

In 2007, the San Diego IRWM program submitted a grant proposal to the Department of Water Resources for Proposition 50 funds. This proposal included 19 projects that would implement four high priority programs to meet the Region's water management needs.

#### *Conservation Program*

**Project 1: Implementation of Integrated Landscape and Agricultural Efficiency Program.** This project aims to increase water efficiency in urban landscapes and agricultural practices, and improve water quality by reducing runoff associated with excessive irrigation. SDCWA will conduct agricultural audits, outreach and education, and retrofits to improve water efficiency without compromising crops or agricultural production. The program has the potential to achieve over 3,600 AFY of water savings.

**Project 2: Irrigation Hardware Giveaway and Cash for Plants Project.** This project offers customized commercial landscape and residential surveys along with state-of-the-art efficient irrigation hardware, free of charge to customers in the City of San Diego. The project is expected to conserve approximately 91 AFY of water and will reduce over-watering, thereby conserving potable water and reducing pollutant-laden dry weather runoff flows from entering receiving waters.



**Project 3: Over-Irrigation Runoff/Bacteria Reduction Project.** This project aims to protect water quality by reducing irrigation runoff through improved water use efficiency at eight pilot sites. The project will demonstrate the link between over-irrigation reductions and reductions in pollutant loads. This will be accomplished through water use assessment, flow monitoring and water quality monitoring at key locations in the storm drain system. This project will conserve an estimated 353 AFY of water.

#### *Water Recycling Program*

**Project 4: Santee Water Reclamation Facility (WRF) Expansion Project.** This project includes design and construction of facilities necessary to expand the Title 22 treatment capacity of the Santee WRF from 2 MGD to 4 MGD. This project is part of a coordinated effort to enhance local supplies through an expansion of recycled water production, coupled with increased groundwater recharge using recycled water (see Project 14 below).

**Project 5: Recycled Water Retrofit Assistance Program.** This project will provide direct financial assistance to facilitate conversion from potable to recycled water for landscape irrigation and other uses. The project will target approximately 40 sites throughout the SDCWA's service area which will allow approximately 2,000 AFY of additional recycled water to be used. The ultimate goal is to promote the development and use of recycled water capable of supplying 5% of the Region's water demand by 2011.



**Project 6: City of San Diego Recycled Water Distribution System Expansion, Parklands Retrofit, and Indirect Potable Reuse/Reservoir Augmentation Project.** This project has three parts, which together are aimed at meeting the City of San Diego's goal of beneficially reusing 50% of wastewater flows. This project includes a demonstration project that is a necessary step in ultimately implementing 12,000 AFY of indirect potable reuse. Using recycled water reduces imported water demand and increases local water supply, and results in less wastewater discharged into the ocean.

#### *Local Supply Protection and Development Program*

**Project 7: San Vicente Reservoir Source Water Protection through Watershed Property Acquisition and Restoration Project.** This project will acquire lands from willing sellers around San Vicente Reservoir for the purpose of creating an expanded drinking source water protection buffer. San Vicente Reservoir is being enlarged to nearly 200,000 AF as part of the SDCWA's Emergency Storage Project. The buffer will provide high quality habitat and protect associated sensitive species.

**Project 8: El Capitan Reservoir Watershed Acquisition and Restoration Program.** This project will acquire and restore approximately 120 acres of targeted vacant undeveloped lands upstream and in the immediate vicinity of the El Capitan Reservoir. The project will protect source water quality at the reservoir by reducing the potential for non-point source pollution, removing trash and debris from the properties, planting 800 trees, maintaining a biologically significant wildlife corridor, and preserving habitat.



**Project 9: Northern San Diego County Invasive Non-Native Species Control Program.** This project will aim to eradicate 374 acres of targeted invasive non-native plant species throughout Northern San Diego County. It would protect and enhance habitat; conserve water resources by increasing available groundwater; protect water delivery and storage systems by reducing flood damage; improve water quality by reducing erosion and normalizing sediment discharge processes; and reduce fire risk.

**Project 10: Santa Margarita Conjunctive Use Project.** This project provides for enhanced recharge and recovery from the groundwater basin to provide a water supply for both Camp Pendleton and Fallbrook as resolution of a long-standing water rights dispute. The project will provide approximately 6,800 AFY of new local supply from the Santa Margarita River by conjunctively managing the groundwater basin. Additionally, 1380 acres of sensitive habitat will be preserved along the river as a result of this project.



**Project 11: Carlsbad Desalination Project Local Conveyance.** This project will provide 56,000 AFY of new water supply through the design and construction of pipelines and facilities to serve local desalinated water from the Carlsbad Desalination Project to SDCWA member agencies. The project provides a secure and reliable water supply for 30 years with two possible 30-year extensions.

**Project 12: San Diego Region Four Reservoir Intertie Project Feasibility Study.** This project will provide an initial design and work plan for a conveyance system that will increase the capability to manage and store imported water in four existing reservoirs. The project would create an enhanced and integrated reservoir system to more efficiently use existing storage, increase water supply reliability, more effectively use imported water aqueducts, and increase accessibility to ~100,000 AF of surface storage.

**Project 13: South San Diego County Water Supply Strategy.** This project will investigate the sustainable use of the apparently vast groundwater resources of the San Diego Formation (SDF), a natural underground aquifer that underlies the central and south San Diego Bay area. Reliable assessments currently estimate that the SDF holds upward of 1,000,000 AF of water. This extensive local water resource has the potential to significantly supplement water supplies and reduce dependence on imported water through its efficient development and use.



**Project 14: El Monte Valley Groundwater Recharge and River Restoration Project, Phases 1 & 2.** This project would recharge the El Monte Valley Basin using highly treated recycled water, raise the groundwater level to support habitat restoration, and subsequently withdraw up to 2,240 AFY of groundwater to supply the R.M. Levy Water Treatment Plant. Phase 1 would develop the necessary Groundwater Management Plan and institutional support, and Phase 2 includes design and construction of spreading basins, conveyance pipelines, and river restoration.

### *Education and Outreach Program*

**Project 15: San Diego Regional Pollution Prevention Project.** This project will remove trash and debris and assess the water quality within San Diego County through citizen monitoring. It seeks to establish a baseline of trash and water quality data that will be transferable to the local communities that live in the Region through two web-based, publicly accessible data portals. The project will teach a minimum of 300 members of the community how to access publicly available water quality data and to analyze and interpret these data to identify water quality impacts on a watershed level.

**Project 16: Biofiltration Wetland Creation and Education Program.** This project will develop a biofiltration wetland within the Safari Park, formerly known as the San Diego Wild Animal Park, which will be used to improve water quality through natural biological filtration and enhance wetlands habitat. The constructed wetlands will act as biological filters to remove high biological oxygen demand, total suspended solids, organic nitrogen, and nitrates. The wetlands will also be used to educate visitors about water conservation and the importance of conserving wetlands.



**Project 17: San Dieguito Watershed Management Plan Implementation – Lake Hodges Natural Treatment System Conceptual Design.** The Lake Hodges Natural Treatment System Conceptual Design project will provide initial design and a work plan for reduction of pollution loads to the City of San Diego’s Lake Hodges Reservoir, which is a water supply source for north county communities and planned to be intertied to the regional water supply system. Natural treatment systems, such as restored and constructed wetlands are an established cost effective and environmentally sound way for reducing pollutant loading.

**Project 18: City of San Diego Green Mall Porous Paving and Infiltration.** This project will retrofit storm water systems, allowing urban runoff and pollutants carried with it to infiltrate into the ground instead of discharging directly to the storm drain system and adjacent waterbodies. Existing asphalt street paving will be replaced with pervious concrete. Existing curbs and gutters will be moved into the street, and bio-retention systems of crushed rock and trees will be installed in the created space. The project will also include water quality monitoring and educational outreach.



**Project 19: County of San Diego Chollas Creek Runoff Reduction and Groundwater Recharge Project.** This project will demonstrate practical implementation of a range of low impact development (LID) practices to reduce runoff from three County facilities. The project will include demonstrations of porous pavements over stone reservoirs, capture/infiltration technologies and landscape elements such as rain gardens and swales.