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## UPPER FEATHER RIVER IRWM PROJECT INFORMATION FORM

### UPPER FEATHER RIVER IRWM 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>	Westwood CSD
<b>Name of Primary Contact</b>	Susan Coffi
<b>Name of Secondary Contact</b>	Randy Buchanan
<b>Mailing Address</b>	P.O. Box 319, Westwood, CA 96137
<b>E-mail</b>	<a href="mailto:office@westwoodcsd.org">office@westwoodcsd.org</a>
<b>Phone</b>	530-256-3211
<b>Other Cooperating Agencies / Organizations / Stakeholders</b>	State Department of Environmental Health, Redding office.
<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>	MS-36: Water Storage Project
<b>Project Category</b>	<input type="checkbox"/> <b>Agricultural Land Stewardship</b> <input type="checkbox"/> <b>Floodplains/Meadows/Waterbodies</b> <input checked="" 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)	Construct a one (1) million gallon water storage tank to bring the Westwood Community Services District (WWCSD) up to minimum state requirements: the Waterworks Standards require systems with less than 1,000 service connections to have source and storage capacity equal to or greater than the maximum day demand (MDD). As shown in the Inspection Report, the District's treated water storage capacity is insufficient to meet its estimated MDD. The District has one active water source and one 500,000 water storage tank, and therefore does not have a second source of supply or sufficient storage to meet the source/storage capacity criteria.
<b>Project Location Description</b> (e.g., along the south bank of stream/river between river miles or miles from	The District's water source is Walker Spring, located adjacent to the Hamilton Branch of the Feather River, about 3-miles west of Westwood near the community of Clear Creek.

Towns/intersection and/or address):	The District's existing water storage tank is located about ½ mile northeast of the District (north of Highway 36 and east of County Road A-21.	
<b>Source:</b>	<b>Latitude:</b>	40°-16' W
	<b>Longitude:</b>	121°-04' N
<b>Storage:</b>	<b>Latitude:</b>	40°-18' W
	<b>Longitude:</b>	120°-58' N

### 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 (e.g. acres of streams/wetlands restored or enhanced)</b>
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	The project will provide approximately 4.5 additional hours of fire suppression capability in the mountain community of Westwood and immediate area.	Unknown
Build communication and collaboration among water resources stakeholders in the Region.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Work with DWR to develop strategies and actions for the management, operation, and control of SWP facilities in the Upper Feather River Watershed in order to increase water supply, recreational, and environmental benefits to the Region.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		

Encourage municipal service providers to participate in regional water management actions that improve water supply and water quality.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Westwood CSD is a municipal service provider. This project will increase water storage and publicity to the residents of the increased water storage and the reasons for it, will encourage the water users to conserve water and alert them of the need to be vigilant of their water use.	Unknown
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Grant funding for this project is necessary to ensure that Westwood CSD will be able to meet current State requirements for water storage for serving users and a water supply for emergency fire protection.	Increase water storage by 1,000,000 gallons
Protect, restore, and enhance the quality of surface and groundwater resources for all beneficial uses, consistent with the RWQC Basin Plan.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Address water resources and wastewater needs of DACs and Native Americans.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	The project will encourage all the users to conserve water and will provide needed storage capacity.	Increase water storage by 1,000,000 gallons
Coordinate management of recharge areas and protect groundwater resources.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Improve coordination of land use and water resources planning.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	.	
Maximize agricultural, environmental and municipal water use efficiency.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Additional storage will provide sufficient water storage to meet State source/storage criteria and enhance the fire suppressing capability of the local Fire Dept.	Unknown
Effectively address climate change adaptation and/or mitigation in water resources management.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Improve efficiency and reliability of water supply and other water-related infrastructure.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Additional storage will provide sufficient water storage to meet State source/storage criteria and enhance the fire suppressing capability of the local Fire Dept.	Unknown

Enhance public awareness and understanding of water management issues and needs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Publicity to the residents of the increased water storage and the reasons for it, will encourage the water users to conserve water and alert them of the need to be vigilant of their water use.	Unknown
Address economic challenges of agricultural producers.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		
Work with counties/communities/groups to make sure staff capacity exists for actual administration and implementation of grant funding.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A		

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

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#### IV. PROJECT IMPACTS AND BENEFITS

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

If applicable, describe benefits or impacts of the project with respect to:		
<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	Bring district up to minimum state requirements: the Waterworks Standards requires systems with less than 1,000 service connections to have storage capacity equal to or greater than maximum day demand (MDD).
<b>c. Environmental Justice<sup>2</sup></b>	<input type="checkbox"/> N/A	The Westwood CSD ensures fair and equal services regardless of race, culture, income, or any other cultural factors.
<b>d. Drought Preparedness</b>	<input type="checkbox"/> N/A	Increased storage allows for better management of water during drought conditions

<b>e. Assist the region in adapting to effects of climate change<sup>3</sup></b>	<input checked="" type="checkbox"/> N/A	
<b>f. Generation or reduction of greenhouse gas emissions (e.g. green technology)</b>	<input checked="" type="checkbox"/> N/A	
<b>g. Other expected impacts or benefits that are not already mentioned elsewhere</b>	<input checked="" type="checkbox"/> N/A	
<p>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 (<a href="http://featherriver.org/maps/">http://featherriver.org/maps/</a>).</p> <p><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.</p> <p><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.</p>		

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

## V. RESOURCE MANAGEMENT STRATEGIES

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

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
<b>Reduce Water Demand</b>		
Agricultural Water Use Efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Urban water use efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Improve Flood Management</b>		
Flood management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Improve Operational Efficiency and Transfers</b>		
Conveyance – regional/local	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Precipitation Enhancement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Municipal recycled water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Surface storage – regional/local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Increasing existing water storage capacity to comply with State source/storage requirements for drinking water.
<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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Salt and salinity management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Urban storm water runoff management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Practice Resource Stewardship</b>		
Agricultural land stewardship	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Ecosystem restoration	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Forest management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Land use planning and management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Recharge area protection	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Sediment management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Watershed management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>People and Water</b>		
Economic incentives	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Users will be encouraged through newsletters and billing statements to conserve water and more closely comply with the State's mandate to practice water conservation measures.

Resource Management Strategy	Will the Project incorporate RMS?	Description of how RMS to be employed, if applicable
Outreach and engagement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The District will keep the users abreast of the proposed project and encourage them to comply with the State regulations.
Water and culture	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water conservation is everyone's responsibility and this theme will be solicited to the users via newsletters and billing statements.
Water-dependent recreation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Wastewater/NPDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Other RMS addressed and explanation:

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## 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.

Sources of funding:

1. State Revolving Loan Fund (SRLF) administered by the State of California Department of Environmental Health.
2. USDA-Rural Development (Loan or grant).
3. State of California Community Development Block Grant (CDBG).

O & M costs for the new tank will be included in the District's current water rate structure as is currently the case for the existing water tank and other features of the District's water system; i.e. pumping plant, water source, pipelines, valves, meters, etc.

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	\$10,000	0	0	\$10,000
b.	Land Purchase/Easement	\$ 5,000	0	0	\$ 5,000
c.	Planning/Design/Engineering / Environmental	\$60,000	0	0	\$60,000
d.	Construction/Implementation	\$600,000	0	0	\$600,000
e.	Environmental Compliance/Mitigation/Enhancement	\$ 2,000	0	0	\$ 2,000

f.	<b>Construction Administration</b>	\$ 10,000	0	0	\$ 10,000
g.	<b>Other Costs (Const. Inspection)</b>	\$ 3,000	0	0	\$ 3,000
h.	<b>Construction/Implementation Contingency</b>	\$60,000	0	0	\$ 60,000
i.	<b>Grand Total (Sum rows (a) through (h) for each column)</b>	\$750,000	0	0	\$750,000
j.	<b>Can the Project be phased?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, provide cost breakdown by phases				
		<b>Project Cost</b>	<b>O&amp;M Cost</b>	<b>Description of Phase</b>	
	<b>Phase 1</b>				
	<b>Phase 2</b>				
	<b>Phase 3</b>				
	<b>Phase 4</b>				
k.	<b>Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).</b>	The District presently maintains and operates its water system infrastructure through user fees. The user fees schedule includes components for operation, maintenance, capital improvements, replacement, and depreciation. The new tank will be factored into the user fee calculations and adjustments to the fees will be made as determined necessary.			
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 District is obligated to seek funding for a new water storage tank from a State or Federal funding agency. The State DHS has expressed to the District (in writing) that additional storage is required. It is the responsibility of the District to pursue and obtain the funds to implement the project.			
*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> ).					



**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**.

<b>Project Stage</b>	<b>Check the Current Project Stage</b>	<b>Completed?</b>	<b>Description of Activities in Each Project Stage</b>	<b>Planned/ Actual Start Date (mm/yr)</b>	<b>Planned/ Actual Completion Date (mm/yr)</b>
<b>a. Assessment and Evaluation</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	The necessity for additional water storage was a directive from the State Department of Environmental Health. Additional storage can be constructed adjacent to the existing water tank and connected to the existing tank to allow both tanks to function as either one tank (in parallel) or separately to allow one tank to be taken out of service for repairs, etc.	06/2015	07/2015
<b>b. Final Design</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Final design will not be completed until funding is obtained.	Two months after funding is secured	Four months After funding is secured
<b>c. Environmental Documentation (CEQA / NEPA)</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	It is anticipated that the environmental documents will be in the form of a Mitigated Negative Declaration, similar to when the existing tank was constructed in 1975.	02/2015	03/2016
<b>d. Permitting</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	There are no permits anticipated from other agencies. The land is flat and open requiring minimal clearing and grading.	N/A	N/A

<b>e. Construction Contracting</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	The project will be subject to public bid and prevailing wages will apply.	07/2016	09/2016
<b>f. Construction Implementation</b>	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Construction implementation (i.e. inspection and contract administration) will be accomplished by the WWCS staff and their consultant engineer.	07/2016	09/2016
<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>The project is consistent with the Westwood CSD master water plan. Budget constraints in 1975 (when the existing water system was constructed), limited the volume of water storage. A second water tank of comparable size was considered a viable component of the overall system for redundancy and required storage volume.</p>
<p><b>b. List technical reports and studies supporting the feasibility of this project.</b></p>	<p>The necessity for additional water storage is substantiated by the State of California Drinking Water Standards, wherein water suppliers with 1,000 or fewer customers shall have source/storage equivalent to the maximum daily demand, which in Westwood's case is 1,500,000-gallons.</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>The need for additional water storage is derived from the State Standards for small water systems, wherein the storage capacity should be equivalent to the Maximum Daily Demand (MDD), which in Westwood's case is 1,500,000 gallons.</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A If yes, please describe.</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 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A If yes, please indicate which groundwater basin.</p>
<p>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: MS-36: Water Storage Project

Project applicant: Westwood

## 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

Additional storage capacity for the community of Westwood's domestic water use. The additional water storage has been requested by the State of California, Department of Environmental Services, Drinking Water Division, to comply with State Water System(s) regulations. Additional water storage will provide increased fire protection capability, increased emergency storage requirements during power outages, which occur frequently in mountainous areas, and reduced power consumption needs at the water source.

### 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

The additional water storage will reduce the pumping cycles at the water source, lessening the power requirements somewhat. Westwood's water source of supply is dependent on electrical power to operate the turbine pumps that supply water to the community.

### 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.)

### Flooding

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

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

### Ecosystem and Habitat

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

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

### Hydropower

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

- Not applicable
- Reduced hydropower output

Upper Feather River IRWMP  
Project Assessment - GHG Emissions Analysis

MS-36: Water Storage Project

**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
Tractors/Loaders/Bac khoes	1	2	1
Graders	1	1	0
Dumpers/Tenders	1	1	0
Cranes	1	5	4
			0
			0
			0
			0
			0
			0
<b>Total Emissions</b>			<b>5</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
1	500	1

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
4	5	2	0

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

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



Upper Feather River IRWMP  
Project Assessment - GHG Emissions Analysis

MS-36: Water Storage Project

**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
	<b>0</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
	<b>0</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
0	<b>0</b>

\*A negative value indicates GHG reductions

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

**GHG Emissions Summary**

Construction and development will generate approximately:	6 MTCO <sub>2</sub> e
In a given year, operation of the project will result in:	0 MTCO <sub>2</sub> e