The Regional Water Facilities Optimization & Master Plan Update
A Road Map for Long-Term, Reliable & Cost-Effective Regional Water Supplies

The San Diego County Water Authority’s Regional Water Facilities Optimization and Master Plan Update guides new infrastructure development. Master plan revisions completed in 2014 identify and assess infrastructure and supply options needed to meet projected increases in regional water demands within the Water Authority service area through 2035.

Using the 2003 master plan as a foundation, the current version of the plan builds on successful efforts by the Water Authority and its 24 member agencies to ensure a safe and reliable water supply that supports the region’s $220 billion economy and the quality of life for 3.3 million residents.

The “New Normal”

The latest master plan – referred to as the 2013 master plan update based on when the process started – recognizes the “new normal” of lower projected water sales volumes, increased awareness of water conservation, and the benefits of diversifying the region’s water supply portfolio. The new normal also takes into account organizational changes within the Water Authority as it shifts from an emphasis on expanding water supply infrastructure to operating and maintaining regional water production and conveyance systems. Accordingly, the updated master plan assures optimal use of the region’s existing infrastructure while reexamining the timing and need for projects in the Water Authority’s Capital Improvement Program.

The Water Authority uses the 2013 master plan update to:

- Consider new infrastructure consistent with the latest water demand and supply projections
- Optimize use of the region’s existing infrastructure
- Evaluate cost-effective facility options
- Pursue an adaptive supply mix that recognizes future supply and demand uncertainties
- Integrate asset and energy management concepts into facility planning

Preparing for Uncertainty

Demand forecasts in the Water Authority’s Urban Water Management Plan provide the basis for assessing regional water demands in the Master Plan Update.

Given the potential impact of future management decisions by federal, state and local...
resource agencies, it’s impossible to pinpoint the availability of supplies over two decades. External factors that contribute to supply uncertainty include the Bay-Delta Conservation Plan (now called California WaterFix and EcoRestore), the long-term trajectory of Colorado River flows, and the potential development of new local supplies in San Diego County.

In light of these uncertainties, the 2013 master plan update adopted a “scenario planning” approach that includes a range of potential future water supply and demand settings to guide the consideration of new infrastructure.

Infrastructure Needs

The 2013 master plan update identified a number of necessary system improvements. Near-term concerns included potential pipeline capacity constraints for the delivery of untreated water supplies to local water treatment plants and reservoirs. Over the longer term, it showed that regional supply shortages could occur near 2030, depending on imported water supply reliability and the development of new local supplies. To meet water supply reliability goals, it’s also critical to keep the Water Authority’s aqueduct system fully operational.

2003 Master Plan

The 2003 Regional Water Facilities Optimization and Master Plan played a major role in enhancing regional water supply reliability. It called for:

- Construction of the Twin Oaks Valley Water Treatment Plant (completed 2008)
- Expansion of the San Vicente Reservoir (completed 2014)
- Continuation of high-priority pipeline relining projects (ongoing)
- Improvements to increase regional delivery capacity, eliminate capacity constraints and improve operational efficiency (ongoing)
- Integration of the Carlsbad Desalination Project into the regional conveyance system (completed 2015)

Member Agency Review

The Water Authority’s member agencies participated in the development and review of the 2013 master plan update, as well as recommendations to optimize the region’s water system. The agencies also provided significant input into the need for improved regional reservoir coordination to reduce peak delivery constraints and address the potential for shortages caused by multiple dry years.

Environmental Review

In addition to the 2013 master plan update, a Supplemental Program Environmental Impact Report and a Climate Action Plan were prepared concurrently to comprehensively address potential environmental and cumulative impacts of the master plan in compliance with the California Environmental Quality Act and the California Global Warming Solutions Act of 2006 (Assembly Bill 32). All three planning documents were approved by the Water Authority’s Board of Directors on March 27, 2014. The documents can be viewed at sdcwa.org/master-plan-documents.