

TAdN Steering Committee
Friday, November 7, 2003, 9 am -12 noon
USDA Building, 430 D St., Room 125, Davis, CA

Agenda And Minutes

Welcome and Introductions (9 - 9:10)

Kristen Cooper-Carter
Dave Spencer
Ron Unger
Frank Wallace
Jim Johnson
Michael Perrone
Jenny Gabor
Paul Washburn
Tracy Enhelder
Deanne DiPietro

Update on Arundo Proposal (9:10 - 9:15)

We are working on the second of our two CALFED proposals, after being put into a status of Directed Action and then having to wait for the NIS workshop to happen so we can get guidance on revision of this second proposal.

The workshop, held in July, was intended to provide guidance and coordination, but not to tell us how to shape the rewrite.

We've been told to resubmit by Dec. 1, and can expect to be on the agenda of the Bay Delta Authority's next meeting in Feb., then for funding to begin within a few months.

Next RFP probably coming out in Dec.

Review of CALFED project reviewers comments (9:15 - 9:30)

Direction by CBDA:

Scientific component: We have to figure this out within the context of our eradication program.

Some of the comments from participants:

Monitoring
Controls
Stream channel hypothesis

Before and after photos

Products not generating novel information for decision-makers (refers to the mapping section and how does it translate into improved eradication?)

We need to make our proposal stand alone; can't assume they know our history or even our last proposal's work.

There is a mismatch in agendas between our program and CALFED- they want science, we want to kill weeds, and these goals are difficult to reconcile. Hard to prove the merit of an eradication program on these terms, need to be somewhat creative. With CALFED moving toward a primary concern of water supply, we need to emphasize the water use of Arundo (KC).

Remote sensing/ground truthing

Comparing efficacy of coordinated program compared to individually-funded projects. We argue that the information support component forms a strong head-start for these individual groups beginning an Arundo eradication project. Also, creates a model (RM) for other NIS programs.

Expansion...?

Increase justification for the equipment requests, mapping.

Budget, justification: more of it. (This is challenging with all the multiple budgets. We are going to try attaching the partner budgets instead of combining them.)

Cost standardization: how much does it cost per acre to eradicate? This is lacking and we can say we are delivering it as a product. Costs per acre for each method - work with Paul Washburn and Ron Unger on this one. Important contribution and much needed. Contractors will break it down for us. We should reconstruct the methods and their effectiveness and put it in a table. Can take pure acres vs mixed acres, terrain, how much money did we give them and what they did (sequence of cutting, spraying, etc.) and see how the groupings fall out. Use these groups to evaluate future work.

FW and KC point out that their methods change on the fly with every situation they encounter. We'll just have to generalize. Come up with a gross range and break it down from there. KC has info we can look at.

This is where we can bolster the information product with research. Big question - how to structure the research component. We may need to revisit our hypotheses, decide about the important questions to address with our research.

Include additional riparian weed species for a more holistic approach. We are there, why not kill the other NIS? But getting into the whole world of riparian weeds may be overwhelming. We should capitalize on the model-building argument, AND expand

enough to facilitate monitoring of the other weeds present. Also the revegetation work we're doing has an effect on invasion by other spp. Arundo is the "bad actor" when it comes to flood control, though.

KC has test plots to investigate the success of reveg and the effect on invasive species invading the eradication site. RM says that once they eradicated the Arundo and the Himalayaberry, native willows came in. We should say we are doing this research now and then we can develop a protocol telling how to follow up or not to prevent reinvasion.

The partners are already addressing multiple species and working on secondary invasions. Point to the successes that come from treating Arundo.

What did CALFED say to the other two directed action projects? Mark will follow up by talking to the project leads. We are already sharing our proposals with each other. Perhaps we can coordinate more tightly.

Review of NIS Workshop Preliminary Summary - Experimental Components and Adaptive management (9:30 - 9:45)

Mark passed out a document entitled "Major Points from Multiple Breakout Groups", a draft of the report of the workshop held by CALFED in July. Author Kim Webb. This is what we have to work with to inform our rewrite of our proposal.

Four different components: Experimental Design, Performance Measures, Monitoring, Linkage to Restoration

(RU) CALFED doesn't want to spend money on activities that don't last, want to have a lasting effect. Also must overcome certain threats: wildlife threat, fire, flood. We must show that we are addressing these goals and show that it will have long-term success. We should prove that we're having a long-term maintenance effect on wildlife habitat, etc. We haven't proved that removing Arundo has a long-term positive effect on wildlife habitat.

Wording our hypotheses so they can be answered is difficult, but we have to be sure there are hypotheses that address each CALFED recommendation (ie. Linkages to restoration).

(RM)- It takes too long to go through the whole process of eradicating and restoring an area to show that there is benefit to wildlife diversity. But we can compare existing sites to document diversity in the two kinds of sites. We can also point to the existing body of research (birds, insect studies). Then prove that you've created the desired habitat. 1) Use the lit review to explain the differences in the two types of sites, then 2) answer the question of amount of money it costs to get to the native (or at least better for wildlife)

condition. Focus on bird data because there's lots of it- hard maybe to get at the fish stuff.

Most important to close the adaptive management loop- that we are evaluating success of the methodologies and responding by changing the way we manage the program.

Addressing CALFED's requirement for scientific documentation (9:45 - 10:30)

How rigorous: field trials vs full-fledged research, and how to incorporate into an eradication program

Value/need/role for a P.I.

Collecting the necessary data to provide feedback for adaptive management - experimental design and data management.

e.g.: eradication costs for different methods - develop standard costs

Reporting on and applying new knowledge.

Mark passed out the hypotheses from the proposal. We have to collect the information necessary to answer these questions. Before and after photos are very powerful and easy for the partners.

Our hypotheses are okay, but we need to make sure that the data we collect is rigorous and follows a scientific framework. AND that we are adapting to the results.

Experimental design is important- having a number to back up the observations makes it more rigorous. We will use standard ecological sampling techniques and cite them. But how do we change what we are doing to make it more like science? Right now we have a pretty good set-up as far as the data to collect, but with all the different people collecting the data there's no way to compare the numbers because the methods used are subjective. We need to incorporate objective methods of measuring these things (DS). We can't have the partners collect this kind of objective data- rather we should dedicate a team to sample the different areas.

D. S. suggests that we continue with the subjective data collection, and add a component wherein we do the more rigorous data collection in the same places so we can see a relationship between the approaches and also preserve the data being collected now. Dave will help us come up with this design and figure out what the roles of the partners are. K.C. says they've coupled their effort with the University and they have a riparian ecologist and students working within the framework of the eradication project. The scientists come out to the sites, identify sampling sites and have students collect the data. TAdN can make the scientific connection for the partners. We should base our proposal on theirs for this approach. They are actively restoring areas and comparing to passive restoration- is the propagation and resulting density different. (Our second hypothesis). They are also doing HEC modeling and addressing #3, too.

If we do the same exact thing we can compare results. There is value in this because they have different site characteristics.

We should stratify to ensure representation of all the different sites characteristics in our study area.

We should have a scientific data collection team that is pretty tight and calibrated for the most consistent data collection.

We may want to simplify the data collection that the partners do, as well.

What to do with our existing databases (offline and online)? ICE has put a lot of effort into a new MS Access application and wants to have it synch with the online database. Do we continue to have the partners collect data and put it in a database? Maybe the database gets mostly filled out by the researchers. Or do we leave it as is and see how well they calibrate, making the partner data-collection more valuable?

Feelings on the online forms:

RM-

Lots of junk (test) data still in it.

Needs standard terminology.

Frustrating to use the online forms.

Should standardize on EDAW's method of estimating area infested by *Arundo* so we can use as a basis for estimation for cost.

Have to be able to refer back to the data for predicting costs for the rest of the project.

** Database work: Meet with Ron, Dave, and Rich and make some decisions about making changes if any to the database system. Include Jean Hubble from Chico State who has worked with the forms.

Dave gave a short presentation on a simple experimental design that will allow for several questions to be answered. Identical plots- one has treatment and one is control, record # of stems and chlorophyll content before and after treatment. Plots are placed in a variety of environmental conditions and are marked or GPSed for future measurements. Can also get evapo-transpiration measurements to get at the water use issue. Maybe not all the partner projects are appropriate for this.

Answers the hypothesis "the treatment used effectively eradicates *Arundo*", and can address others.

It's okay to even duplicate research that has been done because they haven't been done in all the different conditions and locations.

** Set up a meeting to nail down the language.

Mapping component:

Talk with the WMAs and Ag Comm Offices, DWR, to find the worst infestations and then look at the aerial photos and visit sites to map. Get an overview map that can be overlaid with a habitat value map for prioritization of eradication. Can use the CNDDDB for proximity to sensitive resources. Also State of the Estuary project for salmonid stream value. But must relate the benefit of removal of Arundo with the species- KC has made that connection, ask her for help.

Partner Needs (10:45 - 11:30)

Budgeting monitoring costs - current and future requirements
Experimental component costs - P.I. and partners responsibilities.
Eradication methods - Are partners considering all options?
Equipment needs - tools to heavy machinery

Mark wants to get feedback on equipment needs and how to

Ideas for next steps for coordinated region-wide Arundo eradication (11:30 - 12)

Rapid, region-wide Arundo mapping
Training workshops in eradication methods and data collection
Identification of priority areas and potential partnerships to address them.