



Volunteer Coleman Byrnes taking flow readings on Salt Creek.

In the FLOW



Volunteer Sue Nattinger "grab sampling" on Tumwater Creek.

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Recruiting New Volunteers!!! We need you!

Many opportunities to help your local watershed

Streamkeepers, Clallam County's volunteer stream monitoring program, is seeking new volunteers to help collect stream health data, perform data entry & analysis, and conduct education & outreach. As the program continues to expand, there is a continuing need for volunteers. New volunteers join existing stream teams and perform quarterly stream monitoring and other stewardship activities, on streams throughout the county—or may volunteer to provide other kinds of program support, both outdoors and indoors.

Free training begins Tues., June 11, 6 - 9 p.m. in the Clallam Co. Courthouse EOC training room—call for directions. Presenters: Ed Chadd, Program Coordinator; Cathy Lear, Habitat Biologist; Cathy Lucero, Noxious Weed Specialist. Trainees will learn how watersheds provide services to fish, wildlife, and people; what threatens our watersheds; and why and how we monitor them. Two full-day classes with indoor and outdoor instruction will follow, dates to be determined at the first training session.

No previous experience or special equipment required.

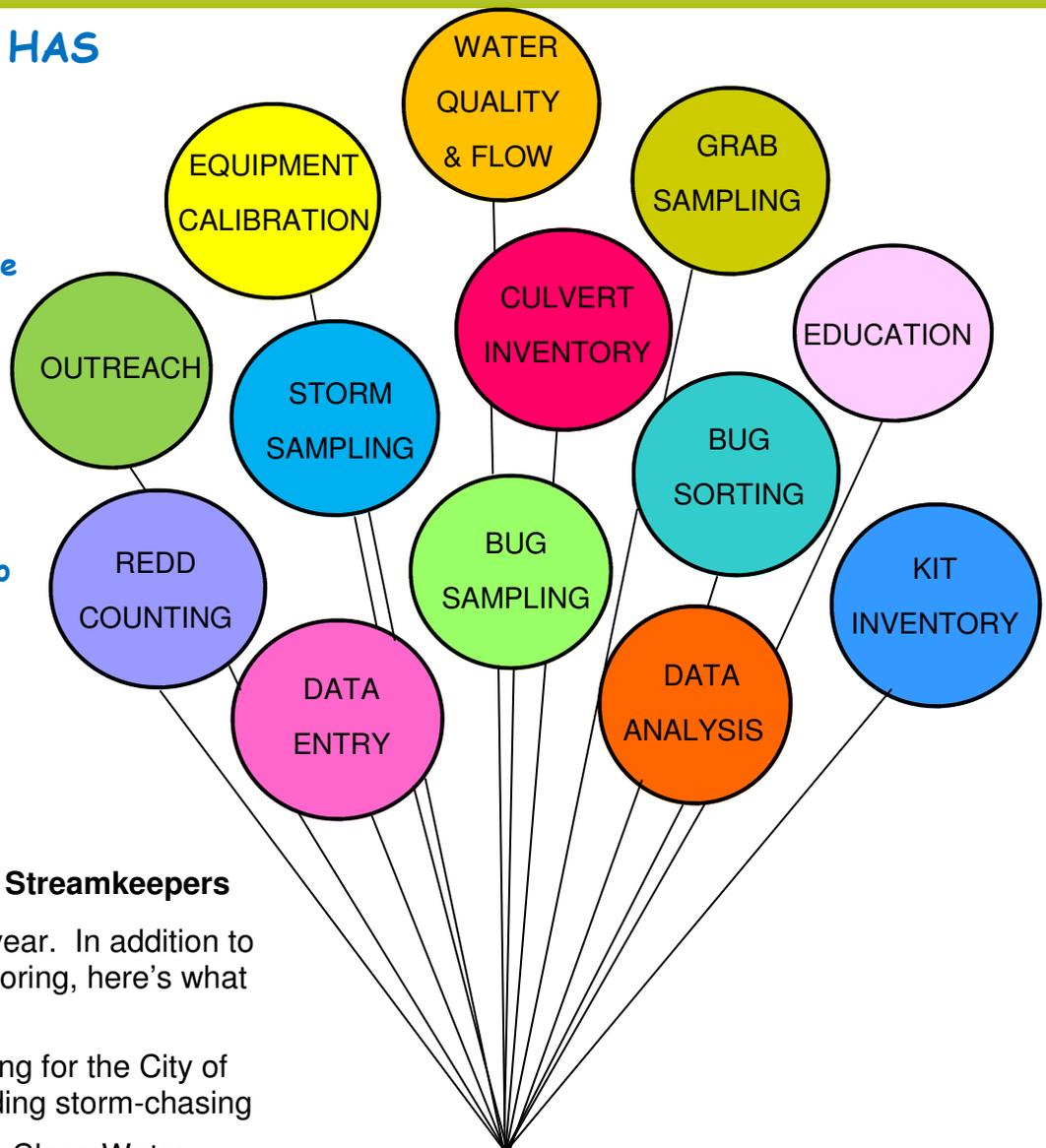
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STREAMKEEPERS HAS A JOB FOR YOU!

Ed Chadd, half-time program coordinator (pictured below), can use all the help he can get to keep the program aloft (or afloat)—there's a balloon for everybody! Help needed both indoors and outdoors—no experience necessary. Teens, Singles, College Students, Dads, Moms, Seniors, Families—all are welcome.



New Season Ahead for Streamkeepers

We are into an ambitious year. In addition to our regular quarterly monitoring, here's what else is on our list:

- * Monthly bacterial sampling for the City of Port Angeles, including storm-chasing
- * Monthly sampling for the Clean Water District in the Sequim area, involving multiple parameters and partnering with the Jamestown Tribe. (See article pg. 3 for details)
- * Stormwater sampling in WRIA 19.
- * Redd counting on Siebert Creek this Spring.
- * The biggest bug-sampling summer we've had in years, with as many as 26 samples to collect.
- * A lot of work for the Bug-Sorting Team to pre-process these samples.



Streamkeepers Under Contract with City to Perform Sampling

In 1999, Streamkeepers began performing quarterly water-quality and bacterial testing and annual invertebrate sampling (B-IBI) on urbanized streams, and the data qualified many of those streams for Impaired Waters ["303(d)"] listings under the Clean Water Act. Faced with data demonstrating impairment, in 2001 the City of Port Angeles began contracting with Streamkeepers to perform additional sampling on streams and stormwater conveyances to better understand the problems and identify sources of pollution. Streamkeepers has continued to perform sampling for the City every year since then, and recently signed a 5-year contract to perform sampling through 2016, with a \$15,000 limit for 2013 and a \$20,000 limit for subsequent years. The funding will pay for lab work (bacteria and invertebrates) and staff time. This is a sign of a continuing, mutually beneficial partnership between Streamkeepers and the City, and of the City's confidence that Streamkeepers will continue collecting reliable data long into the future.

(Published in Volunteer Monitoring News, a newsletter for – and by – the volunteer monitoring community, available at: http://acwi.gov/monitoring/vm/publications/newsletters/VM_News_Issue3_Mar2013.pdf)

Recent Findings from Storm Water Sampling for City of Port Angeles

For our monthly sampling for the city of Port Angeles, we target storms in the quarterly months. April was the last such month, in which we sampled both pre-storm and during the storm. We were surprised by how high the storm readings were, given the large amount of rainfall in prior days and the fact that we sampled after peak flow in many cases. The results, taken as a whole, seem to indicate that the bacteria does not easily flush out of the city storm system. However, new research indicates that storm systems themselves can multiply bacteria, but that in some cases at least, the bacteria produced are not signs of pathogens.

HAVE YOU MADE THE e-SWITCH?

Thanks to all who switched from paper mailings to electronic to receive our newsletter, "In the Flow." You have helped save \$ and resources! If you're still receiving a paper copy and would like to switch to electronic, let us know. All editions of the newsletter are available through the Clallam county website at: www.clallam.net/Streamkeepers

Tracy McCallum and Mical Blanchard-Wright— New SK Equipment Wranglers!

As many of you know, kit maintenance has had its ups and downs since **Laurene McLane** and **Dorothy Gendron** left their posts. We've had some great fill-in efforts on the part of **Marilyn Harbaugh**, **Jinx Bryant**, **Sue Nattinger**, **Wade Raynes**, and **Joe McDonald**, but there hasn't been a real consistent pair of eyes keeping track of the kit situation. **Tracy**, one of our great new volunteers from the Class of 2012, has stepped up to take on the role of Equipment Wrangler, with assistance from **Mical**, a PC student. Thanks to both!

Monthly Monitoring to Continue in Sequim-Dungeness Valley

We're proud to announce that after a year's hiatus, we're back monitoring in the Sequim-Dungeness Valley on behalf of the Clean Water District, better than before!

Streamkeepers, in collaboration with the Clallam County Dept. of Health and Human Services (HHS) Environmental Health Division and Jamestown S'Klallam Tribe, have resumed monitoring of about 15 sites **monthly**, for bacteria, nutrients, flow, and standard water-quality parameters (temperature, dissolved oxygen, pH, conductivity, salinity, turbidity).

Our regular sampling under this project began the end of April, and we'd welcome more help.

Streamkeepers Helps Road Crew with Culvert Inventory

Streamkeeper volunteers are assisting Eric Carlsen of the North Olympic Lead Entity for Salmon in inventorying culverts throughout Clallam County on behalf of the County Road Dept. They need your help. Get to know your way around Clallam county while doing a good deed.

Congratulations to Our Long Time Invertebrate Identifier, Art Frost

We're proud and happy to announce that Streamkeepers' long-time invertebrate identifier, **Art Frost**, has received certification from the Society for Freshwater Science (formerly the North American Benthological Society) in the identification of Western General Arthropods and Western Ephemeroptera/Plecoptera/Trichoptera (Mayflies/Stoneflies/Caddisflies), thus officially qualifying him to identify invertebrate samples for submission to the State's database under new Dept. of Ecology regulations. The certification process involves passing a practical (specimen-based) exam with a score of 95% for certification for a particular region and taxonomic group. **Way to go, Art!**



MAYFLY



STONEFLY



CADDISFLY

(Camouflaged in Stick Case)



CADDISFLY

(Camouflaged in Stone Case)

Thank You, Olympic Forest Coalition!

Olympic Forest Coalition, OFCO, recognizing the importance of the Streamkeeper program overall and specifically for our monitoring in the WRIA 19 Stormwater project, provided us with a donation to cover not only lab processing for the project but also Streamkeepers' general operating costs. We were just at a point where we couldn't keep our equipment maintained and calibrated, so we would have been "high and dry" without this donation. So, thank you, OFCO!

Bugs Galore on the Wild West End! Partnership with the Quileute Tribe

The Quileute Tribe were the pioneers of benthic macroinvertebrate sampling on the Olympic Peninsula when they conducted an extensive project in 1997-98, which provided excellent baseline data and a preliminary analysis of the impact of forestry activity on stream health. Now, through an EPA grant, the Tribe plans to resample 15 sites on the Quillayute River system (WRIA 20) in both 2013 and 2014, and naturally they've come to Streamkeepers for project support. We've signed a contract whereby Streamkeepers will help with sample collection, chain of custody, sample sorting, quality control, and data management, and the Tribe will pay for staffing, supplies, and taxonomic laboratory work. If you "dig bugs" and want to get out on some beautiful streams, come join us! Bug sampling runs through August and September each year.

And More Bugs! Thanks to WA Dept. of Fish & Wildlife Grant

In addition to the above, we've just been awarded a WDFW-ALEA grant for \$8235 to collect 6 additional benthic macroinvertebrate samples in both 2013 & 2014. Thanks to all who helped on the application, including support letters submitted by:

- Strait Ecosystem Recovery Network of the Puget Sound Partnership
- North Olympic Peninsula Lead Entity for Salmon
- Dungeness River Management Team
- Quileute Tribe

The grant will cover supplies, ID & QC lab work, volunteer mileage when connected to bug sampling, and even snacks for the sampling and sorting teams.

We expect these extra 6 samples to be collected in WRIAs 17-19. **Please begin thinking of sites you'd like to suggest for sampling, along with your rationale.**



Reading pH



At Valley Creek



Collecting Macroinvertebrates



Weighing Fish



Restoration

My Time in the Creek

by *Chace Souza, Student Reporter, NOPSC Natural Resources Program*

Living in the Pacific Northwest, I have been blessed to be surrounded by a wide variety of beautiful landscapes: the Olympic Mountains, the Elwha River, and the Hoh Rain Forest, to name a few. My name is Chace Souza; I am a senior at Port Angeles High School and am taking a Natural Resources Options class through the Skills Center. I would like to tell you about my experience volunteering and what I learned while working with Streamkeepers of Clallam County and the Natural Resources Options program to help preserve our beautiful environment.

The Natural Resources Program has a variety of classes to give students relevant environmental skills, knowledge, and experience while meeting the needs of the North Olympic Peninsula region. Students receive high school credits, which was important to me. The community is served by the work provided. We partner with many local organizations like the Feiro Marine Life Center and the Olympic National Park Visitor Center. The one my class is partnered with is Streamkeepers of Clallam County.

In my time with this program I have gained all sorts of experience, since our class has been the team in charge of monitoring both Valley and Tumwater Creeks. I now consider myself an experienced Streamkeeper thanks to the class. I have loved being in this class and it has been a blast getting to know all of the other volunteers and classmates. There is something so exciting about being out in the field calculating the flow of the creek, finding its pH level, discovering its turbidity, and determining its conductivity that I can barely wait to get to the creek. I love doing work and being out in the creek and that is why I enjoy it so much. The most satisfying experience I have gained from this course was learning to do real professional work involving scientific data that will be used in the future.

I encourage students to take this class because of how many great opportunities it presents them, like an internship with Olympic National Park, where you can earn a scholarship of \$1200 which most colleges will match. Visit www.nopsc.org/naturalresources and click "Natural Resources 1, 2 and Senior Culminating Project" links or call Dan Lieberman at 360-565-1892 to learn more.

All in all, I have had a great time these past few months being involved in this program and will remember the experiences I have gained from it for a long time. There are not many opportunities for people my age to get involved in their community, and we have great ones here on the Olympic Peninsula with Skills Center Natural Resources and Streamkeepers. We are surrounded with beauty, so why not help keep it that way and sign up today?

New Class at Skills Center Next Year—Looking for Gear Donations

Daniel Lieberman, instructor for the Natural Resources course and Jamie Valadez, a Lower Elwha Klallam cultural teacher, who has shared so much in the schools throughout the county, plan to team-teach a "Cultural and Natural Resources" class that will include a wide variety of environmental service projects and the natural history of the Olympic Peninsula. They are looking for donated waders, boots, raingear, and warm layers for their High School age students.

Upgrades Will Make Data Entry a Breeze—Come Join Us!

by **Stefanie Colliton**, Student Reporter, *NOPSC Natural Resources Program*

Streamkeepers gathers a lot of information from the field that requires diligent consistency to keep it recorded and as up to date as possible. Not only do office volunteers have to enter all the data, they also have to check and double-check all of it.

In order to hold the variety of data that Streamkeepers now gather, we executed a massive restructuring of the database in 2010, with the help of **Walt Johnson**, **Steve Belcher**, **Rowann Osborn**, **Robert Knapp**, and **Revital Katznelson** of the National Water Quality Monitoring Council. As a result, the data entry forms became much more complex, and a three-year backlog of data developed! To address this problem, **Jinx Bryant** and **Phil Morgan-Ellis** are creating specialized database entry forms that match each type of Streamkeeper data sheet, which will facilitate the process of entering data. In addition, the new forms will be online, opening the possibility that someday volunteers and Skills Center Natural Resources students will be able to enter their field data through home computers, tablets or smart phones.

Right now would be a great time to get involved in data entry, with the wonderful new user interface that Jinx and Phil are creating. This is a way to help protect and restore our streams without getting your feet wet!



Walt Johnson and Steve Belcher working on database design



Streamkeepers Could Not Function Without the Support of Loyal Office/Lab Volunteers!

Not all SK volunteers are sloshing through streams, taking measurements and collecting samples. Many are either in a dry room in the basement of the Courthouse or at Feiro Marine Life Center, doing a multitude of tasks, including entering data, analyzing data, sorting bugs, planning educational presentations, creating displays for festivals, cleaning and organizing equipment, calibrating instruments, checking and organizing kits, working on the SK website, publishing this newsletter, etc. The work done by these individuals goes largely unnoticed, but we couldn't do what we do without them. Pictured here is **Donna Spence** constructing from scratch a custom-made sampling-container box, with dividers to house the various containers needed for the Clean Water District project, complete with the appropriate labels.

Thank you, Donna, for the multitude of jobs you do for Streamkeepers, and to **all** the volunteers who spend some of their time indoors helping out: **Walt Johnson**, **Steve Belcher**, **Marilyn Harbaugh**, **Lucille Schmitt**, **Jinx Bryant**, **Phil Morgan-Ellis**, **Bob Lake**, **Coleman Byrnes**, **Sue Nattinger**, **Tracy McCallum**, **Mical Blanchard-Wright**, **Ron Sidwell**, **Keith Peters**, **Cathy Wright**, **Cyndy Patzman**, **Robert Buck**, **Rowann Osborn**, **Jean Sigmar**, **Tara Morrow**, and **Art Frost**.



**Introducing Streamkeepers'
New Summer Intern,
Rebekkah Curtin
Joining us from
June 22nd—Sept. 1st**



Rebekkah grew up between Port Angeles and Sequim on Blue Mountain. She graduated from PA HS and is attending UW. She's a Super Senior, meaning she's completing both her 4th and an extra "5th year" simultaneously in the Environmental Science and Resource Management Program next year. She's looking forward to learning Streamkeeper field techniques and working with a diverse group of volunteers. Her interests have focused on wild life and landscape ecology; in particular, studying broadscale patterns. She enjoys hiking and gardening. Welcome, Rebekkah and thank you for helping with our program this summer.

Remembering Gwen Pierce

By Ed Chadd

I'll never forget the sly smile of Gwen Pierce, who passed away recently in Sequim. Gwennie joined Streamkeepers when we were still the Eight Streams project, and she was determined to do what she could to save the innocent creatures who so often come up on the short end of civilization. Already well into retirement, she teamed up with Jack Smith to do the bulk of our monitoring of Sequim irrigation ditches in "the early part of the century," when the Conservation District was prioritizing ditches to pipeline. Gwen had an angelic little devil inside her: once, she was volunteering at the entrance station to the Dungeness Wildlife Refuge when a wealthy family passed the pay station without stopping. When she approached them about this, the man of the family began to harangue Gwen about how his tax money should be contribution enough. Gwen started digging in her purse and replied, "Well, there's not enough tax money to run this park because so many wealthy people aren't paying their fair share, but if you can't pay, don't worry. I'm an old lady on a fixed income, but I'll pay your entrance fee." We get your point, Gwen!

Ed Chadd included on new website: Olympic Peninsula Natural Resource Careers

(Profile written by NOPSC Natural Resources student, Savannah Kays)

<http://www.opnrc.org/profiles-of-natural-resource-professionals-on-the-olympic-peninsula.html>



As a kid, Ed Chadd liked to play in empty lots, catch bugs, go on hikes, sleep under the stars, and skip rocks in the ocean. When he got older he became a high school English teacher, and then carried on to follow his passion with the outdoors and get his degree in environmental science through Western Washington University's Huxley College in Port Angeles. Part of his motivation to switch to natural resources was that education should be more connected to the outdoors and community.

Following his switch from classroom teaching, he did outdoor education for Outward Bound. He worked with students in many areas building trails in the National Parks and rehabilitating streams. During some stream work, his crew made a mess with the muck, and he thought the creek looked horrible. He and the crew shoveled muck out of the stream, and when they returned the next day, it was very clear, and for the first time in years there were baby Coho salmon. This amazing experience made Ed want to get more into this type of work.

Now, Ed runs the Streamkeepers program. He recruits volunteers to monitor the health of our local creeks. He has to find out from the experts in Streamkeepers what needs to be done in the streams and he helps get it done. He wrote the Streamkeepers handbook including the monitoring protocols and tools. His advice to people considering work in natural resources is try to follow your passion and have a lot of motivation.

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