CASTAC BASIN
GROUNDWATER SUSTAINABILITY AGENCY
TECHNICAL UPDATE

BOARD OF DIRECTORS MEETING
30 MARCH 2026

eki environment & water

Agenda

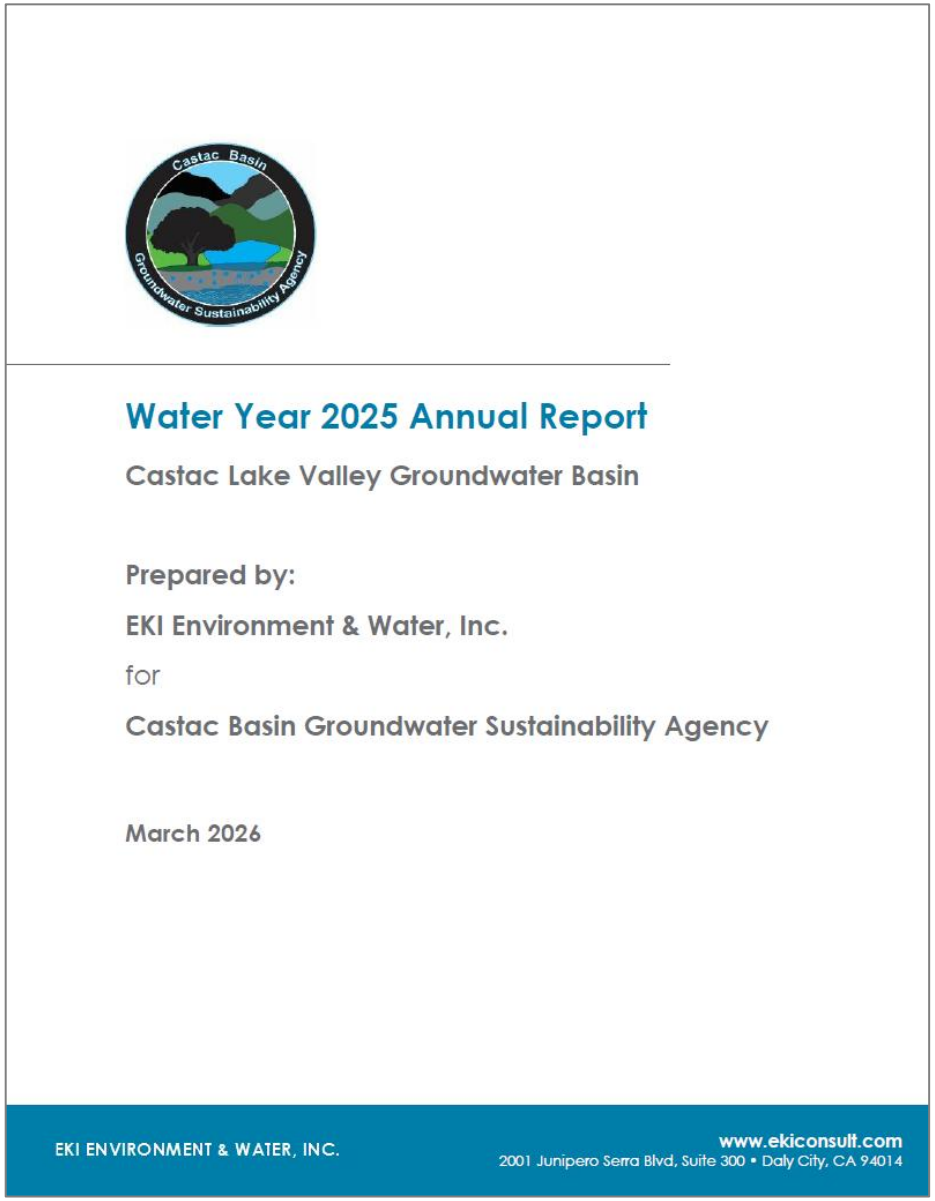
- DRAFT Water Year (WY) 2025 Annual Report and Basin Hydrologic Status
- Proposed GSP Amendments Summary Tables in Annual Report
- Potential Task Orders for 2026

DRAFT WY 2025 Annual Report

- 6th Annual Report of the Basin
- Covers 1 October 2024 through 30 September 2025
- SGMA requires report submittal to DWR by 1 April 2026
- Includes descriptions of GSP Amendments in response to DWR review; Amended GSP will be finalized and submitted to DWR after public review

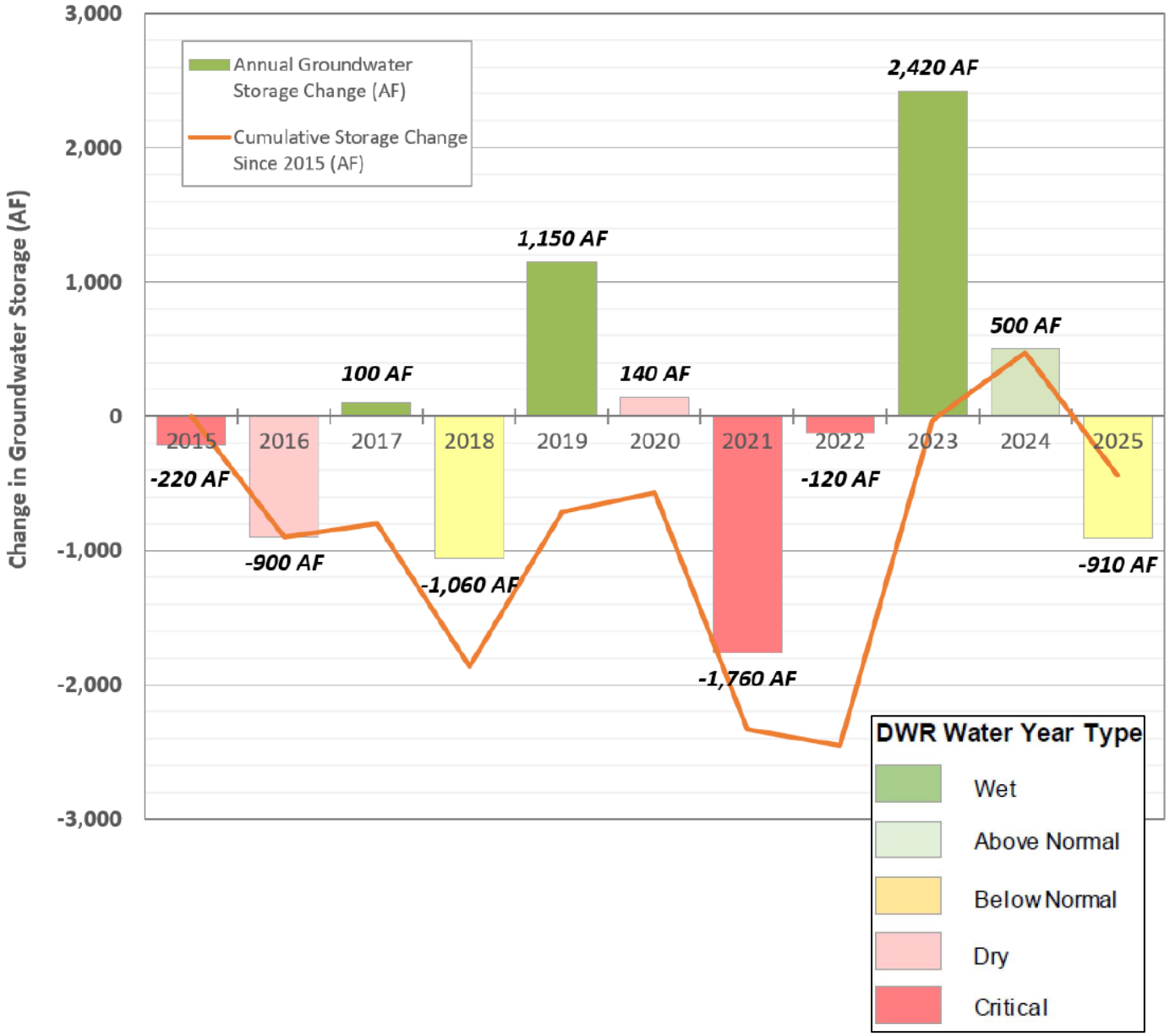
Key WY 2025 Points:

- Net decrease in Basin storage
- Varying water level trends



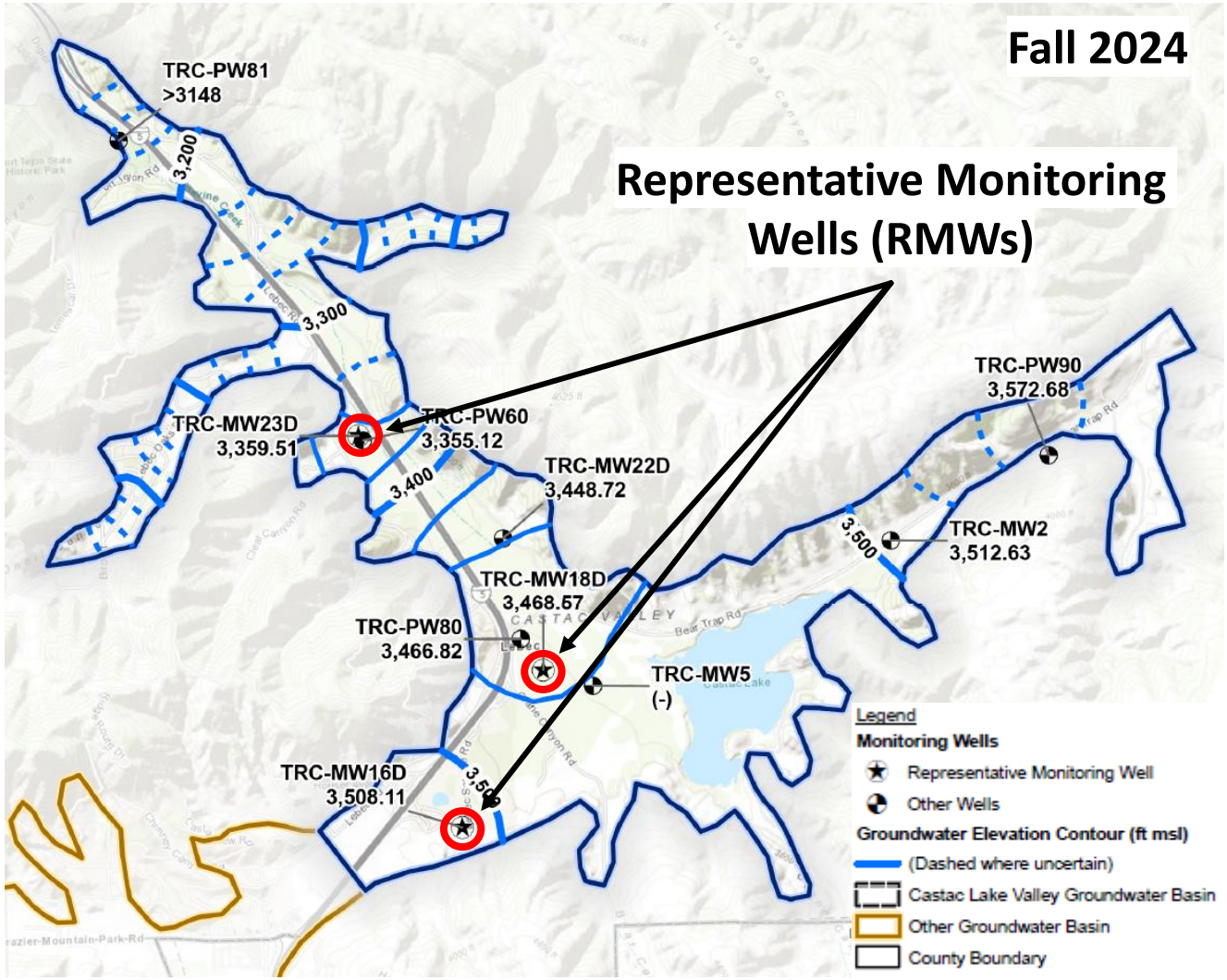
Basin Hydrologic Status

- Water Year 2025 precipitation conditions classified as “Below Normal” by DWR
- Representative Monitoring Well (RMW) water levels increasing in upper Basin, but decreasing toward the lower Grapevine Canyon area
- Cumulative effect is a decrease in basin storage by an estimated 910 AF.
- Castac Groundwater Flow Model was updated through WY 2025
- Includes corrections to past years’ surface water recharge calculations, which altered some previous storage change values (especially for wetter years)



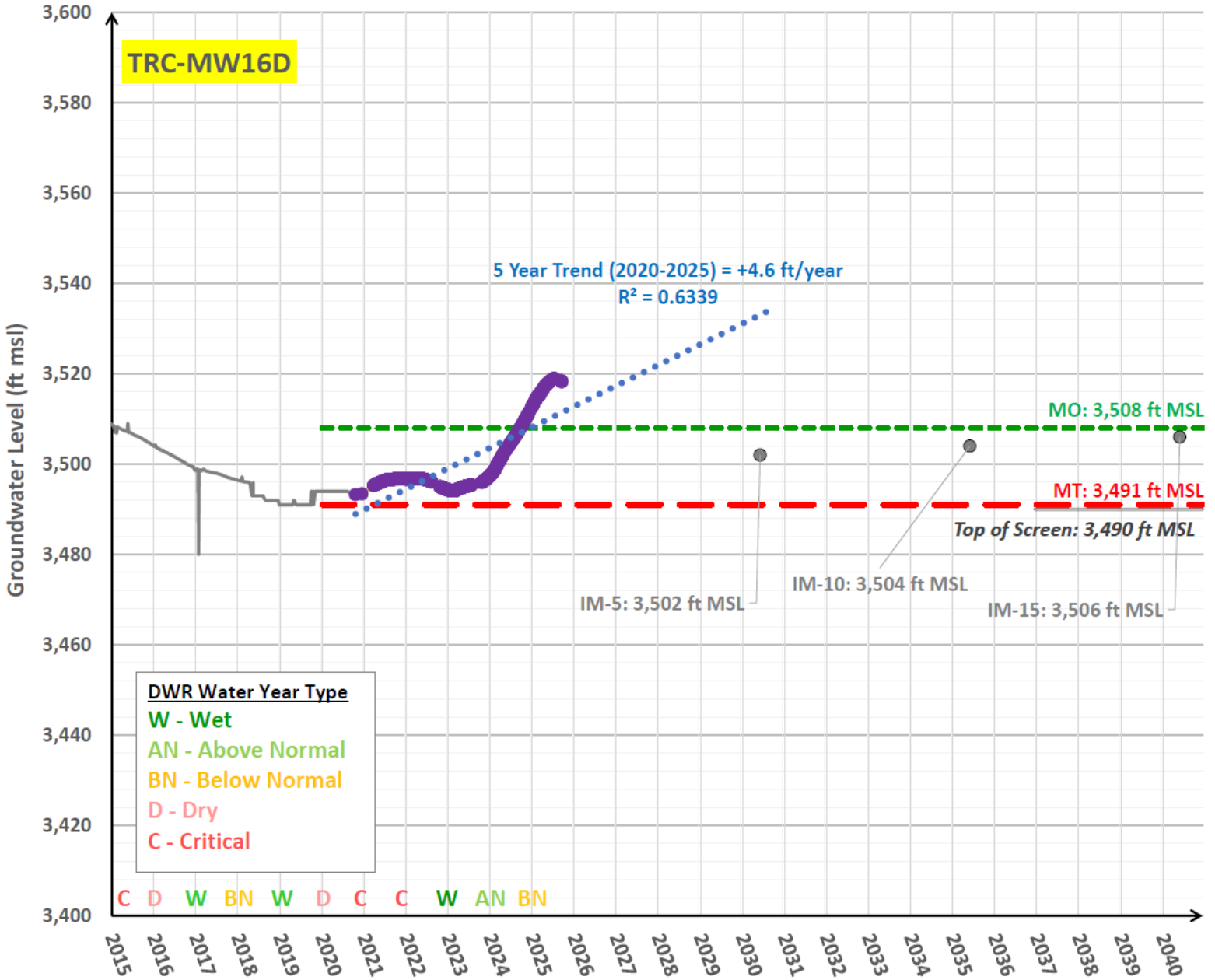
Groundwater Elevation Contours

- Water levels in all three Representative Monitoring Wells (RMWs) were above the new Minimum Thresholds (MTs), as revised in the 2025 Amended GSP (to be submitted shortly after Annual Report).
- Groundwater elevations varied moderately from the dry to wet seasons in WY 2025 (+4.2 to +9.3 feet), more than previous water year (+0.2 to +3.6 feet).
- Annual changes from WY 2024 to WY 2025 (in dry season) ranged from -1.3 to +12.2 feet.



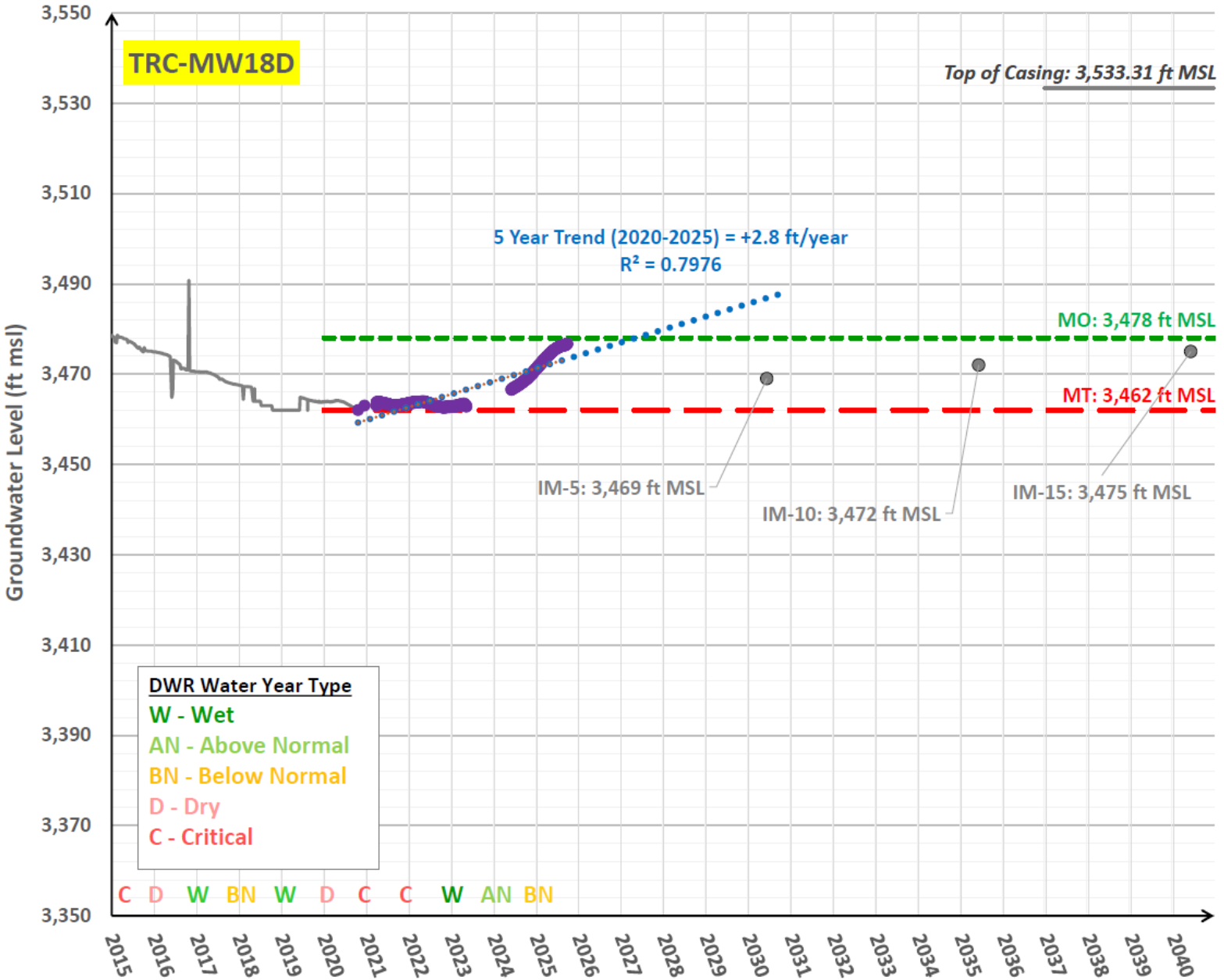
Upper Basin (TRC-MW16D)

- Water levels remain above the MT and increased above the MO in WY 2025
- Significant positive 5-year trend (+4.6 ft/year)
- Fall year-over-year change is significantly increased (+12.2 ft); but is a lagging indicator (Fall 2024)
- WY 2025 seasonal change is increasing (+7.04 ft)



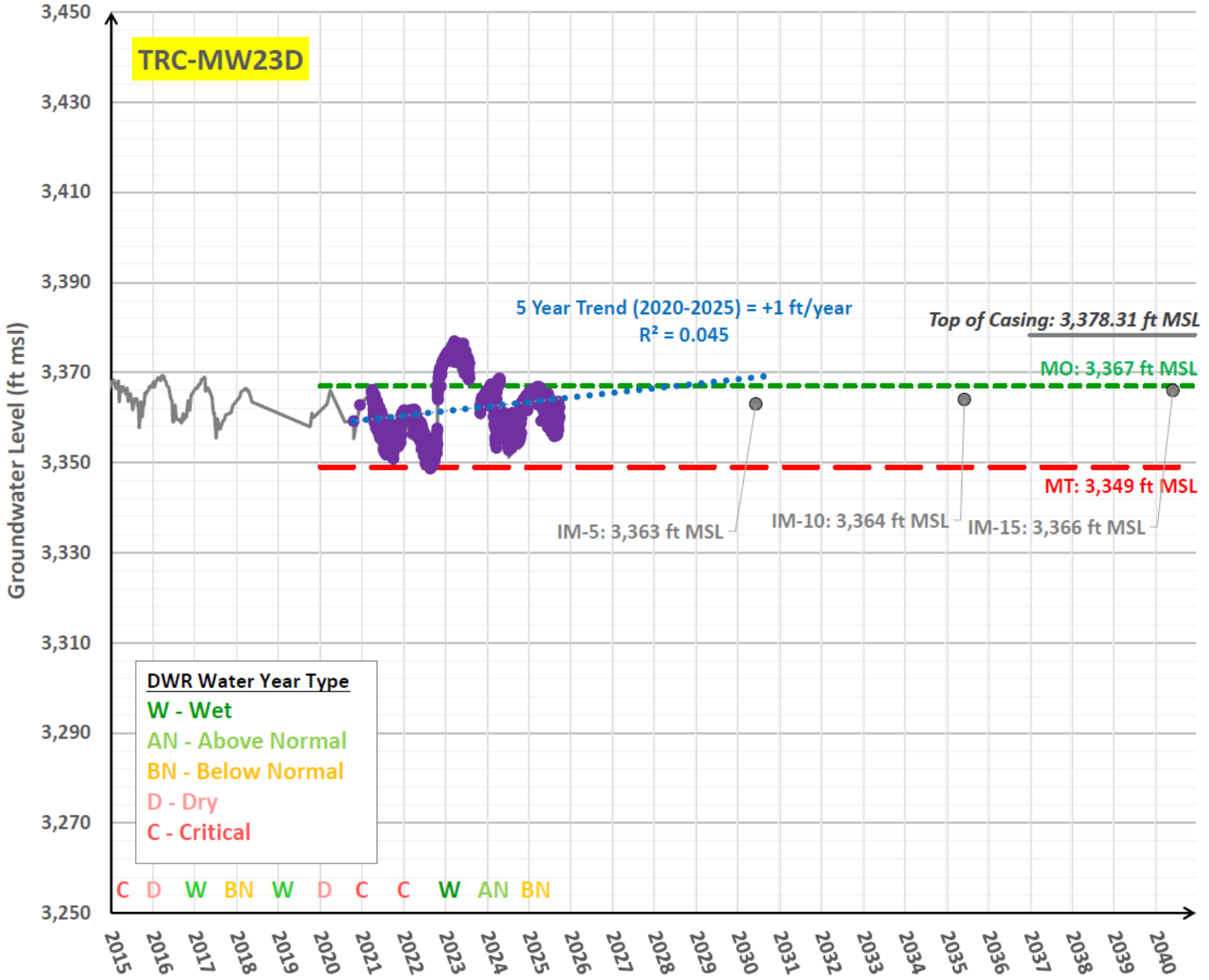
Middle Basin (TRC-MW18D)

- Water levels remain above the MT and increased nearly to MO in WY 2025
- Moderately high positive 5-year trend (+2.8 ft/year)
- Fall year-over-year change is up (+5.2 ft); but is a lagging indicator (Fall 2024)
- WY 2025 seasonal change is increasing (+4.2 ft)



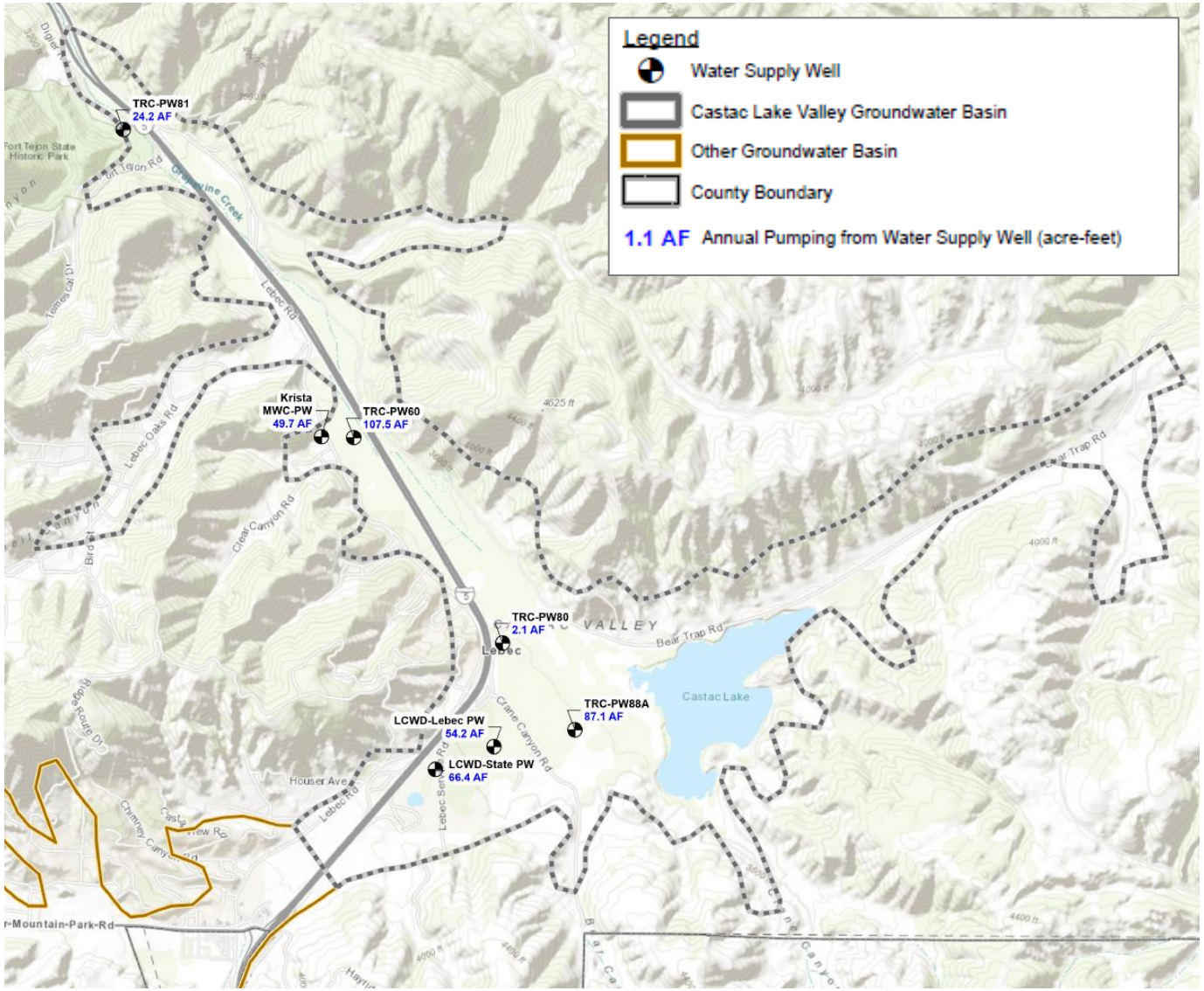
Lower Basin (TRC-MW23D)

- Water levels remain above the MT, but seasonally fluctuate around the MO
- Moderate positive 5-year trend (+1 ft/year)
- Fall year-over-year change is a small decrease (-1.3 ft); but data are variable, and this may not be reliable
- WY 2025 seasonal change is greatly increasing (+9.3 ft)



Groundwater Pumping and Total Water Use

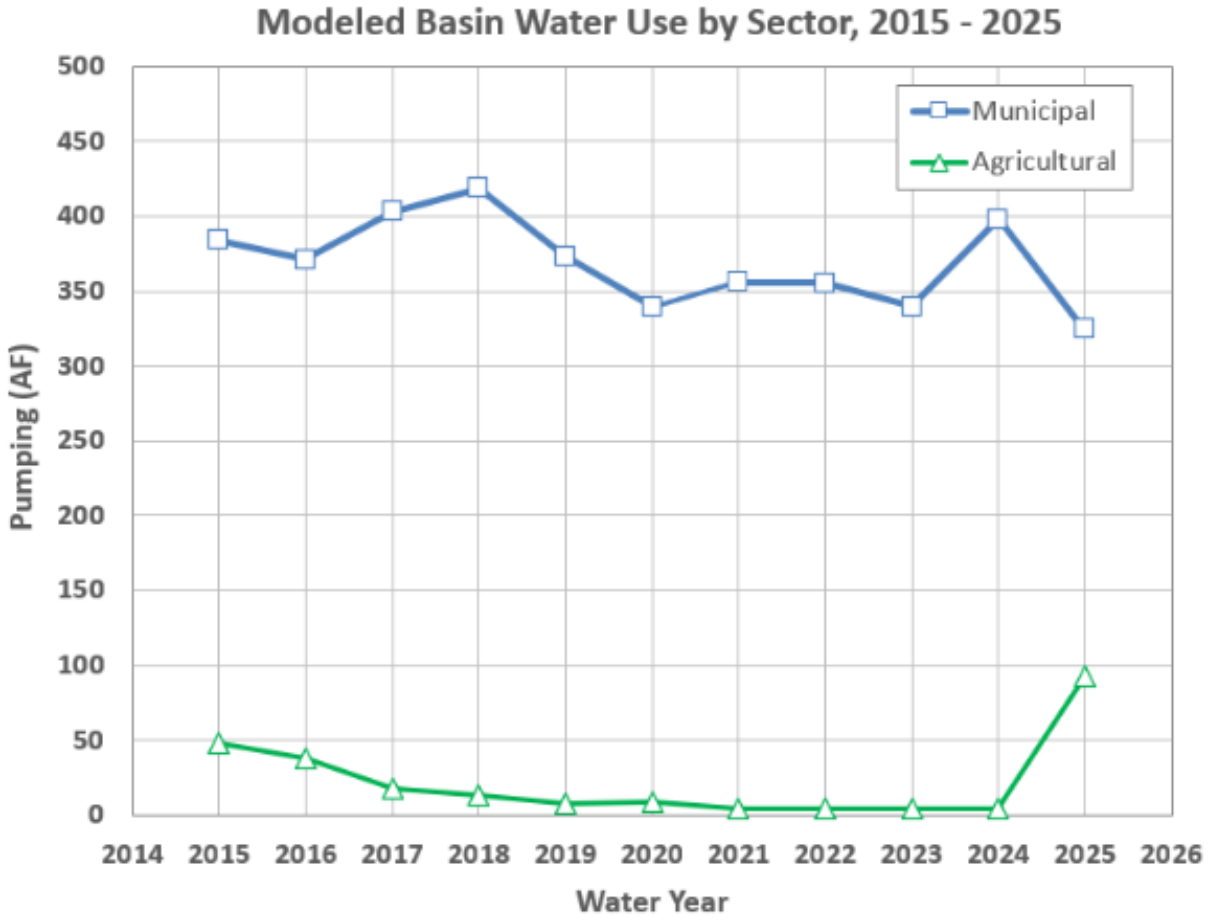
- WY 2025 total estimated pumping: **418 acre-feet (AF)***.
- Reported pumping of 391 AF is 13 AF (4%) more than reported pumping in WY 2024.
- Attributable to significant increase in agricultural pumping from ag well TRC-PW88A.
- Minor decreases in pumping across all reported municipal wells.
- Well-by-well reported pumping shown on Figure 7 of Annual Report.

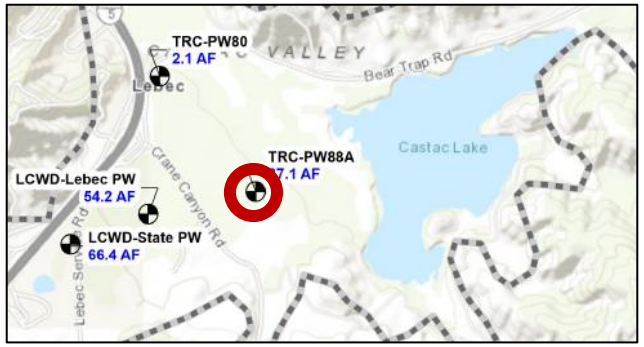


*Includes 27 AF estimated pumping from Tejon Middle School and Fort Tejon State Historical Park.

Groundwater Pumping and Total Water Use

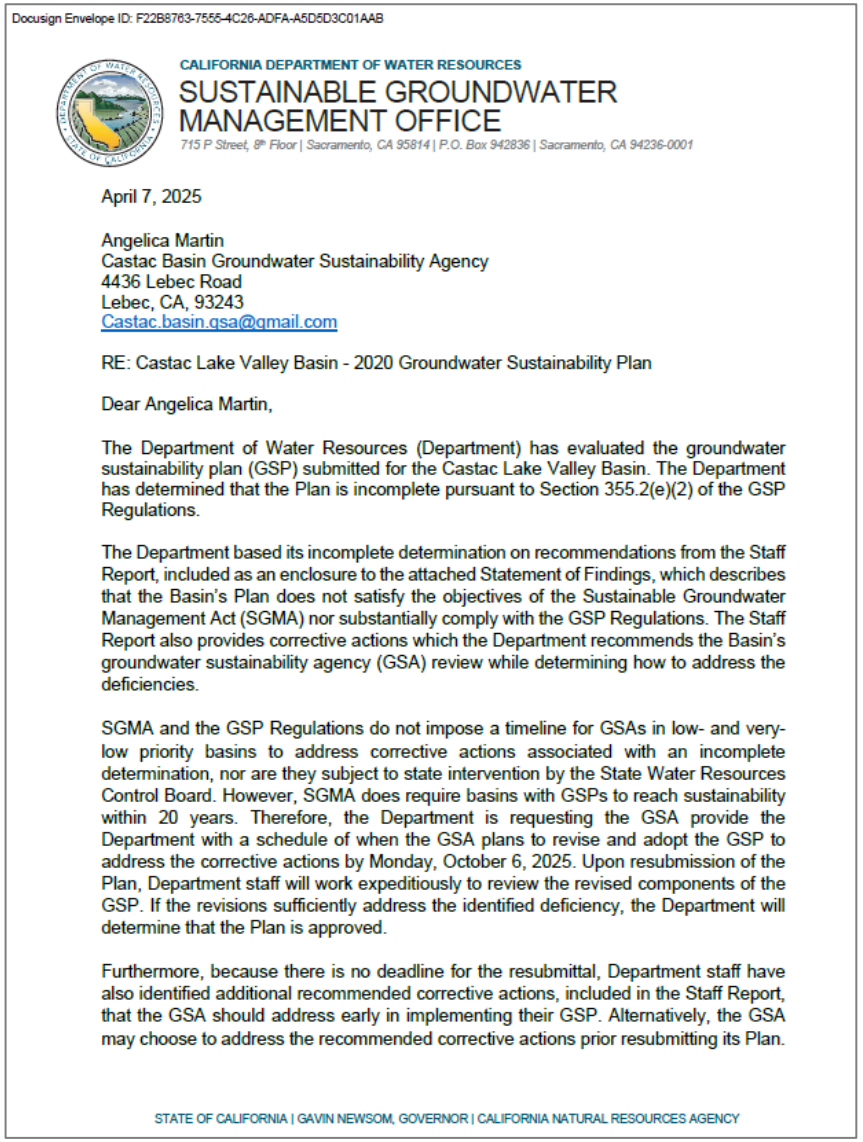
- Municipal use decreased
- 78% of pumping was for municipal use (declined from 99% in WY 2024)
- Ag pumping in TRC-PW88A increased +88 AF over 3 months:
  - July 2025: 11.6 AF
  - Aug 2025: 39 AF
  - Sept 2025: 36.4 AF
- High TRC-PW88A pumping attributed to livestock watering and dust control during those months.





Amended Groundwater Sustainability Plan (GSP)

- DWR determined the 2020 Castac Basin GSP is incomplete and included both **required** (for approval) and **recommended** modifications.
- DWR classifies Castac as a **Very Low Priority Basin.**
- "SGMA and the GSP Regulations **do not impose a timeline** for GSAs in low and very low priority basins to address corrective actions associated with an incomplete determination"… "**Nor are they subject to state intervention** by the State Water Resources Control Board."
- Videoconference discussions with Monica Salais & Roy Hull of DWR on 26 Jun 2025 and 18 Sep 2025 to explain proposed responses; DWR expressed no objections to proposed actions.
- Castac GSA Ad-Hoc Technical Review Committee had no edits or changes to Draft Amended GSP.



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CALIFORNIA DEPARTMENT OF WATER RESOURCES
SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE
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April 7, 2025

Angelica Martin
Castac Basin Groundwater Sustainability Agency
4436 Lebec Road
Lebec, CA, 93243
Castac.basin.gsa@gmail.com

RE: Castac Lake Valley Basin - 2020 Groundwater Sustainability Plan

Dear Angelica Martin,

The Department of Water Resources (Department) has evaluated the groundwater sustainability plan (GSP) submitted for the Castac Lake Valley Basin. The Department has determined that the Plan is incomplete pursuant to Section 355.2(e)(2) of the GSP Regulations.

The Department based its incomplete determination on recommendations from the Staff Report, included as an enclosure to the attached Statement of Findings, which describes that the Basin's Plan does not satisfy the objectives of the Sustainable Groundwater Management Act (SGMA) nor substantially comply with the GSP Regulations. The Staff Report also provides corrective actions which the Department recommends the Basin's groundwater sustainability agency (GSA) review while determining how to address the deficiencies.

SGMA and the GSP Regulations do not impose a timeline for GSAs in low- and very-low priority basins to address corrective actions associated with an incomplete determination, nor are they subject to state intervention by the State Water Resources Control Board. However, SGMA does require basins with GSPs to reach sustainability within 20 years. Therefore, the Department is requesting the GSA provide the Department with a schedule of when the GSA plans to revise and adopt the GSP to address the corrective actions by Monday, October 6, 2025. Upon resubmission of the Plan, Department staff will work expeditiously to review the revised components of the GSP. If the revisions sufficiently address the identified deficiency, the Department will determine that the Plan is approved.

Furthermore, because there is no deadline for the resubmittal, Department staff have also identified additional recommended corrective actions, included in the Staff Report, that the GSA should address early in implementing their GSP. Alternatively, the GSA may choose to address the recommended corrective actions prior resubmitting its Plan.

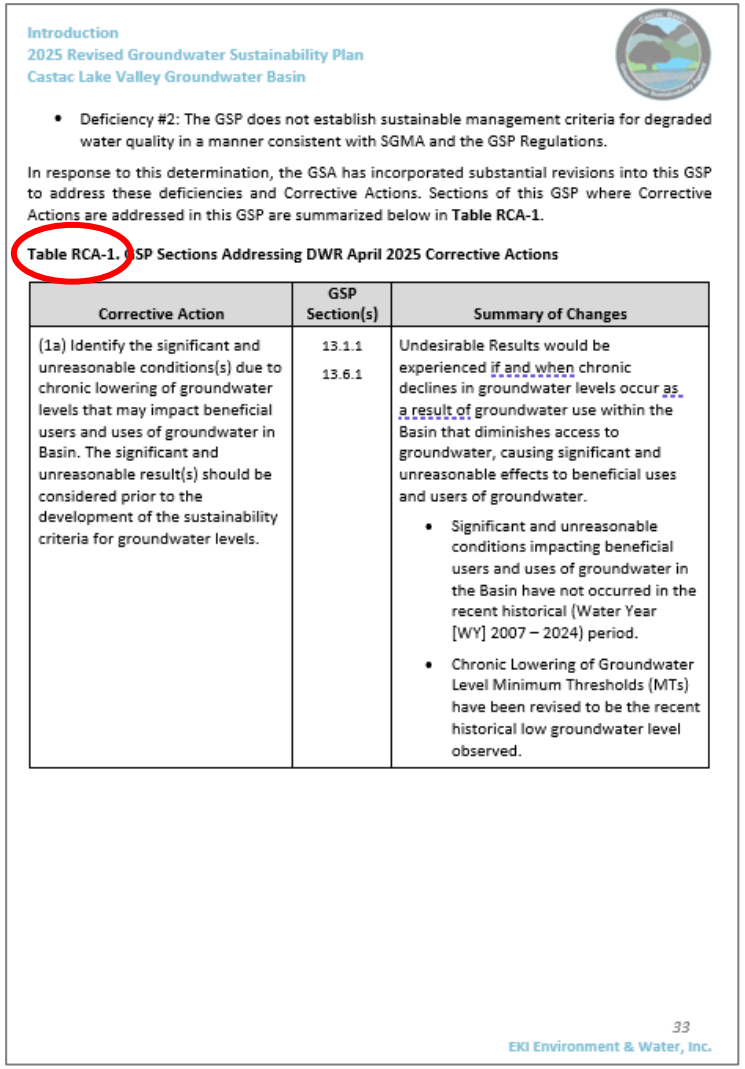
STATE OF CALIFORNIA | GAVIN NEWSOM, GOVERNOR | CALIFORNIA NATURAL RESOURCES AGENCY

Summary of Amendments for GSP Approval

Tables from GSP are included in the WY 2025 Annual Report:

- Table **RCA-1** (p. 33) summarizes how the revised GSP addresses DWR's Required Corrective Actions
- Table **RCA-2** (p. 37) summarizes how the revised GSP addresses DWR's *Recommended* Corrective Actions

Note: This is the first formal submittal of the GSP amendments to DWR for their review.



Introduction
2025 Revised Groundwater Sustainability Plan
Castac Lake Valley Groundwater Basin

- Deficiency #2: The GSP does not establish sustainable management criteria for degraded water quality in a manner consistent with SGMA and the GSP Regulations.

In response to this determination, the GSA has incorporated substantial revisions into this GSP to address these deficiencies and Corrective Actions. Sections of this GSP where Corrective Actions are addressed in this GSP are summarized below in **Table RCA-1**.

Table RCA-1. GSP Sections Addressing DWR April 2025 Corrective Actions

Corrective Action	GSP Section(s)	Summary of Changes
(1a) Identify the significant and unreasonable conditions(s) due to chronic lowering of groundwater levels that may impact beneficial users and uses of groundwater in Basin. The significant and unreasonable result(s) should be considered prior to the development of the sustainability criteria for groundwater levels.	13.1.1 13.6.1	Undesirable Results would be experienced if and when chronic declines in groundwater levels occur as a result of groundwater use within the Basin that diminishes access to groundwater, causing significant and unreasonable effects to beneficial uses and users of groundwater. • Significant and unreasonable conditions impacting beneficial users and uses of groundwater in the Basin have not occurred in the recent historical (Water Year [WY] 2007 – 2024) period. • Chronic Lowering of Groundwater Level Minimum Thresholds (MTs) have been revised to be the recent historical low groundwater level observed.

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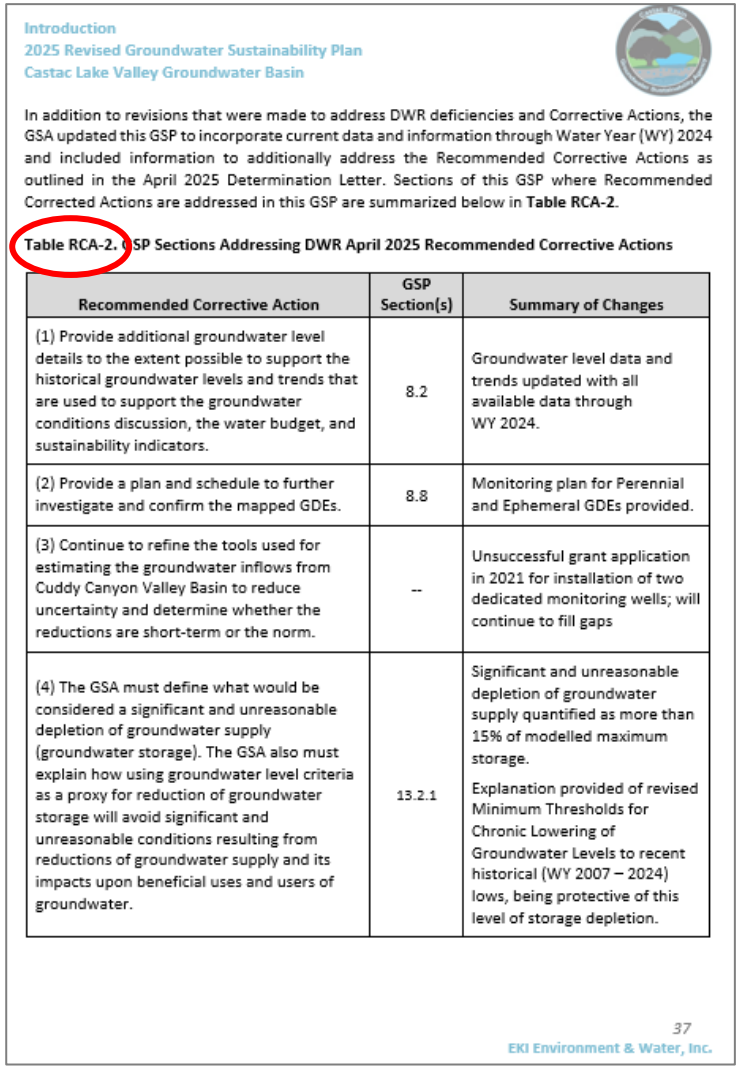

Introduction
2025 Revised Groundwater Sustainability Plan
Castac Lake Valley Groundwater Basin

In addition to revisions that were made to address DWR deficiencies and Corrective Actions, the GSA updated this GSP to incorporate current data and information through Water Year (WY) 2024 and included information to additionally address the Recommended Corrective Actions as outlined in the April 2025 Determination Letter. Sections of this GSP where Recommended Corrected Actions are addressed in this GSP are summarized below in **Table RCA-2**.

Table RCA-2. GSP Sections Addressing DWR April 2025 Recommended Corrective Actions

Recommended Corrective Action	GSP Section(s)	Summary of Changes
(1) Provide additional groundwater level details to the extent possible to support the historical groundwater levels and trends that are used to support the groundwater conditions discussion, the water budget, and sustainability indicators.	8.2	Groundwater level data and trends updated with all available data through WY 2024.
(2) Provide a plan and schedule to further investigate and confirm the mapped GDEs.	8.8	Monitoring plan for Perennial and Ephemeral GDEs provided.
(3) Continue to refine the tools used for estimating the groundwater inflows from Cuddy Canyon Valley Basin to reduce uncertainty and determine whether the reductions are short-term or the norm.	--	Unsuccessful grant application in 2021 for installation of two dedicated monitoring wells; will continue to fill gaps
(4) The GSA must define what would be considered a significant and unreasonable depletion of groundwater supply (groundwater storage). The GSA also must explain how using groundwater level criteria as a proxy for reduction of groundwater storage will avoid significant and unreasonable conditions resulting from reductions of groundwater supply and its impacts upon beneficial uses and users of groundwater.	13.2.1	Significant and unreasonable depletion of groundwater supply quantified as more than 15% of modelled maximum storage. Explanation provided of revised Minimum Thresholds for Chronic Lowering of Groundwater Levels to recent historical (WY 2007 – 2024) lows, being protective of this level of storage depletion.

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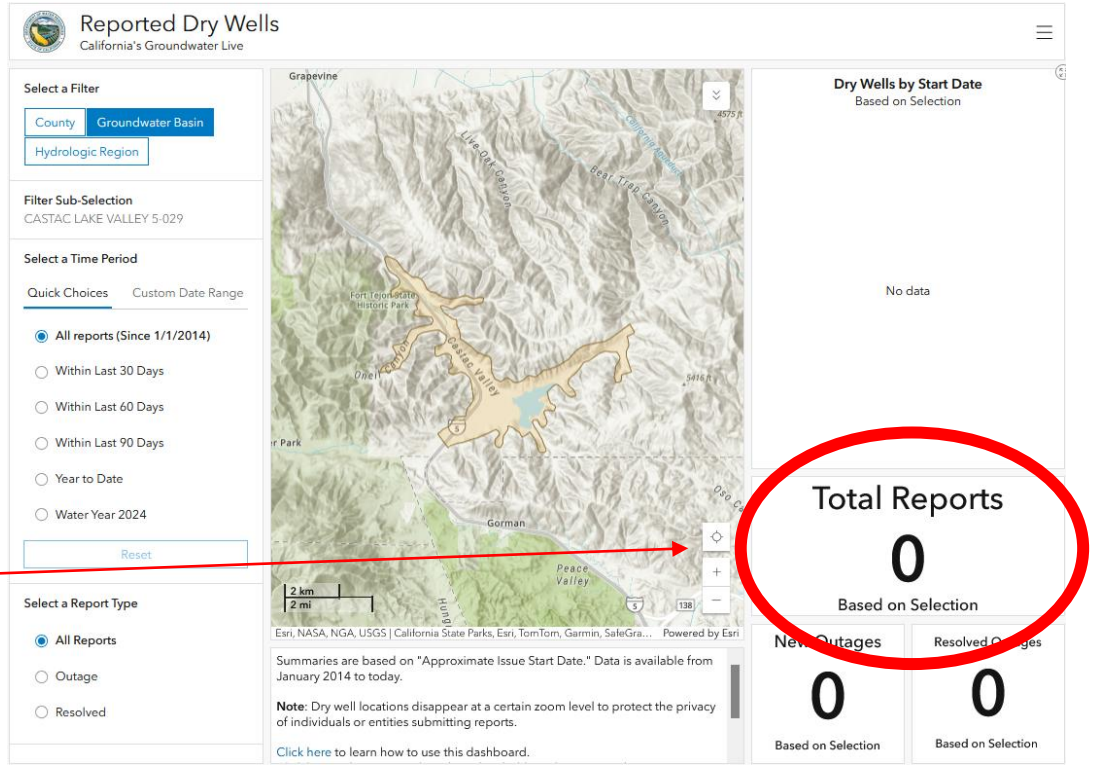
DWR Required Amendments For GSP Approval

- *#1: Amend Sustainable Management Criteria (SMCs) for chronic lowering of groundwater levels in Groundwater Level Monitoring Network wells, and quantify Undesirable Results (URs)*
  - **Main Responses**:
    - Set Minimum Thresholds (MTs) equal to recent (since 2007) minimum water levels
    - Set Measurable Objectives (MOs) equal to Spring 2015 water levels
  - These new Sustainable Management Criteria (SMCs) will avoid SGMA Undesirable Results (URs) because they are based on recent conditions already experienced in the Basin (i.e., no reported dry wells from 2014 to present).



DWR Required Amendments For GSP Approval

- *#2: Establish SMCs for degraded water quality in Water Quality Monitoring Network wells*
  - **Main Responses**:
  - Set maximum concentration MTs for Fluoride, Uranium, and Total Dissolved Solids (TDS)
  - Based on three or more exceedances of Maximum Contaminant Levels (MCLs)
  - Set MTs equal to the greater of:
    - **MCLs**, or if historical concentrations exceed MCLs
    - **95th percentile** of available data

Table GWC-4. Supply well water samples exceeding MCLs, 2007 - 2024

Constituent	MCL (mg/L)		Supply Wells Sampled	Total Samples	Wells Exceeding MCL	Samples Exceeding MCL
	Primary	Secondary				
Arsenic	0.01	-	7	33	0	0
Chloride	-	250	7	33	0	0
Fluoride	2	-	8	368	**5**	**60**
Iron	-	0.3	6	30	1	2
Lead	0.015[(a)]	-	7	31	0	0
Manganese	-	0.05	6	25	0	0
Nitrate as N	10	-	9	330	0	0
Sulfate	-	250[(c)]	7	32	0	0
TDS	-	500[(c)]	7	32	**6**	**29**
Uranium	0.03[(b)] [20 pCi/L]	-	7	248	**3**	**22**

Abbreviations:
MCL = maximum contaminant level
mg/L = milligrams per liter

Notes:

(a) The MCL for lead was rescinded with the adoption of a Regulatory Action Level in 1995 in which systems must take certain actions if an Action Level is exceeded. The Action Level replaces the MCL.

(b) US EPA MCL of 30 µg/L (0.03 mg/L) for uranium is equivalent to 20.1 pCi/L, using natural uranium specific activity of 0.67 pCi/µg per State Water Resources Control Board guidance: https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/mclreview/mcls_dlrs_phgs.pdf.

(c) Recommended Secondary MCL.

(d) Bold text indicates constituent is identified as a constituent of concern for the purposes of this GSP, based on three or more MCL exceedances in supply wells Basin-wide.

DWR Required Amendments For GSP Approval

Corrective Action	Summary of Response
(**1a**) **Identify the significant and unreasonable conditions** due to chronic lowering of groundwater levels that may impact beneficial users and uses of groundwater in Basin. The significant and unreasonable result(s) should be considered prior to the development of the sustainability criteria for groundwater levels.	SGMA **Undesirable Results would occur if groundwater use within the Basin causes chronic declines in groundwater levels** that diminish access to groundwater, causing significant and unreasonable effects on beneficial groundwater uses and users in the Basin. **Significant and unreasonable conditions** impacting beneficial uses and users of groundwater **have not occurred during Water Years 2007 to 2024 (the Recent Historical Period)**, thus, water levels measured in wells during this period have avoided causing SGMA Undesirable Results. • **Sustainable Management Criteria (SMCs)** for Chronic Lowering of Groundwater Levels, including Minimum Thresholds (MTs) and Measurable Objectives (MOs), have been **revised** to remain **above minimum groundwater levels recorded during the Recent Historical Period** (WY 2007 - 2024).

DWR Required Amendments For GSP Approval

Corrective Action	Summary of Response
(**1b**) Revise the **quantitative undesirable result definition for groundwater levels** to be protective of beneficial uses and users, including the groundwater dependent ecosystems (GDEs) in the Grapevine Canyon area that are indicated in the Plan as needing to be protected.	Based on consideration of significant and unreasonable impacts to beneficial users and uses of groundwater, the **criteria for Undesirable Results for Chronic Lowering of Groundwater Levels have been revised**, as follows: • SGMA Undesirable Results will occur if groundwater levels **(a) fall below the MT** for Chronic Lowering of Groundwater Levels in **any two Representative Monitoring Wells** (RMWs) for **four consecutive semi-annual monitoring events**, and **(b)** are determined to be **related to pumping** or other activities that can be managed by the GSA, rather than caused by decreases in precipitation. • **MTs** have been **redefined** to match **minimum groundwater elevations** recorded **during the Recent Historical Period (WY 2007 - 2024)**. • **MOs** have been **redefined** to match recorded **Spring 2015 groundwater elevations**. • Using groundwater levels as a proxy, SGMA **Undesirable Results for Interconnected Surface Waters have been defined** to occur if the groundwater levels in RMW TRC-MW23D (a) fall below its MT for two consecutive Fall monitoring events, and (b) are determined to be related to pumping or other activities that can be managed by the GSA, rather than caused by decreases in precipitation.

DWR Required Amendments For GSP Approval

Corrective Action	Summary of Response
(**1c**) Select the **sustainability criteria** at a level indicating a **depletion of supply** that may lead to **undesirable results**. The sustainability criteria should account for the significant and unreasonable effects that the GSA aims to avoid, including any necessary operational buffer. Describe the relationship between the sustainability criteria established for groundwater levels and the other sustainability indicators applicable to the Basin, i.e., reduction of groundwater storage, degradation of groundwater quality, and interconnected surface water. Explain how the Basin conditions at the established sustainability criteria of groundwater levels will avoid undesirable results for other applicable sustainability indicators.	• Amended GSP now includes a quantitative definition of significant and unreasonable depletion of groundwater supply as a loss of **more than 15% of modeled maximum storage**, based on estimated storage losses during the WY 2007 - 2024 Recent Historical Period. • Amended GSP now includes **descriptions of relationships** between the groundwater level sustainability criteria and the other sustainability indicators. • Amended GSP now provides **explanation** of how the **revised MTs** for Chronic Lowering of Groundwater Levels **prevents Undesirable Results** for storage depletion, degradation of groundwater quality, subsidence, and interconnected surface water. • Amended GSP now includes a **statistical analysis of groundwater quality**. • Amended GSP now designates additional municipal water supply wells as **RMWs for water quality** monitoring.

DWR Required Amendments For GSP Approval

Corrective Action	Summary of Response
(2a) Establish **sustainable management criteria** for all identified constituents of concern, based on the best available information and science, to prevent significant and unreasonable **degradation of water quality** that could impair water supplies and impact beneficial uses and users in the Basin (including urban, agricultural, and domestic uses), and to avoid exacerbating existing degraded groundwater conditions in the Basin.	• Water quality constituents of concern now defined as **fluoride**, **uranium**, and **total dissolved solids (TDS)**. • Undesirable Results now defined as one or more of the Representative Monitoring Wells for Degraded Water Quality (RMW-WQs; i.e., **LCWD-State PW**, **TRC-PW60**, or **TRC-PW81**) having MT exceedances for a Constituent of Concern (fluoride, uranium, or TDS) (a) for at least two consecutive years, and (b) the exceedances are determined to be related to groundwater activities that can be managed by the GSA, rather than drought or other naturally occurring conditions. • **SMCs now defined** for each constituent of concern at each RMW-WQ: MTs are defined as the greater of (a) the applicable **MCL**, or (b) the **95th percentile of historical concentrations**, and MOs are set equal to the MTs.

DWR Recommended Amendments For GSP Approval

Recommended Corrective Action	Summary of Response
(1) Provide additional **groundwater level details** to the extent possible to support the historical groundwater levels and trends that are used to support the groundwater conditions discussion, the water budget, and sustainability indicators.	• **Groundwater level data and trends** are updated with available high-confidence data through WY 2024.
(2) Provide a plan and schedule to further **investigate and confirm** the mapped **GDEs**.	• Amended GSP provides a **monitoring plan** for both Perennial and Ephemeral **GDEs**.
(3) Continue to **refine the tools used for estimating the groundwater inflows** from Cuddy Canyon Valley Basin to reduce uncertainty and determine whether the reductions are short-term or the norm.	• GSA applied for a DWR TSS grant in 2021 for installation of **two dedicated monitoring wells** at the **upgradient Basin boundary**, but it was not funded. • GSA will **continue efforts** to fill data gaps.

DWR Recommended Amendments For GSP Approval

Recommended Corrective Action	Summary of Response
(4) The GSA must **define** what would be considered a **significant and unreasonable depletion of groundwater supply** (groundwater storage). The GSA also must explain how using groundwater level criteria as a proxy for reduction of groundwater storage will avoid significant and unreasonable conditions resulting from reductions of groundwater supply and its impacts upon beneficial uses and users of groundwater. **(5)** After re-evaluating the sustainable management criteria for groundwater levels, if the GSA retains minimum thresholds that are below historical lows, the GSA should establish sustainable management criteria for subsidence.	• Amended GSP now includes a **quantitative definition** of significant and unreasonable depletion of groundwater supply as a **loss of more than 15% of modeled maximum storage**, based on estimated storage losses during the WY 2007 - 2024 Recent Historical Period. • Significant and unreasonable conditions impacting beneficial uses and users of groundwater have not occurred during Water Years 2007 to 2024 (the Recent Historical Period), thus, water levels measured in wells during this period have avoided causing SGMA Undesirable Results. • Sustainable Management Criteria (**SMCs**) for Chronic Lowering of Groundwater Levels, including Minimum Thresholds (MTs) and Measurable Objectives (MOs), have been revised to **remain above minimum groundwater levels recorded during the Recent Historical Period**.

DWR Recommended Amendments For GSP Approval

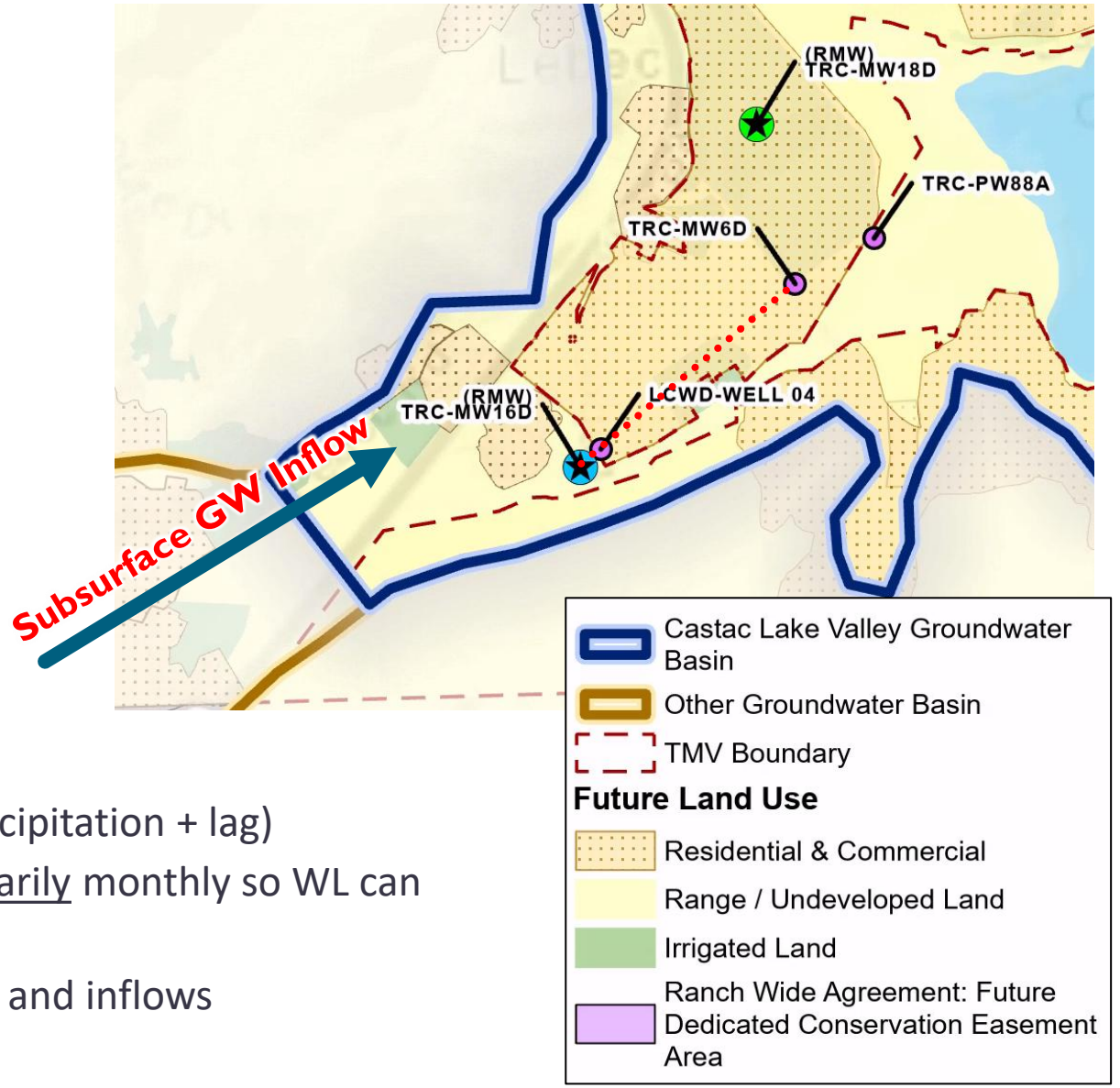
Recommended Corrective Action	Summary of Response
(6a) Consider utilizing the **interconnected surface water** guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions. **(6b)** Continue to **fill data gaps**, collect additional monitoring data, and implement the current strategy to manage depletions of interconnected surface water and define segments of interconnectivity and timing.	• Amended GSP presents a **preliminary monitoring plan to collect surface water flow data** in preparation for the anticipated DWR interconnected surface water BMP, which should provide guidance on establishing SMCs.
(6c) Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping-induced surface water depletion within the GSA's jurisdictional area.	• GSA will continue ongoing data gap filling and stakeholder engagement

DWR Recommended Amendments For GSP Approval

Recommended Corrective Action	Summary of Response
(7) The GSA should **formally adopt** the **production wells** that are currently being tested for **water quality**. The GSA should also pursue the additional sites discussed in the plan for the Grapevine Canyon area. The GSA will also need to consider monitoring frequency that will enable early detection of trends that may indicate that groundwater extractions may be influencing the results.	• Amended GSP now designates **three municipal water supply wells (LCWD-State PW, TRC-PW60, and TRC-PW81) as RMWs for water quality monitoring**. Two of these wells are located in the Grapevine Canyon area. • The wells' operating entities will collect and analyze **annual samples** for **fluoride, uranium, and TDS**, and will share the data with the GSA. Sampling from supplemental wells will be initiated prior to initiation of planned P&MAs.
(8) When the Department expands the InSAR coverage to include the Basin, the GSA should consider using the data for **subsidence monitoring** and if necessary, sustainability criteria.	• Amended GSP discusses potential use of future available InSAR coverage for both subsidence monitoring and setting SMCs.

Future Work: Groundwater Inflow Estimation

- Main source of Basin subsurface groundwater inflow is from upgradient Cuddy Canyon
- Subsurface inflow to the Basin is currently estimated by calculating the gradient between **TRC-MW6D** and **TRC-MW16D**
- Increased pumping this year in TRC-PW88A may have affected WLs in TRC-MW6D, thus changing the estimated gradient and inflow
- LCWD Well 4 operation will affect TRC-MW16D; could make it <u>unusable</u> for gradient estimation
- *Possible solutions*:
  a) Attempt to <u>synthesize gradient</u> with proxy data (precipitation + lag)
  b) Coordinate with LCWD to <u>shut down Well 4 temporarily</u> monthly so WL can recover and be measured
  c) <u>Drill new monitoring wells</u> to better define gradient and inflows



Next Steps, Short Term

- **Board Action:** Approve final WY 2025 Annual Report and authorize submittal to DWR by 1 April.
- **Board Action:** Approve public review draft Amended GSP; post on website and start 30-day public review period.
- ***26 April 2026***: End of 30-day public review period; EKI to compile and prepare responses to public comments.
- ***4 May 2026***: Ad-Hoc Technical Committee Meeting to review public comments and responses.
- ***7 May 2026***: GSA Special Board Meeting and Public Hearing to adopt Amended GSP for submittal to DWR.
- ***8 May 2026*:** Submit Amended GSP to DWR.

Next Steps, Longer Term

- **WY 2026 data collection by TCWD, LCWD, and KMWC**:
  - Minimum schedule: ***March - April 2026*** and ***September - October 2026***
  - Data Needed:
    - Water levels at RMWs;
    - Pumping / flow data at all supply wells; and
    - Photographs of active well flow meter faces (for confirmation of flow units).
- **Ongoing P&MA Implementation Tasks**:
  - Data uploads to DWR in June and December;
  - Transducer reconfiguration to reduce instrument movement and improve data quality;
  - Planning for public supply well groundwater sampling and analysis (Total Dissolved Solids, Uranium, Fluoride);
  - Review and modify subsurface groundwater inflow estimation method to avoid inflow errors when new LCWD supply well #4 comes online;
  - Database maintenance for WLs, pumping, and other received data; and
  - Streamline analytical workbook and numerical model annual update process.

End