

Proposal for Plumas Watershed Forum

1. **Project Name:** Feather River Irrigated Lands Water Quality Improvement Program.
2. **County:** The project area encompasses Plumas County and parts of Sierra and Lassen Counties.
3. **Project Number:** _____
4. **Project Sponsor:** Feather River Water & Watershed Authority
5. **Date:** April 3, 2009
6. **Sponsor's Phone Number:** (530) 284-7294
7. **Applicant Capability:** The Feather River Water & Watershed Authority is the newly chartered regional water management group for the Upper Feather River region, which was formally established to meet the requirements of the IRWM Planning Act of 2008. Rather than an entirely new entity, the Watershed Authority is a formalization of the many informal relationships that have long been effective in the Feather River region.

The programs of the Feather River Water & Watershed Authority are carried out through coordination of staff from amongst its various members, including Plumas County, the Plumas County Flood Control & Water Conservation District, the Feather River Resource Conservation District (RCD), U.C. Cooperative Extension, and the Upper Feather River Watershed Group. Leah Wills of the Plumas County Flood Control District will be responsible for coordinating project work with the Natural Resources Conservation Service (NRCS) and other relevant members of the regional water management group.

NRCS has substantial experience in overseeing the types of work that this project will assist in funding. The Plumas County Flood Control District, the Feather River RCD, and U.C. Cooperative Extension have all successfully completed Watershed-Forum projects in the past, including the same types of project administration and landowner interaction that are needed in this project.

8. **Sponsor's E-mail:** leah2u@frontiernet.net
9. **Project Location:** The project applies to irrigated lands in the Upper Feather River watershed. For the six potential projects that are offered as examples in this proposal, five are located in Sierra Valley and one is located in Mohawk Valley.
10. **Justification, Goals, and Objectives:** The justification for the project is reflected on page 17 of the Feather River Watershed Management Strategy, which states that "[p]riority should be given to projects which work toward meeting the requirements of the Ag Waiver program, fit within the priorities of the watershed management strategy, and include economic incentives for (and contributions from) the landowner."

The goals and objectives of this project are to support the accomplishment of those very three items:

- *Meet Ag Waiver requirements.* The project supports the implementation of Best Management Practices (BMPs) that will improve water quality discharges from irrigated lands and help meet water quality criteria.
- *Fit watershed management priorities.* The BMPs supported by the project will help reduce erosion, improve water quality, protect habitat, buffer flood events, and improve groundwater recharge.
- *Include incentives for and contributions from landowners.* The project provides matching funds to reduce financial barriers to participation in the NRCS Environmental Quality Incentives Program (EQIP) or implementation of other BMPs while also requiring some level of matching contribution from landowners.

11. Project Description: This project will leverage funding from NRCS, the Farm Service Agency (FSA), and private landowners to maximize physical improvements to better manage grazing on irrigated lands in order to reduce erosion, improve water quality, protect habitat, buffer flood events, and improve groundwater recharge.

NRCS currently has a program in the Upper Feather River region to provide assistance to private landowners in developing and implementing ranch management plans. The local funding available under the NRCS program amounts to approximately \$180,000 per year. However, NRCS can only fund a portion of any particular improvement, and the private landowner is required to provide matching funds. The funding match and selection criteria are barriers to some landowners participating in the program, which prevents the program from achieving its full potential.

This project is modeled after a successful program in King County, Washington, that was brought to our attention by Holly George from U. C. Cooperative Extension. By bridging the gap between NRCS or FSA funding and what some private landowners and grazing permittees can afford or are willing to pay, this project will help take full advantage of other available funding sources and increase the ranch management improvements that can be completed on the ground. The proposed program may also provide opportunities for projects that do not fit the normal criteria for NRCS or FSA funding. Providing funding from multiple sources recognizes that benefits from the improvements are realized well beyond the interests of the private landowners or grazing permittees themselves.

12. Coordination of Project with Other Related Project(s) on Adjacent Lands: The types of projects funded under the program are discrete BMPs that do not necessarily need to be coordinated with other projects on adjacent lands. However, the possible projects listed below are high-profile projects that are intended to serve as good examples for other landowners and encourage similar improvements elsewhere.

13. How Does Proposed Project Meet Purposes of the Monterey Settlement:

- a. **Improve Retention (Storage) of Water for Augmented Baseflow in Streams.** The project will implement fencing, off-site water sources, and other BMPs to help protect streambanks and riparian areas. Well-managed riparian zones slow flood flows and provide opportunity for increased groundwater recharge, resulting in increased water available to augment baseflow.
- b. **Improve Water Quality (Reduced Sedimentation) and Streambank Protection.** The BMPs that are targeted under this project are aimed directly at restoring riparian buffers and improving and protecting streambank condition.

- c. Improve Upland Vegetation Management. The Watershed Management Strategy notes that restoring upland vegetation is usually dependent upon sound grazing management. While this project is primarily directed toward measures that will be taken in riparian areas, it will also benefit upland vegetation areas included in ranch management plans.
- d. Improve Groundwater Retention/Storage in Major Aquifers. The project will help prevent further stream channel degradation that further reduces groundwater storage capacity.

Watershed Management Strategy Priorities

- e. Westside vs. Eastside. The “priority watersheds” where this project will be implemented are all on the east side of the Sierra Crest.
- f. Road Density. Development of a ranch management plan by NRCS typically includes a review of roads, including surfacing and drainage, to identify possible improvements or changes in use that could enhance resource protection.
- g. Sediment Transport. A key objective in implementing BMPs is stabilizing stream channels and reducing erosion.
- h. Groundwater Condition. By implementing BMPs to improve management of riparian areas, the travel of flood water will be slowed and groundwater recharge will be enhanced.
- i. Density of Meadows. The Watershed Management Strategy identifies meadow areas in the upper subwatersheds as being subject to high erosion as a result of various disturbances, while also being heavily used for grazing. Implementation of BMPs will stabilize degraded meadows and allow gradual improvement while such areas may be awaiting full-scale restoration projects. Yellow Creek through Humbug Valley in the North Fork watershed is a prime example of how grazing management can allow passive restoration to begin while long term management and restoration plans are being developed.
- j. Riparian and Streambank Condition. The BMPs that are targeted under this project are aimed directly at restoring riparian buffers and improving and protecting streambank condition.
- k. Upland Vegetation Condition. The Feather River Watershed Management Strategy notes that restoring upland vegetation is usually dependent upon sound grazing management. While this project is primarily directed toward measures that will be taken in riparian areas, it will also benefit upland vegetation areas that are included in ranch management plans.
- l. Potential Benefits. Improved grazing management has long been identified as a key element in restoring and managing the Feather River watershed for the very reason that so many resource issues converge upon the health and stability of riparian areas and stream channels. This project directly addresses the goals of the Monterey Settlement by reducing erosion, improving water quality, protecting habitat, buffering flood events, and improving groundwater recharge.
- m. Economic and Social Feasibility. The proposed project implements simple, effective, proven, and relatively inexpensive watershed improvements, while leveraging outside funding against Forum funding at a rate between 3 to 1 and 4 to 1. The type of work that will be accomplished is also vastly scalable, meaning the level of effort undertaken by the proposed program can be readily matched to the level of funding that may be available in any future year from different sources.

In particular, the Feather River Watershed Management Strategy calls for prioritizing projects that will implement BMPs as part of the Irrigated Lands Program.

14. **Project Type:** Tier 1 Type 3

15. **Measure of Project Accomplishment/Expected Outcomes:** The program will support projects that implement BMPs to protect and stabilize streambanks and riparian areas. The primary indicator of success will be the state of vegetation in the areas affected by each project.

16. **Estimated Start Date:** June 2009

17. **Estimated Completion Date:** Construction of Forum-funded projects no later than December 2010; post-project monitoring through September 2012.

18. **Proposed Method(s) of Accomplishment:** This project is intended to establish a program that has been formulating in concept among the sponsors over the past two years. With the level of funding requested from the Forum, the program will be implemented on a "pilot" scale and establish the framework for a long-term program than can be funded through a variety of available sources in the future. Future Watershed Forum funding could provide some level of continued support, but there are also opportunities for funding from Plumas and Sierra Counties, from the Upper Feather IRWM program, and from other sources. Also, the Irrigated Lands Regulatory Program is currently being revised by the Central Valley Regional Water Quality Control Board. One proposal in that process is that a portion of the funding being collected from landowners and used by the ag waiver coalitions to conduct water quality monitoring should be redirected into implementation of BMPs.

Examples of projects that could receive funding assistance through this program are presented below. To allow equitable access to available funding, project proposals will be solicited and reviewed by the Irrigated Lands Workgroup of the Feather River Water & Watershed Authority, and funding for any project will be approved by the board of directors. To ensure accountability of Watershed Forum funds, the following criteria will be used for any expenditure of such funds:

- a. Watershed Forum funds will not pay for more than 50% of the cost of any project.
- b. Watershed Forum funds shall only be used to pay for physical improvements, such as fencing or off-stream water sources.
- c. Watershed Forum funds shall be paid on a reimbursable basis after work is completed.

The following possible projects have already been submitted as examples of the types of projects that would be implemented:

Sierra Valley Project A: Improve streambank stabilization and establish riparian buffer zones on three miles of the Middle Fork Feather River through a ranch, with fencing and bridge placement to manage crossings and limit livestock access to the creek.

Sierra Valley Project B: Reduce streambank erosion caused by high seasonal runoff by installing weirs and plug-and-pond structures to redirect the channel to its natural course. Fence one-half mile of ditch and install one bridge to eliminate two livestock crossings in a tributary of the Middle Fork Feather River.

Sierra Valley Project C: Develop two sources of off-site water with solar powered wells and storage tank capacity for 400-500 cow-calf pairs. Supplemental water sources will reduce livestock travel to the main channels of the Middle Fork Feather River which traverse the ranch in a vast series of slews and tributaries which are largely impractical for permanent fencing due the irregular channels and annual damaging seasonal flooding where runoff from several sub-watersheds converge at this point on the valley floor. Develop tailwater buffer zones and sediment traps to mitigate potential impacts of tailwater discharges to the MFFR channels.

Sierra Valley Project D: Install one mile of fencing in pasture where two creeks converge in the southwest corner of the valley.

Sierra Valley Project E: Eliminate a 100-yard “water gap” on the East Channel that was left open by a previous NRCS project. Install fencing in the gap and provide off-site water.

Mohawk Valley Project F: Support an FSA project to install off-site water for a pasture area on Sulfur Creek north of Hwy 89.

19. **Anticipated Project Cost:** This project requests \$30,000 from the Plumas Watershed Forum to support projects that will be implemented during the 2009 and 2010 construction seasons. If additional Watershed Forum funding is available in the future, additional funds may be requested to help continue the program.

20. Identify Sources of Other Funding:

Natural Resources Conservation Service:	\$60,000
Farm Service Agency	Undetermined amount
Plumas County Flood Control District	\$3,000
Private Landowner Contribution: (minimum 10% to maximum 25% in-kind and/or cash match)	\$10,000 to \$30,000

21. Monitoring Plan

Photo-points will be established for each funded project to record pre-project condition, completion of construction, and two years of post-project conditions. Success of each project will be evaluated based on expected changes in streambank condition and vegetation. The Plumas County Flood Control District will coordinate annual monitoring.

22. Failure to Comply with terms of the agreement.

Six individual projects have already been identified for possible funding support from this program, and there are many other landowners who are interested in similar projects. In the event any selected project does not move forward in a timely manner, the allocated funding will be redirected to another project. Similar projects have been successfully completed in the past under the administration of the Plumas County Flood Control District, NRCS, U.C. Cooperative Extension, and Feather River RCD.

23. Details of the landowner agreement: A landowner agreement will identify the scope of work for each particular project, document the landowner's financial contribution, and provide for access for two years of post-project monitoring.

Status of Project Planning

a. NEPA* and/or CEQA* Complete:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
b. NEPA or CEQA review will be conducted for each project. For NRCS and FSA projects, environmental review will be determined by the sponsoring agency. For other projects, the Feather River Water & Watershed Authority will coordinate CEQA review.			
c. NMFS* Sec. 7 ESA Consultation Complete:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NRCS or FSA will address as part of their projects.
d. USFWS* Sec. 7 ESA Consultation Complete:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NRCS or FSA will address as part of their projects.
e. RWQCB/CDFG* Permits for In-stream Work Obtained: Depends upon individual projects	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Applicable
f. RWQCB/COE* 401/404 Fill/Removal Permit Obtained: Depends on individual projects	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Applicable
g. SHPO* Concurrence Received: Depends on individual projects	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Applicable
h. Project Design(s) Completed: Some of the possible projects have been designed	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Not Applicable
i. FEMA/NFIP Compliance	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Not Applicable
j. Local/Regional Permits & Regulatory Compliance	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Not Applicable
* NEPA = National Environmental Policy Act, CEQA = California Environmental Quality Act, NMFS = National Marine Fisheries Service, USFWS = United States Fish & Wildlife Service, RWQCB = Regional Water Quality Control Board, CDFG = CA Dept. of Fish & Game, COE = Army Corps of Engineers, SHPO = State Historic Preservation Officer, FEMA = Federal Emergency Management Agency; NFIP = National Flood Insurance Program			

Project Cost Analysis

Item	<i>Column A</i> Fed. Agency Appropriated Contribution ¹	<i>Column B</i> Requested Watershed Forum Funds	<i>Column C</i> Other Contributions ²	<i>Column D</i> Total Available Funds
a. Field Work & Site Surveys	\$900		\$1,200	\$2,100
b. NEPA/CEQA & Sec 7 ESA Consultation	\$600			\$600
c. Permit Acquisition			\$1,200	\$1,200
d. Project Design & Engineering	\$600			\$600
e. Contract Preparation	\$600		\$600	\$1,200
f. Contract Administration	\$900		\$900	\$1,800
g. Contract Cost	\$56,400	\$30,000	\$10,000	\$96,400
h. Workforce Cost				
() Materials & Supplies				
i. Monitoring				
j. Other				
k. Indirect Costs				
Total Cost Estimate	\$60,000	\$30,000	\$13,900	\$103,900

¹ Federal Appropriated Contribution: Anticipated NRCS contribution is shown. NRCS funding may be substituted or augmented by FSA funding.

² Other Contributions: Includes administration by Plumas County Flood Control District staff and required landowner contributions.

Project Work Plan

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|---|---------------------------|
| 1. Execute Watershed Forum funding agreement | June 2009 |
| 2. Solicit project proposals | June 2009 |
| 3. Irrigated Lands (IL) Workgroup review of proposals | July 2009 |
| 4. Board approval of projects | July 2009 |
| 5. Execute landowner agreements | July 2009 |
| 6. CEQA review for non-NRCS/FSA projects | Ongoing |
| 7. Implementation of projects | July 2009 - December 2010 |
| 8. Verification of project completion | Ongoing |
| 9. IL Workgroup reviews completed projects | December 2009 |
| 10. Solicit project proposals (if funding available) | January 2010 |
| 11. IL Workgroup review of new proposals | February 2010 |
| 12. Board approval of new projects | February 2010 |
| 13. Execute landowner agreements | February 2010 |
| 14. Post-project photo monitoring | September 2010 |
| 15. IL Workgroup reviews completed projects | December 2010 |
| 16. Post-project photo monitoring | September 2011 |
| 17. Post-project photo monitoring | September 2012 |

Additional projects will be solicited and implemented upon availability of funding.

Upper Feather River Region – Priority Watersheds

