



# In the Flow

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Produced with Volunteer Help

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MIKE HOVIS PHOTO

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### Streamkeepers Recruiting New—and “Old”—Volunteers for 2011 Annual Training



Streamkeepers relies heavily on our loyal, hard-working volunteers. There are a variety of opportunities to contribute and learn new skills while providing an important service—helping to protect our local streams. So jump in and join us!

Due to some extraordinary challenges this year, we will be doing a “mini” version of training. **We need experienced volunteers to help with training!** Let us know if you're available to help on all or part of either of the dates below.

#### Training Schedule

Date, Time, Location	Topics
Thursday, June 23, 6-9 pm, Commissioners' Meeting Room (after-hrs entrance W. of the flagpoles)	County volunteer orientation Streamkeepers basics Streamkeepers teams Noxious weeds
Saturday, June 25 9 am—4 pm, Commissioners' Meeting Room + Peabody Creek	Monitoring protocols + field demonstrations

**Chum Fry from Jimmy-Come-Lately Creek**



MIKE HOVIS PHOTO

### Robert Knapp Leaving

(by Ed Chadd, program coordinator)

Due to impacts of staffing changes within our department, Robert Knapp will no longer be helping with the Streamkeepers program, at least on any regular basis. He has served our program and department well in the 2+ years he has been with us, and he will continue to do so—in fact, he has just been promoted to Planner II and will be focusing this year on the County’s stormwater and shoreline management grants. He’s moved to a desk a bit further back into the basement office area, but I’m sure he’ll be happy to say hello to his many fans.

So for the first time, there’s only one Streamkeeper staff person. It can get a bit crazy at times keeping this operation running, but the good news is that as we’ve slowly lost the services of the half-time position, we’ve equally ramped up the services provided by volunteers, to the point that volunteer time in 2010 reached the equivalent of more than two full-time positions, and volunteers have continued to take on ever-more-technical tasks. And there’s also the fact that the program has persisted through some difficult economic times and is now in its 13<sup>th</sup> year.

I look forward to continuing working with you all to seek the best ways to involve our citizens in watershed stewardship. And Robert is still hovering out there in our orbit!



[BUG QUIZ: CAN YOU IDENTIFY THE MACROINVERTEBRATES (BUGS) PICTURED HERE? ANSWERS ON PAGE 3.]

### Streamkeepers Receives Grant for Bug Sorting Team Equipment

Streamkeepers has received word from the Washington Department of Fish and Wildlife (WDFW) that we will be receiving a \$5483 grant from the ALEA Volunteer Cooperative Grant Program for purchase of equipment to support the work of our volunteer Bug-Sorting Team. This team meets every Monday to pre-process benthic macroinvertebrate (“stream bug”) samples that Streamkeeper teams collect annually to assess the overall health of our small streams. The pre-processing involves separating invertebrates from stream detritus before sending the specimens to a taxonomy lab for identification. Picking often-tiny invertebrates out of piles of detritus is meticulous work, and the Bug-Sorting team currently uses old, borrowed equipment. The grant will enable this team to purchase new microscopes, illuminators, and other equipment which will improve their speed and accuracy. This is another example of using appropriate technology to boost productivity of the volunteer effort, and the grant continues a long history of WDFW support of Streamkeepers’ work.

For more information about Streamkeepers’ use of biological sampling to assess stream health, see:

[http://www.clallam.net/streamkeepers/html/biological\\_monitoring.html](http://www.clallam.net/streamkeepers/html/biological_monitoring.html)



### 2004 State of the Waters Report Updated

The waters of Clallam County provide recreational, aesthetic, economic and ecological benefits for residents and visitors. The county's rivers, creeks, lakes, wetlands and estuaries provide habitat for a diversity of fish and wildlife species; recreational and commercial activities such as boating, fishing, and shellfish harvesting; and infiltration to groundwater aquifers which supply most of our drinking water.

Clallam County’s streams vary in condition: some provide abundant resources for fish, wildlife and humans, while others have been severely impacted by human activities. This “report card,” the “State of the Waters” report, helps citizens evaluate the health of individual watersheds and to understand their problems, in order to better protect and restore them. With the most recent data from Streamkeepers, supplemented by tribal, and other sources, the 2004 report has been updated. Results can be viewed on a website being developed at: <http://pmorg.net/sk/> Preliminary data is based on two indices: the Benthic Index of Biological Integrity (B-IBI) and a Water Quality Index (WQI). The B-IBI was developed at the University of Washington by Jim Karr and colleagues, based on the biodiversity, tolerance levels, and population dynamics of stream invertebrate populations, using a 10-metric genus-level index. The WQI, developed at Clallam County is based on risks to salmonids and humans from high temperatures, low dissolved oxygen, and high fecal coliform counts.



Streamkeeper Volunteers,  
Coleman Byrnes and Sue Nattinger

## Streamkeepers Are Bugging Out

( Article by Amanda Winters, published in the Sequim Gazette, April 6, 2011)



Volunteer, Coleman Byrnes  
with "BUG" sample

Sue Nattinger, Coleman Byrnes and their fellow Streamkeepers play with bugs.

It isn't a game — it's actually very scientific — but it sounds like fun.

Every fall volunteers with Clallam County Streamkeepers collect bugs along creeks and spend months sorting the samples to determine the health of the stream.

"Bugs are categorized to levels of tolerance to disturbance," Nattinger said. "The more intolerant bugs present in our samples, the healthier the stream."

Who knew bugs could be so telling?

Nattinger and Byrnes, "Bug-Sorting Team leaders" and recipients of the Clallam County Citizens of the Year award in 2010, know how telling bugs can be. That's why they're applying for a \$5,000 grant to get new equipment with which to sort the bugs. (Which was recently received— see story pg. 2)

### Marine lab partnership

Streamkeepers, a citizen-based watershed monitoring program through the Clallam County Department of Community Development, partners with the Feiro Marine Life Center in Port Angeles to sort the bugs. The center has microscopes, forceps and other scientific tools for the volunteers to use. There's just one problem — "They're really old," Byrnes said.

Some of the scopes on the equipment don't stay in place when in use and while it is nice to be able to borrow it as needed, the Streamkeepers need equipment of their own, he said.

Over the past 10 years Streamkeepers have collected, sorted and identified about 1 million bugs, Streamkeepers' program coordinator Ed Chadd said.

"We're the first entity in Washington state to submit our bug data for stream-health reporting required under the federal Clean Water Act," he said.

### Data shows trouble in Sequim

The most recent data, through 2009, was released last week by the Streamkeepers. It shows several problem areas in the Sequim-Dungeness Valley.

Johnson Creek is compromised, meaning it is somewhat degraded, with impacts to one or more salmonid life stages.

"Bell Creek is highly to critically impaired," Nattinger said. The creek is highly adverse to salmon and unable to support a variety of once-native life forms.

Several creeks out toward Dungeness near the intersection of Woodcock Road and Sequim-Dungeness Way also are highly to critically impaired. Nattinger said heavy fertilization of golf courses paired with heavy use of weed killer and other pollutants can cause nearby creeks to suffer degradation.

The bug sorting and counting, along with monitoring other biological, chemical and physical health attributes, help identify trends in watershed conditions, track problem areas and determine watershed restoration priorities.

Nattinger said to restore a creek, efforts must be made to stop contamination, plant vegetation, add large pieces of woody debris and make natural meanders in streams that have been canalized.

The improved health of the stream will be evident when bug counts show a higher presence of intolerant bugs.

**ANSWERS TO SELF I.D. BUG QUIZ FROM PREVIOUS PG: 1. Mayfly 2. Water Mite 3. Caddis camouflaged in stick case 4. Black Fly 5. Water Beetle 6. Stonefly II 7. Non-Biting Midge 8. Caddis camouflaged in stone case 9. Stonefly I 10. Scud**

## SK Report to Clallam County Commissioners Brings Praise to Volunteers

*"Amazing use of highly trained and motivated volunteers to accomplish work that the County couldn't otherwise afford. Job well done."*

*(Based on an article in the Peninsula Daily News)*

In his report to county commissioners, Ed Chadd, who heads Clallam County Streamkeepers, reported on Streamkeeper activities during 2009 and 2010 with the following:

Streamkeepers is Clallam County's volunteer stream monitoring and watershed involvement program; volunteers collect data, perform data entry and analysis, and conduct public education and outreach.

The volunteer effort, approximately 5000 hours per year in 2009 & 2010, amounts to 2 ½ full-time positions all by itself, so with Chadd and the volunteers put together, they equal 3 ½ FTEs.

Volunteers have continued to take on more and more of the technical aspects of the work. If you try to figure their true value, if you look at the jobs they're doing, they're doing a lot of jobs that are \$50-an-hour consultant jobs.

Accomplishments include:

- Quarterly water quality and flow monitoring at 46 sites on 18 streams in 2009, and 44 sites on 21 streams in 2010.
- Quarterly bacterial grab-sampling at 69 sites on 21 streams in 2009, and 77 sites on 25 streams in 2010.
- Yearly benthic macroinvertebrate sampling at 13 sites on 11 streams in 2009, and 17 sites on 12 streams in 2010.

In addition to its water sampling and public outreach, Streamkeepers has collaborated on grant-funded projects with various agencies on the North Olympic Peninsula.

In Responses to the report, County Administrator Jim Jones acknowledged there is a pool of high-quality volunteers in Clallam County. "But if you don't have a decent program that makes them feel like it's worth their time, they come and go," Jones said. "If you put a program together that not only honors but respects the volunteer's time and give them high-quality things to do, they're lining up. And this is one of those examples. You just don't hear enough about that."

Community Development Director Sheila Roark Miller thanked the volunteers for their hard work.

Commissioner Mike Chapman said Streamkeepers is a good example of how things can get accomplished in tight economic times. "Very little tax dollars are being expended to provide these services to the community. "I think that's a job well done."

Ed Chadd's comment: "I feel really lucky to be in this position. The volunteers are amazing people. Every day, I walk into this place happy."

To volunteer or inquire about Streamkeepers, phone 360-417-2281 or e-mail [streamkeepers@co.clallam.wa.us](mailto:streamkeepers@co.clallam.wa.us).

### **KUDOS TO ALL STREAMKEEPER VOLUNTEERS!**

**Your efforts are not only helping preserve our precious environment, but are recognized and**

## NOPSC Natural Resources Class & Streamkeeper's Valley Creek Team

### Native Planting Day on Valley Creek



Valli Sanstrom  
and Brian Phillips



Jesse Turney  
and Brian Phillips

These days, to graduate from high school in Washington State a student needs to not only earn enough credits but also complete a senior culminating project (SCP). Skills Center Natural Resources class with instructor, Dan Lieberman, offers four service-learning-based options in the community, one of which enlists students as Streamkeepers on the Valley/Tumwater Stream Team. This spring, while studying biological health of a stream, the crew of students and adult volunteers planted native trees and shrubs in the semi-natural reach of Valley Creek. With contributions of plants from the Conservation District (30 each of big leaf maple, snowberry, and red elderberry, and 10 crabapple) and a donation of 100 conifers from Merrill & Ring, students had a successful planting day. These student-Streamkeepers are now analyzing past chemical and biological health data from Valley Creek and working to draw conclusions about the state of that watershed. Learn more about Natural Resources SCP and other options at:

<http://nopsc.org/naturalresources/>

### Measuring Flow on Valley Creek



Jeanette Weichman & Shyanna Takacs



Jeanette Weichman, Leo Sprinzen,  
Jesse Turney, Brian Phillips

### Shoreline Master Program Being Updated

Clallam County is in the process of updating its Shoreline Master Program which attempts to balance the interests of homeowners, business, recreators, and the natural environment on the county's marine and large freshwater shorelines. The Clallam county website offers maps, documents, and information for all areas of the county that are involved in the SMP update process. Your comments are invited and may be sent from the County SMP web page: [http://www.clallam.net/RealEstate/html/shoreline\\_management.htm](http://www.clallam.net/RealEstate/html/shoreline_management.htm)

### Puget Sound Science Update launched; Input Sought

A collection of the latest scientific information on the state of Puget Sound and how it affects the people and wildlife that live nearby has been published online. A unique publication, the **Puget Sound Science Update**, is a living, Web based document pulling together current, peer reviewed science about protecting and restoring Puget Sound. Developed by the partnership's Science Panel, the Wiki like format of the science update allows scientists to continually update the information when new scientific data becomes available. Some of the region's most prominent scientists and technical experts contributed to the update. PugetSoundPartnership <http://www.psp.wa.gov/scienceupdate.php>.