

# Feather River Coordinated Resource Management

PLUMAS CORPORATION

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## 2008 Annual Report to Signatory Agencies



**March 2008**

•California Department of Conservation •California Department of Fish and Game •California Department of Forestry and Fire Protection •California Department of Parks and Recreation •California Department of Transportation •California Department of Water Quality Control Board •California Department of Water Resources •Feather River College •Feather River Resource Conservation District •Natural Resource Conservation Service, USDA •North Cal-Neva Resource Conservation and Development District •Pacific Gas & Electric •Plumas Corporation •Plumas County •Plumas County Community Development Commission •Plumas National Forest USFS, USDA •Plumas Unified School District •University of California Cooperative Extension •Salmonid Restoration Federation •Trout Unlimited •U.S. Army Corps of Engineers •USDA Farm Services Agency •U.S. Fish & Wildlife Service

## Introduction

This report summarizes the Feather River Coordinated Resource Management Group's (CRM) 2007 accomplishments, program activities for 2008 and 2009, and proposed planned out-year projects. These projects could not go forward without your agency's participation. The Feather River CRM has twenty-three signatory partners, whose involvement and participation have fluctuated over the years. The CRM would not be successful in implementing watershed restoration in the upper Feather River Watershed without the continuing support and participation of its partners. It is recognized that budgets and turnover of staff limit the ability of partners to be involved, but it is our hope that as a partner you will make it a priority to maintain communication and stay abreast of the work being accomplished in the upper Feather River Watershed.

This is the fourth annual report to the signatory agencies of the Feather River CRM. The purpose of this report is to provide an account of accomplishments to a broader audience of our participants. More detailed information can be found on our website: [www.feather-river-crm.org](http://www.feather-river-crm.org).

The Feather River CRM has successfully implemented a total of 97 projects over the last twenty-three years through the support and cooperation of many agencies and landowners, both private and public. Of this total, 60 have been on-the-ground constructed restoration projects, 11 studies/strategies, 13 planning/coordination projects, and 13 education projects. On-the-ground projects have treated approximately 43 miles of stream, directly restoring approximately 3,800 acres of meadow/floodplain within the Feather River watershed. In addition, four projects are scheduled for construction in 2008 encompassing 3 miles of creek and 188 acres of meadow. Without the support from your organization these collaborative achievements would not be possible. The Feather River CRM's accomplishments are your organization's accomplishments, and we hope you include these projects in your progress reports. The Feather River CRM is your example of what can be achieved by public and private agencies supporting local communities on mutual goals.

All 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 <sup>1</sup>	State/Federal Funding	County Cooperative Grants <sup>2</sup>	Non-program Match <sup>3</sup>
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	\$1,223,800.00	\$762,260.00	\$294,140.00	\$167,400.00
<b>2008-11(est.)<sup>4</sup></b>	<b>\$11,934,210.00</b>	<b>\$9,437,740.00</b>	<b>\$263,870.00</b>	<b>\$2,232,600.00</b>

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

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

<sup>3</sup>Direct partner project match contributions (funds, in-kind).

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



## **Summary of Projects Completed in 2007:**

**Dixie Creek-** The project on Dixie Creek - a major tributary to Red Clover Creek – was completed in September of 2007. Total project budget was \$62,000. The Plumas Watershed Forum funded \$56,704 of the project and Plumas National Forest, Beckwourth Ranger District contributed \$5,000 of rock for the valley grade structure. The project involved the construction of 8 ponds and 12 plugs to eliminate approximately 2,000 feet of gully on Dixie Creek. A rock-armored, moderate gradient valley grade structure was constructed at the downstream end of the project. The construction contract was awarded to Grizzly Creek Excavating from Taylorsville, CA.



**Construction on Dixie Creek in September 2007.**

**Smith Creek-** Construction on Smith Creek began in October 2007. Gully obliteration and installation of six floodplain access culverts at the upstream bridge were completed by December. Bank stabilization with boulder vanes and vegetation along a 700 foot channel segment to reduce bank erosion downstream is set to be constructed in September 2008. Post-project monitoring will be conducted this upcoming summer. Total project budget is \$252,000 funded by California State Water Resources Control Board (SWRCB) Proposition 40 Non-point Source Pollution funds for a complex of projects within the Upper Middle Fork Feather River watershed (including Smith Creek). Ten landowners in partnership with Trout Unlimited (TU) are involved in the project. Landowners and TU contributed time and funding to the preliminary design surveys, environmental surveys and reports, fish monitoring surveys, fish relocation during construction, and re-vegetation efforts for a total in-kind contribution of approximately \$13,000. Project construction was done by Genesis Systems from Sloat, CA.

**Headcut on Smith Creek July 2007**



**Construction on Smith Creek October 2008**



### **Vanes on Guidici Ranch**



### **Riffle construction on East Branch**



**Little Last Chance Creek-** Located in Sierra Valley, the Little Last Chance project area is broken into three treatment reaches: the Guidici Ranch, North Creek and East Creek. The Guidici Ranch is located at the top of the alluvial fan in the most constricted part of the valley. Project design for the Guidici Ranch involved treating nine bank sections along a one-mile stretch of channel through reshaping of vertical banks, vegetating, and installing boulder vanes to direct the force of flows away from eroding terrace banks. 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. Restoration for these treatment reaches consisted of using riffle augmentation to raise the channel base level back to the root zone of the meadow vegetation. This would allow the riparian vegetation to again protect the streambanks from high flow velocities. The project also included grazing management changes through the use of fencing. Total project budget is \$951,227. The Plumas Watershed Forum and Plumas County Resource Advisory Council (RAC) approved funding for a required 25% funding match for the Prop 40 grant that funded a complex of projects in the Upper Middle Fork Feather River watershed. Partners include Plumas National Forest, California Department of Water Resources, Sierra Valley Resource Conservation District and the Natural Resources Conservation Service. Construction began in October and was completed in December 2007 by Hat Creek Construction of Burney, CA. Post-project monitoring and further vegetation work will be completed in 2008. **Photo above of FRC students seeding/mulching terrace banks on Guidici Ranch.**



**Poplar Creek, Phase II-** This project received additional RAC funding in 2007 for \$14,002 to fund enhancements to the original Poplar Creek Crossing project, including modifications to the grade control structure, construction of an additional plug, and planting of more willows. Work was completed in July by Folchi Logging and Construction, Inc. of Portola, CA. The landowner is Soper-Wheeler Lumber Co. The FRCRM hopes to continue restoration efforts with Soper-Wheeler further upstream. Photo of Poplar Creek upstream proposed for future restoration.



**Last Chance-Ferris Fields-** This project restored an “in-fill” reach of the original Last Chance Creek Watershed Restoration Project that was constructed in 2002-04. This year’s project connected the previous pond and plug work, which eliminated 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. This project eliminated an additional 4,500 feet of gully on Last Chance Creek using the same techniques and included 2.5 miles of fence repair/replacement around the Ferris Fields pasture. Project construction was completed in August 2007 by Grizzly Creek Excavating from Taylorsville, CA. Total project budget was \$160,011. Funding was approved from the Plumas Watershed Forum (\$107,011) and the RAC (\$47,000), with a \$6,000 match from Plumas National Forest for fence materials and re-vegetation. **Photo of Last Chance Creek flowing in remnant channel March 2008 within the Ferris Fields project.**



**Sulphur Creek Complex-** Raap-Guidici and Boulder Creeks are tributaries to Sulphur Creek within the Whitehawk Ranch development. Both project areas were identified as high priority sites in the Sulphur Creek Watershed Analysis due to the active channel incision which is delivering high levels of destabilizing bedload material to Sulphur Creek. Raap-Guidici (Haskell Creek) is owned by two separate landowners. Construction on Ron Raap’s property (the downstream end of the project) was completed in 2007. Restoration construction will be completed in 2008 on the Guidici piece (Haskell Creek upstream) and Boulder Creek, owned by Mike Murray and Mike Proiette, respectively. The RAC (PL106-393 Secure Schools Title II) funded the Raap-Guidici project for \$131,575, with a total project cost of \$170,720. Both landowners on Raap-Guidici are contributing heavy equipment for project construction. The project budget for Boulder Creek is \$75,000 provided by SWRCB Proposition 40 Non-point Source Pollution grant funds. Landowners and Trout Unlimited assisted with fish moving for the Raap construction in 2007.



**Photo above of constructed pond on Raap. Photo on right shows gullied channel of Boulder Creek.**



**Indian Creek Modeling Project-** In 2006, researchers at UC Davis were awarded a SWRCB CalFed Bay Delta Watershed Program grant under the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 for a research project entitled “Assessment of Restoration Activities at the Indian Creek Watershed”. UC Davis subcontracted with the Feather River CRM to assist in the data collection for the research project. The purpose of the project is to develop, implement and field calibrate an assessment protocol for restoration projects in the Indian Creek Watershed. The assessment protocol will examine the effects of multiple, large-scale restoration projects in the watershed. Primarily, the model will assess potential changes in streamflow timing and water temperatures. As part of the assessment, a watershed model will be developed using the University of California Davis Hydrological Research Laboratory watershed model (UCDHRM). Data collection began in June 2007 and will continue through 2008. Total funding for the CRM monitoring staff, data collection, and equipment is \$80,000. **Photo of Monitoring Coordinator Jessica Albietz measuring groundwater well levels in Red Clover Valley on February 12, 2008.**



## **Other On-going Feather River CRM Programs/ Projects:**

**Watershed Monitoring Program-** The Feather River CRM initiated a watershed-wide continuous monitoring program in 1998 to examine the effects of watershed restoration projects on a larger



watershed scale. Monitoring stations are located in the eastern two-thirds of the Feather River Watershed on public and private lands. Primary program parameters collected include streamflow and temperature at ten continuous recording stations. Two of those sites also collect turbidity measurements. Twenty stream reference reaches have been established throughout the watershed. Data collection on these reaches is targeted every two years pending available funding. Two years of funding (2004-2006) for \$60,000 was provided by the Plumas Water Forum. Funding for the Indian Creek watershed modeling project has provided support for continuation of the watershed monitoring program through 2007.

Plumas County was awarded a Proposition 50 Integrated Regional Water Management grant in 2007 that will provide funding for program watershed monitoring and Last Chance Phase II project monitoring through 2010. The program also entails a Citizen Monitoring component with local resident and student volunteers collecting data in Indian, Spanish, and Sulphur Creek watersheds. Program and project monitoring results can be found on the Feather River CRM website [www.feather-river-crm.org](http://www.feather-river-crm.org). Data collected has been used by a variety of local entities, as well as the Feather River CRM to assist in meeting project and regulatory mandates. **Photo of Leslie Mink, Monitoring Program Manager, taking winter streamflow measurements at Last Chance Creek low-water crossing.**



**CRM Education Program-** The Feather River CRM Watershed Education Program was established in 2004 with an \$110,000 grant award from DWR, which established two half-time positions, a citizen monitoring/outreach coordinator and a school-based education coordinator. Both these positions were subcontracted out to Kristy Hoffman and Rob Wade, respectively. The DWR grant funded the education program through 2006. Subsequent funding has come from the Plumas Water Forum (\$33,668) for a *Feather River Watershed Awareness Campaign* and RAC (\$34,290) for school-based watershed education support, public outreach, and citizen monitoring efforts. Continued funding for the sixth grade Watercourse Program (“Plumas to the Pacific”) has been provided by the Plumas County Board of Supervisors Title III funds for the 2006-07 and 2007-08 school years.

“WATERS”: Watershed Awareness Through Education, Recreation, and Stewardship is a committee of Feather River CRM partners and interested stakeholders that oversees the regional and collaborative efforts on behalf of stewardship education and community outreach. Restoration work in the watershed provides educational opportunities for local high school and college students. In 2007, students from Jim Beckwourth High School in Portola, Greenville High School, and Feather River College all participated in restoration



efforts through water quality sampling, willow planting, and native grass seeding. Public outreach efforts included a storm drain stenciling event in Quincy, an Environmental Film Festival, classroom presentations, and participation in community events, such as the Forest Service Fall Festival and Pioneer Quincy Elementary School Family Science Night. **Photo of Kristy Hoffman, Feather River CRM Outreach Coordinator, and Kara Rockett, Feather River CRM Americorp Member, at Family Science Night sharing the importance of beavers in watershed health with students.**

**Revegetation Program-** In 2007, the Feather River CRM started a Revegetation Committee to heighten awareness and inspire collaboration on vegetation needs in the watershed. Committee members include representatives from many of our already existing partners, including Department of Water Resources, U.S. Forest Service, Trout Unlimited and Feather River College. Initial efforts in 2007 focused on revitalizing the community greenhouse located on the Feather River College campus. The greenhouse had



been constructed with Plumas County Resource Advisory Committee PL106-393, Secure Schools, Title II funds in 2003 with the primary purpose of developing a local source of native plant species for watershed restoration and other projects. Native sedges and grasses were propagated by high school students enrolled in Plumas County Office of Education’s Regional Occupation Program (ROP). Efforts were successful for two years, but began to wane as available school funding limited student participation. Greenhouse use for native plant propagation ended in 2005. In 2007, the CRM successfully secured

\$14,000 in funding from the Plumas County Board of Supervisor’s Title III funds to revitalize the greenhouse and native plant revegetation work in the watershed. The Forest Service contributed \$5,000

for greenhouse maintenance, which is being completed by Feather River College (FRC). Using Title III monies, the CRM helped organize native plant outings and native grass seed collection in the watershed, in addition to coordinating subcommittee meetings and getting the greenhouse operational. In February 2008, the CRM sponsored a Native Plant Workshop offered through FRC. Gary Romano of Sierra Valley Farms taught the class and students helped fill the greenhouse with starters of a variety of native plant species including sedges, rushes, bitterbrush, willows, and cottonwoods. Other workshops are planned for the spring and fall of 2008. It is hoped the starters will be ready for planting on projects in the fall of 2008. The Feather River CRM annually collects native seed in the summer and performs revegetation work on restoration sites in the spring and fall. **Photo of students in the community greenhouse filling super cells with potting mix during the Native Plant Workshop in February 2008.**

## **Update of Projects Completed in 2006:**

**Red Clover/McReynolds Creek-** The Red Clover/McReynolds Creek Restoration Project was constructed over a five month period from July to December in 2006. The project restored 400 acres of meadow floodplain and 3.3 miles of gullied channel along Red Clover and McReynolds Creeks. Work in 2007 involved post-project monitoring of vegetation and forage production, water temperatures, groundwater levels, stream flows, channel morphology, and fish and wildlife. Results were documented in the final project monitoring report sent to the SWRCB in January 2008. Both the final project report and monitoring report can be found on the Feather River CRM website at [www.feather-river-crm.org](http://www.feather-river-crm.org).

Primary project funding was provided by SWRCB Proposition 13 CALFED Watershed Program, with substantial cost-share funding for fencing, off-site water development, and livestock

management provided by the Natural Resources Conservation Service and the landowner, Goodwin Ranch. Other contributions were made by the Plumas National Forest and DWR for rock material and monitoring. Total project cost was \$1.3 million. Monitoring of the project will continue in 2008.



**Aerial photo taken June 2007 from the downstream end of project area looking east (upstream).**



**Red Clover/McReynolds confluence July 2004**



**Red Clover /McReynolds confluence July 2007**



## **Projects Planned for Construction in 2008:**

**Meadow Valley Projects: Silver Creek and Spanish Creek @ Kellett-** Project development funds from the Plumas Watershed Forum funded the data collection, analysis and project design for both projects in 2005/6. Project design planned for Spanish Creek at Kellett includes constructing boulder vanes, utilizing vegetation transplants, bank reconstruction, and removal of 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. Plumas County Department of Public Works is a partner on the Spanish Creek @ Kellett portion of the project. Public Works is contributing match for installation of floodplain culverts when they replace the bridge in two to five years. Plumas Watershed Forum funding for \$198,000 was approved in May 2006 (\$51,000 for Silver and \$147,000 for Spanish @ Kellett).



Environmental surveys were completed in 2007. CEQA documents and permit applications are currently under review. Construction is planned to begin on Spanish @ Kellett in late July, and on Silver Creek in mid-August 2008. **Photo of eroding bank on Silver Creek, 3/2007.**

**Long Valley Creek-** A project development grant from the Plumas Watershed Forum funded the data collection, analysis and project design for this project in 2005/6. Project objectives are to restore the bedload capture function of the alluvial fans, reconnect the stream channels with their historic floodplain, eliminate erosion and raise the water table to its historic elevation utilizing the pond and plug technique.



Additional benefits of restoration will improve aquatic and riparian habitat conditions. Partners include the landowner, Dean Panfili, and NRCS, who are contributing funds for project revegetation, fencing, and grazing management. Primary funding is being provided from the RAC PL 106-393 Secure Schools Title II funds and a SWRCB Prop. 40 Non-point Source Pollution grant for a total budget of \$352,000. The landowner has already completed the new fencing around the project area/riparian zone.

Environmental survey work was completed in 2007. CEQA documents and permit applications are currently under review. Construction is planned to begin in August 2008.

**Aerial photo of project area showing Long Valley and Little Long Valley Creeks in June 2007.**

## **Upcoming Projects 2008-2010:**

**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 stabilize functional tributary meadows. The project, with a budget of \$3,700,000, was submitted as part of Plumas County's Proposition 50 IRWM application. The County was awarded 2/3rds funding in 2007, but is still awaiting a final signed contract with the Department of Water Resources. Project surveys, environmental analysis, design development, technical reviews, and permit applications will be completed in 2008/2009. Construction is tentatively scheduled to begin the summer of 2009 spanning two seasons, with completion planned for the fall of 2010.

Additional project funding for the remaining 1/3<sup>rd</sup> of construction funds will be sought in 2009 after completion of the environmental analyses. **Aerial view of Last Chance II project taken in 2006.**



**Sulphur Creek Bank Stabilization Project-** In support of other restoration efforts in the Sulphur Creek watershed, this project was initiated upon landowner request in 2006 when the bank receded nearly 12 feet undermining the fence during high flows in the December 31, 2005 flood event. The main channel of Sulphur Creek serves as the property line between the two ownerships. The project area, immediately upstream of the Highway 89 Bridge, is currently grazed by both landowners on either side of the creek. The landowners, Gordon DePaoli and Tom Seeliger, worked with the Natural Resource Conservation Service to construct a fence in 2005 to restrict cattle access to the channel. In 2007, they also funded the environmental surveys (\$5,040) needed to complete the CEQA analysis. The adjoining landowner across the creek has stated their intentions to fence cattle from the creek in 2008. In early 2008, the FRCRM received a Sierra Nevada Conservancy (SNC) Proposition 84 Strategic Opportunity Grant (SOG) for



\$7,500 to complete the CEQA analysis and obtain all required permits for construction. Restoration efforts on the DePaoli/Seeliger bank will entail laying back approximately 500 feet of vertical bank to a 1:1 slope, reducing 200 feet of over-steepened terrace slopes upstream of the cut slope, building a floodplain bench, constructing seven boulder vanes to direct flows away from the newly sloped banks, and planting the project area with willows and other native shrubs and seeds. Implementation funding will be sought in November 2008 through the Caltrans Environmental Enhancement and Mitigation Program (EEM), with construction planned for July 2009.

**Photo of eroding vertical bank and fence damage taken in September 2007.**



**Sulphur Creek @ Barry and Whitehawk Ranch-** Sulphur Creek at its confluence with Barry Creek ranked as the highest priority site in the Sulphur Creek Watershed Analysis, with the Whitehawk Ranch ranked as fourth. The second and third ranked priorities were the previously discussed Raap-Guidici and Boulder Creek projects scheduled for completion in 2008. In 2007, Highlands Management of the Whitehawk development provided \$10,000 to complete the field surveys and develop project design proposals necessary to begin the environmental analysis process for both project areas. All design surveys have been completed. A conceptual design has been finished for Barry Creek. The Whitehawk Ranch design will be completed by June 2008. In early 2008, the FRCRM received a Sierra Nevada Conservancy (SNC) Proposition 84 Strategic Opportunity Grant (SOG) for \$19,530 to complete the environmental surveys, CEQA and NEPA analyses, and obtain all required permits for the Barry Creek project. The Highlands Management group has been asked if they would be willing to fund the environmental surveys, analysis, and permit applications for the Whitehawk Ranch reach. Environmental surveys for wildlife, botany, and archaeology are planned for the summer 2008. CEQA and NEPA documents and permit applications will be done during the winter 2008/2009. Implementation funding will be sought in November 2008 through the Caltrans Environmental Enhancement and Mitigation Program (EEM), with construction tentatively planned for 2009.



**Sulphur Creek at Whitehawk Ranch in 2007.**

**Meadow Carbon Project-** This project was initiated in 2007 with funding from the Plumas County Board of Supervisors Title III monies (\$17,000) to develop a protocol that will quantify the amount of carbon sequestered by restored meadows. In 2007, the Feather River CRM, with technical review from researchers at the University of Nevada, Reno, submitted a draft protocol to the California Climate Registry. As per the protocols, proposed sample meadows (both restored and un-restored) were surveyed and mapped by local subcontractors for soil and vegetation types in the fall. The purpose of these surveys was to provide a stratification scheme for determining sampling sites. Final approval of the protocol and collection of vegetation and soil samples will be completed the summer of 2008. Samples will be sent to a lab for testing of total carbon content.



**Jim Battagin and Denny Churchill mapping soil and vegetation at Clarks Creek for carbon sampling.**

**Greenhorn Creek-** Funded in 2007 for project development through the Plumas County Board of Supervisors Title III funds, \$19,550 was awarded for preliminary data collection and analysis for the planning and conceptual design phase of a stream bank restoration project on Greenhorn Creek



in American Valley. Project work in 2008 will include: contacting other landowners (including the Forest Service), field data collection, data analysis, development of conceptual designs, and holding a minimum of one stakeholder meeting. Because of the many landowners along the channel, and the inter-connected irrigation system, coordination with landowners will be a substantial element in the development and conceptualization of a project. In addition, other funding sources will be sought for CEQA analysis, permits, and construction. Chances for substantial funding may be increased because of the potential integration of this project with design work the FR-CRM is conducting on Spanish Creek through American Valley, where again, landowners have requested assistance for erosion control.



**Greenhorn Creek on the Shea Ranch, July 2007.**

**Quincy Community Services District Wetland Project-** This is a Proposition 50 project funded through Plumas County's IRWMP grant with the Department of Water Resources. Quincy Community Services District (QCSD) is subcontracting out the project to the Feather River CRM. Project purpose is to expand their tertiary treatment capability. Work in 2008 will entail completing the environmental surveys and CEQA documentation, finalizing the design, and acquiring the necessary permits. Construction is tentatively planned for the fall of 2009.

**Spanish Creek Restoration and Gravel Management-** The Spanish Creek Assessment and Rehabilitation Strategy was completed in 2006 with Proposition 13 grant funds from the State Water Resources Control Board. Additional funding through the Resource Advisory Committee PL106-393, Secure Schools, Title II funds was awarded in 2007 to do additional work on the Spanish Creek Restoration Demonstration Projects which included revegetation and maintenance work on the Dyrr Bank Stabilization Project constructed in 2006 and completing surveys for determining a site to relocate the vortex gravel sampler removed in 2006. The Feather River CRM has planned a watershed tour for May 21, 2008 to bring all stakeholders and other interested parties together to review the proposed sites identified in the Strategy. The restoration strategy



**Spanish Creek at Bresciani in 2004**

has two components: 1) streambed/bank structural and vegetation stabilization; and 2) developing passive gravel management locations where excess bedload can be removed from the system without impacting the channel function or stability. To that end, the FRCRM will be focusing on developing the details for gravel management in 2008. This will entail securing site access, developing permanent monitoring cross-sections, and acquiring necessary permits. Implementation funding will be sought in a



coordinated effort with the Greenhorn Creek project development to demonstrate the synergistic benefits throughout American Valley between Greenhorn and Spanish Creeks.

**Humbug Valley @ Yellow Creek-** The Feather River CRM is assisting PG&E and the Humbug Valley Subcommittee of the Ecological Resources Committee in development of a potential restoration project on Yellow Creek in Humbug Valley upstream (north) of the county road. The area is currently subjected to gully widening and active head-cutting on both the main stem of Yellow Creek and irrigation ditches that have captured perennial stream flow. FR-CRM staff have conducted physical surveys and developed several alternatives, including a “pond and plug” approach. Cultural resource surveys are a likely next step as this valley is archaeologically very sensitive.

**Yellow Creek in Humbug Valley looking downstream from finger headcut in June 2007.**



**Red Clover/Poco Creek (USFS)-** This Plumas National Forest (PNF) project located on the Beckwourth Ranger District is a continuation of the Feather River CRM’s Red Clover/McReynold’s Creek project constructed in 2006. The Red Clover/Poco Creek project starts at the downstream end of the CRM project restoring 3 continuous miles of gullied stream channel and meadow floodplain utilizing the pond and plug technique. The Forest Service will be completing the NEPA analysis in 2008 and is coordinating with the CRM for construction the summer of 2009.

**Aerial view of Red Clover/Poco Creek project downstream of Chase Bridge taken June 2007.**



**Red Clover Dotta-** The Red Clover Dotta Project is a long expansive headwater meadow on Red Clover Creek currently downcut to an elevation six to eight feet below the surface of the floodplain. The proposed project would reconnect the channel to the floodplain using the “plug-and-pond” technique. The project area encompasses the ranchlands of the Goodwin Ranch and public lands administered by USDA-Plumas National Forest (PNF). The Goodwin Ranch, the Feather River CRM and PNF were instrumental in the implementation of the 3.3 mile long, 400 acre Red Clover/McReynolds Creeks Restoration Project downstream of this proposed project. The Feather River



CRM has developed a grant proposal for design development, environmental surveys, CEQA/NEPA analysis, and permit application work to be submitted to the Sierra Nevada Conservancy's Proposition 84 Strategic Opportunity Grants program in 2008. Total funding request is \$49,850. If funded, this will then enable the CRM to apply for implementation funds to restore functionality to 280 acres of montane meadow floodplain resulting in improved channel stability for 2.9 miles of Red Clover Creek and tributaries. **Photo of Red Clover Creek – Dotta mid-channel looking upstream in June 2007.**

**Rowland/Meadowview-** The Meadowview/Rowland Creek Project encompasses the contiguous meadow system that straddles the watershed divide between Last Chance Creek, tributary to the North Fork Feather River (NFFR) and Rowland Creek, tributary to the Middle Fork Feather River (MFFR). Rowland Creek has been tributary to both watersheds in historic times through natural channel migration. Currently, Rowland Creek contributes the bulk of its flow to the MFFR drainage, with only flood flows contributing discharge to the NFFR. Meadowview is the uppermost meadow on Last Chance Creek. Both channels, including tributaries, are currently downcut to an elevation six to eight feet below the surface of the floodplain. The proposed project would reconnect the channel to the floodplain using the "plug-and-pond" technique. The project area encompasses the ranchlands of John and Corinne Matley and public lands administered by USDA- Plumas National Forest (PNF). The Matleys and PNF were instrumental in the implementation of the 9 mile long Upper Last Chance Creek Watershed Restoration Project funded by the CALFED Ecosystem Restoration Program in 2002- 2004. The proposed project would restore functionality to 396 acres of montane meadow floodplain resulting in improved channel stability for 4.4 miles of Last Chance Creek, Rowland Creek and tributaries. The Feather River CRM has developed a grant proposal for design development, environmental surveys, CEQA/NEPA analysis, and permit application work to be submitted to the Sierra Nevada Conservancy's Proposition 84 Strategic Opportunity Grants program in 2008. Total funding request is \$48,470. If funded, this will then enable the CRM to apply for implementation funds.

**Meadow Restoration DVD-** The Feather River CRM submitted a grant proposal to the Sierra Nevada Conservancy's Proposition 84 Strategic Opportunity Grants program in early 2008 to produce a DVD on meadow restoration technology. The Feather River CRM has implemented numerous, very successful meadow restoration projects since 1995. The purpose of the video is to expose the general public across the region to the meadow restoration technology and its implementation as a solution for many of California's water concerns such as flooding, drought and water storage. While meadow restoration using the "pond and plug" technology has been implemented in the McCloud, Pit, Feather, Truckee and Kings River watersheds, little is known of the technology and benefits outside these watersheds. The FR-CRM has developed numerous PowerPoint presentations on this subject; however, a video would be able to convey the same information to a much broader audience. In light of the ever-increasing demands on water resources, presentation of this information to a wide audience is especially timely given the ancillary ecological benefits that accrue from its implementation. The project would result in a 30-minute, High Definition, network broadcast quality product. KVIE, the Sacramento area PBS station, has expressed strong interest in airing this video as part of its on-going documentary series *Region At Risk* on its regular Viewfinder program. The video would also be offered to public television outlets in Redding, Fresno, San Francisco and Los Angeles and to other appropriate venues, such as the annual Wild and Scenic Environmental Film Festival in Nevada City, California.

## **Coordination:**

Program coordination enhances the CRM's ability to carry out restoration projects. Projects respond to identified problems and build an education program that leads to long-term behavioral changes. With the assistance and contributions of our partners, CRM staff has coordinated and implemented over 60 restoration projects and watershed studies in the last twenty-three years, sharing this experience with other restoration practitioners. These projects all entail coordination and collaboration between private landowners, agencies, and other stakeholders. Project development requires one to two years of outreach, discussion and data collection in order to develop goals, objectives and design concepts for funding. As the CRM program of work has grown both in project scale and annual number of projects, the need for effective coordination has increased. Landowner requests for assistance are at an all time high, requiring



significant resources to provide quality service. All members of the staff, as well as agency partners, have responded to assistance requests as available. In 2007, the Feather River CRM was unable to address ten project requests from landowners for assistance due to lack of coordination funding and project workload. Expanding outreach and restoration efforts increases visibility of watershed issues and helps build watershed understanding in local communities and regionally. Watershed monitoring of restoration efforts also continues to expand, as more projects are implemented throughout the watershed. Coordination funding in 2007 was covered through the SWRCB Proposition 40 funding for the Middle Fork Complex projects. Sufficient funding to maintain coordination for 2008-2009 has been secured through the Proposition 50 IRWMP grant funds for the Last Chance II project and the remaining Proposition 40 monies.

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 (i.e. Propositions 40 and 50, the Plumas Watershed Forum, and PL 106-393 Secure Schools Title II). Feather River CRM is continually seeking future funding sources for both coordination and project resources. Recent applications to the Sierra Nevada Conservancy Proposition 84 and the Department of Conservation for project and coordination funds, respectively, have been submitted for funding in 2010 and beyond.

In 2007, the Feather River CRM hired Jessica Albietz as our Monitoring Coordinator. Jessica has effectively taken charge of the monitoring program, juggling project monitoring, the Indian Creek Model sampling for UC Davis, and the CRM's watershed-wide program monitoring. In addition, she has taken charge of the revegetation efforts and profitably brought the Patagonia Wild and Scenic Film Festival to the local community as a fundraiser for watershed education efforts. Leslie Mink successfully transitioned into a Project Manager position. Under guidance of Jim Wilcox, Feather River CRM Program/Project Manager, Leslie designed and constructed the Ferris Fields and Little Last Chance Creek projects in 2007. Leslie also secured an AmeriCorp position for the CRM through the Sierra Nevada Alliance. Kara Rockett, our AmeriCorp member, started in January 2008 and will support program and project work for one year.

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
1- Program Asst, AmeriCorp - Rockett	90% AmeriCorp/ 10% Project funded

<b><u>Unfunded Project Requests</u></b>	<b><u>Potential Funding Sources</u></b>
<b>Willow Creek</b> (single landowner)	Landowner; unknown
<b>Sulphur Creek @ Barry</b>	Landowners; Caltrans EEM
<b>Sulphur Creek @ Whitehawk Ranch</b>	Landowners; Caltrans EEM
<b>Spanish Creek Restoration</b> (American Valley, multiple landowners)	Proposition 84; Wildlife Conservation Board (WCB)
<b>Spanish Creek Vortex Sampler</b> (relocation and continued operation)	unknown
<b>Last Chance Charles-North</b> (The Nature Conservancy and Leasee, Matley)	NRCS Conservation Innovation Grants (CIG)
<b>Indian Creek @ Garr Ranch</b>	unknown
<b>Wolf IV</b> (multiple landowners)	unknown
<b>Red Clover/Poco Creek</b> (USFS)	SNC Prop. 84
<b>Red Clover @ Noble's</b> (private)	unknown
<b>Red Clover/Dotta Canyon</b> (private)	NRCS CIG

<b>Humbug Creek @ Markwell's</b>	unknown
<b>Greenhorn Creek Phase II</b>	Landowner; WCB
<b>Sulphur Creek Complex - McKenzie Creek, McNair Meadow</b>	unknown
• Sulphur Creek Roads/Plumas County Rd 114	unknown
• Yarrington Meadow, Wash Creek, Sulphur below	unknown
• Whitehawk, Calfpasture Creek, Mowhawk/Chapman	unknown
• Road Closure	unknown