

# Project Description Form

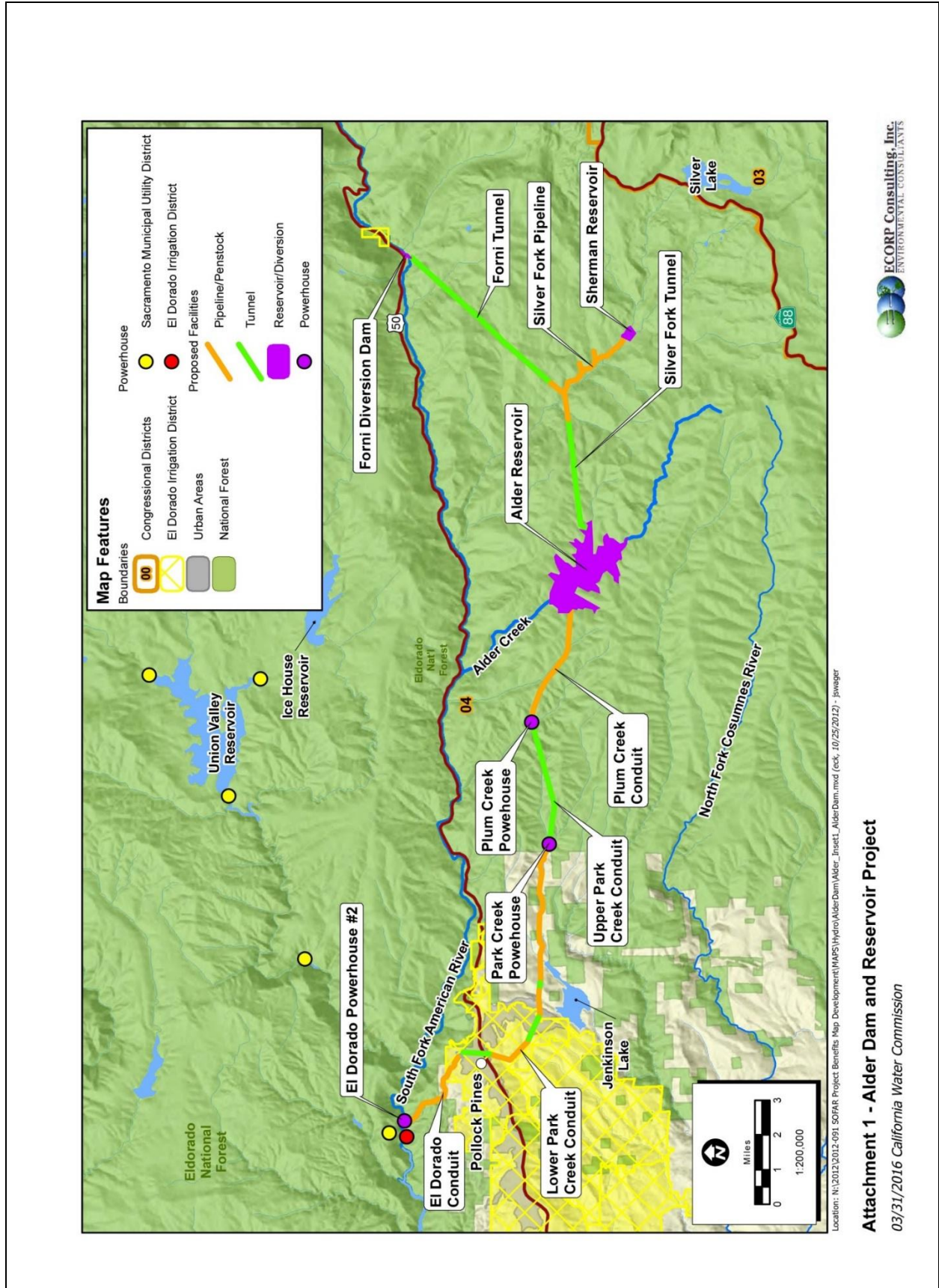
<b>Project/Program Name</b>		<i>Alder Creek Reservoir</i>	
<b>Responsible Agency</b>		El Dorado County Water Agency	
<b>Partner Agency (ies)</b>		Bureau of Reclamation	
<b>Net Yield</b>	<b>Normal Year:</b> ~23,480 AFY	<b>Wet Year:</b> NA	<b>Dry Year:</b> NA
<b>Estimated Cost</b>	<b>Capital:</b> \$909 Million	<b>O&amp;M:</b> NA	<b>Energy:</b> NA
<b>Unit Cost</b>	NA		
<b>Site Coordinates (Approximate)</b>	<b>Latitude:</b> 38.729700°	<b>Longitude:</b> -120.342875°	
<b>Description</b>			
<p><i>(Provide a high level description of project including funding history/sources/strategy, consequences if project does not happen etc.)</i></p> <p>Alder Creek Dam and Reservoir is located in the headwater catchment of Alder Creek just 25 miles east of Placerville in El Dorado County, California at an elevation of 5,500 feet. Several Alder Creek Reservoir concepts have been studied over the years. In 2004 the 108<sup>th</sup> Congress passed H.R. 3597, which authorized the Secretary of the Interior to conduct a feasibility study for construction of a water storage project on Alder Creek. Currently, Alder Reservoir is included in Reclamation’s Sacramento-San Joaquin River Basin Study as a potential climate change adaptation measure. A wide range of Alder Reservoir scenarios have been studied over the last several decades: a 32,000 acre-foot (AF) water supply reservoir with a 10MW powerhouse and power generation of up to 56,000 MWh; a 60,000 AF water supply and seasonal pumped storage reservoir with a 14 MW powerhouse and power generation up to 81,000 MWh; and a 175,000 AF reservoir with 110 MW capacity at 3 powerhouses and power generation up to 470,000 MWh. This “Large Alder” project has been identified to provide the greatest public benefit.</p> <p>The Alder Reservoir project, would divert water from the South Fork American and Silver Fork to Alder Reservoir through approximately 6.6 miles of pipelines and 8.8 miles of tunnels. In an average water year these diversions would total about 180,000 AF. At Alder Reservoir, this water, along with local Alder Creek runoff (23,480 AF per year on average), would be stored and then released as required for renewable energy generation, to meet water supply demands, and provide environmental flows. These releases would be conveyed through three powerhouses arranged in series, through approximately 18 miles of pipelines, tunnels and penstocks, with a total elevation drop of approximately 3,600 feet, back into the American River at the current site of the El Dorado Hydroelectric Project (FERC Project No. 184) El Dorado Powerhouse. To improve local supply reliability in dry years, water could be diverted from the project upstream of the El Dorado Powerhouse into Jenkinson Lake and/or at El Dorado Forebay and used to meet consumptive and irrigation demands. The project would also allow for coordinated operations with Reclamation for releases at Folsom Reservoir, similar to other large reservoirs in the American River watershed, for enhanced water supply reliability, temperature management for anadromous fish in the Lower American River and for broader CVP/SWP benefits including improvement to ecosystems, water quality, flood control, emergency response and recreation. The cost of the Alder Dam and Reservoir Project was estimated at \$250 million in 1978 (ENR CCI=2776). Adjusted to today’s dollars, project costs are estimated to be about \$909 million (ENR CCI=10092).</p>			
<b>Component</b>			
Surface Water Storage			
<b>Potential Challenges</b>			

*(List challenges in bullets)*

- 

**Conceptual GIS Map of Site**

- *Can refer to the map that was obtained from the Alder Public Benefits Concept Paper, that describes the location of the proposed reservoir location*



**Attachment 1 - Alder Dam and Reservoir Project**  
03/31/2016 California Water Commission



Purpose(s)		Key Stakeholders
<input checked="" type="checkbox"/> Improve in-stream water quality <input checked="" type="checkbox"/> Improve health of local watersheds <input checked="" type="checkbox"/> Improve local water supply reliability <input type="checkbox"/> Implement & monitor a reliable stormwater system <input checked="" type="checkbox"/> Increase climate resilience <input type="checkbox"/> Increase community awareness for sustainable water		<i>(List key stakeholders)</i> El Dorado Irrigation District El Dorado County Water Agency
Stage of Development		
<input type="checkbox"/> Conceptual <input checked="" type="checkbox"/> Planning <input type="checkbox"/> Pre-Design <input type="checkbox"/> Design <input type="checkbox"/> Construction <input type="checkbox"/> Other		
<i>Notes on Stage of Development</i>		
Expected Project Timeline	<i>Near or long-term (approximate years to implement). 2019, when the Feasibility Study is due</i>	
Project Triggers	<i>What would cause this project to justify immediate implementation (e.g., flow rate, funding opportunity)? NA</i>	
Potentially Applicable Federal and State Programs for Technical and Financial Assistance		
<ul style="list-style-type: none"> <li>• Reclamation Environmental Feasibility Study</li> <li>• MOA</li> </ul>		
Stormwater Multi-Benefits (per SWRP Guidelines Table 4):		
<span style="color: #e67e22;">■</span> Primary <span style="color: #95a5a6;">■</span> Opportunity (highlight applicable cells and provide justification below table)		
Benefit Category	Main Benefit	Additional Benefit
<b>Water Quality</b> <i>while contributing to compliance with applicable permit and/or TMDL requirements</i>	Increased filtration and/or treatment of runoff	Nonpoint source pollution control
		Reestablished natural water drainage and treatment
<b>Water Supply</b> <i>through groundwater management and/or runoff capture and use</i>	Water supply reliability	Water conservation
	Conjunctive use	
<b>Flood Management</b>	Decrease flood risk by reducing runoff rate and/or volume	Reduced sanitary sewer overflows
<b>Environmental</b>	Environmental and habitat protection and improvement including: - Wetland enhancement/creation; - Riparian enhancement; and/or - Instream flow improvement	Reduced energy use, GHG emission, or provides a carbon sink
		Reestablishment of the natural hydrograph
	Increased urban green space	Water temperature improvements
<b>Community</b>	Employment opportunities provided	Community involvement
	Public education	Enhance and/or create recreational and public use areas

**(##) List details supporting why this project will achieve the highlighted benefit.**

Alder Reservoir storage is approximately 18% the size of Folsom Reservoir and represents a 10% increase in storage in the American River watershed above Folsom Reservoir. A 10% increase in storage in the basin will provide measurable benefit and contribute to greater operational flexibility at Folsom Reservoir and in the broader CVP/SWP to meet CVP water quality and Bay-Delta Water Quality Control Plan requirements, and provide other benefits. Locally, Alder Reservoir would provide a new and unique opportunity to enrich the habitat quality of small order tributaries like Alder Creek and lower river reaches of the South Fork American River that traditionally do not benefit from an upstream supply source for such functions. Located high in the major tributary watersheds of the CVP/SWP, a significant benefit of the Alder Reservoir project is flood control, both locally and regionally. Operation of Alder Reservoir could provide further public benefit including an amount of water storage or supply dedicated for emergency response purposes that are outside normal facility operations. Located in the Eldorado National Forest, high within the Sierra Nevada Mountain Range, Alder Reservoir would provide a wide range of recreational and associated economic benefits. New water supply yield resulting from Alder Reservoir would advance the long-term Delta objectives of restoring ecological health and improved water management for beneficial uses in the Delta. A new upstream reservoir, by capturing water typically lost through flood evacuation, provides a source of water that could be managed for downstream environmental flow enhancement and water quality protection in the Delta. Alder water supply would benefit water needs locally, regionally, and statewide. Locally, water supply reliability in dry and critically dry years would be improved with Alder Reservoir storage which is located above the El Dorado Irrigation District's points of water diversion.

<b>Project Included in IRWM:</b>	<input type="checkbox"/> Yes, which one _____ <input checked="" type="checkbox"/> No, explain _____
<b>Project Benefits a DAC/EDA<sup>1</sup>:</b>	<input type="checkbox"/> Yes, which one _____ <input type="checkbox"/> No
<b>CEQA Compliance:</b>	<input type="checkbox"/> Yes, explain _____ <input checked="" type="checkbox"/> No, explain <u>Will be developed</u>
<b>Contact Person(s):</b>	
Ken Payne, Interim General Manager of EDCWA, kpayne@payneenviroconsulting.com, (530)672-6721	
<b>Key References:</b>	
<ul style="list-style-type: none"> <li>• Public Law 101</li> <li>• MOA</li> </ul>	
<b>Supplemental Information (e.g., Project Webpage or equivalent):</b>	
Project webpage, as applicable <ul style="list-style-type: none"> <li>• <a href="https://cwc.ca.gov/Documents/2016/WSIP/Eldorado_AlderReservoir.pdf">https://cwc.ca.gov/Documents/2016/WSIP/Eldorado_AlderReservoir.pdf</a></li> <li>• Integrated Water Resources Master Plan, El Dorado Irrigation District (2013)</li> <li>• <a href="http://www.mtdemocrat.com/news/alder-dam-part-of-eidscounty-water-agencys-long-term-plans/">http://www.mtdemocrat.com/news/alder-dam-part-of-eidscounty-water-agencys-long-term-plans/</a></li> <li>• Alder Public Benefits Concept Paper, Feb 2016</li> </ul>	

<sup>1</sup>DAC = Disadvantaged Communities  
 EDA = Economically Distressed Area