

TAdN Steering Committee Meeting
September 7, 2007
Davis, CA

Those present: Rich Marovich, Lower Putah Creek Coordinating Committee; David Spencer, USDA-ARS; Chris Sauer, Napa County Flood Control District; Michael Perrone, CA Dept. of Water Resources; Sarah Cairns, San Joaquin River Parkway & Conservation Trust; Gena Lasko and Conor Dupre-Neary, Sacramento River/AECP; Rob Hill, Butte County Ag Commissioner's Office; Carolyn Ruttan, Lake County Dept. of Public Works; Zhahai Stewart, Bob Hass, Mark Newhouser, Sonoma Ecology Center.

Program Updates and Discussion (Mark Newhouser)

Project management staff are preparing Partner subcontract amendments for the one-year extension that was approved by the funder. We are requesting funds be moved from the Eradication Support Services Task to Project Management to cover additional permit work required to obtain regulatory compliance. We are also requesting that funds be moved to provide additional funding for partners to complete permitting and monitoring.

Data Coordination and Mapping (Zhahai Stewart)

We have just released a software update of GeoWeed, with some new features and bug fixes. A new user guide is available and downloadable from the GeoWeed website (<http://geoweed.org>). When we collect data from you next month, we'll convert it to Geoweed 3.3. For first time we now have some data from all nine AECP partners, which has been entered into one database, and based on that we've generated some web pages. GeoWeed now supports a one-button archiving function (zipping up the database) which will also help you when sending in data.

In addition to the required quarterly data reports, we are accepting other data reports (copies of your database) so we can check and process them and catch problems earlier. We're putting up a mapserver using Google maps that will show where Arundo is, what treatments have been made, etc. We also hope to increase the quality of the data that is collected by helping you cut down on the number of "errors" (for example, making sure occurrences are linked to a primary region). We have 1,400 occurrences and 1,100 assessments in the combined database. Treatments are also starting to trickle in (due to the delay in permitting). We're also about to put up some discussion forums on the GeoWeed website that partners and other GeoWeed users can use.

Our goal in the mapping task is to bring together as much Arundo mapping as exists within the California Bay-Delta region, look at what's mapped and what isn't, and then do some of the needed mapping. The next step is to prioritize—determine where we need more information, where priority habitats are located, and where to focus future eradication efforts. We've been working with the Point Reyes Bird Observatory to obtain fish and wildlife habitats data. We're also getting tips on the best ways to model based on existing species data. Then we'll come up with a recommendation on where to focus future eradication efforts and where more information is needed. Currently we have over

11,000 occurrences of *Arundo*. In addition, Cal-IPC has secured funding for doing statewide *Arundo* mapping. So eventually all of our data will be compiled with data from southern California, and we'll end up with a much larger picture of *Arundo* locations and the extent of these infestations.

Programmatic Permitting (Mark Newhouser)

Our latest efforts have been driven by funding and by FWS saying we can't claim "no-take" using a programmatic approach. Our original idea was to do multi-weed eradication in a broad area within prescribed creek setbacks. This was unacceptable to FWS. Now we're focusing only on *Arundo* and including current maps with updated *Arundo* and sensitive species location data within eradication areas. Several partners are still operating under a letter of concurrence from FWS that was initiated by DPR in Phase 1. Chico has been operating under a letter of technical assistance ("unlikely to adversely affect" sensitive listed species in your watershed).

We are planning to obtain letters of technical assistance for partners who are not covered by our Phase 1 letter of concurrence. (Mark then passed out maps of *Arundo* occurrences in each partner's region, together with sensitive species data, which show the proximity of sensitive species to where they are doing *Arundo* eradication work.) If sensitive species are present, partners may be required to use different treatment methodologies depending on proximity to sensitive species (e.g., methodology near elderberry will differ within 20 feet from those located within 100 feet).

Rich Marovich: Most partners have more experience in treating *Arundo* than FWS, yet they have to make judgments about what should be done. FWS recommends putting up impermeable barriers around each elderberry bush, which is not practical, considering rocky locations of some of the plants. But for example, if you're using Roundup during the dormant stage of elderberry, that won't effect sensitive species—so timing is critical. FWS said these were recommendations, except in cases where they were impacting elderberry beetles. We actually have a much better idea of how to protect elderberry than FWS since we have more experience using herbicides.

Mark: Contractually, we are required to be in compliance with environmental regulations and are close to achieving compliance with FWS. We can also learn from agency recommendations regarding avoidance methodology. There is room for interpretation of these requirements, since we're not taking federal dollars or operating on federal land.

Experimental Design (USDA ARS – David Spencer)

[David handed out an 8-page document titled, "Effects of Selected Herbicide Treatments on Giant Reed (*Arundo donax*)."]

We conducted experiments at three places: Gray Lodge, Sonoma Creek, and Sycamore Island Ranch (north of Fresno). We treated three *Arundo* "plants" per treatment. Plants varied in width, stem height, number of stems, and amount of biomass.

We used a SPAD chlorophyll meter to measure the greenness of leaves and determine whether or not stems were dead. If stems had any green patches just below nodes, they were considered still living. Gray Lodge plants were treated in July, while plants at the other two sites were treated in September. We then followed plants for one year after the initial treatment.

We conducted two field experiments with glyphosate, and also monitored a site where imazapyr had been applied, with the purpose of testing two hypotheses relating to these herbicides. One hypothesis was that glyphosate concentrations of 1.5%, 3%, and 5% applied as foliar sprays were equally effective at killing giant reed plants. The second hypothesis was that a 1.5% solution of imazapyr applied as a foliar spray was effective at killing giant reed.

Leaf chlorophyll content and the proportion of living stems declined significantly following treatment with 1.5% or greater solutions of glyphosate. New stems were observed the spring following treatment for plants treated with 1.5% glyphosate. No new stems were observed for plants treated with either 3% or 5% glyphosate.

There was no evidence indicating that "bending and breaking" stems prior to treatment with 5% glyphosate provided enhanced kill. Nor was there evidence that plants sprayed with only a mixture of the surfactant (agri-dex), water, and a marking dye were affected beyond the short-term.

We monitored the result of a *fall* treatment of imazapyr that had been applied by DFG at a Gray Lodge site. The Arundo had been treated with 1.5% imazapyr, applied from a helicopter on a wetland. While the herbicide reduced leaf chlorophyll content after treatment, the Arundo recovered the following spring. We found that the imazapyr treatment did not significantly reduce the proportion of living stems or prevent the production of new stems during the spring following treatment. This result agrees with the herbicide label, which recommends applying imazapyr in the *spring* when plants are actively growing.

Taken together, these results indicate that 3% or 5% foliar applications with glyphosate were the most effective and consistent treatments for killing giant reed with a single late season application. This result is especially important if the goal of the treatment program is to minimize the number of treatments, thus reducing labor costs and minimizing impacts on sensitive habitats by reducing the number of site visits.

Levees and Vegetation Conference (Michael Perrone)

The Sacramento Area Flood Control Agency, in cooperation with the California Department of Water Resources (DWR), cosponsored a two-day scientific conference August 28-29 in Sacramento to address impacts of proposed USACE changes requiring vegetation removal from Central Valley flood control levees. Michael Perrone of DRW, and a member of the TAdN Steering Committee, was asked to report on this conference due to the vegetation management implications of the draft USACE policy.

What does vegetation do to levees? None of the nine experts at the conference thought vegetation hurt the levees, and most thought it might be useful. It appears that the Corps' technical argument against vegetation levees wasn't based on sound science, but even so, the Corps did not change its opinion. Carolyn Ruttan noted that levees in her area are covered with vegetation and would be in a horrible state without it. The Corps indicated it would not decertify levees there.

In its arguments, the Corps said: 1) tree roots loosen the soil; 2) when trees fall over, they bring the root ball with them; 3) tree roots cause tunnels (piping) in levees when they die, and water can enter those spaces. However, experts disagreed and said trees don't damage levees, but instead hold levees together better. There was general agreement that you need to be able to see the levee surface.

Eradication Task Update from AECP Partners

San Joaquin River: providing resources to do treatments on one of their properties.

Sacramento: City is helping remove their biomass.

Putah Creek: Using Solar as activator, but is penetrating river hoses during applications.

Next Meeting Date: Friday, December 14, Yolo Bypass Wildlife Center.