



featherriver.org

UPPER FEATHER RIVER IRWM PROJECT INFORMATION FORM

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Please submit by **5:00 p.m. on August 3, 2015**, to UFR.contact@gmail.com

Please provide information in the tables below:

I. PROJECT PROPONENT INFORMATION

Agency / Organization	USDA Natural Resources Conservation Service (NRCS)
Name of Primary Contact	Dan Z. Martynn
Name of Secondary Contact	Joe Hoffman
Mailing Address	PO Box 3562
E-mail	Dan.martynn@ca.usda.gov
Phone	
Other Cooperating Agencies / Organizations / Stakeholders	Lake Almanor Watershed Group (LAWG) Feather River Roundtable Group/ Plumas NF
Is your agency/organization committed to the project through completion? If not, please explain	yes

II. GENERAL PROJECT INFORMATION

Project Title	FMW-6: Watershed Monitoring Program
Project Category	<input type="checkbox"/> Agricultural Land Stewardship <input checked="" type="checkbox"/> Floodplains/Meadows/Waterbodies <input type="checkbox"/> Municipal Services <input type="checkbox"/> Tribal Advisory Committee <input type="checkbox"/> Uplands/Forest
Project Description (Briefly describe the project, in 300 words or less)	To expand and extend existing streamflow monitoring Program throughout the Feather River watershed to include Lake Almanor basin and provide central clearing house where monitoring data can be assessed and maintained. This is primarily an implementation project lasting 3-5 years, but could go longer.
Project Location Description (e.g., along the south bank of stream/river between river miles or miles from	Upper North Fork, East branch of the north fork and upper Middle Fork of the Feather River Watershed.

Towns/intersection and/or address):	
Latitude:	Regional
Longitude:	Regional

III. APPLICABLE IRWM PLAN OBJECTIVES ADDRESSED

For each of the objectives addressed by the project, provide a one to two sentence description of how the project contributes to attaining the objective and how the project outcomes will be quantified. If the project does not address *any* of the IRWM plan objectives, provide a one to two sentence description of how the project relates to a challenge or opportunity of the Region.

Upper Feather River IRWM Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
Restore natural hydrologic functions.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Reduce potential for catastrophic wildland fires in the Region.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Build communication and collaboration among water resources stakeholders in the Region.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Sharing of water Quality and Quantity data with stakeholders in watershed will allow local water users to make informed decisions and aid in collaboration on future projects	
Work with DWR to develop strategies and actions for the management, operation, and control of SWP facilities in the Upper Feather River Watershed in order to increase water supply, recreational, and environmental benefits to the Region.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Encourage municipal service providers to participate in regional water management actions that improve water supply and water quality.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Downstream water users may see value in investing in upper watershed improvements if monitoring data can show increases over time as result of management activities / restoration.	
Continue to actively engage in			

Upper Feather River IRWM Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
FERC relicensing of hydroelectric facilities in the Region.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Address economic challenges of municipal service providers to serve customers.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Protect, restore, and enhance the quality of surface and groundwater resources for all beneficial uses, consistent with the RWQC Basin Plan.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Address water resources and wastewater needs of DACs and Native Americans.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Coordinate management of recharge areas and protect groundwater resources.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Improve coordination of land use and water resources planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Monitoring data likely to support improved coordination between county, state and federal agencies in watershed.	
Maximize agricultural, environmental and municipal water use efficiency.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Effectively address climate change adaptation and/or mitigation in water resources management.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Improve efficiency and reliability of water supply and other water-related infrastructure.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Enhance public awareness and understanding of water management issues and needs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Database/website will be available to public and could help inform them on water management issues & trends	
Address economic challenges of agricultural producers.	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		
Work with counties/ communities/groups to make sure staff capacity exists for actual administration and	<input type="checkbox"/> Yes <input type="checkbox"/> N/A		

Upper Feather River IRWM Objectives:	Will the project address the objective?	Brief explanation of project linkage to selected Objective	Quantification (e.g. acres of streams/wetlands restored or enhanced)
implementation of grant funding.			

If no objectives are addressed, describe how the project relates to a challenge or opportunity for the Region:

IV. PROJECT IMPACTS AND BENEFITS

Please provide a summary of the expected project benefits and impacts in the table below or check N/A if not applicable; **do not leave a blank cell**. Note that DWR encourages multi-benefit projects.

If applicable, describe benefits or impacts of the project with respect to:		
a. Native American Tribal Communities	<input checked="" type="checkbox"/> N/A	
b. Disadvantaged Communities ¹	<input checked="" type="checkbox"/> N/A	
c. Environmental Justice ²	<input checked="" type="checkbox"/> N/A	
d. Drought Preparedness	<input type="checkbox"/> N/A	More complete and comprehensive streamflow information will help quantify water available downstream (Oroville Dam).
e. Assist the region in adapting to effects of climate change ³	<input checked="" type="checkbox"/>	Data trends in collected monitoring data could help guide management decisions relating to climate change
f. Generation or reduction of greenhouse gas emissions (e.g. green technology)	<input checked="" type="checkbox"/> N/A	
g. Other expected impacts or benefits that are not already mentioned elsewhere	<input checked="" type="checkbox"/> N/A	

¹ A Disadvantaged Community is defined as a community with an annual median household (MHI) income that is less than 80 percent of the Statewide annual MHI. DWR’s DAC mapping is available on the UFR website (<http://featherriver.org/maps/>) .

² Environmental Justice is defined as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations and policies. An example of environmental justice benefit would be to improve conditions (e.g. water supply, flooding, sanitation) in an area of racial minorities.

³ Climate change effects are likely to include increased flooding, extended drought, and associated secondary effects such as increased wildfire risk, erosion, and sedimentation.

DWR encourages multiple benefit projects which address one or more of the following elements (PRC §75026(a)). Indicate which elements are addressed by your project.

a. Water supply reliability, water conservation, water use efficiency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	g. Drinking water treatment and distribution	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
b. Stormwater capture, storage, clean-up, treatment, management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	h. Watershed protection and management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A
c. Removal of invasive non-native species, creation/enhancement of wetlands, acquisition/protection/restoration of open space and watershed lands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	i. Contaminant and salt removal through reclamation/desalting, other treatment technologies and conveyance of recycled water for distribution to users	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
d. Non-point source pollution reduction, management and monitoring	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	j. Planning and implementation of multipurpose flood management programs	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A
e. Groundwater recharge and management projects	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	k. Ecosystem and fisheries restoration and protection	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A
f. Water banking, exchange, reclamation, and improvement of water quality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		

V. RESOURCE MANAGEMENT STRATEGIES

For each resource management strategy (RMS) employed by the project, provide a one to two sentence description in the table below of how the project incorporates the strategy. A description of the RMS can be found in Volume 2 of the 2013 California Water Plan (<http://featherriver.org/2013-california-water-plan-update/>).

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
Reduce Water Demand		
Agricultural Water Use Efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Urban water use efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Improve Flood Management		
Flood management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Educating the public on protection of functions of floodplains
Improve Operational Efficiency and Transfers		
Conveyance – regional/local	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
System reoperation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water transfers	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Increase Water Supply		
Conjunctive management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Precipitation Enhancement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Municipal recycled water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Surface storage – regional/local	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Improve Water Quality		
Drinking water treatment and distribution	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Groundwater remediation/aquifer remediation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Matching water quality to water use	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pollution prevention	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Salt and salinity management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Urban storm water runoff management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Practice Resource Stewardship		
Agricultural land stewardship	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Ecosystem restoration	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Forest management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Land use planning and management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Public lands management may be adjusted based on long term stream monitoring results
Recharge area protection	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Sediment management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sediment load will be monitored
Watershed management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Monitoring data will assist in the process of creating and implementing watershed plans related to streams and streamflow
People and Water		
Economic incentives	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Outreach and engagement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A database/website location for streamflow monitoring provides an opportunity for public groups & individuals to contribute to positive water management outcomes by being better informed
Water and culture	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water-dependent recreation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wastewater/NPDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Other RMS addressed and explanation:

VI. PROJECT COST AND FINANCING

Please provide any estimates of project cost, sources of funding, and operation and maintenance costs, as well as the source of the project cost in the table below.

PROJECT BUDGET					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Funding Match Waiver request?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
	Category	Requested Grant Amount	Cost Share: Non-State Fund Source* (Funding Match)	Cost Share: Other State Fund Source*	Total Cost
a.	Direct Project Administration	40,000	4,000		\$44,000
b.	Land Purchase/Easement				
c.	Planning/Design/Engineering / Environmental				
d.	Construction/Implementation				
e.	Environmental Compliance/ Mitigation/Enhancement				
f.	Construction Administration				
g.	Other Costs				
h.	Construction/Implementation Contingency				
i.	Grand Total (Sum rows (a) through (h) for each column)				\$44,000
j.	Can the Project be phased? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, provide cost breakdown by phases				
		Project Cost	O&M Cost	Description of Phase	
	Phase 1				
	Phase 2				
	Phase 3				
	Phase 4				
k.	Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).		N/A		
l.	Has a Cost/Benefit analysis been completed?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
m.	Describe what impact there may be if the project is not funded (300 words or less)		Opportunity to establish long term baseline conditions for water quality and quantity on representative streams in watershed will be lost.		
*List all sources of funding. Note: See Project Development Manual, Exhibit B, for assistance in completing this table (http://featherriver.org/documents/).					

VIII. PROJECT STATUS AND SCHEDULE

Please provide a status of the project, level of completion as well as a description of the activities planned for each project stage. If unknown, enter **TBD**.

Project Stage	Check the Current Project Stage	Completed?	Description of Activities in Each Project Stage	Planned/ Actual Start Date (mm/yr)	Planned/ Actual Completion Date (mm/yr)
a. Assessment and Evaluation	<input checked="" type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		TBD	TBD
b. Final Design	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
c. Environmental Documentation (CEQA / NEPA)	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
d. Permitting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
e. Construction Contracting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
f. Construction Implementation	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Provide explanation if more than one project stage is checked as current status					

IX. PROJECT TECHNICAL FEASIBILITY

Please provide any related documents (date, title, author, and page numbers) that describe and confirm the technical feasibility of the project. See www.featherriver.org/catalog/index.php for documents gathered on the UFR Region.

<p>a. List the adopted planning documents the proposed project is consistent with or supported by (e.g. General Plans, UWMPs, GWMPs, Water Master Plan, Habitat Conservation Plans, TMDLs, Basin Plans, etc.).</p>	
<p>b. List technical reports and studies supporting the feasibility of this project.</p>	<p>a) Climate Change & the Changing Water Balance for California’s N Fork of the Feather River b) Effects of Meadow Restoration on Stream flow in the Feather River Watershed c) Feather River CRM Group Annual reports 2005-2014 d) Lake Almanor Watershed Mgt Plan e) Lake Almanor Watershed Monitoring Plan</p>
<p>f) Concisely describe the scientific basis (e.g. how much research has been conducted) of the proposed project in 300 words or less.</p>	<p>10+ years of stream flow data has been collected by FRCRM but variability in climate during that time has made it hard to identify trends. More data needed.</p> <p>Proposal can be combined with Lake Almanor Watershed Group proposal to include whole watershed.</p>
<p>g) Does the project implement green technology (e.g. alternate forms of energy, recycled materials, LID techniques, etc.).</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A If yes, please describe.</p>
<p>h) Are you an Urban Water Supplier¹?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>f. Are you are an Agricultural Water Supplier²?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>g. Is the project related to groundwater?</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A If yes, please indicate which groundwater basin. Upper feather river watershed</p>
<p>¹ Urban Water Supplier is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. ² Agricultural Water Supplier is defined as a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding the acreage that receives recycled water.</p>	

Climate Change – Project Assessment Checklist

This climate change project assessment tool allows project applicants and the planning team to assess project consistency with Proposition 84 plan standards and RWMG plan assessment standards. The tool is a written checklist that asks GHG emissions and adaptation/resiliency questions.

Name of project: FMW-6: Watershed Monitoring Program

Project applicant: Feather River Roundtable

GHG Emissions Assessment

Project Construction Emissions

(If you check any of the boxes, please see the attached worksheet)

- The project requires nonroad or off-road engines, equipment, or vehicles to complete.
- The project requires materials to be transported to the project site.
- The project requires workers to commute to the project site.
- The project is expected to generate GHG emissions for other reasons.
- The project does not have a construction phase and/or is not expected to generate GHG emissions during the construction phase.

Operating Emissions

(If you check any of the boxes, please see the attached worksheet)

- The project requires energy to operate.
- The project will generate electricity.
- The project will proactively manage forests to reduce wildfire risk.
- The project will affect wetland acreage.
- The project will include new trees.
- Project operations are expected to generate or reduce GHG emissions for other reasons.

Adaptation & Resiliency Assessment

Water Supply

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water supply vulnerability issues:

- Not applicable
- Reduced snowmelt
- Unmet local water needs (drought)
- Increased invasive species

Monitoring of stream flow will help better manage the available water resources available in the watershed for both quantity and quality.

Water Demand

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water demand vulnerability issues:

- Not applicable
- Increasing seasonal water use variability
- Unmet in-stream flow requirements
- Climate-sensitive crops
- Groundwater drought resiliency
- Water curtailment effectiveness

More accurate data on stream flow allows for better estimates of availability in sub-watersheds.

Water Quality

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority water quality vulnerability issues:

- Not applicable
- Increasing catastrophic wildfires
- Eutrophication (excessive nutrient pollution in a waterbody, often followed by algae blooms and other related water quality issues)
- Seasonal low flows and limited abilities for waterbodies to assimilate pollution
- Water treatment facility operations
- Unmet beneficial uses (municipal and domestic water supply, water contact recreation, cold freshwater habitat, spawning habitat, wildlife habitat, etc.)

Increased streamflow measurements and long term water quality monitoring within watershed will assist managers with allocating unmet beneficial uses.

Flooding

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority flooding vulnerability issues:

- Not applicable
- Aging critical flood protection
- Wildfires
- Critical infrastructure in a floodplain
- Insufficient flood control facilities

Ecosystem and Habitat

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority ecosystem and habitat vulnerability issues:

- Not applicable
- Climate-sensitive fauna or flora
- Recreation and economic activity
- Quantified environmental flow requirements
- Erosion and sedimentation
- Endangered or threatened species
- Fragmented habitat

Hydropower

Describe how the project makes the watershed (more/less) resilient to one or more of the following high priority hydropower vulnerability issues:

- Not applicable
- Reduced hydropower output

FMW-6: Watershed Monitoring Program

GHG Emissions Analysis

Project Construction Emissions

The project requires non-road or off-road engines, equipment, or vehicles to complete. If yes:

Type of Equipment	Maximum Number Per Day	Total 8-Hour Days in Operation	Total MTCO ₂ e
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Total Emissions			0

The project requires materials to be transported to the project site. If yes:

Total Number of Round Trips	Average Trip Distance (Miles)	Total MTCO ₂ e
10	100	2

The project requires workers to commute to the project site. If yes:

Average Number of Workers	Total Number of Workdays	Average Round Trip Distance Traveled (Miles)	Total MTCO ₂ e
2	10	100	1

The project is expected to generate GHG emissions for other reasons. If yes, explain:

The project does not have a construction phase and/or is not expected to generate GHG emissions during the construction phase.

Upper Feather River IRWMP
Project Assessment - GHG Emissions Analysis

FMW-6: Watershed Monitoring Program

Project Operating Emissions

The project requires energy to operate. If yes:

Annual Energy Needed	Unit	Total MTCO ₂ e
	kWh (Electricity)	0
	Therm (Natural Gas)	0

The project will generate electricity. If yes:

Annual kWh Generated	Total MTCO ₂ e
	0

*A negative value indicates GHG reductions

The project will proactively manage forests to reduce wildfire risk. If yes:

Acres Protected from Wildfire	Total MTCO ₂ e
	0

*A negative value indicates GHG reductions

The project will affect wetland acreage. If yes:

Acres of Protected Wetlands	Total MTCO ₂ e
	0

*A negative value indicates GHG reductions

The project will include new trees. If yes:

Acres of Trees Planted	Total MTCO ₂ e
0	0

*A negative value indicates GHG reductions

Project operations are expected to generate or reduce GHG emissions for other reasons. If yes, explain:

GHG Emissions Summary

Construction and development will generate approximately:	2 MTCO ₂ e
In a given year, operation of the project will result in:	0 MTCO ₂ e