



# In the Flow

Winter 2023, Issue 73

<https://www.clallamcountywa.gov/901/Streamkeepers>

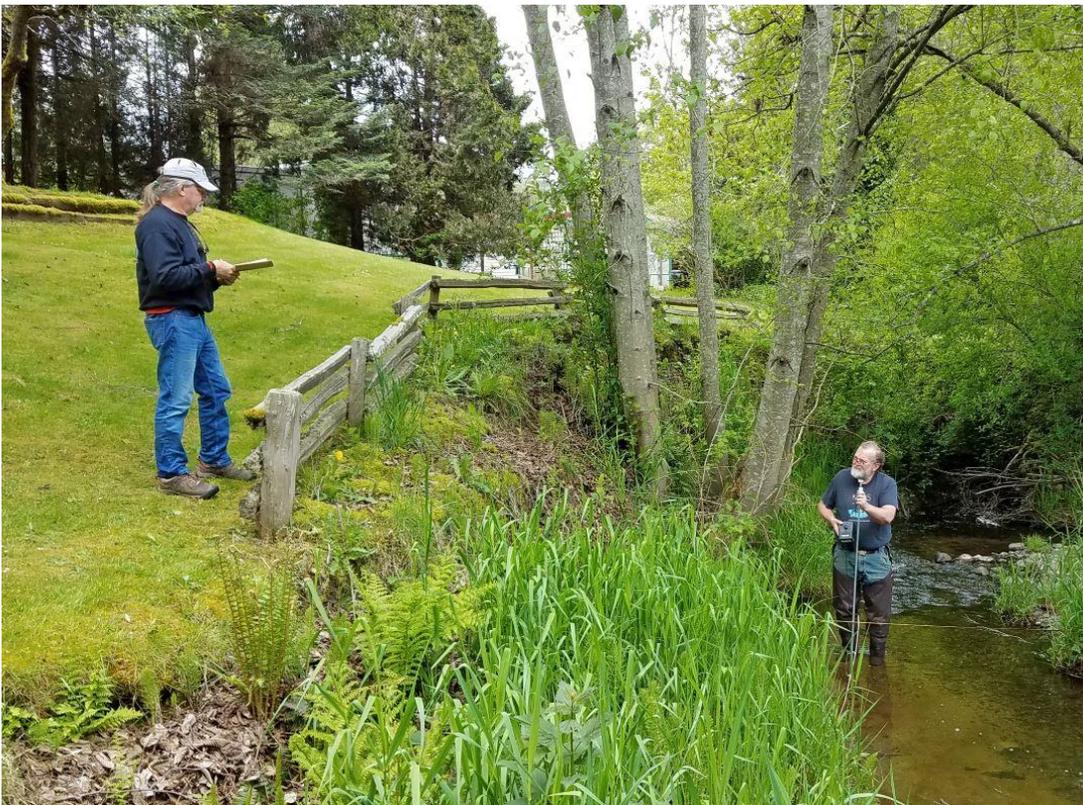
360-417-2281

## Greetings Streamkeepers and Friends,

Reflecting on 2022, it was a good and interesting year for Streamkeepers. We worked on a variety of projects, and as always, gathered important data on our local streams and passed it along for use in management and improvement of water quality in the area. We had 33 volunteers doing a lot of good work in 2022. Here's a brief summary with photos.

### Quarterly Monitoring

We monitored water quality at 25 sites on 10 creeks, in January, April-May, August, and October. In quarterly monitoring, we are mainly assessing water quality as it relates to salmon and trout habitat. Salmon and trout need cool clean water with high dissolved oxygen content and low turbidity, and with pH in the neutral range, to survive and thrive. So we measure water temperature, dissolved oxygen, turbidity, and pH. We measure stream flow, as this is another important aspect of fish habitat. We also record our observations of fish and wildlife. We're excited to have two new flow Ott MF Pro flow meters this year, which we started using in October.



Stephen White and Paul Pickett measuring stream flow in Lees Creek in May, 2022.



Dan Lieberman measuring stream flow in Valley Creek in October 2022, using a new Ott MF Pro flow meter. Such a cool new gizmo! It measures stream velocity using a bulb sensor which generates an electromagnetic field that senses water velocity. This has advantages over the propellor sensors of the old Swoffer meters – no moving parts, no problems with low flow conditions or aquatic vegetation, and experienced volunteers will appreciate – no more blow test!

### **Benthic Macroinvertebrate Monitoring**

Streamkeepers did monitoring of benthic macroinvertebrates (AKA stream bugs) in October 2022 in Valley Creek, Tumwater Creek, Peabody Creek, Ennis Creek, and the Hoko River. Monitoring stream insects and other invertebrates is a great way to assess stream biological health. People seem to love this work, everyone wanted to get involved, including collaborating staff of the Makah Tribe and Lower Elwha Klallam Tribe. Here's some photos.



Heading out to the Valley Creek monitoring site



Stephen White, Coleman Byrnes and Ted Oldenburg sort a sample while Sue Nattinger checks the Surber Sampler net.



Everyone was excited to find a sculpin in the sample at the Hoko River!



A fitting conclusion to successful benthic macroinvertebrate monitoring at the Hoko River – a Watermelon Party!

### **City of Port Angeles Stormwater Monitoring**

I'm glad to say, our contract with the City of Port Angeles has been renewed, and we are back to work on monitoring water quality every month and after high rainfall storm events in Port Angeles creeks, as of October 2022. For this project, we are monitoring stormwater outfalls and creeks to assess impacts of stormwater on stream water quality and ensure that good water quality is maintained. In response to a change in the State Water Quality Criteria, we now use a new indicator of bacterial pollution – E. coli instead of fecal coliform. So we collect samples for E. coli analysis, and also monitor other water quality parameters including turbidity, pH, dissolved oxygen, and temperature.

### **Dungeness Off-Channel Reservoir Project**

Work continues on this project to monitor water quality in ditches that will eventually flow into or out of a new off-channel reservoir near the Dungeness River south of US 101. We're contributing data that informs the reservoir design, and provides baseline conditions for eventual comparison to the future conditions.

### **Temperature monitoring in Indian Creek and the Elwha River**

We are beginning a collaboration with NOAA fisheries to install and/or maintain temperature loggers that record temperature at 30 minute intervals in Indian Creek and the Elwha River. Continuous measurement of temperature allows us to track how temperature changes over the seasons and even over each day. This measurement method is needed to determine daily maximum temperatures, an important indicator of salmon habitat suitability. We need volunteers for this project, so if you are interested, please let's talk.

### **Pollution Investigation and Correction (PIC) Project**

After many years of great service with the PIC Team, Sarah Miller had to leave to begin a new volunteer career as president of the New Dungeness Light Station Association (NDLSA). We are tremendously grateful for all Sarah has done with Streamkeepers, and sad to see her go. However, this new avenue of service she is embarking on sounds great too, I must admit, and Sarah will continue to be a wonderful contributor to the community in a new way. A new volunteer

Lance Vail has joined the PIC Team, and with his strong background in water quality with prior work at Pacific Northwest National Laboratory, Lance is a valuable addition to the team.



PIC Team member Linda Sumner collects a water sample in Meadowbrook Creek, while Peggy McClure looks on from atop the bridge, in November 2022.

### **Lower Dungeness River Floodplain Restoration Project**

In the last year, there's been a lot of action with this project to expand the flood plain for the lower Dungeness River and create more and better habitat for salmon, steelhead, and other fish and wildlife. Streamkeepers provides support for this project by monitoring water quality to ensure water quality criteria and permit requirements are met. This project has been a great collaboration between Clallam County and the Jamestown S'Klallam Tribe. The removal of a long stretch of old levee has been completed, and a new levee further away from the river has been built. The northern section of Towne Road has been removed. All just in the nick of time before the winter rains came! The real excitement came on December 27<sup>th</sup>, when river flow reached maximum for the year at over 2,300 cubic feet per second (CFS). The river carved itself some new channels through the expanded flood plan, and river water was abundant in places it hadn't been for over 50 years. The engineered flood return channel, designed to return flood waters back to the river near the Anderson Road bridge, served its purpose well. With the high water in December, it has actually become a new side channel of the river!



View looking west from near the Anderson Road bridge, on December 7<sup>th</sup> (left) and December 27<sup>th</sup> (right). The Dungeness River is at right. The path of the old removed levee is left of center. The flood return channel / new side channel comes in from the left. Wow, big changes! And great for the salmon of the future.

Large flocks of ducks and other water birds have been having a great time with all the ponded water too (see photo below).



Aerial photo of the Dungeness River filling up its new expanded flood plain on December 27<sup>th</sup>, 2022.

**AND – We are gearing up for winter quarterly monitoring 2023! And other projects too!**

**To the volunteers: please send me a list of your available dates (or unavailable dates) for the rest of January.**

FYI - we now have a collection of hip waders in various sizes on hand for those volunteers who don't have their own.

Cheers,

**Joel Green**

(he/him/his)

Streamkeepers Coordinator

**Phone:** 360-417-2281

**Mobile:** 360-325-3979

**Email:** [joel.green@clallamcountywa.gov](mailto:joel.green@clallamcountywa.gov)

Clallam County Dept. of Community Development

