# In the Flow

Streamkeepers of Clallam County

**JULY 2012** Produced with Volunteer Help **Issue 64**

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## IN THIS ISSUE



Trainers **Coleman Byrnes** and **Jinx Bryant** with Trainees Steve Muller, Siobhan Sloan-Evans, Tracy McCallum

## 2012 Streamkeeper Training

Training this year was accomplished in 2 days. The first day included introductions to the program and field training at Peabody Creek for bug collection for the B-IBI (Benthic Index of Biological Integrity), which is a stream health grading system based on aquatic insects found at monitoring sites. The second day took place at West Wind Farm on Salt Creek, thanks to owners/ hosts, Peter and Jane Vanderhoof. Trainers were: **Ed Chadd**, **Adar Feller**, **Sue Nattinger**, **Coleman Byrnes**, **Bob Lake**, **Keith Peters**, **Jim McCullough**, **Nancy Messmer**, **Roy Morris**.

## Summer Quarterly Monitoring Begins in August!

**Find your boots and be prepared as your stream team leaders will be contacting you soon with monitoring dates and times. Be safe out there and don't forget the sunscreen! Thank you for your help and dedication. Review your handbook on procedures to be prepared and check to see if your handbook is up to date, on the SK website.**

Trainers **Adar Feller** and **Keith Peters** with Trainees Lisa Unger, Julie Hayes, Randal Waltz

**Handbook now available at:** http://www.clallam.net/streamkeepers/html/volunteer_handbook.htm

# 2012 Streamkeeper Training

**Trainers: Adar Feller, Sue Nattinger, Nancy Messmer, Keith Peters, Jim McCullough, Roy Morris, Bob Lake, Coleman Byrnes, Ed Chadd, Art Frost.**
**Trainees: Michael Craig, Julie Hayes, Joe MacDonald, Tracy McCallum, Steve Muller, Bob Phreaner, Wade Raynes, Siobhan Sloan-Evans, Lisa Unger, Randall Walz**

Bug Collecting Training took place on Peabody Creek. After collection, bugs are sorted and identified according to the B-IBI (Benthic Index of Biological Integrity) by SK volunteers at the Art Feiro Marine Lab Center in Port Angeles. The identity and numbers of these macroinvertebrates (bugs) help show the health of the stream.

Setting up bug collecting site (L to R) Wade, Joe, Lisa, Bob P., Keith, Sue, Bob L., Julie, & Bug Guru, Art Frost

Sorting bugs (L to R) Siobhan, Coleman, Steve, Jinx, Tracy

Keith, explaining the Surber Sampler "bug bag" to Wade and Joe

Sue, Julie, Bob L., searching for bugs.

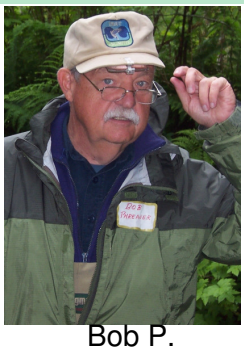
The 2nd training day took place at West Wind Farm. Morning sessions included learning how to measure Turbidity, Chemistry, and Flow. Afternoon sessions included instruction on Noxious Weeds by Cathy Lucero, use of the Camera by Bob Dunlap, Gradient & Compass, Safety & Etiquette, Fish & Wildlife.

Lisa

Joe

Wade

Michael



Bob P.

Siobhan

Siobahn, Jane Vanderhoof, Cathy Lucero presenting about Noxious Weeds, and Coleman

Jim, Tracy, Michael, Bob P., and Wade learning about measuring Turbidity

Joe and Steve measuring Turbidity

Tracy learning about use of camera from Bob Dunlap

# Welcome new volunteers!

## Inter-Local Agreement Allows for Continuation of Stream Water Quality Monitoring for 2012

An agreement between the city of Port Angeles and the Clallam County Department of Public Works- Roads allows for the continuation of Streamkeeper services: recruit and train volunteers to collect water samples and annual benthic macroinvertebrate samples, coordinate sampling activities, submit samples to laboratory for analysis, record, confirm, and analyze laboratory results and report them to the city. The city will provide direction as to sampling design, parameters, etc., provide access to sites, arrange for payment of laboratory analysis, and reimburse for technical assistance. Total cost for all services not to exceed $11,500. Agreement is in effect from May 1 to Dec. 31 of 2012.

## Inter-Local Agreement for Stream Monitoring Services to be Performed by Clallam County on Behalf of the Lower Elwha Klallam Tribe

The Elwha Klallam tribe receives funding through an EPA grant for the purpose of gathering data on stream condition and wishes to engage the services of the Clallam County Streamkeepers program. Compensation allows for $5000 in 2012 (as of May 15, 2012) and $4000 in 2013 to recruit and train volunteers to perform water-quality sampling, coordinate sampling at various sites, and manage equipment calibration and maintenance, data entry, data storage, quality control, metadata, data analysis, and data reporting.

Noxious Weed # 1

## SK's Grant Application to DOE

Noxious Weed # 2

Streamkeepers' monitoring and data management has been named as the DRMT's second priority for funding from the WA Dept. of Ecology's operating and Capital Grants program for the biennium beginning July 7, 2013. Application needs to be made. We hope to include with this application a proposal for funding to finish the restructuring of the Clallam County Water Resources database; this project has been in abeyance since last summer, due to Ed's kidney donation, last year's program upheavals, and Ed's current half-time schedule. If all goes well, the database will be tied together again within a few years- depending on a funding source.

## Streamkeeper Database Restructured

**Walt Johnson** and **Jinx Bryant** have continued their work on the new data-entry forms for the restructured database. Jinx reports that the forms are working perfectly, and the data-entry has ramped up accordingly. Be assured it has nothing to do with the mallet in Walt's hand– pictured here, but rather a great deal of hard work by volunteers.

## Plans for Regional B-IBI

Puget Sound local governments continue their work (with **Ed Chadd** helping the leadership team) on a project to re-calibrate and standardize procedures for our regional B-IBI. This will result in better data and more universally-acceptable interpretation. It has resulted in some changes to our sampling procedures. Also, Bug Sampling Season has changed. We will now sample a month earlier than before: the new window is from August 1– Sept. 15. It also coincides with Summer WQ monitoring, so there will be more work to do in August, but it should also mean generally better weather for sampling! We're working on figuring out funding and sites for this year's bug sampling. See revised protocol:

http://www.clallam.net/streamkeepers/assets/applets/Changes_from_2011_to_2012.pdf

## Slightly Changed Weed Protocol

We'll survey for weeds every summer whether there's anything new to report or not. You'll fill out a Noxious Weeds form, with any new data found at a site. You'll describe the size of the area surveyed and its overall noxious weed cover. The method of describing the infestation has changed—see the revised protocol: http://www.clallam.net/streamkeepers/assets/applets/Changes_from_2011_to_2012.pdf

Have you noticed numbered photos of Noxious weeds throughout this newsletter? See if you can identify the noxious weeds that you may see while doing your monitoring. Answers on pg. 8

## Check Out Updated Streamkeeper Website

Thank You to **Bob Lake**, who is continually keeping the Streamkeeper website up to date. Streamkeeper's "In the Flow" newsletter publisher **Jean Sigmar** helped with photos.

There's now a link to two STUDIES. Habitat Biologist, **Cathy Lear's** presentation on stream processes and disturbances, "Threads in the Web- a Brief Introduction to Olympic Peninsula Streams," is listed as "Ecosystem Processes and Disturbances on Olympic Peninsula Streams."
http://www.clallam.net/streamkeepers/assets/applets/LFA_2012_slides.pdf
And, the WRIA Limiting Factors Reports is a summary of geology, biology, and human impact on all area streams, compiled by State Conservation Commission. http://salmon.scc.wa.gov/

There's also a link to information on noxious weeds from **Cathy Lucero,** Clallam County's Coordinator of the Noxious Weed Control Program:
http://www.clallam.net/streamkeepers/assets/applets/Noxious_Weed_Presentation_2012_for_Web.pdf

The 2012 (14th) edition of our handbook has been published a bit early this year in time for this year's training. The changes from the 2011 edition are not earth-shaking enough to send you new hard copies, but if you want new hard copies of selected sections or the entire Field Procedures, let us know. The handbook is available on our website: http://www.clallam.net/streamkeepers/html/volunteer_handbook.htm


Noxious Weed # 3


Noxious Weed # 4

**Ed Chadd**, coordinator of Clallam County Streamkeepers volunteer stream-monitoring program, received a full scholarship from YSI, Inc. to attend the National Water Quality Monitoring Council Biennial Conference in Portland, OR, May 1-4. In addition to attending workshops and assisting with logistics, he moderated a panel, speaking on "Assessment Approaches for Habitat Protection and Restoration." Conference website:

http://acwi.gov/monitoring/conference/2012/index.html

## Volunteers Needed for DOE Project on Peabody Creek this Summer

**"Peabody Creek Stressor Identification"**

There are several potential stressors on Peabody Creek; most of which are related to stormwater and urbanization impacts, so stormwater input events will be monitored, looking at flows, but also the chemical and thermal properties as well. They will also be looking to identify causes of the biological impairment on Lower Peabody Creek and propose actions to improve conditions and move the creek off of the 303 (d) Category 5 list. To volunteer, contact Karen Adams, kaad461@ECY.WA.GOV, (360) 407-6530

## Streamkeepers Keeps Marching On

In spite of reduced staffing and funding, Streamkeepers marches on, and the basic decision made at our Program-Planning meeting in December was to try to do everything we have the capacity (staffing, funding, volunteers) to do, and maybe a bit more. The only way to know our limits is to hit them. So far, here's how things are shaking out:

~ We've done fairly well keeping our quarterly stream-teams going, though we have no funding for equipment repair.

~ There has been no bacterial grab sampling this quarter (including our Clean Water District Team) because there is no funding for lab work.

~ Our Western Straits Stormwater team, led by **Coleman Byrnes**, has been out sampling during recent high water events, funded by a grant from OFC (see article on pg. 7)

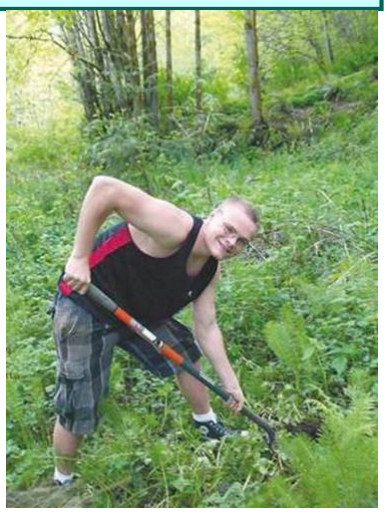
~ **Walt Johnson, Jinx Bryant**, and **Ed Chadd** continue to upgrade the database, and volunteers are entering backlogged data.

~ In addition to program coordinator, **Ed Chadd's** 20 hr/wk paid by the Road Dept., he can work on additional projects that have outside funding.

~ We've discussed a number of partnership opportunities with our new umbrella organization, the County Road Dept., which we'll be implementing later this year, to help the Road Dept. achieve its mission more effectively.

**Check out the Volunteer opportunity for the Roads Dept. on pg. 6!**

**Clallam County Health Dept. hopes to have money to resume WQ sampling in the Clean Water District (special project in Sequim area) by this summer; stay tuned...**



## NOPSC Natural Resources Class

The NOP Skills Center Natural Resources students gave their Senior Culminating Project presentations in June, to a crowd of about 60. Some excellent presentations, some based on collaboration with Streamkeepers; link to article at: http://www.peninsuladailynews.com/article/20120624/NEWS/306249998

An excellent study was done by student, Dustin Hellwig, on Valley Creek restoration and how Streamkeepers data tracks the success of that project. Streamkeepers will inherit a wonderful poster Dustin made on this subject; look for it at upcoming fairs.

Noxious Weed # 5

Noxious Weed # 6

Dustin Hellwig, a North Olympic Peninsula Skills Center student, recently planted trees along the "semi-natural reach" of Valley Creek in Port Angeles. This part of the creek, partially restored to its natural state by the Lower Elwha Klallam tribe, was the setting for a service-learning partnership with the skills center, the tribe and Streamkeepers of Clallam County. Photo by Port Angeles School District. Caption from PDN.

## Thank-You, New Team Leaders!

**Keith Peters** – Barnes Creek

**Jinx Bryant** – Ennis/Morse, Elwha side-by-side

**Jim McCullough** – McDonald

**Prepare for Summer monitoring in August!**

## VOLUNTEERS NEEDED
### Forage Fish Habitat in the Nearshore

This Summer volunteers are needed to walk Olympic Peninsula beaches in search of forage fish habitat in conjunction with graduate research and associated with the Coastal Watershed Institute. We are looking at large woody debris and sediments in the Elwha driftcell area, Dungeness bluffs and spit, as well other areas. Let me know if you have anyone available on weekends starting June 30th through the end of September. Hiking boots required, lunch provided.

Contact: Samantha Rich
Natural Resources & Environmental Science
UIUC(University of Illinois at Urbana-Champaign) grad student
206.660.7655

## Volunteer Opportunity: Inventorying Culverts! NOW!

Here's an opportunity to thank the Roads Dept. for helping save our Streamkeeper program and a chance to provide a valuable service, while doing your favorite activity: mucking around in creeks all over the county. Culvert replacement can often be the most effective salmon-restoration-per-dollar project out there, as we've seen in recent years on Salt Creek. This new project is inventorying all the culverts on the northern flanks of Clallam county, in order to prioritize culverts for replacement, upgrade, etc. It is the result of a partnership between Streamkeepers, the Clallam county Road Dept., and the North Olympic Peninsula Lead Entity for Salmon Restoration.

Contact: N Eric Carlsen
Restoration Planner– North Olympic
223 E. 4th St., Suite 5
Port Angeles, WA 98362-3015
360-417-2324
360-640-0708 c

**BIG THANK YOU TO WADE RAYNES AND JOE MACDONALD FOR ALL THEIR HELP IN KEEPING THE STREAMKEEPER OFFICE RUNNING SMOOTHLY!**

Special Thanks to SK volunteers, **Roy Morris** and **Nancy Messmer** who represented Streamkeepers at the recent West End Water Fair on June 16th and also for serving as liaisons in establishing a new partnership with the Quileute Tribe to perform WQ sampling.

Noxious Weed # 7

Bull Trout

## BULL TROUT SURVEYS

Fall is approaching and soon it will be time for Bull Trout spawning surveys. Since 2005 Streamkeeper staff and volunteers have conducted spawning surveys in the upper Dungeness and Graywolf Rivers and we will do so again this fall. These spawning surveys involve hiking through forested landscapes in the Buckhorn Wilderness Area and wading down scenic rivers. If this sounds appealing, give it a try. Watch for announcements concerning Bull Trout surveys.

Noxious Weed # 8

## SIEBERT CREEK SPAWNING SURVEY

This year Streamkeeper volunteers again conducted spawning surveys on Siebert Creek. The first Stream-keeper survey was conducted in 2003 and, with the exception of 2011, has been done yearly. The 2012 crew consisted of **Robert Buck**, **Larry O'Keefe**, **Marcos Grimsditch**, **Sue Nattinger**, **Coleman Byrnes**, and **Keith Peters**. 39 spawning sites were found.

## OFCO (Olympic Forest Coalition) to Continue Stormwater Sampling in WRIA 19

(and the overall Streamkeeper program with another donation of about $3000. )

## WRIA 19 Turbidity Study (by Coleman Byrnes)

(Our Western Straits stormwater team, led by **Coleman Byrnes**, has been out sampling during our recent high-water events, funded by a grant pass-through from the Olympic Forest Coalition.)

WRIA 19 borders the western portion of the Strait of Juan de Fuca. Its streams drain the uplands to the west of the Elwha River and east of the Makah Indian Reservation and all WRIA 19 streams flow northward into the Strait. The major streams of WRIA 19 are Salt Creek, Lyre River, East Twin River, West Twin River, Deep Creek, Pysht River, Clallam River, Hoko River and the Sekiu River. The Lyre River drains Lake Crescent and its waters originate in snow fields and glaciers of Olympic National Park. The rest of the streams of this WRIA are rain fed streams originating in the lower elevation foot hills along the Strait.

The population of this region is low. Approximately 3000 people live in WRIA 19 and are concentrated in the community of Joyce and Clallam Bay. Retirees don't seem to be attracted to this region and population growth is low. Thirty to forty years ago there was a vibrant agricultural community in this region. However farming has declined in this area and only a few working farms are left. Many former pastures and fields are returning to forest. The life style of the region can best be defined as rural residential.

Despite this region's small population, human activities have heavily impacted it. The landscape of WRIA 19 is one dominated by commercial forests and 75% of its land base is devoted to that purpose. 53% of the forest land is privately owned and the rest is state and federal forests. Only a few small parcels of old growth are left. Almost all of WRIA 19 watersheds have been logged at least once and some have experienced up to three cuts. The density of logging roads per square miles is quite high and some of the roads are old and poorly built.

Since the human impacts affecting the landscape of WRIA 19 are so concentrated in one area, commercial forestry, we decided to focus our study on how the interaction of storm events and landscape contributes to the sedimentation and turbidity of WRIA 19 streams. Water samples were collected at study sites and analyzed for turbidity levels and suspended sediment concentrations. We have tried to determine how WRIA 19 streams respond to storm events by finding the areas from which the turbidity originates.

Study sites on various WRIA 19 streams were chosen after consultation with tribal and other fisheries biologists. Safe and legal access was considered when choosing study sites. Most study sites were located on public land. Sites on private property were entered with owner's written consent. The Hoko and the Little Hoko had the most sites because of safe access sites during high water events. The study itself was conducted under the auspices of Streamkeepers of Clallam County, a county sponsored volunteer water quality monitoring program. All equipment used in the study was the property of Clallam County or of Washington State Department of Ecology. Streamkeeper protocols were followed.

The study sites were located on eight WRIA 19 streams. One of these streams was the Little Hoko River, the Hoko River's largest tributary. Only rain fed rivers were chosen since these streams all have their origin in, and wander through, commercially forested landscapes. The Lyre was not considered for study purposes because of its origin in the snow fields of Olympic National Park.

The turbidity levels of the samples were analyzed using two different Clallam County turbidimeters. Water samples were also sent to the Department of Ecology's Manchester Chemistry Laboratory in order to find out the suspended sediment concentration of the samples. Turbidity readings from another study on the Hoko and Little Hoko were used as a control. Visits to these study sites always took place during fair weather and low water conditions. Low turbidity readings were associated with these low water readings. The analytic equipment in this study was the same as used in the other study.

Data gathered is being entered into the Clallam County data base and, once entered, is public record. Eventually this data will go to the Department of Ecology. As the study progressed, sampling sites were added in order to fine tune the search.

So far samples have been gathered during 15 different storm events and some general trends are starting to emerge. Salt Creek always has a lower turbidity level than the other streams of WRIA 19. During storms, the Little Hoko River always has a much lower level of turbidity than does the Hoko River itself. Below where the little Hoko enters Hoko, the Hoko River often has a lower turbidity reading than it does above the confluence of these 2 streams. The source of the majority the Hoko's turbidity originates above the Makah Hatchery at river mile 9.5.

**Chuck Whidden** We bid farewell to Chuck Whidden, who died in April. A former Coast Guard officer, marine-supply store owner, and civic leader, Chuck was hyper-active in his retirement, serving on the City's Parks Commission, doing long-distance bicycle rides, and eventually joining Streamkeepers at age 80 with failing knees, fading health, and ever-ebullient spirits. After warning us that he couldn't be clambering over trees anymore, he clambered over them anyway, and he focused hard on performing our field procedures with exactitude, understanding the importance of high-quality data. He enjoyed stories of political goings-on, hinting that he had some experience in that regard but not explaining till later that he'd once been Mayor of Port Angeles! He had no problem with the grunt work and was apologetic when the time came for him to hang up his wading boots. We'll long remember that Boston accent and the smile he had for everyone he met.

Thank You to **Zack Hovis** and his parents, **Pat and Mike Hovis**, for all your support of Streamkeepers. We wish Zack the very best as he enters The Evergreen State College to begin studies in Biology and Environmental Studies, ground work before his hope of attending UC Davis to study "Bugs" for an M.S. degree.
Letter from Zack:
Dear Ed,
It feels like such a short time since I started going to SK meetings, but now, after 5 yrs., it's coming to an end. The time flew because I had so much fun with you all. I will be forever grateful for the companionship, experience, and knowledge I encountered here. Thank you, Cheers, Zack

## Noxious Weeds Answer Key

#1 Tansy ragwort #2 Herb Robert #3 Meadow knapweed #4 Japanese knotweed

#5 Bighead knapweed #6 Orange hawkweed #7 Reed canarygrass #8 Policeman's helmet

To learn more about these and other Noxious weeds: http://www.clallam.net/WeedControl/html/weed_photos.htm#Blueweed