



4 Current Water Demand

The municipal water supply in the Hemet/San Jacinto Groundwater Management Area (Management Area) is primarily the responsibility of four entities: Eastern Municipal Water District (EMWD), Lake Hemet Municipal Water District (LHMWD), the City of Hemet, and the City of San Jacinto. In addition, private groundwater producers and the Soboba Band of Luiseño Indians extract groundwater for their respective uses. Groundwater, imported water (treated and raw), surface water, and recycled water are the primary sources of water supplies to the Management Area. Table 4-1 summarizes the 2018 water demands. Chapter 9, Figure 9-4 shows the boundaries of the major water purveyors in the Management Plan area.

4.1 Groundwater

Groundwater is, and historically has been, the primary source of supply in the Management Area. In addition to the Soboba Tribe and other private producers, EMWD, LHMWD, and the Cities of Hemet and San Jacinto produce groundwater from various areas of the Canyon, San Jacinto Upper Pressure, and Hemet North and South groundwater management zones. Groundwater management zones are shown in Chapter 9, Figure 9-2.

The City of San Jacinto extracts groundwater from the San Jacinto Upper Pressure groundwater management zone, and the City of Hemet extracts groundwater from both the San Jacinto Upper Pressure and Hemet South groundwater management zones. EMWD and LHMWD both extract groundwater from the Canyon, San Jacinto Upper Pressure, and Hemet South groundwater management zones. None of the municipal producers currently extract groundwater from the Hemet North portion of the Lakeview/Hemet North groundwater management zone. Private producers extract groundwater from all four groundwater management zones and the Soboba Tribe extracts from the Canyon and San Jacinto Upper Pressure groundwater management zones.

During 2018, over one-half of the 40,006 acre feet (AF) of groundwater produced in the Management Area was produced from the San Jacinto Upper Pressure groundwater management zone (25,960 AF), with lesser amounts produced from the Canyon, Hemet South, and Hemet North groundwater management zones. EMWD also produced and delivered approximately 80 AF from the San Jacinto Upper Pressure groundwater management zone to the Soboba Tribe and this delivery has been accounted for in the Tribe's demand.

4.2 Imported Water

EMWD is one of the twenty-six member agencies of the Metropolitan Water District of Southern California (MWD), and has access to imported water directly from MWD. EMWD imports and sells State Project Water (SPW) from northern California and Colorado River Water (CRW) via the Colorado River Aqueduct both as raw water and treated water.

Table 4-1: 2018 Water Demand Estimates
 All values rounded to nearest Acre Feet

2018	EMWD	LHMWD	City of Hemet	City of San Jacinto	Private Pumpers	Soboba Tribe	Totals	
Groundwater	Canyon	1,654	2,832	0	0	1,007	1,171	6,663
	SJUP	4,713	5,686	161	2,870	6,637	272	20,340
	Hemet North	0	0	0	0	2,662	0	2,662
	Hemet South	0	236	2,014	0	2,471	0	4,721
	IRRP Wells	3,850	26	1,574	170	0	0	5,620
	Total	10,217	8,780	3,749	3,040	12,777	1,443	40,006
Surface Water (SJ River)	0	253	0	0	0	0	253	
In-Lieu Recharge	0	0	0	0	0	0	0	
Imported Water (Treated by EMWD)	1,854	0	0	0	0	0	1,854	
Imported Raw Water	180	5,867	0	0	175	0	6,222	
Recycled Water	0	0	0	0	10,474	0	10,474	
In-Lieu Recycled Water	0	0	0	0	2,689	0	2,689	
Totals	12,251	14,900	3,749	3,040	26,115	1,443	61,498	

Note – All values are rounded to nearest Acre Feet, totals may deviate slightly from the sum of the rounded values.

Treated MWD water can reach the Management Area via EMWD’s Homeland bypass and the Simpson pumping plant, which results in blends of imported water and groundwater from wells west of the Management Area due to the complexity of the distribution system. SPW enters the EMWD system at the Mills Filtration Plant (MWD turnout EM-12). CRW can enter the EMWD system through either the Perris Water Filtration Plant (EM-4) or from Lake Skinner via the Auld Road pumping plant (EM-17). Untreated CRW enters the EMWD system at the EM-1 turnout and is delivered to the dairy participants along Ramona Expressway. A separate system for imported raw or untreated SPW (EM-14) is maintained for the purpose of raw water feed to EMWD’s Hemet Water Filtration Plan (HWFP), groundwater recharge, and some agricultural customers in both EMWD’s and LHMWD’s service areas. Under emergency conditions, EM-14 can receive CRW, but this water is not recharged into the groundwater basins.

4.2.a Hemet Water Filtration Plant

Faced with the challenge of developing additional potable water supply sources, EMWD constructed the HWFP in 2006, located on a 4.5 acre parcel at the intersection of Kirby Street and Commonwealth Avenue in Hemet. The plant can receive raw SPW from Lake Silverwood and Lake Perris, or raw CRW from the Colorado River Aqueduct, through the existing EMWD Warren Road Pump Station (EM-14). Once treated, the water enters EMWD's potable water distribution system.

The HWFP, with a capacity of 12 million gallons per day (MGD), or 13,400 acre feet per year (AFY), meets the current demand as described in EMWD's Master Plan. Due to increasingly large projected demands for the area, the plant was constructed with the capability of being expanded to 44,800 AFY.

The HWFP has to be operated at a constant rate. Therefore at times, when demand in the Management Area is less than plant production, water treated at the HWFP leaves the Management Area. Watermaster requires the amount of treated water leaving the Management Area be less than the amount produced by the HWFP. During 2018, the HWFP treated 4,326 AF of water of which 2,472 AF was exported outside the Management Area, and the remaining 1,854 AF was delivered to the customers in the Management Area.

4.2.b North San Jacinto Water Supply Pipeline

In addition to the EM-14 imported water delivery system in the Management Area, EMWD has a system (EM-1), which provides raw (untreated) CRW purchased from MWD to six dairy property owners in the Management Area. In turn, the property owners have agreed to reduce their groundwater extraction by substituting the imported raw water for groundwater extraction. A surcharge for every acre foot of water used, regardless of whether it is the imported raw water or groundwater, is paid by each property owner to support a portion of this system's capital cost which includes a pipeline, a pump station, and a connection to the MWD system.

Both the property owners and Management Plan participants benefit. The property owners benefit in that the project reduces drawdown of groundwater levels and provides water supply reliability, thereby maintaining existing business practices. The Management Plan benefits since groundwater extractions are reduced, which is equivalent to an equal amount of recharge to the basin, which is the most beneficial use of this vital resource and a cost-effective method of increasing local supply. The decreased groundwater extraction helps to stabilize over-drafted areas in the Lakeview/Hemet North and San Jacinto Upper Pressure groundwater management zones. It should be noted that CRW has higher salinity, which may have negative impact on the water quality of the Management Area.

During 2018, the North San Jacinto Water Supply Pipeline served 322 AF of raw water to the dairies, with 175 AF of that amount served within the Management Area.

4.3 Recycled Water

Recycled water in the Management Area is generally supplied by the San Jacinto Valley Regional Water Reclamation Facility (SJV RWRf) but can also be supplied from the Winchester Ponds, Moreno Valley Regional Water Reclamation Facility (MV RWRf), or the Perris Valley Regional Water Reclamation Facility (PV RWRf).

The SJV RWRf is a 256-acre wastewater treatment facility that serves the population living within its 167-square-mile service area. The SJV RWRf has a current capacity of 14 MGD with ultimate expansion at the plant envisioned to be 27 MGD. The water is recycled for use by agricultural and landscape customers within the Management Area as well as other areas such as the 10,000-acre San Jacinto Wildlife Area adjacent to Lake Perris. Recycled water from this plant also sustains the Hemet/San Jacinto Multipurpose Constructed Wetlands, an approximately 50-acre site adjacent to the plant constructed to provide additional treatment, multi-species habitat, environmental enhancement, education, and other public benefits.

The Winchester Ponds are located on an approximately 160-acre site on Simpson Road in the unincorporated community of Winchester. They are used for storage of recycled water from the Perris and Temecula Valley RWRfs. The water is sold and transported to various users within EMWD's service area including customers within the Management Area.

The PV RWRf and the MV RWRf can, based on operational necessity, supply recycled water to users in the Management Area via a pipeline through Lakeview.

During 2018, recycled water usage in the Management Area totaled 13,163 acre feet. The total recycled water generated at the SJV RWRf in 2018 was 8,366 AF.

4.3.a Recycled Water In-Lieu Project

This project supplies recycled water from the SJV RWRf for agricultural irrigation in-lieu of pumping from the San Jacinto Upper Pressure groundwater management zone. The project allows for delivery of up to 8,540 AFY of recycled water to Rancho Casa Loma and the Scott Brothers Dairy (known as In-lieu Project Participants). The project construction cost was jointly funded by EMWD, LHMWD, and the Cities of Hemet and San Jacinto. Agreements were executed with Rancho Casa Loma and Scott Brothers Dairy in 2008 that set limits on groundwater production in return for a low rate for recycled water purchases. The EMWD recycled water rate due by the In-lieu Participants is subsidized by the Watermaster.

During 2018, 3,499 AF and 798 AF of recycled water was delivered to Rancho Casa Loma and Scott Brothers Dairy respectively, for a total of 4,297 AF of recycled water. The in-lieu portion of this delivery was 2,689 AF.

4.4 Surface Water

The Management Area is drained by the San Jacinto River, which rises in and drains the western slopes of the San Jacinto Mountains. Waterways tributary to the river include the North and South Forks, Strawberry Creek, Indian Creek, Poppet Creek, and Bautista Creek. The San Jacinto River and its tributaries are ephemeral, that is, they flow only when enough precipitation occurs to produce runoff and much of this flow infiltrates to groundwater. When storms are unusually intense and prolonged, the ground saturates and the remaining precipitation runs off outside the Management Area. The river recharges the groundwater basin in the area southeast of the City of San Jacinto. The river then flows northwest past the Lakeview Mountains before turning southwest to flow across the Perris Valley toward Lake Elsinore. The San Jacinto River ultimately flows into Lake Elsinore via Railroad Canyon and Canyon Lake. Lake Elsinore, when full, overflows into Temescal Wash, which joins the Santa Ana River near Prado Dam.

During 2018, river flows were considerably lower than 2017 and well below long-term average for the year.

4.4.a Surface Water Diversions

EMWD and LHMWD both hold water rights on the San Jacinto River allowing them to divert water when river flows are sufficient.

LHMWD holds pre-1914 rights for the diversion and storage of surface water from the San Jacinto River and its tributaries. These diversions take place at Lake Hemet, Strawberry Creek, plus the North and South Forks of the San Jacinto River. During 2018, LHMWD diverted 253 AF of surface water – 0 AF at Lake Hemet; 0 AF at South Fork; 243 AF at North Fork; and 10 AF at Strawberry Creek. LHMWD diverted 253 AF of surface water which was all directly used. Surface water diverted was not put into storage by LHMWD.

EMWD's diversion and storage of San Jacinto River surface water takes place in the Canyon groundwater management zone at the Grant Avenue Ponds in the Valle Vista area. Per the Stipulated Judgment and diversion License No. 10667, EMWD is required to store any diverted water into the groundwater aquifer. During 2018, EMWD diverted 279 AF of surface water for recharge into the groundwater basin.