Mound Basin Annual Report Water Year 2025

MoundBasin
GROUNDWATER SUSTAINABILITY AGENCY

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Mound Basin Annual Report Water Year 2025

Prepared for

MoundBasin
GROUNDWATER SUSTAINABILITY AGENCY

Mound Basin Groundwater Sustainability Agency

Prepared by

BONDY
Groundwater Consulting, Inc.

Bondy Groundwater Consulting, Inc.

PROFESSIONAL GEOLOGIST
BRYAN TODD BONDY
No. 7676
STATE OF CALIFORNIA

CERTIFIED HYDROGEOLOGIST
BRYAN TODD BONDY
No. 821
STATE OF CALIFORNIA

Bryan Bondy

Bryan Bondy, PG, CHG
MBGSA Executive Director

INTERA

INTERA Incorporated

PROFESSIONAL GEOLOGIST
STEVEN HUMPHREY
No. 10024
CERTIFIED HYDROGEOLOGIST
No. 1127
STATE OF CALIFORNIA

Steven Humphrey, PG, CHG
Senior Hydrogeologist

Executive Summary

> **§356.2 Annual Reports.** *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*
>
> ***(a) General information, including an executive summary and a location map depicting the basin covered by the report.***

The Mound Basin (Basin) Groundwater Sustainability Agency (MBGSA) adopted its Groundwater Sustainability Plan (GSP) on November 18, 2021, and this is the fifth Annual Report in compliance with the California Code of Regulations §356.2 groundwater conditions and GSP implementation for water year 2025 (i.e., October 1, 2024, through September 30, 2025).

The water year type for 2025 was classified as "dry" based on precipitation data. Basin-wide groundwater levels were generally stable or slightly increased in 2025 in comparison with the last water year. The groundwater quality remained generally stable for water year 2025.

Groundwater is extracted from two principal aquifers (Mugu and Hueneme) in the Basin for agricultural, municipal, and industrial uses. Extraction rates for water year 2025 were generally lower than reported for the historical and current periods (1986-2019) in the GSP. The change in storage for each principal aquifer was estimated for water year 2025. The Mugu Aquifer groundwater storage for water year 2025 increased by an estimated 57 acre feet (AF), and the Hueneme Aquifer groundwater storage increased by an estimated 1,452 AF. The change in storage for the entire Basin was estimated to increase by 5,432 AF for water year 2025. Water year 2025 groundwater storage increased for the Basin despite being a dry water year type due to a combination of continued increases in groundwater levels from consecutive previous wet water years (i.e., 2023 and 2024) and reduced groundwater extraction rates.

Total water use within the Basin for agricultural, municipal, and industrial demands is sourced from groundwater extractions, imported surface water, and imported groundwater. Total estimated water use in the Basin during water year 2025 was 12,345 AF per year (AF/yr), which was approximately 517 AF more than the prior water year.

Sustainability is evaluated by comparing monitoring data to the Sustainable Management Criteria (SMC) for each applicable sustainability indicator: chronic lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, and land subsidence. The groundwater levels measured in water year 2025 were compared to the SMC established for the chronic lowering of groundwater levels sustainability indicator, and none of the groundwater level measurements exceeded the minimum thresholds for any of the monitoring wells. All analyzed water quality data met the measurable objectives for the degraded water quality sustainability indicator in water year 2025, except TDS and sulfate analyzed in well 02N23W23Q02 were between the minimum threshold and the interim milestone and measurable objective in the Mugu aquifer. Chloride isocontours were evaluated for the seawater intrusion sustainability indicator, and the measurable objective was met for water year 2025. The land subsidence sustainability indicator also met the measurable objectives.

GSP implementation activities completed during the reporting period included:

- Submittal of the Fourth Annual Report;
- Submittal of water year 2025 fall and spring groundwater levels to the California Department of Water Resources (DWR);
- Implementation of the Seawater Intrusion Monitoring Wells for Sustainable Management Criteria Implementation Project: substantial progress was made on encroachment permit and coastal development permits necessary for the second clustered monitoring well (Site B); and
- Implementation of the Interim Shallow Groundwater Data Collection and Analysis Project – shallow groundwater monitoring continued.

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Acronyms and Abbreviations

AF	acre-foot/acre-feet
AF/yr	acre-feet per year
Alta MWC	Alta Mutual Water Company
amsl	above mean sea level
Basin	Mound Basin
CMWD	Casitas Municipal Water District
DMS	Data Management System
DWR	Department of Water Resources, State of California
ET	evapotranspiration
FICO	Farmers Irrigation Company
ft	foot/feet
ft/yr	feet per year
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
HSU	hydrostratigraphic unit
InSAR	interferometric synthetic aperture radar
M&I	Municipal and Industrial
MBGSA	Mound Basin Groundwater Sustainability Agency
mg/L	milligrams per liter
SGMA	Sustainable Groundwater Management Act
SMC	Sustainable Management Criteria
TDS	total dissolved solids
United or UWCD	United Water Conservation District
VCWPD	Ventura County Watershed Protection District
Ventura Water	The City of Ventura's water and wastewater department

1.0 Introduction [§356.2(a)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

(a) General information, including an executive summary and a location map depicting the basin covered by the report.

Mound Basin Groundwater Sustainability Agency (MBGSA), formed in 2017, is the exclusive Groundwater Sustainability Agency (GSA) for Mound Basin. MBGSA adopted its Groundwater Sustainability Plan (GSP) on November 18, 2021, and this is the fifth Annual Report in compliance with the California Code of Regulations §356.2. This Annual Report presents data and information for water year 2025 (i.e., October 1, 2024, through September 30, 2025). To track the progress of the GSP implementation, monitoring network data are compared against the Sustainable Management Criteria (SMC) established in the adopted GSP (MBGSA, 2021). This report also provides updates to the status of GSP implementation, including projects and management actions described in the adopted GSP.

1.1 Background

The Mound Basin is classified by the California Department of Water Resources (DWR) as a high-priority groundwater subbasin in western Ventura County along the Pacific coastline, including the City of Ventura (officially San Buenaventura) (Figure 1.1). The Basin is within the Santa Clara River Valley watershed and includes the Santa Clara River estuary and floodplain at the southwestern corner of the Basin, where the river discharges into the Pacific Ocean (Figure 1.1). Adjacent basins include the Oxnard Subbasin (No. 4-004.02) to the south, Santa Paula Subbasin (No. 4-004.04) to the east, and Lower Ventura River Subbasin (4-003.02) to the west (Figure 1.1).

Groundwater supplies municipal and industrial (M&I) and agricultural beneficial uses within the Mound Basin from approximately 25 active extraction wells. Water demands in the Basin are met by groundwater extractions from these Basin extraction wells, plus groundwater imported from adjacent basins (Upper Ventura River Valley, Oxnard, and Santa Paula Basins) and surface water imported from the Ventura River Watershed to the north. There are no active domestic wells within the Basin; drinking water is exclusively provided by the City of Ventura (i.e., Ventura Water).

Four water-bearing Hydrostratigraphic Units (HSUs) have been identified within the Mound Basin (United, 2018), and two of them are identified as principal aquifers: the Mugu Aquifer and the Hueneme Aquifer. Extraction wells within the Basin extract water from the principal Mugu and Hueneme aquifers and a very minor amount from the Fox Canyon Aquifer. The other HSUs (Shallow Alluvial Deposits and Fox Canyon Aquifer) are not considered principal aquifers and are therefore not actively managed under the GSP. The Shallow Alluvial Deposits aquifer does not meet the Sustainable Groundwater Management Definition (SGMA) definition of a principal aquifer to “store, transmit, and yield significant or economic quantities of groundwater…,” and the Fox Canyon Aquifer does not have a material amount of groundwater extractions due to its depth. The Shallow Alluvial Deposits have no material hydraulic connection with the principal aquifers and have no groundwater extraction. Owing to the lack of a material hydraulic connection between principal aquifers and the Shallow Alluvial Deposits and surface water, the GSP deemed the depletions of interconnected surface water sustainability indicator inapplicable to the Basin. MBGSA is collecting shallow groundwater level data near the Santa Clara River Estuary to provide additional analysis to validate the GSP's hydrogeologic conceptual model conclusion that pumping in the principal aquifers has no material effect on shallow groundwater levels and surface water. This shallow groundwater level data collection program is called the "Interim Shallow Groundwater Data Collection and Analysis Project" and is one of the implementation projects included in the GSP (MBGSA, 2021). The GSP concluded that the five other sustainability indicators are applicable to the Basin.

2.0 Groundwater Conditions [§356.2(b)]

United Water Conservation District (UWCD, or United) and other local agencies have been collecting groundwater elevation and groundwater quality data from wells in Mound Basin and adjacent basins since the 1920s. United maintains a comprehensive database of groundwater elevations in Mound Basin and incorporates data collected by others, including the Ventura County Watershed Protection District (VCWPD) and the City of Ventura. All these data have been uploaded to the DWR website and incorporated into the MBGSA Data Management System (DMS), which is described in the GSP (MBGSA, 2021).

This section describes data updates to precipitation and water year types for the Basin, groundwater elevations, groundwater quality, groundwater extraction, surface water supplies, total water use, and the change in storage for the principal aquifers in the Basin as a whole.

2.1 Precipitation and Water Year Types

Precipitation data were provided by the Ventura County Public Works Agency from gages 066E (Downtown Ventura), 167 (Hall Canyon), and 222A (County Government Center) and were updated for water year 2025 (Figure 2.1). Total precipitation for water year 2025 was 7.02 inches, compared to the average of 15.46 inches at gage 222A for 1986-2019 (MBGSA, 2021). Precipitation on the valley floor contributes to recharge to the Shallow Alluvial Deposits, or runoff, without directly recharging the principal aquifers except at the outcrops of the Hueneme and Fox Canyon aquifers in the foothills in the northern part of Mound Basin.

The water year type for 2025 was classified as "dry" using the alternative water year type classification system developed by MBGSA, as described in the GSP (Figure 2.2) (MBGSA, 2021). The bulk of the precipitation occurred during November 2024 and March 2025, accounting for approximately 87% of the annual precipitation.

2.2 Groundwater Elevations [§356.2(b)(1)(A),(B)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

(b) *A detailed description and graphical representation of the following conditions of the basin managed in the Plan:*

(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.

(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

Groundwater elevations were updated through water year 2025 using the available data for the wells in the monitoring network for each principal aquifer, i.e., Mugu and Hueneme (Figures 2.3 and 2.4).

2.2.1 Groundwater Elevation Contours [§356.2(b)(1)(A)]

Groundwater elevation contours were prepared for water year 2025 seasonal lows and highs in each principal aquifer. The United numerical groundwater model output (United, 2021) and supplemental monitoring well data outside of the Basin assisted the interpretation of the gradient and flow directions near the edges of the Basin.

As discussed in the GSP (MBGSA, 2021), Mound Basin is structurally complex. The regional groundwater flow pattern is generally from east-northeast to the southwest, generally toward the Pacific Ocean; however, localized flow patterns exist in the vicinity of extraction wells depending on their activity, and flow directions are observed toward the southern and eastern Basin boundaries at times. Available historical information indicates that Mound Basin receives groundwater underflow from both the Santa Paula Basin to the east and the Oxnard Forebay/Oxnard Plain to the south-southeast (United, 2018). This Annual Report shows areas of groundwater underflow into Mound Basin from the Oxnard Forebay/Oxnard Plain and Santa Paula Basins during the reporting period, which is consistent with the historical conditions of the Basin.

Mugu Aquifer

Groundwater levels measured for the water year 2025 fall-low season (October of 2024) served as the basis for preparing the groundwater elevation contours shown in Figure 2.5 and indicate groundwater flow from east to west. No fall-low or spring-high groundwater levels were measured for well 02N22W07P01S. The contours based on groundwater level measurements for the water year 2025 spring-high season (April of 2025) are generally consistent with the water year 2025 fall-low (October of 2024) contours, with levels within the Basin averaging approximately 10 feet higher, and groundwater flow directions from east to west (Figure 2.6). No fall-low groundwater levels were measured for well 02N22W07P01S. Wells 02N23W15J01S and 02N23W23Q01S were reported to be artesian starting in February 2024 and had fall-low and spring-high measurements recorded at or above the reference point elevation.

Hueneme Aquifer

Groundwater levels measured for the water year 2025 fall-low season (October of 2024) served as the basis for preparing the groundwater elevation contours shown in Figure 2.7 and indicated flow directions were generally westerly toward the coastline. The steep gradient indicated by the closely spaced contours near well 02N22W10N03S is inferred based on model results and groundwater level measurements outside the Basin. There are anomalous data points for wells 02N22W09L03S/L04S which are not contoured, and their discrepancies are likely due to changes in pumping status, screen depth, and/or geologic structure. No fall-low groundwater levels were measured for well 02N22W20E01S. Wells 02N23W15J01S and 02N23W23Q01S were reported to be artesian starting in February 2024 and had fall-low measurements recorded at or above the reference point elevation.

The groundwater level contours for the water year 2025 spring-high season (April of 2025) are generally consistent with the water year 2025 fall-low (October of 2024) contours, with groundwater flow directions toward the Pacific Ocean. Groundwater levels were measured for all wells within the eastern half of the Basin, averaging approximately 5 ft higher for spring-high compared to fall-low (Figure 2.8). Anomalous data are noted at wells 02N22W09L03S/L04S and 02N22W17M02S. No spring-high groundwater levels were measured for well 02N23W23Q01S.Well 02N23W15J01S was reported to be artesian starting in February 2025 and had fourteen measurements recorded above the reference point elevation. Wells 02N23W15J01S and 02N23W23Q01S were reported to be artesian starting in February 2024 and had spring-high measurements recorded at or above the reference point elevation.

In summary, groundwater levels and flow directions for both principal aquifers during water year 2025 were generally consistent with the previous water year 2024; however, there is a significant change in comparison to previous water years during the GSP implementation period (i.e., prior to water year 2024), with both principal aquifers shifting from a generally southerly groundwater flow direction to a westerly direction. The combination of decreased groundwater extractions and increased recharge from precipitation due to wet conditions during water years 2023 and 2024 have likely contributed to the shift in groundwater flow directions.

2.2.2 Groundwater Elevation Hydrographs [§356.2(b)(1)(B)]

Groundwater elevation hydrographs for the monitoring network for each principal aquifer (Mugu and Hueneme) along with the water year types are shown in Figures 2.9 and 2.10. Water year 2025 groundwater levels for both the Mugu and Hueneme aquifers were relatively consistent with water year 2024. Water year 2025 groundwater levels were unavailable for well 02N22W07P01S. As mentioned above, wells 02N23W15J01/02S and 02N23W23Q01/02S are reported to be artesian. Note, since 2022 well 02N22W09L04S has been exhibiting very slow groundwater level recovery following well purging for water quality sampling so the representativeness of the transducer data is questionable.

2.3 Groundwater Quality

Figures 2.11 and 2.12 show the groundwater quality monitoring network locations for the Mugu and Hueneme aquifers, respectively. Maps of average concentrations of the key indicator constituents for water year 2025 in the Mugu and Hueneme aquifers are shown in Figures 2.13 through 2.22 and discussed in further detail within this subsection.

Mugu Aquifer

Total dissolved solids (TDS), sulfate, chloride, nitrate, and boron were analyzed for water year 2025 in the four monitoring wells screened in the Mugu Aquifer (including well 02N22W08G01S with a screen interval extending below the Mugu Aquifer; however, no chloride and boron results were analyzed for this well). These four wells are generally located along the west-southwest to east-northeast axis of the Basin (Figures 2.13 through 2.17).

The average TDS concentration in water year 2025 in wells screened in the Mugu Aquifer ranged from 900 to 1,959 milligrams per liter (mg/L) (Figure 2.13). The highest TDS concentration (1,959 mg/L) was in well 02N22W08G01S and is not considered representative of Mugu Aquifer groundwater quality The average TDS concentrations measured in the remaining wells ranged from 900 (Well 02N22W07M02S) to 1,150 mg/L (Well 02N23W23Q02S) (Figure 2.13).

The average sulfate concentration in water year 2025 in wells screened in the Mugu Aquifer ranged from 324 to 995 mg/L (Figure 2.14). The highest sulfate concentration was in Well 02N22W08G01S and is not considered representative of Mugu Aquifer groundwater quality. The average sulfate concentrations measured in the remaining wells ranged from 324 to 501 mg/L (Figure 2.14).

The average chloride concentration in water year 2025 in wells screened in the Mugu Aquifer ranged from 48 to 66 mg/L (Figure 2.15). No chloride was analyzed in Well 02N22W08G01S during water year 2025.

The average nitrate concentration in water year 2025 in wells screened in the Mugu Aquifer ranged from non-detect (<0.4 mg/L) to 3.4 mg/L (Figure 2.16). Similar to TDS and sulfate, the highest nitrate concentration was in Well 02N22W08G01S and is not considered representative of Mugu Aquifer groundwater quality. The average nitrate concentrations measured in the remaining wells were non-detect (Figure 2.16).

The average boron concentration in water year 2025 in wells screened in the Mugu Aquifer was 0.5 mg/L in wells 02N22W07M02S, 02N23W15J02S, and 02N23W23Q02S (Figure 2.17). No boron was analyzed in Well 02N22W08G01 during water 2025.

Hueneme Aquifer

TDS, sulfate, chloride, nitrate, and boron were analyzed in water year 2025 at six wells screened in the Hueneme Aquifer (Wells 02N23W08F01S and 02N23W13F02S were not analyzed during water year 2025). Most of the sampled wells are generally located along the west-southwest to east-northeast axis of the Basin (Figures 2.18 through 2.22).

It is noted that wells 02N22W08F01S, 02N22W13K03S, and 02N22W09L04S have historically exhibited anomalously high concentrations of TDS, sulfate, and chloride and are not considered representative of Hueneme Aquifer water quality. In addition, wells 02N22W13K03S and 02N22W09L04S have historically exhibited anomalously high concentrations of nitrate, suggesting an influence of shallow groundwater, possibly through a compromised well seal or well casing.

The average TDS concentration in water year 2025 in wells screened in the Hueneme Aquifer ranged from 1,035 to 6,530 mg/L (Figure 2.18). The highest TDS concentration was in Well 02N22W09L04S and is not considered representative of Hueneme Aquifer groundwater quality. Excluding the wells known with anomalously high concentrations, the range of average TDS for the Hueneme Aquifer in water year 2025 is 1,035 (Well 02N23W09L03S) to 1,295mg/L (Well 02N23W15J01S) (Figure 2.18).

The average sulfate concentration in water year 2025 in wells screened in the Hueneme Aquifer ranged from 462 to 3,765 mg/L (Figure 2.19). The highest sulfate concentration was in Well 02N22W09L04S and is not considered representative of Hueneme Aquifer groundwater quality. Excluding the wells known with anomalously high concentrations, the range of average sulfate is 462 to 544 mg/L (Figure 2.19).

The average chloride concentration in water year 2025 in wells screened in the Hueneme Aquifer ranged from 67 to 170 mg/L (Figure 2.20). The highest chloride concentration was in Well 02N22W09L04S and is considered anomalous and not representative of Hueneme Aquifer groundwater quality. Excluding the wells known with anomalously high concentrations, the range of average chloride is 67 to 91 mg/L (Figure 2.20).

The average nitrate concentration in water year 2025 in wells screened in the Hueneme Aquifer ranged from less than the laboratory detection limit (0.4 mg/L) to 24.1 mg/L (Figure 2.21). The highest nitrate concentration was in Well 02N22W09L04S and is not considered representative of Hueneme Aquifer groundwater quality. Excluding the wells known with anomalously high concentrations, the average nitrate concentration ranged from less than the detection limit (0.4 mg/L) to 0.4 mg/L (Figure 2.21). Nitrate concentrations were either at or below the detection limit at four out of the six wells analyzed in the Hueneme Aquifer in Mound Basin for water year 2025.

The average boron concentration in water year 2025 in wells screened in the Hueneme Aquifer ranged from 0.5 to 1.1 mg/L (Figure 2.22). The highest boron concentration was in Well 02N22W09L04S and is not considered representative of Hueneme Aquifer groundwater quality. Excluding the wells known with anomalously high concentrations, the range of average boron is 0.5 to 0.7 mg/L (Figure 2.22).

2.4 Groundwater Extraction [§356.2(b)(2)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

- ***(b)*** *A detailed description and graphical representation of the following conditions of the basin managed in the Plan:*
  - ***(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.***

Groundwater extraction data were provided by United, which requires reporting of groundwater extraction volumes on a semi-annual basis pursuant to its Water Code powers. In addition, the City of Ventura provides its monthly groundwater extractions for its wells in Mound Basin (currently 02N22W08G01S/Mound#1 and 02N22W17R01S/Mound#3) to MBGSA.

For the semi-annual groundwater extraction data provided by United, volumes are reported for non-city extraction wells for the periods January-June and July-December. MBGSA used the semi-annual reporting to estimate extractions for water year 2025 according to the following methodology. First, the semi-annual volumes are converted to monthly volumes using the method developed for the United numerical groundwater model, which uses precipitation data to estimate a subdivision of the monthly pumping for each extraction well (United, 2018, 2021). The available semi-annual data ends in June 2025, so data for July, August, and September 2025 (to complete water year 2025) are estimated based on prior trends for the summer season, which have very similar precipitation amounts. The estimated groundwater extraction from the United data was supplemented with the extraction data provided by the City of Ventura to calculate the total extraction for water year 2025. The estimated data for the missing months are updated for prior water years in each subsequent Annual Report. Groundwater extraction due to native vegetation (i.e., evapotranspiration [ET])[1] was estimated for water year 2025 based on the numerical model (MBGSA, 2021; United, 2018, 2021) ET results for the baseline projection (2022-2096) for similar water year types; for water year 2025, the average ET for a dry water year type was used (691 AF).

The estimated extraction volumes for water year 2025 are summarized by water use sector in Table 2.1. Agricultural and M&I groundwater use accounted for 70.5% and 29.5%, respectively, of total extraction due to pumping (excluding extractions due to native vegetation) for water year 2025. The volumes extracted from each well in the principal aquifers for water year 2025 are shown in Figure 2.23. The total extracted water during water year 2025, including native vegetation, was 3,759 AF, which is 43% of the total extracted water estimated from the GSP for water year 2025, including native vegetation, which was 8,737 AF.

2.5 Surface Water Supply [§356.2(b)(3)]

> **§356.2 Annual Reports.** *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*
>
> ***(b)*** *A detailed description and graphical representation of the following conditions of the basin managed in the Plan:*
>
> ***(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.***

The City of Ventura (Ventura Water) purchases surface water from the Casitas Municipal Water District (CMWD). Surface water is imported to Mound Basin via pipeline, and exact volumes used within the Basin are unknown; therefore, surface water use volumes for the Basin are estimated based on water demands not met by imported groundwater and groundwater extracted within the Basin. The total volume for imported surface water for water year 2025 was estimated to be 898 acre-feet per year (AF/yr). The surface water use within the Mound Basin portion of the overall Ventura Water service area was estimated as described in Section 2.6 and is shown in Table 2.2 and Figure 2.24.

[1] Note the native vegetation extraction term includes the invasive species Arundo.

2.6 Total Water Use [§356.2(b)(4)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

(b) *A detailed description and graphical representation of the following conditions of the basin managed in the Plan:*

(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

Water supplies that meet agricultural and M&I demand within Mound Basin are sourced from groundwater extractions, imported surface water, and imported groundwater. Ventura Water purchases surface water from CMWD (Lake Casitas) and imports groundwater from the Santa Paula, Oxnard, and Upper Ventura River Basins, and this water is used for M&I purposes. Alta Mutual Water Company (Alta) imports groundwater from the Santa Paula and Oxnard Basins, and Farmers Irrigation Company (FICO) imports groundwater from the Santa Paula Basin, both using water for agricultural purposes. Groundwater extracted from the Mound Basin is used for agricultural and M&I purposes. There are no known domestic wells in the Basin.

Estimation of the total water use within the Mound Basin is complicated by the fact that the Mound Basin is only a portion of the Alta, FICO, and Ventura Water service areas. This annual report uses the simplifying assumptions described in GSP Section 3.1.1.3 for Alta and FICO (MBGSA, 2021). Estimation of water use within the Mound Basin portion of the overall Ventura Water service area and the breakdown of the associated Ventura Water supply sources that met the demands required additional analysis beyond that presented in the GSP. The estimation approach is as follows:

1. Calculate the total water supplies reported from all Ventura Water sources for the entire Ventura Water service area.
2. Multiply the total Ventura Water supplies by the fraction of the Ventura Water service area located within the Mound Basin (i.e., 64%) (See Figure 1.1).
3. Satisfy the demand calculated in step no. 2 by allocating Ventura Water supplies in the following priority order:
    a. Mound Basin groundwater extracted by Ventura Water.
    b. Oxnard Basin groundwater extracted by Ventura Water (after accounting for estimated Ventura Water deliveries within the Oxnard Basin portion of the overall Ventura Water service area using an approach similar to steps nos. 1 and 2).
    c. Satisfy remaining demand using equal parts CMWD surface water deliveries and Upper Ventura River Valley Basin groundwater extracted by Ventura Water. If either source produced insufficient water to satisfy the remaining demand, it is then satisfied with the other source.
    d. Any remaining demand is satisfied using Santa Paula Basin groundwater extracted by Ventura Water.

The total estimated water use within Mound Basin for water year 2025 was 12,345 AF/yr (see Table 2.2 and Figure 2.24). The estimated volumes supplied by the various water sources to meet these demands are broken out in Table 2.2 and Figure 2.24.

2.7 Change in Storage [§356.2(b)(5)(A),(B)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

(b) *A detailed description and graphical representation of the following conditions of the basin managed in the Plan:*

(5) Change in groundwater in storage shall include the following:

(A) Change in groundwater in storage maps for each principal aquifer in the basin.

(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

Groundwater levels were used to estimate the change in storage for the Mugu and Hueneme aquifers (principal aquifers) for water year 2025. The differences in groundwater levels between spring high measurements (for water years 2024 and 2025) were averaged for each aquifer and multiplied by grids of the storativity and aquifer areas derived from the United numerical groundwater model (United, 2021). A portion of the Hueneme Aquifer near its outcrop in the north is unconfined, so the specific yield value was used to calculate the change in storage in that area. There are no groundwater level measurements available for the unconfined portion of the Hueneme Aquifer, so the average difference in spring-high groundwater levels for the confined portion was used to calculate the change in storage in this area.

The change in storage maps for both aquifers for water year 2025 are shown in Figures 2.25 and 2.26. The Mugu Aquifer storage for 2025 increased by 57 acre-feet (AF), and the Hueneme Aquifer storage increased by 1,452 AF. These change in storage values are reasonable compared to the modeled values reported in the GSP (MBGSA, 2021).

Figure 2.27 shows the water year type, groundwater use, the annual change in groundwater in storage for the entire Basin, and the cumulative change in groundwater in storage for the entire Basin, starting in 1986. The change in storage between spring high water years for the Basin was calculated using the numerical model for years 1986 to 2019 (MBGSA, 2021). The change in storage values for the entire basin for water years 2020 through 2025 were estimated using the storage curve approach (see Appendix K in the GSP; MBGSA, 2021), and the total change in storage for the Basin for water year 2025 was calculated to be 5,432 AF (increase). Based on the historical model results, the change in storage for the Mugu and Hueneme aquifers ranged from 2 to 45% of the total. For water year 2025, the estimated change in storage for the Mugu and Hueneme aquifers was 56% of the Basin total, which is outside the expected range. This may be due to the uncertainty in the storage curve approach to estimating the total storage.

3.0 Plan Implementation [§356.2(c)]

§356.2 Annual Reports. *Each Agency shall submit an annual report to the Department by April 1 of each year following the adoption of the Plan. The annual report shall include the following components for the preceding water year:*

(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

Implementation of the MBGSA GSP was initiated with the submittal of the GSP to DWR in December of 2021. The progress towards implementing the Mound Basin GSP is evaluated by comparing monitoring data to the SMC for each applicable sustainability indicator for the past water year (2025). The monitoring data consist of groundwater levels, groundwater quality, and subsidence measurements. The monitoring networks are still being developed for part of the Basin; regardless, all currently available data are evaluated for this Annual Report.

3.1 Chronic Lowering of Groundwater Levels

The SMC for the chronic lowering of groundwater levels sustainability indicator is evaluated using groundwater level measurements. Groundwater levels were measured in five wells in the Mugu Aquifer and thirteen wells in the Hueneme Aquifer. The historical and current groundwater levels were plotted against the minimum thresholds, measurable objectives, and interim milestones along with water year types for each monitoring well (Figures 2.9 and 2.10).

The water level data are summarized in Table 3.1, and—based on these results—the implementation of the plan for the chronic lowering of groundwater levels is in very good status. All minimum groundwater levels in the Mugu Aquifer are currently above their respective minimum thresholds. Currently, all monitoring wells have groundwater levels meeting their 5-year interim milestones. Well 02N22W08P01S was decommissioned, and no data were collected at well 02N22W07P01S for water year 2025.

For the Hueneme Aquifer monitoring wells, all of the minimum groundwater levels are currently meeting their respective measurable objectives (Table 3.1).

Overall, current groundwater levels in the principal aquifers are relatively high due to two consecutive wet years (2023-2024). Although water year 2025 was classified as a “dry” year based on precipitation, groundwater levels remained high in comparison with levels measured during the GSP implementation period.

3.2 Reduction of Groundwater Storage

Reported groundwater extractions are compared to the measurable objective and minimum threshold for the reduction of groundwater storage sustainability indicator. The minimum threshold for the reduction of groundwater storage sustainability indicator is the estimated sustainable yield of 8,200 AF/yr of the Basin. The minimum threshold applies over an averaging period, so groundwater extractions exceeding the minimum threshold in any given year do not automatically indicate undesirable results are occurring in the Basin. The measurable objective is 90% of the sustainable yield (i.e., 7,400 AF/yr). For water year 2025, the total groundwater extraction was 3,068 AF/yr, which met the measurable objective (Table 3.2).

3.3 Seawater Intrusion

Seawater intrusion is monitored using chloride concentrations from the available water quality data. The chloride data are contoured and compared to the minimum threshold isocontour, which was established for the GSP (MBGSA, 2021). Figures 3.1 and 3.2 show the chloride isocontours for the Mugu and Hueneme aquifers, respectively. The isocontours indicate the measurable objective is reached for both aquifers (Figures 3.1 and 3.2).

3.4 Degraded Water Quality

Groundwater quality was monitored for water year 2025 in three monitoring wells for the Mugu Aquifer and five monitoring wells for the Hueneme Aquifer. The two-year moving averages for concentrations of nitrate, TDS, sulfate, chloride, and boron are compared against the SMC for the degraded water quality sustainability indicator for each monitoring well in the Mugu and Hueneme aquifers (Table 3.3). The water quality data for water year 2025 are also described in Section 2.3, and Table 3.3 also shows the average concentrations for the water year 2025 period in the Mugu and Hueneme aquifers against the SMC. For the Mugu aquifer, TDS and sulfate analyzed in well 02N23W23Q02 were between the minimum threshold and the interim milestone and measurable objective. All remaining analytes met their respective measurable objectives for the two-year averaging period consisting of water years 2024-2025, and no minimum thresholds were exceeded in any monitoring wells (Table 3.3). The effects of groundwater conditions deemed to cause undesirable results are considered to occur when all representative monitoring wells in a principal aquifer exceed the minimum threshold concentration for a constituent for two consecutive years.

3.5 Land Subsidence

Land subsidence is only monitored for the Eastern Half of Mound Basin because remote sensing data coverage (interferometric synthetic aperture radar [InSAR]) for the Western Half was determined to be unreliable (MBGSA, 2021). As a result, groundwater levels are used as a proxy for the minimum thresholds in the Western Half of the Basin and have the same minimum threshold values as the chronic lowering of groundwater levels sustainability indicator (i.e., historical lows). For the Eastern Half of the Basin, if the InSAR-measured subsidence rate exceeds the minimum threshold (0.1 foot per year [ft/yr]), and groundwater levels are below historical low levels, the InSAR-indicated land surface elevation changes will be evaluated to determine whether they were caused by groundwater conditions.

Table 3.1 depicts the current results for groundwater levels or subsidence rates with respect to their minimum thresholds for the land subsidence sustainability indicator. No minimum thresholds for measured subsidence were exceeded in the Eastern Half of the Basin in water year 2025. For the Western Half monitoring wells, identical to the chronic lowering of groundwater levels, all minimum groundwater levels for the land subsidence are currently above their respective minimum thresholds. Currently, all seventeen of the measured monitoring wells for water year 2025 have groundwater levels that meet their 5-year interim milestones and measurable objectives (Table 3.1). The subsidence datasets for water year 2025 provided by DWR were downloaded, mapped, and reviewed (as presented in Figure 3.3). The DWR data include land surface elevation changes for Mound Basin based on InSAR measurements. The total estimated error is 0.1 ft (MBGSA, 2021), and the measured subsidence rate was below 0.1 ft/yr in the Eastern Half of Mound Basin for water year 2025.

3.6 Projects and Management Actions

3.6.1 Seawater Intrusion Monitoring Wells

Prior to GSP submittal, MBGSA applied for and was approved for DWR Technical Support Services to construct a clustered monitoring well in the Coast Area of the Basin to monitor for seawater intrusion (i.e., 02N23W23Q02S and 02N23W23Q01S depicted in Figures 3.1 and 3.2). MBGSA obtained an access agreement, completed California Environmental Quality Act requirements, and obtained permits for the well in 2021. The clustered well was constructed in the spring of 2022. Monitoring of groundwater levels did not occur for this clustered well during water year 2025 due to artesian conditions.

Preliminary planning for construction of the other planned clustered monitoring well (Site B) was performed during water year 2023 (see Figures 3.1 and 3.2 for the location of Site B). Also, during water year 2023, MBGSA increased its fiscal reserve that is set aside to fund construction of the Site B monitoring well. During water year 2024 MBGSA continued to increase the fiscal reserve, identified a preliminary well site, and contracted with a consultant to develop applications for encroachment and coastal development permits. During water year 2025, MBGSA continued to increase the fiscal reserve and worked on applications for the encroachment and coastal development permits.

3.6.2 Seawater Intrusion Contingency Plan

There was no activity on this task during the reporting period. It is noted that this management action is described as voluntary in the GSP. There is no definitive implementation trigger for developing the contingency plan.

3.6.3 Land Subsidence Contingency Plan

There was no activity on this task during the reporting period. It is noted that this management action is described as voluntary in the GSP. There is no definitive implementation trigger for developing the contingency plan.

3.6.4 Groundwater Quality Protection Measures

There was no activity on this task during the reporting period. It is noted that this management action is described as voluntary in the GSP. There is no definitive implementation trigger for implementation.

3.6.5 Interim Shallow Groundwater Data Collection and Analysis

During water year 2021, MBGSA confirmed the availability and accessibility of the shallow groundwater monitoring wells with the City of Ventura and planned for collaborative monitoring with the City of Ventura. The City granted access agreements for the monitoring activities, and the shallow groundwater monitoring was initiated during water year 2022. Data collection continued during water year 2025 and work began on evaluating the data for the first 5-year GSP review to evaluate further whether groundwater extractions in the principal aquifers have had material effect on shallow groundwater levels and surface water.

4.0 References

Mound Basin Groundwater Sustainability Agency (MBGSA). Groundwater Sustainability Plan. December 2021.

United Water Conservation District (United). 2018. Ventura Regional Groundwater Flow Model and Updated Hydrogeologic Conceptual Model: Oxnard Plain, Oxnard Forebay, Pleasant Valley, West Las Posas, and Mound Basins, United Water Conservation District Open-File Report 2018-02, July.

______. 2021. Ventura Regional Groundwater Flow Model Expansion and Updated Hydrogeologic Conceptual Model: Santa Paula, Fillmore, and Piru Groundwater Basins, United Water Conservation District Open-File Report 2021-01.

Figures

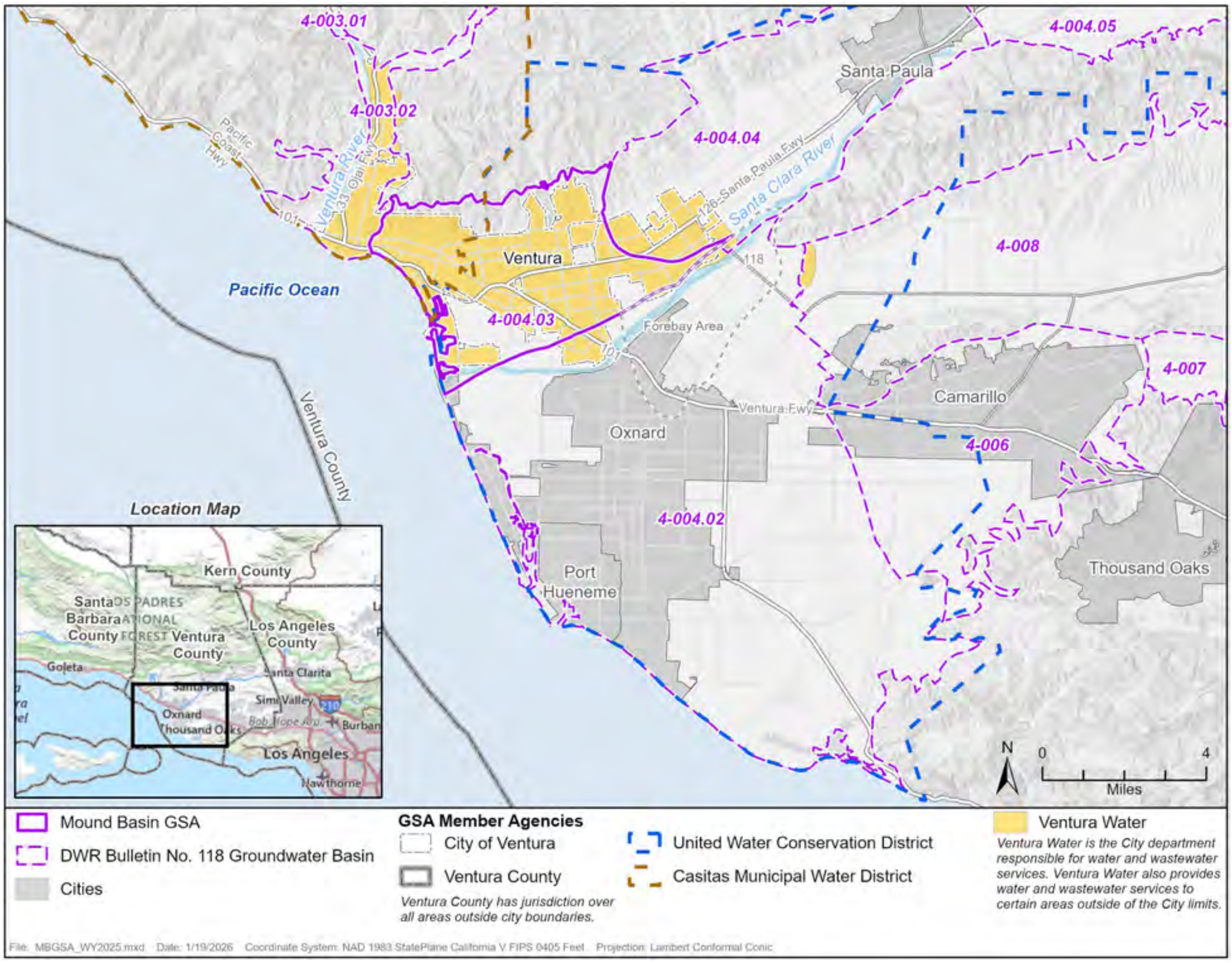


Figure 1.1 Mound Basin Groundwater Sustainability Agency Boundary Map

Figure 2.1 Topographic Map with Precipitation Gage Stations in Mound Basin

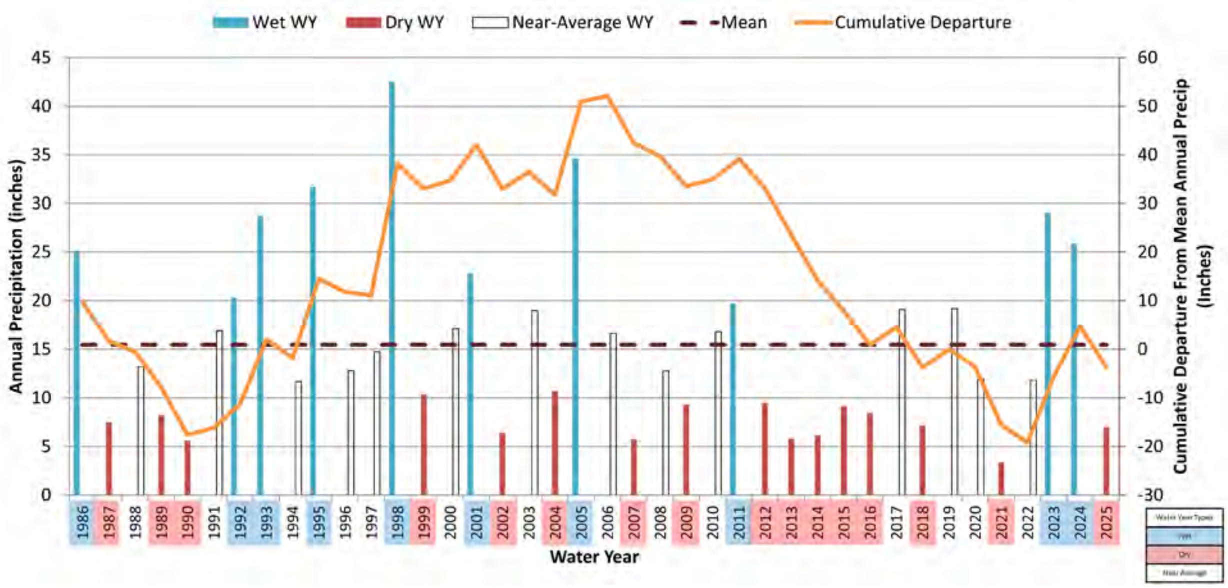


Figure 2.2 **Annual Precipitation and Cumulative Departure from the Mean, with Water Year Types**

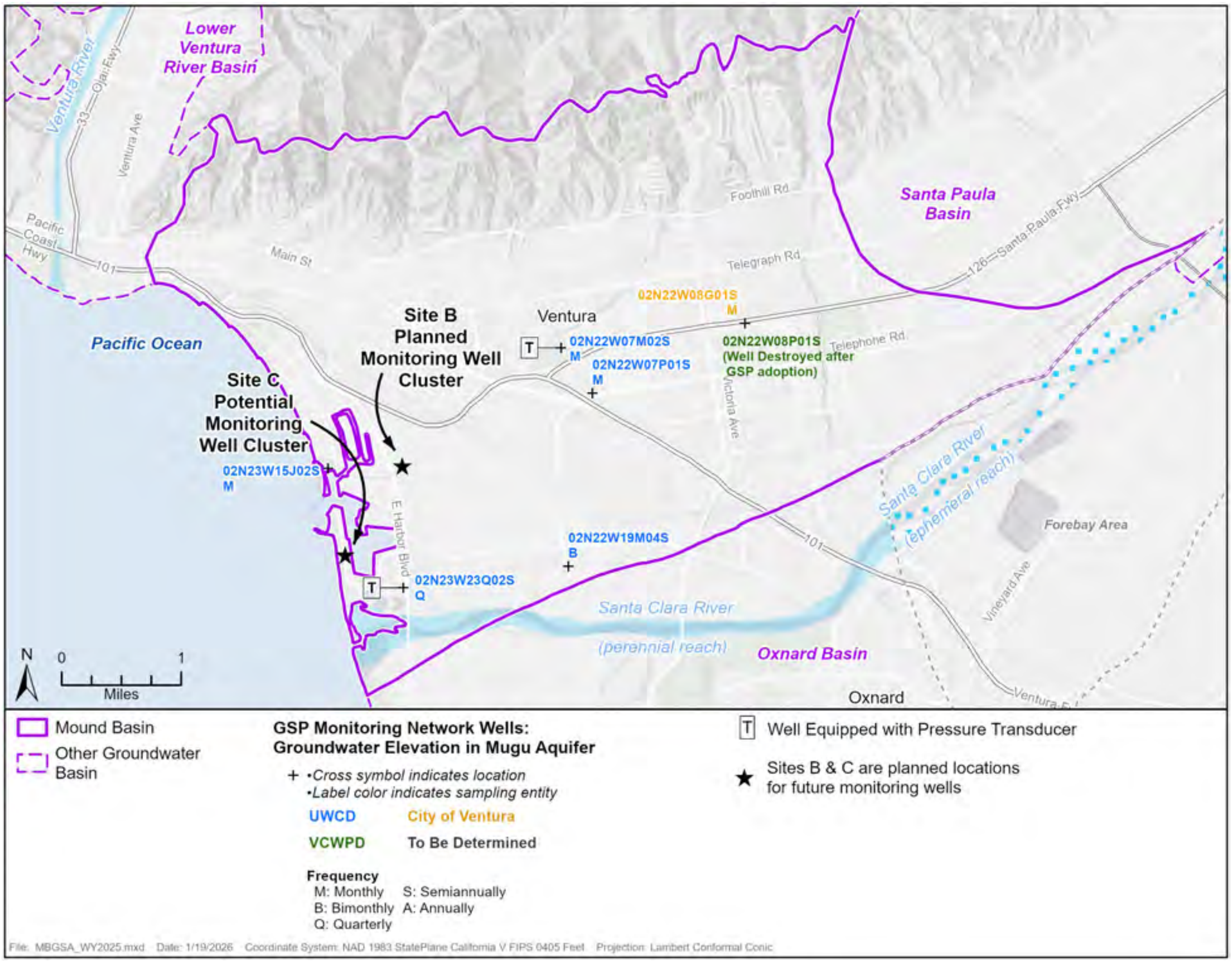


Figure 2.3 Map Showing the Groundwater Elevation Monitoring Network in the Mugu Aquifer of Mound Basin

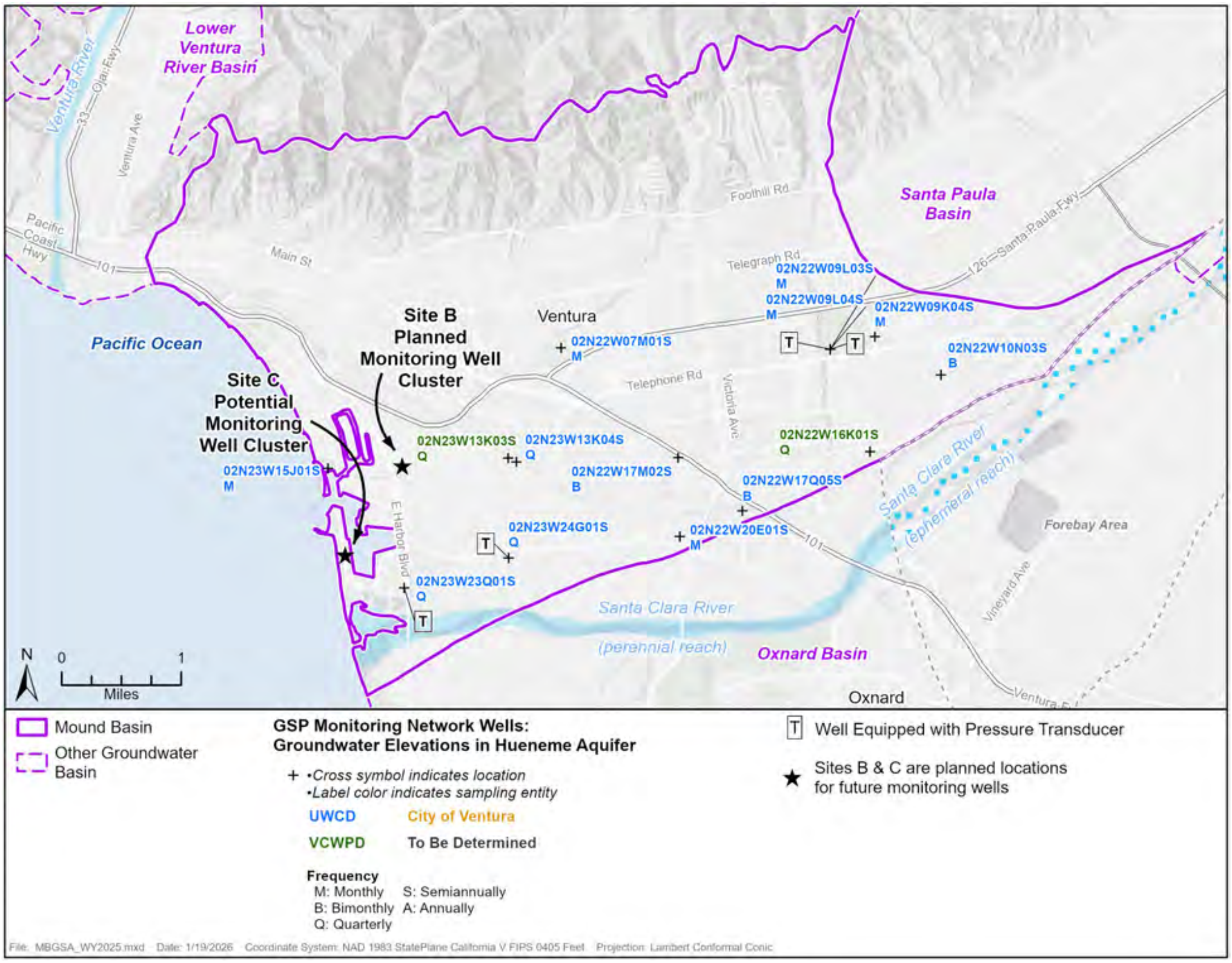


Figure 2.4 Map Showing the Groundwater Elevation Monitoring Network in the Hueneme Aquifer of Mound Basin

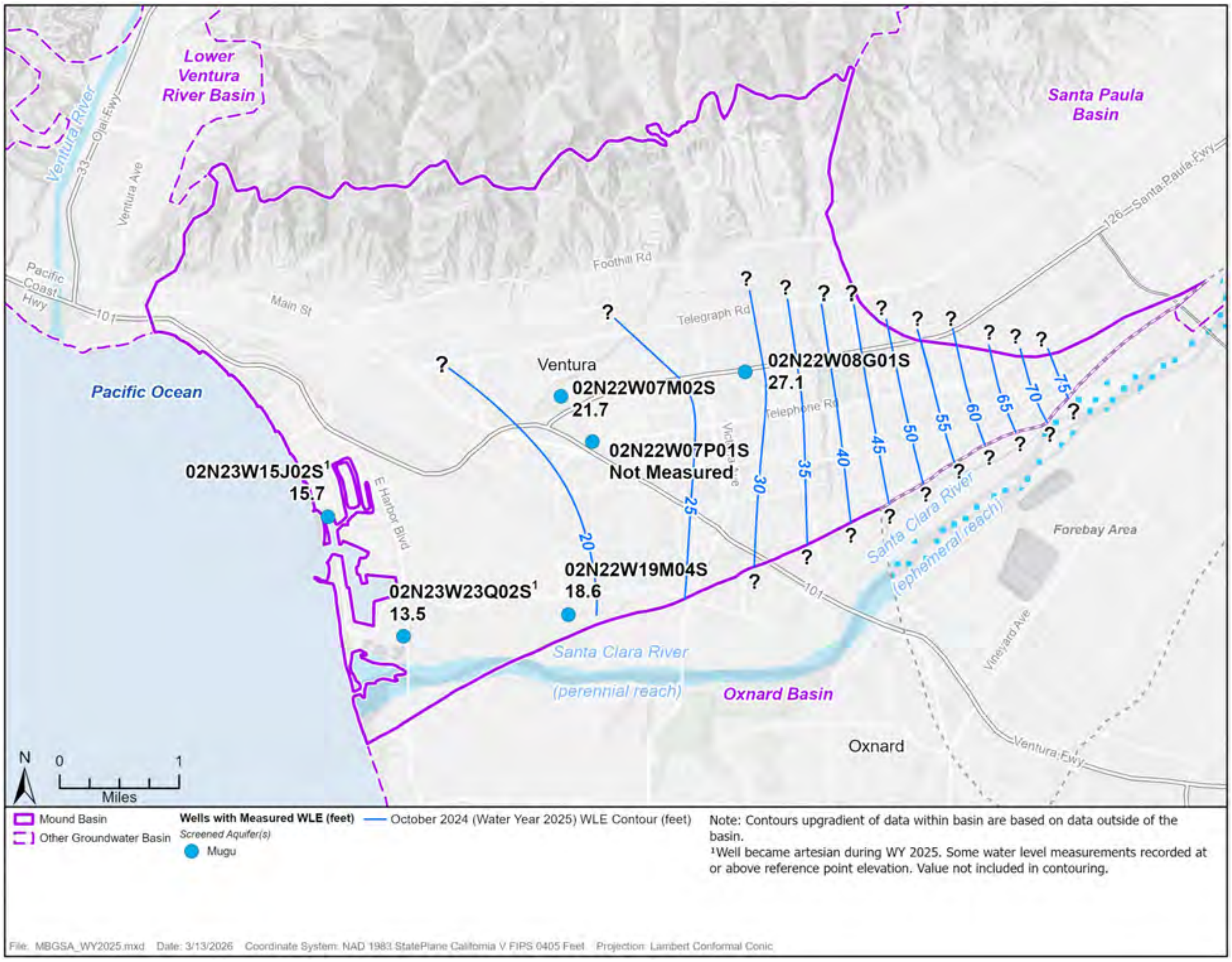


Figure 2.5 Water Level Elevation in Mugu Aquifer, October 2024 (Fall-Low Water Year 2025)

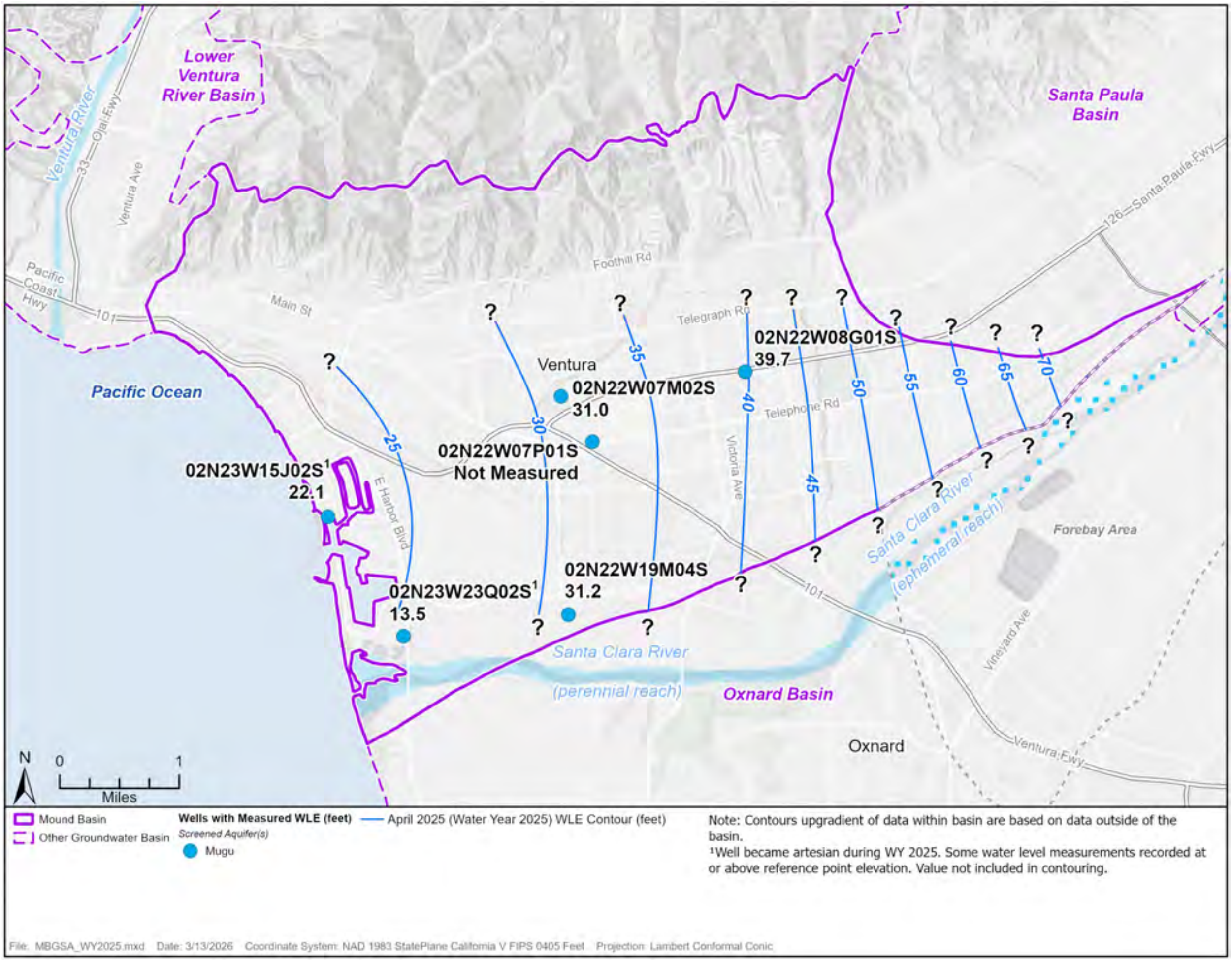


Figure 2.6 Water Level Elevation in Mugu Aquifer, April 2025 (Spring-High Water Year 2025)

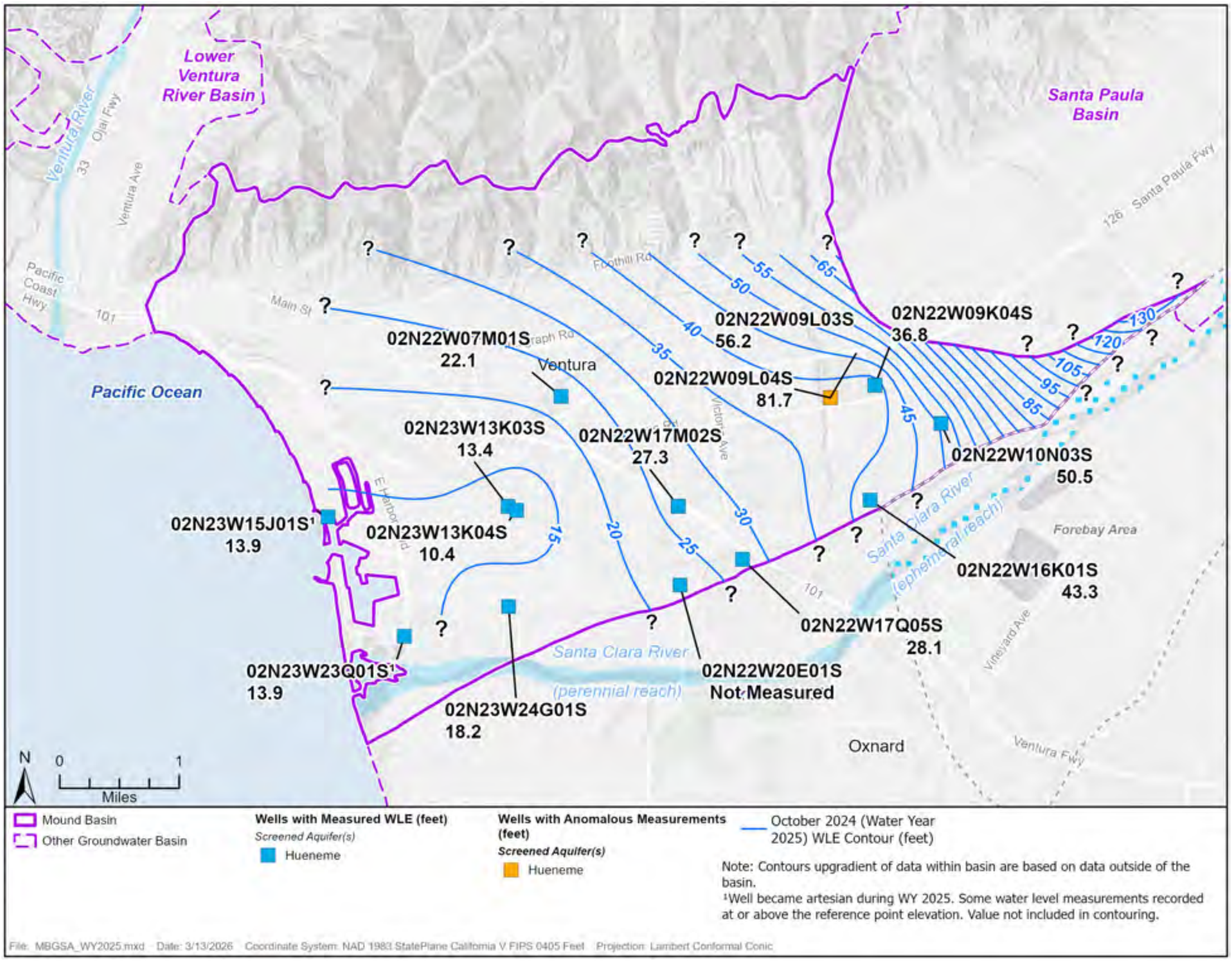


Figure 2.7 Water Level Elevation in Hueneme Aquifer, October 2024 (Fall-Low Water Year 2025)

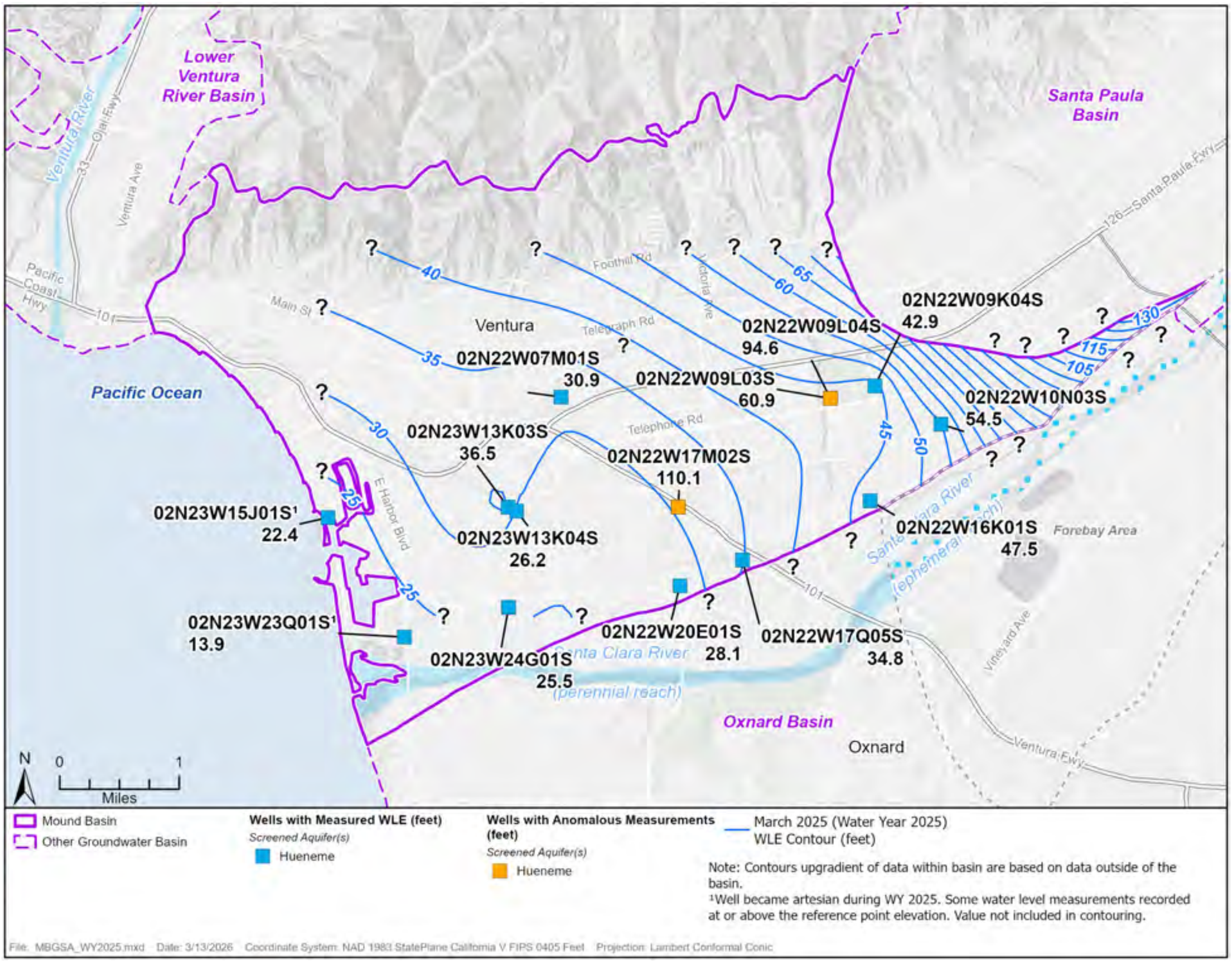


Figure 2.8 Water Level Elevation in Hueneme Aquifer, April 2025 (Spring-High Water Year 2025)

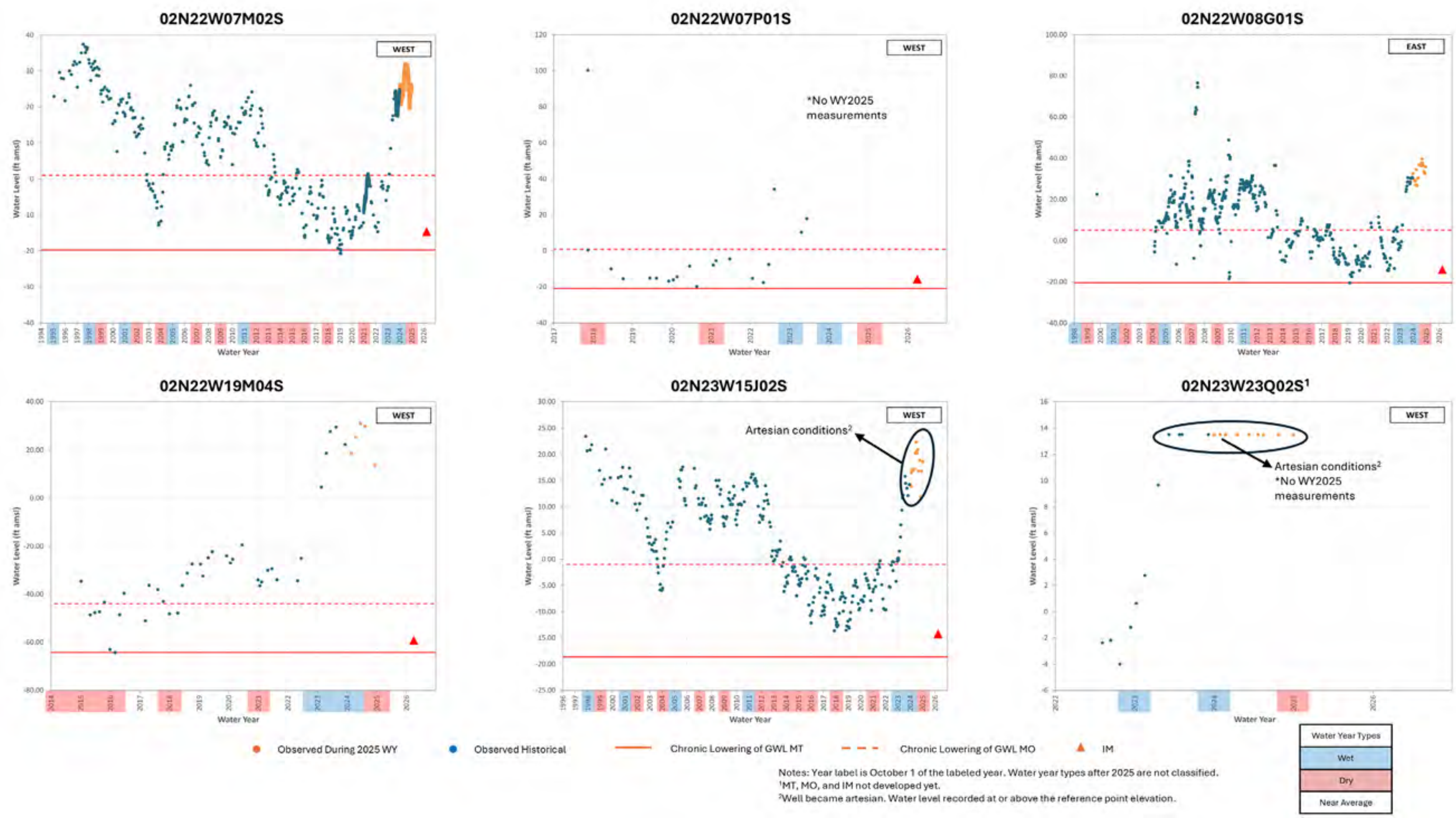
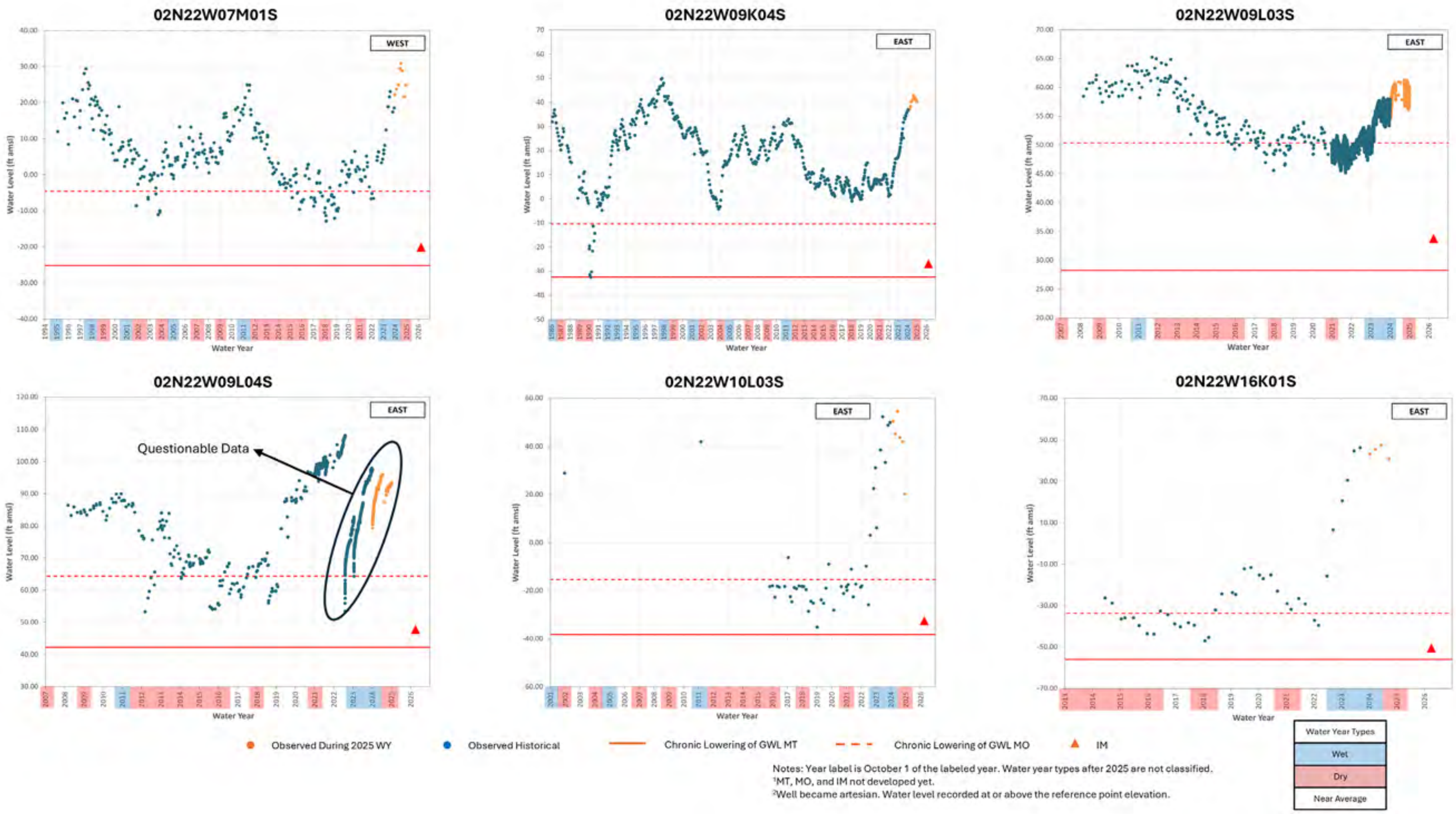
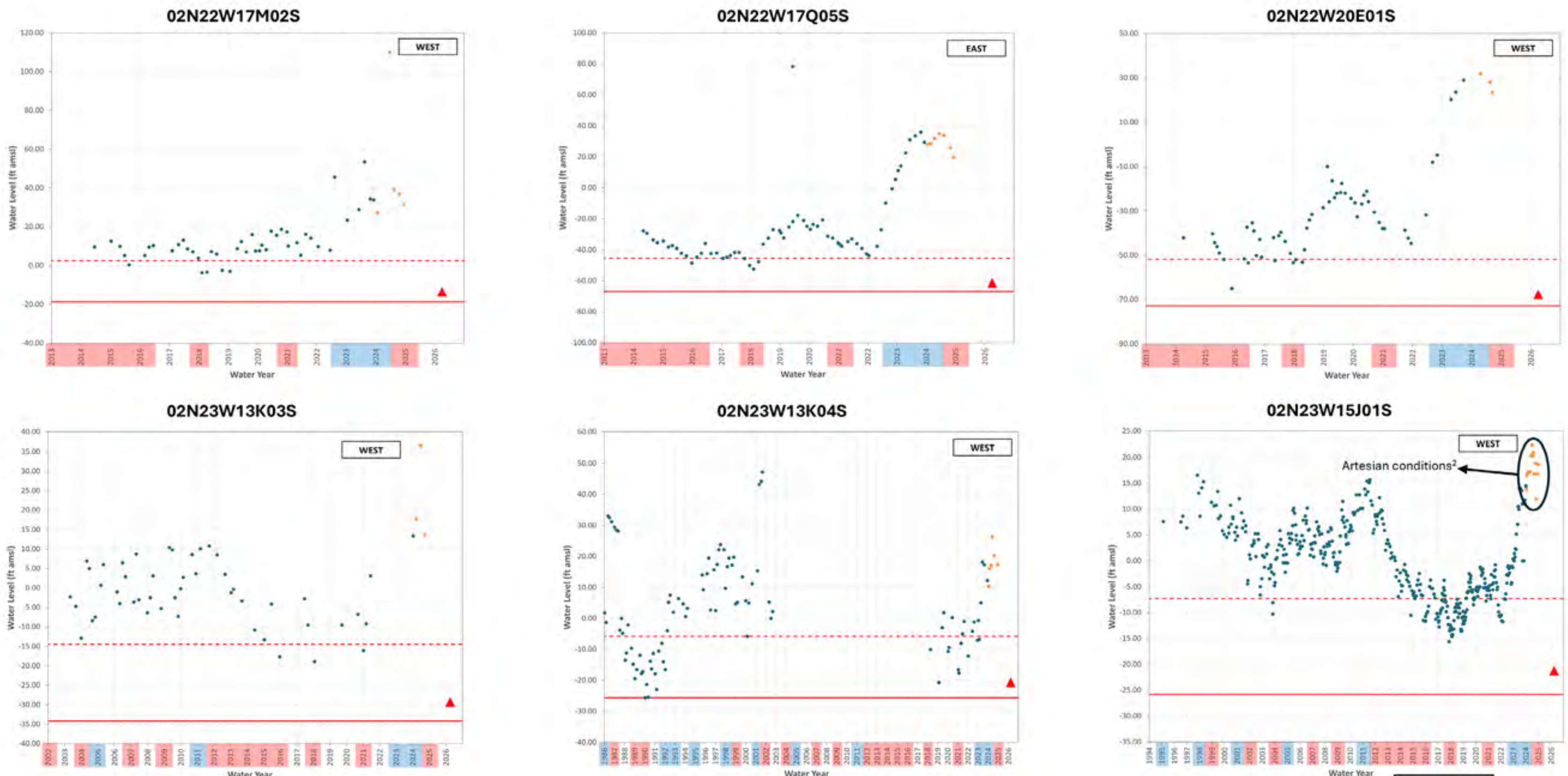


Figure 2.9 **Hydrographs for the Monitoring Network in the Mugu Aquifer of Mound Basin**


02N22W07M01S
WEST
02N22W09K04S
EAST
02N22W09L03S
EAST
02N22W09L04S
EAST
Questionable Data
02N22W10L03S
EAST
02N22W16K01S
EAST
Water Level (ft amsl)
Water Year
Observed During 2025 WY
Observed Historical
Chronic Lowering of GWL MT
Chronic Lowering of GWL MO
IM
Water Year Types
Wet
Dry
Near Average
Notes: Year label is October 1 of the labeled year. Water year types after 2025 are not classified.
¹MT, MO, and IM not developed yet.
²Well became artesian. Water level recorded at or above the reference point elevation.



Observed During 2025 WY · Observed Historical · Chronic Lowering of GWL MT · Chronic Lowering of GWL MO · IM

Water Year Types
Wet
Dry
Near Average

Notes: Year label is October 1 of the labeled year. Water year types after 2025 are not classified.
[1]MT, MO, and IM not developed yet.
[2]Well became artesian. Water level recorded at or above the reference point elevation.

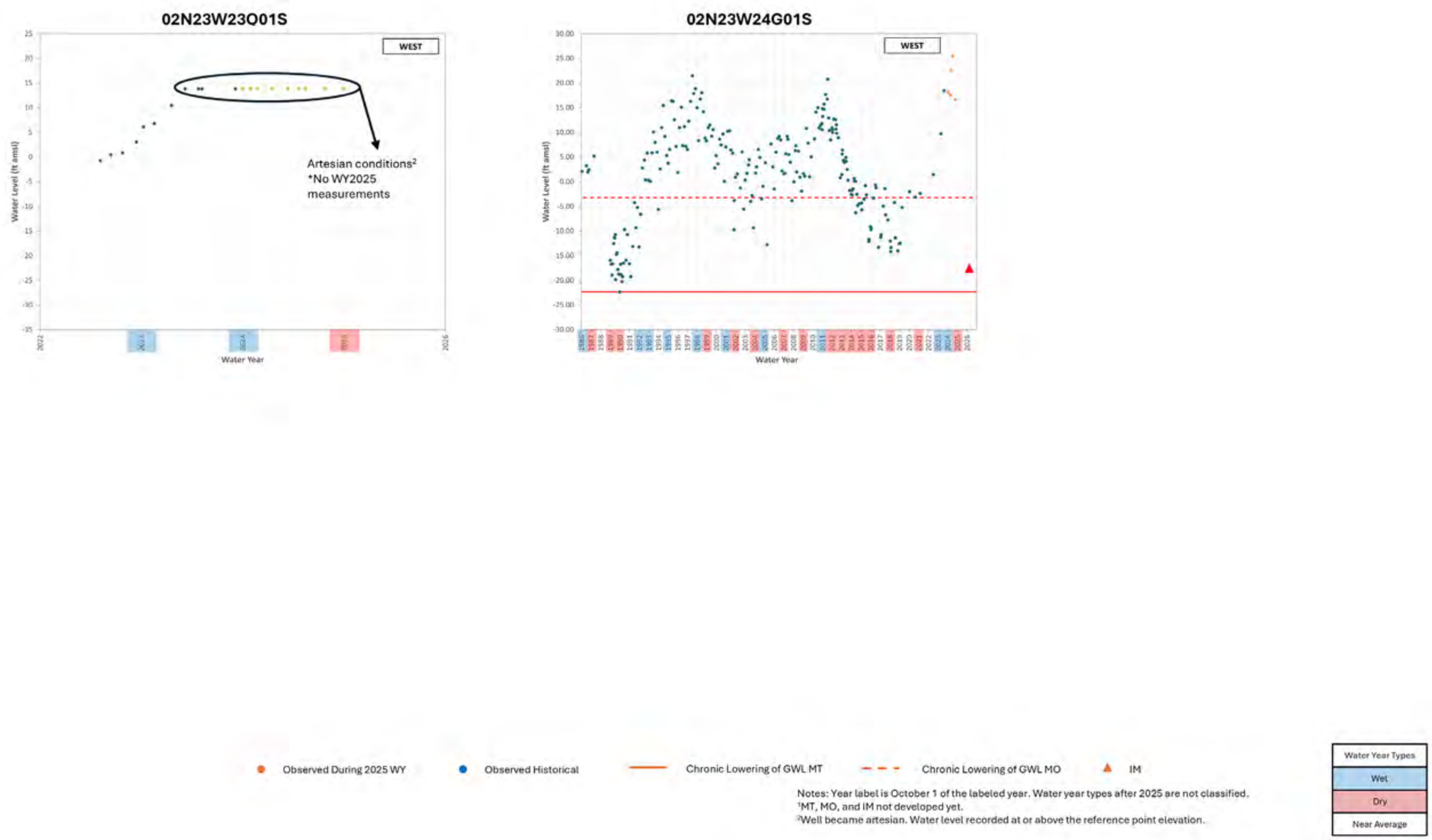


Figure 2.10 Hydrographs for the Monitoring Network in the Hueneme Aquifer of Mound Basin

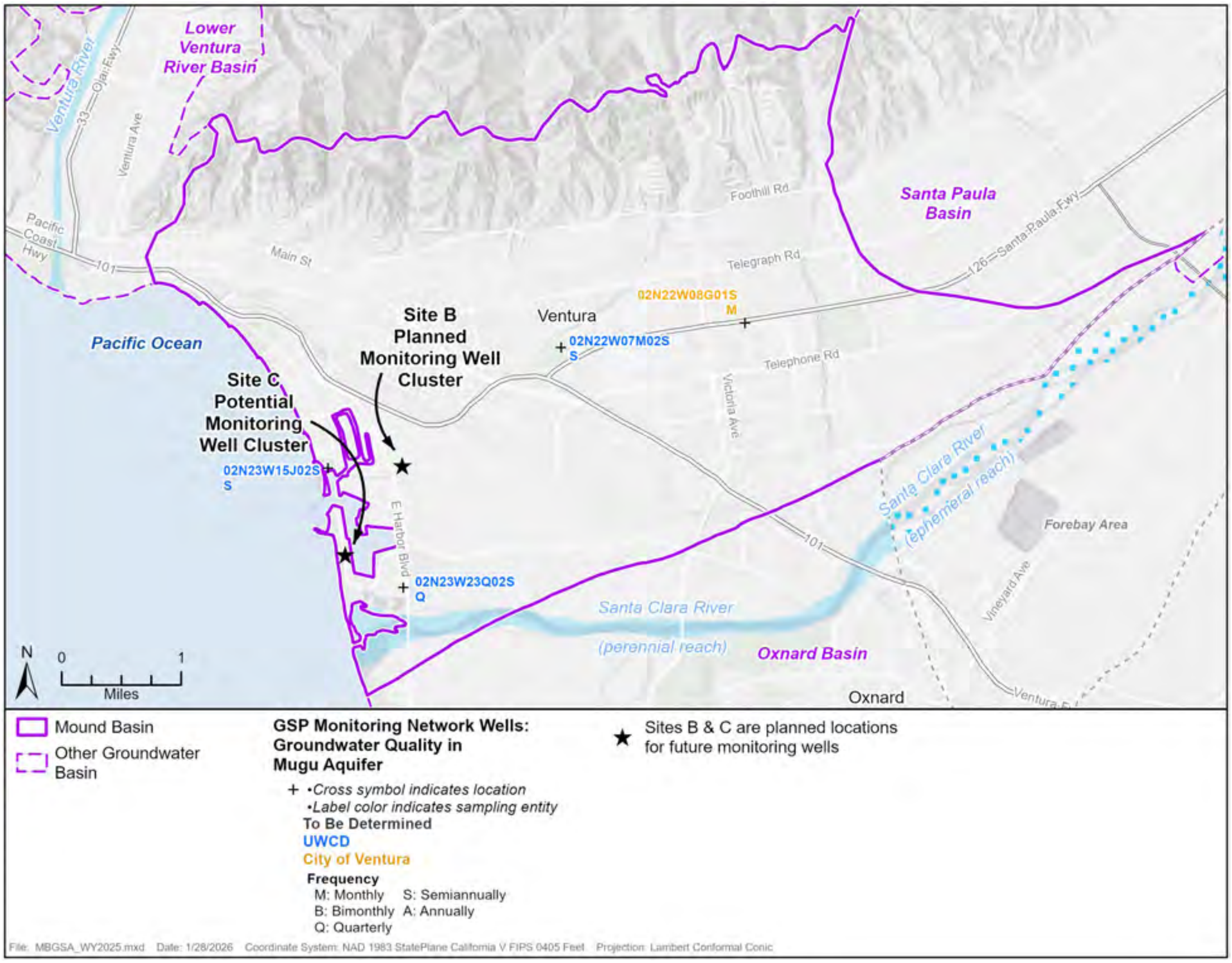


Figure 2.11 Map Showing the Groundwater Quality and Seawater Intrusion Monitoring Networks in the Mugu Aquifer of Mound Basin

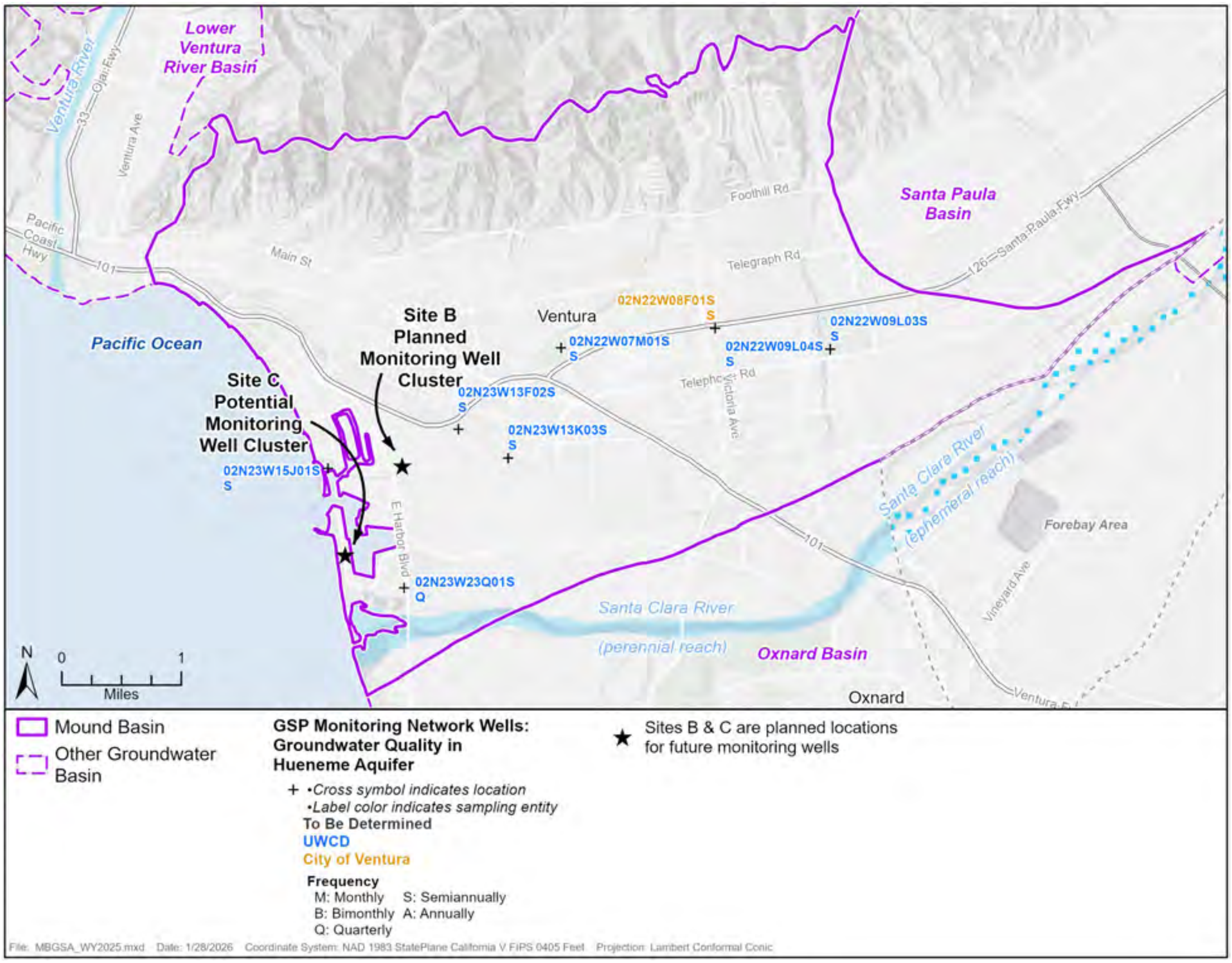


Figure 2.12 Map Showing the Groundwater Quality and Seawater Intrusion Monitoring Networks in the Hueneme Aquifer of Mound Basin

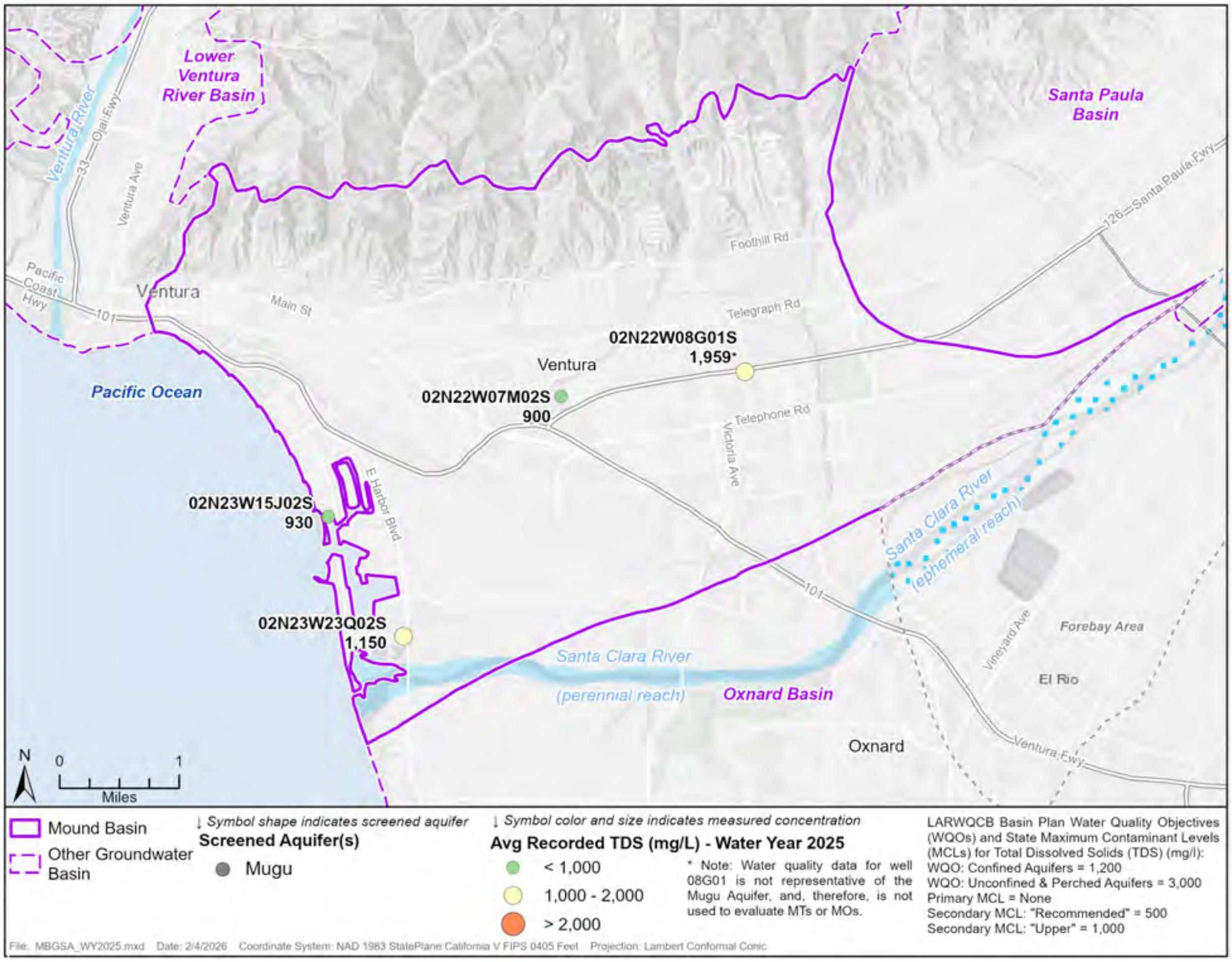


Figure 2.13 Average TDS Concentrations Detected in Mugu Aquifer During Water Year 2025

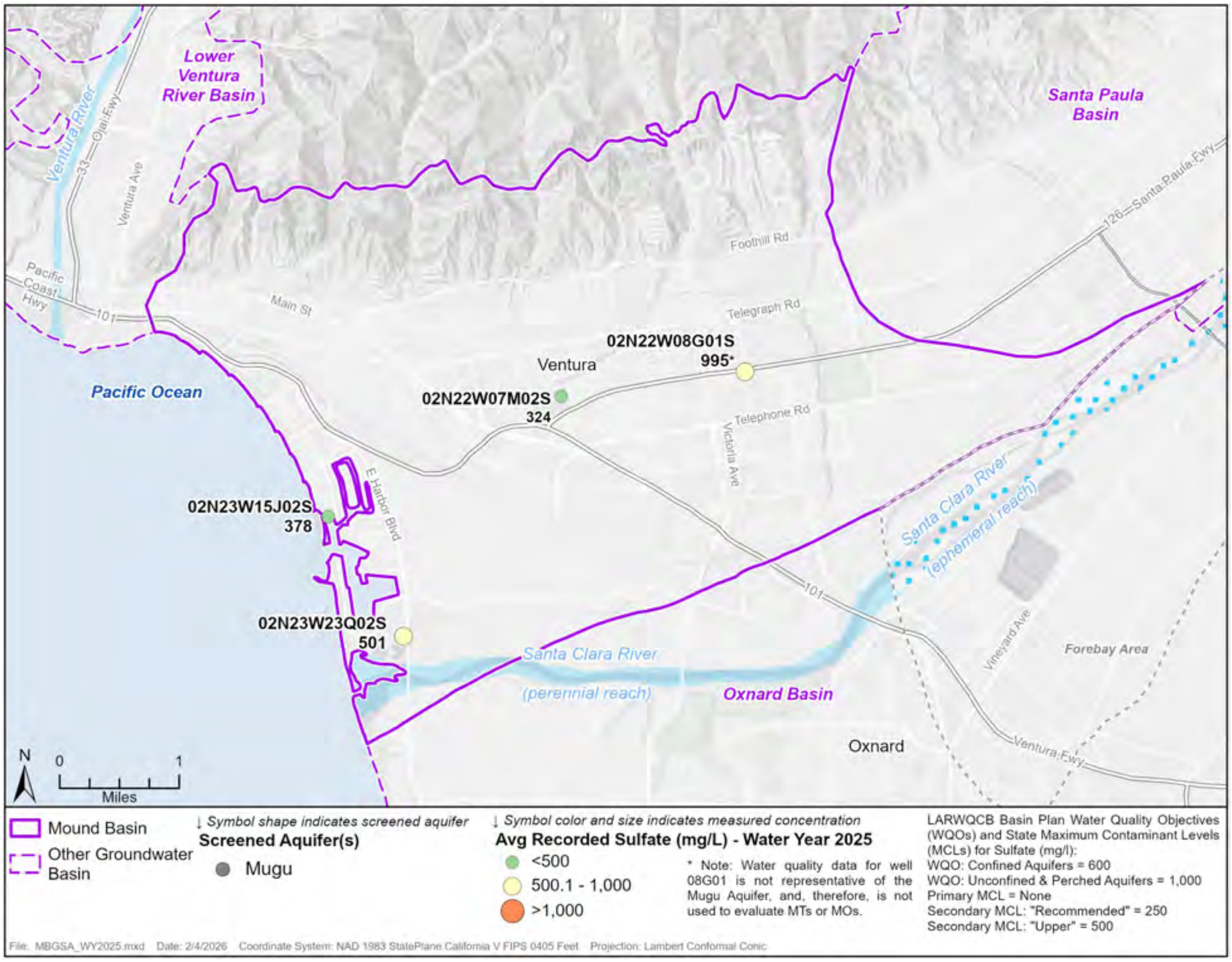


Figure 2.14 Average Sulfate Concentrations Detected in Mugu Aquifer During Water Year 2025

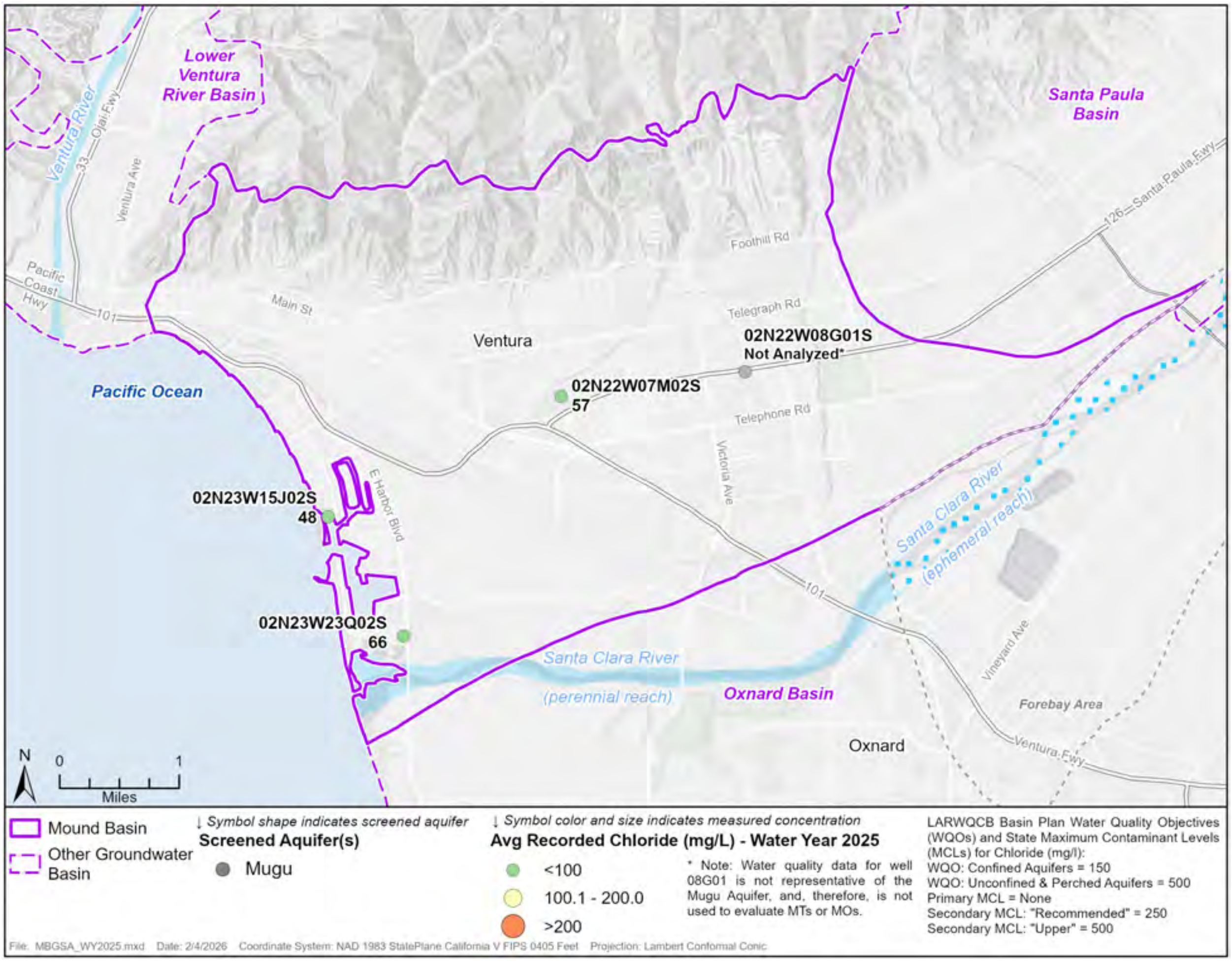


Figure 2.15 **Average Chloride Concentrations Detected in Mugu Aquifer During Water Year 2025**

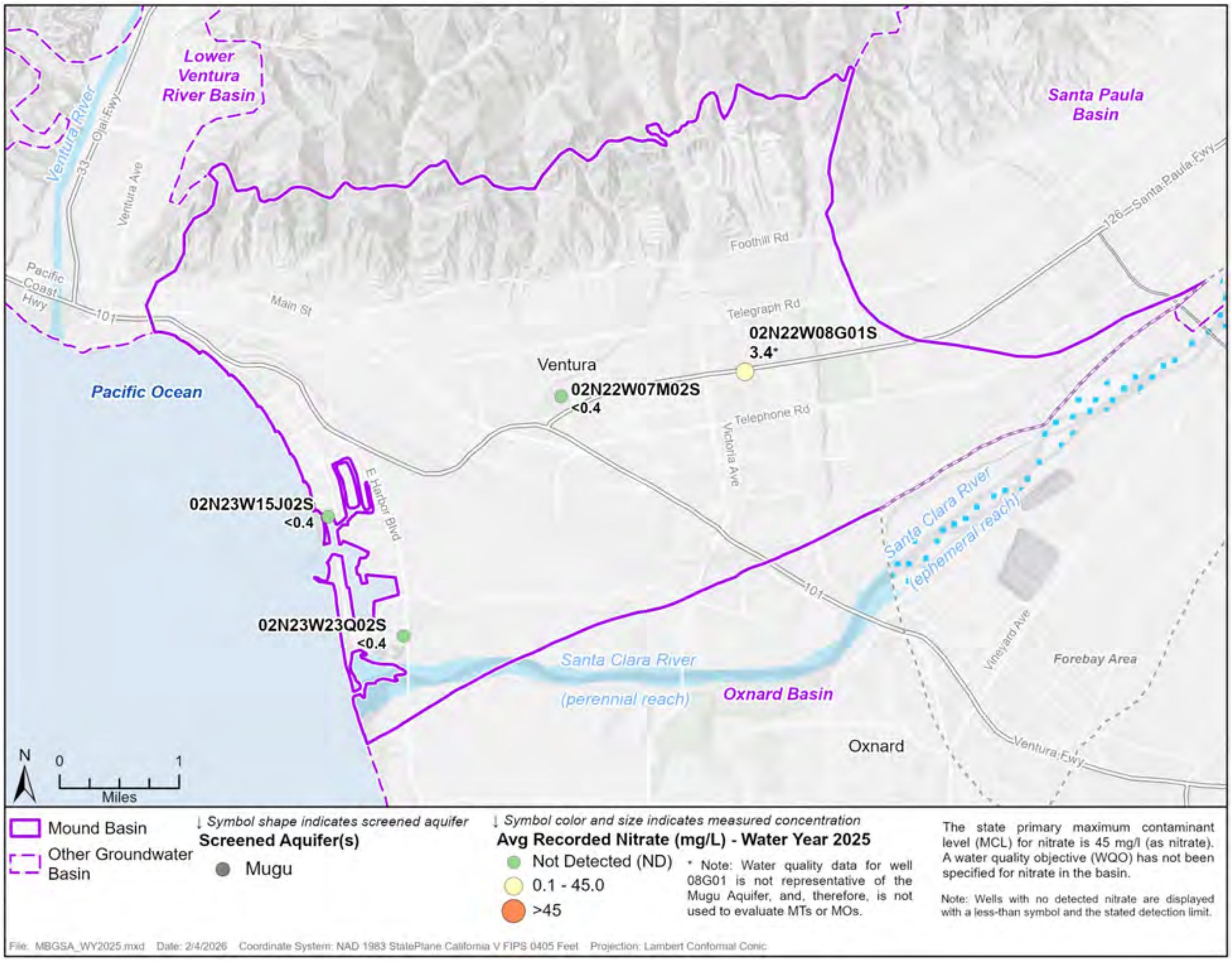


Figure 2.16 Average Nitrate Concentrations Detected in Mugu Aquifer During Water Year 2025

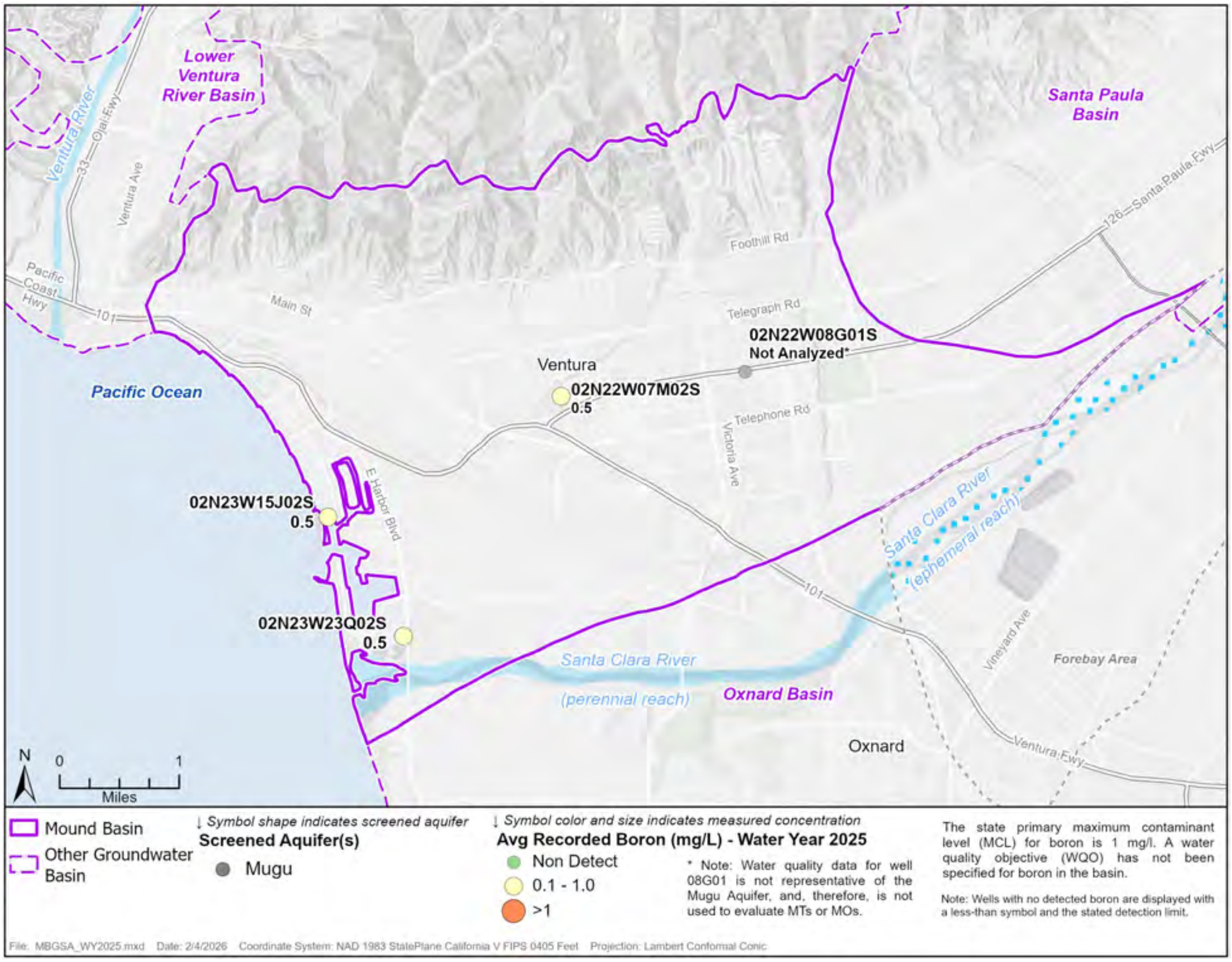


Figure 2.17 Average Boron Concentrations Detected in Mugu Aquifer During Water Year 2025

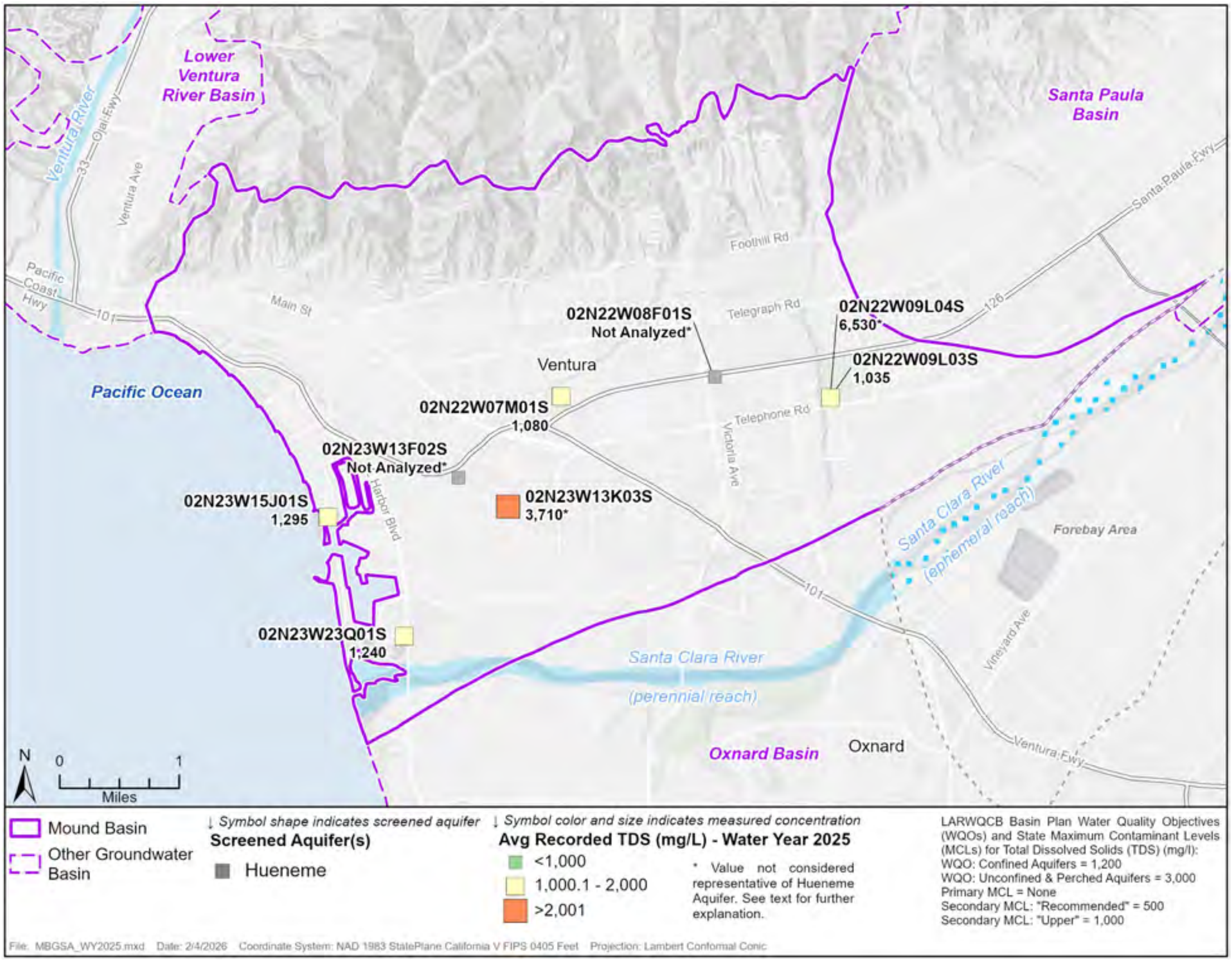


Figure 2.18 Average TDS Concentrations Detected in Hueneme Aquifer During Water Year 2025

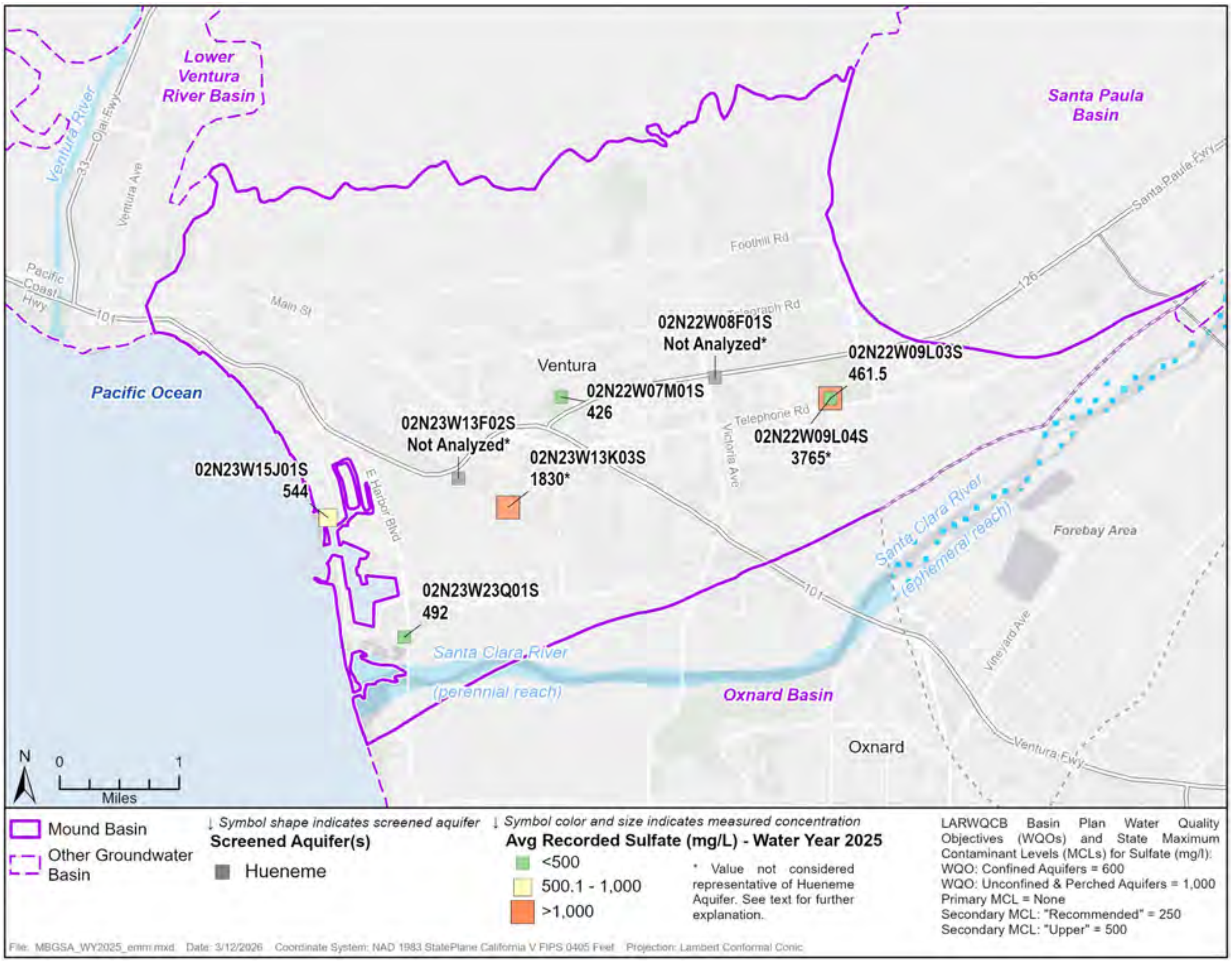


Figure 2.19 Average Sulfate Concentrations Detected in Hueneme Aquifer During Water Year 2025

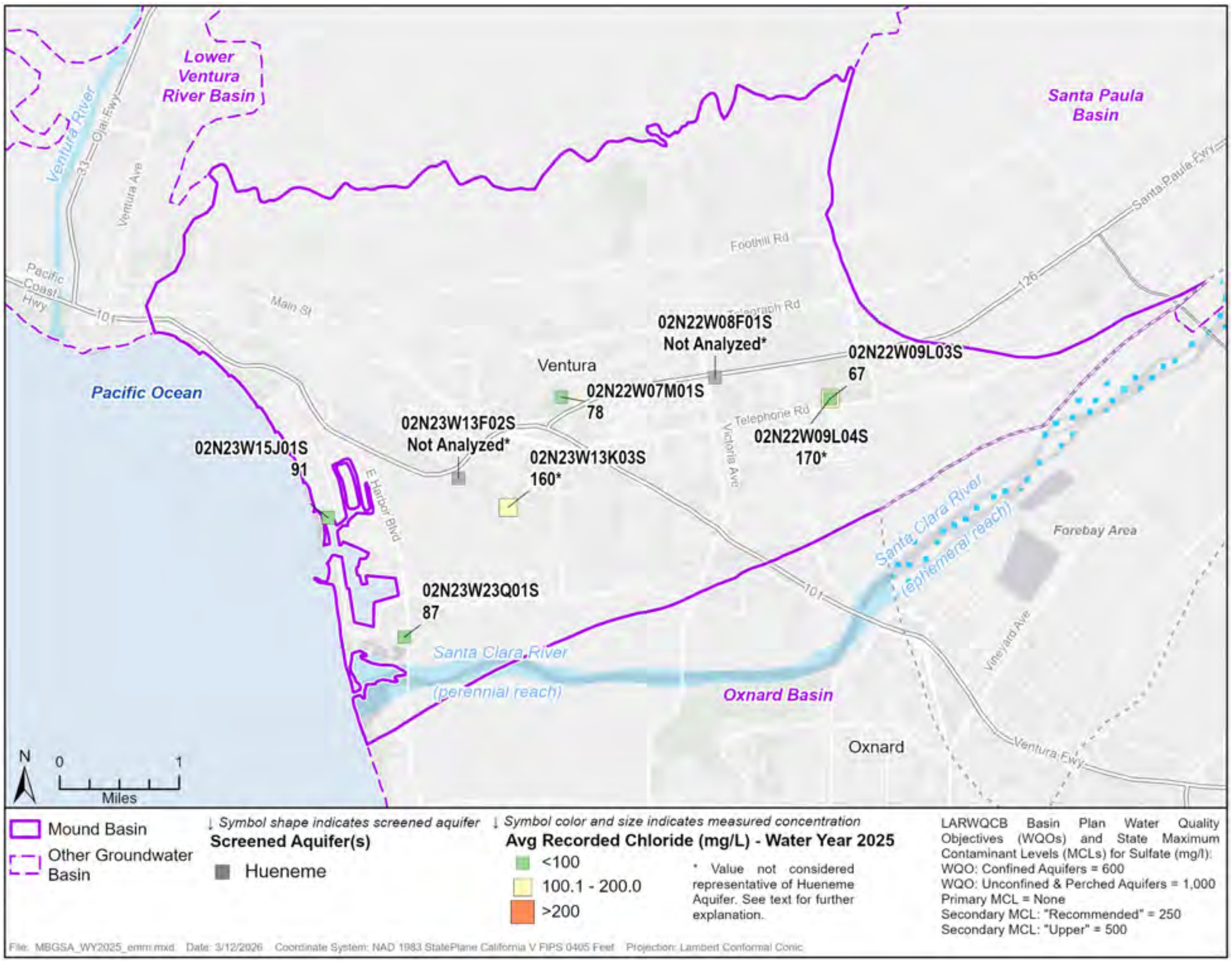


Figure 2.20 Average Chloride Concentrations Detected in Hueneme Aquifer During Water Year 2025

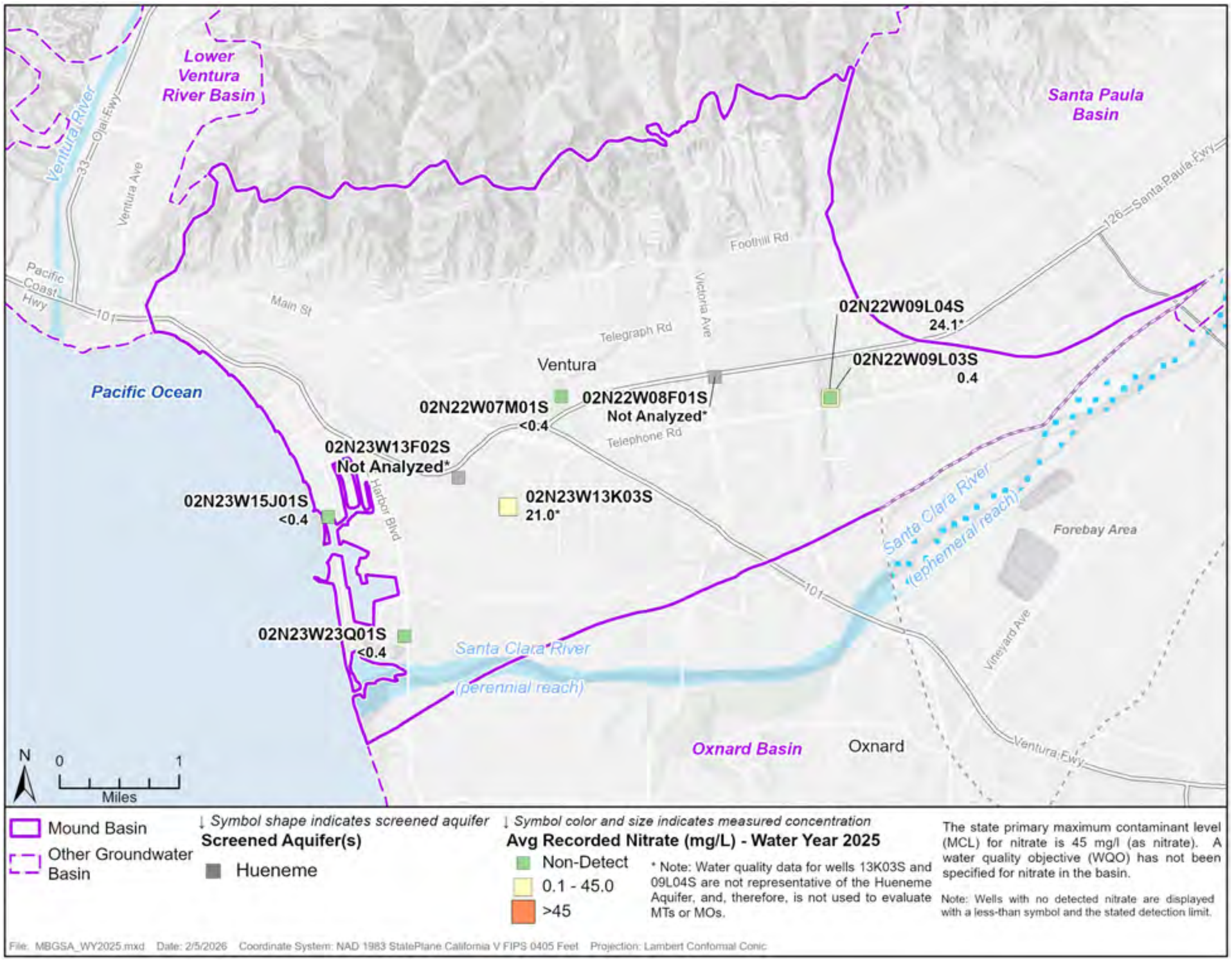


Figure 2.21 **Average Nitrate Concentrations Detected in Hueneme Aquifer During Water Year 2025**

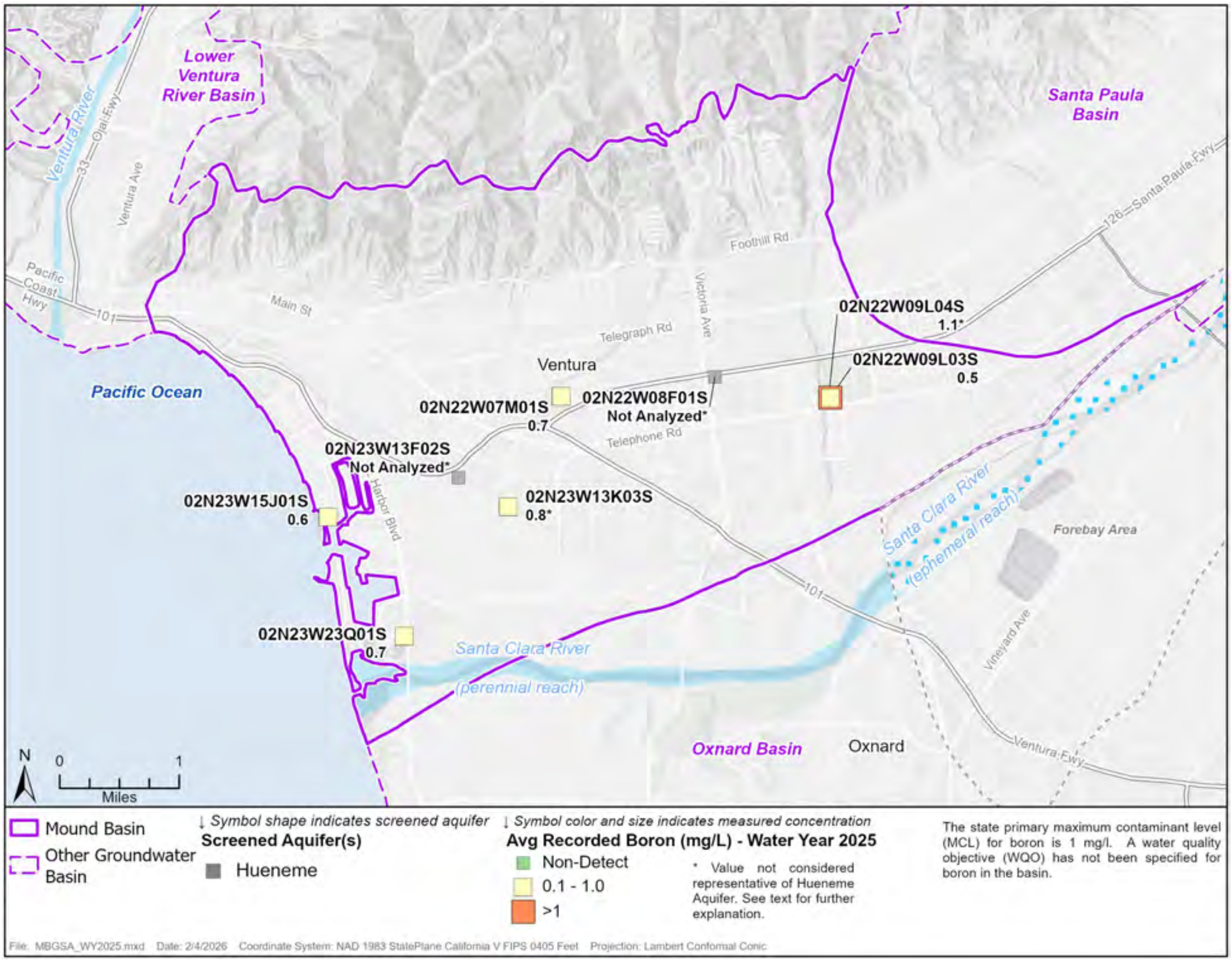


Figure 2.22 Average Boron Concentrations Detected in Hueneme Aquifer During Water Year 2025

Figure 2.23 Groundwater Extraction from Mound Basin, Water Year 2025

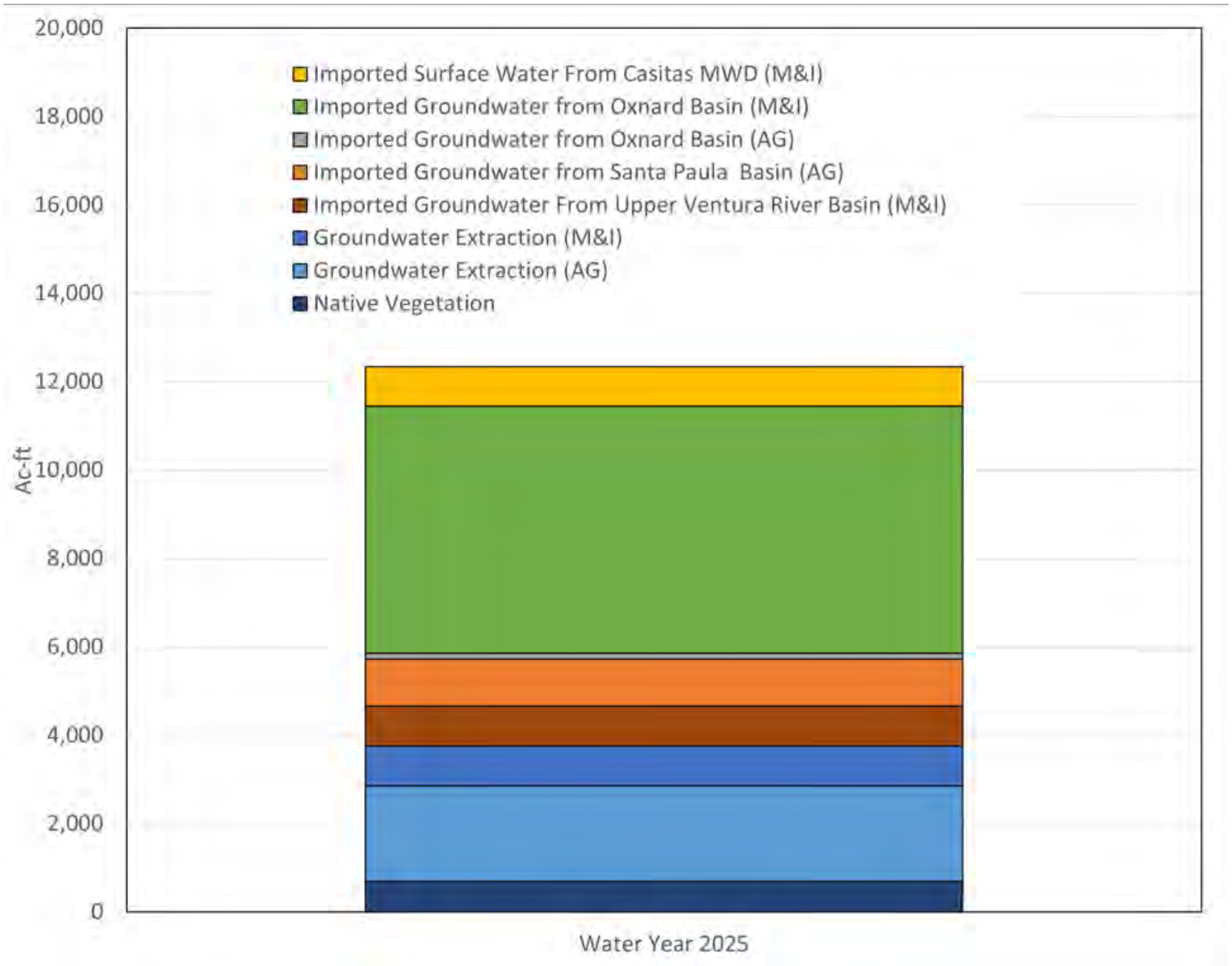


Figure 2.24 Total Water Use for Water Year 2025

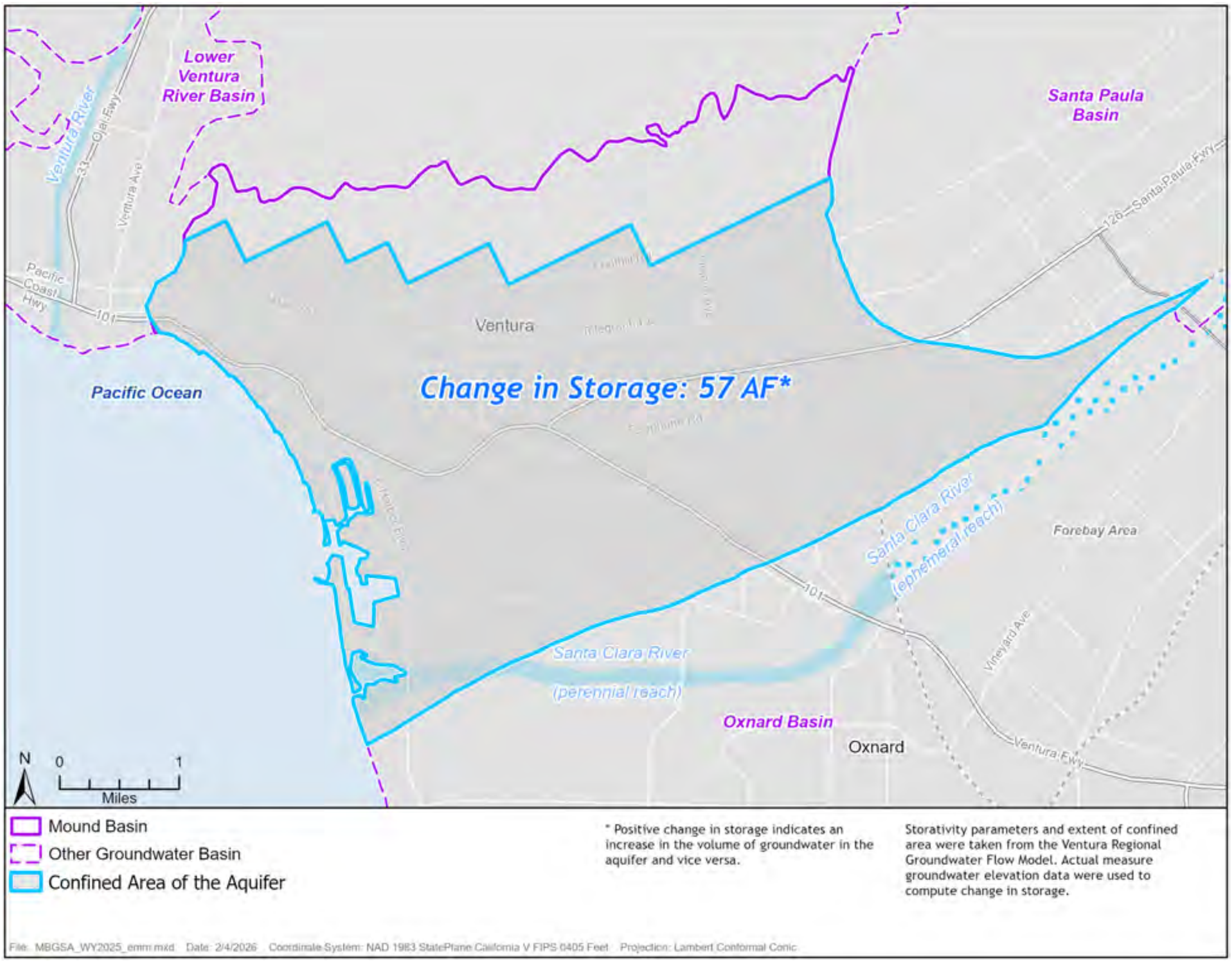


Figure 2.25 Change in Groundwater in Storage for Mugu Aquifer, Water Year 2025

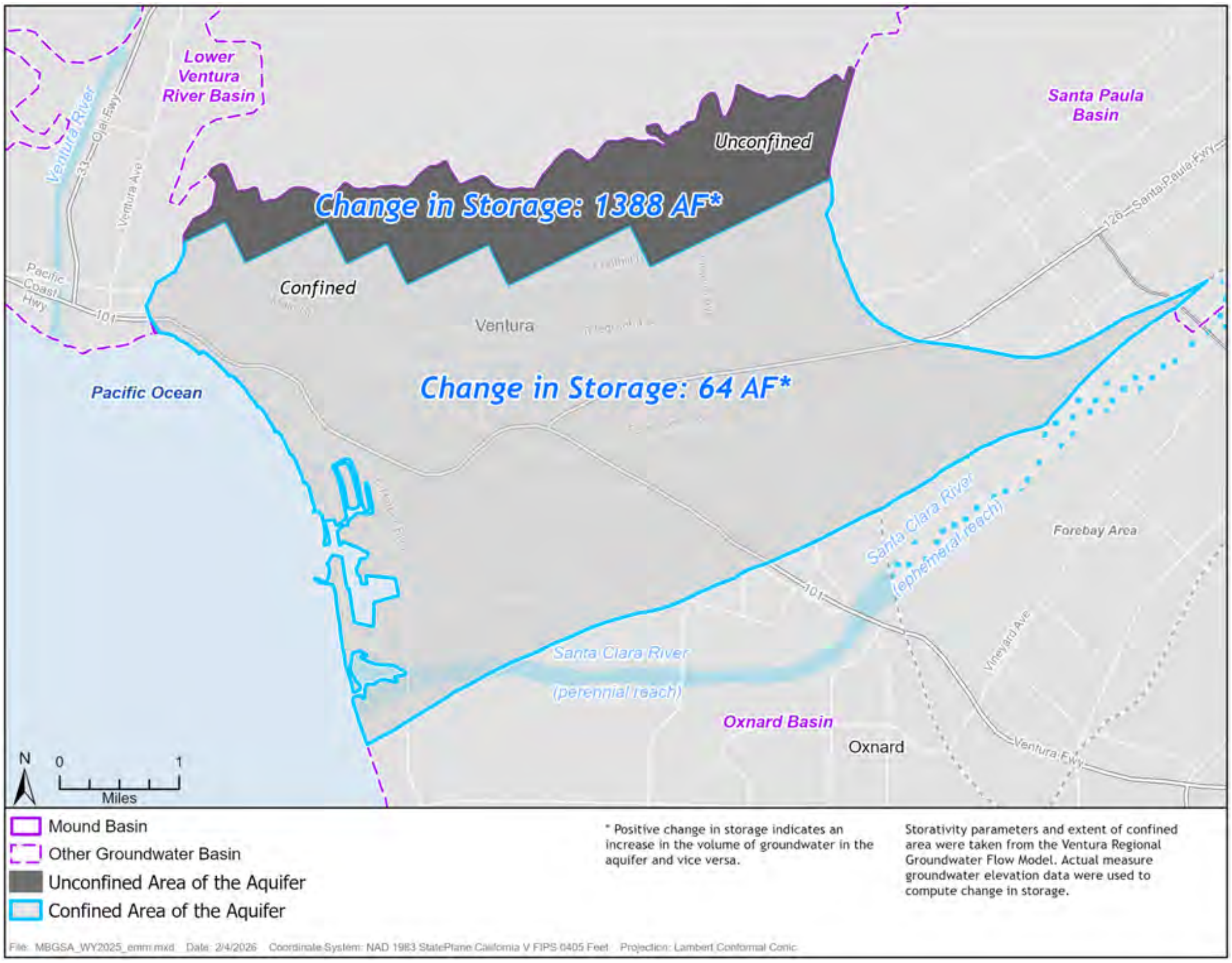


Figure 2.26 Change in Groundwater in Storage for Hueneme Aquifer, Water Year 2025

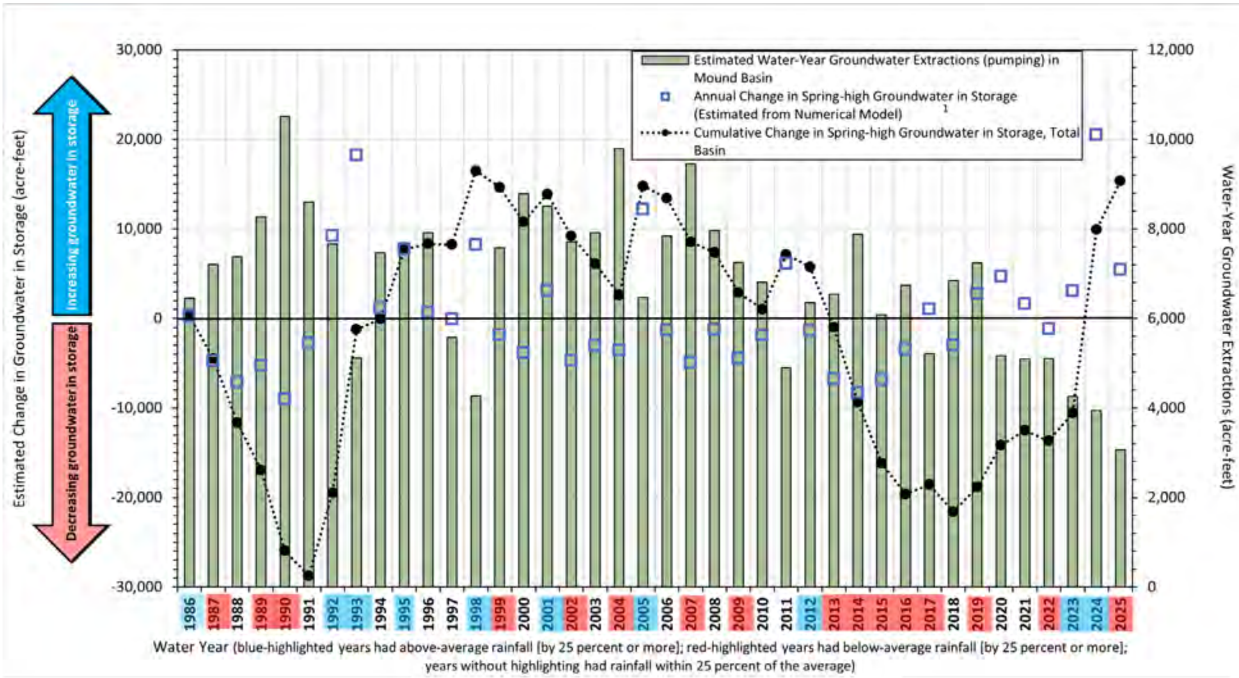


Figure 2.27 Change in Storage for Mound Basin

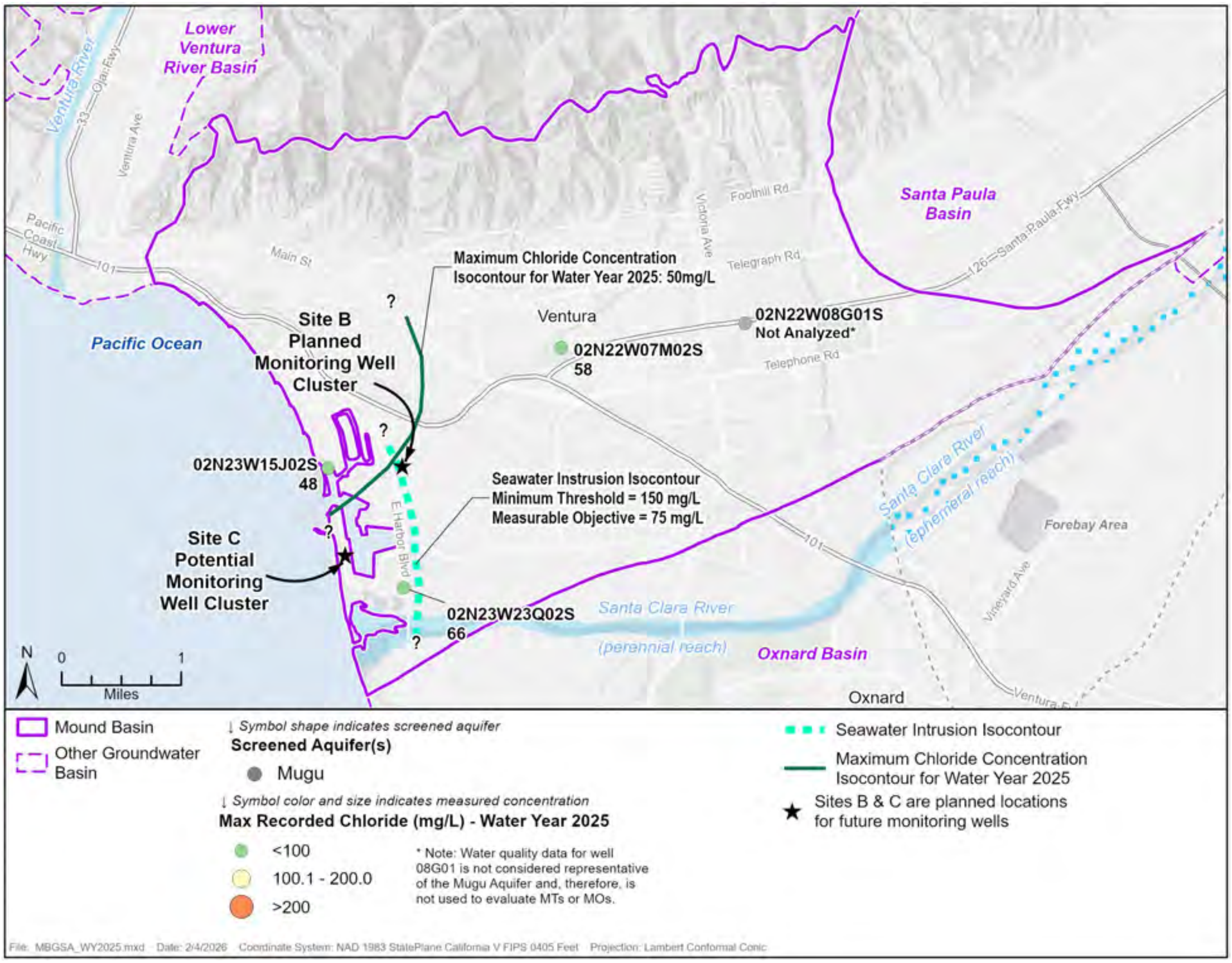


Figure 3.1 Map Showing Seawater Intrusion Minimum Threshold and Measurable Objective, Mugu Aquifer

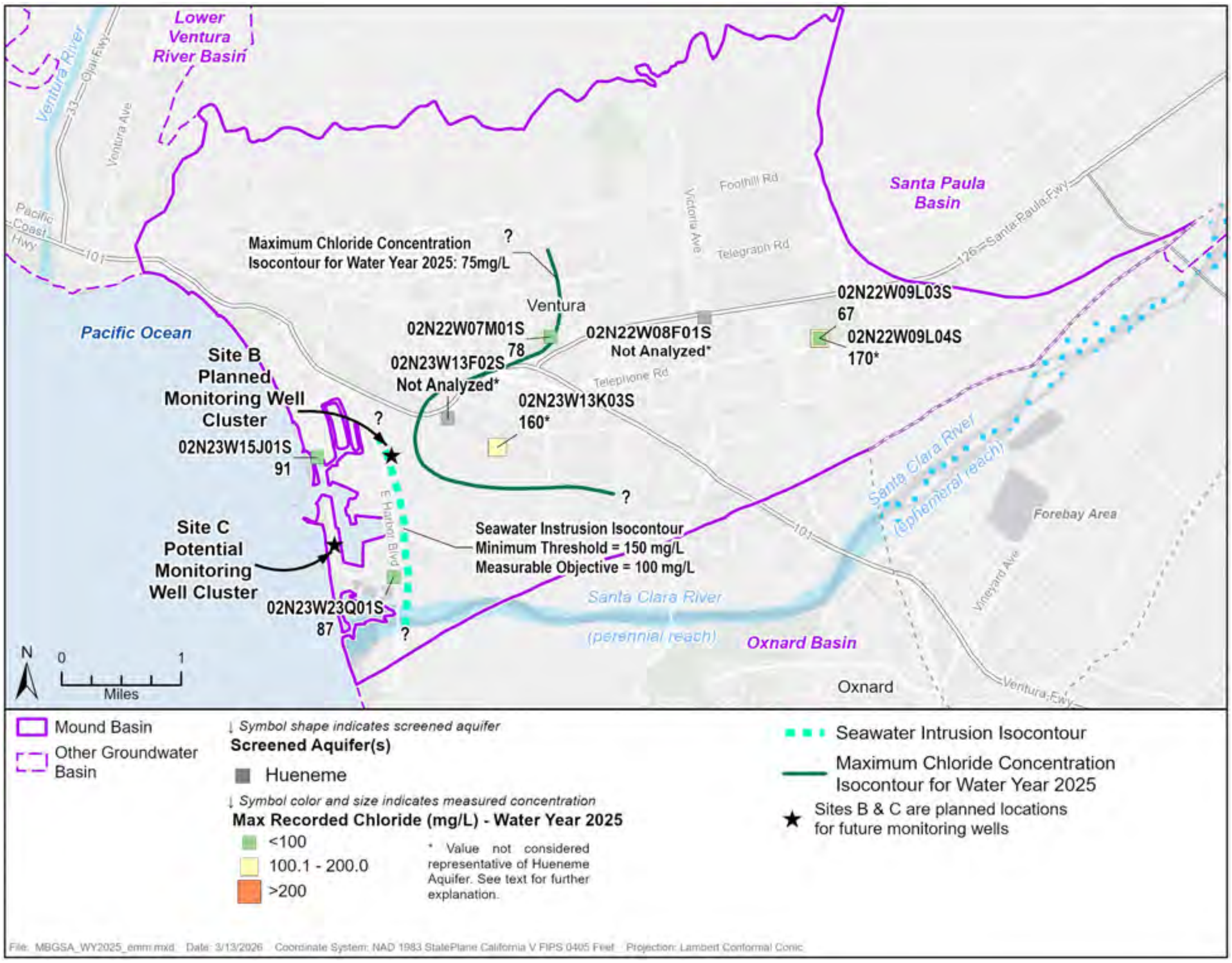


Figure 3.2 Map Showing Seawater Intrusion Minimum Threshold and Measurable Objective, Hueneme Aquifer

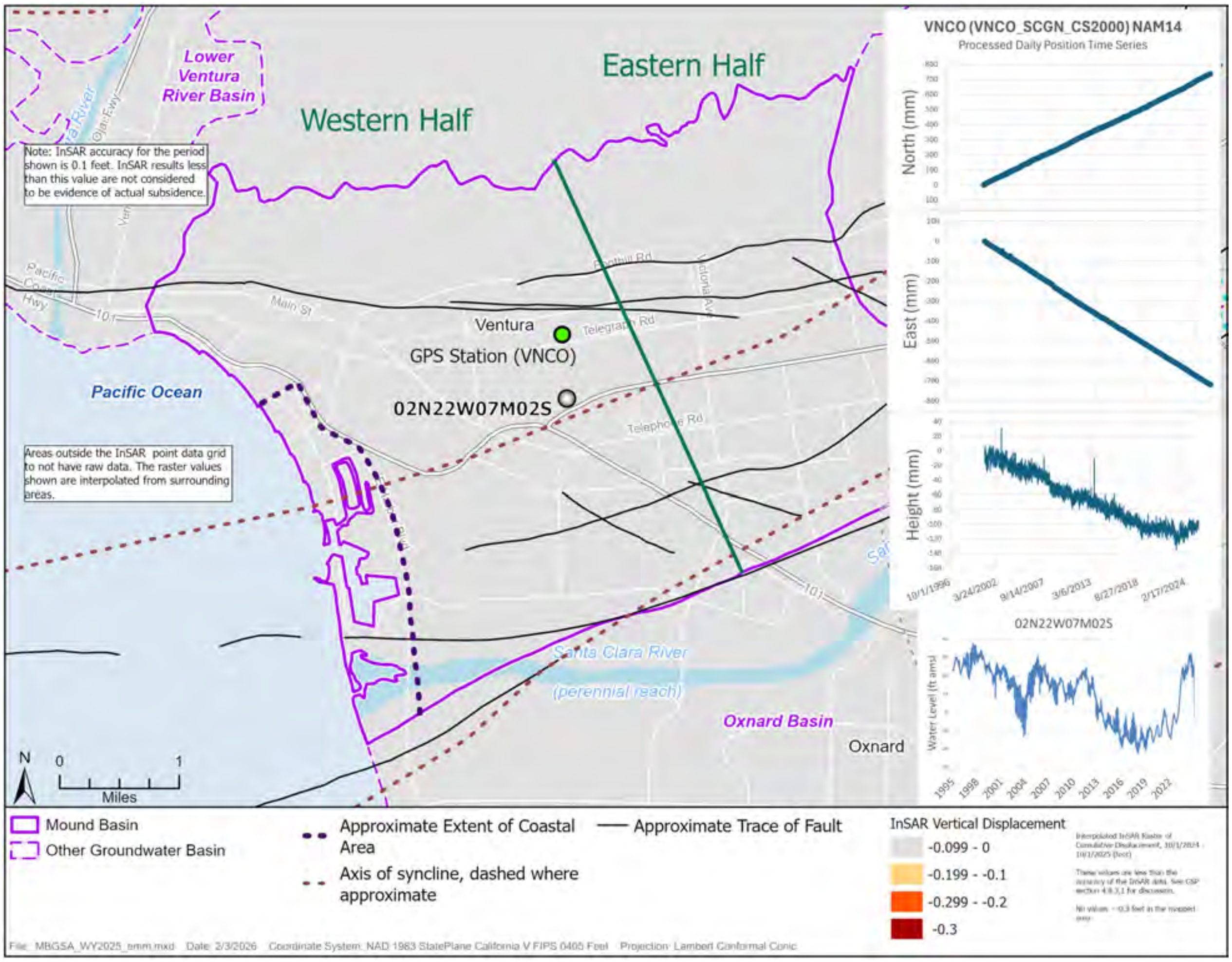


Figure 3.3 **Subsidence Map for Mound Basin Between Water Years 2024 and 2025**

Tables

Table 2.1 Groundwater Extraction by Water Use Sector for Water Year 2025

Water Use Sector	2025 AF/yr	Method of Measurement	Accuracy of Measurement
Agricultural	2,162	Direct and Estimated[a]	Medium
Municipal and Industrial	906	Direct and Estimated[b]	High
Native Vegetation[c]	691	Estimated[b]	Medium
TOTAL	**3,759**		
Total estimated from GSP	8,737		

Notes:

- Totals may not match sum of values due to rounding

[a] Water year volumes estimated based on precipitation, see text Section 2.4

[b] Water year volumes for 2 non-city wells estimated based on precipitation, see text Section 2.4

[c] Note the extraction due to native vegetation includes the invasive species Arundo.

[d] Based on numerical model results for the baseline simulation, see text Section 2.4 and GSP (MGBSA, 2021)

Table 2.2 Total Water Use Within Mound Basin During Water Year 2025

Water Year 2025								
Water Use Sector	Water Source Type					Total	Method of Measurement	Accuracy of Measurement
	Groundwater Extraction	Imported Groundwater from Upper Ventura River Basin[a]	Imported Groundwater from Oxnard Basin[b]	Imported Groundwater from Santa Paula Basin[b]	Imported Surface Water (Casitas MWD)[a]			
Agricultural	2,162	0	133[c]	1,067[c]	0	3,362	Direct and Estimated[d]	Medium
Municipal and Industrial	906	898	5,589	0	898	8,292	Direct and Estimated[d,e]	High
Native Vegetation[f]	691	0	0	0	0	691	Estimated[g]	Medium
TOTALS	3,759	898	5,722	1,067	898	**12,345**		

Notes:

- Totals may not match sum of values due to rounding

[a] M&I supplies from Upper Ventura River Basin and Casitas MWD are assumed to be split 50%-50% for use within Mound Basin (see text in Section 2.6).

[b] M&I groundwater imports from Santa Paula Basin are assumed to be unused in Mound Basin (see Section 3.1.1.3 in GSP; MBGSA, 2021).

[c] Groundwater imported by FICO and Alta MWC, see Section 3.1.1.3 in GSP.

[d] Water year volumes for extraction wells estimated based on precipitation, see text in Section 2.4.

[e] Imported M&I volumes are metered, and total use is based on the fraction of Mound Basin within Ventura Water service area (see text in Section 2.6)

[f] Based on numerical model results for similar water year types. Note the extraction due to native vegetation includes the invasive species Arundo.

[g] Based on numerical model results for the baseline simulation, see text in Section 2.4 and GSP (MGBSA, 2021).

Table 3.1 Sustainable Management Criteria for the Chronic Lowering of Groundwater Levels and Land Subsidence Sustainability Indicators

State Well Identification	Aquifers	Frequency of Groundwater Elevation Measurement	Basin Half	Land Subsidence MT	Land Subsidence MO	Chronic Lowering of GW Levels MT	Chronic Lowering of GW Levels MO	IM 5-year	IM 10-year	IM 15-year	IM 20-year	Water Year 2025 WL Minimum	Subsidence Sustainability Indicator - Water Year 2025
Number	Monitored	2015-2020		(ft amsl)								(ft amsl)	
02N22W08G01S	Mugu	Monthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-20.39	5.21	-14	-7.59	-1.19	5.21	26.81	<0.1 ft/yr*
02N22W08P01S	Mugu	Quarterly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-16.11	7.93	-10.1	-4.09	1.92	7.93	Well Destroyed	
02N22W07M02S	Mugu	Monthly	Western	-19.77	1	-19.77	1	-14.6	-9.38	-4.19	1	20.80	20.80
02N22W07P01S	Mugu	Monthly	Western	-21	0.88	-21	0.88	-15.5	-10.1	-4.59	0.88	No Measurement	
02N22W19M04S	Mugu	Bimonthly	Western	-64.19	-43.98	-64.19	-43.98	-59.1	-54.1	-49	-44	13.74	13.74
02N23W15J02S	Mugu	Monthly	Western	-18.64	-0.96	-18.64	-0.96	-14.2	-9.8	-5.38	-0.96	11.96	11.96
02N22W09K04S	Hueneme	Monthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-32.41	-10.31	-26.9	-21.4	-15.8	-10.3	36.92	<0.1 ft/yr*
02N22W09L03S	Hueneme	Monthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	28.27	50.37	33.8	39.32	44.85	50.37	56.10	<0.1 ft/yr*
02N22W09L04S	Hueneme	Monthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	42.28	64.39	47.81	53.34	58.86	64.39	79.29	<0.1 ft/yr*
02N22W10N03S	Hueneme	Bimonthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-38.2	-15.4	-32.5	-26.8	-21.1	-15.4	20.29	<0.1 ft/yr*
02N22W16K01S	Hueneme	Quarterly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-56.09	-33.73	-50.5	-44.9	-39.3	-33.7	40.77	<0.1 ft/yr*
02N22W17Q05S	Hueneme	Bimonthly	Eastern	≥ 0.1 ft/yr*	≥ 0.1 ft/yr*	-66.73	-45.48	-61.4	-56.1	-50.8	-45.5	19.69	<0.1 ft/yr*
02N22W07M01S	Hueneme	Monthly	Western	-25.21	-4.59	-25.21	-4.59	-20.1	-14.9	-9.75	-4.59	21.64	5.86
02N22W17M02S	Hueneme	Bimonthly	Western	-18.76	2.51	-18.76	2.51	-13.4	-8.12	-2.81	2.51	27.26	23.39
02N22W20E01S	Hueneme	Monthly	Western	-72.79	-51.82	-72.79	-51.82	-67.6	-62.3	-57.1	-51.8	23.57	20.30
02N23W13K03S	Hueneme	Quarterly	Western	-34.23	-14.44	-34.23	-14.44	-29.3	-24.3	-19.4	-14.4	13.41	13.41
02N23W13K04S	Hueneme	Quarterly	Western	-25.6	-5.81	-25.6	-5.81	-20.7	-15.7	-10.8	-5.81	10.37	10.37
02N23W15J01S	Hueneme	Monthly	Western	-25.86	-7.3	-25.86	-7.3	-21.2	-16.6	-11.9	-7.3	11.96	11.96
02N23W24G01S	Hueneme	Quarterly	Western	-22.3	-3.21	-22.3	-3.21	-17.5	-12.8	-7.98	-3.21	16.69	16.69

Notes:

MT/MO based on land subsidence measurements in the Eastern Half of the Basin

* INSAR land surface elevation accuracy threshold is 0.1 ft/yr

Color Key:

MO met	5-yr IM met	Between MT and IM	MT exceeded

Table 3.2 Sustainable Management Criteria for the Reduction of Groundwater Storage Sustainability Indicator

Water Year	Groundwater Extractions	Minimum Threshold	Measurable Objective
	AF/yr	AF/yr	AF/yr
2025	3,068	8,200	7,400

Color Key:

MO met

MT exceeded

Table 3.3 Sustainable Management Criteria for the Degraded Water Quality Sustainability Indicator

State Well Identification Number	Local Well Identifier	Aquifers Monitored	Frequency of Groundwater Quality Sampling	Measurement or Sampling	Degraded WQ Nitrate		Degraded WQ TDS		Degraded WQ Sulfate		Degraded WQ Chloride		Degraded WQ Boron	
					MT	MO/ IM[1,2]	MT	MO/ IM[1,2]	MT	MO/ IM[1,2]	MT	MO/ IM[1,2]	MT	MO/ IM[1,2]
02N22W08G01S	**Mound #1**	**Mugu**	**Monthly**	**City of Ventura**	**Not used - water quality is anomalous**									
02N22W07M02S	CP-780	Mugu	Semiannually	United	45	5	1,200	1,000	600	500	150	75	1	0.75
Average observed concentration for water year 2025					<0.4		900		324		57		0.5	
Two-year running average observed concentration for water years 2024-2025					<0.4		883		314		55		0.5	
02N23W15J02S	MP-660	Mugu	Semiannually	United	45	5	1,200	1,000	600	500	150	75	1	0.75
Average observed concentration for water year 2025					<0.4		930		377		47.5		0.5	
Two-year running average observed concentration for water years 2024-2025					<0.4		937		381		47		0.5	
02N23W23Q02S		Mugu	Semiannually	United	45	5	1,200	1,000	600	500	150	75	1	0.75
Average observed concentration for water year 2025					<0.4		1,150		501		66		0.5	
Two-year running average observed concentration for water years 2024-2025					<0.4		1,157		495		64		0.5	
02N22W08F01S	**Victoria #2**	**Hueneme**	**Monthly**	**City of Ventura**	**Not used - water quality is anomalous**									
02N22W09L03S	CWP-950	Hueneme	Semiannually	United	45	5	1400	1400	600	600	150	100	1	0.75
Average observed concentration for water year 2025					<0.4		1,035		461		66.5		0.5	
Two-year running average observed concentration for water years 2024-2025					<0.4		1,052		456		66.5		0.5	
02N22W09L04S	**CWP-510**	**Hueneme**	**Semiannually**	**United**	**Not used - water quality is anomalous**									
02N23W13F02S	---	Hueneme	Annually	United	**Not measured in WY2025**									
02N22W07M01S	CP-1280	Hueneme	Semiannually	United	45	5	1,400	1,400	600	600	150	100	1	0.75
Average observed concentration for water year 2025					<0.4		1,080		426		78		0.7	
Two-year running average observed concentration for water years 2024-2025					<0.4		1,080		422		77		0.65	
02N23W13K03S	**---**	**Hueneme**	**Annually**	**VCWPD**	**Not used - water quality is anomalous**									
02N23W15J01S	MP-1070	Hueneme	Semiannually	United	45	5	1,400	1,400	600	600	150	100	1	0.75
Average observed concentration for water year 2025					<0.4		1,295		544		91		0.6	
Two-year running average observed concentration for water years 2024-2025					<0.4		1,302		548		90		0.7	
02N23W23Q01S	MP-1070	Hueneme	Semiannually	United	45	5	1,400	1,400	600	600	150	100	1	0.75
Average observed concentration for water year 2025					<0.4		1,240		492		87		0.7	
Two-year running average observed concentration for water years 2024-2025					<0.4		1,225		487		86		0.7	

Notes:

MO = Measurable Objective.
IM = Interim Milestone.
MT = Minimum Threshold.
SMC = sustainable management criteria.
WQ = water quality.
NA = Not available.
[1]Sustainability Goal for degraded water quality for a given constituent is considered to be met when the two-year running average concentration for at least one representative monitoring well is below the MO/IM.
[2]The degraded water quality MO and IM are equal and are met when the maximum 2-yr running average across all wells within each principal aquifer is below their respective MO/IM.

Color Key:

MO/IM met[2]
Between MT and MO/IM
MT exceeded

Appendix

Appendix A – Updated Extraction Volume Estimation

Groundwater extraction volumes for the Mound Basin are reported semi-annually (January through June, and July through December). Each Annual Report for the Mound Basin Groundwater Sustainability Agency (MBGSA) reports pumping for the water year (October 1 through September 30), which requires the months of July, August, and September to be estimated due to the water year extending beyond the available semi-annual reporting period. This Appendix documents the updates and comparison to the previous Annual Report water year pumping volume estimates along with the corrected figure and tables. The total monthly extraction estimated for the last 3 months of water year 2024 was approximately 28% more than what was subsequently reported for water year 2025 (Table A-1).

Table A-1. Summary comparison of previously reported and updated groundwater extraction volumes.

Month-Year	2024 Annual Report Originally Estimated Total Extraction (AF)		Updated Volumes Based on Semi-Annually Reported Extraction (AF)		% Difference		Overall Difference
	Total Agricultural	Total M&I	Total Agricultural	Total M&I	Total Agricultural	Total M&I	
Jul-24	297	145	264	18	-11%	-88%	-36%
Aug-24	190	153	259	27	+27%	-82%	-17%
Sep-24	240	171	264	21	+9%	-88%	-31%

Figure A-1 and Tables A-2 through A-4 show the updates to Figure 2.27 and Tables 2.1, 2.2, and 3.2 from the previous water year 2024 Annual Report are provided in this Appendix.

MoundBasin
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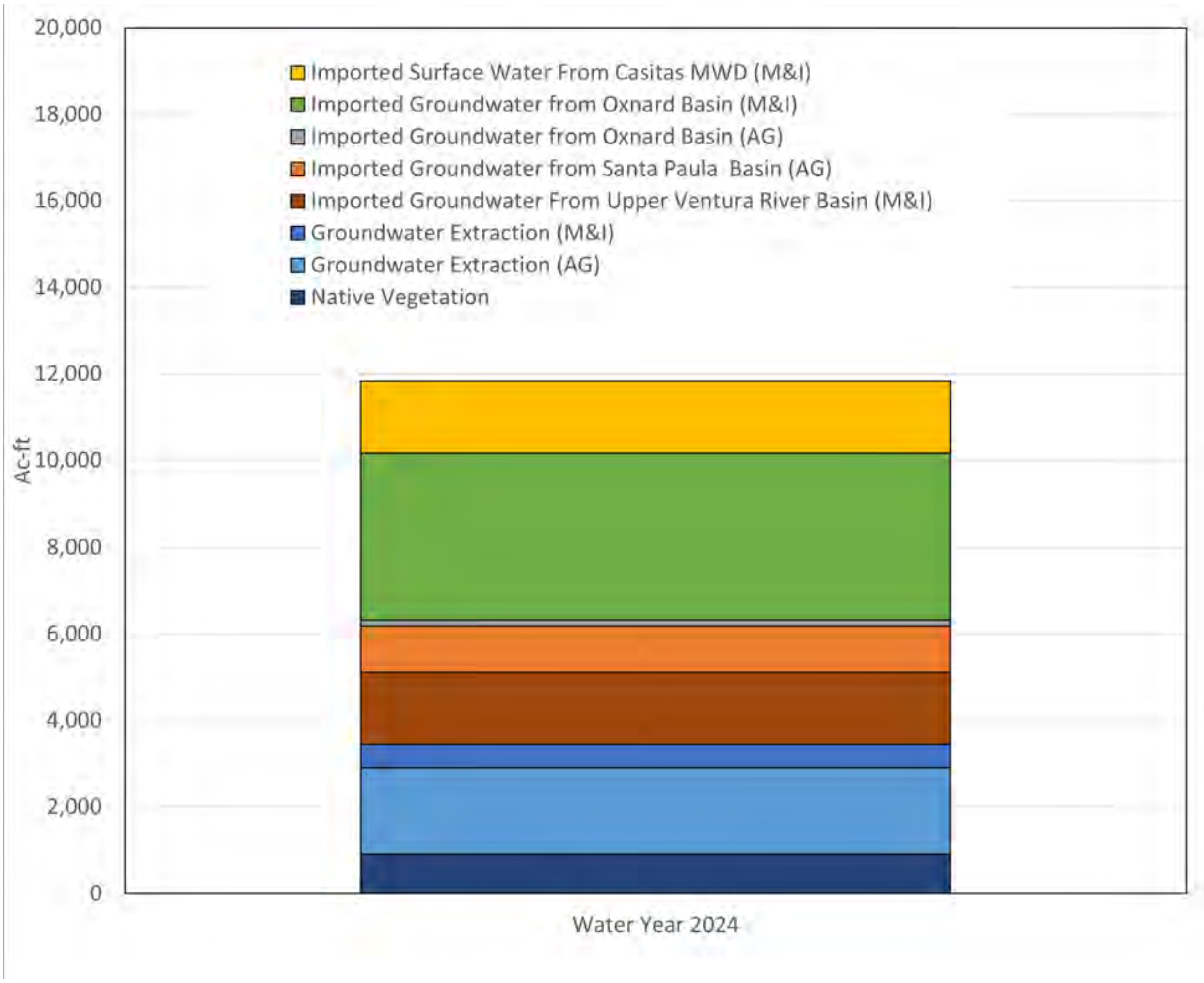

Figure A-1. **Updated Figure 2.27 from the water year 2024 MBGSA Annual Report. Groundwater Extraction (M&I and AG) for Water Year 2024 have been updated.**

Table A-2. Updated Table 2.1 from the water year 2024 MBGSA Annual Report. Previous values are shown as strikethrough text.

Table 2.1 Groundwater Extraction by Water Use Sector for Water Year 2024.

Water Use Sector	Water Year 2024 AF/yr	Method of Measurement	Accuracy of Measurement
Agricultural	~~1,998~~ 2,058	Direct and Estimated[a]	Medium
Municipal and Industrial	~~545~~ 507	Direct & Estimated[b]	High
Native Vegetation[c]	911	Estimated[d]	Medium
Total	**~~3,454~~ 3,476**		

Notes:

- Totals may not match sum of values due to rounding

[a] Water year volumes estimated based on precipitation, see text Section 2.4

[b] Water year volumes for 2 non-city wells estimated based on precipitation, see text Section 2.4

[c] Note the extraction due to native vegetation includes the invasive species Arundo.

[d] Based on numerical model results for the baseline simulation, see text Section 2.4 and GSP (MGBSA, 2021)

Table A-3. Updated Table 2.2 from the water year 2024 MBGSA Annual Report. Previous values are shown as strikethrough text.

Table 2.2 Total Water Use Within Mound Basin During Water Year 2024.

Water Year 2024								
	Water Source Type							
Water Use Sector	Groundwater Extraction	Imported Groundwater from Upper Ventura River Basin[a]	Imported Groundwater from Oxnard Basin[b]	Imported Groundwater from Santa Paula Basin[b]	Imported Surface Water (Casitas MWD)[a]	Total	Method of Measurement	Accuracy of Measurement
Agricultural	~~1,998~~ 2,058	0	133[c]	1,067[c]	0	~~3,198~~ 3,258	Direct and Estimated[d]	Medium
Municipal and Industrial	~~545~~ 507	1,663	3,848	0	1,663	~~7719~~ 7,681	Direct and Estimated[d,e]	High
Native Vegetation[f]	911	0	0	0	0	911	Estimated[g]	Medium
TOTALS	**~~3,454~~ 3,476**	1,663	3,981	1,067	1,663	**~~11,828~~ 11,888**		

NOTES:
- Totals may not match sum of values due to rounding

a M&I supplies from Upper Ventura River Basin and Casitas MWD are assumed to be split 50%-50% for use within Mound Basin (see text Section 2.6).
b See text Section 2.6 for estimation method.
c Groundwater imported by FICO and Alta MWC, see Section 3.1.1.3 in GSP.
d Water year volumes for extraction wells estimated based on precipitation, see text Section 2.4.
e Imported M&I volumes are metered and total use is based on the fraction of Mound Basin within Ventura Water service area (see text Section 2.6)
f Note the extraction due to native vegetation includes the invasive species Arundo.
g Based on numerical model results for the baseline simulation, see text Section 2.4 and GSP (MGBSA, 2021)

Table A-4. Updated Table 3.2 from the water year 2022 MBGSA Annual Report. Previous values are shown as strikethrough text.

Table 3.2 Sustainable Management Criteria for the Reduction of Groundwater Storage Sustainability Indicator

Water Year	Groundwater Extractions	Minimum Threshold	Measurable Objective
	AF/yr	AF/yr	AF/yr
2024	~~2,543~~ 2,565	8,200	7,400

Color Key:

Measurable objective met
Minimum threshold exceeded