

PLANNING GRANT TO REVAMP THE STREAMKEEPERS AMBIENT MONITORING PROGRAM

Dear Streamkeepers volunteers, advisors, and interested parties:

We have received a grant from WA Dept. of Ecology to revamp the Streamkeepers ambient monitoring plan by June 2015. See [timeline](#).

The grant comes out of watershed plan implementation funding for Water Resource Inventory Area (WRIA) 18, but the program revisions are expected to cover all of Streamkeepers' ambient monitoring county-wide. The grant stemmed from a June 2012 recommendation from the Dungeness River Management Team, which includes Clallam County as a member and is the sole currently-functioning watershed planning group in WRIA 18.

The overall goal is to better enable us to provide credible data useful to decision-makers acting to protect and restore our local watersheds. More specifically, the grant contract calls for program revisions to "reflect and support implementation of the WRIA 18 Elwha – Dungeness Watershed Plan". (Here's a link to a [summary of recommendations from the WRIA 18 watershed plan](#) which might be relevant to Streamkeepers.)

Streamkeepers' ambient monitoring program was essentially set in place in 1999. Meanwhile, standard practices and the needs of users have changed. For instance:

- While Streamkeepers' ambient monitoring is done quarterly, most agencies in our region currently or plan to sample monthly, including the Dept. of Ecology, Clallam County Clean Water District, City of Port Angeles, and most Tribes.
- Streamkeepers' last attempt to assess water-quality trends was unsuccessful because quarterly data didn't provide a rich enough data set to make statistically-valid conclusions.
- To gather a suite of standard WQ parameters (including temperature, dissolved oxygen, pH, conductivity/salinity, and turbidity), Streamkeepers deploys three pieces of equipment, each requiring its own in-field calibration and checking procedures, whereas most other jurisdictions sample all of their WQ parameters with a single piece of equipment that gets calibrated and post-checked back in the office.
- Streamkeepers performs wade-across flow measurements simultaneously with its WQ sampling, whereas most other sampling programs do not.
- The Clean Water District has asked Streamkeepers to coordinate monthly sampling for fecal coliform and nutrients as part of a Pollution Identification & Correction plan in the eastern part of the county, and opportunities exist for collaboration between the District and Streamkeepers' own data-gathering needs.

Some basic questions we should pose along the way include:

- What questions do we seek to answer?
- To what ends will the data be used?
- What and how much data will be needed to accomplish our goals?
- What resources are available to accomplish our goals?

The [grant](#) includes about \$11,000 for equipment/supplies purchases, hopefully to purchase the equipment needed to implement the revised plan. One condition for revising the plan is that its ongoing expenses either remain expenditure-neutral or identify additional funding sources.

One scenario to consider is the possibility of increasing sampling frequency from quarterly to monthly, without increasing volunteer effort, by dramatically increasing sampling efficiency:

- Do all in-situ measurements with a single meter that does not need to be calibrated or checked in the field. Calibrations and post-checks would be performed at home or in the office.
- For parameters that cannot be accurately measured with a multi-parameter meter (e.g., turbidity?), grab samples for analysis at home.
- Separate WQ and Flow teams, where WQ team only reads staff gauges.
- Flow teams perform sufficient annual sampling to keep staff gauges calibrated.
- Where flows correlate well between multiple sites, install staff gauges at only one site. Flows will then be modeled at the other sites for analytical purposes.

We need to have a broad-ranging discussion of these issues to arrive at a product that will best meet the needs of the community.

We welcome your participation in this project, either by attending meetings or by contacting us.

[Meeting 1 agenda](#)

[Meeting 1 notes](#)

[Meeting 2 agenda](#)

[Meeting 2 notes](#)

[Marine shoreline monitoring needs survey - MRC 11-17-14](#)

[Flow modeling proposal 1-14-2015](#)