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## UPPER FEATHER RIVER IRWM PROJECT INFORMATION FORM

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#### PROJECT INFORMATION FORM

Please submit by 5:00 p.m. on August 3, 2015, to [UFR.contact@gmail.com](mailto:UFR.contact@gmail.com)

Please provide information in the tables below:

#### I. PROJECT PROPONENT INFORMATION

<b>Agency / Organization</b>	Feather River Resource Conservation District (FRRCD)
<b>Name of Primary Contact</b>	Nils Lunder
<b>Name of Secondary Contact</b>	Brian Kingdon
<b>Mailing Address</b>	
<b>E-mail</b>	Lunder.nils@gmail .com
<b>Phone</b>	(530) 258-6936 cell
<b>Other Cooperating Agencies / Organizations / Stakeholders</b>	Natural Resource Conservation Service, Sierra Valley Resource Conservation District (SVRCD), Upper Feather River Watershed Group, University of California Cooperative Extension, California Cattlemen Association, Farm Bureau, United States Forest Service, Plumas Audubon Society
<b>Is your agency/organization committed to the project through completion? If not, please explain</b>	Yes

#### II. GENERAL PROJECT INFORMATION

<b>Project Title</b>	ALS-2: Water Quality & Infrastructure Upgrades on Working Lands
<b>Project Category</b>	<input checked="" type="checkbox"/> <b>Agricultural Land Stewardship</b> <input type="checkbox"/> <b>Floodplains/Meadows/Waterbodies</b> <input type="checkbox"/> <b>Municipal Services</b> <input type="checkbox"/> <b>Tribal Advisory Committee</b> <input type="checkbox"/> <b>Uplands/Forest</b>
<b>Project Description</b> (Briefly describe the project, in 300 words or less)	The project will identify opportunities to improve water quality, reduce erosion and sedimentation and increase water use efficiency in the region. The FRRCD will work in partnership with the SVRCD and other organizations in order to connect with landowners in the project area to install infrastructure to protect and enhance riparian areas, to monitor and improve water quality and to better utilize water supplies in the Upper Feather River watershed.
<b>Project Location Description</b> (e.g., along the south bank of stream/river between river miles or miles from Towns/intersection and/or address):	The project will occur on participating private lands in the upper Feather River watersheds.
<b>Latitude:</b>	
<b>Longitude:</b>	

**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.

<b>Upper Feather River IRWM Objectives:</b>	<b>Will the project address the objective?</b>	<b>Brief explanation of project linkage to selected Objective</b>	<b>Quantification</b> (e.g. acres of streams/wetlands restored or enhanced)
Restore natural hydrologic functions.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will reduce livestock impact on sensitive riparian areas, will reduce sedimentation and will improve water quality for downstream users	Approximately 3000 acres of streams/wetlands restored or enhanced
Reduce potential for catastrophic wildland fires in the Region.	<input type="checkbox"/> Yes <input checked="" 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	Project will engage local land owners and land managers and will improve communication and collaboration among water resources stakeholders in the region.	Approximately 3000 acres of streams/wetlands restored or enhanced
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project proponents will work with both DWR and landowners in the region to assess potential modifications to water management along SWP tributaries.	Approximately 500-1000 acres of streams/wetlands restored or enhanced
Encourage municipal service providers to participate in regional water management actions that improve water supply and water quality.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Continue to actively engage in FERC relicensing of hydroelectric facilities in the Region.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Address economic challenges of municipal service providers to serve customers.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		

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<b>Upper Feather River IRWM Objectives:</b>	<b>Will the project address the objective?</b>	<b>Brief explanation of project linkage to selected Objective</b>	<b>Quantification</b> (e.g. acres of streams/wetlands restored or enhanced)
Protect, restore, and enhance the quality of surface and groundwater resources for all beneficial uses, consistent with the RWQC Basin Plan.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will engage local land owners and land managers to improve irrigation efficiency, and establish off-site stock water facilities and riparian fencing, all of which may contribute to less particulate matter in streams.	Approximately 3000 acres of streams/wetlands restored or enhanced, 30,000 feet of pipe installed to improve water use efficiency
Address water resources and wastewater needs of DACs and Native Americans.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Coordinate management of recharge areas and protect groundwater resources.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will engage local land owners and land managers to implement improvements in infrastructure including irrigation efficiency, which may serve to reduce use of groundwater, and riparian fencing, which may help recharge.	Approximately 3000 acres of streams/wetlands restored or enhanced; 30,000 feet of pipe installed
Improve coordination of land use and water resources planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will engage local land owners and land managers and will improve communication and collaboration among water resources stakeholders in the region.	
Maximize agricultural, environmental and municipal water use efficiency.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will engage local agricultural land owners and land managers to improve irrigation efficiency, off-stream stock water facilities and riparian fencing.	Approximately 3000 acres of streams/wetlands restored or enhanced, 30,000 feet of pipe installed to improve water use efficiency
Effectively address climate change adaptation and/or mitigation in water resources management.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Project will engage local land owners and land managers to implement improvements in infrastructure including irrigation efficiency and riparian area protection.	Approximately 3000 acres of streams/wetlands restored or enhanced, 30,000 feet of pipe installed to improve water use

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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)
			efficiency
Improve efficiency and reliability of water supply and other water-related infrastructure.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Improvements in infrastructure including irrigation efficiency, off-site stock water facilities and riparian fencing. Pipe will aid in irrigation supply reliability.	Approximately 3000 acres of streams/wetlands restored or enhanced; 30,000 feet of irrigation pipe installed
Enhance public awareness and understanding of water management issues and needs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Public will be informed of the purpose of the project and why the project is a priority, outreach will be performed by the FR RCD and the SV RCD	Outreach materials will be developed; landowners will be engaged by local experts.
Address economic challenges of agricultural producers.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Will develop infrastructure that will assist local livestock producers to better manage their animals, their water systems and their rangelands. Funding will be available to local agricultural producers to improve infrastructure including irrigation efficiency, off-site stock water facilities and riparian fencing.	Approximately 3000 acres of streams/wetlands restored or enhanced, 30,000 feet of pipe installed to improve water use efficiency
Work with counties/communities/groups to make sure staff capacity exists for actual administration and implementation of grant funding.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Funding for this project will include the cost of project coordinators that will work with interested land owners and land managers	

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

The proposed project will construct approximately 30,000 feet of livestock fence at sensitive riparian areas in the Upper Feather River watershed. The protection of those sensitive areas will also lead to an increase in riparian vegetation that will provide habitat to wildlife while also leading to increased bank stabilization and improved downstream water quality in the future. Additionally, the project will assist landowners with the installation of 30 solar powered off-stream/site water facilities that will provide livestock water, thus reducing the impact of livestock on sensitive riparian areas in the region. The project will also assist landowners to assess and develop water delivery infrastructure in an attempt to increase water use efficiency for both stock water as well as irrigation. Approximately 30,000 feet of irrigation pipe will be installed to assist with water delivery.

**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.

<b>If applicable, describe benefits or impacts of the project with respect to:</b>		
<b>a. Native American Tribal Communities</b>	<input checked="" type="checkbox"/> N/A	
<b>b. Disadvantaged Communities<sup>1</sup></b>	<input checked="" type="checkbox"/> N/A	
<b>c. Environmental Justice<sup>2</sup></b>	<input checked="" type="checkbox"/> N/A	
<b>d. Drought Preparedness</b>	<input type="checkbox"/> N/A	The proposed project will increase drought preparedness by facilitating improvements in infrastructure including irrigation efficiency, off-site stock water facilities and riparian fencing.
<b>e. Assist the region in adapting to effects of climate change<sup>3</sup></b>	<input type="checkbox"/> N/A	The project will protect and enhance important riparian habitats in the region. These habitats are increasingly important for sensitive plants and animals as the region prepares for the effects of climate change in the future. It will also facilitate improvements in infrastructure including irrigation efficiency, off site stock water facilities.
<b>f. Generation or reduction of greenhouse gas emissions (e.g. green technology)</b>	<input type="checkbox"/> N/A	The projects will assist with local landowners and land managers as they work to assess how their management techniques impact carbon sequestration by protecting approximately 3000 acres of streams/wetlands.
<b>g. Other expected impacts or benefits that are not already mentioned elsewhere</b>	<input type="checkbox"/> N/A	Project will be monitored in order to determine how the infrastructure improvements impacts riparian health as well as water quality, erosion and sedimentation. These monitoring efforts will be a collaborative effort with other on-going projects run by local organizations.

<sup>1</sup> 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/>).

<sup>2</sup> 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.

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

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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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A
f. Water banking, exchange, reclamation, and improvement of water quality	<input checked="" type="checkbox"/> Yes <input 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
<b>Reduce Water Demand</b>		
Agricultural Water Use Efficiency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will facilitate the installation of infrastructure to increase water use efficiency by installing approximately 30,000 of water supply pipe, it will also provide a framework for the local RCDs to highlight efforts underway by land managers and land owners to increase water-use efficiency
Urban water use efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Improve Flood Management</b>		
Flood management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will help to enhance riparian areas and will assist in the attenuation of flood events and the filtration of sediments and nutrients from upstream land uses
<b>Improve Operational Efficiency and Transfers</b>		
Conveyance – regional/local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The project will assist local landowners to ensure that their water use efficiency is

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Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		improved by installing approximately 30,000 of water supply pipe.
System reoperation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water transfers	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Increase Water Supply</b>		
Conjunctive management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The project will assist local landowners to ensure that their water use efficiency, which involves a combination of surface and groundwater in many cases, is improved.
Precipitation Enhancement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Municipal recycled water	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Potential use of treated wastewater for irrigation.
Surface storage – regional/local	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Improve Water Quality</b>		
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will assist efforts underway by land managers and land owners to improve operations to reduce water pollution.
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	
<b>Practice Resource Stewardship</b>		
Agricultural land stewardship	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will complement efforts underway by land managers and land owners to modify their operations to improve agricultural land stewardship (improvements in infrastructure including irrigation efficiency, off-site stock water facilities and riparian fencing)
Ecosystem restoration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Riparian fencing, off-site stock watering, planting of trees and other native plants in riparian areas.
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	Project will complement efforts underway by land managers and land owners to manage their lands (protection of open space, agriculturally zoned operations)
Recharge area protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will complement efforts underway by land managers and land owners to manage recharge areas to maximize groundwater recharge (riparian area fencing, off-stream stock watering)

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Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
Sediment management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will complement efforts underway by land managers and land owners to reduce sediment production (e.g., riparian fencing)
Watershed management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will complement efforts underway by land managers and land owners to manage the watersheds (streams, tributaries) on their lands
<b>People and Water</b>		
Economic incentives	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will enhance and restore approximately 3000 acres of wetlands and riparian areas. This will increase available wildlife habitat and may lead to increased tourism in the region. Additionally, the proposed infrastructure may increase the economic viability of agriculture in the region for our local producers.
Outreach and engagement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will increase the awareness of locals and visitors to the region on management efforts that are occurring in the area; the local RCDs will develop and educate the region regarding the efforts of the project and the project participants.
Water and culture	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserving historical ranching heritage in the region. Increased wildlife habitat, recreation opportunities (e.g., birdwatching).
Water-dependent recreation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Potential for infrastructure development on working lands that support public recreation (e.g., birdwatching, canoeing).
Wastewater/NPDES	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project will enhance and restore approximately 3000 acres of wetlands and riparian areas. This will increase available wildlife habitat and will improve water quality. Protected areas will act as bio-filters for sediment and nutrients that enter the project areas from upstream land management activities.

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 checked="" type="checkbox"/> Yes <input 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	\$142,500			
b.	Land Purchase/Easement				
c.	Planning/Design/Engineering / Environmental	30,000			
d.	Construction/Implementation	1,320,000			
e.	Environmental Compliance/Mitigation/Enhancement	30,000			
f.	Construction Administration				
g.	Other Costs	25,000			
h.	Construction/Implementation Contingency	20,000			
i.	Grand Total (Sum rows (a) through (h) for each column)	\$1,567,500			
j.	Can the Project be phased? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide cost breakdown by phases				
		Project Cost	O&M Cost	Description of Phase	
	Phase 1	\$25,000		Outreach to landowners, prioritization of properties.	
	Phase 2	\$900,000		Installation of off-site facilities	
	Phase 3	\$522,500		Installation of water delivery infrastructure	
	Phase 4	\$120,000		Installation of riparian fence systems	
k.	Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).		Contracts will be developed between project proponents and participating landowners requiring landowners to take on the costs and responsibilities associated with ongoing operation and maintenance of infrastructure improvements (e.g., fencing, pipe, off-site watering).		
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)		If the project is not funded, the status quo will continue. The benefit of this project is that it will provide opportunities for agricultural		

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		producers to improve their operations. Due to declining surface water availability at this time, many local producers are having difficulty ensuring that their livestock have adequate water.
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\*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	Assess and repair of existing fencing system	08/2016	12/2016
b. Final Design	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Mapping and budget development of phases 1-4	01/2017	06/2017
c. Environmental Documentation (CEQA / NEPA)	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Analyze if any of the proposed project requires CEQA/NEPA compliance	01/2017	06/2017
d. Permitting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Secure any permits necessary to complete phases 1-4	06/2017	12/2017
e. Construction Contracting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		01/2018	12/2018
f. Construction Implementation	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Contracts will be developed with professionals to install appropriate infrastructure for phases 2-4	04/2018	12/2019
<b>Provide explanation if more than one project stage is checked as current status</b>			The FR RCD and the SV RCD are conducting outreach with local landowners that would benefit from infrastructure improvements on their properties		

**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](http://www.featherriver.org/catalog/index.php) for documents gathered on the UFR Region.

<p><b>a. List the adopted planning documents the proposed project is consistent with or supported by</b> (e.g. General Plans, UWMPs, GWMPs, Water Master Plan, Habitat Conservation Plans, TMDLs, Basin Plans, etc.).</p>	<p>20X2020 Water Conservation Plan                  California Water Plan Update 2013                  East Branch North Fork Feather River Erosion Control Strategy                  Feather River Resource Conservation District Long-range Workplan 2005-2009                  Mountain Meadow Watershed Restoration Action Plan                  Upper Feather River Watershed Integrated Regional Water Management Plan</p>
<p><b>b. List technical reports and studies supporting the feasibility of this project.</b></p>	<p>Adapt Flee or Perish. Water and climate change</p>
<p><b>c. Concisely describe the scientific basis</b> (e.g. how much research has been conducted) <b>of the proposed project in 300 words or less.</b></p>	<p>Evidence suggests that evaporative losses are reduced when water is moved through impermeable pipes versus open, unlined ditches.</p>
<p><b>d. Does the project implement green technology</b> (e.g. alternate forms of energy, recycled materials, LID techniques, etc.).</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                  The project will utilize solar energy to pump water for livestock use.</p>
<p><b>e. Are you an Urban Water Supplier<sup>1</sup>?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p><b>f. Are you are an Agricultural Water Supplier<sup>2</sup>?</b></p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p><b>g. Is the project related to groundwater?</b></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A                  If yes, please indicate which groundwater basin.                  Indian Valley, American Valley, Sierra Valley</p>

<sup>1</sup> 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.

<sup>2</sup> 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.

## 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: ALS-2: Water Quality & Infrastructure Upgrades on Working Lands

Project applicant: Feather River RCD and Sierra Valley RCD

## 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

The proposed project will increase watershed resiliency by protecting and enhancing shoreline vegetation, increasing bank stability and improving water infiltration. The project will reduce the impact of livestock on sensitive riparian areas by establishing solar powered off stream water sources and by establishing infrastructure to better manage riparian areas.

### 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

Increasing irrigation efficiency may increase water availability in streams.

Protecting and enhancing shoreline vegetation, increasing bank stability and improving water infiltration will improve groundwater drought resiliency.

### 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.)

Improving downstream water availability translates to additional water in streams which will reduce concentration of nutrients/pollutants in streams and improve conditions for wildlife.

### 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

Encouraging proactive management of riparian areas through improved infrastructure will enhance opportunities for flora and fauna (providing refuge for species that rely on riparian zones) and will reduce erosion and sedimentation.

### 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

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**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 <sub>2</sub> e
Bore/Drill Rigs	1	30	30
Trenchers	1	30	7
Tractors/Loaders/Bac khoes	1	30	8
			0
			0
			0
			0
			0
			0
			0
			0
<b>Total Emissions</b>			<b>44</b>

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

Total Number of Round Trips	Average Trip Distance (Miles)	Total MTCO <sub>2</sub> e
90	50	7

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 <sub>2</sub> e
2	90	50	3

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

Remaining work can be accomplished via standard highway vehicles, such as pick-up trucks.

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

ALS-2: Water Quality, Infrastructure Upgrades on Working Lands

**Project Operating Emissions**

The project requires energy to operate. If yes:

Annual Energy Needed	Unit	Total MTCO <sub>2</sub> e
	kWh (Electricity)	<b>0</b>
	Therm (Natural Gas)	<b>0</b>

The project will generate electricity. If yes:

Annual kWh Generated	Total MTCO <sub>2</sub> e
25,920	<b>-5</b>

\*A negative value indicates GHG reductions

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

Acres Protected from Wildfire	Total MTCO <sub>2</sub> e
	<b>0</b>

\*A negative value indicates GHG reductions

The project will affect wetland acreage. If yes:

Acres of Protected Wetlands	Total MTCO <sub>2</sub> e
3,000	<b>-12,990</b>

\*A negative value indicates GHG reductions

The project will include new trees. If yes:

Acres of Trees Planted	Total MTCO <sub>2</sub> e
200	<b>-37,200</b>

\*A negative value indicates GHG reductions

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

The project will protect and enhance riparian areas on working lands. By protecting these sensitive habitats we believe that there will be increases in vegetative diversity and abundance, and this will assist in the sequestration of GHG

**GHG Emissions Summary**

Construction and development will generate approximately:	54 MTCO <sub>2</sub> e
In a given year, operation of the project will result in:	-50,195 MTCO <sub>2</sub> e