Part 1: Annual Total Potable Water Supply

Imported Water (wholesaler-supplied)

Imported water is conveyed to Rancho California Water District (RCWD/District) through Metropolitan Water District of Southern California's (MWD) Lake Skinner Reservoir and Water Treatment Facility, with back-up storage provided by Diamond Valley Lake. Although the District purchases water from these facilities through Eastern Municipal Water District (EMWD) and Western Municipal Water District (WMWD), these MWD member agencies do not convey the water through their facilities to RCWD. Rather, RCWD receives the water directly at the MWD turnouts.

Historically, MWD has been able to provide enough water to satisfy RCWD demands, and as indicated on the Water Supply Reliability Certification and Data Submission Forms provided to the State Water Resources Control Board (State Water Board) by MWD, EMWD, and WMWD, these water wholesalers will be able to provide enough water to meet RCWD's imported water demands in future water years. The following table shows RCWD's imported water supplies for water years 2017, 2018, and 2019, which have been certified as available by the District's water wholesalers. The supply figures are reflective of the District's average imported water demand, based on actual production data for calendar years 2013 and 2014.

Source of Supply	Name of Provider	Supplies (Acre-Feet[AF]) Available In		
		2017	2018	2019
MWD	EMWD & WMWD	48,661	50,207	51,753

Local Groundwater (self-supplied)

Local Groundwater Governance

The District pumps groundwater through a number of wells from the Temecula Valley Basin (Basin), which underlies several valleys in southwestern Riverside County and a portion of northern San Diego County, within the Santa Margarita Watershed. Two aquifers within the Basin, the Pauba Aquifer and the Temecula Aquifer, include eight underlying groundwater basins, which are defined based on surface water hydrology sub-areas.

The Basin has been governed under court jurisdiction since 1928, as part of the Santa Margarita River Watershed system. In 1940, a San Diego Superior Court Stipulated Judgment ("1940 Judgment") was issued directing the use and allocation of groundwater in the region. In 1963, a Final Judgment and Decree was issued further defining the use of groundwater in the region and, in April 1966, a Modified Judgment and Final Decree (U.S. v. Fallbrook Case 1247/"Fallbrook Case") was entered incorporating interlocutory judgments and the 1940 Judgment. To this day, the Court retains jurisdiction over all surface flows of the Santa Margarita River and all underground waters determined by the Court to add to, support, or contribute to the Santa Margarita stream system.

These judgments were followed by years of disputes over their interpretation by multiple parties, including the federal government (U.S. Marine Corps Camp Pendleton) over water use in the watershed basins, citing the judgments did not fully meet the needs of the parties for effective water management. Finally, after many years, a Cooperative Water Resource Management Agreement (CWRMA) between RCWD and Camp Pendleton was executed in March 2002. This agreement more effectively implements the previous judgments and remains in place today to manage surface water flow in the Santa Margarita River and water use within the Basin.

To help manage water in the region, a Watermaster was assigned by the court to oversee all uses within the Santa Margarita Watershed. The Watermaster works cooperatively with a steering committee comprised of entities within the watershed and overlying the Basin, and prepares a Santa Margarita Watershed Annual Report that provides annual reporting of water conditions in the watershed. RCWD works cooperatively with the Watermaster to: 1) manage the Basin on a watershed-wide basis, 2) implement projects that support the region's Integrated Regional Water Management Plan, and 3) prepare an annual groundwater hydrogeological assessment that ensures the District's local groundwater production practices are implemented on a sustainable, safe yield basis.

Local Groundwater Production Program

On an annual basis, RCWD works with Geoscience Support Services, Inc. to conduct a groundwater audit, which recommends a groundwater production program for the upcoming year. The underlying philosophy guiding the groundwater audit has been, and continues to be, to operate the groundwater basin within safe yield limits to avoid permanent overdraft (mining) or other undesirable conditions that could degrade water quality. Safe yield limit determinations take into account both hydrologic conditions and the terms of CWRMA. Determination of the amount of groundwater hydrologically, economically, and legally available to RCWD is an ongoing process of evaluation and review.

Annual groundwater production recommendations are based mostly on a review of individual well production and historical hydrographs. During the District's annual review, groundwater level elevations from all production and monitoring wells are considered. Hydrologic sub-areas and "index wells" representing water level changes in each sub-area are used to help formulate groundwater production recommendations. Where water level trends in sub-area index wells indicate a decline over several years, lower production values are recommended. Where water level declines have not occurred, and as other factors permit, recommended production values are increased.

In addition to well data, groundwater production recommendations are made with consideration given to precipitation, production, expected natural and artificial recharge, and the terms of CWRMA. Consideration is also given to the projected production from production wells in the northern Murrieta Valley area that are operated by WMWD. As always, in keeping with sound groundwater basin management practices, the recommended production is considered as a guideline only, and is subject to revision as additional data becomes available.

Effect of Drought on Groundwater Production

The most recent four-year drought has reduced recharge of native groundwater into the basin. For this reason, production of native groundwater has decreased over the past three water years. The following table contains total well production numbers for wells that produce native groundwater, and reflects declining yield of native groundwater during recent water years.

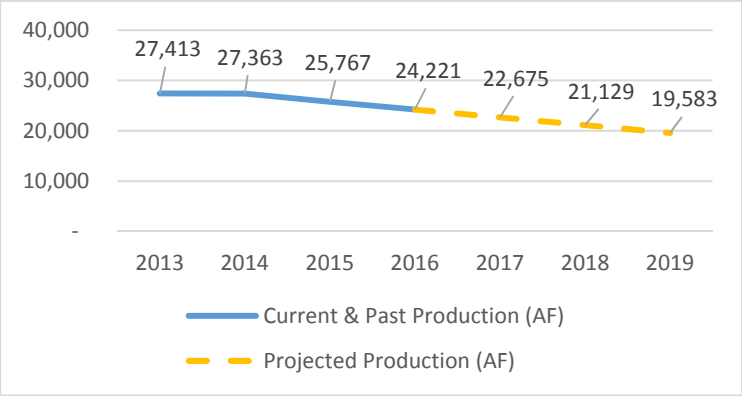
Water Year	Production (AF)	% Change
2013	27,413	-
2014	27,363	(0.18%)
2015	25,767	(5.83%)

For projecting native groundwater production in future water years, a conservative approach was used. For the remainder of water year 2016, and water years 2017, 2018, and 2019, it was assumed that increasingly dry hydrological conditions similar to those of 2013, 2014, and 2015 would persist and native groundwater production would continue to decrease like it did between water years 2014 and 2015. In addition, it was assumed that no water would be removed from RCWD's Vail Lake, which, under normal conditions, is used as a storage reservoir for native water that is later conveyed to the District's

groundwater recharge facilities. Currently, Vail Lake's surface level is at 1,415.5 feet, which is operationally prohibitive for any further drafting of water for recharge due to water quality concerns. Furthermore, evaporation from the lake has exceeded native water inflows for each of the last three years, as shown in the chart below. It is assumed that if similar hydrologic conditions are repeated for water years 2017, 2018, and 2019, no additional water will be available from Vail lake for groundwater recharge.

Vail Lake Inflow & Evaporation Data		
Water Year	**Inflow (AF)**	**Evaporation (AF)**
2013	1,233	3,631
2014	767	3,276
2015	872	2,876

The following chart shows projected native groundwater production through water year 2019, based on the assumptions that unprecedented drought conditions continue, native inflow water within Vail Lake will not be available for recharge, and native groundwater production will decrease overall by 6% per year.



Water Year	Production (AF)
2017	22,675
2018	21,129
2019	19,583

It is important to note that while continuing dry hydrology would decrease the yield of native groundwater, RCWD has the ability to artificially recharge its basin using untreated water imported through MWD. This allows the District to manage groundwater levels and maintain safe yield standards. Artificial recharge supplies are reported as imported water supplies in the previous section.

Projected Groundwater Production Detail

As per the State Water Board's requirements for reporting projected production, the following three tables show projected native groundwater production for water years 2017, 2018, and 2019 for each of the District's wells that were active during water years 2013 and 2014. Projected production numbers for each well were estimated by calculating the average percentage of total native groundwater produced by each of the wells for calendar years 2013 and 2014 and then by applying those percentages to total projected native groundwater production for water years 2017, 2018, and 2019.

Water Year	Well #	Estimated Native Production (AF)
2017	101	539
	106	168
	108	520
	109	414
	110	450
	113	256
	118	558
	119	325
	120	1177
	122	329
	123	207
	124	242
	126	616
	130	764
	131	797
	132	548
	133	528
	138	1525
	139	971
	140	325
	141	387
	143	591
	144	428
	145	269
	149	184
	151	574
	156	669
	203	582
	205	1299
	210	608
	211	303
	217	518
	154	139
	232	726
	233	1088
	234	225
	235	948
	309	1876
	TOTAL	22,675

Water Year	Well #	Estimated Native Production (AF)
2018	101	502
	106	156
	108	485
	109	385
	110	419
	113	239
	118	520
	119	303
	120	1097
	122	306
	123	193
	124	226
	126	574
	130	712
	131	743
	132	511
	133	492
	138	1421
	139	905
	140	303
	141	361
	143	551
	144	398
	145	251
	149	171
	151	535
	156	623
	203	542
	205	1210
	210	567
	211	282
	217	483
	154	130
	232	677
	233	1014
	234	210
	235	883
	309	1748
	TOTAL	21,129

Water Year	Well #	Estimated Native Production (AF)
2019	101	466
	106	145
	108	449
	109	357
	110	389
	113	221
	118	482
	119	281
	120	1017
	122	284
	123	179
	124	209
	126	532
	130	660
	131	689
	132	474
	133	456
	138	1317
	139	839
	140	281
	141	334
	143	511
	144	369
	145	232
	149	159
	151	496
	156	578
	203	502
	205	1122
	210	525
	211	261
	217	448
	154	120
	232	627
	233	940
	234	194
	235	819
	309	1620
	TOTAL	19,583

Water Supplies Committed to Other Uses

To satisfy the requirements of CWRMA, RCWD purchases untreated MWD import water from WMWD, and transfers it for use downstream by conveying it through an outfall pipeline into the Santa Margarita River to be used by Camp Pendleton.

Using average demand for water transfers from calendar years 2013 and 2014, the District estimates transfer demands for water years 2017, 2018, and 2019 to be 3,286 AF per year:

Demands for Water Transfers				
Source of Supply	**Name of Provider**	**AF Quantity In**		
		2017	**2018**	**2019**
MWD (Raw Water for Transfer)	EMWD & WMWD	3,286	3,286	3,286

Annual Total Available Potable Water Supply

RCWD's total available water supply is equal to its combined imported water and native groundwater supplies, minus water committed for managing surface water flows in the Santa Margarita River. The following table summarizes RCWD's water supplies for 2017, 2018, and 2019.

Supply Type	**2017**	**2018**	**2019**
Imported Water	48,661	50,207	51,753
Local Groundwater	22,675	21,129	19,583
Subtotal	**71,336**	**71,336**	**71,336**
Water Committed for Other Uses	3,286	3,286	3,286
RCWD Total Water Supplies in AF	**68,050**	**68,050**	**68,050**

Part 2: Annual Total Potable Water Demand

The following table shows annual potable water demand for 2013 and 2014, as determined through analysis of monthly production reports generated from SCADA system information.

Calendar Year	**Potable Water Demand (AF)**
2013	66,996
2014	69,105
Average	**68,050**

Part 3: Local Groundwater Information

Volume of Water in the Aquifer

RCWD pumps native groundwater from the Temecula Valley Groundwater Basin, which is located along Murrieta and Temecula Creeks in the Santa Margarita Watershed. As part of an analysis conducted by the Watermaster for the Santa Margarita River Watershed, total groundwater storage at the end of water year 2001 was computed for each of 22 hydrologic sub-areas that make up the groundwater basin. These computations were based on the areal extent of each sub-area, the thickness of each of three aquifers (younger alluvium, Pauba Aquifer, and Temecula Aquifer), a specific yield for each aquifer, and the depth to water in each aquifer at the end of the water year. Specific yields were based on unconfined conditions for all aquifers. The total groundwater in the uppermost 500 feet as of September 30, 2001 was estimated at 1,340,556 AF.

Since 2001, annual changes in groundwater storage have been computed by the Watermaster using two different methodologies for comparison: a water budget method and a groundwater level method. The water budget method determines the change in storage as the difference between the major elements of inflow and outflow for the groundwater area. Within the Watermaster's 2013/2014 annual report, data is presented showing that, based on the water budget method, the water volume within the groundwater basin between 2010 and 2014 has declined by 12,895 AF. The groundwater level method is based on the changes in water levels in key wells within hydrologic sub-areas. Changes in storage under the groundwater level method for 2010 through 2014 is calculated as a decline of 10,477 AF.

More detail regarding the results of these analyses and associated methodologies can be found in the Santa Margarita River Watershed Watermaster's annual reports: http://www.wmwd.com/293/Santa-Margarita-River-Annual-Reports or https://www.casd.uscourts.gov/Fallbrook/files/doc1/54901.pdf.

Groundwater Elevation Monitoring

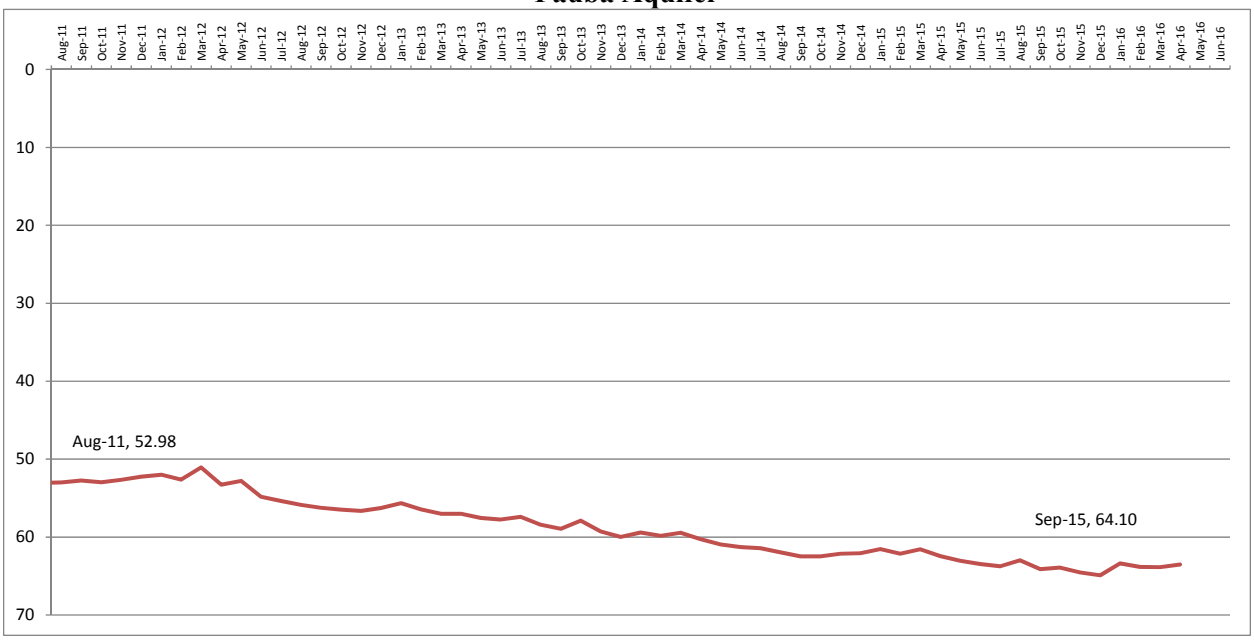
RCWD actively monitors groundwater elevations. Operations staff perform depth measurements on a monthly basis.

Depth of Water Table

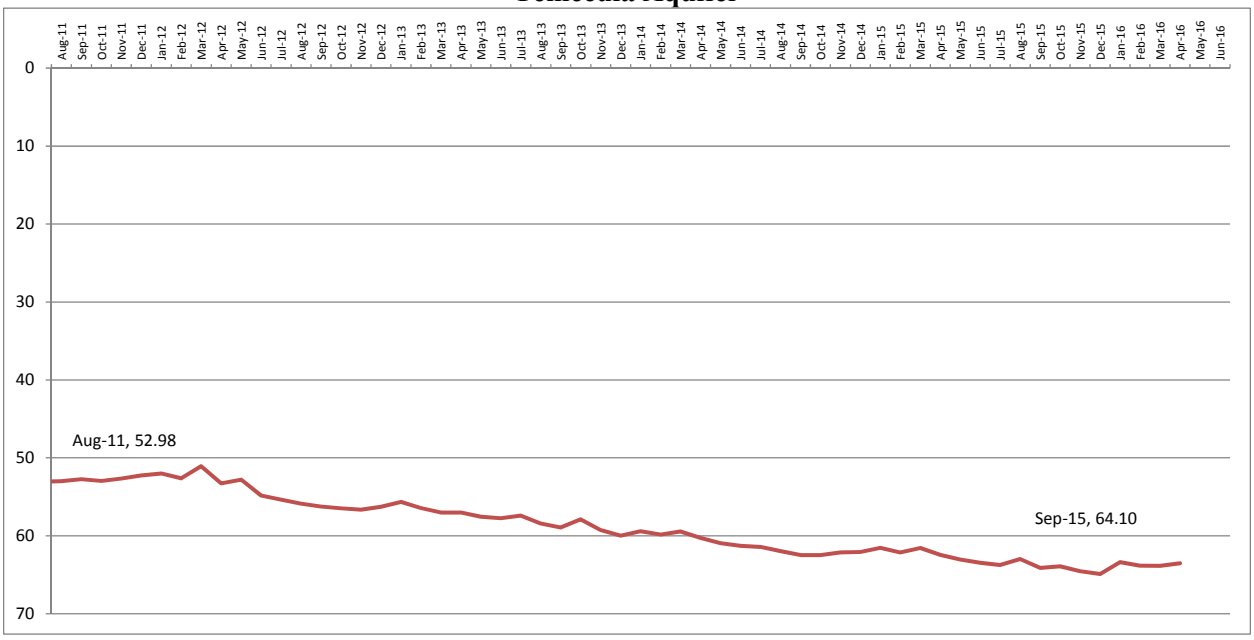
RCWD's monthly water production reports show that the largest portion of RCWD's native groundwater supply is pumped from Well #309. This well pumps water within the Santa Gertrudis hydrologic sub-area from the Temecula aquifer. The most recent data available shows that, as of June 2016, the depth of the water table for this well was 247.0 feet. Data from June 2013 shows the depth of the water table for this well to be 246.6 feet.

To provide a more comprehensive look at water depths within the District's two aquifers, the following charts are provided, which show water depth trends from August 2011 to present. These depths represent an average of the readings from index wells, which represent the hydrologic sub-areas for each of the two aquifers.

Pauba Aquifer



Temecula Aquifer



Ability to Pump Water

RCWD operates a number of wells that were designed to pump from different aquifers within different hydrologic sub-areas with different characteristics. For this reason, each of the wells is designed to pump from a different depth at a different rate; therefore, the number of feet that can be withdrawn from each of the wells before RCWD's ability to pump water is substantially affected is different for each well. However, in the context of Well #309, which is responsible for pumping the largest portion of RCWD's native groundwater supply, it is estimated that the groundwater depth could be lowered by 612 feet before the well breaks suction. The estimate of 613 feet was derived by subtracting the total depth of the well (the well column has perforations down to 860 feet) from the most recent water level measurement of 247 feet.