



CDM Smith: Sustainable Solutions for the 21st Century

CDM Smith provides lasting and integrated solutions in water, environment, transportation, energy and facilities to public and private clients worldwide. As a full-service consulting, engineering, construction and operations firm, we deliver exceptional client service, quality results and enduring value across the entire project life cycle.

Role in the Santa Ana River Watershed

CDM Smith supports One Water One Watershed (OWOW) planning and implementation by providing watershed-related consulting services such as integrated regional water management planning, ecosystem restoration, water master planning, water and wastewater treatment plant design, recycled water planning and design, salt management analyses, watershed sanitary surveys, receiving water body monitoring, stormwater program support, and TMDL implementation.

The SAWPA Connection

Many of CDM Smith's projects in the Santa Ana River Watershed are managed through the Santa Ana Watershed Project Authority (SAWPA). CDM Smith and SAWPA staff have developed close relationships based on mutual respect. These relationships have improved the efficiency and effectiveness of work by both CDM Smith and SAWPA.

What is the importance of the Santa Ana River Watershed to the region?

Water resources management involves stewardship of the natural resources that support clean water and watersheds -- our aquifers, streams, rivers, lakes, and estuaries -- as well as controlling water's flow through urban and suburban neighborhoods and agricultural areas. Ultimately, water resources management is total resource management, addressing all components of the water cycle in an integrated fashion.

Why is it important to take a regional approach to management of the watershed?

There is a limited supply of fresh water in Southern California, which is in excess of current demand. Regional water management maximizes the use of these supplies by pooling water agency resources, avoiding redundant facilities, using groundwater basins for seasonal and long-term storage of local water, and ensuring sensible and equitable demand management by all water agencies. By increasing local water sustainability, the region reduces its dependence on imported water from Northern California and Colorado River which aids in emergency preparedness, drought management, and climate change resiliency; while also improving local receiving water quality and environment.

At CDM Smith, we challenge ourselves to take a holistic view of the urban environment. Dr. Richard Meyerhoff and Wendy Katagi, of CDM Smith, recently assisted the OWOW pillars and SAWPA with the OWOW 2.0 White Paper, which provides a framework for continuing to raise the bar in improving watershed management and health in the Santa Ana Watershed.

Expertise in Santa Ana River Watershed

- Integrated Regional Water Management
- TMDL & Water Quality Planning
- Stormwater Harvesting, BMPs and LID
- Ecosystem Restoration
- Urban Water Management Plans
- Water & Wastewater Treatment Design
- Recycled Water Planning & Design

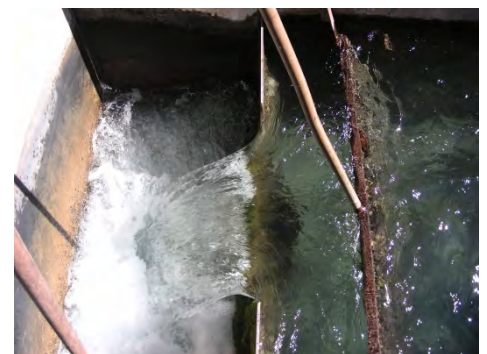


Recent Project Highlights

- 1) The 2009 Water Conservation Bill (SBX7-7) set forth a statewide road map to maximize the state's urban water efficiency and conservation opportunities. It requires water agencies to reduce urban per capita water use 20% by 2020. CDM Smith completed the 2010 UWMP for Cucamonga Valley Water District (CVWD), which included proposed demand management measures to meet their urban water use target. The UWMP also involved a reliability analysis for CVWD's water supply sources, which include canyon runoff from the San Gabriel Mountains, groundwater, imported water, and recycled water.
- 2) CDM Smith developed guidelines for preparation of water quality management plans (WQMPs) as required for new development and significant redevelopment projects in fourth term MS4 Permits for Orange, San Bernardino, and Riverside Counties. The MS4 Permit updates all required a prioritization of onsite low impact development (LID) best management practices (BMPs) that retain stormwater by infiltration, thus recharging underlying groundwater basins, or capture and onsite use, thus offsetting non-potable water demand. The technical guidelines developed by CDM Smith provide developers with specific criteria for selecting, evaluating, and sizing onsite LID BMPs that can provide a mutual stormwater harvesting benefit to water managers in the Santa Ana River Watershed.
- 3) For San Antonio Water Company (SAWCo), CDM Smith evaluated the potential to improve existing flow measurement and water collection facilities in San Antonio Canyon to more accurately quantify flow diversions and increase the volume of water that the SAWCo system could divert under extreme high flow periods in San Antonio Creek. Estimation of the potential increase in diversion required a hydrologic analysis of the canyon. The study recommended CCTV inspection on downstream transmission pipelines and consideration of repair or replacement to address capacity limitations of the system during high flow conditions.
- 4) CDM Smith prepared an Integrated Resources Plan (IRP) for Eastern Municipal Water District (EMWD) that explored over 30 different conservation and water supply options, including indirect potable reuse. The IRP developed an adaptive implementation road map for a preferred strategy that will increase reliability and water quality and reduce costs over the long-term.
- 5) U.S. Environmental Protection Agency (EPA) published a Climate Change Handbook for regional water planning practitioners prepared by CDM Smith. The handbook focused on incorporating climate change into the Integrated Regional Water Management (IRWM) process by:
 - Helping practitioners ask the right questions about climate change,
 - Providing tools to help inventory and quantify Greenhouse gas emissions from potential projects, and consider the emissions in decision-making, a
 - Providing links to tools, data and experienced implementers of climate change adaptation.



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