

Water Storage Investment Program Concept Paper

Safe Drinking Water Program

Contact Information

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Agency/Organization Name: Water Replenishment District of Southern California (WRD)
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: Safe Drinking Water Program
Project Type: <input type="checkbox"/> CALFED Surface Storage <input checked="" type="checkbox"/> Groundwater Storage <input checked="" 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: \$9,000,000
Estimated WSIP Funding Request: \$4,500,000
Please describe your project, including location, water source, facilities, and operations: The Central and West Coast groundwater basins are two of the most heavily utilized urban basins in California and provide 40% of the water supply for 4 million residents, 10 percent of the State’s population, within 43 cities. The Water Replenishment District (WRD) manages these adjudicated basins. WRD has an established Safe Drinking Water Program that assists local groundwater producers in addressing impacted water supply wells located in these basins. So far, 21 drinking water wells have been treated for various man-made and naturally occurring contaminants including manganese, Tetrachloroethene (PCE), and Trichloroethene (TCE). Removal of man-made contamination from the groundwater basin not only improves the quality of water within the basin, it also increases the storage capacity of the basin. This effort also assures the continued use of the groundwater basins in areas affected by contamination, preventing the shift of demand from local groundwater supplies to imported water. Fifty percent (50%) of these wellhead treatment projects were located in disadvantaged communities where industrial practices over the past several decades have resulted in widespread groundwater contamination. Such contamination will need to be addressed and will benefit from the funding opportunity presented by the California Water Commission. This project seeks to remediate at least six water supply wells in an effort to continue to provide a safe, local drinking water supply within the Central and West Coast groundwater basins while increasing the storage capacity of those basins by 5,400 to 24,000 acre-feet per year. Four of these six water supply wells will be located in disadvantaged communities. Project tasks include (1) well profiling, (2) fate and transport contaminant modeling, and (3) installation of a wellhead treatment system consistent with design processes already established by WRD. Well profiling is a relatively low-

cost investigation tool used to identify the area of highest concentrations (and flow) within the water well and provides valuable design parameters (e.g., anticipated flow rates, identify zone(s) that can be isolated to enhance groundwater remediation efforts, and inlet concentration to a treatment system). The groundwater modeling will help in evaluating contaminant transport pathways that may lead to identifying a responsible party (RP). WRD is currently updating its basin-wide groundwater model with the United States Geological Survey (USGS).

The final product will be a completed wellhead treatment system installed at a groundwater pumper's affected well facility and an agreement that they assume responsibility for long-term operation and maintenance (O&M). The system components will continue to be owned by WRD. Overall, this project will preserve the use of a local water supply (alleviating demand for imported water), improve the quality of the groundwater basins and increase the groundwater storage capacity of those basins by 5,400 to 24,000 acre-feet per year.

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:

Ecosystem Improvements: The project will provide a public benefit by reducing the amount of water imported to Southern California from the Bay-Delta. This will provide an ecosystem benefit by changing the amount and timing of water diversions from the Bay-Delta. As a result, the project will contribute to improvements in flow conditions, temperature, and other ecosystem benefits that contribute to the restoration of native fish and wildlife in aquatic and terrestrial habitats.

Emergency Response: In addition to providing the water supply reliability needed to directly respond to a variety of emergency situations, the project will contribute to emergency water supplies and flows for dilution and salinity repulsion following a natural disaster or act of terrorism.

Water Quality Improvements: The project provides water quality benefits in two ways. First, it will reduce water imports, keeping more water in Delta waterways. This will contribute to fishery protection, fish and wildlife conservation, preservation of waterways in their natural state, and recreation. Second, the project will clean up and restore groundwater resources in a heavily urbanized basin.

Also, depending on the size of the well of each treatment system, this project will offset 5,400 to 24,000 acre-feet per year of imported water with local water supplies.

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 a result of this project and other related management actions, the WRD will cease to import water from the State Water Project. Accordingly, the amount of water that will remain in the Delta, which would have otherwise been diverted to Southern California, is a minimum of 5,400 acre-feet per year. The project will provide ecosystem improvements in the Delta and its tributaries by reducing the amount of water taken from the Delta, thereby increasing flows in rivers and streams. The result of increased flow includes major ecosystem improvements such as cooler water temperatures and restoration of historic natural hydrographs to increase fish abundance, distribution, and overall viability.

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:

This project is foundational to WRD's "Water Independence Now" (WIN) program, which aims to permanently eliminate the need to import water from the Bay-Delta, by producing and storing a high-quality, locally sourced water supply. WRD will demonstrate this improved paradigm for managing water resources and, in this way, will lead by example. The projects WRD proposes provide lasting and long-term benefits in the Bay-Delta as well as in Southern California.

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

C5 – Local water quality improvement achieved through storm water capture and better basin management, improved local water supply reliability, and climate change adaptation. Beneficiaries include 350,000 people, four disadvantaged communities and the local economy.

C6 – same as C5

C7 – C10 Local water quality improvement achieved through better basin management, improved local water supply reliability, and climate change adaptation. Beneficiaries include 350,000 people, four disadvantaged communities, and local economy.