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## UPPER FEATHER RIVER IRWM PROJECT INFORMATION FORM

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

Please provide information in the tables below:

#### I. PROJECT PROPONENT INFORMATION

<b>Agency / Organization</b>	Sierra Wildlife Habitat & Community Foundation (SWHCF) and Sierra Valley Resource Conservation District (SVRCD)
<b>Name of Primary Contact</b>	Rick Roberti, SWHCF / SVRCD Board of Directors
<b>Name of Secondary Contact</b>	Bill Nunes, SVRCD Board Chairman
<b>Mailing Address</b>	P.O. Box 693 Loyalton, CA 96118
<b>E-mail</b>	<a href="mailto:rickroberti@yahoo.com">mailto:rickroberti@yahoo.com</a>
<b>Phone</b>	(530) 249-4988 / Rick Roberti
<b>Other Cooperating Agencies / Organizations / Stakeholders</b>	Feather River Land Trust, CA DWR, NRCS, UCCE, and Landowners
<b>Is your agency/organization committed to the project through completion? If not, please explain</b>	Yes.

#### II. GENERAL PROJECT INFORMATION

<b>Project Title</b>	ALS-13: Little Last Chance Lake
<b>Project Category</b>	<input checked="" type="checkbox"/> <b>Agricultural Land Stewardship</b> <input checked="" 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 building of Frenchman Dam in the early 1960s has been a great benefit to many in Eastern Plumas County and beyond, but it has also changed water flow, especially on the lower end of the Little Last Chance Creek. Even before the dam, irrigation used water that would have historically found its way to Little Last Chance Lake. This project will restore and enhance 450 acres of wetland and sub-irrigated meadows back to how this land was before the creek was altered. Since the building of the dam, Little Last Chance Lake is full of water only on extremely wet years, and the water most often dries up long before summer is over. There is no longer enough late winter or early spring runoff below the dam to fill the Little Last Chance Lake with approximately 320 - 500 acre-feet of water. The overall project plan is to restore Little Last Chance

	<p>Lake in Sierra Valley to a year-round water supply for wildlife and native vegetation, and to provide drinking water for wildlife and livestock.</p> <p>Phase 1 will be a feasibility study evaluating the best source of water, securing landowner and other stakeholder MOUs, evaluating roadside pullouts, arts and recreation involvement and other aspects of the project. This phase will include CEQA if required.</p> <p>Phase 2 of the project is to pump early-season supplemental water to the Little Last Chance Lake, possibly from the Middle Fork Feather River near Marble Lane in Sierra Valley, to restore a year-round water supply for wildlife and native vegetation, as well as to provide drinking water for wildlife and livestock. When the lake is filled, it creates approximately 200 acres of open water (with depths up to four feet deep) and over 250 acres of meadow alongside the lake and below its outlet.</p> <p>Phase 3 of the project proposes to construct up to five new wetland areas, or ponds, on property owned by Carmichael Ranch, DS Ranches, the Feather River Land Trust, and Roberti Ranch by bringing water from the Little Last Chance Lake to the above-mentioned properties. The size of the ponds would be 1-3 acres wide in diameter and they would be constructed parallel to County Road A24, between Heriot Lane and Highway 70. This land, which was flooded and irrigated with early spring runoff before the 1960s, currently receives virtually no water, especially in dry years. Today sagebrush and non-native plants exist where meadows, ditches and canals were once filled with water and waterfowl.</p> <p>General tasks that will be completed:</p> <ul style="list-style-type: none"> <li>• Assessment and evaluation of project concept with NRCS assistance.</li> <li>• Securing source of water, e.g., meeting with DWR to apply for a supplemental right to divert water from Middle Fork Feather River.</li> <li>• Obtain signed agreements between all landowners involved in project.</li> <li>• Finalize design and budget.</li> <li>• Set project schedule and timeline.</li> <li>• Develop bid documents.</li> <li>• Select contractors.</li> </ul>
<p><b>Project Location Description</b> (e.g., along the south bank of stream/river between river miles or miles from</p>	<p>Little Last Chance Lake is a lake in Plumas County, CA, with an elevation of 4,882 feet, or 1,488 meters above sea level. The lake is about 6 miles southeast of Beckwourth and is located one mile east of the intersection of County Road A24 and Marble Hot Springs</p>

Towns/intersection and/or address):	Road. For a map of the location of Little Last Chance Lake, see: <a href="#">Map:</a>
<b>Latitude:</b>	39.7762779
<b>Longitude:</b>	-120.3033733

### 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Little Last Chance Lake will be restored to its natural level, and water exiting the lake will restore wetlands that once existed prior to the construction Frenchman Reservoir.	Approximately 450 acres of meadows/wetlands will be restored.
Reduce potential for catastrophic wildland fires in the Region.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	N/A	N/A
Build communication and collaboration among water resources stakeholders in the Region.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Stakeholders will need to collaborate together to make this project feasible. Communication between landowners and the Department of Water Resources will be crucial to the success of this project.	-Meetings -Partnerships -Contracts
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	Stakeholders/landowners will work with DWR (local watermaster) to acquire the permits necessary to pump the water to the lake.	Up to a 1,000 acre-feet of water could be used depending on the availability of supplemental water.
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	N/A	N/A
Continue to actively engage in FERC relicensing of	<input type="checkbox"/> Yes	N/A	N/A

<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)
hydroelectric facilities in the Region.	<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	N/A	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	By filling the lake with water it will enhance the quality of the surface water for a longer period of time and help groundwater recharge. Having water in the lake well into or through the summer season will enhance beneficial uses for fish and wildlife (including nesting season for water-dependent avian species), recreation (e.g., birdwatching) and livestock.	Approximately 450 acres of meadows/wetlands will be restored.
Address water resources and wastewater needs of DACs and Native Americans.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A	N/A	N/A
Coordinate management of recharge areas and protect groundwater resources.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Water in the lakes will help with localized areas of recharge.	Possibly up to 1000 acre-feet of water will remain in Sierra Valley, as opposed to the water leaving our county.
Improve coordination of land use and water resources planning.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Local landowners will work with agencies such as NRCS, SVRCD, UCCE, DWR, to improve coordination of land use and water resources planning.	Landowner will make a plan with listed agencies and complete projects as needed.
Maximize agricultural, environmental and municipal water use efficiency.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Restored meadows and wetlands will benefit both agriculture and the environment.	Approximately 450 acres of meadows/wetlands will be restored.
Effectively address climate change adaptation and/or mitigation in water resources management.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	The restoration of the wetland will potentially improve resiliency to climate change variability in the normally dry area of Sierra Valley.	Instead of dry land in summer, water will be in the lake surrounded by healthy meadows.
Improve efficiency and	<input checked="" type="checkbox"/> Yes	A full lake will provide a reliable	Water lasting

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reliability of water supply and other water-related infrastructure.	<input type="checkbox"/> N/A	livestock water supply, which will in turn reduce pumping costs and demand for groundwater.	through the summer will provide adequate protection for young waterfowl until they are able to fly, as well as recharge to groundwater in local area.
Enhance public awareness and understanding of water management issues and needs.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	Many birders and wildlife enthusiasts who visit Little Last Chance Lake will learn about good stewardship and management of wildlife water.	-Educational tours -Tourism
Address economic challenges of agricultural producers.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> N/A	One of the benefits of this project is that agricultural producers would have stock water for livestock throughout the spring and summer, as well as healthier meadows for grazing.	Ranchers play a big role in our local economy, and good stewardship of meadows is a benefit to all.
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	This project will rely heavily on the collaboration of many agencies and stakeholders. SVRCD and FRLT do have the capacity to administer and implement the grant funding.	

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

N/A

#### 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	N/A
<b>b. Disadvantaged Communities<sup>1</sup></b>	<input checked="" type="checkbox"/> N/A	This project will potentially have an impact on the following local disadvantaged communities: Loyaltan, Vinton, Chilcoot, Calpine, Sierraville, Sierra Brooks and Portola. The completed project will attract tourists (especially birders) to Sierra Valley, and as a result, the disadvantaged communities listed above will benefit economically due to tourism. <a href="https://gis.water.ca.gov/app/boundaries/">https://gis.water.ca.gov/app/boundaries/</a> Checked N/A due to project not providing a critical water supply or wastewater need for a DAC.
<b>c. Environmental Justice<sup>2</sup></b>	<input checked="" type="checkbox"/> N/A	N/A
<b>d. Drought Preparedness</b>	<input type="checkbox"/> N/A	Water that would normally leave Sierra Valley in late winter and early spring will be stored in Little Last Chance Lake and will in turn benefit landowners and wildlife especially during dry years, as well as helping to recharge underground aquifers.
<b>e. Assist the region in adapting to effects of climate change<sup>3</sup></b>	<input type="checkbox"/> N/A	The project will assist in water storage in Plumas County and create meadows, which will contribute to a healthy ecosystem.
<b>f. Generation or reduction of greenhouse gas emissions (e.g. green technology)</b>	<input type="checkbox"/> N/A	Project is expected to use solar pump(s), with year-round energy production but only seasonal energy use.
<b>g. Other expected impacts or benefits that are not already mentioned elsewhere</b>	<input type="checkbox"/> N/A	Phase 1 of the project is to restore the Little Last Chance Lake by bringing supplemental water into the lake. The outcome from this project will be that water will remain in the lake long enough for waterfowl to raise their young until they begin to fly. The lake will once again be a thriving wildlife habitat, which will benefit wildlife, stewards of the land, and the local economy in Plumas and Sierra counties. Furthermore, a full lake will

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	<p>create healthy surrounding meadow and riparian areas. The new wetlands constructed in Phase 2 along County Road A-24 will be strategically placed and designed to attract birders to our area from around California and beyond. Birders already know what a true gem Sierra Valley is for viewing birds, but find it difficult to watch birds from public roads. The wetland areas created in this project for viewing would have off-road access (“pullouts”) to offer both safety and good viewing access.</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. Storm water capture, storage, cleanup, 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 type="checkbox"/> Yes <input checked="" 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 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Less underground pumping for stock water; more groundwater recharge
Urban water use efficiency	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
<b>Improve Flood Management</b>		
Flood management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The lake would be able to operate as a flood control area under certain situations.
<b>Improve Operational Efficiency and Transfers</b>		
Conveyance – regional/local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A conveyance ditch would need to be established to transfer water from the Middle Fork River to Little Last Chance Lake.
System reoperation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Will improve existing water management (including repair of an impoundment dam and storage of supplies of water when high for later use) to improve ecosystem and agricultural beneficial uses
Water transfers	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Increase Water Supply</b>		
Conjunctive management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Having the use of the surface water from the lake will reduce the need to pump groundwater for stock watering
Precipitation Enhancement	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Municipal recycled water	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Surface storage – regional/local	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The project will provide water to a lake that currently runs dry by late spring.
<b>Improve Water Quality</b>		
Drinking water treatment and distribution	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Groundwater remediation/aquifer remediation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Matching water quality to water use	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	The water will benefit livestock production & wildlife habitat.
Pollution prevention	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Salt and salinity management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Urban storm water runoff management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
<b>Practice Resource Stewardship</b>		
Agricultural land stewardship	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The plan will help to restore native plants and grasses and eradicate non-native species.



<b>Resource Management Strategy</b>	<b>Will the Project incorporate RMS?</b>	<b>Description of how RMS to be employed, if applicable</b>
Ecosystem restoration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	It will help return the lake and its surrounding area in to a more sustainable habitat.
Forest management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Land use planning and management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Landowners would work with UCCE and/or NRCS to prepare a management plan for areas affected in this proposal. Phase 3 of the project will require extensive coordination with Plumas County Planning and Roads. Concept would help implement goals of new Plumas County General Plan.
Recharge area protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The project will help to establish the recharge area that has been lost for several years.
Sediment management	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A
Watershed management	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Water will remain in the local watershed.
<b>People and Water</b>		
Economic incentives	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Results of the plan will include: more forage for livestock, habitat for wildlife, and some recharge of underground water, benefitting economic viability of ranches. Project does not, however, include concept of loans, rebates, etc.
Outreach and engagement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Outreach with adjacent and directly involved landowners, arts and environmental organizations, county staff and many other stakeholders. Project has education components – wildlife, showing kids and other visitors how good agricultural water stewardship can create great wildlife habitat, etc.
Water and culture	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Provides support for a fifth-generation historic cattle ranch (formerly a dairy) and would further provide agritourism opportunities to educate visitors and other community members about historic cultural values in the area. Though few have ever seen Little Last Chance Lake, those who have marvel at the abundance and wide variety of waterfowl drawn to unique body of water.
Water-dependent recreation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Birding has become a very popular pastime in the region, and this project would reestablish wetland areas. Road pullouts envisioned would provide additional access for recreation/birders.
Wastewater/NPDES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A

Other RMS addressed and explanation:

N/A

**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.

<b>PROJECT BUDGET</b>					
Project serves a need of a DAC?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Funding Match Waiver request? : <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (This could change)					
	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			\$30,000
b.	Land Purchase/Easement	N/A			N/A
c.	Planning/Design/Engineering /Environmental	\$30,000			\$30,000
d.	Construction/Implementation				
e.	Environmental Compliance/ Mitigation/Enhancement	\$200,000			\$200,000
f.	Construction Administration				
g.	Other Costs (Misc. Expenses)	\$5,000			\$5,000
h.	Construction/Implementation Contingency				
i.	<b>Grand Total (Sum rows (a) through (h) for each column)</b>	<b>\$265,000</b>			<b>\$265,000 (Phase 1 only)</b>

<b>j.</b>	<b>Can the Project be phased?</b> <input checked="" type="checkbox"/> Yes <input 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>	\$265,000		Feasibility study, engineering, CEQA
	<b>Phase 2</b>	TBD (highly dependent on water source determined feasible)		One possible scenario:  1. Diversion dam and ditch: This will bring water from the source to the pump. 2. Solar Pump and installation (platform, concrete work, and discharge pipe) (pump capable of pumping 4,000 to 5,000 gallons per minute would need to

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			<p>purchased and set up)</p> <ol style="list-style-type: none"> <li>3. Conveyance Ditch:</li> <li>4. Existing lake enhancement: Dirt levee will be built using material from ditch along Carmichael and Ramelli border fence.</li> <li>5. Dam repair: The purpose of the dam and levee is to retain water longer on the south side of the Lake, which typically dries up sooner.</li> <li>6. Culverts: Two 36-inch culverts (each 20 ft. long) on the west side of County Road A24 for ditch crossings. Includes:             <ul style="list-style-type: none"> <li>- Two 36-inch culverts (each 20 ft. long) for County Road A24 to get water from one side of the road to the other.</li> <li>- A 36-inch culvert (20 ft. long) will be needed on the east side of County Road A24 for landowner crossing</li> <li>- Two 30-inch (20 ft. long) culverts for overflow ditch on the northwest corner of the Lake on Roberti and DS Ranches properties.</li> </ul> </li> <li>7. Fencing: Fence will be needed around the pump and the solar plant. Fence on the levee between the Carmichael and Ramelli properties</li> <li>8. Alternate overflow ditch:</li> </ol> <p>On extremely wet years when the Little Last Chance Lake is full and Frenchman Dam is spilling, this ditch (approximately one mile long) will serve as a relief canal to avoid flooding.</p>
	<p><b>Phase 3</b></p>	<p>TBD</p>	<p>Phase 3 of the project will create an avenue (ditches) from Little Last Chance Lake overflow ditch to the viewing ponds. Also included in this phase of the project will be to design and engineer viewing ponds (wetlands) along County Road A24. Another goal will be to create access off of County Road A24 for parking and viewing of wildlife in newly created wetlands (which will be on private land). Creating new wildlife habitat, such as nesting islands, owl boxes, and the introduction of native plants and shrubs around Little Last Chance Lake is another component</p>

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			of Phase 2. The possibility of building more storage capacity in the Lake itself will be examined.
	Phase 4	N/A	
k.	Explain how operation and maintenance costs will be financed for the 20-year planning period for project implementation (not grant funded).	After the project is completed, the landowners will be responsible for operation and maintenance costs.	
l.	Has a Cost/Benefit analysis been completed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
m.	Describe what impact there may be if the project is not funded (300 words or less)	A valuable wetland area in Sierra Valley would be restored and enhanced as a result of this project. If the project is not funded the Little Last Chance Lake will continue to deteriorate and the possibility for economic development in disadvantaged communities through tourism may be lost.	
<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 type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Currently the status of the project is in the conceptual phase and it will need design work and engineering evaluation before the onset of the project.	TBD	6 months
b. Final Design	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		TBD	6 months
c. Environmental Documentation (CEQA / NEPA)	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		TBD	6 months
d. Permitting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		TBD	
e. Construction Contracting	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		TBD	
f. Construction Implementation	<input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		TBD	

		<input type="checkbox"/> N/A			
<b>Provide explanation if more than one project stage is checked as current status</b>			N/A		

**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.

<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.).	The Plumas County General Plan is supportive of agriculture and wildlife, knowing that both are critical to the ecosystem and economy of Eastern Plumas County.
<b>b. List technical reports and studies supporting the feasibility of this project.</b>	DWR has records associated with the Little Last Chance Lake dating back to the 1930s.  The technical merit and feasibility of this project will be documented through letters of support from Plumas County Audubon Society, Ducks Unlimited, Plumas-Sierra County Farm Bureau, and other organizations regarding the importance of this wildlife area and the proposed project.
<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>	There are volumes of research data proving the benefits of wetlands and well-functioning meadows.
<b>d. Does the project implement green technology</b> (e.g. alternate forms of energy, recycled materials, LID techniques, etc.).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A If yes, please describe. The project will utilize solar energy to pump water for wildlife and livestock.
<b>e. Are you an Urban Water Supplier<sup>1</sup>?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
<b>f. Are you are an Agricultural Water Supplier<sup>2</sup>?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
<b>g. Is the project related to groundwater?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A If yes, please indicate which groundwater basin. Sierra Valley
<sup>1</sup> Urban Water Supplier is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. <sup>2</sup> Agricultural Water Supplier is defined as a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding the acreage that receives recycled water.	

## Climate Change – Project Assessment Checklist

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

Name of project: ALS-13: Little Last Chance Lake

Project applicant: Sierra Wildlife Habitat & Community Foundation (SWHCF) and (SVRCD)

## 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

A year-round water supply will benefit wildlife, livestock, and help the surrounding wetland and meadows to be healthier (like they used to be).

### 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 lake has been going dry by late spring. By staying full through summer, the waterfowl hatch survival rate will be much greater. Meadows will function properly and wildlife and livestock will have stock water, reducing the need to pump water from wells.

### 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.)

Water is life. When this 200-plus acre wetland functions properly, it's alive with wildlife and it will be an extraordinary wetland home to thousands of birds. When dry, it's bare ground and susceptible to wind erosion.

### 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

Little Last Chance Lake is a special place for birding. People come from everywhere to see birds in Sierra Valley. Several listed and threatened species summer in Sierra Valley. Irrigation and winter and spring storage at Frenchman Reservoir limits the water in Little Last Chance Lake.

### 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

ALS-13: Little Last Chance Lake

**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
Scrapers	15	15	231
			0
Tractors/Loaders/Bac khoes	20	20	109
Excavators	14	14	86
			0
Tractors/Loaders/Bac khoes	2	2	1
			0
			0
			0
			0
<b>Total Emissions</b>			<b>426</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
10	12	0

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
3	20	10	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

ALS-13: Little Last Chance Lake

**Project Operating Emissions**

The project requires energy to operate. If yes:

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

The project will generate electricity. If yes:

Annual kWh Generated	Total MTCO <sub>2</sub> e
	0

\*A negative value indicates GHG reductions

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

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

\*A negative value indicates GHG reductions

The project will affect wetland acreage. If yes:

Acres of Protected Wetlands	Total MTCO <sub>2</sub> e
400	-1,732

\*A negative value indicates GHG reductions

The project will include new trees. If yes:

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

\*A negative value indicates GHG reductions

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

Solar panels will operate year-round generating far more energy than that needed for temporary seasonal pump usage.

**GHG Emissions Summary**

Construction and development will generate approximately:	427 MTCO <sub>2</sub> e
In a given year, operation of the project will result in:	-38,932 MTCO <sub>2</sub> e