



1 EXECUTIVE SUMMARY

The West San Jacinto Groundwater Management Area 2020 Annual Report (Annual Report) was prepared by Eastern Municipal Water District (EMWD) in accordance with the West San Jacinto Groundwater Basin Groundwater Management Plan (EMWD, 1995 [Management Plan]). The reporting period extends from January 1, 2020 through December 31, 2020.

The West San Jacinto Groundwater Management Area (Management Area) is located in the western portion of Riverside County within the San Jacinto River Watershed and includes the cities of Moreno Valley, Menifee, and Perris, as well as the unincorporated areas of Lakeview, Nuevo, and Winchester, as presented in Chapter 7, Figure 7-1. The Management Area covers approximately 256-square miles (over 164,200 acres) and has been divided into six (6) groundwater management zones as shown in Chapter 7, Figure 7-2, encompassing water bearing sediments (aquifer materials) as well as essentially non-water bearing areas such as the Lakeview Mountains, the Bernasconi Hills and Mount Russell Range around Lake Perris, the Double Butte area near Winchester, and areas in the extreme northern and western portions of the EMWD.

1.1 Monitoring Programs Summary

EMWD oversees the Monitoring Programs within the Management Area including: groundwater quality, groundwater level, groundwater extraction, and inactive well capping and sealing programs. Other groundwater related data is also collected in support of these programs including: recycled water use, imported water use, precipitation, and additional activities affecting the entire Management Area and/or specific groundwater management zones. Participation in the Groundwater Monitoring Programs is voluntary for well owners. Detailed information about the Monitoring Programs can be found in Chapter 4.

During the 2020 Groundwater Quality Monitoring Program, water quality samples were collected from a total of 96 wells in the Management Area. Ninety-five (95) samples were analyzed for total dissolved solids (TDS). Ten (10) of the ninety-five (95) samples analyzed for TDS reported values below the secondary maximum contaminant level (MCL) of 500 milligrams per liter (mg/L). Ninety-six (96) samples were analyzed for nitrate as nitrogen (NO₃-N). Eighty (80) of the ninety-six (96) samples analyzed for nitrate as nitrogen (NO₃-N) reported values below the primary MCL of 10 mg/L for NO₃-N. The highest TDS concentration in the Management Area was 23,000 mg/L reported for well EMWD-Skiland 02, located in the Perris South groundwater management zone and the lowest was 239 mg/L reported for well Fish and Game West, located in the Lakeview groundwater management zone. The highest NO₃-N concentration measured in the Management Area was 25.1 mg/L reported for

well EMWD 46 Edgemont 02, located in the Perris North groundwater management zone and the lowest sample concentrations were “non-detects” for wells located in the Lakeview portion of the Lakeview/Hemet North, Perris North, Perris South, and San Jacinto Lower Pressure groundwater management zones.

The Groundwater Level Monitoring Program includes collecting groundwater levels in the Spring and Fall of each year. During Spring 2020, EMWD measured static depth-to-water in 138 wells in the Management Area. During the 2019-2020 calendar years, 130 wells were measured for static depth-to-water in the Spring. Twenty-two (22) of the 130 wells measured during both Spring 2019 and Spring 2020 showed a depth-to-water increase of more than five (5) feet (ft) from the previous year (Spring 2019). Two (2) of the 130 wells measured during both Spring 2019 and Spring 2020 showed a depth-to-water decrease of more than 5 ft from the previous year (Spring 2019).

During fall 2020, EMWD measured static depth-to-water in 135 wells in the Management Area. During the 2019-2020 calendar years, 118 sets of wells were measured for static depth-to-water in the Fall. Twenty-one (21) of the 118 sets of wells measured during Fall 2020, showed a depth-to-water increase of more than five (5) feet (ft) from the previous year (Fall 2019). Six (6) of the 118 sets of wells measured during Fall 2020 showed a depth-to-water decrease of more than 5 ft from the previous year (Fall 2019).

March Air Reserve Base also performs groundwater elevation monitoring in the Management Area. The data is summarized in the 2019-2020 Annual Monitoring Report, CG049 Basewide Groundwater Monitoring Program, Operable Unit 5.

Groundwater extraction in the Management Area totaled 19,858 acre feet (AF) in 2020. A total of 59 wells were monitored as part of the Groundwater Extraction Monitoring Program in 2020. Of the 59 wells, 47 (80%) were metered and 12 (20%) were estimated by EMWD. Of the 19,858 AF of groundwater extraction, 15,387 AF (77%) are metered and 4,471 AF (23%) were estimated by EMWD.

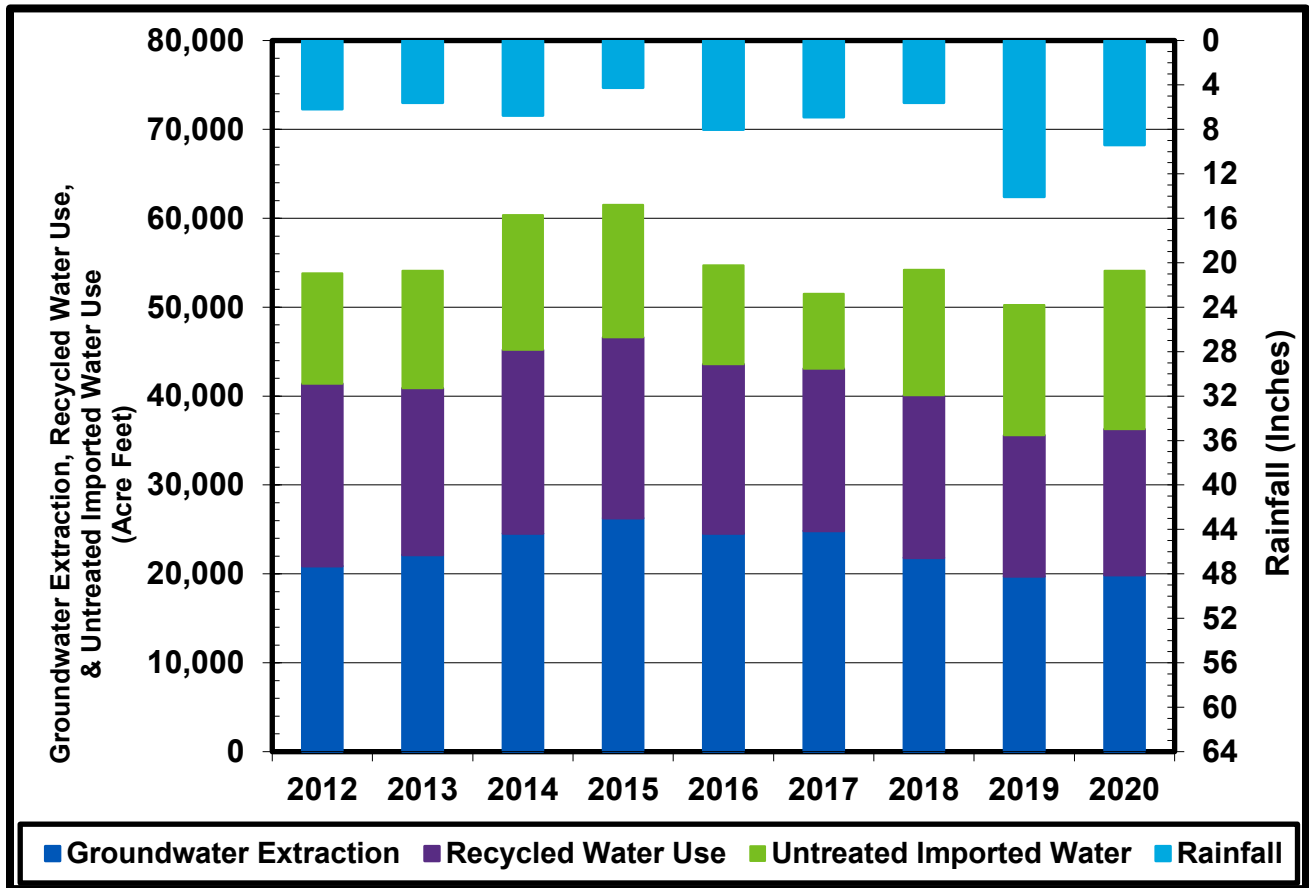
In 2020, recycled water usage accounted for 16,441 AF of demand in the Management Area. Fifty-four percent (54%) of the recycled water sold in the Management Area was used for agricultural irrigation, twenty-six percent (26%) was utilized for municipal and industrial usage, and the remaining twenty-one percent (21%) was used for irrigated landscaping, golf courses, construction, and habitat creation.

In 2020, imported raw water usage accounted for 17,811 AF of demand in the Management Area. Of the total imported untreated water, approximately 17,621 AF was imported State Water Project (SWP) water and approximately 191 AF originated from the Colorado River Aqueduct for use within the Management Area.

The Riverside County Flood Control and Water Conservation District maintains rainfall data for five stations in the Management Area. Precipitation in 2020 was 9.41 inches based on measurements from the Lake Perris station (Station 151), which is just below the 31-year

long-term average (1989-2021) of approximately 9.43 inches per year for the area. Figure 1-1 displays a summary of groundwater extraction, recycled water use, imported water use, and rainfall in the Management Area during 2020.

Figure 1-1: Groundwater Extraction, Recycled Water Use, Imported Water Use and Rainfall in the Management Area



Inactive wells and wells with open casings create the potential for groundwater contamination and may present a hazard for small children and animals. EMWD initiated the Inactive Well Capping/Sealing Program in 2000. In this program, inactive wells and wells which are no longer equipped for pumping are capped at no charge to the well owner. If feasible, a capped well will be added to the Groundwater Quality and Groundwater Level Monitoring Programs, thereby increasing the data points available for analysis. During 2020, eight wells (EMWD 39 Robinson LaMirada, EMWD 52 Follico, EMWD B8 Perris RWRf Open Casing, EMWD Trumble MW-1, EMWD Trumble MW-3, Perris Properties Ellis, Perris Properties San Jacinto, and Smith C Mapes OC) were capped in the Management Area as part of the Inactive Well Capping/Sealing Program. Seventy-five (75) wells have been capped in the Management Area since this program has been in existence.

1.2 Recommendations and Budget Summary

Chapter 3 presents the recommendations and goals of the Management Plan for the next year. EMWD's estimated 2021 budget totals \$330,080. More details on the budget can be found in Chapter 5. Recommendations for 2021 Management Plan included:

- Continue the Groundwater Quality and Groundwater Level Monitoring Programs
- Continue the Groundwater Extraction Monitoring Program
- Continue the Inactive Well Capping/Sealing Program
- Continue to provide annual reports to well owners participating in the Groundwater Monitoring Programs
- Continue to pursue potential state or federal funding sources for the benefit of the Management Area
- Continue EMWD's Groundwater Salinity Management Activities, including
 - Perris Basin Desalination Program
 - Perris II Desalter and initiation of the monitoring described in the Perris II Reverse Osmosis Treatment Facility Monitoring and Reporting Plan
 - Iron and Manganese Removal Facilities
 - Brine Concentrate Management
- Continue the Operation of the North San Jacinto Water Supply Initiative
- Continue EMWD's participation in regional activities
 - Basin Monitoring Task Force
 - Total Maximum Daily Loading Task Force
 - Western Riverside County Agricultural Coalition