

In 2014, the San Diego IRWM program submitted a grant proposal to the Department of Water Resources for Proposition 84 funds. This proposal included 7 projects to meet the Region’s water management needs, and address regional drought concerns.

Direct Potable Water Use Reduction

Project 1: Reynolds Groundwater Desalination Facility Expansion. The *Reynolds Groundwater Desalination Facility Expansion* will increase production of potable water from desalinated brackish groundwater by 5,200 acre-feet per year (AFY). The project will also drill 5 new wells in the San Diego Formation, and construct an additional 13,200 linear feet (LF) of pipeline. The desalinated groundwater produced by the project will be added directly into the potable supply, and will directly offset imported water purchases. This new water supply is a drought-proof local supply, increasing water supply reliability in the Region, and providing drought protection. Brine discharge from this project will help to maintain the brackish quality in the Sweetwater River estuary, protecting against incursion by non-native freshwater species. The project will be implemented by the Sweetwater Authority, in partnership with the City of San Diego.



Project 2: Fallbrook Plant Nurseries Recycled Water Distribution System Expansion. The *Fallbrook Plant Nurseries Recycled Water Distribution System Expansion* project is sponsored by Fallbrook Public Utility District (FPUD) in partnership with the Mission Resource Conservation District and the San Diego County Farm Bureau. FPUD will work closely with targeted nursery customers, including San Diego Growers, Inc., DM Color Express Inc., Premier Color Nursery, Olive Hill greenhouses, and Roseland Nursery, which are local growers that will use recycled water provided by the project. This project will extend Fallbrook’s existing recycled water line to serve growers in the southeastern portion of Fallbrook’s service area. Fallbrook already produces sufficient recycled water to meet the additional demands of these potential customers, but currently discharges excess recycled water to the ocean.

By delivering 642 AFY of additional recycled water to users, Fallbrook will efficiently use available water resources, offset potable water demands, reduce discharges to the ocean, and offload flows to an ocean outfall, helping to reduce the need for future expansion of the outfall.

Project 3: Carlsbad Recycled Water Plant and Distribution System Expansion. The *Carlsbad Recycled Water Plant and Distribution System Expansion* project will be implemented by Carlsbad Municipal Water District (CMWD) in partnership with Olivenhain Municipal Water District. The project will increase treatment capacity at the Carlsbad Water Recycling Facility (WRF) from 4 million gallons per day (MGD) to 6 MGD – an increase of 2,240 AFY. This expansion will support CMWD’s Phase III Recycled Water Project and the Carlsbad Recycled Water Master Plan, CMWD’s long-term vision for recycled water use within its service area. With the expanded Carlsbad WRF capacity, potable supplement water will no longer be needed to meet recycled water demands in the summer months, offsetting 30 AFY of imported potable water. The project will also construct pipeline Expansion Segments 1a and 7, to deliver 197 AFY recycled water to previously identified customers, and conduct retrofits to serve 126 AFY to customers located near existing recycled water pipelines. In total, the project will offset 353 AFY of potable water demands through delivery of recycled water.



Drought Relief through Demand Management

Project 4: Regional Demand Management Program Expansion. The *Regional Demand Management Program Expansion* will be implemented by San Diego County Water Authority (SDCWA), and includes partnerships with San Diego Gas & Electric, the California Landscape Contractors Association, and SDCWA's 24 member agencies. The project includes four components: 1) WaterSmart Landscape Efficiency Program that will include financial incentives to reduce outdoor water use, 2) detention facility retrofit program, 3) turf replacement rebate program, and 4) Landscape Workshops to provide education regarding water-efficient landscaping. The landscape efficiency and turf rebate programs will continue existing efforts to reduce irrigation inefficiencies and replace turf with water-wise landscaping. The detention facility retrofit will reduce water waste by installing timers on the existing low-flow toilets at a juvenile detention facility, which will prevent excess flushing. In total, the project is expected to result in 1,089 AF of water savings through implementation of the four program components.



Project 5: San Diego Water Use Reduction Program. The City of San Diego's *San Diego Water Use Reduction Program* will be implemented through two programs: the Pressure Regulator Incentive Pilot, and the Recycled Water Filling Station. Through a rebate program, the City of San Diego will encourage installation of 5,000 pressure regulators in its service area. These pressure regulators will reduce the amount of excess water that flows from fixtures, and reduce pipe and fixture leaks from excess pressure by reducing the pressure of water entering homes to the recommended functional range. The project will also construct a multi-user recycled water filling station at the North City Water Reclamation Plant. This station will provide recycled water for dust control and other permitted construction-related

water needs. The project is anticipated to result in a total combined potable water savings (through conservation and recycled water components) of 381 AFY.

Project 6: Rincon Customer-Driven Demand Management Program. Rincon del Diablo Municipal Water District (Rincon) will install Advanced Metering Infrastructure (AMI), which is a mechanical meter with a radio transponder, for the remaining 20% of its customers that do not already have AMI installed. The project will also purchase WaterSmart software that will incorporate water use data from the AMI with customer data into a user-friendly, accessible interface, which will allow customers to access their water use data hourly, alert them to potential leaks, and access links to resources from Rincon such as rebates and incentive programs. The WaterSmart software also includes a social component, which provides information about neighbors' water use and personalized recommendations to further incentivize water savings. Increased communication with customers will result in immediate reductions in water demands (estimated at 300 AFY) that are anticipated to be sustained through subsequent years, based on use of AMI+WaterSmart software in other cities.



System Inertias



Project 7: Regional Emergency Storage and Conveyance System Inertia Optimization. Hodges Reservoir faces a number of water quality issues that prohibit shifting water from Hodges Reservoir to the regional water supply and conveyance system. These issues reduce the use of water in Hodges Reservoir in the regional Emergency Storage Project, and limit the City's ability to move water stored at Hodges Reservoir to other parts of the system. Further, during wet weather events Hodges Reservoir often overfills, and without the ability to move water from Hodges Reservoir to the regional water system, water spills over the Hodges Dam and is thus wasted. This project will install a Speece Cone at Hodges Reservoir to oxygenate the deep portions of the reservoir and improve water quality, increasing the volume of useable water in the reservoir, enabling movement of water from Hodges to other

storage reservoirs, and reducing the need to import additional water. Over its 20-year life, this project is anticipated to result in 102,163 AF of additional local supplies that are not currently available to the Region.