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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>	Sierra Valley Resource Conservation District
<b>Name of Primary Contact</b>	Jeff Carmichael – SVRCD Board of Directors
<b>Name of Secondary Contact</b>	Bill Nunes – SVRCD Board of Directors
<b>Mailing Address</b>	PO Box 3562, Quincy CA 95971
<b>E-mail</b>	<a href="mailto:sierravalleyrcd@gmail.com">sierravalleyrcd@gmail.com</a> or <a href="mailto:bnunes1964@gmail.com">bnunes1964@gmail.com</a>
<b>Phone</b>	(530) 994-3222
<b>Other Cooperating Agencies / Organizations / Stakeholders</b>	County of Sierra, County of Plumas, and County of Lassen
<b>Is your agency/organization committed to the project through completion? If not, please explain</b>	Yes. The Sierra Valley Resource Conservation District (SVRCD) was established in 1947, and is one of the oldest Special Districts in California, to coordinate local conservation and restoration programs since the 1940's. Resource Conservation Districts (RCDs) were organized for the purposes of soil, water and related natural resource conservation. Categories of focused interest for the Sierra Valley RCD include natural disaster readiness & prevention, agricultural stability, sustainable urban development, wildlife habitat, recreation, watershed management, protection of water quality and quantity, and the optimum treatment of each resource and lands according to the need. The SVRCD has demonstrated success with this wide variety of resource challenges.

#### II. GENERAL PROJECT INFORMATION

<b>Project Title</b>	ALS-11: Cold Stream AG & Fire Storage Impoundment
<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 Sierra Valley Water Company operates and maintains a diversion dam and conveyance channel allowing water from the Little Truckee River to be diverted under specific conditions and during a specific season into the Feather River watershed (Sierra Valley). This inter-basin transfer allows water to be diverted for irrigation purposes in Sierra Valley

	<p>(Sierra and Plumas Counties) between the months of March and September each year. While water is available as of March 15, peak irrigation need for this water and timing for optimizing the resource occurs later in the season. As a result, the water allotment is currently underutilized due to timing.</p> <p>The concept is consideration of an earthen dam located in a feasible location within the Coldstream drainage south of Sierraville to store agricultural water enabling better utilization and more efficient use of available supplies, provide flood control and water storage for fire suppression that is accessible, functional and reliable. Also included within the concept for consideration is a small hydro electric plant. Limited recreational opportunities may occur but the first phase of this undertaking is a technical feasibility study. This phase will identify engineering and geotechnical findings, mapping and soil/water conditions, biological conditions, and issues of concern to the consideration of future phasing of the project.</p>
<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):	T19N R15E Sections 29 & 32
<b>Latitude:</b>	39.5598265/39.552084
<b>Longitude:</b>	-120.3257879/-120.332912

**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 type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Reduce potential for catastrophic wildland fires in the Region.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Readily accessible water for initial attack and long term suppression fire suppression actions	Acre Feet of water available for fire suppression actions
Build communication and collaboration among water resources stakeholders in the Region.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	There is an opportunity to enhance and further partnership capacity with the Sierra Valley RCD, CALFIRE,	Public Meetings and Partnerships

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		Sierra Valley Mutual Water Company, U.S. Forest Service, and local Volunteer Fire Departments	
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	Implementation of BMP's Increasing the efficiency and timing of storage and of the water conveyance systems.	Sediment Load and Water Delivery
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		
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	Implementation of BMP's Increasing the efficiency of the storage and timing of water delivery will steward the continued use of the land though allowing the efficient conveyance of water to flow to support agricultural use and support aquatic biota during drought years.	The impoundment will serve as a settling pond, reducing sediment load entering lower diversions and channels. The impoundment will also serve this function in its flood-control capacity, by enabling a controlled release, reducing sediment carrying capacity. Later season release of water from the impoundment into the channels will be of lower temperature due to deep water storage, possibly lowering

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			temperatures in downstream channels and reducing the likelihood of eutrophication/other warm water issues in a cold water fishery.
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	Increasing the efficiency of storage and timing of water delivery to agricultural water purveyors will ultimately assist groundwater recharge and long term affects to groundwater	Water Delivery  Groundwater Recharge levels
Improve coordination of land use and water resources planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	There is an opportunity to enhance and further partnership capacity with NRCS, U.S. Forest Service, CALFIRE, Sierra Valley Mutual Water Company, CA DWR, County of Sierra and local Volunteer Fire Department.	Public Meetings and Partnerships
Maximize agricultural, environmental and municipal water use efficiency.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Increasing the efficiency of the storage and timing of water delivery will steward the continued use of the land though allowing the efficient conveyance of water to flow to support agricultural use. This especially critical during drought years.	Improvements in flows to Water Conveyance Systems (Acre Feet Delivered)
Effectively address climate change adaptation and/or mitigation in water resources management.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Development of storage facilities to store water is a critical component in addressing the potentially effects of climate change and outlined as a critical step within the recent CA State Water Bond.	Acre Feet of water available for continuance of agricultural production and fire suppression actions
Improve efficiency and reliability of water supply and other water-related infrastructure.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Development of storage facilities to store water is a critical component in addressing the potential effects of climate change and outlined as a critical step within the recent CA State Water Bond.	Acre Feet of water available for continuance of agricultural production and fire suppression actions

Enhance public awareness and understanding of water management issues and needs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Furtherance of partnership capacity with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, NRCS, CALFIRE, CA DWR, County of Sierra, and local Volunteer Fire Departments.	Public Meetings and Partnerships
Address economic challenges of agricultural producers.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Development of storage facilities to store water is a critical component in addressing the potentially disastrous effects of drought to agricultural producers in ensuring a reliable source of water for agricultural operations.	Acre Feet of water available for continuance of agricultural operations & production.
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	Current and demonstrated capacity exists with the Sierra Valley RCD, CA DFW, Sierra Nevada Conservancy, Sierra County, US. Forest Service, and NRCS	Partnerships with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, NRCS, CALFIRE, CA DWR, County of Sierra, and local Volunteer Fire Departments.

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.

<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 type="checkbox"/> N/A	The community of Sierraville is a designated disadvantaged community. This impoundment could be utilized to capture additional run-off and stormwater as a potential primary or secondary source of municipal water for Sierraville, which is currently having water supply issues.
<b>c. Environmental Justice<sup>2</sup></b>	<input checked="" type="checkbox"/> N/A	

<p><b>d. Drought Preparedness</b></p>	<p><input type="checkbox"/> N/A</p>	<p>Development of storage facilities to store water is a critical component in addressing the potential effects of drought and specifically targeted as a priority within the State of California Drought Management Plan. Later-season release of water via the impoundment will mitigate the effects of drought with water supply for agriculture as well as the ecosystem.</p>
<p><b>e. Assist the region in adapting to effects of climate change<sup>3</sup></b></p>	<p><input type="checkbox"/> N/A</p>	<p>Development of storage facilities to store water is a critical component in addressing the potential effects of climate change and outlined as a critical step and priority within the recent CA State Water Bond. Later-season release of water via the impoundment will mitigate the effects of climate change with water supply for agriculture and the ecosystem.</p>
<p><b>f. Generation or reduction of greenhouse gas emissions (e.g. green technology)</b></p>	<p><input type="checkbox"/> N/A</p>	<p>The development of the Coldstream Agricultural and Fire Storage Improvement Project Feasibility Analysis will incorporate measures and considerations which assist in the reduction of GHG emissions. For example, wildfire suppression activity using the impoundment as much-needed dip site could prevent a small fire from becoming catastrophic (and thereby creating GHG on a large scale). In addition, sustained later season water release will improve wetland riparian plant production, which will be able to sequester additional carbon.</p>
<p><b>g. Other expected impacts or benefits that are not already mentioned elsewhere</b></p>	<p><input type="checkbox"/> N/A</p>	<p>This proposed storage reservoir or impoundment addresses all of the approved goals of the IRWMP Management Group in that it can improve water quality and water supply availability; it can protect and improve the health of the environment through more consistent and sustained flows to support existing wetlands and ecosystems through timed and controlled release of available water supply. It would also provide storage of water for fire suppression efforts to contain local wildfires early, thereby preventing catastrophic events</p>

		<p>such as the Cottonwood fire of 1994 and many others since. It can promote the economic conditions of the region by providing additional water storage for agricultural operations and for limited recreational opportunities, and it has direct correlation to preserving working landscapes in Sierra Valley. Correlation to the IRWM Objectives include: 2, 3, 4, 13, 14, 16, 17, 18. Resource Management Strategies 1, 3, 8, 13, 24, and 26 are all well-served by this proposed project.</p>
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<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.

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 checked="" type="checkbox"/> Yes <input 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/>).

<b>Resource Management Strategy</b>	<b>Will the Project incorporate RMS?</b>	<b>Description of how RMS to be employed, if applicable</b>
<b>Reduce Water Demand</b>		
Agricultural Water Use Efficiency	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Increasing the efficiency of the storage and timing of water delivery will steward the continued use of the land though allowing the efficient conveyance of water to flow to support agricultural use. This especially critical during drought years.
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	The proposed reservoir will provide multiple benefits specific to flood control for the town of Sierraville especially the prevention of erosion and sedimentation and related impacts upon downstream residential properties which occurred during the floods of 1986 and 1997.
<b>Improve Operational Efficiency and Transfers</b>		
Conveyance – regional/local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Sierra Valley Water Company operates and maintains a diversion dam and conveyance channel allowing water from the Little Truckee River to be diverted under specific conditions and during a specific season into the Feather River watershed (Sierra Valley). This inter-basin transfer allows water to be diverted for irrigation purposes in Sierra Valley (Sierra and Plumas Counties) between the months of March and September each year. While water is available as of March 15, peak irrigation need for this water and timing for optimizing the resource occurs later in the season. As a result, the water allotment is currently underutilized due to timing. The construction of the storage facility would allow for the utilization of stored agricultural water enabling better utilization through timing and more efficient use of available supplies.
System reoperation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Water transfers	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Sierra Valley Water Company operates and maintains a diversion dam and conveyance channel allowing water from the Little Truckee



Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		River to be diverted under specific conditions and during a specific season into the Feather River watershed (Sierra Valley). This inter-basin transfer allows water to be diverted for irrigation purposes in Sierra Valley (Sierra and Plumas Counties) between the months of March and September each year. While water is available as of March 15, peak irrigation need for this water and timing for optimizing the resource occurs later in the season. As a result, the water allotment is currently underutilized due to timing. The construction of the storage facility would allow for the utilization of stored agricultural water enabling better utilization through timing and more efficient use of available supplies.
<b>Increase Water Supply</b>		
Conjunctive management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Increasing the efficiency of storage and timing of water delivery to agricultural water purveyors will ultimately assist groundwater recharge and long-term affects to groundwater
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The proposed storage reservoir or impoundment addresses all of the approved goals of the IRWMP Management Group in that it can improve water quality and water supply availability/storage; it can protect and improve the health of the environment through more consistent and sustained flows to support existing wetlands and ecosystems through timed and controlled release of available water supply
<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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The town of Sierraville is having water supply issues and is looking at the possibility of drilling a municipal well. The impoundment has the potential to serve as a clean source (e.g., no arsenic – which is an issue in other nearby municipal wells) water source for the town. This water will also be of a suitable quality for fire suppression activities, as well as

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		agriculture. Project matches water of cooler temperatures to instream and ecosystem uses.
Pollution prevention	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The storage reservoir would assist in alleviating the existing levels of erosion, sedimentation and turbidity, while increasing later-season flow rates which will improve dilution of any contaminants entering the system. This action would benefit water quality and reduce sediment loading which ultimately reduce likelihood of 303D Listed Watershed Conditions.
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	The storage reservoir project is directly correlated to the IRWM Objectives include: 2, 3, 4, 13, 14, 16, 17, and 18. Resource Management Strategies 1, 3, 8, 13, 24, and 26 are all well-served by this proposed project.
Ecosystem restoration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The storage reservoir project is directly correlated to the IRWM Objectives include: 2, 3, 4, 13, 14, 16, 17, and 18. Resource Management Strategies 1, 3, 8, 13, 24, and 26 are all well-served by this proposed project.
Forest management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The storage reservoir would provide a readily accessible water source for initial attack and long term suppression fire suppression actions. Ultimately, the project would assist with an expedient increase in initial attack response time and therefore a reduction in forested land lost due to the effects of catastrophic wildfire.
Land use planning and management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Project adheres to CEQA/NEPA and Sierra County Land Use Planning Policies and Regulations. The feasibility study will include input from a variety of stakeholders, including water rights holders, County Planning Department, environmental advocates and more, all of which will contribute to the planning process.
Recharge area protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Increasing the efficiency of storage and timing of water delivery to agricultural water purveyors will ultimately assist groundwater recharge and long term affects to groundwater

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	<p>The storage reservoir would assist in alleviating the existing levels of erosion, sedimentation and turbidity. This action would benefit water quality and reduce sediment loading which ultimately yield improvements to/prevention of 303D Listed Watershed Conditions.</p>
Watershed management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>The storage reservoir would assist in alleviating the existing levels of erosion, sedimentation and turbidity. This action would benefit water quality and reduce sediment loading which ultimately yield improvements to/prevention of 303D Listed Watershed Conditions. Better watershed management will be accomplished via later-season release of water to the Sierra Valley wetland areas.</p>
<b>People and Water</b>		
Economic incentives	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<p>There is an opportunity to foster a reliable and dependable water source for the agricultural producers in Sierra Valley. Livestock production and agricultural operation opportunities and camping opportunities which remains increasingly vital to the economies of the communities within Sierra County. (checking no, but leaving text, as there is potential for economic stimulation – just doesn't meet more narrow definition of using fines, rebates, loans, etc.)</p>
Outreach and engagement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>There is an opportunity to enhance and further partnership capacity with agricultural producers, land managers, NRCS, FSA, Sierra Valley Groundwater Management District, Sierra County, BLM, CA DFW, CA DWR, U.S. Forest Service, CA DWR, CA WQCB and representatives of the IRWM as well as through public scoping and outreach programs.</p>
Water and culture	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>There is an opportunity to enhance and further partnership capacity with agricultural producers, land managers, and the citizens of Sierra County through public scoping and outreach programs. Helps preserve historic ranches by improving adjudicated water delivery. Support for bird watchers.</p>

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
Water-dependent recreation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	There is an opportunity to further enhance water dependent recreation with the potential development of additional angling opportunities and camping opportunities which remains increasingly vital to the economies of the communities within Sierra County.
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Funding Match Waiver request?: <input checked="" type="checkbox"/> Yes <input 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	\$30,000	0	0	\$30,000
b.	Land Purchase/Easement	0	0	0	0
c.	Planning/Design/Engineering / Environmental	\$270,000	0	0	\$270,000
d.	Construction/Implementation	0	0	0	0
e.	Environmental Compliance/Mitigation/Enhancement	0	0	0	0
f.	Construction Administration	0	0	0	0
g.	Other Costs	0	0	0	0
h.	Construction/Implementation Contingency	0	0	0	0
i.	Grand Total (Sum rows (a) through (h) for each column)	\$300,000	0	0	\$300,000
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	\$300,000	0	This task will be a detailed engineering analysis	

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				supported by geotechnical work and soil/hydrology analyses required for the evaluation of any proposed water impoundment. This analysis involves extensive mapping, field work, and design considerations that adapt the impoundment to on-the-ground conditions. It is estimated that two seasons of field work that will involve geotechnical testing and study as well as biological baseline studies will be a requirement. The result of this phase will be a complete feasibility study supported by field work, testing and analysis as well as engineering alternatives, mapping, and cost estimates for evaluation and determination of phase 2 of this three phase project and whether it will be undertaken and/or pursued.
<b>Phase 2</b>	Contingent on Results of Phase I	0		Phase 2: This phase would be the preparation of specific engineering design plans using a preferred alternative from the phase one study and would include the preparation of the required CEQA/NEPA analysis. The CEQA/NEPA analyses would be undertaken only if the phase one results proved feasible, cost effective, and environmentally sound. This phase is estimated to require 24 months.
<b>Phase 3</b>	Contingent on Results of Phase I	0		Phase 3: This phase would be permitting, final design, bidding, and construction. This phase is estimated to require 24 months.
<b>Phase 4</b>	N/A			

k.	<b>Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).</b>	Future operation and maintenance costs would be generated by the Sierra Valley Mutual Water Company Shareholder Fees
l.	<b>Has a Cost/Benefit analysis been completed?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
m.	<b>Describe what impact there may be if the project is not funded (300 words or less)</b>	The availability or more specifically the lack of availability of water within the State of California has reached a critical level. Given the continued and future impacts of climate change, the availability of water for the production of agricultural crops, livestock production, and fire suppression has reached a level where conservation measures are only a part of the key solution. Ultimately there is a need for additional reservoir storage capacity across the State, as noted within the California Drought Management Plan as well as the 2015 California Water Bond. This project would contribute to our State's goal in developing additional storage capacity. Without the additional storage capacity given the current future impacts of climate change, livestock operations, agriculture production, fire suppression capabilities as well as the economic vitality of Sierra and Plumas County would be marginalized.
<p>*List all sources of funding.                  Note: See Project Development Manual, Exhibit B, for assistance in completing this table (<a href="http://featherriver.org/documents/">http://featherriver.org/documents/</a>).</p>		

**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	This task will be a detailed engineering analysis supported by geotechnical work and soil/hydrology analyses required for the evaluation of any proposed water impoundment. This analysis involves	09/01/2015	09/31/2017

			<p>extensive mapping, field work, and design considerations that adapt the impoundment to on-the-ground conditions. It is estimated that two seasons of field work that will involve geotechnical testing and study as well as biological baseline studies will be a requirement. The result of this phase will be a complete feasibility study supported by field work, testing and analysis as well as engineering alternatives, mapping, and cost estimates for evaluation and determination of phase 2 of this three phase project and whether it will be undertaken and/or pursued.</p>		
<p><b>b. Final Design</b></p>	<p><input type="checkbox"/></p>	<p><input type="checkbox"/> Yes  <input checked="" type="checkbox"/> No  <input type="checkbox"/> N/A</p>	<p>This phase would be the preparation of specific engineering design plans using a preferred alternative from the phase one study and would include the preparation of the required CEQA/NEPA</p>	<p>10/01/17</p>	<p>10/01/19</p>

			analysis. The CEQA/NEPA analyses would be undertaken only if the phase one results proved feasible, cost effective, and environmentally sound. This phase is estimated to require 24 months. (Concurrent Action with CEQA/NEPA)		
<b>c. Environmental Documentation (CEQA / NEPA)</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	This phase would be the preparation of specific engineering design plans using a preferred alternative from the phase one study and would include the preparation of the required CEQA/NEPA analysis. The CEQA/NEPA analyses would be undertaken only if the phase one results proved feasible, cost effective, and environmentally sound. This phase is estimated to require 24 months. (Concurrent Action with CEQA/NEPA)	10/01/17	10/01/19
<b>d. Permitting</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	This phase would be permitting, final design, bidding, and construction. This phase is estimated to require 24 months. <u>(Concurrent Action with Project Stage</u>	10/02/19	10/02/21



			<u>D, E, &amp; F)</u>		
<b>e. Construction Contracting</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	This phase would be permitting, final design, bidding, and construction. This phase is estimated to require 24 months. <u>(Concurrent Action with Project Stage D, E, &amp; F)</u>	10/02/19	10/02/21
<b>f. Construction Implementation</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	This phase would be permitting, final design, bidding, and construction. This phase is estimated to require 24 months. <u>(Concurrent Action with Project Stage D, E, &amp; F)</u>	10/02/19	10/02/21
<b>Provide explanation if more than one project stage is checked as current status</b>					

**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>Sierra Valley Coordinated Resource Management Plan (2002), Sierra Valley Watershed Assessment (2005), IRWM – Upper Feather River Watershed Plan (2005), Sierra County General Plan, Lassen County General Plan, Plumas County General Plan, Tahoe National Forest – Land &amp; Resource Management Plan, Sierra Valley RCD – Watershed Action Plan (2007), Water Quality Plan for the Lahontan Region; California DWR Bulletin 118 and the Northeastern Counties Investigation. Sierra Valley Groundwater Management District-Management Plan and annual updates; the DWP Environmental Study for Sierra Valley dated 1973; the Upper Feather River Watershed (UFRW) Irrigation</p>
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	Discharge Management Program (2007)
<p><b>b. List technical reports and studies supporting the feasibility of this project.</b></p>	<p>Numerous studies and reports have been prepared and published regarding the Sierra Valley. Such studies include but are not limited to the Sierra Valley Groundwater Management District-Management Plan and annual updates; the DWP Environmental Study for Sierra Valley dated 1973; the Upper Feather River Watershed (UFRW) Irrigation Discharge Management Program dated 2007; Water Quality Plan for the Lahontan Region; California DWR Bulletin 118 and the Northeastern Counties Investigation; SCS Reports for Sierra Valley; and Biological Baseline Analysis for the Sierra Valley Marsh prepared by SF State University Field Campus. The proposed feasibility study will provide additional specific data illustrating the need and benefits of the proposed project.</p>
<p><b>c. Concisely describe the scientific basis (e.g. how much research has been conducted) of the proposed project in 300 words or less.</b></p>	<p>Phase 1 (Feasibility Analysis) is consideration of an earthen dam located in a feasible location within the Coldstream drainage south of Sierraville to store agricultural water enabling better utilization and more efficient use of available supplies, provide flood control and water storage for fire suppression that is accessible, functional and reliable. Also included within the concept for consideration is a small hydro electric plant. Limited recreational opportunities may occur but the first phase of this undertaking is a technical feasibility study. <u>This phase will identify engineering and geotechnical findings, mapping and soil/water conditions, biological conditions, and issues of concern to the consideration of future phasing of the project.</u></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                  If yes, please describe.</p> <p>The development of the Feasibility Analysis will incorporate measures and considerations which assist in the reduction of GHD emissions.</p>
<p><b>e. Are you an Urban Water Supplier<sup>1</sup>?</b></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 type="checkbox"/> No <input checked="" 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.</p> <p><b>Middle Fork Feather River HUC 180201232</b></p>
<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.</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: ALS-11: Cold Stream Agricultural & Fire Storage Impoundment

Project applicant: Sierra Valley Resource Conservation District

## 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

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.

### 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

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.

### 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.)

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.

### **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

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.

### **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

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.

### **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

Project is a Feasibility Study only. No construction or Greenhouse Gas emissions associated with this project.