



## *Santa Margarita Water District*

# Supporting Analysis and Calculations for Water Supply Reliability Certification

**June 2016**

Santa Margarita Water District (“District”) is a retail water agency located in southern Orange County. The District is Orange County’s second largest water district providing water and wastewater treatment services to more than 150,000 people within an area of over 60,000 acres. The District is a member agency of the Municipal Water District of Orange County (“MWDOC”), the regional water wholesale agency for Orange County. MWDOC is a member agency of the Metropolitan Water District of Southern California (“MET”) and ultimately, it is MET’s water supply analysis that drives the District’s Water Supply Reliability Certification process under the Extended Emergency Conservation Regulations (“Emergency Regulations”).

The District’s 2013/2014 average potable demand is 28,726 Acre-Feet (AF). This potable demand can be met in 2019, assuming a dry three year hydrology, based on the MET and MWDOC imported water supply analysis conducted for the Emergency Regulations. The MWDOC imported water supply projections can be found at [www.mwdoc.com/state-regs](http://www.mwdoc.com/state-regs) and MET’s wholesale water supply analysis is available [online](#).

The District is currently 100% dependent on imported water supplies to meet potable demands but has made significant investments in recycled water supply and storage in addition to short-term conservation measures and long-term water use efficiency. These investments in sustainable supply development and demand management are highlighted below:

### Recycled Water

Worksheet 1 (Step 2 of Water Supply Reliability Certification and Data Submission Form) does not recognize investments made in expanding recycled water supplies through conversions. Converting potable demands to recycled water is a sustainable, drought-proof, and permanent solution. Despite indicating an imported potable demand of 28,726 AF in 2019, the District plans to offset this demand by 2,500 AF through recycled water conversions of dedicated irrigation accounts. This represents approximately a 9% permanent reduction from the 2013/2014 average potable demand. Table 1 highlights the District’s planned recycled water conversions over the next three years:

Table 1 – Planned Recycled Water Conversions

2017	2018	2019
1,500 AF	400 AF	600 AF

The District is also adding seasonal storage for recycled water to maximize off-season generation of recycled water. Design work has started on Trampas Reservoir that is being designed to hold 5,000 AF of non-potable water at a cost that will exceed \$30 million. The District is working towards eliminating ocean discharge of treated wastewater. This goal is dependent on the development of off-season recycled water storage in addition to a regional indirect potable reuse project.

#### Water Shortage Contingency Plan

The District has a progressive [Water Shortage Contingency Plan](#) that includes year-round water waste restrictions addressed in the State’s Emergency Regulations in addition to prohibitions based on escalating water shortage levels. In July 2014, the District declared a Conservation Stage Two, which is designed to produce water savings of up to 20%. Watering restrictions of 3 days per week in summer and 1 day per week in winter are enacted in a Conservation Stage Two.

On June 17, 2016, the District’s Board of Directors, by Resolution, decided to remain in a Conservation Stage Two due to continued drought conditions. This reaffirms the District’s commitment to conservation and continues the momentum gained in 2015 for conservation during an unprecedented drought.

#### Long-Term Water Use Efficiency

The District has encouraged water use efficiency among its customers for over 20 years. In July 2014, the District developed a formal Water Use Efficiency Plan to serve as a guide to ensuring water reliability in the future through efficiency programs as well as public awareness and education campaigns. To date, the District is ahead of schedule in compliance with the State’s 20x2020 per capita reduction goal (152 GPCD today versus the 2020 Target of 169 GPCD) and has implemented efficiency programs to maintain and further reduce the District’s per capita water use efficiency. Several important efficiency programs and activities include:

- *Budget-Based Rates:* The District implemented a budget-based tiered rate structure in January 2016. All single-family residential customers and dedicated irrigation accounts (approximately 40,000 accounts) are set up on budgets based on household size and irrigable area. Multi-family residences are billed on a conservation-based tiered rate.
  - *CIMIS Stations:* The District, in partnership with CA Department of Water Resources, established two brand new weather stations as part of the CIMIS network (Station #241 and #245). These stations provide the daily ET values for the District’s budget-based rate structure and are available for all to use.
- *WaterSmart Software:* The District contracts with WaterSmart Software Inc., to provide all 55,000 customers with an online customer water use information portal.

This portal provides water use in context with drought goals and efficient customers in addition to providing customer-specific water saving recommendations. The majority of customers are also sent water reports autonomous from water bill to further increase customer engagement and awareness.

- *Water Loss Audit:* The District just finished a comprehensive water loss audit and water loss control program in June 2016. The firm Water Systems Optimization was brought in to help develop this program for the District. The results of the audit showed that the District maintains an extremely efficient distribution system with non-revenue water representing only 4.9% of the total volume of water supplied.
- *Staffing:* The District dedicates three full-time employees to water use efficiency. Staff manages efficiency programs, administers the District's conservation ordinance, performs customer site surveys, and assists in other District activities related to customer service and education.
- *Turf Removal:* The District participates and contributes supplemental funding to several regional rebate programs. The regional turf removal program was quite successful in terms of program participation in 2014 and 2015. To date, through this program, the District has removed over 1,600,500 square feet of turf (~37 Acres).
- *Design Studio:* An innovative water use efficiency program the District has implemented is its SustainaBlue Design Studio. This program provides District customers free landscape designs to help convert turf-dominated landscapes into aesthetically-pleasing low water use landscapes. Customers are able to meet with individually with a landscape designer and come away with a custom landscape plan, plant palette, and maintenance resources. Over one hundred customers have participated in this program since it began in fall 2015. This is the capstone program this is part of the District's landscape programs and resources available at [www.SMWD.com/Landscape](http://www.SMWD.com/Landscape).