

# Executive Summary

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With the submittal of the Atascadero Basin Groundwater Sustainability Plan (GSP), the Groundwater Sustainability Agency (GSA) is required to submit an annual report for the preceding Water Year (October 1 – September 30) to DWR by April 1, 2022. The annual report shall be provided by April 1 of each year following adoption of the plan and provide monitoring and water use data to the DWR and Atascadero Basin (Basin) stakeholders to gauge performance of the Basin relative to sustainability goals set forth in the GSP.

This document provides annual monitoring data required by the California Department of Water Resources (DWR) for a GSP and consistent with the GSP dated January 19, 2022, for the Basin. This report contains monitoring data for water year 2021 (October 1, 2020 – September 30, 2021). The values for water years 2017 through 2021 are included for reference purposes.

Water levels, groundwater extractions, surface water diversions, and total water usage measurements and change in groundwater storage estimates are presented. The measurements and information presented demonstrate the groundwater in the Basin is sustainable, consistent with the GSP findings.

Sections of the Water Year 2021 Annual Report include the following:

- **Section 1. Introduction:** a brief background of the Atascadero Basin GSA and a location map.
- **Section 2. Atascadero Basin Setting and Monitoring Networks:** a summary of the Basin setting, Basin monitoring networks, and ways in which data are used for groundwater management.
- **Section 3. Groundwater Elevations (§356.2[b][1]):** a description of recent monitoring data with groundwater elevation contour maps for spring and fall monitoring events and representative hydrographs.
- **Section 4. Groundwater Extractions (§356.2[b][2]):** compilation of metered and estimated groundwater extractions by land use sector and location of extractions.
- **Section 5. Surface Water Use (§356.2[b][3]):** a summary of reported surface water use.
- **Section 6. Total Water Use (§356.2[b][4]):** a presentation of total water use by source and sector.
- **Section 7. Change in Groundwater in Storage (§356.2[b][5]):** a description of the methodology and presentation of changes in groundwater in storage.
- **Section 8. Progress towards Basin Sustainability (§356.2[c]):** a summary of sustainability of the Basin.
- **Section 9. References:** includes the references used for this Annual Report.

## Groundwater Elevations

In general, the groundwater elevations observed in the Basin during water years (WYs) 2017 through 2021 show stable groundwater levels in both the Alluvial Aquifer and Paso Robles Formation Aquifer. Positive and negative changes in groundwater elevations from year to year are observed in response to climatic variability and changes in pumping, but all representative monitoring site locations maintained water levels above minimum thresholds. The Alluvial Aquifer continues to show an ability to recharge rapidly after significant rainfall.

## Groundwater Extractions

Total groundwater extractions in the Basin for WY 2021 are estimated to be 16,700 acre-feet (AF). **Table ES-1** summarizes the groundwater extractions by water use sector for each WY from 2017 to 2021.

**Table ES – 1. Groundwater Extractions by Water Use Sector**

Water Year	Groundwater Extractions by Water Use Sector			Total (AF)
Source	Municipal (AF)	PWS and Rural Domestic (AF)	Agriculture (AF)	
2017	8,760	1,299	4,900	15,000
2018	10,227	1,312	4,300	15,800
2019	9,442	1,325	5,000	15,800
2020	10,611	1,339	4,700	16,600
2021	10,860	1,348	4,500	16,700
Method of Measure	Metered	2016 Groundwater Model	OpenET	
Level of Accuracy	high	low-medium	medium	

**Notes:**

AF = acre-feet

PWS = public water systems

## Surface Water Use

The Basin currently benefits from surface water from both local and imported supplies. Imported supplies are from the Nacimiento Water Project (NWP) while local supplies are from precipitation and inflows from the Salinas River. **Table ES-2** shows total surface water available for use and used from the imported NWP.

**Table ES – 2. Total Surface Water Use by Source**

Water Year	Nacimiento Water Project Water Available			Total (AF)	Nacimiento Water Project Water Used			Total (AF)
	City of Paso Robles <sup>1</sup> (AF)	Templeton CSD <sup>2</sup> (AF)	Atascadero MWC <sup>3</sup> (AF)		City of Paso Robles (AF)	Templeton CSD (AF)	Atascadero MWC (AF)	
2017	6,488	406	3,244	10,138	134	274	0	408
2018	6,488	406	3,244	10,138	862	258	854	1,974
2019	6,488	406	3,244	10,138	356	157	47	560
2020	6,488	406	3,244	10,138	804	0	1,372	2,176
2021	6,488	406	3,244	10,138	746	97	2,218	3,061

**Notes:**

<sup>1</sup> Contract annual entitlement to the City of Pas Robles. Note that City of Paso Robles uses some water outside Atascadero Basin

<sup>2</sup> Contract annual entitlement to Templeton Community Services District

<sup>3</sup> Contract annual entitlement to Atascadero Mutual Water Company

AF= acre feet

CDC = Community Services District

MWC = Atascadero Mutual Water Company

## Total Water Use

For WY 2021, quantification of total water use was completed through from reported metered municipal water production and metered surface water delivery, and from models used to estimate agricultural and rural water demand. **Table ES-3** summarizes the total annual water use in the Basin by source and water use sector.

**Table ES – 3. Total Water Use in the Subbasin by Source and Water Use Sector**

Water Year	Municipal (AF)		PWS and Rural Domestic (AF)	Agriculture (AF)	Total (AF)
	Groundwater	Surface Water	Groundwater	Groundwater	
2017	8,760	408	1,299	4,900	15,400
2018	10,227	1,974	1,312	4,300	17,800
2019	9,442	560	1,325	5,000	16,300
2020	10,611	2,176	1,339	4,700	18,800
2021	10,860	3,061	1,348	4,500	19,800
Method of Measure	Metered	Metered	2016 Groundwater Model	Soil-Water Balance Model	
Level of Accuracy	high	high	low-medium	medium	

**Notes:**

AF = acre-feet

PWS = public water systems

**Change in Groundwater in Storage**

The calculation of change in groundwater in storage in the Basin was derived from comparison of fall groundwater elevation contour maps from one year to the next as well as taking the difference between groundwater elevations throughout the Basin as the aquifer becomes saturated (storage gain) or dewatered (storage loss). For example, fall 2020 groundwater elevations were subtracted from the fall 2021 groundwater elevations resulting in a map depicting the changes in groundwater elevations in the Paso Robles Formation Aquifer that occurred during WY 2020. This same analysis was completed for all WYs starting in 2017 through 2021 and for both the Alluvial and Paso Robles Formation Aquifer.

For both aquifers, change in storage fluctuates between slightly negative and slightly positive values depending on WY type and pumping activity. The greatest fluctuations in change of storage are just to the northeast of Templeton and just east of Asuncion, where presumably groundwater use is the highest. These regions tend to have the greatest declines in water level and the greatest rise in water level.

The annual change of groundwater in storage calculated for WY 2017 through WY 2021 is presented in Table ES-4. Increases of groundwater in storage are presented as positive numbers and decreases of groundwater in storage are presented as negative numbers.

**Table ES – 4. Annual Change of Groundwater in Storage**

Water Year	Annual Change (AF)
2017	14,600
2018	-5,400
2019	4,300
2020	100
2021	-5,200

**Note:** AF = acre-feet

## **Progress towards Meeting Basin Sustainability**

Because the Basin is currently being managed sustainably, as evidenced by historic groundwater levels in the Basin, there are no projects or management actions that are required to achieve sustainability. A number of management actions and conceptual projects were included in the GSP to provide a means to ensure the Basin is operated to maintain its sustainable yield and sustainability. The Basin will continue to be managed in an adaptive management approach as described in the GSP.

While not required to achieve sustainability, there are ongoing activities in the Basin that shall contribute to a better understanding of the Basin hydrogeology and groundwater management in general. These projects include participation in the DWR Airborne Electromagnetic (AEM) Survey and Expansion of the Monitoring Well Network. Results of these activities will be used to inform management of the Basin and future GSP updates. These activities include the AEM survey and expanding the groundwater monitoring network.