

Feather River Coordinated Resource Management

2007 Annual Report to Signatory Agencies



Cottonwood Creek- Big Flat 5/2006

**Prepared by
Plumas Corporation
March 2007**

Introduction

In the last twenty-two years the Feather River Coordinated Resource Management Group (FR-CRM) has successfully implemented a total of 91 projects through the support and cooperation of many agencies and landowners, both private and public. These include current projects and those in the planning stages. Of this total, 54 have been on-the-ground work, 11 studies/strategies, 13 planning and coordination of projects, and 13 education projects. On-the-ground projects have treated approximately 28 miles of stream, directly restoring approximately 2,449 acres of meadow/floodplain within the Feather River watershed. In addition, six projects are scheduled for 2007 encompassing 8 miles of creek and 1000 acres of meadow. Without the support from your agencies these collaborative achievements would not be possible. The FR-CRM's accomplishments are your agency's accomplishments, and we hope you include these projects in your progress reports. The FR-CRM is your example of what can be achieved by public and private agencies supporting local communities on mutual goals.

This report briefly describes the FR-CRM's accomplishments in 2006, program activities for 2007 and 2008, and potential planned out-year projects. These projects could not go forward without your agency's participation. This is the third annual report to the agencies that the FR-CRM has produced. This report is a vehicle to report accomplishments to a broader audience of our participants.

These projects, as well as general program outreach and coordination, have been funded by a variety of federal, state and local funds on a project-by-project basis. Current state and federal budget situations affect these funding sources in different ways depending on whether they are appropriated or bond funded.

Budget Table:

Year	Total Program Expenditures ¹	State/Federal Funding	County Cooperative Grants ²	Non-program Match ³
2004	\$690,000.00	\$640,000.00	\$50,000.00	\$135,000.00
2005	\$990,000.00	\$740,000.00	\$250,000.00	\$135,000.00
2006	\$1,393,000.00	\$1,000,000.00	\$190,000.00	\$203,000.00
2007-11(est.)⁴	\$11,158,000.00	\$8,200,000.00	\$558,000.00	\$2,400,000.00

¹Does not include funds expended through partner contracts (i.e. PC Public Works Prop. 204 construction contracts)

²Collaborative Grants/Participating Agreements (Prop.50, CalTrans, Plumas Watershed Forum, etc.)

³Direct partner project match contributions (funds, in-kind).

⁴Includes secured out-year funds, applications pending and projects nearing application process.

Partial coordination funding was secured in 2006 to pursue out-year projects for landowners seeking assistance. This funding was made available through the SWRCB Proposition 40 Non-point Source Program for the Upper Middle Fork Complex allowing landowners requesting project assistance to be assisted at an adequate level through 2007. Additional coordination and project implementation funding is being sought for 2008 and beyond. Potential funding sources include: DWR Urban Stream Grant Program, Sierra Nevada Conservancy, and Proposition 1E, among others.

Summary of Projects Completed in 2006:

Spanish Creek Assessment and Rehabilitation Strategy- The Spanish Creek Assessment and Rehabilitation Strategy was completed in 2006. Funded by a Proposition 13 grant from the SWRCB, this project used a combination of the field monitoring/data collection and sediment transport modeling to better refine our understanding of the bedload supply and movement affecting Spanish Creek. This was deemed necessary to ensure that a coordinated restoration effort planned for Spanish Creek would accommodate the bedload supply. A public meeting was held in March 2007 to receive input and guidance from landowners on the assessment and restoration strategy. FR-CRM is planning a watershed tour of Spanish Creek as an example of rehabilitation of entrenched urban streams in Spring 2007. Additional funding from the Secure Schools and Community Self Determination Act (PL 106-393) has been secured for the watershed tour, public meetings and outreach in 2007. The next phase is securing implementation funding for Spanish Creek restoration strategy. The restoration strategy will have two components: 1) streambed and bank structural and vegetation stabilization; 2) developing passive gravel management locations where excess bedload can be removed from the system without impacting channel function or stability. The DWR Urban Stream Grant Program is one of the initial programs we will be exploring for this implementation funding.

Spanish Creek Restoration Demonstration Projects (Vortex Sampler and Dyrr Bank Stabilization)- These two projects were integral in demonstrating potential restoration technologies proposed in the Spanish Creek Assessment and Rehabilitation Strategy. Plumas County Department of Public Works removed the vortex sampler from Spanish Creek at Snake Lake Bridge and is storing the sampler in their yard. Funding (\$47,000) to restore the operation of the vortex sampler was obtained from PL 106-393, Secure Schools, Title II funds, with in-kind contributions from the Quincy Community Services District, DRI, Plumas County Department of Public Works, and PNF. FR-CRM staff and the TAC will be assessing a site upstream of the former Spanish Creek Aggregate mine to relocate the vortex gravel sampler in 2007.

The first project component, the operation of a vortex gravel sampler, demonstrates a new gravel management technology that provides an aggregate supply without physical disturbance to the riparian area. Installed in 1997 just below the Snake Lake Bridge, the sampler was operated and monitored for effectiveness from 1997 through 2000. Modifications to improve the efficiency of the sampler in 2001 and 2005 resulted in material exceeding the capacity of the storage pond. Changes in the streambed in 2005 led to the decision to remove the sampler until a better location for placement was determined.



FRC students place willows in the trench



Packing down the soil in the willow trench

The second component comprised work within the entrenched channel of Spanish Creek, using boulder vanes to protect the lower portion of eroding banks, dissipating the energy into the center of the channel. In addition, the bank was sloped back and the floodplain expanded. Revegetation of the project was

accomplished with the help of FRC forestry students. Willow trench packs were planted on the floodplain and sloped bank. Construction on the second component of this project - to stabilize two eroding banks on the Dyrr property upstream of the Hwy 70 bridge – was completed in 2006. Funding (\$20,000) is from PL 106-393, Secure Schools, Title II funds with equipment contributions from Feather River Materials and rock contributed by CalTrans.



Post-project floodplain, Dyrr Bank



Dyrr Bank, high water, February, 2007.

Red Clover/McReynolds Creek Restoration Project- Construction of 64 ponds, 58 plugs and 2 grade structures took five months during the summer and fall of 2006. This project restored 4.2 miles of stream channel and 375 acres of meadow floodplain. Numerous volunteers participated in collecting and spreading native plant seed on the plugs, including SVRCD, students from the Jim Beckwourth Continuation High School, and Loyalton High School students.



Aerial view of construction July, 2006



Plug construction Red Clover Creek, Nov. 2006



Pre-project photo X-section 18, June, 2006



Post-project photo X-section 18, February 2007

Construction of this project on the Goodwin Ranch and USFS lands was provided by the SRWCB Proposition 13 CALFED Watershed Program. Substantial cost-shared funding with the Natural Resources Conservation Service (NRCS) and landowner included fencing and off-site water improvements to maximize livestock management and land productivity. Additional fencing, revegetation, and post-project monitoring will be completed in 2007. Other project contributions have been provided by DWR and USFS for monitoring and rock, respectively. The project construction contract was awarded to Hat Creek Construction from Burney, Ca. Total project cost is \$1.3 million. The final project report will be completed September 2007.

Hosselkus Creek Phase II- This project was an extension of work undertaken in 2002 under Plumas County's Proposition 204 Indian Creek Watershed Project grant. The project encompasses the private Neff Ranch, and public lands managed by PNF. The initial grant completed approximately 1500 feet of channel/meadow restoration integrated with County road drainage improvements. The 2005-06 high winter flows caused some headcutting around the grade control structure at the downstream end of the Phase I project. Phase II consisted of meadow channel restoration that extended from the upstream end of the Phase I reach up-valley to the tree line, completing the entire meadow. In 2006, construction of a modified design of the proposed Phase II work was completed, putting the main flows in a remnant channel along the east side of the meadow (see Photo). As part of the revegetation effort on the



rocky ground, cattle from the Neff Ranch were brought in to feed/trample in native hay seed. Willow revegetation efforts have been ongoing through February 2007. The project budget included \$80,000 in Plumas Watershed Forum funding with approximately \$30,000 of in-kind contributions from USFS, DWR, NRCS, and the landowner. The project construction contract was awarded to Hat Creek Construction from Burney, Ca.

Humbug/Charles Creek Phase II- The Phase II project was an extension of the initial restoration work done in 2004 with funding from the landowners and SWRCB 319(h) Non-point Source Pollution grant. The 319(h) grant was extended Dec. 2005, to fund modifications and complete the environmental documentation and permits for the Phase II. Completed in fall 2006, the second phase included treating 600 feet of degraded channel and headcuts along mid-Charles Creek, upstream of the ranch main access road. Restoration included installing sod riffles to raise the existing channel, so the floodplain can be accessed when streamflows reach bankfull levels. Downstream of the access road, 700 feet of the channel was filled with soil material left over from the first phase of the project. Flows were diverted into the remnant channel system. On upper Humbug Creek, above the 2004 project, 800 feet of the degraded channel was treated and flows diverted into the remnant channel system also. A rock grade control structure was constructed at the most downstream headcut to step flows down to the stable reach below. Construction funding was provided by NRCS and landowner for \$12,000. A tour of the project is planned for spring 2007 with the Steering Committee. The landowner completed the initial revegetation work and will be continuing to monitor and maintain.



Watershed Monitoring Program- This on-going program began in 1998 to monitor the impact of FR-CRM projects on a larger watershed scale. Monitoring stations are located on both public and private lands, in the eastern two thirds of the Feather River watershed in Plumas County. The monitoring



Flow monitoring, Doyle Crossing 2/2006

Creek watersheds. Project information, watershed monitoring data and annual summary reports are available on our website at www.feather-river-crm.org. The data has been used by a variety of local entities, as well as the FR-CRM to assist in meeting project and regulatory mandates. The cost of this ongoing program is approximately \$20,000 to \$50,000 annually.

program collects continuous streamflow and temperature data at ten locations (including turbidity at two of those), and biennially collects data on 20 stream reference reaches. Two years of funding for watershed monitoring, starting in 2004, was provided by the Plumas Watershed Forum (\$60,000). With the completion of funding in 2006, FR-CRM is currently seeking funding for on-going monitoring. Until future funding is secured, the frequency of monitoring visits has been cut back. The program also involves continuation high school students collecting data in Portola and Quincy, and volunteer citizen monitors in Sulphur and Spanish

CRM Education Program- In 2004, the FR-CRM received \$110,000 in grant in funding from DWR for an education and citizen monitoring coordinator position, which was divided between two subcontractors, Rob Wade and Kristy Hoffman. Program accomplishments include years of implementation of a school district-wide sixth grade watershed education program; establishing a river education center in the Feather River Canyon; teacher trainings; community and classroom presentations; citizen monitoring training and coordination; Headwaters Festival in 2005; and a storm drain stenciling event in Portola in 2006. The education program has received some funding from the Plumas Watershed Forum to develop outreach



Science Fair participants working the watershed model

WATERS (Watershed Awareness Through Education Recreation and Stewardship), a county-wide collaboration founded by Rob Wade.

materials for the *Feather River Watershed Awareness Campaign*, including an illustrated watershed map and landowner brochure. Additional public outreach money from a recently awarded Secure Schools (PL 106-393) grant has been obtained for continued public outreach such as the science fair exhibit, participating in the PNF Fall Festival and classroom presentations, and development of curriculum guides and environmental education kits. The CRM Education committee has expanded into

Update of Projects Completed in 2005:

Dooley Creek/Downing Meadow Restoration Project- Completed in the fall of 2005, Downing Meadow is an 80 acre, 1+ mile-long, meadow system on the Dooley Creek tributary to Last Chance Creek. Following construction, FR-CRM staff and high school students from Jim Beckwourth High School in Portola, seeded plugs with locally collected native grass and *Pyracoma lucida* (a rare perennial forb) seeds. High flows on 12/31/05 may have affected seeding efforts, moving seed downstream. Currently FR-CRM staff are monitoring post-project conditions and looking at additional revegetation work.



Beckwourth H.S. students seeding 11/05



Post-project 9/22/06

The project was funded by PL 106-393, Secure Schools, Title II funds, with contributions from the U.S. Forest Service (USFS) Range Program and the landowner. The construction contract was awarded to Hat Creek Construction of Burney and was completed in October of 2005. Major partners: Plumas National Forest (PNF) and Alan Nichols, landowner. Total project budget was \$55,000.

Jordan Flat Supplemental Project- This project was implemented on lands managed by the USFS-PNF and is the second phase of a project that eliminated approximately 1,200 feet of entrenched channel using the pond and plug technique on both Last Chance Creek and critical gullied areas on the Jordan Creek fan.



Jordan Flat 9/22/06 Post-Project

FR-CRM staff completed revegetation with locally collected native grass seed. Project budget was \$64,000, funded by the Plumas Watershed Forum. Major partners: PNF and Plumas County. Though the Jordan Flat pond and plug project performed well during the 12/31/05 flood event, the arrival of the flood flows soon after construction was completed did not allow the vegetation to establish on the bare ground. Additional revegetation work is needed on the plugs and pond margins. Beaver activity has diverted some of the flow, requiring some project maintenance. FR-CRM is working with PNF to accomplish maintenance and revegetation needs in summer 2007.



Post-construction September 2005

Jamison Creek Restoration in Plumas-Eureka State Park – Cyndi Walck, State Park Geologist, completed maintenance work on step-pools in 2006. Cyndi also replaced boulders that were moved during the 12/31/05 flood event. Wilburn Construction completed construction in September of 2005. Feather River CRM project budget was \$39,000.

Projects planned for completion in 2007:

The following proposed projects were funded for project development under a Plumas Watershed Forum grant for approximately \$5,000 each. The funding was used to accomplish initial data collection and analysis for the purpose of developing design alternatives and seeking implementation funding, all completed in 2005 and 2006. All projects have been awarded implementation funding through a variety of local, state and federal sources in 2006.

Dixie Creek- The project on Dixie Creek - a major tributary to Red Clover Creek - entails eliminating approximately 2,000 feet of gully on Dixie Creek using the pond and plug technique, and constructing a rock-armored, moderate gradient valley grade structure at the downstream end. Streamflows will be diverted to existing remnant channels on the meadow surface. Environmental documentation has been completed and construction is scheduled for October 2007. Total project budget is \$62,000. The Plumas Watershed Forum is funding \$56,000 of the project and Plumas National Forest is contributing \$5,000 of rock for the valley grade structure.



Dixie Creek headcut, May 2006

Smith Creek- Smith Creek is an important fishery and a tributary to the Wild and Scenic Middle Fork Feather River. Project restoration design involves gully obliteration, installing additional floodplain access culverts at the upstream bridge, and a short bank vane treatment on a 700 foot channel segment to reduce bank erosion. Ten landowners are involved in the project, and contributed to the environmental surveys, preliminary design surveys and reports in partnership with Trout Unlimited (in the range of \$12,600 total cost). Total project costs are estimated at \$252,000, primarily funded by a Prop 40 grant for a complex of projects within the Upper Middle Fork Feather River watershed (including Smith Creek). The environmental work has been completed and construction is planned for October 2007.



Longnecker residence on Smith Creek, July 2006



Smith Creek gully, 2006

Little Last Chance Creek- Located in Sierra Valley, the Little Last Chance project area is broken into three treatment reaches: the Guidici Ranch, the North Creek and the East Creek. The Guidici Ranch is located at the top of the alluvial fan in the most constricted part of the valley. The project design for the Guidici Ranch involves treating the banks with boulder vanes directing the force of flows away from eroding terrace banks along a one-mile stretch of channel. On the North and East Creeks, a combination of concentrated flows, highway culverts, loss of sediment supply, and intensive agricultural use have contributed to the development of gully channels to an existing depth of three to nine feet. The restoration plan for these treatment reaches consists of using riffle augmentation that will allow high flows to spill out onto the floodplain. The project also includes management changes through the use of fencing. Total estimated cost is \$973,250. The Plumas Watershed Forum and Resource Advisory Council (RAC) approved funding for a required 25% funding match for the Prop 40 grant. Partners include PNF and the NRCS. Construction is planned for October 2007. FR-CRM is currently working out community concerns over water rights for irrigation purposes.



Eroding banks on Little Last Chance, Guidici Ranch, 5/06.

Meadow Valley Projects: Silver Creek and Spanish Creek @ Kellett- Project design for Spanish Creek at Kellett includes reconstructing the south approach to the County's bridge, adding culverts at floodplain elevation, constructing boulder vanes, utilizing vegetation transplants, bank reconstruction, and removal of large gravel berms within the active floodplain. Project design for Silver Creek, a tributary of Spanish Creek, will involve the enhancement or construction of whole tree and other small log jams, the construction of rock-riffles and a long-term management plan for recruiting large woody debris into the channel. Estimated total costs for both projects are \$347,000 (\$52,000 Silver Crk/\$295,000 Spanish Creek or 170,000 for amended treatment, i.e. less culverts). Plumas County Department of Public Works is a partner on the Spanish Creek @ Kellett portion of the project, contributing match for installation of the culverts. Plumas Watershed Forum funding for \$198,000 was approved in May 2006. Environmental surveys and documentation will be completed in 2007, with construction planned for September 2008.

Long Valley Creek- Landowner Dean Panfili, of Long Valley Ranch, requested FR-CRM assistance in 2005 to restore Long Valley Creek (tributary to Middle Fork Feather River) and Little Long Valley Creek from near Cromberg to Sloat. Project development funds from the Plumas Watershed Forum funded the data collection, analysis and project design. This restoration design will be finalized spring-summer 2007. The project objective is to restore the bedload capture function of the alluvial fans, reconnecting the stream channel with its historic floodplain, eliminating erosion and raising the water table to its historic elevation utilizing the pond and plug technique. The restoration will also restore aquatic and riparian habitat conditions. Total project cost is estimated at \$235,000. Partners include the landowner and NRCS, who are contributing funds for project construction, fencing, and grazing management. Funding was approved by the RAC from PL 106-393 Secure Schools Title II funds in June 2006. The landowner has already installed over a mile of new fencing around the project area/riparian zone. Environmental survey work, CEQA documentation, and permit applications will be completed in 2007. Construction is planned for Sept-Oct 2008.



Long Valley Creek, 6/15/06

Sulphur Creek Complex- Raap-Guidici and Boulder Creek are two demonstration projects identified as high priority projects in the Sulphur Creek Watershed Analysis due to active channel incision. This incision has resulted in gully formation and delivery of coarse destabilizing bedload the main channel of Sulphur Creek. The Raap-Guidici project was approved for funding through the PL106-393 Secure Schools Title II funds for \$131,575, with a total project cost of \$170,720. CEQA and permit applications have already been completed on the Raap-Guidici project, which will restore the floodplain function through gully obliteration utilizing the pond and plug technique. Construction for Raap-Guidici is scheduled for August-September 2007. Construction on Boulder Creek has been postponed to fall 2008. An archeological evaluation is scheduled for the California Fruit Exchange railroad grade in the Boulder Creek meadow, which is expected to be completed in spring 2007. Estimated project cost for Boulder Creek is about \$75,000, with funding from the Proposition 40 grant. Partners for the Sulphur Creek Complex includes multiple landowners, USFS, NRCS and Caltrans.



2005 TAC meeting for Sulphur Creek Complex.

Poplar Creek, Phase II- This project recently received additional RAC funding for \$14,002 for needed modifications to the valley grade structure on the original Poplar Creek project (photo to the right). The landowner is Soper-Wheeler Lumber Co.



Last Chance-Ferris Fields- This project is part of a larger project that was constructed in 2003-04, which eliminated approximately 2,200 feet of gullied channel on Last Chance Creek at the downstream end of Ferris Fields, and another 2,500 feet on Ferris Creek above the confluence with Last Chance Creek utilizing the pond and plug technique. The supplemental project proposes to obliterate an additional 4,500 feet of gully on Last Chance Creek using the same technique and includes 2 1/2 miles of fence repair/replacement around the Ferris Fields pasture. Project construction is scheduled for August 2007. Total project costs are estimated at \$141,000. Funding was approved from the Plumas Watershed Forum (\$86,000) and the RAC (\$49,000), with a \$6,000 match from Plumas National Forest for fence materials and re-vegetation.



Ferris Fields, Last Chance gully on right, 6/2006



Last Chance Creek Phase II, 6/2005.

Last Chance Phase II- This project involves private land owned by the Vasey Family, and Plumas National Forest lands. The Phase II project proposal involves restoring 800 acres of relic meadow and reducing the incision risk to still functional tributary meadows. The project, with a budget of \$3,700,000, was submitted as part of Plumas County's Proposition 50 IRWM Program. Final decision on that application is pending. Tentative construction schedule is 2009-10.

Coordination:

As proposed in 2006, a new staff member was added to the FR-CRM in February 2007. Partial coordination funding was received from the Proposition 40 grant to help secure this position. Jessica Albietz has joined FR-CRM in the capacity of a temporary (one-year) employee, and is coordinating the revegetation subcommittee, the monitoring program and will be helping staff with most projects. Leslie Mink, the former Monitoring Coordinator, has taken on a "new" (official) role as Project Manager. The current projects that she is working on are Little Last Chance Creek, Yellow Creek in Humbug Valley, Greenhorn Creek Phase II and Ferris Fields on Last Chance Creek.

Direct project funding from state and federal entities has been a reliable source to secure project funding; however, several local/federal sources and state propositions that have funded past projects have, or are completing their final funding cycles in 2006 (i.e. Propositions 40 and 50, the Plumas Watershed Forum, and PL 106-393 Secure Schools Title II). Sufficient funding to maintain coordination efforts have been

secured through 2007 from Proposition 40 funds. FR-CRM is actively seeking future funding sources for both coordination and project resources.

Current FRCRM staff consists of (5) full-time positions. These positions are as follows:

1- Project/Program Manager- Wilcox	80% Project funded/20% Coordination
1- Program Coordinator- Martynn	80% Coordination/20% Project funded
1- Monitoring Coordinator - Albietz	75% Project funded/25% Coordination
1- Project Manager - Mink	90% Project funded/10% Coordination
1- Project Manager- Benoit	90% Project funded/10% Coordination

Unfunded Project Requests (potential funding sources):

- Willow Creek- single landowner (landowner; unknown)
- Sulphur Creek @ Barry (landowners; unknown)
- Sulphur Creek @ Whitehawk Ranch (landowners; unknown)
- Spanish Creek Restoration (American Valley, multiple landowners) (Urban Streams)
- Spanish Creek Vortex Sampler (relocation and continued operation) (unknown)
- Last Chance Charles-North (The Nature Conservancy and Leasee, Matley) (unknown)
- Indian Creek @ Garr Ranch “
- Wolf IV (multiple landowners) “
- Red Clover @ Chase Bridge (USFS) “
- Red Clover @ Noble’s (private) “
- Red Clover/Dotta Canyon (private) “
- Humbug Creek @ Markwell’s “
- Greenhorn Creek Phase II “
- Sulphur Creek Complex- McKenzie Creek, McNair Meadow, “
 - Sulphur Creek Roads/Plumas County Rd 114,
 - Yarrington Meadow, Wash Creek, Sulphur below
 - Whitehawk, Calfpasture Creek, Mowhawk/Chapman
 - Road Closure