



### **3 MANAGEMENT PLAN RECOMMENDATIONS AND GOALS**

The 2018 Annual Report included twelve recommended activities proposed for 2019 within the West San Jacinto Groundwater Management Area (Management Area). The status of the recommendations and the proposed goals for 2020 are outlined below.

#### **3.1 Continue the Groundwater Quality and Groundwater Level Monitoring Programs**

During 2019, 98 wells were sampled in the Management Area to assess groundwater quality. Groundwater levels were measured twice annually, spring and fall, to provide a time-series dataset of groundwater elevations, hydrologic conditions, and direction of groundwater flow. EMWD field personnel monitored spring and fall groundwater levels in 136 and 128 wells, respectively in 2019. Water levels were reported for an additional 361 wells by March Air Reserve Base (MARB) for Spring 2019. These data were compiled and entered into the Regional Water Resources Database (RWRD) and subsequently utilized in the 2019 analyses and calculations.

Continuation of the Groundwater Quality and Groundwater Level Monitoring Programs are recommended to remain in effect for 2020. Available wells are to be sampled and measured for groundwater levels to provide a comprehensive dataset of groundwater elevations, direction of flow, and groundwater quality. In accordance with the monitoring programs, well owners will be provided copies of groundwater quality analyses and groundwater level measurements on an annual basis.

#### **3.2 Continue the Groundwater Extraction Monitoring Program**

A total of 58 major extraction wells within the Management Area were monitored under the 2019 extraction program. These wells were selected for the Program because annual pumping exceeded 25 acre feet (AF). Groundwater extractions were metered in 44 wells, while extractions from 14 wells were estimated by EMWD staff. Estimates for extraction wells are based on a property's acreage, crops, and/or number of livestock present. Additionally, EMWD checks metered extractions against the Annual Notices of Recordation of Groundwater Extraction filed by the well owner and reported to the State Division of Water Rights. This extra step provides a means to identify variances between estimates and recordations of metered wells.

It is recommended that the Groundwater Extraction Monitoring Program continue in 2020. It is believed that all significant groundwater extraction wells within the Management Area will continue to be accounted for, and the resulting extraction figures should be the most comprehensive figures available. However, groundwater extractions for well owners not

participating in the program are estimated, and estimation methods must be continually refined due to potentially changing land use.

### **3.3 Continue the Inactive Well Capping/Sealing Program**

Under the Inactive Well Capping/Sealing Program, inactive wells and open casings (i.e., wells not equipped for pumping) are capped and/or sealed by EMWD field staff at no expense to the well owner. The capped wells may be subsequently used as monitoring wells to collect water level and/or water quality samples. During the 18 years the Program has been in existence, 65 wells in the Management Area have been capped. In 2019, two wells (Nutralite 07 and NWC-11) located in the Lakeview Groundwater Management Zone were capped under this Program.

In 2020, EMWD will continue the Inactive Well Capping/Sealing Program to protect groundwater supplies in the Management Area from surface contamination. Open casing wells represent a potential direct pathway to groundwater contamination. Open casing wells are particularly vulnerable to the dumping of oil and waste products, as well as surface flows containing pollutants. Wells with larger casing diameters also pose a hazard that can trap animals and small children, especially once the area surrounding the wells becomes overgrown and obscured.

In cases where wells will not be capped, EMWD continues to coordinate with developers and the County of Riverside to identify and locate wells for proper abandonment and destruction within EMWD's service area.

### **3.4 Continue Providing Annual Reports to Well Owners Participating in the Groundwater Monitoring Programs**

Annual Well Owner's Reports were provided to those well owners participating in the Groundwater Monitoring Programs. Participants were assisted with the filing of their Annual Notices of Recordation of Groundwater Extraction with EMWD and subsequent reporting to the State Division of Water Rights. First Notice forms were provided to owners of new wells or wells that were not previously recorded.

In June 2019, well owners participating in the monitoring programs were provided with copies of the 2018 water quality analyses, water level measurements, and annual groundwater extractions for each well they own within the Management Area.

The activities associated with the Annual Well Owner's Reports are scheduled to continue in 2020.

### **3.5 Continue Quarterly Reports to the Advisory Committee**

Reports documenting activities within the Management Area are sent to the Advisory Committee members on a regular basis in-lieu of holding more frequent informational meetings. At the November 23, 2010 meeting, the Committee agreed that status reports to the Advisory Committee will continue, but the frequency will change from monthly to

quarterly. The Quarterly Reports prepared in 2019 are included in Chapter 8, Section 8.1. EMWD will submit quarterly reports to the Advisory Committee in 2020.

### **3.6 Continue to Pursue Potential State or Federal Funding Sources for the Benefit of the Management Area**

Whenever possible, EMWD pursues potential State and Federal funding sources for construction project subsidies, studies, and groundwater management. In 2019, EMWD applied for a number of grant opportunities (7) such as federal funds through the U. S. Bureau of Reclamation, Proposition 68 funding from California Department of Water Resources, and Proposition 1 funding from the State Water Regional Control Board.

EMWD will continue this practice to pursue potential state and federal funding sources in 2020.

### **3.7 Continue EMWD's Groundwater Salinity Management Program**

As part of its effort to manage the salinity in the Management Area, EMWD supported the following projects in 2019:

#### **3.7.a Perris Basin Desalination Program**

During 2019, the Menifee and Perris I Desalters produced 3,306 AF and 4,236 AF of potable water for the Management Area, respectively, for a total of 7,542 AF. Additional details on this program is provided in Chapter 4, Section 4.7.a.

The Menifee and Perris I Desalters will remain in operation in 2020.

#### **3.7.b Perris II Desalter**

EMWD is currently constructing a third brackish groundwater desalination facility in the Management Area. Construction of the Perris II desalter (5.4 MGD) is anticipated to be completed in April 2021.

EMWD purchased property for the purpose of installing four new production wells which will provide additional brackish water supply to the new desalter. In 2016, equipping of Well 93 (Nuevo/Menifee) was completed and the well was placed into service in June 2016. Wells 95 (13<sup>th</sup>/Reservoir) and 96 (Santa Rosa) were drilled, tested and equipped in 2017 and placed into service in 2018. Equipping of Well 94 (12<sup>th</sup>/Reservoir) was completed in 2019 and placed into service on October 2019. Additional details on this project are provided in Chapter 4, Section 4.7.b.

#### **3.7.c Iron and Manganese Removal Facilities**

EMWD was awarded grant funding from the California Department of Public Health in the amount of \$10 million for the construction of an iron and manganese removal facility. Construction was completed in 2013 and the facility began operation in 2014, which has resulted in a number of inactive desalter wells to re-enter active service. Additional details on these facilities is provided in Chapter 4, Section 4.7.c.

### 3.7.d Desalination Recovery Enhancement and Brine Concentrate Management

EMWD aims to increase the recovery of potable water for the Groundwater Salinity Management Program and is currently performing pilot-testing of new technologies to further concentrate the brine generated from the desalters.

Additional details on these projects may be found in Chapter 4, Section 4.7.

### 3.8 **Continue Operation of the North San Jacinto Water Supply Initiative**

EMWD initiated the North San Jacinto Water Supply Initiative in cooperation with local dairy farmers to reduce groundwater production by providing raw water via a pipeline completed in 2008.

In 2019, EMWD served 273 AF of raw water to the dairies, of which 117 AF was delivered within the Management Area. EMWD will continue to serve raw water to the dairies under this initiative in 2020.

Further information on the North San Jacinto Water Supply Initiative can be found in Chapter 4, Section 4.6.a.

### 3.9 **Support EMWD's Participation in Regional Activities**

#### 3.9.a Basin Monitoring Task Force

As an outgrowth of the TIN/TDS Task Force, the agencies responsible for implementing the Basin Plan Amendments formed The Basin Monitoring Task Force. The Santa Ana Watershed Project Authority (SAWPA) was identified to administer/facilitate the Task Force. EMWD participates on the Task Force and attended meetings during 2019.

As part of the agreement to adopt the 2004 Basin Plan Amendment (Resolution No. R8-2004-0001), affected parties are required to complete a recomputation of ambient water quality for all groundwater management zones within the Santa Ana River Watershed once every three years. The latest report was completed in 2017 and is titled "*Recomputation of the Ambient Water Quality in the Santa Ana Watershed for the Period of 1996 to 2015.*" The primary objective of this project is to compute current-ambient groundwater quality for TDS and nitrate-nitrogen in all 40 groundwater management zones in the Santa Ana River watershed. The Task Force also updated the Waste Load Allocation model for the Santa Ana River Watershed and projected allocations for the next 20 years. An addendum to the 2008 Santa Ana River Wasteload Allocation Model Report was completed in 2015.

#### 3.9.b Total Maximum Daily Loading Task Force

Lake Elsinore and Canyon Lake were identified in 1994, 1998, and 2002 by the California Regional Water Quality Control Board, Santa Ana Region (Regional Board) on the Clean Water Act (CWA) Section 303(d) list of impaired waters for nutrients. In 2000, the Regional Board initiated the process to develop Total Maximum Daily Loads (TMDL) for nutrients for both Lake Elsinore and Canyon Lake (LECL), as required by the federal Clean Water Act and California's Nonpoint Source Pollution Control Plan. This process included the formation

of the LECL TMDL Task Force. EMWD participates in the LECL TMDL Task Force, which is comprised of local stakeholders, such as representatives from local cities, Riverside County, agricultural and dairy interests, environmental groups, as well as the regulatory community, interested in water quality issues within the San Jacinto Watershed.

In 2016, a Comprehensive Monitoring Work Plan was issued to include a focused reassessment of current conditions and establish an updated monitoring framework to better assess water quality trends towards meeting the existing TMDL numeric targets. During 2019, the Task Force continued to make progress on the task elements required by the Nutrient TMDL for LECL. The group continued with the monitoring program for Lake Elsinore and Canyon Lake (lakes) and conducted studies of the in-lake processes, watershed, and conducted compliance monitoring. Nutrient reduction actions were taken to include lake stabilization efforts, fish management strategies, and the addition of alum to bind nutrients in Canyon Lake. Efforts have been initiated to evaluate the current status and historic trends leading towards achievement of nutrient TMDL targets in the lakes, determine the degree of influence of natural background sources, and distinguish and quantify external pollutant loading from upstream watersheds including agricultural, urban, and open space sources.

### 3.9.c Western Riverside County Agricultural Coalition

The Western Riverside County Agricultural Coalition (WRCAC) is a 501(c) 3 non-profit organization comprised of dairy and agricultural operators interested in environmental issues affecting the agricultural community in the San Jacinto Watershed. WRCAC is currently the representative for agricultural and dairy interests on the Lake Elsinore and Canyon Lake Total Maximum Daily Loading (LECL TMDL) Task Force and has participated in this capacity since 2005.

WRCAC has recently completed an additional Total Maximum Daily Load (TMDL) cycle for both dairy operators and agricultural operators; continues work on a USDA Conservation Innovation grant; and is actively participating in the revision to the TMDL process for dairy and agricultural operators on the Lake Elsinore/Canyon Lake TMDL Task Force.

Areas of emphasis for 2019 included, but were not limited to, the following:

1. Continued assistance to all dairy and stakeholders
2. TMDL revisions review and making certain agriculture and dairy source data is correct, provide assistance
3. AgNMP revise after TMDL revision is complete
4. Pursue grant opportunities as available
5. Evaluate AWS Technology on regional basis
6. Concentrated Animal Feeding Operation (CAFO) permit 2019 – TMDL component

### 3.9.d San Jacinto River Watershed Council

The San Jacinto River Watershed Council has been closed permanently.

### 3.9.e March Air Reserve Base Groundwater Modeling Effort

During 2019, EMWD and MARB continued to voluntarily participate in a data exchange program to fully support the goals of each agency. Data exchange will continue in 2020.

### 3.9.f City of Perris Sale of Water System

On November 7, 2017, the City of Perris voters voted yes to Measure H that allowed the city to sell the water systems to Liberty Utilities (Park Water) Corp. On May 9, 2018, Liberty Utilities (Park Water) Corp. filed Application No. 18-05-011 with the California Public Utilities Commission requesting authority to purchase the City of Perris's Municipal Water Systems.

### **3.10 Continue the Implementation of EMWD's Key Well Program**

EMWD initiated the implementation of a Key Well Program to increase the precision and efficiency of the groundwater monitoring effort. Areas of Key Well deficiencies were identified and efforts to locate parcels for new monitoring wells in these areas continued in 2019. In addition, potential sources of funding for the installation of automated data-logging transducers in existing Key Monitoring Wells are currently being identified.

It is anticipated that during 2020, the San Jacinto Watershed Groundwater Model will continue to be utilized to confirm and/or identify areas of Key Well deficiencies.

### **3.11 Utilization of the San Jacinto Watershed Groundwater Model**

EMWD has completed its efforts to update the existing San Jacinto Watershed Groundwater Model. Significant revisions were made to the geometry of the conceptual model. Calibration of the model by a consultant was completed in 2015. During 2017, predictive scenarios were developed for the March Air Reserve Base Groundwater Recovery Program. The groundwater model was also used by the Department of Water Resources to simulate underflow below the Perris Dam. In 2019, the groundwater model was also used for development of the San Jacinto Groundwater Basin Groundwater Sustainability Plan and the Perris North Basin Groundwater Contamination Remediation and Prevention Program.

### **3.12 Reconfiguration of West San Jacinto Advisory Committee to the Technical Advisory Committee**

In 2017, EMWD became the GSA for the western portion of the San Jacinto Groundwater Basin. The area encompasses the cities of Moreno Valley, Perris and Menifee, and the surrounding unincorporated communities. The West San Jacinto Groundwater Sustainability Plan will replace the AB3030 groundwater management plan. The West San Jacinto Advisory Committee will be reconfigured to form a West San Jacinto GSA Stakeholder Group that will include members of the West San Jacinto Advisory Committee as well as additional Basin Stakeholders. Stakeholder Advisory Group meetings were initiated on June 26, 2019 and continued on a quarterly basis.