2015
Urban Water Management Plan

Prepared by
SAN DIEGO COUNTY WATER AUTHORITY
Water Resources Department
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With assistance provided by the following:
Colorado River Program
Finance Department
General Counsel’s Office
General Manager’s Office
MWD Program
Operations and Maintenance Department
Public Outreach and Conservation Department

June 2016

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2.4 Projected Water Demands

Since the mid-1990s, the Water Authority has utilized an econometric model to develop its long-range M&I demand forecasts. This computer model is based on the U.S. Army Corps of Engineers Municipal and Industrial Needs (MAIN) model, which has over a quarter of a century of practical application and is used by many cities and water agencies throughout the United States. The Water Authority’s version of the model, known as CWA-MAIN, was modified by a consultant to reflect the San Diego region’s unique parameters. The CWA-MAIN model relates historic water demand patterns to variables, such as household income, consumer response to the price of water, and weather, to predict future M&I water demands. These datasets are compiled from various sources, including SANDAG, Water Authority member agencies, and the National Aeronautics and Space Administration. Under the terms of a 1992 Memorandum of Agreement (MOU) between the Water Authority and SANDAG, the Water Authority utilizes SANDAG’s official forecast, which is based on the general plans and policies of local land use jurisdictions, to project consumptive water demands for the region. This coordination ensures linkage between local jurisdictions’ general plans and the Water Authority’s projected water demands.

In October 2013, SANDAG’s Board approved the Series 13: 2050 Regional Growth Forecast for planning analysis purposes, also referred to as SANDAG Series 13 forecast. Two key refinements of the 2050 Regional Growth Forecast include integration of 2010 Census counts and an economic outlook that factors in the “Great Recession.” These refinements result in slower regional growth in the near term and lower water demands over the long-term planning horizon compared to SANDAG’s previous forecast. Lower forecasted water demands are directly linked to SANDAG’s smaller estimated growth in overall housing units—with approximately 18,500 fewer units projected over the 2020–2040 timeframe compared to the previous Series 12 forecast. Additionally, the mix of new housing units is more heavily weighted toward multi-family structures that traditionally use less water than single-family units. The demographic and economic projections contained in SANDAG’s Series 13 forecast (that is, housing units, household density, household size, and employment counts) were incorporated into the CWA-MAIN model. It should be noted that SANDAG does not forecast land use on MCB Camp Pendleton. Therefore, demand projections for MCB Camp Pendleton were developed outside of the CWA-MAIN model and were based on projections provided by base staff.