UPPER FEATHER RIVER IRWM

PROJECT INFORMATION FORM

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	Sierra Valley Resource Conservation District (SVRCD)
Name of Primary Contact	Jeff Carmichael – SVRCD Board of Directors
Name of Secondary Contact	Bill Nunes – SVRCD Board of Directors
Mailing Address	PO Box 3562, Quincy CA 95971
E-mail	sierravalleyrcd@gmail.com or jc.18520@gmail.com
Phone	(530) 514-4936
Other Cooperating Agencies / Organizations / Stakeholders	County of Sierra, County of Plumas, and Sierra Valley Mutual Water Company, U.S. Forest Service
Is your agency/organization committed to the project through completion? If not, please explain	Yes

II. GENERAL PROJECT INFORMATION

Project Title	ALS-6: Sierra Valley Ag. Water Diversion Efficiency, Improvement
Project Category	■ **Agricultural Land Stewardship** ☐ **Floodplains/Meadows/Waterbodies** ☐ **Municipal Services** ☐ **Tribal Advisory Committee** ☐ **Uplands/Forest**
Project Description (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). The proposed project is a feasibility study in support of a mechanism for conduit to be installed from the diversion dam for approximately 2.5 miles to significantly increase agricultural water use efficiency and to restore the watercourse ecosystem from Little Truckee Summit to Onion Valley. This project will significantly reduce water loss from the conveyance channel due to seepage and remove significant erosive conditions and sediment loading that is evident along the route of the diversion ditch into Sierra Valley. Current losses are approximately 25% of the water diverted. This project will prevent further scouring and deepening of the channel that is presently over fifteen (15) feet in depth to the watercourse; stop erosion and sedimentation that is annually contributing to a significant impact into the downstream ecosystem and meadows; and make significant contributions to improving water quality. The

	efficiencies in delivery of agricultural water to Sierra Valley under the 1870 water right will also be significantly improved. This is a phased project beginning with the feasibility study. If proven feasibility, phase 2 will include CEQA, and phase 3 implementation.
Project Location Description (e.g., along the south bank of stream/river between river miles or miles from Towns/intersection and/or address):	T19N R14E Sections 11, 14 & 15
Latitude:	39.49262/39.50815
Longitude:	-120.30105/-120.285420

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.	■ Yes ☐ N/A	Reduce/eliminate erosion, down cutting and sedimentation of existing channel and ultimately Feather River System	Sediment Load
Reduce potential for catastrophic wildland fires in the Region.	☐ Yes ■ N/A		
Build communication and collaboration among water resources stakeholders in the Region.	■ Yes ☐ N/A	There is an opportunity to enhance and further partnership capacity with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, and representatives of the IRWM	Public Meetings and Partnerships
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.	☐ Yes ■ 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)
Encourage municipal service providers to participate in regional water management actions that improve water supply and water quality.	☐ Yes ■ N/A		
Continue to actively engage in FERC relicensing of hydroelectric facilities in the Region.	☐ Yes ■ N/A		
Address economic challenges of municipal service providers to serve customers.	☐ Yes ■ N/A		
Protect, restore, and enhance the quality of surface and groundwater resources for all beneficial uses, consistent with the RWQC Basin Plan.	■ Yes ☐ N/A	The project will restore ecological function of the riparian and stream system(s)	Acres of riparian habitat and stream miles restored
Address water resources and wastewater needs of DACs and Native Americans.	☐ Yes ■ N/A		
Coordinate management of recharge areas and protect groundwater resources.	☐ Yes ■ N/A		
Improve coordination of land use and water resources planning.	■ Yes ☐ N/A	There is an opportunity to enhance and further partnership capacity with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, and representatives of the IRWM	Public Meetings and Partnerships
Maximize agricultural, environmental and municipal water use efficiency.	■ Yes ☐ N/A	Implementation of the project will eliminate historic seepage and water delivery loss	Acre Feet delivered to Sierra Valley
Effectively address climate change adaptation and/or mitigation in water resources management.	■ Yes ☐ N/A	To improve its resiliency to climate change, this project will replace an unlined ditch subject to approximately 25% water losses with a pipeline that is expected to result in water losses of less than approximately 5%. This allows the Sierra Valley Mutual Water Company to maintain their current level of service to customers with a	Acre Feet delivered to Sierra Valley

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)
		decrease in consumptive water use. Reducing consumptive water use improves resiliency to climate change variability, the effects of which may decrease availability of surface water through decrease in snowpack and increase in flash precipitation events.	
Improve efficiency and reliability of water supply and other water-related infrastructure.	■ Yes ☐ N/A	This project will replace an unlined ditch subject to approximately 25% water losses (from leaks and evaporation) with a pipeline that is expected to result in water losses of less than approximately 5%. This will improve efficiency of water delivery/use by ensuring the final delivery of a higher percentage of diverted water.	Acre Feet delivered to Sierra Valley. Reduce losses from ~25% to 5%.
Enhance public awareness and understanding of water management issues and needs.	■ Yes ☐ N/A	There is an opportunity to enhance and further partnership capacity with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, and representatives of the IRWM	Public Meetings and Partnerships
Address economic challenges of agricultural producers.	■ Yes ☐ N/A	More efficient delivery of water will result in more consistent and greater production of forage and agricultural crops. This level of increased flow is critical for sustainability during drought years.	Acre Feet delivered to Sierra Valley
Work with counties/ communities/groups to make sure staff capacity exists for actual administration and implementation of grant funding.	■ Yes ☐ N/A	Current and demonstrated capacity exists with the Sierra Valley RCD and Sierra County	Partnership with Sierra County and Sierra Valley RCD

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 no 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	■ N/A	
b. Disadvantaged Communities[1]	■ N/A	Sierraville (Sierra County) is a designated disadvantaged community and the project is located within this community. This project alone, however, does not address a critical water resource need for the community.
c. Environmental Justice[2]	■ N/A	
d. Drought Preparedness	☐ N/A	The project will replace an unlined ditch subject to approximately 25% water losses with a pipeline that is expected to result in water losses of less than approximately 5%.
e. Assist the region in adapting to effects of climate change[3]	☐ N/A	To improve its resiliency to climate change, this project will replace an unlined ditch subject to approximately 25% water losses with a pipeline that is expected to result in water losses of less than approximately 5%. This allows the SVMWC to maintain their current level of service to customers with a decrease in consumptive water use. Reducing consumptive water use improves resiliency to climate change variability, the effects of which may decrease availability of surface water through decrease in snowpack and increase in flash precipitation events.
f. Generation or reduction of greenhouse gas emissions (e.g. green technology)	☐ N/A	This project is a feasibility study and therefore will not impact GHG. However, construction-related GHG emissions reduction strategies will be considered in the design stage of project development.
g. Other expected impacts or benefits that are not already mentioned elsewhere	■ 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	■ Yes ☐ N/A	g. Drinking water treatment and distribution	☐ Yes ■ N/A
b. Stormwater capture, storage, clean-up, treatment, management	☐ Yes ■ N/A	h. Watershed protection and management	■ Yes ☐ N/A
c. Removal of invasive non-native species, creation/enhancement of wetlands, acquisition/protection/restoration of open space and watershed lands	■ Yes ☐ N/A	i. Contaminant and salt removal through reclamation/desalting, other treatment technologies and conveyance of recycled water for distribution to users	☐ Yes ■ N/A
d. Non-point source pollution reduction, management and monitoring	■ Yes ☐ N/A	j. Planning and implementation of multipurpose flood management programs	☐ Yes ■ N/A
e. Groundwater recharge and management projects	☐ Yes ■ N/A	k. Ecosystem and fisheries restoration and protection	■ Yes ☐ N/A
f. Water banking, exchange, reclamation, and improvement of water quality	■ Yes ☐ 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	■ Yes ☐ No	Increase water use efficiency through a decrease in water losses in the Ditch that supplies water for agricultural use.
Urban water use efficiency	☐ Yes ■ No	
Improve Flood Management		
Flood management	☐ Yes ■ No	
Improve Operational Efficiency and Transfers		
Conveyance – regional/local	■ Yes ☐ No	Increase water use efficiency through a decrease in water losses in the Ditch that supplies water for agricultural use and down stream flows
System reoperation	☐ Yes ■ No	
Water transfers	☐ Yes ■ No	
Increase Water Supply		
Conjunctive management	■ Yes ☐ No	Reduction in lost surface water from the

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
		diversion will likely translate to less groundwater pumping for irrigation on fields served by both sources, i.e., will allow for improved conjunctive management by irrigators.
Precipitation Enhancement	☐ Yes ■ No	
Municipal recycled water	☐ Yes ■ No	
Surface storage – regional/local	☐ Yes ■ No	
Improve Water Quality		
Drinking water treatment and distribution	☐ Yes ■ No	
Groundwater remediation/aquifer remediation	☐ Yes ■ No	
Matching water quality to water use	☐ Yes ■ No	
Pollution prevention	■ Yes ☐ No	Reduce/eliminate erosion, down cutting and sedimentation of existing channel and ultimately Feather River System
Salt and salinity management	☐ Yes ■ No	
Urban storm water runoff management	☐ Yes ■ No	
Practice Resource Stewardship		
Agricultural land stewardship	■ Yes ☐ No	Reduce/eliminate erosion, current turbidity levels and increase efficiency of water received to agricultural users.
Ecosystem restoration	■ Yes ☐ No	The project will restore ecological function of the riparian, stream system(s) and aquatic biota
Forest management	☐ Yes ■ No	
Land use planning and management	■ Yes ☐ No	Project will adhere to CEQA/NEPA and Sierra County Land Use Planning. Project under feasibility study involves the orderly and planned use of water resources, with a view to securing the physical and economic well-being of rural communities and producers.
Recharge area protection	☐ Yes ■ No	
Sediment management	■ Yes ☐ No	Reduce/eliminate erosion, current turbidity levels and increase efficiency of water received to agricultural users.
Watershed management	■ Yes ☐ No	Reduce/eliminate erosion, current turbidity levels and increase efficiency of water received to agricultural users.

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
People and Water		
Economic incentives	☐ Yes ■ No	
Outreach and engagement	■ Yes ☐ No	There is an opportunity to enhance and further partnership capacity with the Sierra Valley RCD, Sierra Valley Mutual Water Company, U.S. Forest Service, and representatives of the IRWM as well as through public scoping.
Water and culture	☐ Yes ■ No	
Water-dependent recreation	■ Yes ☐ No	Project will increase flows and aquatic biota – increased angling opportunities
Wastewater/NPDES	☐ Yes ■ 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?: ☐ Yes ■ No
Funding Match Waiver request?: ☐ Yes ■ 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**	$15,000	0	0	$15,000
b.	**Land Purchase/Easement**	0	0	0	0
c.	**Planning/Design/Engineering / Environmental**	$135,000	0	0	$135,000
d.	**Construction/Implementation**	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)**	$150,000	0	0	$150,000

j.	**Can the Project be phased?** ■ **Yes** ☐ **No** If **yes**, provide cost breakdown by phases			
		Project Cost	**O&M Cost**	**Description of Phase**
	Phase 1	$150,000	0	Feasibility Study/Analysis
	Phase 2	$250,000	0	CEQA/NEPA
	Phase 3	$1,800,000	0	Project Construction & Implementation
	Phase 4			
k.	**Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).**		Project O&M would be financed by Sierra Valley Mutual Water Company. All current maintenance costs of existing conveyance system are accomplished by Sierra Valley Mutual Water System	
l.	**Has a Cost/Benefit analysis been completed?**		☐ **Yes** ■ **No** (cost-benefit will be addressed in feasibility study)	
m.	**Describe what impact there may be if the project is not funded (300 words or less)**		Continuation of approximately 25% water losses to agricultural/livestock producers in Sierra Valley. Without project funding, there will be a higher level of impacts to groundwater during drought events through well development and significant groundwater usage. In addition, the conveyance system is dated 1870 and will continue to lose efficiency at a higher rate in the future if remedial action is not taken in the immediate term. There is also potential for complete catastrophic failure of the ditch if not addressed, which would likely cause substantial reverse of flow/loss of irrigation for the remainder of the season, erosion and substantially increased cost to repair, as well as environmental damage.	

*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	■	☐ Yes ■ No ☐ N/A		11/01/2015	10/31/2016
b. Final Design	☐	☐ Yes ☐ No ■ N/A		Pending Assessment Completion	

c. Environmental Documentation (CEQA / NEPA)	☐	☐ Yes ■ No ☐ N/A		Pending Assessment Completion	
d. Permitting	☐	☐ Yes ■ No ☐ N/A		Pending Assessment Completion	
e. Construction Contracting	☐	☐ Yes ■ No ☐ N/A		Pending Assessment Completion	
f. Construction Implementation	☐	☐ Yes ■ No ☐ N/A		Pending Assessment Completion	
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.

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.).	TROA EIR/EIS and the Truckee River Operating Agreement; Settlement Agreement by and between SPPCo, Washoe County Water Conservation District, Sierra Valley Water Company; 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 Discharge Management Program dated 2007
b. List technical reports and studies supporting the feasibility of this project.	Numerous studies and reports have been prepared and published regarding the Sierra Valley and the importance of the 1870 water right and inter-basin transfer of water. While no reports exist that propose a conduit or pipeline project for the first 2.5 miles of the diversion ditch, these reports, without exception, stress the importance of the diversion of agricultural water to the Sierra Valley as being critical for

	sustaining agricultural operations, preserving habitat and wildlife and bird species that exist in the headwaters of the Feather River at Sierra Valley, and the need to make improvements to watercourse conditions to avoid further erosion, channel scour and deepening, and sediment loading. 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; History of Water – Eastern Sierra Nevada-Recovery and Protection-UC Berkeley Study on the Long Term Diversion of the Little Truckee; TROA EIR/EIS and the Truckee River Operating Agreement; Settlement Agreement by and between SPPCo, Washoe County Water Conservation District, Sierra Valley Water Company; 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.
c. Concisely describe the scientific basis (e.g. how much research has been conducted) **of the proposed project in 300 words or less.**	The methodology proposed by lining an existing water conveyance system that is currently an earthen ditch via a pipe or by concrete is a time-tested and valid approach to reduce/eliminate water loss by seepage. This project will replace an unlined ditch subject to approximately 25% water losses with a pipeline that is expected to result in water losses of less than approximately 5%. Under phase one, the Sierra Valley Resource Conservation District will

	retain a qualified team of consultants with demonstrated experience and success in agricultural water conveyances and watercourse restoration dynamics to outline options to convey the water in an efficient and environmentally sensitive manner. The project will be a "gravity flow" project without any need for pumping or other intrusive features along the existing watercourse. The goal of the project at completion will be for the length of approximately 2.5 miles to be contained in a conveyance conduit so that little to no surface evidence be in existence and the degradation that has occurred over the last decades by scouring and channel erosion be eliminated in entirety and fully restored. Reports needed and prepared will be site analyses and mapping, alternative project scopes (including no project alternative), design and engineering options for the feasible alternatives identified complete with alignment options and cost estimates.
d. Does the project implement green technology (e.g. alternate forms of energy, recycled materials, LID techniques, etc.).	■ Yes ☐ No ■ N/A If yes, please describe. Construction-related green technology strategies will be considered in the design stage of project development.
e. Are you an Urban Water Supplier[1]?	☐ Yes ■ No ☐ N/A
f. Are you are an Agricultural Water Supplier[2]?	■ Yes ☐ No ☐ N/A Sierra Valley Mutual Water Company
g. Is the project related to groundwater?	☐ Yes ■ No ☐ N/A If yes, please indicate which groundwater basin.

[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.

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-6: Sierra Valley Agricultural Water Diversion Efficiency & Improvement

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.