

“Advancing Wildlife Restoration and Compatible Farming Along the Inner River Zone of the Sacramento River”

The Nature Conservancy
May 21, 2002

The Nature Conservancy (TNC) received a \$20,000 Great Valley Center LEGACI grant in July 2001 to involve key stakeholders in crafting a conceptual model and developing grant proposals to improve habitat restoration and compatible farming practices along the Sacramento River. Funds for this project were also made available through a grant from the CALFED Bay Delta Program.

The Nature Conservancy pursued this project because it recognized that its restoration projects along the Sacramento River create concerns for neighbors and the local community. Some of these concerns result from unfamiliarity with riparian restoration activities. Many stakeholders believe that habitat restoration is a threat to agriculture and other economic land uses. TNC decided to attempt to address these issues through a series of meetings to educate stakeholders along the river about TNC’s practices and to collect stakeholder input that would inform TNC’s management plans for properties along the Sacramento River.

Project planning began in September 2001 with the development of a team that included facilitator/writer Kevin Wolf, consultants Fred Thomas, Tanya Meyer and Ajay Singh, and TNC project director Dawit Zeleke. The team conducted a series of meetings and research to craft a project mission statement, identify eight land management subject categories, draft goal statements for each subject, and determine an initial set of major hypotheses to guide the formation of a conceptual model. The team distributed materials to participants for review in advance of the stakeholder meetings and took steps to ensure that the meetings were carefully planned and well organized.

One of the team’s first products was a database of metadata fields that met state and national standards. The consultants searched libraries at University of California Davis, California State University Chico, the Natural Resources Conservation Service, local Resource Conservation Districts, University of California Cooperative Extension, the Internet and other sources. Using the Metapartner software that is built upon Access software, the consultants added over 100 entries to the database. This research led to the discovery of a similar database of Sacramento watershed-related resources at the regional Department of Water Resources library. A Metapartner consultant assisted the team in combining the three databases into a united database of almost 1000 entries. The next step in the project is to transform this database into a searchable asset via the TNC website.

Dawit led the effort to involve stakeholders in the planning process. During the fall, he introduced various farmers, agricultural advisors, and organizational representatives to the project. Their input and advice was incorporated into the team’s efforts to draft the

goals and the conceptual model. One of the results of these discussions was the change of the project's name to the "Good Neighbor Management Tool."

The first stakeholder meeting was conducted in January 2002. In preparation, the team sent over 600 invitations, distributed the meeting materials by mail, and posted the materials on a new website developed for the project: www.sacrivermt.org. 63 people attended the meeting, including over 20 who identified themselves as farmers. The meeting was successful in many ways. Stakeholders helped to clarify the mission statement and the eight goals and provided comments on the detailed sub-hypotheses in two of the subject areas. The highlight of the meeting was a straw poll of attending stakeholders to determine the subject areas of highest priority. At the request of participants, farm votes were counted separately from other stakeholder votes; nevertheless, both groups voted for the same priority issues: flooding, erosion and endangered species.

Marc Horney of the UC Cooperative Extension office in Orland participated in the first meeting and provided invaluable advice on how to reorganize the conceptual model to meet more standard ways of thinking about land management planning processes. (For an example, see www.sacrivermt.org/vertebrate_mh.htm). Dr. Horney's work helped TNC create a sample planning process in each subject area. Now the intellectual framework was in place for a rapid advancement in the project over the next five months and meetings.

With the results of the first meeting as guidance, the organizing team prepared for the second meeting. More than 50 people participated in the email list serve. Outreach and education was further advanced through local newspaper articles and a local television story.

The February meeting brought significant changes to the project. This time, 30 people attended the meeting. Organized around the priority subjects of flooding and erosion, the meeting began with a discussion of the project and its direction. Only two participants identified themselves as full time farmers, and this sparked an intensive discussion about why so few had shown up. By this time the farming season was in full swing, and we learned through follow-up telephone calls that many farmers cancelled their plans to attend because of busy and exhausting schedules. We believed that as the farming season progressed, it would be almost impossible for farmers to attend the rest of the meetings.

As a result of this feedback and the responses from farmers who did not attend the meetings, TNC reevaluated its outreach efforts with local stakeholders and decided to pursue many of the recommendations they had received. Future open meetings were cancelled. Dawit Zeleke followed the agricultural stakeholders' recommendation that TNC staff participate in "kitchen table" meetings with local leaders and participate in meetings of already established local organizations.

In order to address the agricultural stakeholders' concern about the macro issue of farmland conversion to habitat, TNC has responded with a number of actions:

1. A new website is being developed that is dedicated to providing equal access to information relevant to land management and other issues along the Sacramento River. The website, <http://www.sacramentoriverportal.org>, will be a portal to background reports, new proposals, photographs, newspaper articles and other information relevant to management issues along the river.
2. TNC is helping organize information on the activities of other agencies and organizations that may affect issues important to stakeholders in the Sacramento Inner River Zone. This project will involve the collection of the missions, goals, objectives, timelines, leaders and other information from at least 20 different organizations to be made available via the website. We would like to learn what is being done along the river and where there are possible gaps in projects and information.
3. TNC is working with the non-profit CALTEG (www.calteg.org) to build the online tools needed to search the metadata database on the TNC website to make project documents and materials and other relevant articles accessible to stakeholders and the public. CALTEG is contributing its resources to the project.
4. TNC is working to provide the public with more information about TNC properties, projects and proposals related to past, current and future work, and in general, is attempting to increase openness and public trust in future actions. The information will be made available via the new website.
5. Dawit Zeleke is meeting with individual farmers and local community groups to continue to address their concerns about restoration. As of this date, he has given two presentations to community groups, with more planned for the future. A Power Point presentation is being created for this purpose. Using visual aids, Mr. Zeleke will discuss the river's natural processes, give information on TNC's Sacramento River Project, and open opportunities for discussion on issues interesting to the group. He is also meeting with individual farmers who are farming property along the river, and has hired CERUS Consulting to continue to meet with them and create working farm plans to smooth the transition from agriculture to riparian land. (Please see attached reports at the end of this document for more information about these meetings).

The LEGACI grant produced more than was expected in some areas and less in others, but, overall, the project sparked advancements that hold a great deal of promise for bringing stakeholders together to reach greater mutual understanding and to better advance mutual goals and interests.

Evaluation of Specific Expected Outcomes from the Original Grant Proposal

1. *Conceptual Model (Good Neighbor Management Tool)*. TNC has two versions of a conceptual model for the eight different subject areas. In the future, TNC will use the version based on Marc Horney's suggestions. Goal statements for each subject area have been clarified and stakeholders' suggestions have been incorporated in the final

drafts. TNC is using the concepts and some of the specific proposals from the Good Neighbor Management Tool to improve land management planning processes.

2. *Research specific stakeholder-identified management issues.* Significant work was conducted by Ajay Singh and Tanya Meyer in the areas of Vertebrate Pests, Weeds, Endangered Species, and Invertebrate Pests. This work will be extremely useful to TNC in its land management planning.
3. *Develop grant proposals based on the stakeholder process.* Participants at the February meeting supported the expansion of TNC's computer modeling work to understand flooding impacts of multiple land uses in the Beehive Bend sub-reach of the Sacramento River. TNC is incorporating this advice in the development of additional grants to perform this new modeling work and has included local stakeholders in the process. Areas of research were also identified on the subject of farming next to restored sites.
4. *Developing Phase II.* TNC has already embarked on Phase II by changing its outreach strategies. The new website will provide public access to TNC's information. Outreach to individual farmers and farm-related organizations will provide individualized education identified as important by the stakeholders.
5. *Improving Consensus.* TNC clarified its land management goals in eight major categories. Based on overwhelming responses from reviewers, these goals are supported by neighbors and other stakeholders. TNC will work to gain stakeholder consensus by improving its management plans as well.

Jewett Creek Neighbor/Stakeholder Meeting
Jewett Creek Farm
1:00PM, Tuesday, April 16, 2002

Stakeholders Present:

Allen Fulton, University of California Cooperative Extension
Amy Hoss, The Nature Conservancy
Andy Cox
Butch Thomas, Neighbor
Cathy Morris, The Nature Conservancy
Chuck Crain, Crain Orchards
Craig Isola, USFWS
Curt Martin, Neighbor
Dave Walker, California Department of Fish & Game
Dawit Zeleke, The Nature Conservancy
Ed Rosauer, Neighbor
Ernie Ohlin, Tehama County
Fred Thomas, CERUS Consulting
Gus Yates, EDAW
Henning Behrens, Neighbor
John Christenson
John Merz, Sacramento River Preservation Trust
Paul Martin, Neighbor
RaeAnn Dubay, Tehama County RCD
Richard Buchner, University of California Cooperative Extension
Ron Unger, EDAW
Ryan Luster, The Nature Conservancy
Sharon Wallace, Sacramento River Partners Board Member
Tanya Meyer, CERUS Consulting
Tim Smith, Neighbor
Timothy Morrill, Crain Orchards
Vicky Dawley, Tehama County RCD

All attendees were called on the phone by TNC staff and personally invited to the meeting. The meeting date was chosen for their convenience. Almost all of those invited were in attendance.

Meeting format: During the presentation, people were able to ask questions. There were about 45 minutes of discussion at the end of the presentation.

Welcome- Dawit Zeleke, TNC, and Ron Unger, EDAW

Presentation on Jewett Creek Farm Plan-Ron Unger, restoration ecologist, and Gus Yates, Hydrologist:

This updated plan follows up the Jewett Creek Neighbor/Stakeholder meeting of June 6, 2001, which was held to get neighbor's and stakeholder's input on EDAW's plan for agricultural use of the farm and habitat restoration.

The complete presentation is available on CD from The Nature Conservancy.

Goals of the plan:

- Affordable planning
- Find the best plants for the site
- Coordinate with the stakeholders to determine their interests and ideas about the restoration plan.

Discussion and comments:

Gus Yates did a hydrologic model in which he removed the culvert and pinch point at the river and included riparian planting along the open swale. The model showed that flooding would be reduced if the culvert and pinch point were removed. He did not create the model with the river at flood stage.

While the Sacramento River is somewhat controlled by Shasta Dam and other small dams, it does still flood. This usually occurs a few days after a flood event in a tributary such as Jewett Creek. Jewett Creek will thus generally flood before the River does.

If there is a forest planted in the currently open swale (Jewett Creek bed) in front of the house, won't that slow down all the flows of Jewett Creek on the property and cause flooding? Mr. Yates stated that the culvert in the swale and the pinch point at the mouth of the creek are what slows down the flows of the creek and cause flooding. Both of these back the creek up almost to Ohio Road.

The farmer on the property suggested removing the culvert, since the road it goes under is not used during farming operations and could be removed as well.

With riparian planting, roughness is increased and that does raise the water level surfaces. An ongoing issue is that TNC or some agency or whoever is responsible for maintenance needs to keep the bottoms of the channels open and free of vegetation. The creek banks may be vegetated, but not the channel floors. Mr. Yates was in agreement.

There was concern about a closed, tight canopy of riparian trees, like those at the north end of the property. Neighbors worry that large trees will fall into the channel, or creek bed, and slow the flood waters.

Will sediment in the creek reduce the elevation drop by filling up the creek channel? Mr. Yates says no, that it will continue to flush out of the creek channel and into the river, as it always has.

Neighbors are concerned about the creek reaching flood stage and crossing Ohio Road, which it has done in the past when the river is flooding. Again, removal of the culvert and pinch points would probably reduce the possibility of this flooding occurring.

TNC would eventually like to return Jewett Creek to private lands. TNC would like to sell it to a farmer who would live there and work a habitat friendly farm.

Why not restore the creek completely? That would be too expensive. There would be a lot of earthwork, especially if the creek was returned to its original creek bed. But, we can do some re-vegetating and replanting along the creek bed, and perhaps do some earthwork to change the pinch point and remove the culvert. On the property, we can work on removing highly noxious invasive weeds, such as *Arundo donax* and *Tamrisk*, which are invading areas along the river.

It was suggested that Jewett Creek is not the ideal property to try to restore because TNC only owns a small section of the creek and it has been very degraded. However, because the property is along the river and has experienced flooding problems in the recent past, it offers a good opportunity to work on both river and creek restoration.

The upper bar of the property is less likely to flood, but because it was once a gravel bar, it is harder to farm. Currently that orchard is not doing well. The orchard near the river is flourishing, but very susceptible to flooding. This is the Sacramento River farmer's dilemma.

Agricultural plan: there are groundwater issues at Jewett Creek. Some farmers believe that 10 feet of groundwater is perfect for walnuts, while others maintain that 30 feet is better. This was not resolved. The summer groundwater level at Jewett Creek is believed to be 11-22 feet.

Upper Jewett Creek Watershed: There are obstructions upstream that cause flooding. These are the Railroad Crossing and a bridge. These issues are currently being addressed by Tehama County, which is conducting a hydrology study.

Conclusion: the farm is going to have to use adaptive management as we learn more about this type of integrated farming.

This meeting was well attended by farmers and agency staff and all concerned were able to discuss site specific issues in an informal, small setting.

Report on individual meetings with Sacramento River farmers and landowners

Jim Paiva, Pine Creek site, April 24, 2002

Dawit Zeleke, of TNC, and Tanya Meyer and Fred Thomas, of CERUS Consulting, met with walnut and almond farmer Jim Paiva at one of the properties he farms, which is owned by the USFWS. This land is managed by TNC, with assistance from CERUS Consulting.

Mr. Paiva discussed the condition of the orchard both here and at another site he farms for TNC. We discussed the infrastructure on the property: a levee that may be removed, and a building to be removed soon. It was helpful to obtain information on the flooding history of the site. We discussed when an older orchard was to be removed and replanted with native riparian vegetation. Also discussed were several of the pest problems in the orchard, and which pesticides were the most appropriate to use. Fred Thomas of CERUS Consulting has also spoken with Mr. Paiva's pest control advisor about using the pesticides that are approved by the USFWS on the site.

This meeting was useful to both the farmer and TNC. The farmer was able to ask direct questions about on site issues that personally affected him, and TNC and staff were able to learn more about the property they are managing.

Richard Bolen, Westerman Farms site, April 24, 2002

Dawit Zeleke, TNC, and Tanya Meyer and Fred Thomas, CERUS Consulting, met with prune and almond farmer Richard Bolen at the property he has been farming for at least 30 years. TNC has just purchased the land, and is planning on keeping it in crops for several more years. The site, or areas near it, is a potential location for a US Army Corps project called the "J Levee," a levee that will be built to protect Hamilton City from flooding. If the J Levee passes through the Westerman Farms property, most of the orchards will have to be removed.

Richard Bolen is new to the program, and thus was able to ask specific questions pertaining to his farm, and other details about the property deal that he would not have been free to discuss in a group meeting. We were able to get a personal tour of the property, including its riparian sites, levees, and orchards, and learn details about the history, health and profitability of the orchards. We learned that Mr. Bolen is having trouble with Round-Up resistant Annual Rye Grass (*Lolium multiflorum*), which is a weed, and Horsetail (*Equisitum*), which is a native, and were able to tell him not to spray the native. We were also able to discuss potential future plans for orchards and fields on the property.

This meeting was useful to both the farmer and TNC. The farmer was able to ask direct questions about on site issues that personally affected him that he would not have been able to discuss at a group meeting, and TNC and staff were able to learn more about the property they will soon be managing.

Kalin Koehnen, CF Koehnen & Sons, Deadman's Reach site, May 1, 2002

Dawit Zeleke, TNC, and Tanya Meyer and Fred Thomas, CERUS Consulting, met with walnut and almond farmer Kalin Koehnen on property recently acquired by USFWS and managed by TNC, with assistance from CERUS Consulting.

This property is eroding into the river and has some very interesting flooding and erosion issues. Since Kalin's father re-graded and farmed this land, and Kalin grew up here, we were able to learn about the history of the flooding and erosion patterns on the site, and see the bank stabilization projects the landowner had attempted. We learned a great deal about the site.

We were also able to discuss USFWS-approved pesticides and pest control methods for the orchards. We learned that Mr. Koehnen is also having trouble with Round-Up resistant Annual Rye Grass (*Lolium multiflorum*), and discussed possible USFWS-approved herbicides to deal with this problem. Mr. Koehnen asked us many questions about the program and his site. All were especially concerned with an old almond orchard and we discussed when and how to best remove it while controlling invasive weeds and allowing time for planting natives at the proper time.

This meeting was useful to both the farmer and TNC. The farmer was able to ask direct questions about on site issues that personally affected him that he would not have been able to discuss at a group meeting, and TNC and staff were able to learn more about the property they are managing.

Tim Morrill and Jake Cecil, Crain Orchards, Cordora Site, May 1, 2002

Dawit Zeleke, TNC, and Tanya Meyer and Fred Thomas, CERUS Consulting, met with the managers of the site farmed by Crain Orchards on property owned by TNC, and managed with assistance from CERUS Consulting.

Mr. Tim Morrill, the senior manager, was at first very aggressive in his questions and complaints about the program. However, due to the one on one interaction, Mr. Zeleke was able to directly address all the issues, and clear up several misunderstandings Mr. Morrill had about the program. Mr. Cecil, a more recent hire of Crain Orchards, was also able to learn about the program of the farm he was managing.

Mr. Morrill wanted to remove several dead walnut trees, which is not allowed by USFWS in their orchards. However, since TNC owns this site, Mr. Zeleke, as Agricultural Programs manager, was able to give him permission to remove them. We also discussed rodent management, pesticide use and restoration. Crain Orchards is very committed to using pheromone disruption as an alternative to more toxic pesticides, and we discussed that topic. Mr. Morrill reported that the first application did not work and the farmer had to use another pest control method.

Crain Orchards is also very committed to working together with TNC and USFWS to manage their properties in a way that is beneficial to all. After having his initial issues dealt with, Mr. Morrill was quite agreeable and cooperative.