



2013 SFEG Monitoring Programs

Skagit Fisheries volunteer-based monitoring program has a successful track record of engaging our community in salmon enhancement activities. The program encourages wise stewardship of salmon streams by giving citizen's with a hands-on opportunity take an active role in our restoration efforts, and provides our organization and others hard data that can be used to evaluate the effectiveness of restoration efforts and improve project design. Data collected by volunteers is used to identify problems that need correction, document project success, and support project development and grant applications. SFEG has trained and assisted local volunteers to monitor salmon spawning in their neighborhood streams for over a decade.

In 2013, Skagit Fisheries Enhancement Group (SFEG) Monitoring Programs involved 37 volunteers who contributed over 1200 hours to our projects. This work provided more than \$26,000 in matching funds to our projects. Our two areas of focus in 2013 were vegetation monitoring and spawner surveys.

Specific 2013 accomplishments include:

- Hosted 2 training workshops attended by 34 community volunteers
- Monitored 33 native planting sites
- Conducted weekly counts of salmon spawning in 19 streams

This work was made possible by the State of Washington's Aquatic Lands Enhancement Program funding (ALEA) which provided funds for supplies, materials, and to cover volunteers mileage costs, and by the Mountaineers Foundation, whose \$1,500 contribution was critical in allowing our staff to lead these programs and training sessions. We could not continue these programs without this kind of support.

Vegetation Monitoring

Our vegetation monitoring program starts each year with a community vegetation monitoring workshop at which participants are provided training in how to recognize native plants, invasive weeds and to apply SFEG monitoring protocols. Participants sign up to monitor restoration sites that interest them and work with SFEG field staff and interns collecting data on plant health and coverage information at these sites. Surveys were carried out during spring and summer. For some new sites, volunteers established monitoring plots. A random location for each circular plot was selected by SFEG staff using GIS software. Volunteers then marked each plot-center in the field by installing a metal fence-post, flagging it, and recording its location using GPS. Each circular

monitoring plot had an area of 1/10 acre and a 37 foot radius. Monitoring plots cover a minimum of 10% of the total area of each planting site. Other sites were sampled at 100% without the use of plots.



2013 Vegetation monitoring workshop

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Volunteers rated the health of every planted tree or shrub within the plot based on signs of reproduction, new growth, or stress; volunteers also measured heights. Other plants and features in the plots were identified as well, and the amount of plot area covered by various plant types (forbs/shrubs/trees or invasive plants) was estimated as a percentage. Monitoring plots made up approximately 10% of each site's total planted area. After data collection, a volunteer intern entered this data into the SFEG database to be summarized for use in grant reporting and project management. SFEG monitored 33 different restoration sites in 2013. Volunteers contributed nearly 460 hours of time to the program,

allowing us to assess all sites for which funding is no longer available. Without these efforts and the support of the Mountaineers Foundation, unfunded sites could not have been monitored.



Donald Cleary marking the sample plot boundary

Kent Quickstad was recruited as an intern in June 2013 to lead most of the program. Kent initially had a brief training period with SFEG staff to get familiar with monitoring protocol, site locations, equipment use (e.g. GPS), and general expectations. He was also trained to enter and analyze data from vegetation surveys, some of which was used in grant reports. Kent coordinated and worked closely with volunteers on surveys, ensuring data was accurate, consistent, and complete. He completed his internship in September after donating 300 hours to the program. Independently, Kent also developed a dichotomous key on common plants found on many sites.



Kent Quickstead and Ali Andrews evaluate plant survival at the Skagit Mainstem planting site.

Results from this work will be useful in future planning by SFEG staff and interns. The data serves to document success of current and completed projects and guide future planning for the coming year.

SFEG aims to achieve survival of 70-80% for its sites and this data is allowing us to follow up on projects that haven't met this goal. SFEG has made plans to replant many of the sites that did not achieve 70% survival in the coming year. Monitoring data also has provided details on noxious weed presence for individual sites, which will allow project leads to focus maintenance more effectively and time work accordingly. Many noxious weeds have specific windows when treatment is best, so knowing what weed species are at each site will allow managers to prioritize treatment where it is most critical.

Spawner Surveys

SFEG's spawner survey program is one of our most popular volunteer opportunities. At our workshop in October, volunteers were trained to identify adult salmon by species, recognize salmon redds (nests), and record data collected during weekly surveys. Volunteers are then assigned to a stream near their home, and work in teams of two to complete weekly surveys of their stream. Spawner surveys involve counting live fish, redds and carcasses. If interested volunteers are taught to evaluate pre-spawn mortality, a phenomena which is of particular interest to WDFW harvest managers. SFEG staff members accompany volunteer teams on the first survey of each site, and occasionally fill in as necessary if volunteers cannot complete a survey as scheduled. Spawner surveys require a weekly commitment of 2 to 8 hours for up to 16 weeks.



2013 Spawner Survey Workshop.

In 2013 volunteers and SFEG interns spent 795 hours, and have counted 22 Chinook, 91 chum, 4,319 coho and more than 17,000 pink salmon returning to our project sites. Project data are being compiled by intern Melanie Anderson, and will be submitted to WDFW at the end of the season for use in projecting future escapement. Internally, SFEG and volunteer John Leighton have been delighted to watch hundreds of coho returning to streams in the Silver Creek neighborhood, confirming the success of barrier removal projects completed last summer.



Volunteer Melanie Anderson finds her first Chinook salmon during a spawner survey.