



Hemet-San Jacinto
Watermaster

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 2017 water demand estimates. Chapter 10, Figure 10-4 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 provide water service in various areas of the Canyon, San Jacinto Upper Pressure, and Hemet North and South groundwater management zones. Groundwater management zones are shown in Chapter 10, Figure 10-2.

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 2017, approximately one-half of the 38,686 acre feet (AF) of groundwater produced in the Management Area was produced from the San Jacinto Upper Pressure groundwater management zone (18,740 AF), with lesser amounts produced from the Canyon, Hemet South, and Hemet North groundwater management zones.

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: 2017 Water Demand Estimates
All values rounded to Acre Feet

2017		EMWD	LHMWD	City of Hemet	City of San Jacinto	Private Pumpers	Soboba Tribe	Totals
Groundwater	Canyon	1,989	2,894	0	0	1,005	1,294	7,181
	SJUP	4,509	5,150	351	2,735	5,444	551	18,740
	Hemet North	0	0	0	0	2,231	0	2,231
	Hemet South	0	287	3,212	0	2,524	0	6,023
	IRRP Wells	3,864	419	228	0	0	0	4,512
	Total	10,362	8,751	3,790	2,735	11,203	1,845	38,686
Surface Water (SJ River)		0	4,763	0	0	0	0	4,763
In-Lieu Recharge		0	0	0	0	0	0	0
Imported Water (Treated by EMWD)		1,383	0	0	0	0	0	1,383
Imported Raw Water		125	2,076	0	0	205	0	2,407
Recycled Water		0	0	0	0	8,526	0	8,526
In-Lieu Recycled Water		0	0	0	0	3,558	0	3,558
Totals		11,870	15,590	3,790	2,735	23,493	1,845	59,323

Note – All values are rounded to 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). 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. Delivery of potable water from HWFP to the Management Area began in September 2006.

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 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 2017, the HWFP treated 4,519 AF of water of which 3,136 AF was exported outside the Management Area, and the remaining 1,383 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 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 2017, the North San Jacinto Water Supply Pipeline served 282 AF of raw water to the dairies, with 205 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 RWF and the MV RWF can, based on operational necessity, supply recycled water to users in the Management Area via a pipeline through Lakeview.

During 2017, recycled water usage in the Management Area totaled 12,084 acre feet. The total recycled water generated at the SJV RWF in 2017 was 8,225 AF.

4.3.a Recycled Water In-Lieu Project

This project supplies recycled water from the SJV RWF 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 2017, 3,894 AF and 1,393 AF of recycled water was delivered to Rancho Casa Loma and Scott Brothers Dairy respectively, for a total of 5,287 AF of recycled water. The in-lieu portion of this delivery was 3,558 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 2017, river flows were considerably higher than 2016 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. Such pre-1914 rights, and the applicable rights and

obligations that apply to the nature of pre-1914 rights, are associated to Lake Hemet, Strawberry Creek, and the North and South Forks of the San Jacinto River. During 2017, LHMWD diverted 5,186 AF of surface water – 2,919 AF at Lake Hemet; 15 AF at South Fork; 1,914 AF at North Fork; and 338 AF at Strawberry Creek. LHMWD diverted 5,186 AF of surface water, of which 4,763 AF was directly used or sold and 423 AF was put into storage.

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 2017, EMWD diverted 3,150 AF of surface water for recharge into the groundwater basin.