitat.



Vegetation in place at Brown Creek

The results of the project are encouraging. After one year, the meandering channel remains relatively free of reed canary grass and many plantings have survived the first summer. Native willows are growing in the active floodplain, and there appears to be some gravel recruitment in places that were weed choked and trampled by livestock. Fish were again observed in the creek, and are now in no danger of being stranded in off-channel pools created by the cattle-caused bank destruction.

Project partners include the USDA Farm Service Agency, Oregon Watershed Enhancement Board, and The Nature Conservancy.

Watershed Education in the South Santiam: STEWARDS

The South Santiam Watershed Council is excited to begin the second year of partnership with the U.S. Forest Service in delivering a watershed and natural resource education program which engages students of all ages in the natural world around them.

Commonly referred to as the STEWARDS Program, activities have centered around involving students in a “hands-on” learning environment and the creation of a youth watershed council at Sweet Home High School. The youth watershed council decided during the 2008-2009 school year that they would be called the Watershed Restoration Team and they met on a weekly basis to learn about and discuss watershed issues, just like a “regular” watershed council. The Watershed Restoration Team also planned a small restoration project on the banks of the South Santiam River.



Watershed Restoration Team planting native vegetation

The second year of the Watershed Restoration Team is up and running with the first meeting held this November at Sweet Home High School. Returning students are actively recruiting new members, and if you know of a student at the high school with an interest in watersheds and participating in a collaborative approach towards restoration encourage them to join!

The STEWARDS Program also reaches younger students with activities based on watershed processes and health, local fisheries, native plant identification, and much more. These activities take place over the course of a school year and culminate in an overnight outdoor school at Camp Tadmor in the Cascade foothills above McDowell Creek. Here 5th and 6th grade students put into practice some of the skills they have



Map reading at the summer camping program

learned throughout the school year and show off some of their knowledge on watersheds and natural resources. At outdoor school, students also learn new activities including how to use GPS units, identify aquatic macro-invertebrates, and wildlife biology.

Summer doesn't mean that the STEWARDS Program ends either! This summer, the program featured two sessions of overnight camping in the Willamette National Forest for local families. They learned mapping and orientation, and did some hiking at fishing at and around the beautiful Gordon Lakes.

All this could not take place without the generous support of our partners and local volunteers. Funding for the program has come from the Oregon Watershed Enhancement Board, U.S. Forest Service, Gray Family Fund of the Oregon Community Foundation, and the Sweet Home Community Foundation. Supplies were donated by R.E.I, The Mountain Shop, and Mountain House Foods. Local partners include the Oregon Department of Fish and Wildlife, City of Albany, and the Santiam Wilderness Academy. Our gratitude also goes out to all the wonderful local volunteers that share their knowledge with students at outdoor school and at other watershed restoration activities.

SSWC Meetings:

The South Santiam Watershed Council meets on the 3rd Wednesday of every month from 6:00-8:00 pm. The meetings are held at the new Lebanon Library, located at 55 Academy St., in Lebanon. We strive to include speakers that present on topics important and interesting for people in the South Santiam watershed. As always, everyone is encouraged to join us to discuss local watershed issues and solutions! For more information feel free to contact Eric Hartstein at (541) 367-5564.

Our upcoming Council meetings are:

Date	Speaker	Topic	Time
1/20	Joe Holmberg, OSU (retired)	Potential of Woody Biomass Energy	6:00 pm
2/17	Greg Taylor, USACE Fish Biologist	Willamette Biological Opinion	6:00 pm
3/11	Regional WSC Meeting	Stayton Community Center (400 Virginia Ave)	6:30 pm
3/17	TBD		6:00 pm

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Phone: 541-367-5564 email:

