

Puget Sound Knotweed Forum - Minutes
May 22, 2012
Cedar River Watershed Education Center
19901 Cedar Falls Road SE, North Bend, WA 98045

Welcome, Introductions, Announcements - Steve Burke, Program Manager for the King County Noxious Weed Control Program, gave a quick introduction on the background of current projects the program is implementing to control knotweed.

On Beyond Treatment: Large Tree Approach to Restoration *Rodney Pond (Snohomish County SWM)*

This forest restoration project in Snohomish county uses large tree nursery stock to compete with invasive plant species. DOE funded the project through a grant in 2007 to regenerate conifer cover of a riparian floodplain for Chinook salmon habitat. Instead of planting tree seedlings, project staff used mature tree stock, specifically grown out for this project in their own nursery leading to high quality and more flexibility in choosing sizes and species. The goal was higher survival rate, faster shade production, and more canopy cover than planting traditional small (bare-root or 1-2 gal.) plants or understory species. This is a long-term forest succession management approach to lay the foundation for dropping stream temperature. Adaptively matching site conditions (especially soil and aspect) to the species planted is key for this project and staff trained crews to make those decisions on the ground instead of prescriptively developing a planting plan beforehand. Crews stake the trees for the first season to help them resist flood disturbance until they have strong enough root systems.

Another complementary piece is aggressive invasive weed control for plants like blackberry and knotweed. Many of the restoration sites had knotweed prior to planting, so incorporating treatment was part of the planning process. Crews have been controlling knotweed by making a first application using 5% glyphosate as a foliar spray on bent canes and following up with foliar retreatment as necessary for the next four years. Plants are sometimes installed after the first season, and subsequent treatment takes place around them. Results have been successful in controlling knotweed and the implementation of forest riparian restoration.

Aquatic Herbicide Effects on Amphibians Amy Yahnke (*Aquatic and Fisheries Science, University of Washington*)

Currently, most impact studies for herbicide use focus on effects to fish species; very little is known about the effects of weed management on amphibian populations. Implementing habitat restoration for rare species like the Oregon spotted frog (*rana pretiosa*), though, often includes chemical control of invasive species. Reed canary grass (*phalaris arundinacea*) is a particular problem on many projects in Western Washington, and the most effective control comes from foliar application of the herbicide imazapyr. While imazapyr is thought to be a low toxicity option, data for amphibians is lacking, as is information on the effects of a true tank mix (herbicide, surfactant, and dye) as it would be used in the field.

Since no data was available about exposure risks, timing, or impacts, this study first looked at amphibian wetland use to determine which species might be present during applications at which life stages, and then ran exposure trials in the lab based on that information. Priority species included Oregon spotted frog, Columbia spotted frog (*r. luteiventris*), and northern leopard frog (*R. pipiens*). Field collections looking for young-of-year (YOY), considered the most susceptible life stage, showed that while northern red-legged frogs and Oregon spotted frogs were both using the wetland areas surveyed, northern red-legged frogs leave the wetlands in early August, while spotted frogs are present through the beginning of October, making them more susceptible to exposure from treatment activities.

As a priority species and the species most present during planned application windows, laboratory exposures looked at effects to Oregon spotted frog YOY. Members were exposed to a mix of imazapyr (as Polaris AQ), the surfactant Agri-Dex, and the dye Hi-Light at both a high and low concentration, as well as a set of control replications. Post exposure, all animals spent 2 months in clean water for grow out before sacrifice to measure internal organs and inspect for latent effects. Endpoints included feeding behavior, growth (length and mass), liver weight, and gonad condition. Results showed no mortalities, no gross anomalies in gonad structure, no change in behavior, no change in eating habits, no change in body condition, and no effect on liver condition. While the study showed no direct effects from exposure, it did not look at the effects of additional stressors in a natural setting, and did not look at other species such as salamanders which might also be effected.

Update on Washington State's knotweed program Tanner Ketel (Project Coordinator, WSDA)-

Knotweed biocontrol update: Oregon state is testing a sap sucking psyllid.

Accepting proposals for knotweed money due May 31, 2012. Contact info:

www.agr.wa.gov

360-752-5499

Understanding Washington State's NPES Permit for Noxious Weeds; Greg Haubrich (Noxious Weed Coordinator, WSDA)-

Background: in 1996 due to court cases where fish were killed by misapplication of herbicide in water, Washington state and California developed state comprehensive aquatic pesticide NPES permits to aquatic pesticides.

In Washington state the EPA permit applies to Federal lands and to Tribal lands. If you are a state or county employee you can work on federal and tribal lands you can do that under the EPA. Don't have to work under the state permit. If you are working on non-federal land you need to have a state permit.

Aquatic plant and Algae permit – for application of herbicide in the water.

Aquatic Noxious Weed Management Permit for treating in areas that will indirectly get in the water, for example, knotweed in riparian areas.

Recent changes to the Permit:

Fish timing window removed

Noxious weeds and quarantine weeds can be treated by this permit.

No longer cover in water treatments.

Treatment for non-native and potentially invasive plants not listed on the state noxious and quarantine weeds lists as determined by the WSNWCB, WSDA, WISC.

Check for new herbicides added and removed same with adjuvant.

Notification and posting changed. Post public access areas within 2 miles of a treatment area, must notify private residents or immediately adjacent to treatment area. Must include purpose of treatment, herbicides, any re-entry or water use restrictions location of treated areas.

Do not have to post at properties without public access.

How to apply:

www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/noxious/noxious_index.html

Agr.wa.gov plants, insects to NPDES Permits to Information on the permit.

Google Aquatic Noxious Weed Control Permit.

Maintain records of all treatments for five years and report your data by Dec. 31.

Question email: glaubrich@agr.wa.gov

Decontamination for Equipment and Crews; Kym Foley (Project Manager, EarthCorps)-

Targeted Species are aquatic whirling disease, VHS, IHN, New Zealand mud snails, rock snot, reed canary grass, knotweed, hawkweed and garlic mustard.

When developing your decontamination protocol, the result is to minimize contact with invasive organisms. Do not be a vector!

For methods to use refer to Trout Unlimited steps of remove, wash, soak, freeze soak and agitate soak.

Knotweed control in protected habitat: Seattle Public Utilities Experiences working in the watershed, Sally Nickelson (Wildlife Biologist/wetland ecologist, SPU)-

Seattle Public Utilities has an herbicide moratorium ordinance adopted for the watershed. The knotweed infestation in the watershed is about 20 acres. In 2004, experimented with three types of fabric at Rock Creek Wetland. The most effective was covering it with heavy duty geotextile fabric, most effort goes into maintaining and monitoring the fabric. The results of this project is fabric is expensive, sometimes it works and sometimes not, depends on the size of original knotweed root mass. Also did hand pulling of small infestations to starve out roots. It did result in successful maintenance of the knotweed.

Herbicide was used for the large knotweed infestations. The watershed has a short time frame exemption to the herbicide ordinance to control knotweed. Better success with Imazapyr. The results are it is effective; however it takes several years of control work in the large infestation areas.