



SalmonGRAM

Committed to Protecting and Restoring South Puget Sound Habitat



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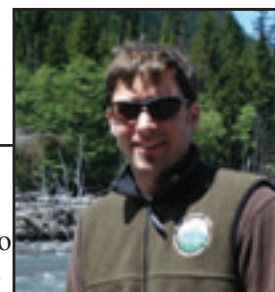
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Cover: SPSSEG's Kristin Williamson and Kim Gridley hosting a Nearshore education workshop at Chambers Bay Beach.

Message from the Executive Director



Hello reader,

This past summer I've been fortunate enough to help teach salmon curriculum at several education and outreach events in the South Sound including: Forest Fest, Kids with Conservation Knowledge (KWICK), New Market Skills Center, and the Northwest Youth Conservation Fly Fishing Academy. In total, over 600 students (20 classes) participated in these sessions and hopefully they learned some interesting facts about salmon and aquatic habitat.

Although each education session is different, I always seem to highlight the usual topics such as; salmon lifecycle, food web, spawning behaviors, ocean derived nutrients, and in-stream habitat requirements. But perhaps one of the most interesting topics we discuss is the importance of water quality and what students can do to help keep water clean for both salmon and people.

Although there are no easy solutions to address all water quality problems in Puget Sound, there are a few simple steps that we can all take to reduce pollution and increase local water infiltration. One easy way to improve water quality is to simply change some old habits at home. Consider using natural lawn care as an alternative to chemicals and conserve water by adding mulch to gardens that help limit weeds while preventing moisture loss.

If you have localized drainage issues on your property, attend a free Rain Garden workshop to learn if this treatment is right for your yard. There is much more information about rain gardens later on in this newsletter. Just remember that each rain garden site is different and it helps to do your homework up front to maximize its effectiveness.

Cold, Clean, Clear, and Constant water are likely the most important habitat requirements for salmon, with in-stream habitat complexity coming in a close second. Remember that people and salmon need clean water, so let's try to keep it clean together.

Thank you for reading this edition of the Salmon Gram! Please pass it along to a friend or colleague when you're finished.

Sincerely,

Lance Winecka

SalmonGram is published twice per year by the South Puget Sound Salmon Enhancement Group (SPSSEG), a 501(c) (3) non-profit, volunteer-based organization that conducts salmon habitat restoration, salmon enhancement, and community education to increase salmonid populations in the South Puget Sound Region.

The SPSSEG is one of fourteen Regional Fisheries Enhancement Groups created in 1989 by the Washington State Legislature. The Regional Fishery Enhancement Program is partially supported by surcharges on sport and commercial fishing licenses. The Washington Department of Fish & Wildlife provides technical and administrative support to the program.

On the Shores of Puget Sound

By Kristin Williamson

SPSSG has been working with Pierce County and students from the Gig Harbor High School Marine Biology and Ecology classes to collect baseline data regarding the physical and biological condition of Chambers Bay Beach. Students collected information on beach substrate, slope, and backshore vegetation. The classes found surf smelt and sand lance eggs on the beach, demonstrating the importance of this location as a forage fish spawning beach. Students also collected insect samples from the upper beach to monitor input of prey sources to support rearing and foraging juvenile salmon using this shoreline.

The beach and adjacent upland were once the site of a large-scale gravel mine that has been reclaimed by Pierce County for future public exploration and recreation opportunities. Currently, the beach

is impaired by debris and remnant structures from gravel mining operations and loss of riparian vegetation. The County will be removing much of the remnant debris and restoring public access to the North Beach. Future plans for the beach include replacement of the old creosote North Dock with a smaller, concrete dock with a pedestrian overpass over the railroad. SPSSEG is working with the County on restoration options to improve the beach and riparian habitats. The information collected by the Gig Harbor High School students will be used to inform restoration design and monitor changes to the beach over time as restoration efforts move forward.

On June 21st, SPSSEG hosted 348 people at Titlow Park for a low tide beach walk. The event was a collaborative effort between

People For Puget Sound, Metro Parks Tacoma/ Tacoma Nature Center, Citizens for a Healthy Bay, Tahoma Audubon, Harbor Wild Watch, and Green Tacoma Partnership. Participants explored the beach during the negative 3-foot tide and discovered many kinds of marine life from Anemones to *Zostera marina* (eelgrass). They also learned about the importance of Titlow beach and the adjacent estuarine lagoon for a



myriad of invertebrate, wildlife and fish, including our favorite fish - salmon! Beach-goers were asked to sign a pledge to tread lightly on the beach and to respect the many marine animals and their homes on Titlow Beach. Volunteer naturalists roamed the beach, engaging the crowd with marine critters and discussing restoration plans for the beach and lagoon.

These events are part of an outreach program employing partnerships with local high schools, park districts, conservation groups and shoreline communities to recruit and train volunteers to recognize and inspect critical salmon habitats and learn to inventory key nearshore plant and invertebrate communities. Information collected is being used directly for design of salmon habitat restoration projects and strives to foster stewardship amongst shoreline communities for conservation of critical shoreline habitats.



2009 Construction

Here's a sampling of the projects we are working on this summer. For more information, please check our website at www.spsseg.org.

During the **Clover Creek Stream Channel Restoration** SPSSEG is partnering with Pierce County to remove 660 feet of the asphalt ditch within the Parkland Prairie Wildlife Preserve on the corner of Tule Lake Road and Yakima Avenue South. Approximately 7,000 linear feet of Clover Creek runs through a 24-foot wide asphalt ditch.

The project will remove the asphalt, widen and meander the stream, add wood to the channel and plant the stream banks. This is a pilot effort to monitor the response of stream flows and streamline restoration techniques for future channel restoration efforts along the remaining 6,340 feet of asphalted creek.

Beachcrest Estuary Restoration will restore a 1.4 acre pocket estuary on the west Nisqually Reach through removal of a barrier culvert and standpipe structure. The project will replace the standpipe with a 14 foot-span concrete box culvert and daylight a 150 foot long tidal channel restoring tidal hydrology and fish passage to the estuary and to a $\frac{3}{4}$ mile long spring fed creek. Project efforts will also remove 100 linear feet of shoreline armor and replace it with wood and native vegetation.

Greenwater Engineered Logjam and Floodplain Reconnection will remove 4500 linear feet of abandoned forest road from the floodplain and install 15 engineered log jams into the mainstem Greenwater River. Project efforts will restore floodplain connectivity, increase primary pool habitat, reduce mean substrate size, increase habitat complexity and dissipate flood flows.

Powell Creek Fish Passage Project is a Family Forest Fish Passage Project (FFFPP), and will replace a crushed culvert with a 50 foot bridge and restore riparian habitat in the Nisqually River Tributary of Powell Creek.

This passage barrier is the next upstream barrier to spawning fish migration in the Powell Creek watershed (3 downstream barriers were

removed last summer) and will connect a vast beaver dominated wetland complex with the higher gradient step/pool habitat upstream, ideal for spawning salmon. This project has been design by Waterfall Engineering in collaboration with SPSSEG and NRCS. McClung Construction is scheduled to begin work in August 2009.

Lackamus Creek Fish Passage Project is another FFFPP project that replaced two failing culverts with a 40 foot bridge and restored riparian habitat in the Nisqually River Tributary of Lackamus Creek. This project, as of August 2009, has been completed by RV Associates.

During the **Frye Cove Park Project** (completed Spring 2009)



Season Update

SPSSEG worked with Thurston County Parks to remove a 450 foot rock bulkhead along the shoreline. The public access area was reshaped and partially protected with a “softer” approach using wood and cobble. This fall, SPSSEG will replant the site with appropriate shrubs and grasses to increase stability. The project was funded by SRFB, NFWF, and Dept. of Ecology.

Frye Cove



Construction of the **Ohop Valley Restoration Project** culminates nearly a decade of planning and design!

The Nisqually Land Trust property, the historical Peterson Farm, in the Ohop Basin straddles Hwy. 7, a major thoroughfare to mountain communities and the Mt. Rainier National Park, Longmire entrance.

The Nisqually Indian Tribe originally identified the Ohop watershed restoration as a primary priority habitat for Chinook Salmon Recovery in their 2002 Chinook Recovery Plan. Since that time, plans have been underway to restore a 4 mile stretch of agricultural ditch, the current Ohop Creek, into a 6 mile meandering channel and wetland complex, resembling the historical Ohop Creek alignment.

The first phase of this project, resulting in 1.2 miles of restored stream, has been in development for the past 2 years. ENTRIX Environmental has worked closely with SPSSEG staff, the landowner (NLT) and adjacent community members, and technical advisors from the Nisqually Indian Tribe, USFWS, NRCS, WADOT, WDFW, Pierce County and Conservation District to develop a design that will reach restoration goals.

These goals include:

- Building a meandering channel of historical elevation that will improve hydrological connectivity within the floodplain
- Increasing channel and floodplain complexity through

the addition of Large Woody Debris (LWD) structures and

- Thorough re-vegetation of 80 acres of valley floor with native wetland and riparian plant communities.

In addition, consideration to infrastructure including Hwy. 7 and Peterson road prisms and associated bridges, flooding impacts on adjacent neighbors, and multiple ditches to contend with have added complexity to design options. Currently, this project is fully funded, permitted, designed and in the beginning phase of construction. SPSSEG has hired RV Associates to construct the Ohop Restoration Project and have contracted Mason Conservation District to manage on-site inspection.

Sound Gardens

By Kim Gridley, SPSSEG Biologist

Stormwater, water quality, and salmon. What do they have in common with Rain Gardens? Probably more than you realize.

Salmon live in water. They eat food from the water, pass oxygen through gills and exchange gases through their skin continually. Without water, salmon can not exist. With low water quality, all aquatic organisms, including salmon, suffer, as toxins build up in their system.

In her book, *Food Not Lawns*, H.C. Flores offers a list of "10 Things We Can Do To Save Water," which includes:

1. Eat organic food and support local organic agriculture
2. Reject corporate globalization and control industrial water
3. Regenerate Native Habitats
4. Develop watershed stewardship coalitions
5. Use renewable energy
6. Reduce packaging
7. Buy less of everything and reuse what you can
8. Use water efficient appliances
9. Save and recycle paper, glass, and metals
10. Establish an ecological home water cycle

Some of the items in this list may sound quite radical and downright improbable in our fast paced, global market society. But there are a few items that are easier to implement at home and ultimately will save the homeowner time and money. Developing

an ecological home water cycle will not only save money on your water bill, lawn maintenance costs and time (very valuable) but will also improve local water quality for salmon and provide habitat for other wildlife. For the homeowner, these minor changes at home will lead to a sense of stewardship with real global implications. Rain Gardens along with rainwater harvesting, permeable pavement, grey water systems, and Water Wisegardening encompasses some of the simple techniques used to develop a Sound Garden, which will create an ecological home water cycle.

Rain gardens function like a natural forest by retaining and treating run-off from buildings, driveways, sidewalks and other impervious surfaces. Rain gardens filter oil, grease and toxic materials before they can pollute salmon habitat in streams, lakes and bays. Rain gardens also help to recharge aquifers by increasing the quantity of water that infiltrates into the ground, that provide beneficial wildlife habitat. Downstream (or just down the street), increased water infiltration leads to less stormwater in road ways, storm drains, and creeks. Consequently, this will decrease the amount of toxins such as lead, zinc and copper that can make their way into salmon habitat, Puget Sound, or our drinking water sources



and groundwater aquifers.

Rain gardens are one versatile and effective land use for managing stormwater, called Low Impact Development (LID). A rain garden project may incorporate several techniques to manage rain water, reduce runoff, and filter pollutants. Soils in LID projects include permeable, compost-amended soils, vegetation, and rainwater collection systems.

Rain Gardens are becoming popular stewardship opportunities in residential and suburban areas because they

Save Salmon



Steps in Building a Rain Garden

- Determine how much impervious surface you have and how much of that water you want to manage
- Decide where on the property you'd like to build a rain garden
- Do a percolation test to make sure the soils can soak up the water
- Decide how big to make the rain garden
- Construct, plant, and maintain!

Locally Rain Gardens are beginning to catch on. Groups such as Stewardship Partners and WSU Cooperative Extension are leading the way through workshops and hands-on learning throughout the South Puget Sound Region. In Thurston County, the County Water Resources Group is spearheading an effort to retrofit the failing stormwater system in the Tanglewilde neighborhood through installation of Rain Gardens and dry well rehabilitation.

For more information on how to build a rain garden, check out the WSU Cooperative Extension Website. More local contacts and links about rain gardens can be found here: <http://spsseg.org/raingardens/>.

- Are an easier and more effective way for landowners to do their part to protect salmon and water quality
- Are planted with beautiful, hardy, native, and low-maintenance perennial plants
- Provide food and shelter for wildlife, birds, butterflies, and other beneficial insects

one of the most landowner tools in a sustainable approach to a low impact rain garden LID. Several tools to reduce stormwater runoff include permeable paving, vegetated rooftops, and rain gardens.

Increasingly, there are opportunities in urban areas to use them:



SPSSEG News

By Lance Winecka, SPSSEG Executive Director

The tide is continually swinging here at SPSSEG. In January, Eli Asher left SPSSEG to pursue other salmon interests closer to home in “steelhead country” aka Lewis County. Eli is now working with the Lower Columbia Fish Recovery Board in Longview. Thanks for all of your hard work at SPSSEG and good luck at LCFRB and on Hazel Dell Farm.



Brian Combs

Sarah Clarke also has recently left the Group to pursue her Masters Degree and is now studying sustainability with The Evergreen State College and Washington State Prisons. Good luck to you Sarah.

To fill the voids left by Eli and Sarah's departure SPSSEG has hired Brian Combs as a Salmon Restoration Biologist. Brian brings valuable native plant experience to SPSSEG that we haven't had in-house before. He will primarily be working on planting plans, plant maintenance, on-site restoration, and project development. We also have added Rebekah Bahrt as a summer work study student from South Puget Sound Community College. Rebekah is helping around the office and also out in the field.

Other members of our staff include Kimberlie Gridley, a Project Manager in our Group who is nearing her third year at SPSSEG. Her primary duties continue to be monitoring restoration projects and managing several on-the-ground restoration projects, including the Ohop Valley Restoration Project. Another Project Manager, Kristin Williamson, is quickly approaching her fourth year at SPSSEG. Kristin has been working along the Puget Sound nearshore the past few years and is also managing several restoration projects including the Greenwater River project that is scheduled to begin next summer. And last but not least, is Christine Garst who is our part-time Accounts Manager. Christine works for The Non Profit Center, and she brings a tremendous amount of experience to our accounts department while keeping the cash flow moving!



Rebekah Bahrt

I am indeed lucky to have such a committed and professional staff at SPSSEG. Each staff member works very hard to contribute to the overall organizational successes and on-the-ground salmon habitat restoration. Working for a small non-profit is not always easy but it is always rewarding!

I would also like to take this opportunity to acknowledge two former SPSSEG Board members: Blake Smith and Sally Hicks. Blake was an original charter member and has served on the Board of Directors from 1991 through 2009, serving two terms as the Board President. Sally was an instrumental part of creating the Kennedy Creek Salmon Trail and has served as the Board president from 2007-2009. Thank you for your years of service and dedication.

Finally, SPSSEG has added two new members to our volunteer Board of Directors. We're pleased to announce that Jessica Moore and Steve Brink have committed to serve until 2011. On behalf of the staff, members, and stakeholders, thank you for your valuable time and knowledge. Welcome aboard!

How Much Wood Could a Salmon Buck Chuck If our Rivers Only Had Wood?

By Kristin Williamson, SPSSEG Biologist

Wood plays an important role in almost any salmon habitat restoration project. Whether the project is on a small creek, an off-channel pond, a large river, an estuary, or a marine shoreline, wood provides a suite of habitat benefits in almost any system to every life stage and species of salmon.

In rivers, large pieces of in-stream wood provide channel roughness and complexity, accumulate mobile pieces of woody debris, and trap fine sediments. They also sort spawning gravels, create pools for juvenile refuge and adult holding, partition flow into the floodplain, dissipate flood flow energy, and supply insect prey and organic nutrients for aquatic species.

Along the marine shorelines and estuaries of Puget Sound, wood provides similar benefit in habitat complexity, refuge for juvenile salmon, input of terrestrial insect prey, stabilization of backshore bluffs, berms and spits, and trapping and sorting of sand and gravel materials for forage fish spawning habitat.

Over the last century, the abundance of mature riparian forests has been significantly reduced along Puget Sound watersheds and shorelines; instream wood has been removed from our creeks and rivers systems; and drift wood has been hauled off beaches. As a result, the many habitat benefits that wood provides have been lost. Over the last decade or so, restoration practitioners have been utilizing wood as a treatment technique to rehabilitate and restore habitat structure and function for everything from floodplain reconnection, to bank

stabilization, to salmon rearing and spawning capacity.

SPSSEG has been incorporating wood in almost every type of project including: fish passage, shoreline restoration, estuarine enhancement, channel reconstruction and engineered log jams projects. Finding wood to fuel all these projects has been a

challenge. SPSSEG and project partners have been working to identify sources of large trees that would otherwise be cut or burned, and instead put them back to beneficial use in the watershed. In the last three years alone, SPSSEG has been successful in “recycling” over 1,000 pieces of wood.



LWD Inspection at Greenwater

This last spring, the US Forest Service and Hoo Doo Family Recreation donated 218 large conifer trees that needed to be removed from campgrounds for access and safety. The trees will be recycled back into the watershed to restore habitat on the Greenwater River. Tacoma Public Utilities also donate over 160 pieces of wood from the debris basins behind Alder Lake Dam, Riffe Lake Dam and Mayfield Dam that would otherwise be burned or sold. These trees will be used to restore habitat on Ohop Creek. Other wood donors include: WA State Parks, the Army Corps of Engineers, City of Olympia, Max Swick, and countless individual landowners. SPSSEG pays to load and haul the wood which can cost up to \$350 per tree. This cost is considerably less than buying wood off the market, which allows us to lower construction costs on most of our restoration projects.

Partner Spotlight: *Lead Entity Program*

By Joe Williams, Board Member

Salmon recovery Lead Entities may be one of the best kept secrets in natural resources management in Washington State. In almost every corner of the state, citizens are helping to guide salmon recovery in their communities through groups called Lead Entities. Local governments, stakeholders, and citizens work through Lead Entities to help plan salmon recovery efforts and to guide high priority habitat restoration projects. In collaboration, they develop strategies, rank projects, and coordinate salmon recovery grants. Once received, these grants are turned into on-the-ground salmon restoration projects all across the state.

In the past ten years, the partners that Lead Entities bring together – counties, cities, tribes, and non-profits like the South Puget Sound Salmon Enhancement Group – have done the lion's share of salmon recovery work in Washington State. Thousands of beneficial restoration projects have been completed because of the cooperation and coordination of these local groups. This effort, which began in 1998 with the creation of Lead Entities by the Washington legislature, has enabled local communities and watersheds to focus on what is best for the salmon, while avoiding the sometimes contentious relationships of the past.

For example, in the Nisqually River watershed, the Lead Entity has set a course to tackle the most complicated and important salmon restoration projects. Four of the neighboring Lead Entities (listed below) have contributed almost \$1 million in grant money to improve nearly 800 acres of former Nisqually estuary habitat because of the obvious benefits to South Sound salmon. This kind of partnership happens because the Lead Entities in the South Sound work together to achieve regional salmon recovery goals. This is an example of what can happen statewide through Lead Entity and stakeholder cooperation.

Lead Entities are facing tough economic conditions. It takes time and energy to coordinate, select, and prioritize projects. Funding to support these restoration efforts is becoming increasingly difficult to secure.

A continued financial investment in Lead Entities is a relatively inexpensive way to efficiently put our state's salmon recovery funds to work. With continued economic support, citizens will continue to have the strong local connection to restore our salmon runs here in South Sound and across the state.

Lead Entities and Coordinators in SPSSEG's service area:

- WRIA 10/12, Puyallup/Chambers, Lorin Reinaldt
- WRIA 11, Nisqually, Jeanette Dorner
- WRIA 13 & 14, Deschutes and Kennedy/Goldsborough, Amy Hatch-Winecka
- WRIA 15, Key Peninsula, Kathy Peters

Thank you to all of our Lead Entity Coordinators for your continued hard work and dedication to the salmon restoration in Puget Sound and all across Washington State!

2009 KENNEDY CREEK SPLASH

September 12th from 3pm-6pm

It's that time of the year again to plan for our 2nd Annual Kennedy Creek Salmon Trail Splash fundraising event. Last year's Splash raised over \$4,000 to help fund and maintain this successful community education program. Every \$35 raised at Splash supports 12 student visitors this Fall. Each year over 2,500 students visit the trail to learn more about salmon life histories and aquatic ecology. Most student visits will occur during the week days and are often met at the gate by one of our fifty volunteer Kennedy Creek docents. Our docents receive updated training each year and many of them have been involved for several years!

Kennedy Creek is an excellent outdoor class room and offers a wide range of learning opportunities from pre-school to college students. Each participant gains a greater understanding of the iconic northwest salmon in its native habitat while visiting the Kennedy Creek Salmon Trail.

Please join SPSSEG and other Kennedy Creek Salmon Trail supporters and enthusiasts on

September 12, 2009 from 3 pm to 6 pm. Splash tickets are \$35 each and the event will be held at the Kennedy Creek Salmon Trail rain or shine. The ticket price includes music, beverages, shellfish, appetizers, and dessert. Parking and shuttle service will be available at the Kamilche Park & Ride near the Little Creek Casino starting at 2:45 pm until 3:30 pm. We would love to thank all of our KCST partners including Mason CD, Squaxin Island Tribe, Trout Unlimited, and Taylor Shellfish Farms.

If you are unable to attend Splash this year, please consider making a financial donation using the form below or by making a secured donation online using our website: www.spsseg.org. All donations are tax deductible. Thank you!

If you are more interested in donating your time, we have many excellent opportunities to become a volunteer docent this Fall. We need docents during the week days for school groups and also on the busy November weekends for the general public. Please contact us for more information.

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Coastal cutthroat from Puget Sound beach seining

South Puget Sound Salmon Enhancement Group Mission:

To protect and restore salmon populations and aquatic habitat with an emphasis on ecosystem function through scientifically informed projects, community education, and volunteer involvement.