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Section 2

Table 2.2-01 Existing Water Resources Monitoring Programs.

Program	Agency	Parameter(s)	Description	Incorporated into GSP Monitoring Networks	Reference
Member Agency Groundwater Levels	MOWD, VRWD, and City of Ventura	Groundwater Levels	Groundwater level monitoring as part of normal well operations.	Yes	N/A
Countywide Groundwater Monitoring Program	Ventura County Watershed Protection District	Groundwater Levels Groundwater Quality	Countywide groundwater monitoring program	Yes	https://s29422.pcdn.co/wp-content/uploads/2018/08/2015-Annual-Report-Final-Reduced.pdf
Division of Drinking Water Compliance Monitoring	Public Water Suppliers in the Basin	Groundwater Quality	Public water suppliers are required to monitor groundwater quality in potable supply wells in the Basin. Data are reported to the Division of Drinking Water.	Yes	https://sdwis.waterboards.ca.gov/PDWW/ https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDTlibrary.html
California Statewide Groundwater Elevation Monitoring (CASGEM)	Ventura County Watershed Protection District	Groundwater Levels	VCWPD is the CASGEM monitoring entity for the Ventura County. Data is compiled from the Countywide Groundwater Monitoring Program and cooperative entities.	Yes	https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM
Groundwater Ambient Monitoring and Assessment Program (GAMA)	State Water Resources Control Board	Groundwater Quality	SWRCB Program implemented in 2000 (modified by Assembly Bill 599 in 2001) to monitor and assess groundwater basins throughout the state.	No (currently no GAMA data in last 10 years that is not captured in other data sources)	https://www.waterboards.ca.gov/water_issues/programs/gama/
GeoTracker	State Water Resources Control Board	Groundwater Quality	Records for contamination remediation sites.	No (currently no plumes of concern in UVRGB)	https://geotracker.waterboards.ca.gov/
Countywide Precipitation Monitoring	Ventura County Watershed Protection District	Precipitation	Countywide rainfall monitoring program (2 active stations located within Basin and three immediately adjacent to Basin See Figure 3.1-04)	Yes	https://www.vcwatershed.net/hydrodata/
Countywide Stream Flow Monitoring	Ventura County Watershed Protection District	Stream flow	Countywide stream flow monitoring program (3 station located near Basin boundaries See Figure 3.1-07)	Yes	https://www.vcwatershed.net/hydrodata/
Countywide Evaporation Monitoring	Ventura County Watershed Protection District	Evaporation	Countywide evaporation monitoring program (no stations located within UVRGB, but data is useful for estimating conditions in the Basin)	N/A	https://www.vcwatershed.net/hydrodata/
California Irrigation Management Information System (CIMIS)	California Department of Water Resources	Weather Station (multiple parameters)	Statewide weather station network (no stations located within UVRB, but data is useful for estimating conditions in the Basin)	N/A	https://cimis.water.ca.gov/
National Water Information System	United States Geologic Survey	Streamflow	Countrywide monitoring network (Streamflow Station 11118500)	Yes	https://maps.waterdata.usgs.gov/mapper/index.html
CMWD Ventura River Near Meiners Oaks Stream Flow Monitoring (former known as Gage 607)	Casitas Municipal Water District	Stream flow	Stream flow monitoring in accordance with a National Oceanic and Atmospheric Administration National Marine Fisheries Service Biological Opinion (BO)	Yes	https://www.casitaswater.org/home/showpublisheddocument/2377/637195232693670000
Electronic Water Rights Information Management System (eWRIMS)	State Water Resources Control Board	Surface Water Diversions	eWRIMS is a SWRCB database that contains Statements of Water Diversion and Use filed by water diverters.	Yes	https://www.waterboards.ca.gov/waterrights/water_issues/programs/ewrims/index.html
Groundwater Extraction Reporting	MOWD, VRWD, CMWD, and City of Ventura	Groundwater Extractions	Groundwater extractions by UVRGA member agencies are provided to UVRGA upon request.	Yes	N/A

Table 2.2-02 Existing Water Resources Management Programs.

Program	Agency	Parameter(s)	Description	Incorporation into GSP	Reference
Casitas Municipal Water District Urban Water Management Plan and Agricultural Water Management Plan **Casitas Municipal Water District Draft Comprehensive Water Resources Plan**	Casitas Municipal Water District	Water Supply	Planning documents that generally guides the actions related to water supply issues for the Casitas Municipal Water District service area.	References for reliability of surface water supplies and evaluation of potential future demands.	https://www.casitaswater.org/home/showpublisheddocument/163/636896291075730000 Casitas – Comprehensive Water Resources Plan (casitaswaterplan.com)
City of Ventura Urban Water Management Plan **City of Ventura Annual Comprehensive Water Resources Reports**	City of Ventura (Ventura Water)	Water Supply	Planning documents that guide the actions related to water supply issues for the Ventura Water service area.	Future water groundwater extractions for projected water budget based on CCWRP.	https://www.cityofventura.ca.gov/DocumentCenter/View/5623/2015-Urban-Water-Management-Plan-Main-Text https://www.cityofventura.ca.gov/DocumentCenter/View/27422/2021-Comprehensive-Water-Resources-Report
Casitas Municipal Water District Robles Diversion Operations	Casitas Municipal Water District	Surface Water Diversion	CMWD operates the Robles Diversion on the Ventura River (located within UVRGB) in accordance with a National Oceanic and Atmospheric Administration National Marine Fisheries Service Biological Opinion (BO), which includes certain stream flow criteria for diversion operations that are intended to furnish a downstream flow regime that mimics the natural storm recession rate and address flow depth for fish passage in critical riffles located within UVRGB.	Actual diversion quantities incorporated into historical water budget. BO operations rules used to estimate potential future diversions for projected water budget.	https://www.casitaswater.org/home/showpublisheddocument/1825/636934387800970000 https://www.casitaswater.org/home/showpublisheddocument/2377/637195232693670000
RWQCB Water Quality Management Programs	Los Angeles Regional Water Quality Control Board	Surface Water and Groundwater Quality	The RWQCB Basin Plan includes water quality objectives (WQOs) for surface water and groundwater. RWQCB operates various water quality regulatory programs to meet the WQOs, including NPDES permits, and the Algae TMDL.	WQOs were used to establish measurable objectives for the degraded water quality sustainability indicator. Actions undertaken by RWQCB contribute to maintenance of groundwater quality below the measurable objective concentrations.	https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html
Ventura County Stormwater Quality Monitoring Program	Ventura County Watershed Protection District and City Partners	Surface Water Quality	Program meets the requirements of the Ventura County Stormwater Permits. Includes water quality sampling, watershed assessments, business inspections, and pollution prevention programs.	This program contributes to maintenance of groundwater quality below the measurable objective concentrations.	http://www.vcstormwater.org/
VCAILG Water Quality Management Plan	Los Angeles Regional Water Quality Control Board and regulated entities. Program is managed by the Ventura County Farm Bureau	Surface Water Quality	VCAILG's Water Quality Management Plan (WQMP) serves as the roadmap to meet local water quality standards and goals. These plans are prepared and submitted to the Los Angeles Regional Water Quality Control Board (Regional Board) to comply with the agricultural conditional waiver of waste discharge requirements. The plan addresses measurement and control of discharges from irrigated farmland to protect surface water quality.	This program contributes to maintenance of groundwater quality below the measurable objective concentrations.	http://www.farmbureauvc.com/issues/water-issues/water-quality/vcailg
Integrated Regional Water Management (IRWM) Program and Plan	Watershed Coalition of Ventura County (WCVC) and Ventura River Watershed Council (VRWC)	Watershed Management Plan	Initiated with Proposition 50 in 2006, the program provides competitive grant funds for projects and studies in accordance with a comprehensive IRWM Plan.	UVRGA participates in the VRWC, which is an important clearinghouse for exchange of information and ideas concerning important water issues affecting UVRGB and the rest of the watershed.	http://wcvc.ventura.org/ http://venturawatershed.org/
Ojai Basin Groundwater Sustainability Plan	Ojai Basin Groundwater Management Agency (OBGMA)	Groundwater Management	Management of the Ojai Basin will impact stream flow in San Antonio Creek, a key tributary that flows into to the Ventura River in the southern portion of the UVRGB near Casitas Springs. Inflows from San Antonio Creek are an important source of water for sustaining the Confluence and Foster Park aquatic and riparian GDEs within the UVRGB.	N/A – currently under development	http://obgma.com/
California Water Action Plan Ventura River Streamflow Enhancement	SWRQB	Surface Water Management	The Ventura River is one of five streams prioritized pursuant to the California Water Action Plan (CWAP) for efforts to enhance flows for anadromous fish. SWRCB will is currently working to develop objectives for streamflow enhancement. The streamflow objectives are expected in 2023-24.	N/A – currently under development	https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/ventura_river.html
Ventura Watershed Instream Flow Enhancement and Water Resiliency Regional Framework (VRIF)	Ventura County Resource Conservation District	Surface Water Flow	This project includes a framework and project planning tools to help enhance streamflow in the Ventura River and increase water supply reliability for the region. The tools will provide landowners and others a means of quantifying water demand, infiltration, and opportunities for reduced consumptive use at the parcel scale.	N/A – currently under development	https://www.vcrcd.org/vrif-project-overview
Ventura River Watershed Adjudication	Superior Court of the State of California, County of Los Angeles	To Be Determined	Includes 2014 complaint by Santa Barbara Channelkeeper against the City of Ventura and State of California concerning effects of water extraction in Foster Park on steelhead and a 2019 cross-complaint by the City of Ventura that incorporates all water users in the Ventura River Watershed. Foster Park Protocols are included in the settlement agreement with Santa Barbara Channelkeeper. The Foster Park Protocols are operational protocols for the City of Ventura's Foster Park extraction facilities. The Foster Park Protocols address direct depletion of interconnected surface water in Foster Park. A future judgment to settle the remainder of the case will likely include aspects relevant to implementation of the GSP. There is no definitive timeline for a judgment. UVRGA will monitor, and to the extent possible, coordinate with the adjudication process during GSP implementation. UVRGA is not a party to the lawsuit.	Foster Park Protocols are incorporated into this GSP as a management action.	https://www.venturariverwatershedadjudication.com/

Tables

Section 3

Table 3.1-01 Streamflow Gages Period of Record and Daily Flow Statistics.

Gage ID(s)	Tributary/River	Period of Record	5th Percentile Daily Flow (cfs)	Median Daily Flow (cfs)	Average Daily Flow (cfs)	95th Percentile Daily Flow (cfs)	Peak Daily Flow (cfs)
602/602B	Matilija Creek	Oct 1927 – Aug 2019	0.6	5.8	33.3	128.8	8,340
604	North Fork Matilija Creek	Oct 1928 – Aug 2017	0.3	2.1	10.6	34.0	4,980
607	Ventura River (Robles Diversion)	Oct 1959 – Sept 2017	0.0	2.3	30.0	52.0	13,300
605/605A	San Antonio Creek	Oct 1949 – May 2017	0.0	1.1	15.8	41.0	10,405
601	Coyote Creek	Oct 1927 – Sept 1982	0.0	0.3	10.1	26.0	3,970
608	Ventura River (Foster Park)	Oct 1929 – Mar 2020	0.0	3.5	62.3	160.0	22,000

Table 3.1-02 Water Quality Objectives for the UVRGB.

Constituent	Groundwater Quality Objective	Surface Water Quality Objective
Nitrate as N (mg/L)	10	5 (Nitrate and Nitrite as N)
TDS (mg/L)	800	800
Sulfate (mg/L)	300	300
Chloride (mg/L)	100	60
Boron (mg/L)	0.5	1

Table 3.2-01 Summary of Streamflows and Streamflow Depletions for Different Locations and Times of the Year, 2005–2019 Historical Simulation.

South Kennedy (Boundary of Kennedy & Robles Area)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow (Historical)	32.1	39.6	42.4	18.6	10.8	4.1	1.2	0.2	0.0	0.1	0.9	5.8
Median Flow (Historical No Pumping)	33.0	39.9	43.0	19.0	11.3	4.8	2.4	0.8	0.3	0.5	1.7	6.3
Median Depletion	0.3	0.4	0.4	0.4	0.4	0.7	0.6	0.4	0.2	0.2	0.4	0.4
Robles Diversion (Gage 607)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	23.2	34.3	30.0	14.6	7.8	1.7	0.1	0.0	0.0	0.0	0.2	3.2
Median Flow (Historical No Pumping)	23.4	34.8	30.4	14.7	8.3	2.3	0.4	0.0	0.0	0.0	0.5	3.6
Median Depletion	0.3	0.4	0.4	0.4	0.3	0.3	0.1	0.0	0.0	0.0	0.2	0.3
North Robles (near Happy Valley Drain)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	3.9	15.4	17.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Median Flow (Historical No Pumping)	3.9	15.8	18.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Median Depletion	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South Robles (150 Bridge)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	4.7	14.1	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median Flow (Historical No Pumping)	5.3	14.3	14.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median Depletion	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Santa Ana Bridge	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	7.3	17.6	16.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median Flow (Historical No Pumping)	7.4	17.7	16.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Median Depletion	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
San Antonio Confluence	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	7.1	28.7	27.3	10.5	6.1	3.1	0.8	0.0	0.0	0.0	0.0	0.8
Median Flow (Historical No Pumping)	10.7	31.2	29.3	13.6	9.2	6.7	4.7	2.2	0.3	0.0	0.1	1.2
Median Depletion	1.5	2.2	1.8	1.1	0.7	0.7	0.3	0.6	0.3	0.0	0.1	0.4
Foster Park (Gage 608)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Historical)	10.7	28.2	25.8	10.9	6.9	4.7	4.5	4.1	2.7	3.5	4.2	4.3
Median Flow (Historical No Pumping)	15.8	36.1	33.1	17.5	14.3	12.6	11.3	10.2	9.8	9.8	9.7	8.9
Median Depletion	5.1	5.1	6.7	4.6	4.5	4.6	4.4	4.3	4.4	4.5	4.2	4.6

All values are cubic feet per second (cfs).

The term depletion refers to the direct or indirect reduction of stream flow resulting from groundwater extraction. Please see Section 3.2.6 for further description of direct versus indirect reductions (depletions) of surface water.

Table 3.3-01 Summary of Data Sources for Water Budget Components.

Water Budget Component	Data Source or Estimation Method
Directly measured components:	
Precipitation (i.e., rainfall)	• Historical and current: Precipitation data for Meiners Oaks-County Fire Station and other rain gauges in Ventura County collected and maintained by Ventura County Watershed Protection District (VCWPD) at https://www.vcwatershed.net/hydrodata/. • Projected: VCWPD precipitation data as noted above (assume baseline period of water year 1970-2019 rainfall amounts), modified in accordance with precipitation climate-change factors for 2030 and 2070, as recommended by California Department of Water Resources (2018).
Surface water diversions	• Historical and current: Annual volumes of surface water diverted at the Robles Diversion by CMWD and at a private sump. Robles Diversion data was obtained from CMWD. The private sump reported water use to the eWRIMS database. • Projected: The Robles Diversion operating logic as specified in the non-jeopardy Biological Opinion Operating Criteria (USBR, 2003) was programmed into code and used to simulated diversions. Inflows used to calculate diversion amounts were adjusted by the respective climate-change streamflow change factors. The owner of the private sump provided planned future use to the URVGA board.
Groundwater extractions (pumping)	• Historical and current: Historical groundwater extractions for the four M&I entities as well as for four agricultural wells were provided to the UVRGA board. Extractions for the remainder of the agricultural wells, the two domestic MWCs, and private de minimis users were estimated for 2017 according to the Groundwater Extraction Estimates Technical Memorandum presented to the UVRGA board on June 30, 2020. Extractions for agricultural wells without historical records were taken as the 2017 volumes scaled by historical precipitation. De minimis extractions were assumed to be constant throughout the historical period. • Projected: The four M&I entities and an agricultural user provided estimates of future use under normal and dry conditions, which were determined by the projected precipitation data above. The remaining agricultural extractions were the 2017 estimates scaled by future projected precipitation and modified in accordance with central-tendency climate-change evapotranspiration factors for 2030 and 2070, as recommended by California Department of Water Resources (2018). De minimis extractions were assumed to be constant throughout the projected period.
Gaged surface flows entering and exiting Upper Ventura River Basin	• Historical and current: Surface inflows to the basin are gaged at Matilija and North Fork Matilija Creeks (stations 602 and 604), and San Antonio Creek (605). Surface outflows are gaged at station 608 at the Foster Park Bridge and are used to calibrate streamflows in the numerical model. • Projected: Historical streamflow data (as noted above) was used for the baseline projected simulation from the reference period 1970-2019). The historical data was modified in accordance with the climate-change streamflow Change Factors for the 2030 and 2070 scenarios, respectively, as recommended by California Department of Water Resources (2018).
Components estimated using related data:	
Ungauged stream flows entering and exiting Upper Ventura River Basin	• Historical and current: Ungauged flows at ephemeral tributaries feeding the Ventura River were estimated using the curve number method with baseflow computed using exponential decay to simulate baseflow recession. Runoff generated using the curve number method was computed using precipitation from VCWPD precipitation gage 20 located in the basin. . • Projected: Ungauged flows were computed for the reference historical period (1970-2019) using the method described above with data from VCWPD precipitation gage 20. Ungauged flows for the climate-change scenarios were adjusted using the climate-change streamflow change factors for the 2030 and 2070 scenarios, respectively.
Direct runoff	• Historical and current: Direct runoff is calculated for the area directly adjacent to the main river using the curve number method based on precipitation from VCWPD precipitation gage 20 located in the basin. • Projected: Direct runoff is calculated using the curve number method for the historical reference period for the baseline scenario with data from VCWPD precipitation gage 20. The runoff data is adjusted by climate-change streamflow change factors for the respective 2030 and 2070 scenarios.

Water Budget Component	Data Source or Estimation Method
Components estimated by groundwater flow modeling:	
Interaction (exchanges) of groundwater and surface water within Upper Ventura River Basin	• Historical, current, and projected: The Ventura River has both gaining and losing reaches within the basin. Both stream percolation directly into the aquifer as well as discharge from the aquifer into the river is calculated in the model and is dependent on the difference between river stage and groundwater elevations as well as the width and slope of the riverbed.
Recharge (including infiltration of precipitation, water distribution system losses, septic system leachate, and agricultural and M&I return flows)	• Historical and current: Areal recharge via precipitation was taken from the BCM model. M&I return flows were estimated by taking residential usage from UWMPs, distributing the water evenly across each M&I entities' service area within the basin (CMWD, VRWD, and MOWD) and assuming that 50% of the water is applied outdoors and 20% of that water is lost to return flows. Distribution system losses were either taken from UWMPs where available and were otherwise estimated as 4% of total deliveries. Septic leachate was applied to parcels with known septic systems and was estimated as total indoor usage times a constant rate per area. Agricultural return flows were estimated at 20% of 2 acre-feet per acre per year for all cropland in the basin. • Projected: Areal recharge via precipitation in the historical period 1970 – 2019 is taken from the BCM data and used to simulate future conditions. For the climate change scenarios, precipitation and ET change factors are both used. Projected return flows are based on VRWD's per area water usage rates applied to all service areas within the basin. Dry years are assigned a water usage rate based on the average water usage from years 2015-2020. Wet years are based on 85% of the average water usage rate from years 2005-2009. Agricultural return flows for the baseline projected simulation were represented in the same way as in the historical model. Agricultural return flows were scaled by the average climate change ET factor for each respective climate-change scenario to represent increased evaporative crop demand.
Direct evapotranspiration (ET) of groundwater in aquifers	• Historical and current: ET from non-riparian surfaces and vegetation is already accounted for in the BCM recharge data, therefore only ET from phreatophytes is accounted for in this section. Areas in the basin known to have GDEs were available in data from The Nature Conservancy, with additional areas of Arundo sourced from surveys in 2007, 2011, 2015, and 2019. Seasonal and spatial crop coefficients for different vegetation groups were used to estimate max ET rates with a reference ET that relied on local pan evaporation stations. Rooting depths for each vegetation group were also used to limit ET as extinction depths in which no ET occurs when groundwater levels fall below that depth. • Projected: The historical and current ET rates were scaled for the climate change scenarios using the ET change factor. Current phreatophyte distribution (with corresponding vegetation type and rooting depths) was assumed for future conditions.

Table 3.3-02 Comparison of Water Year Types used in the UVRGB GSP and DWR Water Year Types for the Ventura River Watershed.

Water Year	Precipitation(in)	UVRGB GSP Water Year Type	DWR Water Year Type
2006	25.9	Wet	Wet
2007	7.0	Dry	Critical
2008	23.9	Normal	Dry
2009	0.0	Dry	Dry
2010	25.4	Wet	Above Normal
2011	27.6	Wet	Wet
2012	10.6	Dry	Below Normal
2013	8.6	Dry	Critical
2014	9.1	Dry	Critical
2015	10.5	Dry	Critical
2016	10.7	Dry	Critical
2017	26.5	Wet	Below Normal
2018	10.9	Dry	Dry
2019	25.7	Wet	(Not Available)

Table 3.3-03 Estimated Historical Demands and Supplies in the UVRGB by Category and Source.

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies*	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supply
2006	Wet	2,595	505	147	3,247	1,104	67	147	1,318	1,491	439	1,930	3,248
2007	Dry	2,974	505	194	3,673	1,220	90	194	1,504	1,754	415	2,169	3,673
2008	Normal	2,710	505	196	3,411	1,126	88	196	1,410	1,584	417	2,001	3,411
2009	Dry	2,565	505	197	3,267	894	92	197	1183	1,671	413	2,084	3,267
2010	Wet	2,261	505	196	2,962	956	83	196	1,235	1,305	422	1,727	2,962
2011	Wet	2,165	505	193	2,863	854	86	193	1133	1,311	420	1,730	2,863
2012	Dry	2,292	505	197	2,994	1,056	95	197	1,348	1,236	410	1,646	2,994
2013	Dry	2,198	505	199	2,902	944	90	199	1,233	1,255	415	1,670	2,903
2014	Dry	2,089	505	195	2,789	651	70	195	916	1,438	436	1,874	2,790
2015	Dry	1,782	505	182	2,469	604	77	182	863	1,178	428	1,607	2,470
2016	Dry	1,501	505	173	2,179	443	57	173	673	1,058	449	1,507	2,180
2017	Wet	1,464	505	168	2,137	680	77	168	925	784	428	1,212	2,137
2018	Dry	1,618	505	183	2,306	689	102	183	974	928	404	1,332	2,306
2019	Wet	1,482	505	191	2,178	614	82	191	887	868	424	1,292	2,179
Average (2006 – 2016)		2121	505	179	2,813	845	83	179	1,114	1,276	423	1,699	2,813

Sums of values may not match averages or totals due to rounding.

**Ag groundwater supplies are less than Ag groundwater extractions shown in Table 3.3-06 due to groundwater exports for agricultural uses located outside of the Basin.*

Table 3.3-04 Actual and Planned CMWD Surface Water Deliveries.

Water Year	Water Year Type	Actual Deliveries	Planned Deliveries
2006	Wet	15,368	18,820
2007	Dry	19,394	18,820
2008	Normal	17,203	18,820
2009	Dry	15,523	18,820
2010	Wet	15,204	18,820
2011	Wet	14,432	17,354
2012	Dry	14,106	17,354
2013	Dry	16,987	17,354
2014	Dry	18,799	17,354
2015	Dry	15,612	17,354
2016	Dry	14,131	17,200
2017	Wet	10,855	17,200
2018	Dry	11,196	17,200
2019	Wet	7,320	17,200

Table 3.3-05 UVRGB Surface Water Inflows and Outflows by Water Year, Historical and Current Period.

Period	Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL Package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
Historical	2006	Wet	44,605	12,527	37,128	5,833	18,642	708	(82,387)	(13,009)	(24,048)	119,444	(119,444)
	2007	Dry	5,381	1,270	297	309	8,632	804	(10,120)	(1,064)	(5,509)	16,694	(16,694)
	2008	Normal	40,874	10,332	36,188	5,871	12,588	846	(71,136)	(11,036)	(24,526)	106,698	(106,698)
	2009	Dry	6,829	1,416	4,032	1,182	7,178	903	(10,759)	(1,685)	(9,096)	21,540	(21,540)
	2010	Wet	21,348	4,544	33,228	5,525	13,492	886	(46,999)	(7,660)	(24,365)	79,024	(79,024)
	2011	Wet	45,682	10,580	49,632	7,243	17,267	856	(82,672)	(23,443)	(25,145)	131,260	(131,260)
	2012	Dry	11,029	901	1,298	742	8,768	785	(10,172)	(1,105)	(12,246)	23,524	(23,524)
	2013	Dry	1,817	110	470	478	5,015	765	(5,443)	(987)	(2,225)	8,655	(8,655)
	2014	Dry	4,188	685	1,474	1,131	573	787	(2,845)	(1,952)	(4,041)	8,839	(8,839)
	2015	Dry	1,978	153	964	843	1,056	271	(1,933)	(427)	(2,904)	5,265	(5,265)
	2016	Dry	1,138	501	3,512	1,574	397	207	(3,047)	(327)	(3,955)	7,329	(7,329)
Current	2017	Wet	23,963	7,152	49,881	6,540	9,055	256	(65,770)	(6,468)	(24,609)	96,847	(96,847)
	2018	Dry	8,027	1,306	1,842	1,427	6,363	199	(9,621)	(877)	(8,665)	19,164	(19,164)
	2019	Wet	69,779	13,801	36,595	5,748	16,696	93	(92,791)	(20,983)	(28,938)	142,711	(142,711)
Historical Average* (2006 – 2016)			16,806	3,911	15,293	2,794	8,510	711	(29,774)	(5,700)	(12,551)	48,025	(48,025)
Current Average* (2017 – 2019)			33,923	7,420	29,439	4,572	10,705	183	(56,061)	(9,443)	(20,737)	86,241	(86,241)

*Sums of values may not match averages or totals due to rounding.

Table 3.3-06 UVRGB Groundwater Inflows and Outflows by Water Year, Historical and Current Period.

Period	Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping‡	Agricultural Pumping†	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
Historical	**2006**	Wet	152	62	242	125	97	24,048	(18,642)	(5)	(708)	(4,600)	(215)	(194)	(1,525)	24,726	(25,889)	(1,090)	(1,090)
	2007	Dry	0	62	271	140	108	5,509	(8,632)	(3)	(804)	(5,009)	(283)	(196)	(1,359)	6,090	(16,286)	(10,115)	(11,205)
	2008	Normal	1,744	62	262	135	105	24,526	(12,588)	(5)	(846)	(5,292)	(266)	(197)	(1,802)	26,834	(20,996)	5,930	(5,274)
	2009	Dry	44	62	245	126	98	9,096	(7,178)	(6)	(903)	(5,618)	(290)	(197)	(1,275)	9,670	(15,466)	(5,523)	(10,798)
	2010	Wet	1,478	62	220	113	88	24,365	(13,492)	(9)	(886)	(5,542)	(240)	(193)	(1,399)	26,325	(21,763)	4,673	(6,125)
	2011	Wet	2,215	62	206	106	82	25,145	(17,267)	(14)	(856)	(4,727)	(252)	(197)	(1,538)	27,816	(24,851)	3,045	(3,080)
	2012	Dry	0	62	213	110	85	12,246	(8,768)	(13)	(785)	(5,908)	(284)	(199)	(1,439)	12,717	(17,398)	(4,490)	(7,569)
	2013	Dry	5	62	209	109	84	2,225	(5,015)	(12)	(765)	(4,449)	(310)	(196)	(944)	2,693	(11,690)	(8,439)	(16,008)
	2014	Dry	0	62	199	102	80	4,041	(573)	(11)	(787)	(4,867)	(266)	(183)	(809)	4,484	(7,497)	(2,532)	(18,540)
	2015	Dry	42	62	175	90	70	2,904	(1,056)	(11)	(271)	(2,815)	(294)	(170)	(678)	3,343	(5,296)	(1,808)	(20,348)
	2016	Dry	6	62	148	76	59	3,955	(397)	(11)	(207)	(2,944)	(338)	(166)	(662)	4,307	(4,725)	(354)	(20,702)
Current	**2017**	Wet	1,724	62	116	71	76	24,609	(9,055)	(15)	(256)	(4,494)	(367)	(184)	(1,001)	26,658	(15,372)	11,363	(9,339)
	2018	Dry	1,309	62	121	74	78	8,665	(6,363)	(15)	(199)	(4,142)	(335)	(192)	(767)	10,309	(12,012)	(1,592)	(10,931)
	2019	Wet	1,570	62	119	73	77	28,938	(16,696)	(18)	(93)	(3,288)	(395)	(192)	(1,314)	30,838	(21,996)	8,939	(1,992)
Average* (2006 – 2016)			517	62	217	112	87	12,551	(8,510)	(9)	(711)	(4,707)	(276)	(190)	(1,221)	13,546	(15,623)	(1,882)	
Average* (2017 – 2019)			1,535	62	119	73	77	20,737	(10,705)	(16)	(183)	(3,975)	(366)	(189)	(1,027)	22,602	(16,460)	6,237	

*Sums of values may not match averages or totals due to rounding.

†Estimated for the Basin. Note that some of the agricultural pumped groundwater is used outside of the Basin.

‡These values are much higher than the "M&I GW Supplies" term in Table 3.3-03 due to City of Ventura pumping exported to the City of Ventura.

Table 3.3-07 Current and Projected Population for CMWD Retail Service Area (CMWD, 2020).

Year	Population
2020	11,042
2025	11,101
2030	11,161
2035	11,221
2040	11,281

Table 3.3-08 Projected Baseline Demands and Supplies by Category and Source.

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supplies
2020	Normal	2133	505	193	2831	720	101	193	1014	1412	404	1817	2831
2021	Normal	2133	505	192	2830	721	109	192	1022	1412	396	1808	2830
2022	Dry	1502	505	188	2196	482	120	188	790	1020	386	1406	2196
2023	Wet	2133	505	193	2831	647	99	193	939	1485	407	1892	2831
2024	Normal	2133	505	193	2831	721	105	193	1019	1412	401	1813	2831
2025	Normal	2133	505	191	2829	721	107	191	1019	1412	399	1811	2829
2026	Dry	1502	505	187	2194	482	113	187	782	1020	392	1412	2194
2027	Dry	1502	505	184	2191	409	121	184	714	1093	384	1477	2191
2028	Wet	2133	505	196	2834	647	86	196	929	1485	420	1905	2834
2029	Normal	2133	505	195	2833	721	95	195	1011	1412	410	1822	2833
2030	Wet	2133	505	198	2836	721	93	198	1011	1412	412	1824	2836
2031	Normal	2133	505	192	2830	721	106	192	1019	1412	399	1811	2830
2032	Normal	2133	505	187	2825	721	106	187	1014	1412	399	1811	2825
2033	Wet	2133	505	196	2834	721	85	196	1001	1412	420	1833	2834
2034	Normal	2133	505	192	2830	721	103	192	1016	1412	402	1814	2830
2035	Normal	2133	505	186	2824	721	115	186	1021	1412	391	1803	2824
2036	Wet	2133	505	190	2828	721	98	190	1008	1412	408	1820	2828
2037	Dry	1502	505	190	2197	482	118	190	790	1020	387	1407	2197
2038	Normal	2133	505	191	2829	647	115	191	954	1485	390	1875	2829
2039	Dry	1502	505	185	2193	482	119	185	786	1020	386	1406	2193
2040	Dry	1502	505	178	2186	409	120	178	707	1093	385	1478	2186
2041	Normal	2133	505	185	2823	647	106	185	938	1485	400	1885	2823
2042	Wet	2133	505	194	2832	721	100	194	1015	1412	405	1817	2832
2043	Wet	2133	505	199	2837	721	85	199	1004	1412	420	1833	2837
2044	Dry	1502	505	193	2201	482	108	193	784	1020	397	1417	2201
2045	Wet	2133	505	197	2835	647	89	197	934	1485	416	1901	2835
2046	Normal	2133	505	194	2832	721	103	194	1018	1412	402	1814	2832
2047	Normal	2133	505	193	2831	721	104	193	1018	1412	401	1813	2831
2048	Wet	2133	505	197	2835	721	79	197	997	1412	426	1838	2835
2049	Dry	1502	505	194	2201	482	111	194	786	1020	395	1414	2201
2050	Normal	2133	505	191	2829	647	113	191	951	1485	393	1878	2829
2051	Wet	2133	505	193	2831	721	101	193	1015	1412	405	1817	2831
2052	Dry	1502	505	188	2195	482	122	188	792	1020	383	1403	2195
2053	Normal	2133	505	191	2829	647	108	191	946	1485	397	1882	2829
2054	Dry	1502	505	189	2196	482	112	189	783	1020	393	1413	2196
2055	Wet	2133	505	197	2835	647	87	197	932	1485	418	1904	2835
2056	Wet	2133	505	194	2832	721	94	194	1008	1412	411	1823	2832
2057	Dry	1502	505	188	2195	482	125	188	795	1020	380	1400	2195
2058	Normal	2133	505	191	2829	647	111	191	949	1485	395	1880	2829

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supplies
2059	Dry	1502	505	187	2194	482	115	187	784	1020	390	1410	2194
2060	Wet	2133	505	191	2829	647	104	191	943	1485	401	1886	2829
2061	Wet	2133	505	193	2831	721	96	193	1010	1412	410	1822	2831
2062	Dry	1502	505	192	2199	482	115	192	789	1020	390	1410	2199
2063	Dry	1502	505	182	2189	409	121	182	711	1093	384	1477	2189
2064	Dry	1502	505	175	2182	409	87	175	671	1093	419	1512	2182
2065	Dry	1502	505	162	2169	409	76	162	647	1093	429	1522	2169
2066	Dry	1502	505	157	2165	409	72	157	638	1093	434	1527	2165
2067	Wet	2133	505	178	2816	647	77	178	902	1485	429	1914	2816
2068	Dry	1502	505	185	2192	482	114	185	781	1020	391	1411	2192
2069	Wet	2133	505	190	2828	647	104	190	942	1485	401	1886	2828
Average (2020-2069)		1906	505	189	2600	608	103	189	901	1297	402	1699	2600

Sums of values may not match averages or totals due to rounding.

Table 3.3-09 Projected 2030 Demands and Supplies by Category and Source.

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supply
2020	Normal	2178	527	192	2897	720	108	192	1020	1458	419	1877	2897
2021	Normal	2178	527	191	2896	721	112	191	1024	1457	415	1872	2896
2022	Dry	1534	527	189	2250	482	124	189	795	1052	403	1455	2250
2023	Wet	2178	527	193	2898	647	106	193	946	1531	421	1952	2898
2024	Normal	2178	527	192	2897	721	110	192	1022	1457	417	1874	2897
2025	Normal	2178	527	191	2896	721	114	191	1025	1457	413	1870	2896
2026	Normal	2178	527	186	2891	721	116	186	1023	1457	411	1868	2891
2027	Dry	1534	527	183	2244	482	125	183	790	1052	402	1454	2244
2028	Wet	2178	527	196	2901	647	91	196	934	1531	436	1967	2901
2029	Wet	2178	527	195	2900	721	100	195	1016	1457	427	1884	2900
2030	Wet	2178	527	196	2901	721	99	196	1015	1457	428	1886	2901
2031	Normal	2178	527	189	2894	721	112	189	1022	1457	415	1872	2894
2032	Normal	2178	527	186	2891	721	111	186	1018	1457	416	1874	2891
2033	Wet	2178	527	196	2901	721	88	196	1005	1457	439	1896	2901
2034	Dry	1534	527	192	2253	482	113	192	787	1052	414	1466	2253
2035	Dry	1534	527	187	2248	409	124	187	720	1125	403	1529	2248
2036	Wet	2178	527	190	2895	647	104	190	942	1531	423	1954	2895
2037	Dry	1534	527	188	2249	482	123	188	793	1052	404	1456	2249
2038	Normal	2178	527	191	2896	647	121	191	959	1531	406	1937	2896
2039	Dry	1534	527	185	2246	482	123	185	790	1052	404	1456	2246
2040	Dry	1534	527	178	2239	409	125	178	712	1125	402	1527	2239
2041	Normal	2178	527	184	2889	647	105	184	937	1531	422	1953	2889
2042	Wet	2178	527	193	2898	721	107	193	1020	1457	420	1878	2898
2043	Wet	2178	527	199	2904	721	91	199	1011	1457	436	1893	2904
2044	Dry	1534	527	193	2254	482	114	193	789	1052	413	1465	2254
2045	Wet	2178	527	196	2901	647	97	196	941	1531	430	1961	2901
2046	Normal	2178	527	194	2899	721	107	194	1022	1457	420	1877	2899
2047	Normal	2178	527	192	2897	721	108	192	1021	1457	419	1876	2897
2048	Wet	2178	527	197	2902	721	82	197	1000	1457	445	1902	2902
2049	Dry	1534	527	194	2255	482	115	194	791	1052	412	1464	2255
2050	Normal	2178	527	190	2895	647	117	190	955	1531	410	1941	2895
2051	Wet	2178	527	193	2898	721	108	193	1021	1457	419	1877	2898
2052	Dry	1534	527	186	2247	482	128	186	797	1052	399	1450	2247
2053	Normal	2178	527	189	2894	647	115	189	952	1531	412	1942	2894
2054	Normal	2178	527	189	2894	721	117	189	1027	1457	410	1867	2894
2055	Wet	2178	527	197	2902	721	95	197	1013	1457	432	1889	2902
2056	Normal	2178	527	193	2898	721	104	193	1017	1457	423	1881	2898

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supply
2057	Dry	1534	527	185	2246	482	132	185	799	1052	395	1447	2246
2058	Normal	2178	527	191	2896	647	115	191	953	1531	412	1942	2896
2059	Dry	1534	527	186	2247	482	117	186	785	1052	410	1462	2247
2060	Wet	2178	527	191	2896	647	109	191	947	1531	418	1949	2896
2061	Wet	2178	527	193	2898	721	102	193	1016	1457	425	1882	2898
2062	Dry	1534	527	190	2251	482	123	190	795	1052	404	1456	2251
2063	Dry	1534	527	181	2242	409	128	181	718	1125	399	1524	2242
2064	Dry	1534	527	174	2235	409	90	174	673	1125	437	1562	2235
2065	Dry	1534	527	158	2219	409	80	158	648	1125	447	1572	2219
2066	Dry	1534	527	156	2217	409	72	156	637	1125	455	1580	2217
2067	Wet	2178	527	178	2883	647	80	178	905	1531	447	1978	2883
2068	Dry	1534	527	184	2245	482	121	184	787	1052	406	1458	2245
2069	Wet	2178	527	190	2895	647	113	190	951	1531	414	1944	2895
Average (2020-2069)		1946	527	188	2662	608	109	188	906	1338	418	1756	2662

Sums of values may not match averages or totals due to rounding.

Table 3.3-10 Projected 2070 Demands and Supplies by Category and Source.

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supply
2020	Normal	2228	551	192	2971	720	116	192	1028	1508	435	1943	2971
2021	Normal	2228	551	191	2970	721	127	191	1039	1507	424	1931	2970
2022	Dry	1569	551	187	2307	482	133	187	802	1087	418	1505	2307
2023	Wet	2228	551	192	2971	647	113	192	953	1581	438	2018	2971
2024	Normal	2228	551	191	2970	721	119	191	1031	1507	432	1939	2970
2025	Normal	2228	551	191	2970	721	122	191	1033	1507	429	1937	2970
2026	Normal	2228	551	190	2969	721	120	190	1031	1507	431	1938	2969
2027	Dry	1569	551	189	2309	482	134	189	805	1087	417	1504	2309
2028	Wet	2228	551	196	2975	647	95	196	938	1581	456	2037	2975
2029	Wet	2228	551	195	2974	721	108	195	1024	1507	443	1951	2974
2030	Wet	2228	551	196	2975	721	104	196	1021	1507	447	1954	2975
2031	Normal	2228	551	190	2969	721	120	190	1030	1507	431	1939	2969
2032	Normal	2228	551	187	2966	721	117	187	1025	1507	434	1941	2966
2033	Wet	2228	551	196	2975	721	96	196	1012	1507	455	1962	2975
2034	Dry	1569	551	192	2312	482	120	192	794	1087	431	1518	2312
2035	Dry	1569	551	186	2306	409	130	186	724	1160	421	1582	2306
2036	Wet	2228	551	190	2969	647	112	190	950	1581	439	2019	2969
2037	Dry	1569	551	187	2307	482	136	187	805	1087	415	1502	2307
2038	Normal	2228	551	190	2969	647	130	190	967	1581	421	2002	2969
2039	Dry	1569	551	183	2303	482	130	183	795	1087	421	1508	2303
2040	Dry	1569	551	178	2298	409	135	178	722	1160	416	1576	2298
2041	Normal	2228	551	184	2963	647	110	184	942	1581	441	2022	2963
2042	Wet	2228	551	193	2972	721	112	193	1026	1507	439	1946	2972
2043	Wet	2228	551	198	2977	721	97	198	1016	1507	454	1961	2977
2044	Normal	2228	551	193	2972	721	124	193	1037	1507	427	1935	2972
2045	Wet	2228	551	197	2976	721	102	197	1019	1507	449	1956	2976
2046	Normal	2228	551	193	2972	721	115	193	1029	1507	436	1943	2972
2047	Normal	2228	551	191	2970	721	116	191	1028	1507	435	1943	2970
2048	Wet	2228	551	197	2976	721	89	197	1006	1507	462	1969	2976
2049	Dry	1569	551	193	2313	482	127	193	802	1087	424	1511	2313
2050	Normal	2228	551	190	2969	647	126	190	964	1581	425	2005	2969
2051	Wet	2228	551	193	2972	721	115	193	1028	1507	436	1943	2972
2052	Dry	1569	551	185	2305	482	141	185	809	1087	410	1497	2305
2053	Normal	2228	551	188	2967	647	126	188	962	1581	425	2005	2967
2054	Normal	2228	551	189	2968	721	125	189	1034	1507	426	1934	2968
2055	Wet	2228	551	197	2976	721	101	197	1019	1507	450	1957	2976
2056	Normal	2228	551	193	2972	721	112	193	1026	1507	439	1946	2972

Water Year	Year Type	M&I Demand	Ag Demand	Domestic Demand	Total Demand	M&I GW Supplies	Ag GW Supplies	Domestic GW Supplies	Total GW Supplies	M&I SW Supplies	Ag SW Supplies	Total SW Supplies	Total Supply
2057	Dry	1569	551	185	2305	482	145	185	812	1087	406	1493	2305
2058	Normal	2228	551	191	2970	647	123	191	961	1581	428	2009	2970
2059	Dry	1569	551	184	2304	482	125	184	792	1087	426	1513	2304
2060	Wet	2228	551	190	2969	647	117	190	955	1581	434	2014	2969
2061	Wet	2228	551	193	2972	721	108	193	1021	1507	443	1950	2972
2062	Dry	1569	551	188	2308	482	132	188	802	1087	419	1505	2308
2063	Dry	1569	551	181	2301	409	131	181	721	1160	420	1580	2301
2064	Dry	1569	551	174	2294	409	101	174	684	1160	450	1610	2294
2065	Dry	1569	551	156	2276	409	89	156	654	1160	462	1622	2276
2066	Dry	1569	551	154	2274	409	81	154	644	1160	470	1631	2274
2067	Wet	2228	551	177	2956	647	85	177	910	1581	466	2047	2956
2068	Dry	1569	551	184	2304	482	130	184	796	1087	421	1508	2304
2069	Wet	2228	551	190	2969	647	106	190	944	1581	445	2025	2969
Average (2020-2069)		2004	551	188	2743	615	117	188	919	1389	434	1824	2743

Sums of values may not match averages or totals due to rounding.

Table 3.3-11 UVRGB Surface Water Inflows and Outflows by Water Year, Future Baseline Conditions.

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL Package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	16,204	4,901	20,731	3,309	14,334	784	(36,778)	(5,281)	(18,203)	60,263	(60,263)
2021	Normal	20,172	5,513	21,826	3,831	13,795	784	(40,950)	(4,758)	(20,213)	65,922	(65,922)
2022	Dry	10,721	1,972	2,936	1,471	9,160	302	(13,704)	(991)	(11,868)	26,562	(26,562)
2023	Wet	58,273	19,145	76,065	9,250	15,081	716	(127,755)	(24,774)	(26,002)	178,531	(178,530)
2024	Normal	18,448	4,852	20,292	3,597	14,646	784	(36,880)	(7,033)	(18,707)	62,620	(62,620)
2025	Normal	23,653	5,105	25,328	5,020	14,371	784	(42,794)	(7,863)	(23,604)	74,261	(74,261)
2026	Dry	9,920	1,250	2,295	1,751	7,523	302	(9,917)	(1,995)	(11,130)	23,041	(23,041)
2027	Dry	4,812	861	2,254	853	7,376	234	(9,103)	(733)	(6,556)	16,391	(16,391)
2028	Wet	135,574	53,947	118,373	13,993	17,358	716	(265,227)	(43,550)	(31,183)	339,960	(339,960)
2029	Normal	27,908	11,499	32,825	4,680	18,290	784	(64,600)	(8,361)	(23,025)	95,986	(95,986)
2030	Wet	69,751	27,305	71,787	9,079	18,163	784	(148,703)	(24,580)	(23,588)	196,871	(196,871)
2031	Normal	10,101	4,507	14,162	3,116	12,069	784	(27,190)	(3,591)	(13,958)	44,739	(44,739)
2032	Normal	9,938	3,232	15,187	2,836	9,017	784	(21,348)	(3,705)	(15,940)	40,993	(40,993)
2033	Wet	119,319	50,110	96,700	12,272	18,954	784	(224,425)	(40,641)	(33,073)	298,139	(298,139)
2034	Normal	15,729	5,401	14,100	2,895	16,633	784	(37,437)	(3,235)	(14,870)	55,542	(55,542)
2035	Normal	6,624	1,745	10,651	2,198	7,943	784	(15,254)	(1,900)	(12,791)	29,945	(29,945)
2036	Wet	59,645	12,835	55,898	7,942	13,203	784	(99,495)	(21,299)	(29,514)	150,308	(150,308)
2037	Dry	7,640	1,400	1,053	807	9,713	302	(11,630)	(1,313)	(7,972)	20,915	(20,915)
2038	Normal	21,551	2,233	17,186	2,965	12,134	716	(27,509)	(6,919)	(22,357)	56,785	(56,785)
2039	Dry	5,877	736	2,091	1,205	7,557	302	(9,340)	(1,028)	(7,400)	17,768	(17,768)
2040	Dry	2,947	298	1,273	986	4,564	234	(5,753)	(553)	(3,997)	10,303	(10,303)
2041	Normal	29,307	6,685	34,865	5,282	8,273	716	(50,701)	(11,211)	(23,217)	85,129	(85,129)
2042	Wet	75,028	20,511	41,257	6,084	15,553	784	(104,696)	(28,556)	(25,963)	159,215	(159,215)
2043	Wet	155,396	61,083	101,824	12,555	21,776	784	(265,965)	(56,905)	(30,548)	353,418	(353,418)
2044	Dry	12,745	3,312	3,480	1,709	15,742	302	(21,512)	(3,123)	(12,657)	37,292	(37,292)
2045	Wet	141,479	48,603	111,416	12,861	19,160	716	(262,549)	(43,298)	(28,389)	334,236	(334,236)
2046	Normal	11,173	4,722	15,347	3,294	14,384	784	(31,266)	(3,239)	(15,199)	49,705	(49,705)
2047	Normal	24,488	8,752	31,175	5,481	14,511	784	(56,893)	(6,556)	(21,742)	85,191	(85,191)
2048	Wet	140,192	73,503	125,957	15,216	19,646	784	(297,523)	(44,875)	(32,900)	375,299	(375,299)
2049	Dry	10,126	3,943	978	489	14,316	302	(18,351)	(754)	(11,049)	30,154	(30,154)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL Package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2050	Normal	21,113	5,406	24,519	3,817	13,178	716	(40,810)	(7,203)	(20,738)	68,750	(68,750)
2051	Wet	55,372	18,402	46,454	6,559	15,319	784	(103,666)	(15,845)	(23,379)	142,890	(142,890)
2052	Dry	7,996	1,099	356	387	8,314	302	(9,335)	(695)	(8,425)	18,455	(18,455)
2053	Normal	12,304	2,790	27,936	5,065	12,453	716	(36,850)	(3,130)	(21,285)	61,265	(61,265)
2054	Dry	9,699	1,847	15,097	2,615	12,043	302	(25,443)	(1,861)	(14,300)	41,604	(41,604)
2055	Wet	102,614	71,059	114,060	14,233	19,511	716	(266,449)	(27,713)	(28,030)	322,193	(322,193)
2056	Wet	44,605	12,527	37,128	5,833	16,550	784	(79,511)	(13,858)	(24,059)	117,428	(117,428)
2057	Dry	5,381	1,270	297	309	9,118	302	(10,305)	(695)	(5,679)	16,678	(16,678)
2058	Normal	40,874	10,332	36,188	5,871	12,935	716	(70,210)	(13,735)	(22,971)	106,916	(106,916)
2059	Dry	6,829	1,416	4,032	1,182	8,555	302	(11,840)	(1,198)	(9,279)	22,317	(22,317)
2060	Wet	21,348	4,544	33,228	5,525	14,380	716	(49,880)	(6,120)	(23,742)	79,742	(79,742)
2061	Wet	45,676	10,580	49,632	7,243	18,164	784	(90,301)	(13,945)	(27,834)	132,080	(132,080)
2062	Dry	11,037	901	1,298	742	10,563	302	(11,659)	(1,692)	(11,493)	24,843	(24,843)
2063	Dry	1,820	110	470	478	6,457	234	(6,645)	(544)	(2,380)	9,569	(9,569)
2064	Dry	4,188	685	1,474	1,131	3,153	234	(5,250)	(1,439)	(4,178)	10,866	(10,866)
2065	Dry	1,978	153	964	843	2,206	234	(2,847)	(542)	(2,989)	6,378	(6,378)
2066	Dry	1,139	501	3,512	1,574	1,407	234	(3,830)	(531)	(4,006)	8,367	(8,367)
2067	Wet	23,961	7,152	49,881	6,540	8,996	716	(65,319)	(6,953)	(24,973)	97,246	(97,246)
2068	Dry	8,001	1,306	1,842	1,427	6,282	302	(9,254)	(1,049)	(8,857)	19,160	(19,160)
2069	Wet	69,788	13,801	36,595	5,748	14,802	716	(85,355)	(27,214)	(28,880)	141,450	(141,450)
Average (2020-2069)		35,009	12,317	31,486	4,683	12,393	586	(67,400)	(11,172)	(17,902)	96,474	(96,474)

Sums of values may not match averages or totals due to rounding.

Table 3.3-12 UVRGB Projected Surface Water Inflows and Outflows by Water Year, 2030 Climate Change Factors.

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL Package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	13,258	3,981	17,672	2,534	13,609	817	(31,293)	(4,843)	(15,737)	51,872	(51,872)
2021	Normal	20,390	5,572	22,516	3,869	13,270	817	(40,894)	(4,843)	(20,698)	66,435	(66,435)
2022	Dry	11,285	2,076	3,184	1,543	9,171	315	(14,145)	(1,082)	(12,347)	27,574	(27,574)
2023	Wet	56,879	18,687	74,765	8,978	14,750	747	(125,722)	(24,254)	(24,830)	174,806	(174,806)
2024	Normal	17,471	4,595	18,498	3,410	13,681	817	(33,187)	(7,313)	(17,971)	58,472	(58,472)
2025	Normal	21,707	4,685	23,674	4,588	13,260	817	(38,651)	(7,663)	(22,416)	68,731	(68,731)
2026	Normal	11,833	1,491	2,739	2,082	5,431	817	(7,948)	(3,665)	(12,781)	24,394	(24,394)
2027	Dry	5,220	934	2,451	916	6,572	315	(8,437)	(1,023)	(6,947)	16,407	(16,407)
2028	Wet	134,937	53,694	117,735	13,927	16,815	747	(265,590)	(42,957)	(29,308)	337,855	(337,855)
2029	Wet	27,115	11,172	31,910	4,521	16,634	817	(61,938)	(8,747)	(21,485)	92,170	(92,170)
2030	Wet	69,130	27,062	71,264	8,969	16,823	817	(147,111)	(24,315)	(22,639)	194,065	(194,065)
2031	Normal	8,968	4,002	12,519	2,773	10,610	817	(23,308)	(3,605)	(12,776)	39,690	(39,690)
2032	Normal	8,813	2,866	12,954	2,550	8,023	817	(17,646)	(3,423)	(14,955)	36,024	(36,024)
2033	Wet	117,722	49,439	95,324	12,076	18,097	817	(222,420)	(40,002)	(31,054)	293,476	(293,476)
2034	Dry	16,909	5,806	16,286	3,047	17,246	315	(41,129)	(2,584)	(15,897)	59,610	(59,610)
2035	Dry	6,480	1,707	10,579	2,127	10,823	244	(18,611)	(665)	(12,684)	31,960	(31,960)
2036	Wet	59,927	12,896	55,791	7,926	13,993	747	(103,881)	(21,102)	(26,296)	151,279	(151,279)
2037	Dry	8,177	1,498	1,132	856	8,551	315	(10,669)	(1,138)	(8,722)	20,529	(20,529)
2038	Normal	22,737	2,356	18,183	3,102	12,184	747	(30,202)	(7,272)	(21,835)	59,308	(59,308)
2039	Dry	6,049	757	2,153	1,230	7,129	315	(8,983)	(1,254)	(7,397)	17,634	(17,634)
2040	Dry	3,279	331	1,419	1,097	4,426	244	(5,824)	(598)	(4,375)	10,797	(10,797)
2041	Normal	26,958	6,149	32,586	4,836	7,951	747	(46,600)	(10,520)	(22,106)	79,226	(79,226)
2042	Wet	74,728	20,429	41,226	6,031	14,652	817	(105,340)	(27,764)	(24,779)	157,884	(157,884)
2043	Wet	151,219	59,442	99,464	12,205	20,015	817	(260,844)	(54,856)	(27,462)	343,161	(343,161)
2044	Dry	13,735	3,569	3,689	1,828	13,788	315	(20,042)	(3,022)	(13,861)	36,925	(36,925)
2045	Wet	124,752	42,857	98,148	11,333	18,611	747	(232,577)	(37,809)	(26,061)	296,448	(296,448)
2046	Normal	12,047	5,091	16,422	3,526	13,207	817	(31,653)	(3,473)	(15,985)	51,111	(51,111)
2047	Normal	24,879	8,892	31,784	5,549	14,229	817	(58,289)	(6,599)	(21,263)	86,151	(86,151)
2048	Wet	149,849	78,566	134,899	16,232	19,075	817	(321,863)	(46,773)	(30,801)	399,438	(399,438)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL Package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2049	Dry	10,428	4,060	990	504	12,850	315	(16,955)	(865)	(11,327)	29,147	(29,147)
2050	Normal	23,452	6,005	26,843	4,278	13,105	747	(45,334)	(8,497)	(20,598)	74,429	(74,429)
2051	Wet	52,877	17,573	44,624	6,221	14,433	817	(99,429)	(15,260)	(21,857)	136,546	(136,546)
2052	Dry	7,652	1,052	341	370	7,511	315	(8,445)	(724)	(8,073)	17,242	(17,242)
2053	Normal	12,072	2,737	27,725	4,992	11,893	747	(35,409)	(3,785)	(20,972)	60,165	(60,165)
2054	Normal	10,249	1,952	15,990	2,741	10,051	817	(24,023)	(3,328)	(14,450)	41,801	(41,801)
2055	Wet	99,011	68,564	110,385	13,731	17,846	817	(255,971)	(26,421)	(27,961)	310,354	(310,354)
2056	Normal	36,146	10,151	29,305	4,746	14,923	817	(62,859)	(11,506)	(21,725)	96,089	(96,089)
2057	Dry	5,568	1,315	308	320	7,743	315	(8,977)	(724)	(5,867)	15,568	(15,568)
2058	Normal	39,941	10,096	35,524	5,724	12,286	747	(68,605)	(13,810)	(21,902)	104,317	(104,317)
2059	Dry	6,763	1,403	4,182	1,138	7,840	315	(11,226)	(1,504)	(8,912)	21,641	(21,641)
2060	Wet	21,742	4,628	33,758	5,618	14,037	747	(50,269)	(6,501)	(23,760)	80,530	(80,530)
2061	Wet	44,136	10,223	47,767	6,991	17,741	817	(87,007)	(13,803)	(26,866)	127,676	(127,676)
2062	Dry	11,662	878	1,043	600	9,384	315	(10,320)	(2,337)	(11,226)	23,883	(23,883)
2063	Dry	1,823	114	387	379	6,060	244	(6,179)	(567)	(2,261)	9,008	(9,008)
2064	Dry	4,004	647	1,036	795	2,913	244	(4,415)	(1,438)	(3,786)	9,639	(9,639)
2065	Dry	2,026	161	755	650	1,905	244	(2,319)	(565)	(2,856)	5,741	(5,741)
2066	Dry	1,191	554	2,889	1,299	1,117	244	(3,088)	(554)	(3,652)	7,293	(7,293)
2067	Wet	26,831	8,637	46,073	6,008	8,718	747	(63,580)	(8,437)	(24,996)	97,013	(97,013)
2068	Dry	7,869	1,288	1,367	1,058	5,888	315	(8,357)	(1,068)	(8,361)	17,786	(17,786)
2069	Wet	69,939	14,586	28,041	4,546	14,162	747	(78,625)	(26,324)	(27,071)	132,021	(132,020)
Average (2020-2069)		34,437	12,145	30,606	4,527	11,701	611	(65,724)	(11,024)	(17,279)	94,026	(94,026)

Sums of values may not match averages or totals due to rounding.

Table 3.3-13 UVRGB Projected Surface Water Inflows and Outflows by Water Year, 2070 Climate Change Factors.

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	15,317	4,580	20,279	3,011	13,904	854	(35,674)	(6,131)	(16,140)	57,944	(57,944)
2021	Normal	18,702	5,111	21,592	3,524	13,082	854	(38,904)	(4,549)	(19,411)	62,864	(62,864)
2022	Dry	9,597	1,765	2,620	1,310	7,701	329	(11,811)	(988)	(10,525)	23,323	(23,323)
2023	Wet	63,225	20,772	84,398	9,870	14,164	780	(142,105)	(26,311)	(24,792)	193,208	(193,208)
2024	Normal	18,951	4,985	20,438	3,677	13,552	854	(35,495)	(8,616)	(18,346)	62,457	(62,457)
2025	Normal	20,689	4,465	23,507	4,346	12,768	854	(37,485)	(7,791)	(21,354)	66,630	(66,630)
2026	Normal	25,994	3,276	6,049	4,423	9,841	854	(19,938)	(6,158)	(24,341)	50,437	(50,437)
2027	Dry	6,147	1,100	2,917	1,065	11,533	329	(13,931)	(1,279)	(7,882)	23,092	(23,092)
2028	Wet	146,975	58,484	128,600	15,154	17,192	780	(293,173)	(46,515)	(27,495)	367,184	(367,184)
2029	Wet	31,299	12,897	36,957	5,178	16,398	854	(71,427)	(11,295)	(20,860)	103,582	(103,582)
2030	Wet	77,878	30,487	80,397	10,044	16,505	854	(167,833)	(25,895)	(22,437)	216,165	(216,165)
2031	Normal	11,369	5,073	16,146	3,494	11,277	854	(29,288)	(4,269)	(14,656)	48,212	(48,212)
2032	Normal	9,516	3,094	13,987	2,755	8,679	854	(19,844)	(3,728)	(15,313)	38,885	(38,885)
2033	Wet	122,106	51,280	99,764	12,457	17,972	854	(233,636)	(41,853)	(28,944)	304,433	(304,433)
2034	Dry	13,116	4,504	13,608	2,310	15,372	329	(32,785)	(1,992)	(14,461)	49,239	(49,239)
2035	Dry	5,269	1,388	8,617	1,731	9,262	255	(15,103)	(669)	(10,750)	26,522	(26,522)
2036	Wet	68,192	14,674	64,834	8,881	13,034	780	(120,564)	(23,480)	(26,350)	170,395	(170,395)
2037	Dry	7,772	1,424	1,082	801	8,124	329	(10,223)	(1,178)	(8,131)	19,533	(19,533)
2038	Normal	21,914	2,270	17,056	3,003	11,673	780	(28,218)	(7,603)	(20,877)	56,697	(56,697)
2039	Dry	5,227	654	1,857	1,061	6,245	329	(7,740)	(1,189)	(6,444)	15,373	(15,373)
2040	Dry	3,900	394	1,688	1,292	3,967	255	(5,749)	(663)	(5,086)	11,497	(11,497)
2041	Normal	33,596	7,663	41,420	5,982	8,108	780	(61,848)	(13,210)	(22,490)	97,548	(97,548)
2042	Wet	82,495	22,552	45,858	6,563	14,189	854	(120,329)	(28,723)	(23,459)	172,511	(172,511)
2043	Wet	163,589	64,304	108,669	13,151	19,133	854	(286,758)	(57,095)	(25,846)	369,700	(369,700)
2044	Normal	15,818	4,110	4,127	2,076	11,472	854	(18,444)	(5,105)	(14,907)	38,457	(38,457)
2045	Wet	148,331	50,957	116,640	13,443	17,424	854	(278,804)	(42,863)	(25,982)	347,649	(347,649)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion Simulated using WEL package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2046	Normal	14,065	5,944	18,872	4,045	13,054	854	(35,957)	(4,578)	(16,300)	56,835	(56,835)
2047	Normal	23,524	8,408	31,331	5,178	13,705	854	(55,971)	(7,075)	(19,953)	82,999	(82,999)
2048	Wet	147,129	77,139	133,148	15,864	18,329	854	(317,800)	(45,247)	(29,416)	392,463	(392,463)
2049	Dry	9,464	3,685	849	460	11,136	329	(14,784)	(929)	(10,209)	25,922	(25,922)
2050	Normal	24,913	6,379	27,391	4,622	12,613	780	(47,044)	(9,567)	(20,086)	76,698	(76,698)
2051	Wet	62,537	20,783	53,207	7,306	14,111	854	(119,020)	(17,732)	(22,048)	158,799	(158,799)
2052	Dry	6,851	942	304	337	7,172	329	(7,942)	(756)	(7,237)	15,936	(15,936)
2053	Normal	10,110	2,292	23,860	4,194	10,782	780	(28,894)	(3,345)	(19,779)	52,018	(52,018)
2054	Normal	11,919	2,270	18,748	3,146	9,999	854	(27,455)	(4,015)	(15,467)	46,936	(46,936)
2055	Wet	108,576	75,188	122,751	14,955	17,850	854	(284,463)	(29,000)	(26,711)	340,174	(340,174)
2056	Normal	38,167	10,719	29,734	5,028	14,778	854	(65,184)	(12,249)	(21,847)	99,279	(99,279)
2057	Dry	5,451	1,287	300	315	7,430	329	(8,616)	(756)	(5,741)	15,113	(15,113)
2058	Normal	43,293	10,943	38,783	6,172	12,095	780	(75,719)	(14,921)	(21,426)	112,066	(112,066)
2059	Dry	5,846	1,212	3,765	958	7,207	329	(10,106)	(1,485)	(7,727)	19,318	(19,318)
2060	Wet	21,313	4,537	35,107	5,435	13,192	780	(49,632)	(7,533)	(23,199)	80,364	(80,364)
2061	Wet	42,002	9,729	45,642	6,620	17,191	854	(82,744)	(13,233)	(26,061)	122,038	(122,038)
2062	Dry	11,100	783	725	426	8,311	329	(9,009)	(2,369)	(10,297)	21,675	(21,675)
2063	Dry	1,823	114	314	290	5,613	255	(5,669)	(593)	(2,148)	8,410	(8,410)
2064	Dry	4,004	647	850	647	2,717	255	(4,006)	(1,462)	(3,652)	9,120	(9,120)
2065	Dry	2,026	161	571	487	1,703	255	(1,933)	(591)	(2,679)	5,203	(5,203)
2066	Dry	1,191	554	2,369	1,127	938	255	(2,540)	(578)	(3,315)	6,434	(6,434)
2067	Wet	26,831	8,637	46,156	6,020	8,484	780	(63,338)	(8,514)	(25,055)	96,907	(96,907)
2068	Dry	7,869	1,288	943	728	5,654	329	(7,717)	(1,100)	(7,994)	16,811	(16,811)
2069	Wet	78,001	16,795	24,412	4,068	13,702	780	(82,195)	(29,586)	(25,978)	137,759	(137,759)
Average (2020-2069)		37,100	13,054	32,865	4,781	11,407	650	(70,897)	(11,927)	(17,032)	99,856	(99,856)

Sums of values may not match averages or totals due to rounding.

Table 3.3-14 UVRGB Projected Groundwater Inflows and Outflows by Water Year, Future Baseline Conditions.

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	53	62	201	102	80	18,203	(14,334)	(13)	(784)	(6,261)	(468)	(193)	(1,294)	18,700	(23,347)	(4,548)	(4,548)
2021	Normal	1,336	62	201	102	80	20,213	(13,795)	(15)	(784)	(6,262)	(491)	(192)	(1,159)	21,994	(22,699)	(607)	(5,154)
2022	Dry	670	62	177	90	71	11,868	(9,160)	(15)	(302)	(4,053)	(520)	(188)	(946)	12,938	(15,185)	(2,139)	(7,294)
2023	Wet	3,590	62	193	98	77	26,002	(15,081)	(19)	(716)	(5,177)	(461)	(193)	(1,225)	30,021	(22,873)	7,244	(50)
2024	Normal	888	62	201	102	80	18,707	(14,646)	(20)	(784)	(6,262)	(480)	(193)	(1,135)	20,039	(23,521)	(3,383)	(3,432)
2025	Normal	782	62	201	102	80	23,604	(14,371)	(19)	(784)	(6,262)	(484)	(191)	(1,100)	24,831	(23,212)	1,729	(1,703)
2026	Dry	66	62	177	90	71	11,130	(7,523)	(17)	(302)	(4,053)	(501)	(187)	(892)	11,596	(13,475)	(1,777)	(3,480)
2027	Dry	30	62	169	86	68	6,556	(7,376)	(14)	(234)	(2,967)	(527)	(184)	(793)	6,970	(12,096)	(5,012)	(8,492)
2028	Wet	8,713	62	193	98	77	31,183	(17,358)	(34)	(716)	(5,177)	(431)	(196)	(1,443)	40,325	(25,355)	15,062	6,570
2029	Normal	1,887	62	201	102	80	23,025	(18,290)	(37)	(784)	(6,262)	(451)	(195)	(1,356)	25,356	(27,376)	(1,922)	4,648
2030	Wet	4,233	62	201	102	81	23,588	(18,163)	(46)	(784)	(6,262)	(446)	(198)	(1,361)	28,267	(27,260)	1,097	5,744
2031	Normal	69	62	201	102	80	13,958	(12,069)	(37)	(784)	(6,262)	(486)	(192)	(1,117)	14,472	(20,947)	(6,320)	(575)
2032	Normal	60	62	201	102	80	15,940	(9,017)	(31)	(784)	(6,262)	(489)	(187)	(939)	16,445	(17,710)	(1,111)	(1,687)
2033	Wet	5,935	62	201	102	80	33,073	(18,954)	(51)	(784)	(6,262)	(426)	(196)	(1,349)	39,452	(28,023)	11,517	9,830
2034	Normal	75	62	201	102	81	14,870	(16,633)	(42)	(784)	(6,262)	(477)	(192)	(1,184)	15,391	(25,576)	(9,996)	(167)
2035	Normal	87	62	201	102	80	12,791	(7,943)	(35)	(784)	(6,262)	(508)	(186)	(893)	13,322	(16,611)	(3,127)	(3,293)
2036	Wet	1,258	62	201	102	80	29,514	(13,203)	(36)	(784)	(6,262)	(458)	(190)	(1,249)	31,216	(22,183)	9,133	5,840
2037	Dry	0	62	177	90	71	7,972	(9,713)	(31)	(302)	(4,053)	(516)	(190)	(900)	8,371	(15,705)	(7,229)	(1,389)
2038	Normal	55	62	193	98	77	22,357	(12,134)	(27)	(716)	(5,177)	(508)	(191)	(1,179)	22,842	(19,932)	3,016	1,627
2039	Dry	36	62	177	90	71	7,400	(7,557)	(23)	(302)	(4,053)	(518)	(185)	(844)	7,835	(13,483)	(5,546)	(3,919)
2040	Dry	16	62	169	86	68	3,997	(4,564)	(21)	(234)	(2,967)	(534)	(178)	(620)	4,396	(9,118)	(4,613)	(8,532)
2041	Normal	1,658	62	193	98	77	23,217	(8,273)	(23)	(716)	(5,177)	(495)	(185)	(1,051)	25,304	(15,920)	9,495	962
2042	Wet	3,474	62	201	102	81	25,963	(15,553)	(31)	(784)	(6,262)	(466)	(194)	(1,322)	29,883	(24,613)	5,367	6,329
2043	Wet	6,739	62	201	102	80	30,548	(21,776)	(54)	(784)	(6,262)	(423)	(199)	(1,525)	37,732	(31,023)	6,801	13,130
2044	Dry	88	62	177	90	71	12,657	(15,742)	(41)	(302)	(4,053)	(488)	(193)	(1,137)	13,145	(21,957)	(8,698)	4,432
2045	Wet	6,751	62	193	98	77	28,389	(19,160)	(66)	(716)	(5,177)	(435)	(197)	(1,512)	35,569	(27,264)	8,397	12,829
2046	Normal	287	62	201	102	81	15,199	(14,384)	(54)	(784)	(6,262)	(475)	(194)	(1,253)	15,932	(23,407)	(7,380)	5,449
2047	Normal	1,307	62	201	102	80	21,742	(14,511)	(53)	(784)	(6,262)	(479)	(193)	(1,292)	23,494	(23,575)	26	5,475
2048	Wet	6,722	62	201	102	80	32,900	(19,646)	(87)	(784)	(6,262)	(410)	(197)	(1,492)	40,067	(28,878)	11,278	16,754
2049	Dry	1	62	177	90	71	11,049	(14,316)	(64)	(302)	(4,053)	(495)	(194)	(1,068)	11,449	(20,492)	(8,935)	7,819
2050	Normal	597	62	193	98	77	20,738	(13,178)	(57)	(716)	(5,177)	(500)	(191)	(1,284)	21,765	(21,103)	766	8,585
2051	Wet	2,185	62	201	102	80	23,379	(15,319)	(62)	(784)	(6,262)	(467)	(193)	(1,346)	26,009	(24,434)	1,671	10,256
2052	Dry	0	62	177	90	71	8,425	(8,314)	(50)	(302)	(4,053)	(527)	(188)	(756)	8,824	(14,190)	(5,256)	5,000
2053	Normal	260	62	193	98	77	21,285	(12,453)	(44)	(716)	(5,177)	(491)	(191)	(1,083)	21,974	(20,155)	1,945	6,945
2054	Dry	104	62	177	90	71	14,300	(12,043)	(39)	(302)	(4,053)	(499)	(189)	(1,020)	14,804	(18,145)	(3,248)	3,698
2055	Wet	7,991	62	193	98	77	28,030	(19,511)	(81)	(716)	(5,177)	(429)	(197)	(1,115)	36,451	(27,226)	9,314	13,012
2056	Wet	152	62	201	102	80	24,059	(16,550)	(60)	(784)	(6,262)	(448)	(194)	(1,002)	24,655	(25,300)	(552)	12,459
2057	Dry	0	62	177	90	71	5,679	(9,118)	(48)	(302)	(4,053)	(536)	(188)	(730)	6,078	(14,974)	(8,788)	3,672
2058	Normal	1,744	62	193	98	77	22,971	(12,935)	(50)	(716)	(5,177)	(495)	(191)	(1,123)	25,145	(20,688)	4,564	8,236
2059	Dry	44	62	177	90	71	9,279	(8,555)	(41)	(302)	(4,053)	(507)	(187)	(790)	9,721	(14,436)	(4,605)	3,631
2060	Wet	1,478	62	193	98	77	23,742	(14,380)	(43)	(716)	(5,177)	(478)	(191)	(973)	25,649	(21,959)	3,787	7,418
2061	Wet	2,215	62	201	102	80	27,834	(18,164)	(47)	(784)	(6,262)	(453)	(193)	(1,139)	30,493	(27,044)	3,539	10,958
2062	Dry	0	62	177	90	71	11,493	(10,563)	(39)	(302)	(4,053)	(507)	(192)	(918)	11,893	(16,575)	(4,572)	6,385
2063	Dry	5	62	169	86	68	2,380	(6,457)	(33)	(234)	(2,967)	(535)	(182)	(601)	2,768	(11,010)	(8,099)	(1,714)
2064	Dry	0	62	169	86	68	4,178	(3,153)	(28)	(234)	(2,692)	(503)	(175)	(566)	4,561	(7,353)	(2,704)	(4,418)
2065	Dry	42	62	169	86	68	2,989	(2,206)	(25)	(234)	(2,692)	(489)	(162)	(294)	3,414	(6,102)	(2,618)	(7,035)
2066	Dry	6	62	169	86	68	4,006	(1,407)	(22)	(234)	(2,692)	(479)	(157)	(365)	4,397	(5,358)	(876)	(7,911)
2067	Wet	1,724	62	193	98	77	24,973	(8,996)	(26)	(716)	(5,177)	(448)	(178)	(948)	27,127	(16,489)	10,851	2,940
2068	Dry	1,309	62	177	90	71	8,857	(6,282)	(25)	(302)	(4,053)	(508)	(185)	(759)	10,565	(12,114)	(1,421)	1,519
2069	Wet	1,570	62	193	98	77	28,880	(14,802)	(28)	(716)	(5,177)	(478)	(190)	(1,258)	30,880	(22,650)	8,331	9,849
Average (2020-2069)		1,566	62	189	96	76	17,902	(12,393)	(38)	(586)	(5,060)	(482)	(189)	(1,054)	19,891	(19,802)	197	2,944

Sums of values may not match averages or totals due to rounding.

Table 3.3-15 UVRGB Projected Groundwater Inflows and Outflows by Water Year, 2030 Climate Change Factors.

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	46	64	209	102	80	15,737	(13,609)	(13)	(817)	(6,261)	(497)	(192)	(1,303)	16,238	(22,692)	(6,299)	(6,299)
2021	Normal	1,295	64	209	102	80	20,698	(13,270)	(15)	(817)	(6,262)	(511)	(191)	(1,201)	22,448	(22,267)	365	(5,935)
2022	Dry	690	64	185	90	71	12,347	(9,171)	(15)	(315)	(4,053)	(547)	(189)	(989)	13,447	(15,278)	(1,720)	(7,654)
2023	Wet	3,432	64	201	98	77	24,830	(14,750)	(19)	(747)	(5,177)	(490)	(193)	(1,257)	28,702	(22,632)	6,161	(1,493)
2024	Normal	819	64	209	102	80	17,971	(13,681)	(20)	(817)	(6,262)	(506)	(192)	(1,143)	19,246	(22,621)	(3,106)	(4,599)
2025	Normal	695	64	209	102	80	22,416	(13,260)	(19)	(817)	(6,262)	(519)	(191)	(1,104)	23,567	(22,172)	1,583	(3,016)
2026	Normal	69	64	210	102	81	12,781	(5,431)	(16)	(817)	(6,262)	(523)	(186)	(909)	13,307	(14,145)	(538)	(3,554)
2027	Dry	34	64	184	90	71	6,947	(6,572)	(14)	(315)	(4,053)	(545)	(183)	(819)	7,390	(12,501)	(4,998)	(8,552)
2028	Wet	8,377	64	201	98	77	29,308	(16,815)	(33)	(747)	(5,177)	(452)	(196)	(1,440)	38,125	(24,859)	13,361	4,809
2029	Wet	1,798	64	209	102	80	21,485	(16,634)	(35)	(817)	(6,262)	(474)	(195)	(1,351)	23,739	(25,769)	(1,936)	2,873
2030	Wet	4,142	64	210	102	81	22,639	(16,823)	(43)	(817)	(6,262)	(469)	(196)	(1,379)	27,238	(25,990)	1,358	4,231
2031	Normal	61	64	209	102	80	12,776	(10,610)	(35)	(817)	(6,262)	(513)	(189)	(1,117)	13,292	(19,544)	(5,895)	(1,664)
2032	Normal	53	64	209	102	80	14,955	(8,023)	(29)	(817)	(6,262)	(514)	(186)	(945)	15,463	(16,777)	(960)	(2,624)
2033	Wet	5,747	64	209	102	80	31,054	(18,097)	(48)	(817)	(6,262)	(445)	(196)	(1,356)	37,257	(27,221)	10,124	7,500
2034	Dry	78	64	185	90	71	15,897	(17,246)	(40)	(315)	(4,053)	(508)	(192)	(1,227)	16,385	(23,582)	(7,091)	409
2035	Dry	91	64	176	86	68	12,684	(10,823)	(34)	(244)	(2,967)	(539)	(187)	(974)	13,168	(15,768)	(2,493)	(2,084)
2036	Wet	1,216	64	201	98	77	26,296	(13,993)	(34)	(747)	(5,177)	(484)	(190)	(1,262)	27,952	(21,887)	6,163	4,079
2037	Dry	0	64	184	90	71	8,722	(8,551)	(29)	(315)	(4,053)	(538)	(188)	(931)	9,131	(14,606)	(5,367)	(1,288)
2038	Normal	56	64	201	98	77	21,835	(12,184)	(25)	(747)	(5,177)	(531)	(191)	(1,230)	22,332	(20,084)	2,354	1,066
2039	Dry	35	64	184	90	71	7,397	(7,129)	(22)	(315)	(4,053)	(540)	(185)	(866)	7,841	(13,111)	(5,160)	(4,094)
2040	Dry	15	64	176	86	68	4,375	(4,426)	(20)	(244)	(2,967)	(558)	(178)	(636)	4,784	(9,030)	(4,130)	(8,224)
2041	Normal	1,514	64	201	98	77	22,106	(7,951)	(22)	(747)	(5,177)	(513)	(184)	(1,079)	24,059	(15,673)	8,482	259
2042	Wet	3,373	64	210	102	81	24,779	(14,652)	(29)	(817)	(6,262)	(491)	(193)	(1,332)	28,609	(23,777)	4,927	5,185
2043	Wet	6,471	64	209	102	80	27,462	(20,015)	(50)	(817)	(6,262)	(448)	(199)	(1,482)	34,389	(29,274)	5,210	10,395
2044	Dry	93	64	184	90	71	13,861	(13,788)	(39)	(315)	(4,053)	(512)	(193)	(1,169)	14,363	(20,070)	(5,601)	4,795
2045	Wet	5,991	64	201	98	77	26,061	(18,611)	(57)	(747)	(5,177)	(464)	(196)	(1,523)	32,492	(26,776)	5,806	10,601
2046	Normal	292	64	210	102	81	15,985	(13,207)	(48)	(817)	(6,262)	(497)	(194)	(1,299)	16,735	(22,326)	(5,414)	5,187
2047	Normal	1,252	64	209	102	80	21,263	(14,229)	(47)	(817)	(6,262)	(501)	(192)	(1,337)	22,970	(23,386)	(53)	5,134
2048	Wet	7,117	64	209	102	80	30,801	(19,075)	(80)	(817)	(6,262)	(427)	(197)	(1,494)	38,374	(28,353)	10,111	15,245
2049	Dry	2	64	184	90	71	11,327	(12,850)	(60)	(315)	(4,053)	(515)	(194)	(1,093)	11,738	(19,079)	(7,222)	8,023
2050	Normal	592	64	201	98	77	20,598	(13,105)	(52)	(747)	(5,177)	(520)	(190)	(1,344)	21,631	(21,135)	606	8,629
2051	Wet	2,181	64	209	102	80	21,857	(14,433)	(57)	(817)	(6,262)	(494)	(193)	(1,352)	24,494	(23,610)	980	9,609
2052	Dry	0	64	184	90	71	8,073	(7,511)	(47)	(315)	(4,053)	(553)	(186)	(760)	8,482	(13,426)	(4,830)	4,779
2053	Normal	262	64	201	98	77	20,972	(11,893)	(42)	(747)	(5,177)	(519)	(189)	(1,108)	21,674	(19,676)	2,268	7,047
2054	Normal	106	64	210	102	81	14,450	(10,051)	(37)	(817)	(6,262)	(523)	(189)	(1,050)	15,013	(18,929)	(3,736)	3,311
2055	Wet	7,395	64	209	102	80	27,961	(17,846)	(72)	(817)	(6,262)	(459)	(197)	(1,130)	35,811	(26,783)	9,125	12,436
2056	Normal	138	64	209	102	80	21,725	(14,923)	(54)	(817)	(6,262)	(483)	(193)	(984)	22,319	(23,716)	(1,296)	11,141
2057	Dry	0	64	184	90	71	5,867	(7,743)	(44)	(315)	(4,053)	(562)	(185)	(716)	6,276	(13,618)	(7,228)	3,912
2058	Normal	1,631	64	201	98	77	21,902	(12,286)	(46)	(747)	(5,177)	(519)	(191)	(1,144)	23,975	(20,109)	3,978	7,891
2059	Dry	44	64	184	90	71	8,912	(7,840)	(38)	(315)	(4,053)	(528)	(186)	(799)	9,365	(13,759)	(4,287)	3,603
2060	Wet	1,443	64	201	98	77	23,760	(14,037)	(40)	(747)	(5,177)	(500)	(191)	(1,003)	25,643	(21,695)	4,188	7,792
2061	Wet	2,132	64	209	102	80	26,866	(17,741)	(44)	(817)	(6,262)	(484)	(193)	(1,168)	29,454	(26,710)	2,890	10,681
2062	Dry	0	64	185	90	71	11,226	(9,384)	(36)	(315)	(4,053)	(536)	(190)	(920)	11,636	(15,435)	(3,688)	6,994
2063	Dry	4	64	176	86	68	2,261	(6,060)	(30)	(244)	(2,967)	(564)	(181)	(597)	2,659	(10,644)	(7,835)	(841)
2064	Dry	0	64	176	86	68	3,786	(2,913)	(26)	(244)	(2,692)	(527)	(174)	(540)	4,179	(7,117)	(2,846)	(3,687)
2065	Dry	43	64	176	86	68	2,856	(1,905)	(23)	(244)	(2,692)	(514)	(158)	(264)	3,292	(5,801)	(2,431)	(6,118)
2066	Dry	7	64	176	86	68	3,652	(1,117)	(21)	(244)	(2,692)	(496)	(156)	(337)	4,053	(5,064)	(927)	(7,045)
2067	Wet	1,691	64	201	98	77	24,996	(8,718)	(25)	(747)	(5,177)	(468)	(178)	(977)	27,127	(16,289)	11,076	4,031
2068	Dry	1,106	64	184	90	71	8,361	(5,888)	(23)	(315)	(4,053)	(538)	(184)	(769)	9,876	(11,770)	(1,764)	2,267
2069	Wet	1,681	64	201	98	77	27,071	(14,162)	(27)	(747)	(5,177)	(511)	(190)	(1,264)	29,193	(22,077)	7,219	9,486
Average (2020-2069)		1,506	64	197	96	76	17,279	(11,701)	(35)	(611)	(5,060)	(507)	(188)	(1,069)	19,219	(19,172)	190	2,493

Sums of values may not match averages or totals due to rounding.

Table 3.3-16 UVRGB Projected Groundwater Inflows and Outflows by Water Year, 2070 Climate Change Factors.

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow interbasin flow to the east	Shallow Groundwater Drainage to the East	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	47	67	219	102	80	16,140	(13,904)	(13)	(687)	(6,261)	(510)	(196)	(1,392)	16,655	(22,963)	(6,201)	(6,201)
2021	Normal	1,269	67	219	102	80	19,411	(13,082)	(15)	(632)	(6,262)	(544)	(195)	(1,236)	21,149	(21,966)	(706)	(6,907)
2022	Dry	546	67	193	90	71	10,525	(7,701)	(14)	(323)	(4,053)	(568)	(191)	(957)	11,492	(13,807)	(2,197)	(9,104)
2023	Wet	3,683	67	210	98	77	24,792	(14,164)	(19)	(692)	(5,177)	(506)	(196)	(1,296)	28,927	(22,051)	6,978	(2,125)
2024	Normal	912	67	219	102	80	18,346	(13,552)	(20)	(534)	(6,262)	(524)	(195)	(1,201)	19,726	(22,288)	(2,446)	(4,571)
2025	Normal	693	67	219	102	80	21,354	(12,768)	(19)	(616)	(6,262)	(536)	(195)	(1,140)	22,515	(21,537)	1,091	(3,480)
2026	Normal	67	67	219	102	81	24,341	(9,841)	(17)	(792)	(6,262)	(526)	(194)	(1,162)	24,877	(18,795)	6,193	2,713
2027	Dry	40	67	193	90	71	7,882	(11,533)	(14)	(329)	(4,053)	(559)	(193)	(988)	8,343	(17,671)	(9,215)	(6,503)
2028	Wet	8,841	67	210	98	77	27,495	(17,192)	(35)	(733)	(5,177)	(463)	(200)	(1,476)	36,788	(25,276)	11,612	5,109
2029	Wet	1,916	67	219	102	80	20,860	(16,398)	(37)	(795)	(6,262)	(487)	(199)	(1,407)	23,244	(25,587)	(2,244)	2,865
2030	Wet	4,297	67	219	102	81	22,437	(16,505)	(47)	(716)	(6,262)	(481)	(200)	(1,443)	27,204	(25,655)	1,646	4,511
2031	Normal	68	67	219	102	80	14,656	(11,277)	(37)	(512)	(6,262)	(526)	(194)	(1,202)	15,192	(20,010)	(4,709)	(199)
2032	Normal	59	67	219	102	80	15,313	(8,679)	(31)	(485)	(6,262)	(526)	(191)	(1,005)	15,840	(17,181)	(1,232)	(1,430)
2033	Wet	6,003	67	219	102	80	28,944	(17,972)	(52)	(790)	(6,262)	(463)	(200)	(1,382)	35,415	(27,122)	8,388	6,958
2034	Dry	65	67	193	90	71	14,461	(15,372)	(43)	(326)	(4,053)	(529)	(196)	(1,212)	14,948	(21,732)	(6,671)	287
2035	Dry	79	67	184	86	68	10,750	(9,262)	(36)	(255)	(2,967)	(557)	(190)	(950)	11,234	(14,217)	(2,866)	(2,579)
2036	Wet	1,265	67	210	98	77	26,350	(13,034)	(36)	(724)	(5,177)	(502)	(194)	(1,297)	28,067	(20,965)	7,207	4,628
2037	Dry	0	67	193	90	71	8,131	(8,124)	(31)	(329)	(4,053)	(562)	(191)	(949)	8,552	(14,239)	(5,574)	(946)
2038	Normal	59	67	211	98	77	20,877	(11,673)	(27)	(758)	(5,177)	(552)	(194)	(1,249)	21,389	(19,631)	1,874	928
2039	Dry	31	67	193	90	71	6,444	(6,245)	(24)	(329)	(4,053)	(560)	(187)	(845)	6,895	(12,243)	(5,231)	(4,303)
2040	Dry	16	67	184	86	68	5,086	(3,967)	(21)	(254)	(2,967)	(578)	(182)	(648)	5,506	(8,618)	(2,992)	(7,296)
2041	Normal	1,703	67	210	98	77	22,490	(8,108)	(24)	(700)	(5,177)	(526)	(188)	(1,144)	24,646	(15,867)	8,616	1,321
2042	Wet	3,436	67	219	102	81	23,459	(14,189)	(32)	(854)	(6,262)	(504)	(197)	(1,357)	27,365	(23,396)	4,077	5,398
2043	Wet	6,849	67	219	102	80	25,846	(19,133)	(55)	(805)	(6,262)	(461)	(202)	(1,513)	33,163	(28,431)	4,832	10,230
2044	Normal	97	67	219	102	80	14,907	(11,472)	(42)	(791)	(6,262)	(530)	(197)	(1,199)	15,472	(20,492)	(4,904)	5,326
2045	Wet	6,653	67	219	102	80	25,982	(17,424)	(67)	(779)	(6,262)	(476)	(201)	(1,602)	33,104	(26,811)	6,397	11,723
2046	Normal	319	67	219	102	81	16,300	(13,054)	(55)	(591)	(6,262)	(512)	(197)	(1,354)	17,088	(22,026)	(4,831)	6,892
2047	Normal	1,444	67	219	102	80	19,953	(13,705)	(55)	(470)	(6,262)	(518)	(195)	(1,357)	21,865	(22,562)	(591)	6,302
2048	Wet	6,979	67	219	102	80	29,416	(18,329)	(90)	(825)	(6,262)	(445)	(201)	(1,517)	36,864	(27,669)	9,289	15,591
2049	Dry	2	67	193	90	71	10,209	(11,136)	(66)	(329)	(4,053)	(538)	(197)	(1,109)	10,631	(17,427)	(6,680)	8,911
2050	Normal	625	67	211	98	77	20,086	(12,613)	(58)	(737)	(5,177)	(540)	(194)	(1,375)	21,165	(20,696)	580	9,491
2051	Wet	2,376	67	219	102	80	22,048	(14,111)	(65)	(854)	(6,262)	(508)	(197)	(1,413)	24,892	(23,410)	1,577	11,067
2052	Dry	0	67	193	90	71	7,237	(7,172)	(52)	(329)	(4,053)	(577)	(189)	(761)	7,658	(13,133)	(5,346)	5,721
2053	Normal	231	67	210	98	77	19,779	(10,782)	(46)	(501)	(5,177)	(545)	(192)	(1,114)	20,462	(18,356)	2,220	7,941
2054	Normal	112	67	219	102	81	15,467	(9,999)	(40)	(652)	(6,262)	(543)	(193)	(1,115)	16,048	(18,804)	(2,644)	5,297
2055	Wet	8,071	67	219	102	80	26,711	(17,850)	(83)	(765)	(6,262)	(473)	(201)	(1,176)	35,250	(26,811)	8,542	13,839
2056	Normal	141	67	219	102	80	21,847	(14,778)	(61)	(808)	(6,262)	(501)	(197)	(1,040)	22,456	(23,647)	(1,082)	12,756
2057	Dry	0	67	193	90	71	5,741	(7,430)	(49)	(329)	(4,053)	(588)	(189)	(722)	6,161	(13,359)	(7,079)	5,678
2058	Normal	1,728	67	211	98	77	21,426	(12,095)	(52)	(558)	(5,177)	(536)	(195)	(1,187)	23,608	(19,799)	3,924	9,601
2059	Dry	42	67	193	90	71	7,727	(7,207)	(43)	(329)	(4,053)	(547)	(188)	(791)	8,189	(13,159)	(4,848)	4,754
2060	Wet	1,490	67	210	98	77	23,199	(13,192)	(44)	(484)	(5,177)	(521)	(194)	(1,027)	25,141	(20,639)	4,616	9,370
2061	Wet	2,159	67	219	102	80	26,061	(17,191)	(48)	(569)	(6,262)	(497)	(197)	(1,209)	28,688	(25,974)	2,777	12,146
2062	Dry	0	67	193	90	71	10,297	(8,311)	(40)	(329)	(4,053)	(558)	(192)	(916)	10,718	(14,398)	(3,568)	8,578
2063	Dry	4	67	184	86	68	2,148	(5,613)	(33)	(226)	(2,967)	(581)	(185)	(589)	2,556	(10,194)	(7,528)	1,050
2064	Dry	0	67	184	86	68	3,652	(2,717)	(29)	(250)	(2,692)	(551)	(178)	(532)	4,056	(6,949)	(2,798)	(1,747)
2065	Dry	38	67	184	86	68	2,679	(1,703)	(26)	(255)	(2,692)	(534)	(160)	(242)	3,122	(5,612)	(2,420)	(4,167)
2066	Dry	7	67	184	86	68	3,315	(938)	(23)	(238)	(2,692)	(515)	(158)	(308)	3,728	(4,874)	(1,073)	(5,240)
2067	Wet	1,733	67	210	98	77	25,055	(8,484)	(27)	(623)	(5,177)	(483)	(181)	(1,017)	27,240	(15,992)	11,330	6,090
2068	Dry	1,236	67	193	90	71	7,994	(5,654)	(26)	(313)	(4,053)	(551)	(188)	(779)	9,650	(11,563)	(1,796)	4,294
2069	Wet	1,784	67	210	98	77	25,978	(13,702)	(30)	(732)	(5,177)	(522)	(194)	(1,278)	28,213	(21,635)	6,682	10,976
Average (2020-2069)		1,584	67	207	96	76	17,032	(11,407)	(39)	(553)	(5,126)	(525)	(192)	(1,104)	19,063	(18,945)	220	3,431

Sums of values may not match averages or totals due to rounding.

Tables

Section 4

Table 4.4-01 Minimum Thresholds, Measurable Objectives, and Interim Milestones for Chronic Lowering of Groundwater Levels and Groundwater Storage.

State Well Identification Number	Well Name	Chronic Lowering of GW Levels MT (ft amsl)	Chronic Lowering of GW Levels MO (ft amsl)	GW Storage MT (ft amsl)	GW Storage MO (ft amsl)	IM 5-year (ft amsl)	IM 10-year (ft amsl)	IM 15-year (ft amsl)	IM 20-year (ft amsl)
05N23W33B03S	Kennedy 05N23W33B03S	792	806	792	806	792	806	806	806
05N23W33G01S	Kennedy 05N23W33G01S	787	797	787	797	787	797	797	797
04N23W04J01S	North Robles 04N23W04J01S	625	679	625	679	625	679	679	679
04N23W09B01S	North Robles 04N23W09B01S	573	648	573	648	573	648	648	648
04N23W16C-VRWD-MW-2	South Robles 04N23W16C-VRWD-MW-2	467	546	467	546	467	546	546	546
04N23W29F02S	Santa Ana 04N23W29F02S	334	385	334	385	334	385	385	385
03N23W08B07S	Casitas Springs 03N23W08B07S	215	225	215	225	215	225	225	225

Table 4.7-01 RWQCB-established WQOs, Minimum Thresholds, and Measurable Objectives for Nitrate.

Constituent	MCL (mg/L)	RWQCB WQO (mg/L)	Range of Average Historical Concentrations for Wells or Well Groups (mg/l)	MT isocontour (mg/L)[1]	MT Rationale	MO isocontour (mg/L)[2]	MO Rationale
Percolating Groundwater Areas (Kennedy, Robles, Mira Monte/Meiners Oaks, and Santa Ana Hydrogeologic Areas)							
Nitrate (as N)	10	10	1.1 – 12.6	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	7.5	Preserve existing groundwater quality for municipal and domestic beneficial uses.
Areas with Rising Groundwater (Casitas Springs Hydrogeologic Areas)							
Nitrate (as N)	10	5 (Surface Water WQO)	1.1 – 1.4	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	3	Preserve existing groundwater quality for municipal and domestic beneficial uses. Protect surface water beneficial uses consistent with the RWQCB surface water WQO (MO is lower than surface water WQO).

[1] SGMA undesirable results are considered to occur when any isocontour exceeds 10 mg/L outside of the Mira Monte / Meiners Oaks Area and encompasses an area with active domestic wells producing groundwater from the alluvial aquifer that lack an alternative drinking water source. If the minimum threshold is exceeded, UVRGA will investigate to determine if caused by pumping by a GSP project or management action.

[2] The measurable objectives are not intended to be applicable in the Meiners Oaks / Mira Monte Area because this area is known to be a source area for nitrate and is an existing area of nitrate impacts. If the measurable objective is not met, UVRGA will investigate to determine if caused by pumping by a GSP project or management action.

Table 4.9-01 Projected ISW Depletion Rates in Beneficial Use Areas.

South Kennedy (Boundary of Kennedy & Robles Area)(Near Private Ag Diversion)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow (Baseline)	26.9	50.7	55.7	21.7	13.7	6.4	3.4	2.0	1.9	2.9	4.8	11.9
Median Flow (Baseline No Pumping)	27.3	51.2	56.1	22.2	14.3	7.2	4.3	2.9	2.5	3.5	5.2	12.3
Median Depletion	0.4	0.5	0.4	0.5	0.6	0.8	0.8	0.7	0.6	0.5	0.5	0.4
Robles Diversion (Gage 607)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	18.7	36.5	37.3	16.1	10.2	3.6	1.0	0.3	0.2	0.6	2.4	9.2
Median Flow (Baseline No Pumping)	19.0	36.9	37.8	16.6	10.8	4.4	1.8	0.6	0.5	1.1	2.9	9.6
Median Depletion	0.4	0.5	0.4	0.5	0.6	0.7	0.6	0.3	0.2	0.3	0.4	0.4
Robles Critical Riffle	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	4.4	25.6	21.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Median Flow (Baseline No Pumping)	4.5	25.7	22.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Median Depletion	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Santa Ana Critical Riffle	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	2.2	12.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Median Flow (Baseline No Pumping)	2.3	12.1	14.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Median Depletion	0.0	0.1	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Robles Aquatic Habitat Area	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	14.1	31.9	31.6	11.4	6.0	0.6	0.0	0.0	0.0	0.0	0.5	5.2
Median Flow (Baseline No Pumping)	14.3	32.3	32.0	11.9	6.5	1.1	0.1	0.0	0.0	0.0	0.6	5.5
Median Depletion	0.3	0.4	0.4	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.1	0.2
Confluence Aquatic Habitat Area	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	14.8	43.1	48.5	21.7	16.2	12.0	8.0	4.3	0.5	0.0	1.3	6.9
Median Flow (Baseline No Pumping)	16.7	44.9	50.6	22.2	17.0	13.1	9.6	6.4	3.7	1.9	3.9	8.4
Median Depletion	2.2	2.0	1.9	1.3	0.9	0.8	0.9	1.1	1.4	1.1	1.5	1.8
Foster Park Aquatic Habitat Area	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Median Flow (Baseline)	19.7	44.5	52.6	20.8	15.3	11.1	8.3	7.0	6.1	5.5	8.5	10.4
Median Flow (Baseline No Pumping)	22.7	51.4	61.2	28.0	22.9	18.8	15.7	13.2	12.2	11.8	12.5	15.2
Median Depletion	4.0	7.0	7.4	7.3	7.4	7.5	7.3	7.5	7.5	7.0	6.6	5.1

All values are cubic feet per second (cfs).

The term depletion refers to the direct or indirect reduction of stream flow resulting from groundwater extraction. Please see Section 3.2.6 for further description of direct versus indirect reductions (depletions) of surface water.

Table 4.9-02 Summary of Depletion Below 2 cfs at Foster Park, 50-Year Baseline Simulation.

Period No.	Period Depleted Below 2 cfs	Days Depleted Below 2 cfs	Avg Depletion (cfs)	Total Depletion (Acre-ft)	Upstream Pumping Depletion (Acre-ft)	City of Ventura Depletion (Acre-ft)
1	July 2027	31	4.6	285	208	77
2	July-Nov. 2035	149	5.4	1,589	1,209	380
3	Feb. 2040 – Feb. 2041	331	1.7	1,093	762	331
4	July 2052	31	4.7	292	204	88
5	July 2057	31	5.0	305	221	84
6	Apr. 2063 – Apr. 2065	611	1.6	1,969	1,356	613
7	Jan. 2066 – Aug. 2066	160	2.1	654	419	235
8	Dec. 2066 – Jan. 2067	18	2.1	74	40	34
Totals:		**1,362**	**N/A**	**6,261**	**4,419**	**1,842**

Note: Period Nos. 1 - 8 are indicated on Figure 4.9-03.

Depletion values do not include approximately 960 AF when undepleted flows are < 2cfs.

The term depletion refers to the direct or indirect reduction of stream flow resulting from groundwater extraction. Please see Section 3.2.6 for further description of direct versus indirect reductions (depletions) of surface water.

For context and comparison to estimated depletion, annual pumping by the City of Ventura at Foster Park under 50-Year Baseline conditions averages 3,257 AFY.

Table 4.9-03 City of Ventura Foster Park Pumping Schedule for 50-Year Future Model Simulations.

Year Type	Total Pumping	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wet & Normal	4,200	161	278	385	398	429	416	410	414	389	379	313	228
1st & 2nd Dry Year	1,573	0	262	262	262	262	262	262	0	0	0	0	0
3rd Dry Year	1,298	0	216	216	216	216	216	216	0	0	0	0	0

Note: All values are acre-feet. Sum of values may not match totals due to rounding.

Table 4.9-04 Minimum Thresholds and Measurable Objectives for ISW Depletion, Foster Park Aquatic Habitat Area.

Undepleted Flow (without groundwater pumping – derived from groundwater model)	Depletion Minimum Threshold and Measurable Objective	Goal
> 2 cfs	Undepleted flow minus 2 cfs	The minimum threshold and measurable objective seek to prevent depletions of surface water flow caused by groundwater pumping that would cause surface water flow to be less than 2 cfs when surface water flow would not be less than 2 cfs without pumping.
< = 2 cfs	0 cfs	The minimum threshold and measurable objective seek to prevent depletions of surface water flow caused by groundwater pumping when surface water would already be 2 cfs or less without groundwater pumping.

Note: See Figure 4.9-04 for an example graph depicting the minimum threshold vs. depletion.

Table 4.9-05 Proposed Measurable Objective & Interim Milestones, Foster Park Aquatic Habitat Area.

IM	Year	Measurable Objective	Depletion in Excess of Measurable Objective	Comment
1	2027	Same as Minimum Threshold	10.7 cfs	Maximum depletion rate from model simulation
2	2032		10.7 cfs	
3	2037		10.7 cfs	
4	2042		0 cfs (attain MO)	Implement project(s) or management action(s) to achieve MO

The term depletion refers to the direct or indirect reduction of stream flow resulting from groundwater extraction. Please see Section 3.2.6 for further description of direct versus indirect reductions (depletions) of surface water.

Tables

Section 5

Table 5.3-01 Well Information for Groundwater Level Monitoring Sites.

State Well Identification Number	Local Well Identifier	CASGEM Master Site Code	Year Well Constructed	Longitude[a]	Latitude[a]	Ground Surface Elevation (feet amsl)[b]	Reference Point Elevation (feet amsl)[b]	Reference Point Description	Elevation Measurement Method	Elevation Measurement Accuracy	Reported (Original) Well Use	Well Pumping Status	Well Configuration	Depth of Screened Interval(s) (feet bgs)[c]	Borehole Depth (feet bgs)[c]	Total Well (Casing) Depth (feet bgs)[c]	Casing Diameter (inches)	Aquifers Monitored	Manual Quarterly by VCWPD	Transducer by UVRGA or Member Agency	Representative Monitoring Well	Comment
03N23W08B07S	County MW	343558N1193092W001	Unknown	-119.30935	34.35577	241.61	241.70	Unknown	Surveyed to a benchmark	0.1 ft.	Unknown	Unknown	Unknown	Unknown	60	60	20	Alluvial Aquifer	X		X	
03N23W08-FP-MW-1	FP MW-1	Unknown	Unknown	-119.30778	34.35278	223.82	226.01		Surveyed to a benchmark	0.1 ft.	Other			15-30	Unknown	40	Unknown			X		
03N23W08-FP-MW-4	FP MW-4	Unknown	Unknown	-119.31000	34.35722	237.98	240.84		Surveyed to a benchmark	0.1 ft.	Other			20-50	Unknown	51	Unknown			X		
04N23W03M01S	Private	344522N1192837W001	Unknown	-119.28421	34.45254	761.97	763.37		Surveyed to a benchmark	0.1 ft.	Domestic	Active		100-160	Unknown	172	Unknown		X			
04N23W04J01S	MOWD-8	Unknown	Unknown	-119.28686	34.45526	707.00	713.00		GPS	Unknown	Public Supply			76-126	Unknown	144	Unknown		X	X	X	Not pumped since 2013
04N23W09B01S	Private	344458N1192917W001	1949	-119.29179	34.44584	659.30	662.30		GPS	Unknown	Irrigation		Single Well	Unknown	180	180	Unknown		X	X	X	
04N23W15A02S	Private	344333N1192681W001	1949	-119.26845	34.43352	682.43	683.43		Surveyed to a benchmark	0.1 ft.	Irrigation			90-405	Unknown	417	10	Non-Alluvial Aquifer - Ojai Conglomerate	X			
04N23W15B01S	VRWD-5	Unknown	1992	-119.27215	34.43202	685.15	686.73		Surveyed to a benchmark	0.1 ft.	Public Supply		Unknown	Unknown	Unknown	665	12			X		VRWD operated transducer
04N23W15D02S	Private	344314N1192842W001	1919	-119.28420	34.43138	636.82	636.82		USGS quad	10 ft.	Domestic		Single Well	80-277	Unknown	207	10		X			
04N23W16C04S	Private	344300N1192965W001	Unknown	-119.29718	34.42996	570.01	571.61		USGS quad	20 ft.	Monitoring			Unknown	Unknown	227	Unknown		X			
04N23W16C-VRWD-MW-2	VRWD MW-2	Unknown	2014	-119.29674	34.43136	561.00	565.11		Surveyed to a benchmark	0.1 ft.	Monitoring		Unknown	66-126	144	136	2			X	X	
04N23W29F02S	Private	343997N1193123W001	1949	-119.31298	34.39955	393.90	396.00		GPS	Unknown	Domestic			Unknown	5	65	5' by 5' dug well		X	X	X	
05N23W33B03S	MOWD-1	Unknown	Unknown	-119.29123	34.47580	823.10	823.10		Unknown	Unknown	Public Supply			30-65	Unknown	65	Unknown		X		X	
05N23W33B04S	MOWD-2	Unknown	1969	-119.29164	34.47718	816.54	816.54		GPS	Unknown	Public Supply			60-115	115	115	12			X		MOWD operated transducer
05N23W33G01S	Private	344739N1192909W001	Unknown	-119.29070	34.47386	816.25	818.75		Surveyed to a benchmark	0.1 ft.	Irrigation		Single Well	Unknown	Unknown	108	Unknown		X		X	
TBD	Planned Site A	TBD																Alluvial Aquifer	TBD		X	Future monitoring site (new construction likely necessary)
TBD	Planned Site B																				X	Future monitoring site (assumes access granted to existing well)
TBD	Planned Site C																				X	Future monitoring site (new construction likely necessary)
TBD	Planned Site D																				X	Future monitoring site (assumes access granted to existing well)
TBD	Planned Site E																				X	Future monitoring site (resume monitoring at 04N23W20A01S if access is obtained from new landowner)

Notes:

"TBD" = To be determined.

[a] Longitude and latitude are in decimal degrees, North American Datum 1983 (NAD83).

[b] feet amsl = Feet above mean sea level, North American Vertical Datum 1988 (NAVD88).

[c] feet bgs = Feet below ground surface.

[d] VCWPD = Ventura County Watershed Protection District; VRWD = Ventura River Water District; MOWD = Meniers Oaks Water District; FP = Foster Park

Table 5.6-01 Well Information for Groundwater Quality Monitoring Sites.

Well Group	State Well Identification Number	Local Well Identifier	CASGEM Master Site Code	Longitude[a]	Latitude[a]	Ground Surface Elevation (ft amsl)[b]	Reference Point Elevation (ft amsl)[b]	Reference Point Description	Elevation Measurement Method	Elevation Measurement Accuracy	Reported Well Use	Depth of Screened Interval (ft bgs)[c]	Total Well Depth (ft bgs)[c]	Aquifers Monitored	Casing Diameter (inches)	Minimum Frequency of Groundwater Quality Sampling	Current Monitoring Entity[d]	Notes	Analytes for Sampling Events
1	05N23W33B03S	MOWD-1	Not currently in CASGEM	-119.29123	34.47580	823.10	823.10	Unknown	Unknown	Unknown	Public Supply	30-65	65	Alluvial Aquifer		per DDW requirements	Owner		TDS, sulfate, chloride, boron, and nitrate
	05N23W33B04S	MOWD-2		-119.29164	34.47718	816.54	816.54		GPS	Unknown		60-115	115						
2	04N23W09B05S	MOWD-4		-119.29093	34.44581	656.44	656.44		DEM	Unknown	Irrigation						Owner		
	04N23W09B04S	MOWD-7		-119.29104	34.44604	659.00	659.00		Unknown	Unknown	Public Supply		167						
	04N23W09G03S	Private		-119.29187	34.44402	688.71	688.71		DEM	Unknown	Domestic	45-125	125			Annually (subject to access)	VCWPD		
3	04N23W16C07S	VRWD-2		-119.29734	34.42991	580.00	580.00		Unknown	Unknown	Public Supply	65-230	230		13				
	04N23W16C08S	VRWD-1		-119.29659	34.43168	572.92	572.92		DEM	Unknown		92-132, 152-232	600		17				
	04N23W16C10S	VRWD-4		-119.29727	34.43020	569.95	569.95		DEM	Unknown			250						
	04N23W16C11S	VRWD-7		-119.29653	34.43202	577.85	577.85		DEM	Unknown									
	04N23W16F04S	VRWD-3		-119.29730	34.42908	573.97	573.97		DEM	Unknown		0-220	296		16				
4	03N23W08B01S	Ventura Nye 7		-119.31009	34.35972	250.68	250.68		DEM	Unknown			55						
	03N23W08B11S	Ventura Nye 11		-119.30989	34.35872	247.09	247.09		DEM	Unknown		15-60	62		18				
	03N23W08C02S	Ventura Nye 8		-119.31228	34.35991	249.84	249.84		DEM	Unknown		28-34	75		16				
	03N23W08-Subsurface Intake	Ventura Subsurface Intake		-119.31020	34.35530	229.60	229.60		DEM	Unknown	Public Supply								
N/A	03N23W05H01S	Casitas MWC		-119.30725	34.36986	281.88	281.88		DEM	Unknown	Public Supply		62	Alluvial Aquifer	12		Owner		
	04N23W15B02S	VRWD-6		-119.27313	34.43192	685.00	685.00		Unknown	Unknown		200-280, 300-360, 380-440	460	Non-Alluvial Aquifer - Ojai Conglomerate					
	04N23W16A01S	CMWD Mira Monte		-119.28669	34.43322	628.83	628.83		DEM	Unknown		130-256	270	Alluvial Aquifer	16				
	04N23W16B07S	Tico MWC		-119.29031	34.42963	627.01	627.01		DEM	Unknown			262		18				
	TBD	Planned Site A	TBD													Annually (subject to access)	UVRGA	Future monitoring site	
		Planned Site B																	
		Planned Site C																	
		Planned Site D																	
		Planned Site E																	

Notes:

"TBD" = To be determined

[a] Longitude and latitude are in decimal degrees, North American Datum 1983 (NAD83).

[b] feet amsl = Feet above mean sea level, North American Vertical Datum 1988 (NAVD88).

[c] feet bgs = Feet below ground surface.

[d] VCWPD = Ventura County Watershed Protection District; VRWD = Ventura River Water District; MOWD = Meiners Oaks Water District; CMWD = Casitas Municipal Water District

Table 5.8-01 Current and Proposed Streamflow Gages in the UVRGB.

Stream Gage Identifier	Stream monitored	General Site Location Description	USGS Station ID	Current Monitoring Entity[a]	Longitude[b]	Latitude[b]	Reference Point Elevation (ft amsl)[c]	Minimum Sampling Frequency	Notes
602B	Matilija Creek	Matilija Creek at Matilija Hot Springs	11115500	VCWPD	-119.30182	34.48269	937.10	daily	
604	North Fork Matilija Creek	North Fork Matilija Creek at Matilija Hot Springs	11116000	VCWPD	-119.30649	34.49275	1166.20		
605A	San Antonio Creek	San Antonio Creek at Old Creek Road	11117500	VCWPD	-119.30266	34.38255	327.30		
607	Ventura River	Downstream of Robles Diversion near Meiners Oaks	11116550	CMWD	-119.29063	34.46477	767.70		
608	Ventura River	Bridge over Ventura River on Casitas Vista Road	11118500	VCWPD	-119.30799	34.35238	210.80		
VR-1	Ventura River	North of Foster Park at confluence of channels	TBD	City of Ventura	-119.31086	34.36589	257.52	30 min	
VR-2	Ventura River	Adjacent to Foster Park Underground Dam	TBD	City of Ventura	-119.31007	34.35613	228.02	30 min	
Proposed Stream Gage A	Ventura River	Downstream of confluence of San Antonio Creek	TBD	UVRGA	-119.30748	34.37605	288.66	TBD	
Proposed DWR Gage at Santa Ana Blvd	Ventura River	Upstream of Santa Ana Blvd. Bridge	TBD	DWR	-119.30829	34.39972	398.84		Installed 6/2021
Proposed Camino Cielo Gage	Ventura River	Downstream of confluence of Matilija Creeks	TBD	UVRGA	-119.29634	34.48284	872.99		

Notes: "TBD" = To be determined

[a] VCWPD = Ventura County Watershed Protection District; DWR = California Department of Water Resources; CMWD = Casitas Municipal Water District

[b] Longitude and latitude are in decimal degrees, North American Datum 1983 (NAD83).

[c] feet amsl = Feet above mean sea level, North American Vertical Datum 1988 (NAVD88).

Table

Section 6

Table 6.1-01 Outline of Proposed Process for Developing and Implementing Projects and/or Management Actions to Address Indirect ISW Depletion in the Foster Park Aquatic Habitat Area.

Action No.	Action Description	Milestone	Target Date
IM #1 Period: 0-5 years (2022 – 2027)			
1-1	Develop Foster Park Aquatic Habitat Area Monitoring Plan	Foster Park Habitat Area Monitoring Plan approved by the UVRGA Board of Directors	6/30/2023
1-2	Initiate Foster Park Aquatic Habitat Area Monitoring Program	Initiate monitoring activities; annual monitoring data published in GSP annual reports	10/1/2023
1-3	Coordinate w/ OBGMA & others to assess San Antonio Creek flow depletion	Agreements for coordinated assessment and monitoring of San Antonio Creek flow depletion	9/30/2023
1-4	Add monitoring wells and stream gauge to monitoring networks	Access agreements, constructed monitoring wells, and stream gage installation	9/30/2025
1-5	Add new monitoring wells to groundwater level and quality monitoring networks	Initiate monitoring of new wells	10/1/2025
1-6	Update numerical model calibration and ISW depletion estimates	Model update tech memo and updated depletion simulation results	6/30/2026
1-7	Begin planning for project(s) and/or management action(s) to achieve measurable objective.	Memo: preliminary feasibility analysis of project(s) and/or management action(s) to achieve measurable objective	6/30/2026
1-8	5-year GSP assessment. Update SMC, if appropriate.	GSP assessment document and GSP update	1/31/2027
IM #2 Period: 5-10 years (2027 – 2032)			
2-1	Continued Foster Park Aquatic Habitat Area monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
2-2	Update numerical model calibration, update depletion simulations, simulate potential project(s) and/or management action(s)	Model update and simulations tech memo	6/30/2029
2-3	Feasibility study of project(s) and/or management action(s) to achieve measurable objective	Feasibility study report	12/31/2030
2-4	Select project(s) and/or management action(s) to achieve measurable objective	UVRGA Board-approved project(s) and/or management actions for inclusion in GSP update.	6/30/2031
2-5	5-year GSP assessment and update. Include updated SMC, if appropriate. Add projects and/or management actions selected to achieve measurable objective.	GSP assessment document and GSP update	1/31/2032
IM #3 Period: 10-15 years (2032 – 2037)			
3-1	Continued Foster Park Aquatic Habitat Area monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
3-2	Develop project(s) and/or management action(s)	Progress toward ordinance(s), agreement(s), or design, as appropriate, based on selected project(s) and/or management action(s).	1/31/2037
3-3	5-year GSP assessment. Update GSP, as needed	GSP assessment document and GSP update	1/31/2037
IM #4 Period: 15-20 years (2037 – 2042)			
4-1	Continued Foster Park Aquatic Habitat Area monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
4-2	Implement project(s) and/or management action(s)	Completed ordinance(s), agreement(s), or construction, as appropriate, based on selected project(s) and/or management action(s).	1/31/2040
4-3	5-year GSP assessment. Update GSP, as needed	GSP assessment document and GSP update	1/31/2042

Table

Section 7

Table 7.1-01 UVRGA 20-Year Budget for GSP.

Fiscal Year	Agency Administration	Legal Counsel	GW Mgmt., Coord., & Outreach	Monitoring Programs[1]	Annual Reports	Projects and Mgmt. Actions	Model Update and Simulations	GSP Evaluation	GSP Update	Respond to DWR Comments and Requests	Contingency Non-Capital	Monitoring Wells and Stream Gage Construction[2]	Contingency Capital Projects	Totals	Extraction Fee ($/AF)	Ending Cash
2022	$ 61,050	$ 35,000	$ 55,000	$ 71,624	$ 45,000	$ -	$ -	$ -	$ -	$ -	$ 26,767	$ 17,537	$ 1,754	$ 313,732	$ 79.16	$ 262,463
2023	$ 62,602	$ 25,000	$ 30,900	$ 138,511	$ 32,500	$ 5,000	$ -	$ -	$ -	$ -	$ 29,451	$ 72,253	$ 7,225	$ 403,441	$ 111.17	$ 236,521
2024	$ 64,207	$ 25,750	$ 31,827	$ 125,815	$ 33,475	$ 5,000	$ -	$ -	$ -	$ 50,000	$ 33,607	$ 111,630	$ 11,163	$ 492,475	$ 111.17	$ 286,546
2025	$ 65,868	$ 26,523	$ 32,782	$ 137,805	$ 34,479	$ 10,000	$ 54,636	$ -	$ -	$ -	$ 36,209	$ 167,303	$ 16,730	$ 582,336	$ 108.39	$ 233,148
2026	$ 67,844	$ 27,318	$ 33,765	$ 131,465	$ 35,514	$ 10,000	$ 56,275	$ 25,000	$ 50,000	$ -	$ 43,718	$ -	$ -	$ 480,900	$ 102.83	$ 254,060
2027	$ 69,880	$ 28,138	$ 34,778	$ 146,132	$ 36,579	$ 10,000	$ -	$ 25,000	$ 100,000	$ -	$ 45,051	$ -	$ -	$ 495,557	$ 100.05	$ 246,753
2028	$ 71,976	$ 28,982	$ 35,822	$ 107,555	$ 37,676	$ 10,000	$ -	$ -	$ -	$ 28,138	$ 32,015	$ -	$ -	$ 352,164	$ 100.05	$ 382,839
2029	$ 74,135	$ 29,851	$ 36,896	$ 110,782	$ 38,807	$ 125,000	$ -	$ -	$ -	$ -	$ 41,547	$ -	$ -	$ 457,019	$ 100.05	$ 414,070
2030	$ 76,359	$ 30,747	$ 38,003	$ 114,105	$ 39,971	$ 125,000	$ -	$ -	$ -	$ -	$ 42,419	$ -	$ -	$ 466,604	$ 100.05	$ 435,716
2031	$ 78,650	$ 31,669	$ 39,143	$ 117,529	$ 41,170	$ -	$ 65,017	$ 28,982	$ 57,964	$ -	$ 46,012	$ -	$ -	$ 506,136	$ 100.05	$ 417,829
2032	$ 81,010	$ 32,619	$ 40,317	$ 121,055	$ 42,405	$ -	$ -	$ 28,982	$ 115,927	$ -	$ 46,232	$ -	$ -	$ 508,547	$ 100.05	$ 397,532
2033	$ 83,440	$ 33,598	$ 41,527	$ 124,686	$ 43,677	$ -	$ -	$ -	$ -	$ 32,640	$ 35,957	$ -	$ -	$ 395,525	$ 100.05	$ 490,258
2034	$ 85,943	$ 34,606	$ 42,773	$ 128,427	$ 44,988	$ -	$ -	$ -	$ -	$ -	$ 33,674	$ -	$ -	$ 370,410	$ 100.05	$ 608,098
2035	$ 88,521	$ 35,644	$ 44,056	$ 132,280	$ 46,337	$ -	$ -	$ -	$ -	$ -	$ 34,684	$ -	$ -	$ 381,522	$ 97.27	$ 701,263
2036	$ 91,177	$ 36,713	$ 45,378	$ 136,248	$ 47,727	$ -	$ 73,144	$ 33,598	$ 67,196	$ -	$ 53,118	$ -	$ -	$ 584,300	$ 97.27	$ 591,651
2037	$ 93,912	$ 37,815	$ 46,739	$ 140,335	$ 49,159	$ -	$ -	$ 33,598	$ 134,392	$ -	$ 53,595	$ -	$ -	$ 589,545	$ 97.27	$ 476,793
2038	$ 96,730	$ 38,949	$ 48,141	$ 144,545	$ 50,634	$ -	$ -	$ -	$ -	$ 37,862	$ 41,686	$ -	$ -	$ 458,548	$ 97.27	$ 492,933
2039	$ 99,632	$ 40,118	$ 49,585	$ 148,882	$ 52,153	$ -	$ -	$ -	$ -	$ -	$ 39,037	$ -	$ -	$ 429,406	$ 100.05	$ 551,777
2040	$ 102,621	$ 41,321	$ 51,073	$ 153,348	$ 53,718	$ -	$ -	$ -	$ -	$ -	$ 40,208	$ -	$ -	$ 442,289	$ 100.05	$ 597,738
2041	$ 105,699	$ 42,561	$ 52,605	$ 157,949	$ 55,329	$ -	$ 82,287	$ 38,949	$ 77,898	$ -	$ 61,328	$ -	$ -	$ 674,606	$ 105.61	$ 438,507
2042	$ 108,870	$ 43,838	$ 54,183	$ 162,687	$ 56,989	$ -	$ -	$ 38,949	$ 155,797	$ -	$ 62,131	$ -	$ -	$ 683,445	$ 105.61	$ 270,438
Yrs. 1-5	$ 321,571	$ 139,591	$ 184,274	$ 605,221	$ 180,968	$ 30,000	$ 110,912	$ 25,000	$ 50,000	$ 50,000	$ 169,754	$ 368,723	$ 36,872	$ 2,272,885		
Yrs. 6-20	$ 1,408,555	$ 567,169	$ 701,020	$ 2,146,545	$ 737,319	$ 270,000	$ 220,449	$ 228,058	$ 709,174	$ 98,640	$ 708,693	$ -	$ -	$ 7,795,622		
Total	$ 1,730,127	$ 706,759	$ 885,295	$ 2,751,766	$ 918,287	$ 300,000	$ 331,361	$ 253,058	$ 759,174	$ 148,640	$ 878,447	$ 368,723	$ 36,872	$ 10,068,507		

Notes:

Section 7.1 activities wholly funded by Member Agencies are not listed in the table.

Costs escalated for inflation at an assume rate of 3% per year.

1. Includes costs for the Confluence Habitat Area Biological Monitoring Study (Section 6.7).
2. Includes costs for the Groundwater Level Monitoring Wells Data Gaps Project (Section 6.5) and Stream Gage Data Gaps Project (Section 6.6).