

Water Storage Investment Program Concept Paper Form

Please complete the questions below and return your completed concept paper by email to cwc@water.ca.gov by 5:00 p.m. on March 31, 2016. Completed concept papers should not exceed four pages.

Contact Information

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Agency/Organization Name: Contra Costa Water District
Agency Type (select one): <input checked="" type="checkbox"/> Public Agency <input type="checkbox"/> Nonprofit Organization <input type="checkbox"/> Public Utility <input type="checkbox"/> Tribe <input type="checkbox"/> Mutual Water Company <input type="checkbox"/> Local Joint Powers Authority <input type="checkbox"/> Other:

Project Information

Project Name: Los Vaqueros Reservoir Expansion Project
Project Type: <input checked="" type="checkbox"/> CALFED Surface Storage <input type="checkbox"/> Groundwater Storage <input type="checkbox"/> Groundwater Contamination Prevention or Remediation <input type="checkbox"/> Conjunctive Use <input type="checkbox"/> Reservoir Reoperation <input type="checkbox"/> Local Surface Storage <input type="checkbox"/> Regional Surface Storage <input type="checkbox"/> Other:
Estimated Project Cost: \$800M
Estimated WSIP Funding Request: \$400M
Please describe your project, including location, water source, facilities, and operations: <u>Background:</u> Contra Costa Water District (CCWD) is reliant on the Delta to serve over 500,000 residents in central and eastern Contra Costa County. CCWD relies on the Central Valley Project for over 90% of its water supply. CCWD has additional water rights associated with Los Vaqueros Reservoir and Mallard Slough. CCWD also relies on supplies transferred from the East Contra Costa Irrigation District and other annual transfers as needed. CCWD has four intakes in the Delta that can be used to divert water to meet demands directly; two of the intakes can also pump water to Los Vaqueros Reservoir. Los Vaqueros Reservoir is an off-stream reservoir located in the foothills west of the Delta in Contra Costa County at the eastern edge of the Bay Area. Los Vaqueros Reservoir was originally constructed in the 1990s with a capacity of 100,000 acre-feet and was expanded in 2012 to a capacity of 160,000 acre-feet. CCWD also has an intertie with East Bay Municipal Utility District's Mokelumne Aqueduct. CCWD's current operations are guided by water quality, fisheries protection, customer demands, and coordination with the Delta operations of the Central Valley Project and the State Water Project. <u>Project Description:</u> The proposed Los Vaqueros Reservoir Expansion Project (the Project) would add a pipeline connecting the Los Vaqueros Reservoir system to the South Bay Aqueduct (the Transfer-Bethany Pipeline) and

expand the total Los Vaqueros Reservoir capacity up to 275,000 acre-feet. The Project would also broaden the sources of water diverted and stored in Los Vaqueros Reservoir to include State Water Project supplies and water supplies from other sources via existing or future interties on behalf of agencies potentially partnering in the Project. The facilities could be operated to meet the following objectives:

- Improved regional water supply reliability
- Improved regional conjunctive use
- Increased emergency water supplies
- Water transfers
- Enhanced ecosystem benefits
- Improved water quality
- Expanded recreational opportunities
- Improved resilience to climate change and future Delta projects
- Improved cooperation among regional and statewide stakeholders and partners

Additional information about the Los Vaqueros Reservoir and the Project may be accessed at the following websites:

<http://www.ccwater.com/9/Los-Vaqueros>

<http://www.usbr.gov/mp/vaqueros/>

Per Water Code section 79753, the Commission may only fund the public benefits of water storage projects. Further, ecosystem improvements must make up 50% of the funded public benefits (Water Code section 79756(b)). What public benefits does your project provide? (select all that apply):

- Ecosystem Improvements Water Quality Improvements Flood Control
 Emergency Response Recreation

Please describe the magnitude of the public benefits and how the project will be operated to provide the public benefits:

The Project is intended to provide a broad variety of public benefits described in detail below. The magnitude of public benefits is estimated at \$400M. Project facilities and operations would be adaptively managed to maintain public benefits as climate conditions change, and the quantity of water supplies and the needs of the ecosystem change over time.

Ecosystem: Benefits to Delta fisheries would be realized by diverting water through state-of-the-art fish screens thus reducing take of species, increasing operational flexibility to avoid diversions at critical times and locations, and coordinating operations with the SWP and CVP Delta export facilities to provide greater fish benefits Delta-wide. Benefits to Central Valley wildlife refuges would result from increasing the quantity and frequency of Level 4 water delivered. Benefits in Delta tributaries could also be achieved by shifting the timing of operations such that there is increased water available in existing storage upstream to improve conditions for aquatic species below the dams.

Emergency Supplies: Expansion of the reservoir would increase the amount of regional storage dedicated for emergencies including earthquakes, Delta levee failures, and drought emergencies.

Water Quality: Water quality improvements would result by filling the reservoir during wet periods when the Delta is fresh and releasing water from the reservoir during dry periods when the Delta is salty to ensure water quality delivered to customers is of a consistently high quality. The Project would expand water quality benefits to regional partners and provide protection from future declines in Delta water quality as a result of climate change, emergencies, and other factors.

Recreation: The Los Vaqueros Watershed includes public recreational facilities that provide opportunities for boating, fishing, and education on 20,000 acres of managed land. The watershed has an extensive trail network open to equestrians, hikers and cyclists, and provides excellent bird watching opportunities for raptors such as Golden and Bald Eagles. Expansion of the reservoir would provide increased recreational opportunities for visitors and maintain other existing benefits.

Water Code section 79752 requires that funded projects provide measurable improvements to the Delta ecosystem or to the tributaries of the Delta. Please describe how your project provides ecosystem improvements in the Delta or tributaries to the Delta:

As noted above, the Project would provide multiple types of ecosystem improvements in the Delta and tributaries to the Delta. Central Valley wildlife refuges (administered by the U.S. Bureau of Reclamation and the U.S. Fish and Wildlife Service) would benefit from increasing the amount and reliability of water deliveries to enhance refuge productivity. Delta fisheries would benefit from improved water operations and coordination aimed at reducing the take of endangered species. Ecosystem improvements in tributaries to the Delta could also be achieved by improving operational flexibility such that additional water is available in upstream reservoirs to meet ecosystem needs. For example, during a drought CCWD could make water available in Los Vaqueros Reservoir to East Bay Municipal Utility District, thus reducing the need to take this water from the Sacramento or Mokelumne Rivers which have important ecosystem needs.

Water Code sections 79755 and 79757 require the Commission to make a finding that a project will advance the long-term objectives of restoring ecological health and improving water management for beneficial uses in the Delta prior to allocating funding for a project. Please describe how your project could help advance the long-term objectives of restoring ecological health and improving water management for beneficial uses in the Delta:

The Los Vaqueros Reservoir has been providing water quality, Delta ecosystem, and water supply reliability benefits since its initial construction in 1998. CCWD has a robust monitoring program that confirms the effectiveness of the facilities and operations at providing those benefits. The proposed Project is envisioned to expand the benefits currently provided, and provide additional benefits as discussed in the sections above. CCWD has also completed pilot projects with neighboring agencies, demonstrating the role Los Vaqueros Reservoir can play in improving water management for beneficial uses in the Delta.

Please describe any other benefits provided by your project, such as water supply reliability benefits, and the potential beneficiaries:

Improved Regional Water Supply Reliability: Improvements in regional water supply reliability would be achieved by optimizing CCWD and partner intake operations to ensure supplies are maintained while fisheries are protected. The Transfer-Bethany Pipeline would allow for greater flexibility in water deliveries to the South-Bay Aqueduct and the region. The increased reservoir storage would provide dry year supply reliability. The Project would also help facilitate water transfers needed seasonally or during dry years. Facilities and operations would be adaptively managed in response to climate change to ensure water supply reliability is sustained in the future.

Improved Regional Conjunctive Use: Many of the potential partners rely on groundwater to meet a portion of demands. Coordinating the Project operations with partner groundwater operations and other independent recharge projects would lead to improved conjunctive use throughout the region and improvements in regional groundwater management to help achieve groundwater sustainability under the Sustainable Groundwater Management Act.

Improved Operation of the State Water System: The Project would improve water operations of regional partners and has the potential to improve operation of the Central Valley Project and State Water Project. Increasing operational flexibility and inter-agency coordination could improve the ability of the Central Valley Project and State Water Project to meet regulatory requirements.

Potential Beneficiaries: Alameda County Water District, Bay Area Water Supply and Conservation Agency, Byron-Bethany Irrigation District, City of Brentwood, Contra Costa Water District, East Bay Municipal Utility District, East Contra Costa Irrigation District, San Francisco Public Utilities Commission, San Luis Delta Mendota Water Authority-Santa Clara Valley Water District, U.S. Bureau of Reclamation, and Zone 7 Water Agency.