East Bay Plain Subbasin Groundwater Sustainability Plan (GSP) Periodic Evaluation and Amendment

General Stakeholders Meeting

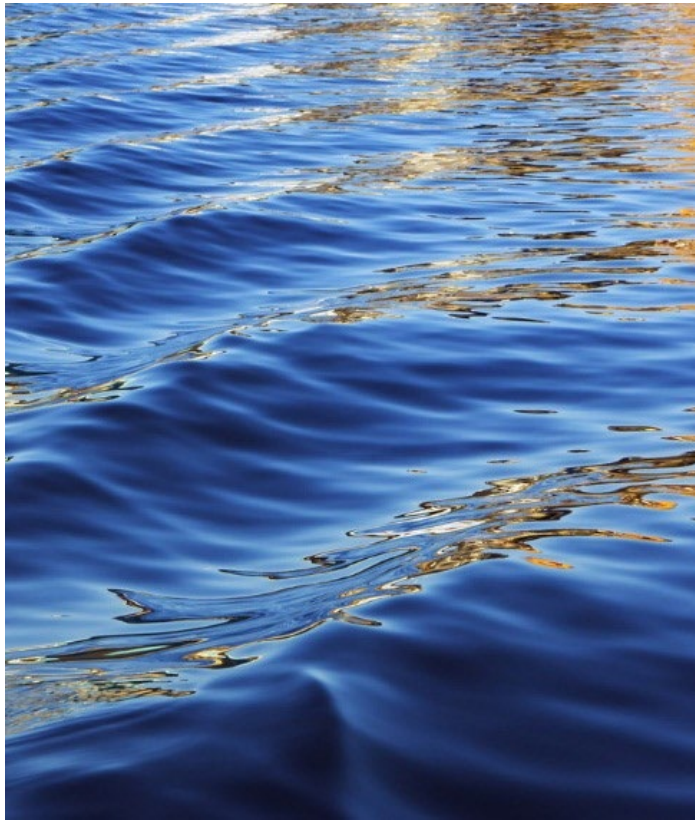
March 9, 2026

Agenda

- Welcome & Introductions
- East Bay Plain Subbasin GSP Background
- Proposed Approach to Address DWR's Seawater Intrusion Management Corrective Action
- Comments and Questions
- Next Steps
- DWR Updates

DWR: Department of Water Resources

East Bay Plain Subbasin GSP Background

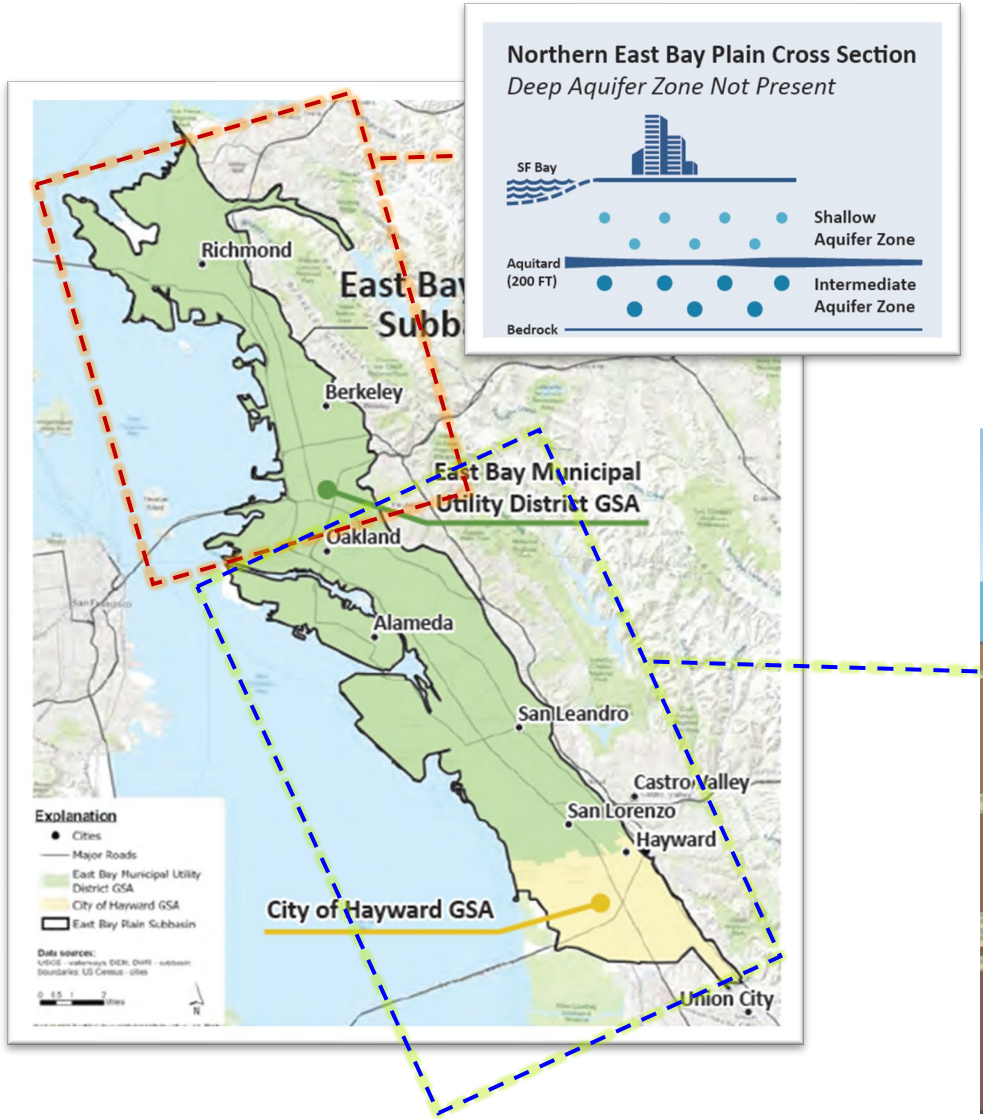


East Bay Plain Subbasin

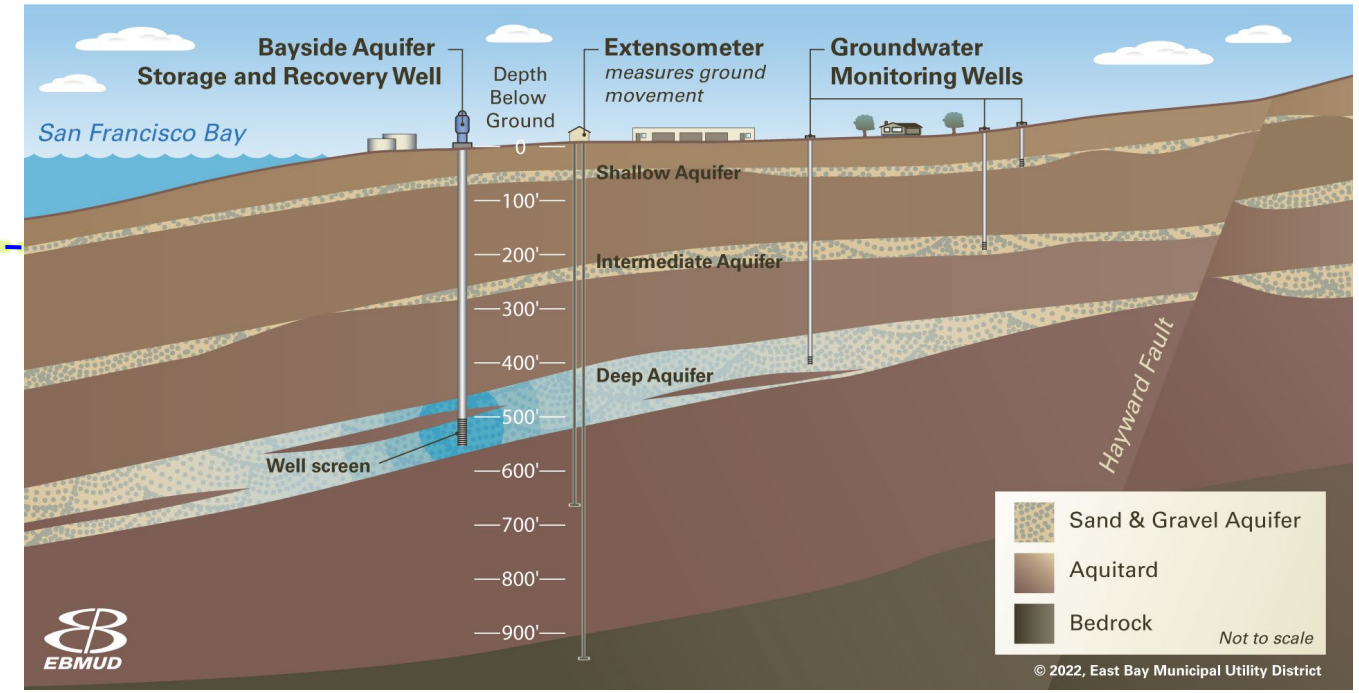
- East Bay Plain (EBP) Subbasin is managed by EBMUD GSA and the City of Hayward GSA
- Medium-priority basin
- Primarily urban (94%)
- Limited groundwater pumping of around 3,600 acre-feet annually, primarily for irrigation and industrial uses
- 2022 EBP Subbasin GSP approved by DWR in July 2023 with 9 recommended corrective actions

EBMUD: East Bay Municipal Utility District
GSA: Groundwater Sustainability Agency

EBP Subbasin Cross-Section



- Three Principal Aquifers: Shallow, Intermediate, and Deep
- Most pumping occurs in the Intermediate and Deep Aquifers
- SF Bay only connects to upper portion of Shallow Aquifer
- Aquitards protect Intermediate and Deep Aquifers from seawater intrusion and shallow groundwater impacts

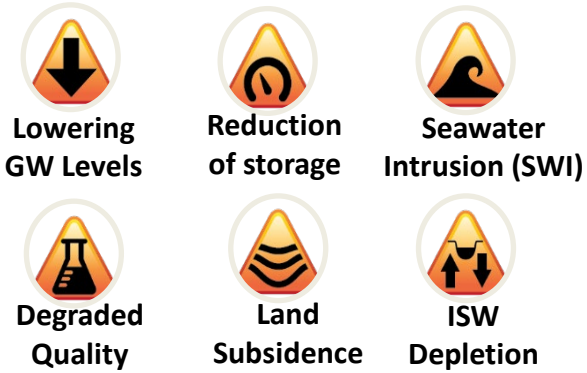


Sustainability Goal & Sustainable Management Criteria

EBP Sustainability Goal: Must be achieved by 2042

- ☑ Manage & protect the East Bay Plain Subbasin
- ☑ Collect data to support science-based decisions
- ☑ Evaluate new opportunities for sustainable groundwater beneficial uses
- ☑ Maintain sustainability through sustainable management criteria that avoid undesirable results (URs)

Six Sustainability Indicators: Groundwater Conditions to Avoid



Sustainable Management Criteria (SMC)

Metrics defining when URs occur for the six sustainability indicators and when sustainability is maintained/achieved

GW: Groundwater
ISW: Interconnected Surface Water

SMC for the sustainability indicators in the 2022 EBP GSP were developed with stakeholder input and using best available science & data with the caveat that major data gaps need to be addressed

Representative Monitoring Site (RMS) Wells

- 17 RMS wells over 9 sites
- 3 new single completion RMS wells completed in February 2025 with DWR Prop 68 funding
  - 2 within EBMUD boundary: MW-N1I and MW-N3S
  - 1 within Hayward boundary: MW-S2I
- EBP Subbasin is sustainable under current conditions relative to the six sustainability indicators

Monitoring data are available on the East Bay Plain Data Management System (DMS): eastbayplaindms.com

Implementation Updates: Projects Status

EBMUD Bayside Phase I

- ASR well is used to store surplus treated drinking water to potentially be pumped later during severe droughts
- Oro Loma Sanitary District decided not to renew the Bayside Facility lease with EBMUD and **anticipates completing the first of two phases to demolish the facilities in mid-March 2026**
- EBMUD's supplemental water supply project priorities are being re-evaluated in 2025 Urban Water Management Plan
- More data is needed before a future phase of Bayside is considered

ASR: Aquifer storage and recovery

Hayward Emergency Wells

- 5 wells intended for use during emergencies
- 1 well is no longer functional and will be replaced in the future
- 3 of the 5 wells are in the EBP Subbasin

2022 GSP Seawater Intrusion SMC

Undesirable Result (UR) Definition

Excessive regional groundwater pumping that causes saline Bay water to move into freshwater aquifers that are or could be developed for water supply, precluding their beneficial use for drinking water

Measurable Objectives (Target to maintain sustainability goal)	Minimum Threshold (When UR occurs)	Objectives Currently Met
• Position of 5-foot MSL contour line based on 2015 Spring groundwater levels in the upper shallow aquifer	• 25% increase in onshore area between the 5-foot MSL contour line and Bay margin AND • 25% increase in chloride concentration in RMS wells near the SF Bay	✓

DWR's Recommended Corrective Action

Establish sustainable management criteria and monitoring necessary for seawater intrusion using a chloride iso-contour as per the GSP Regulations.

MSL: Mean Sea Level

Sea Level Rise

Ongoing Monitoring & Coordination and Adaptation Plans

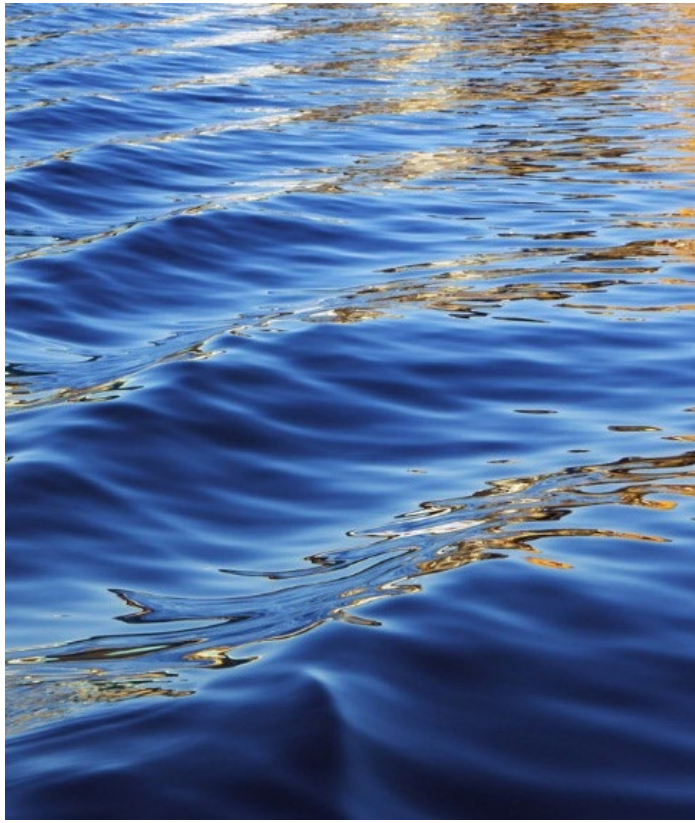
- Sea level rise is not under the GSAs' physical or jurisdictional control
- Ongoing GSP monitoring data will detect changes from any future potential sea level rise along with groundwater pumping
- GSAs meet annually with San Francisco Regional Water Quality Control Board and with the Department of Toxics Substance Control to coordinate on groundwater quality
- Cities and other coastal entities are developing Adaptation Plans in response to sea level rise

2022 GSP Future Modeling Scenarios

- As required under SGMA, future GSP modeling scenarios were conducted that incorporate sea level rise and hydrology changes to estimate the future water budget with current pumping (future baseline) and with potential projects
- Sea level rise of 2.0 feet by 2070 was used and is considered conservative
  - DWR guidance document estimates 1.5 feet by 2070

SGMA: Sustainable Groundwater Management Act

Proposed Approach to Address DWR's SWI Management Corrective Action



Methodology to Address Corrective Action

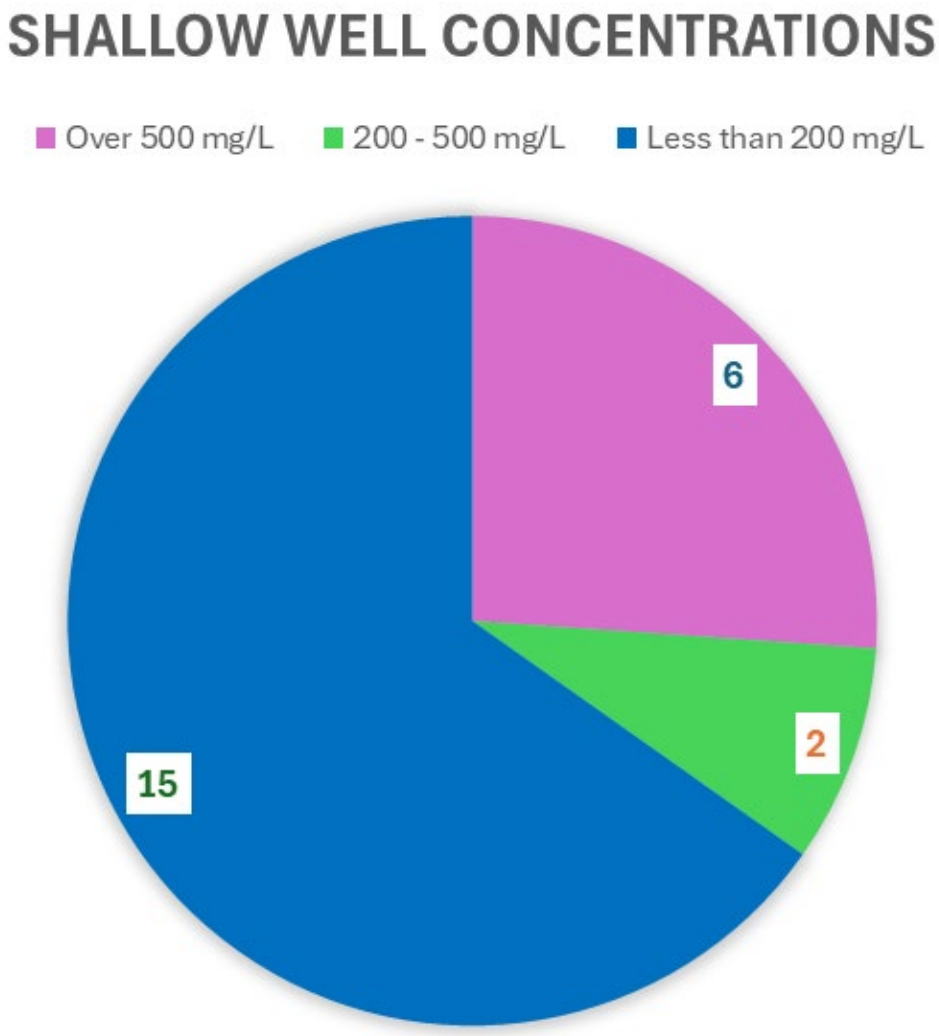
Reviewed relevant chloride concentrations over the past 30+ years

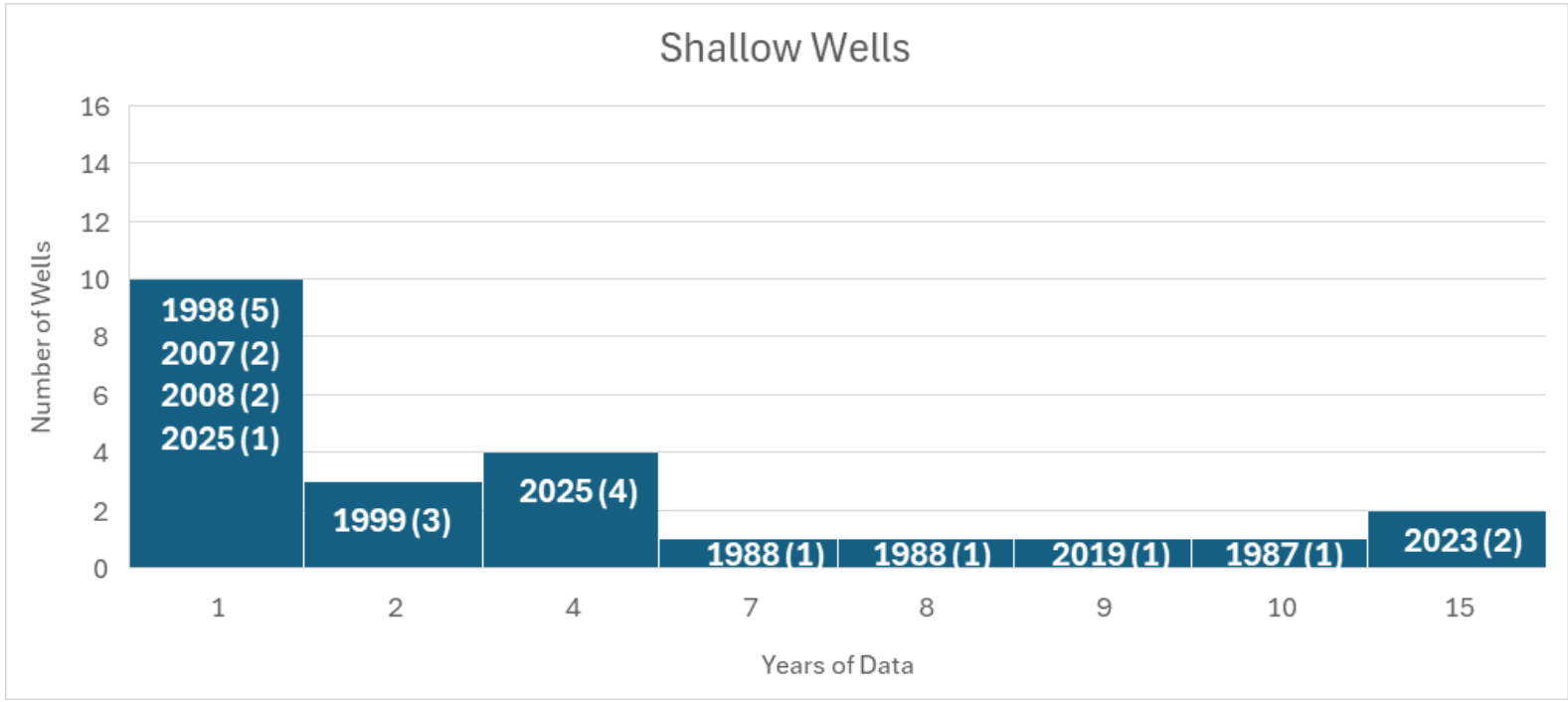
Developed proposed approach and monitoring network

Developed proposed updated sustainable management criteria

Discussed proposal with DWR in December 2025 and discussing with the General Stakeholders today

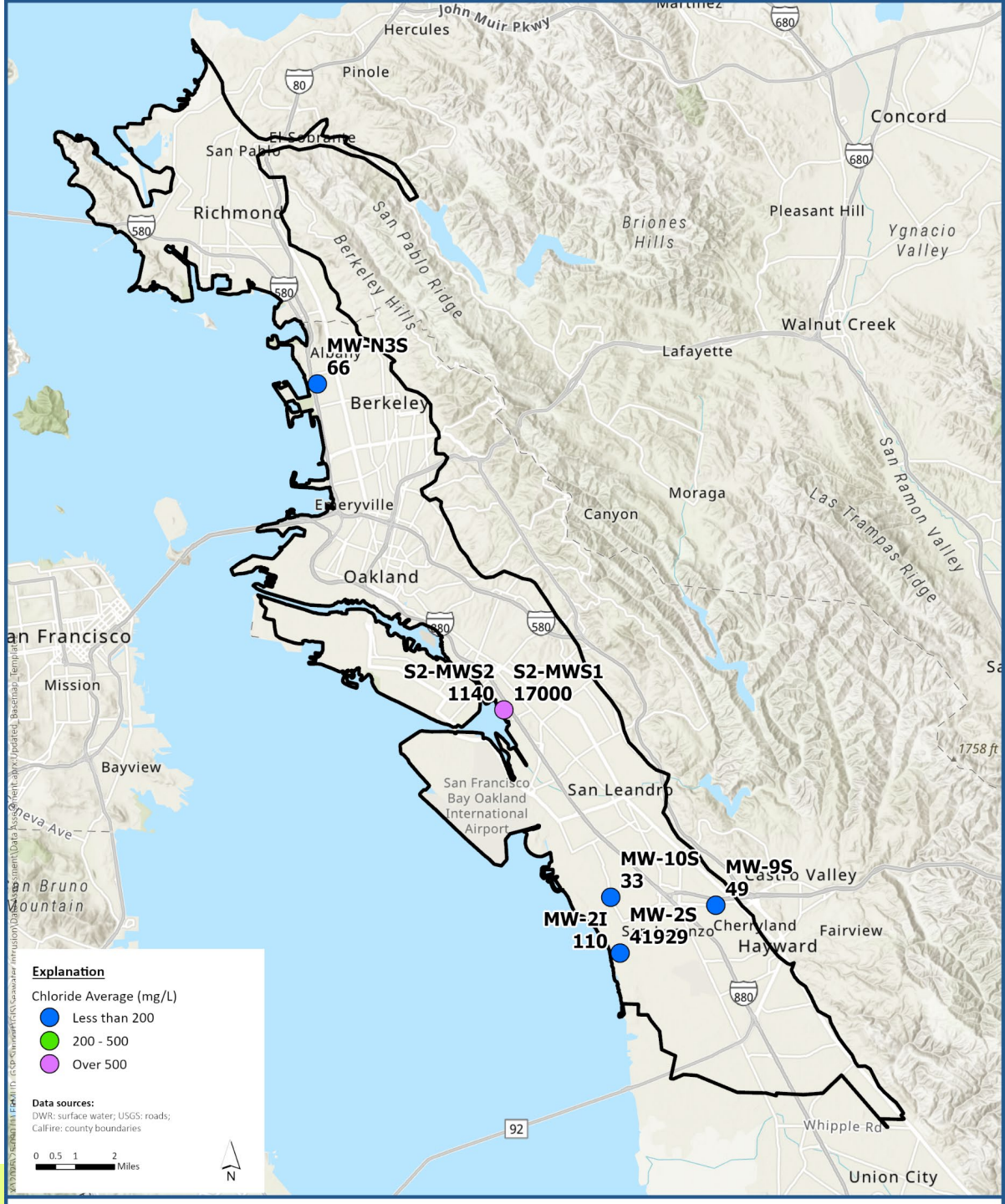
Chloride Concentrations – Shallow Aquifer





Note: In the columns, Year followed by a number in parentheses denotes the following:
Year = The most recent year with data
Number = The number of wells that were last sampled in that year
E.g. 1998 (4) = 4 wells were last sampled in 1998

Chloride Concentrations – Shallow Aquifer



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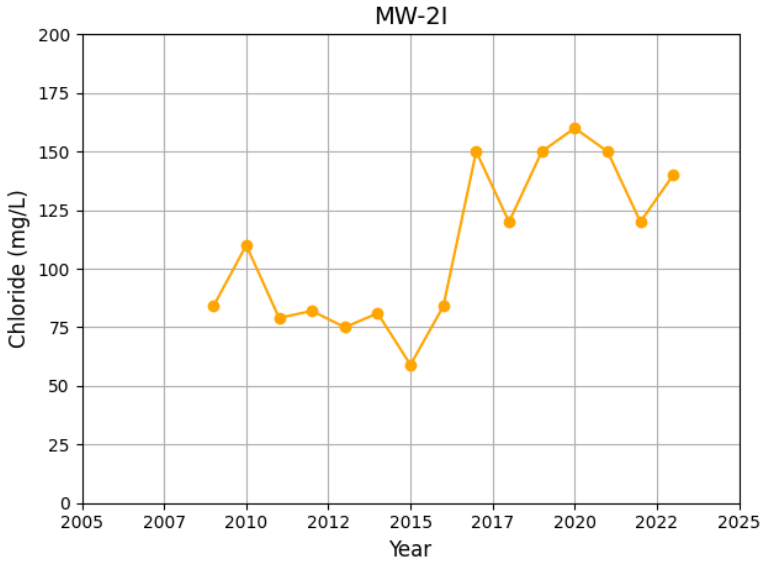
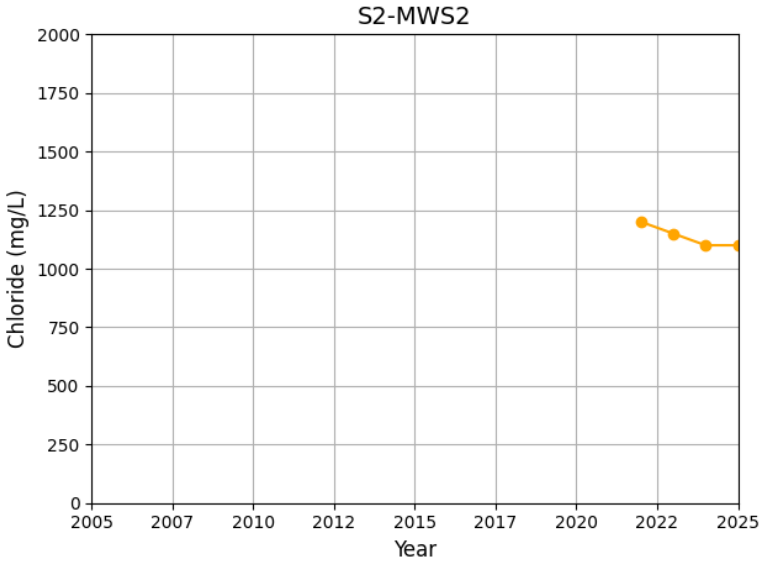
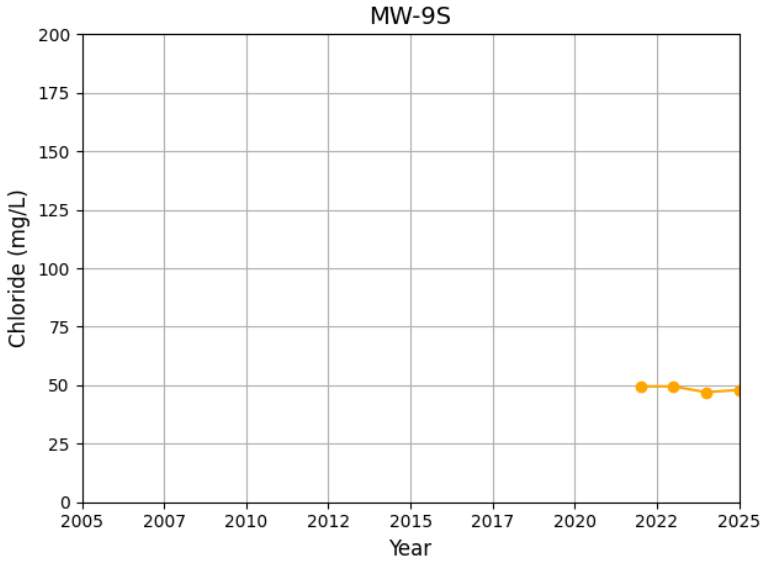
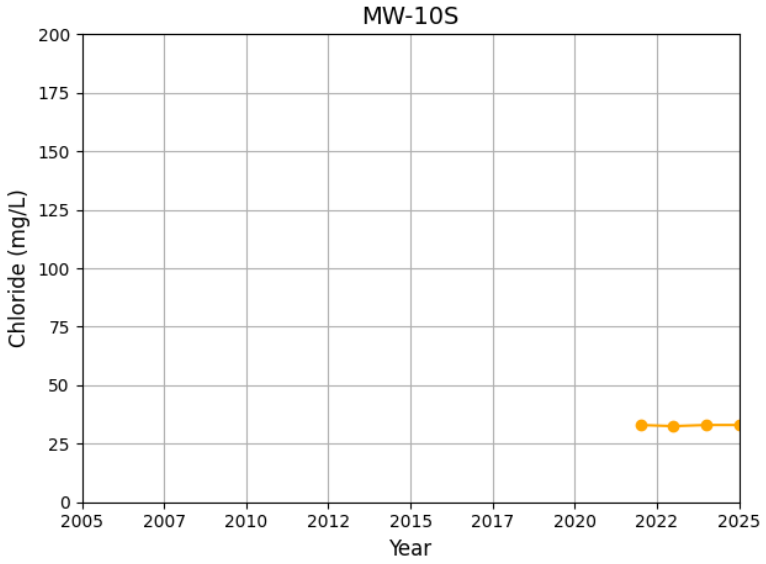
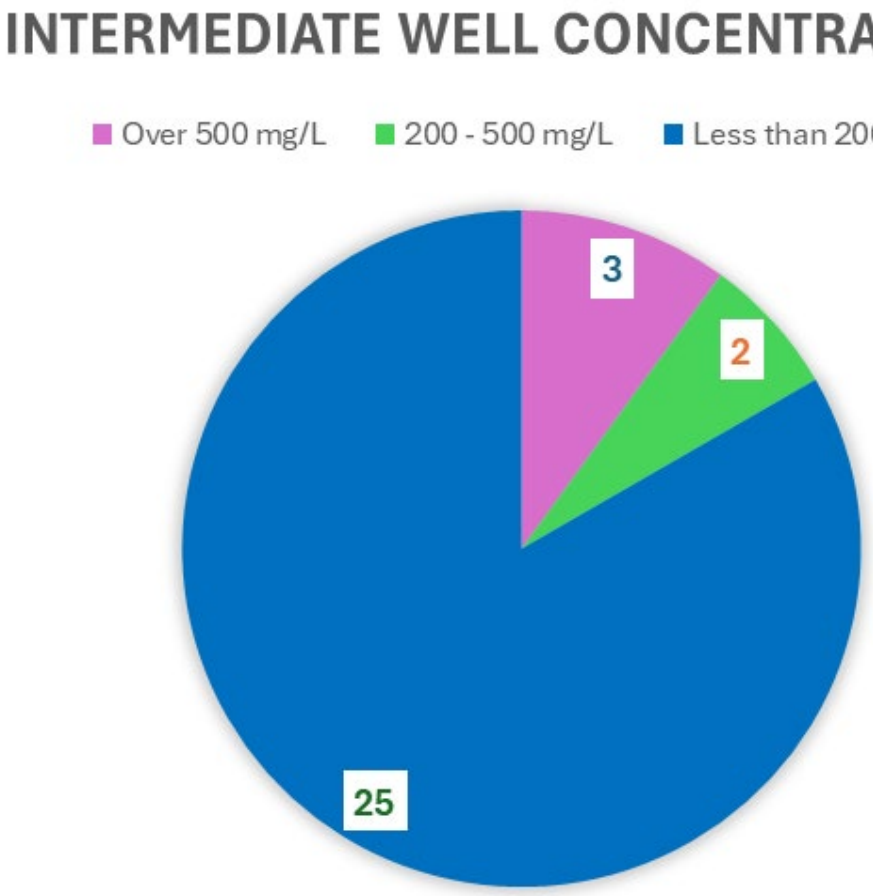




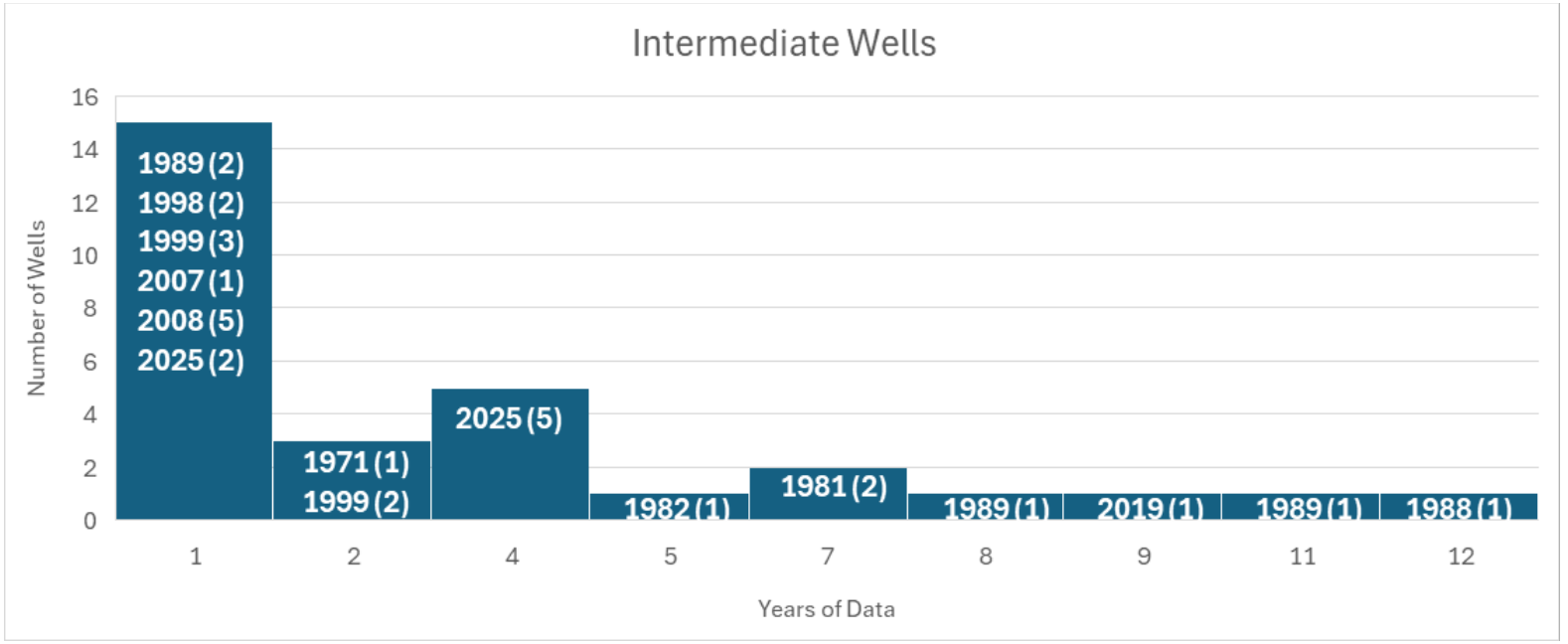




Chloride Concentrations – Intermediate Aquifer



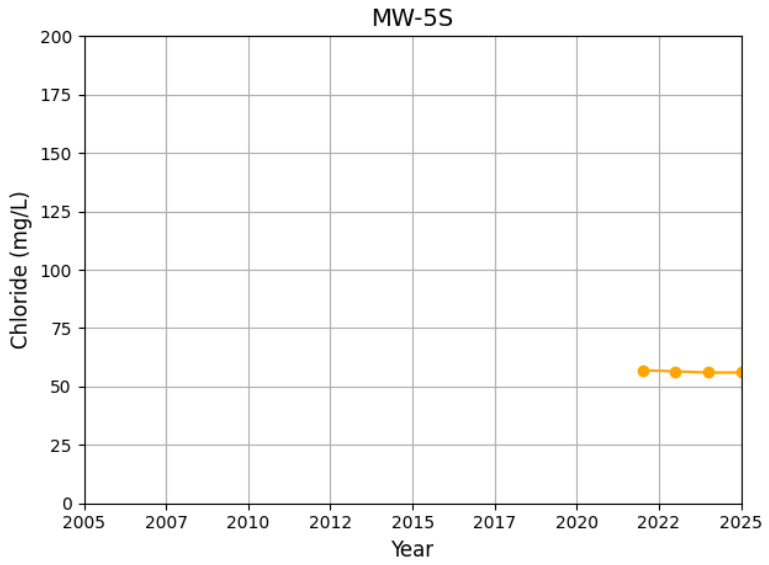
Wells with concentrations over 500 mg/L have total depths in the intermediate zone, but no information on screen intervals. These wells likely include screen intervals in the shallow zone.

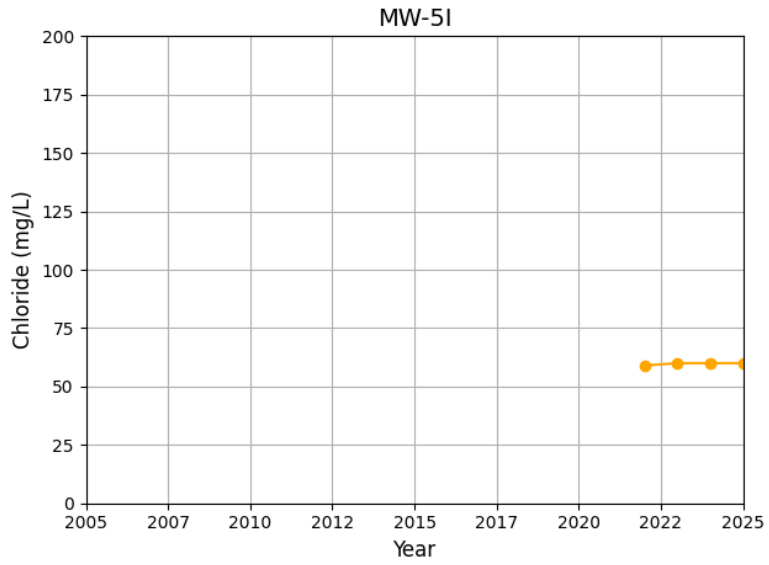


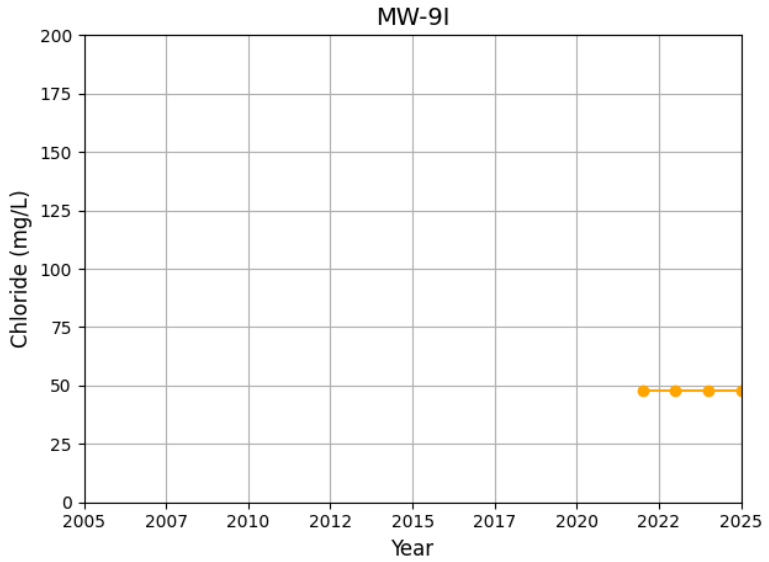
Note: In the columns, Year followed by a number in parentheses denotes the following:
Year = The most recent year with data
Number = The number of wells that were last sampled in that year
E.g. 1989 (2) = 2 wells were last sampled in 1989

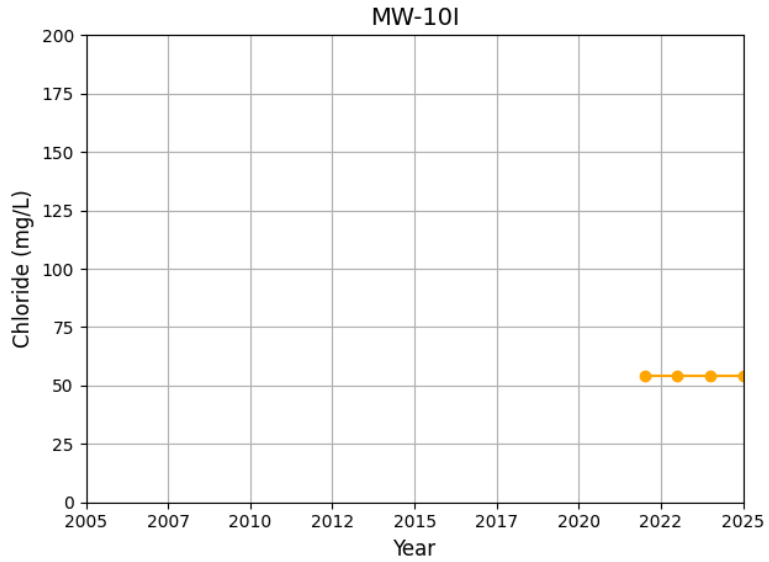
Chloride Concentrations – Intermediate Aquifer

Chloride Concentrations – Intermediate Aquifer

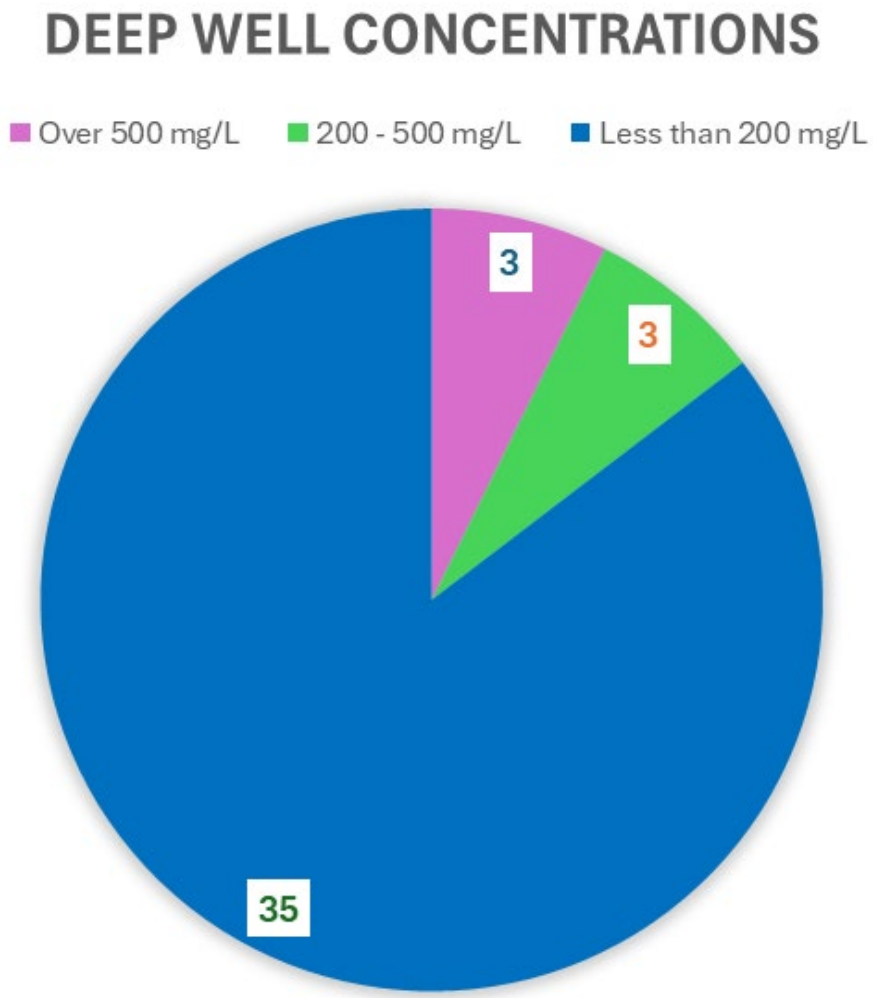




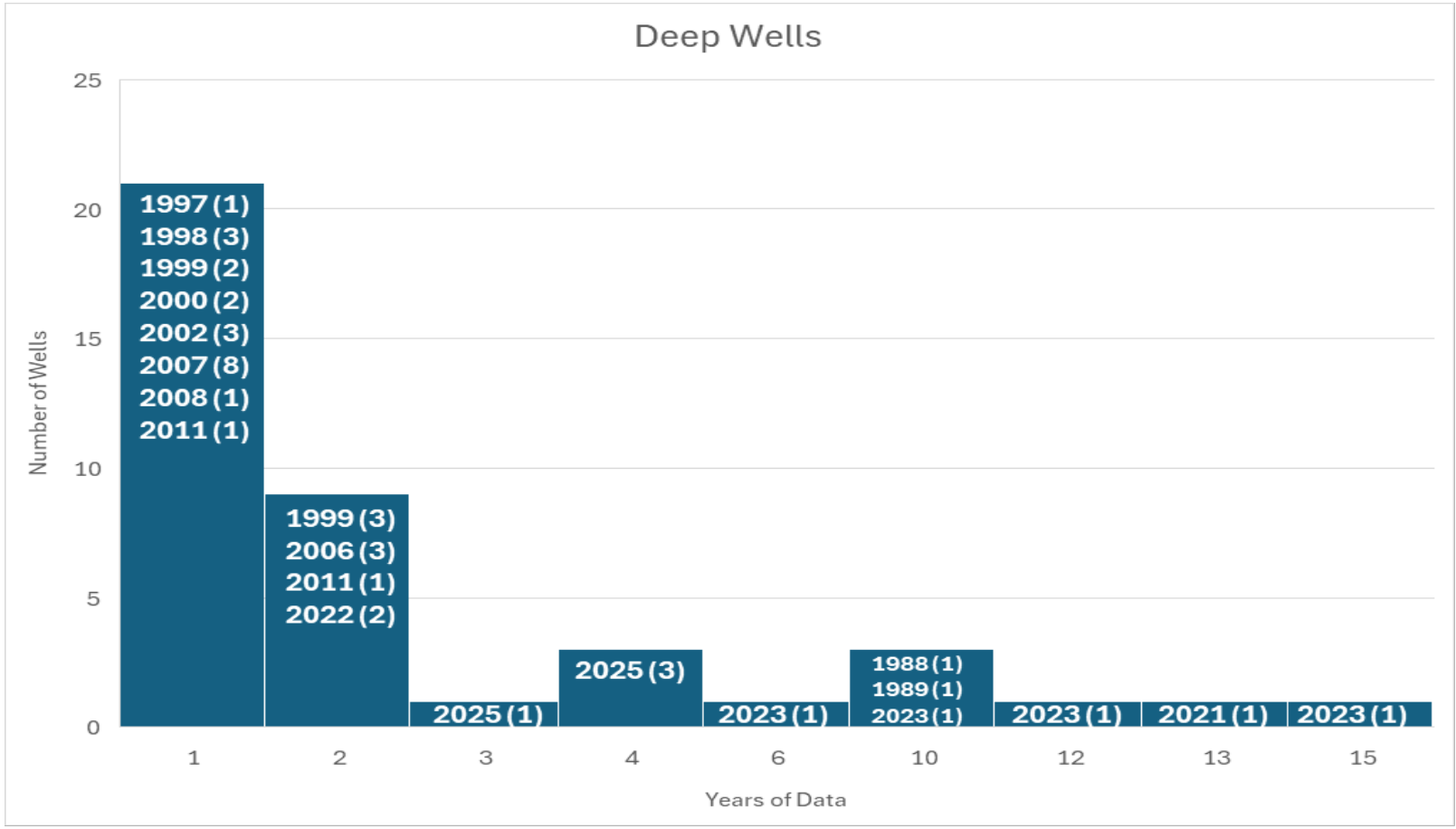




Chloride Concentrations – Deep Aquifer

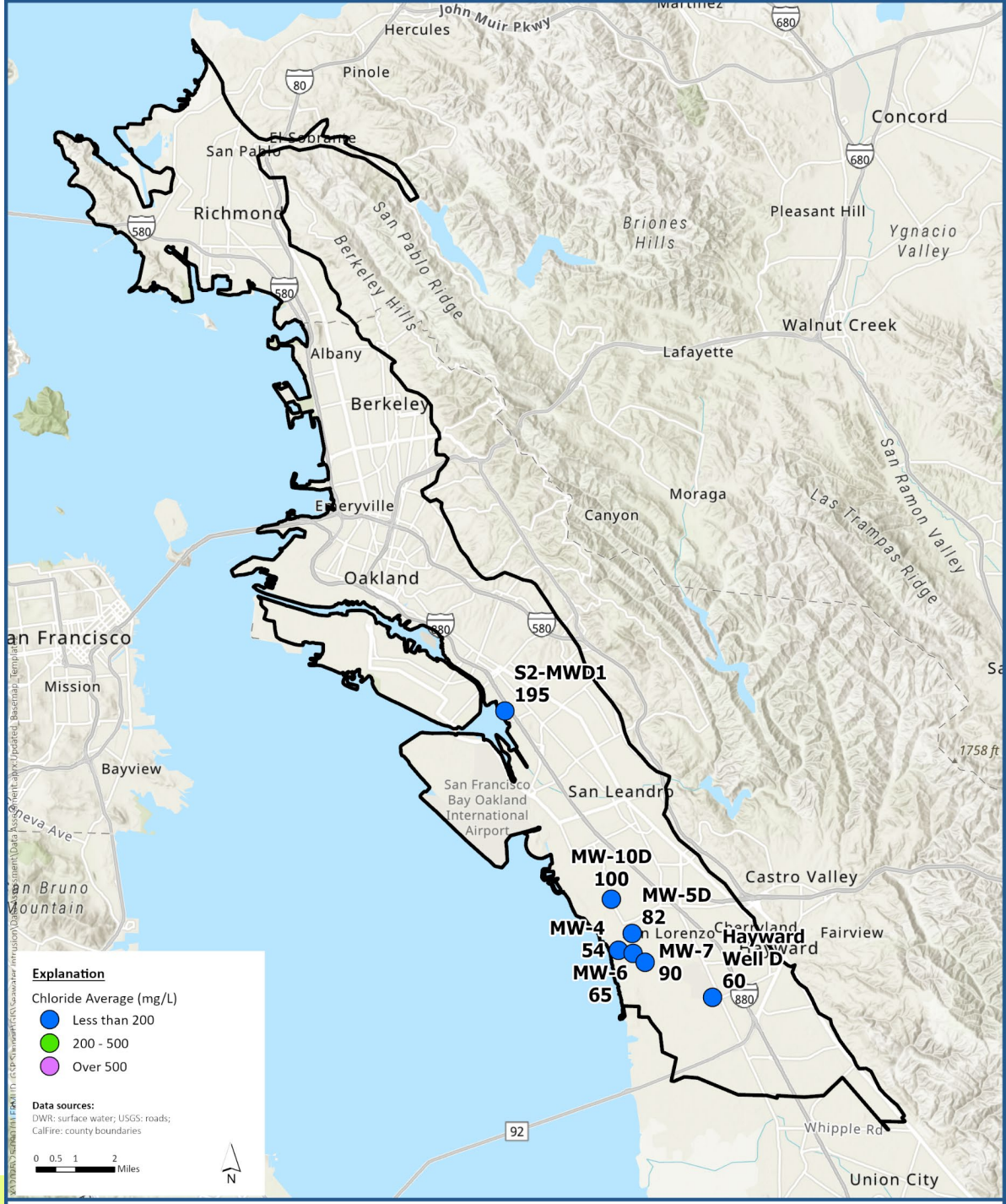


Wells with concentrations over 500 mg/L have total depths in the deep zone, but no information on screen intervals. These wells likely include screen intervals in the shallow zone.



Note: In the columns, Year followed by a number in parentheses denotes the following:
Year = The most recent year with data
Number = The number of wells that were last sampled in that year
E.g. 1997 (1) = 1 well was last sampled in 1997

Chloride Concentrations – Deep Aquifer



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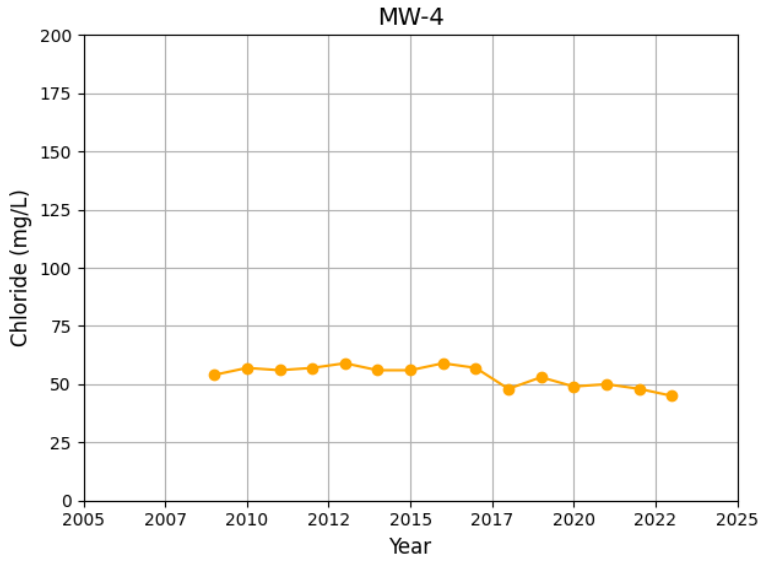
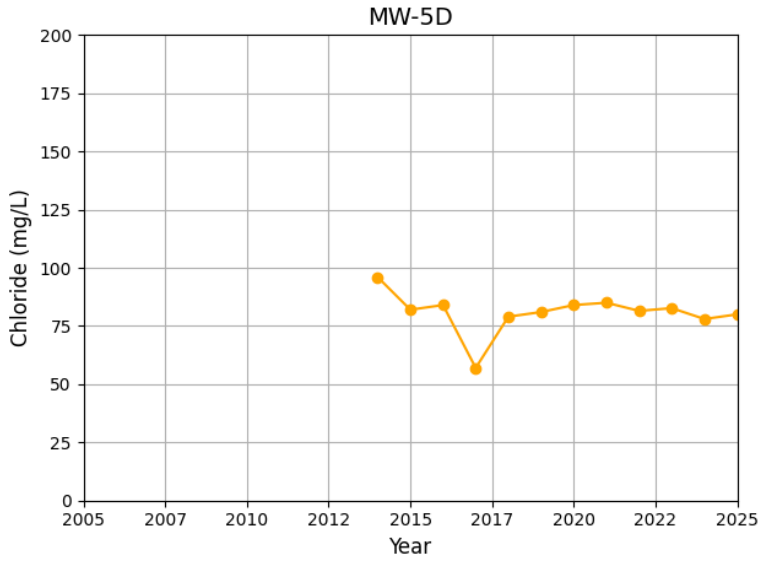
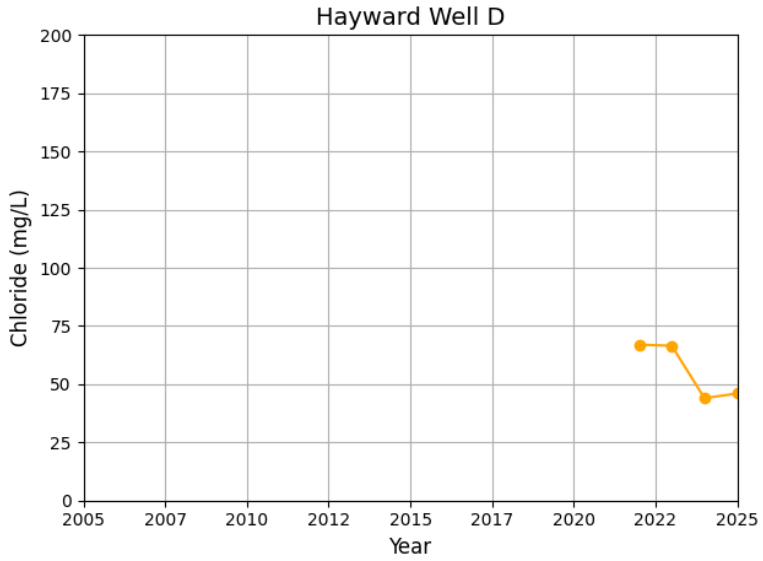
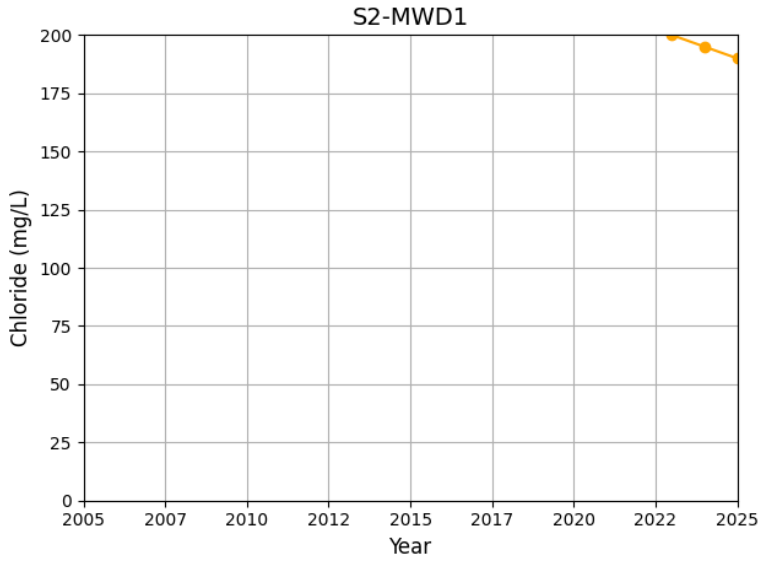








Conclusions from Chloride Concentrations Review

Historical and recent monitoring data show no evidence of seawater intrusion

Except for some shallow wells near the SF Bay, chloride concentrations measured throughout the subbasin are consistently low – generally less than 200 mg/L

With some Bayside monitoring wells being decommissioned and no longer available (MW-1, MW-2S, MW-2I and MW-3), fewer wells are available, reducing the data that can be collected

Because the chloride concentrations are low and stable, and groundwater pumping is limited, preparing chloride isocontours provides limited value for decision-making, so an alternative method has been proposed

Proposed Protective Approach Using Sentinel Wells

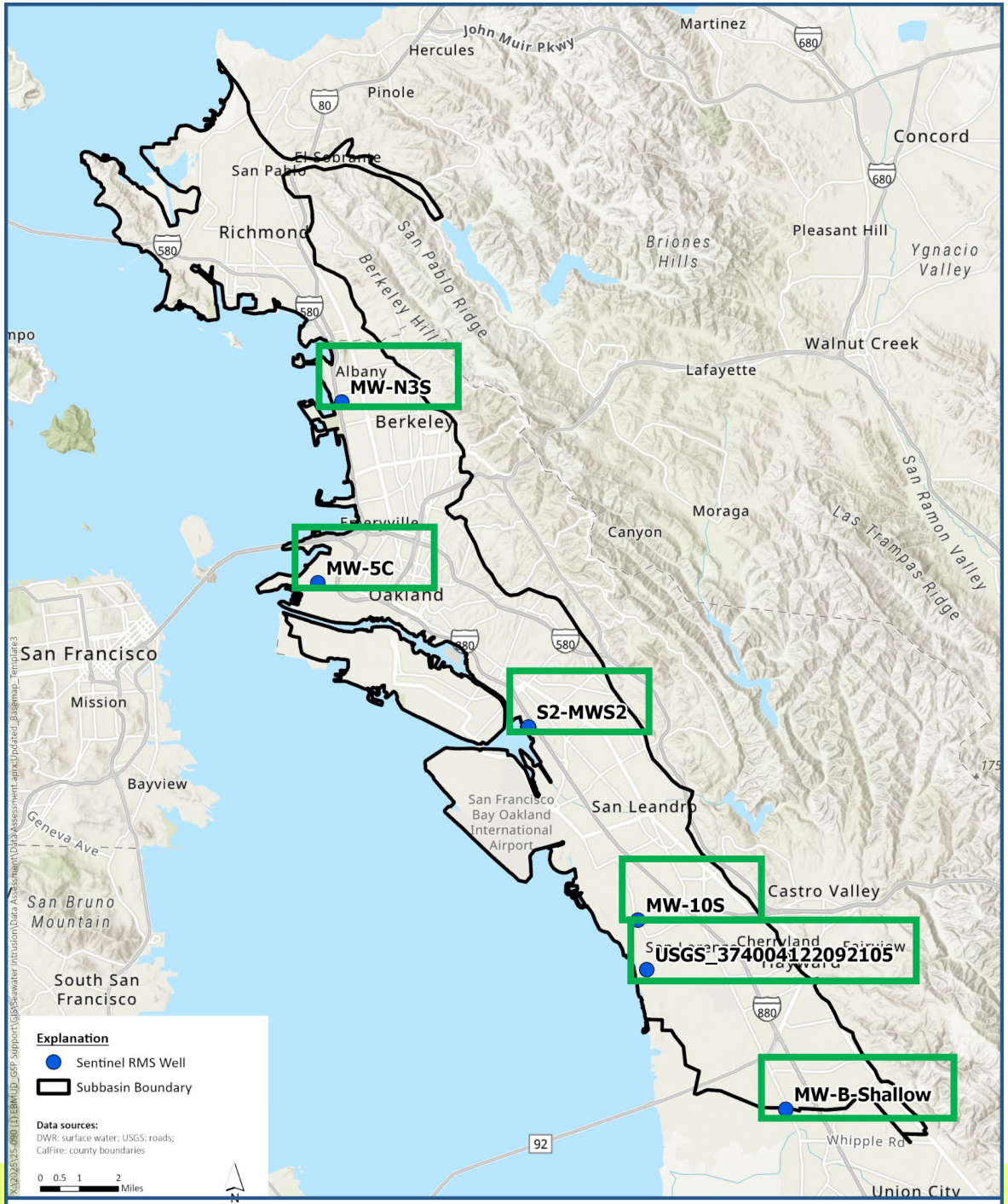
Instead of chloride isocontours, the GSAs propose using sentinel monitoring wells located near the SF Bay to act as early-warning stations tracking chloride concentrations over time

Sentinel wells are more appropriate for the EBP Subbasin and provide a targeted, science-based monitoring strategy supporting advance detection to avoid significant and unreasonable seawater intrusion

Tracking chloride concentrations in sentinel wells aligns with the regulatory intent of protecting beneficial uses and users

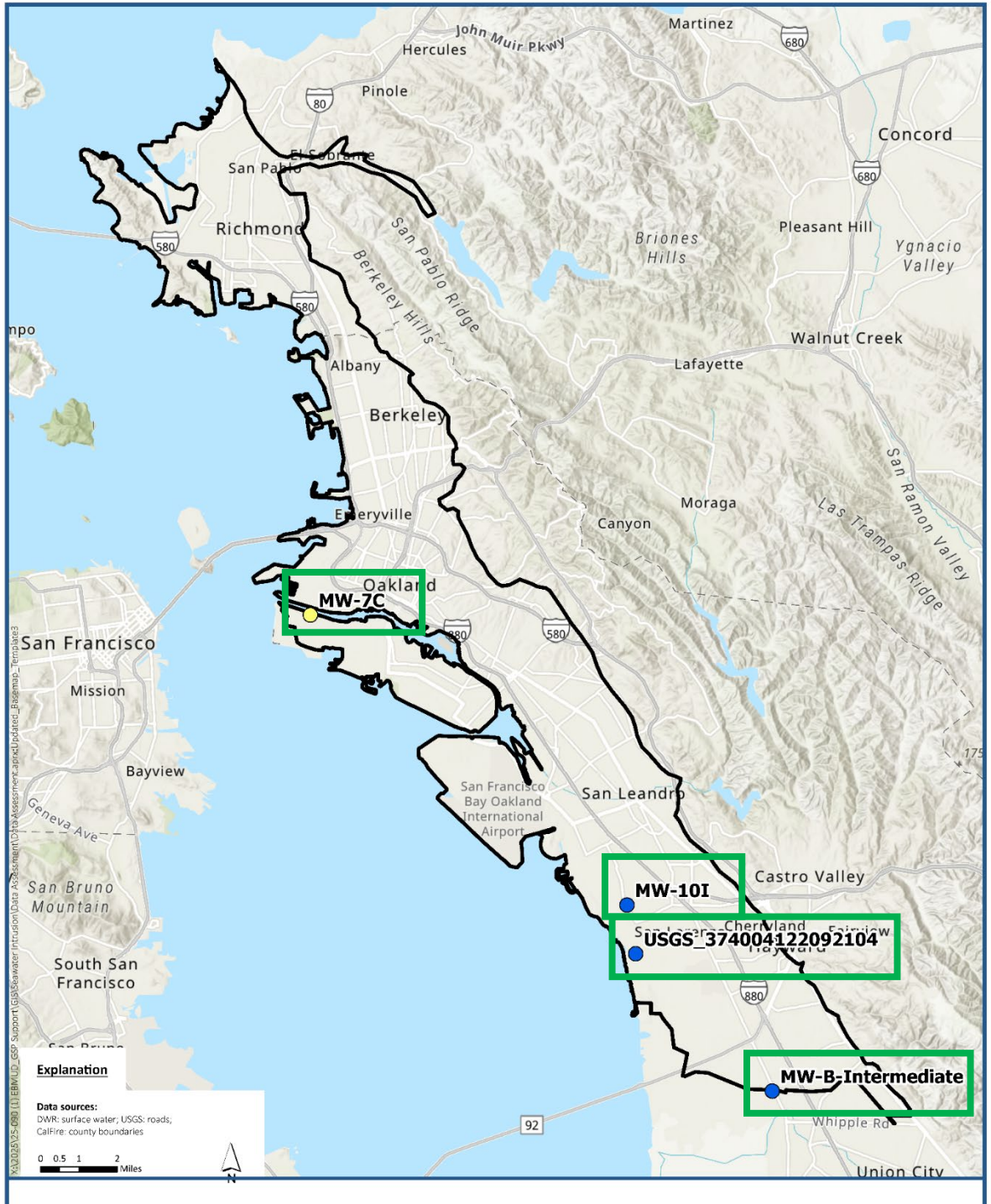
Proposed Monitoring Network – Shallow Aquifer

- 6 wells
- Located in shallow aquifer
  - Determined from well construction information



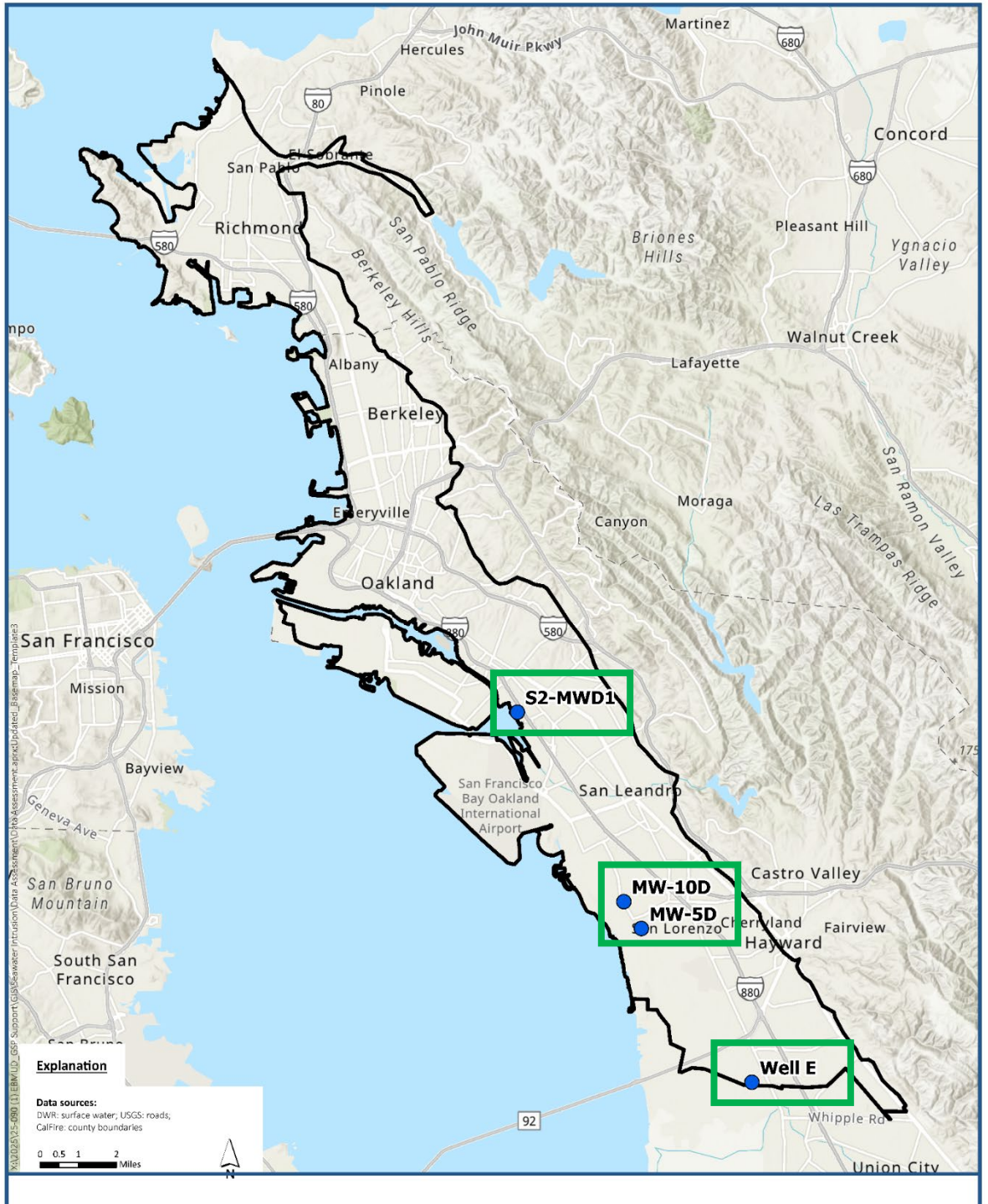
Proposed Monitoring Network – Intermediate Aquifer

- 4 wells
- Located in intermediate aquifer
  - Determined from well construction information



Proposed Monitoring Network – Deep Aquifer

- 4 wells
- Located in deep aquifer
  - Determined from well construction information



Proposed SMC for Sentinel Wells

Undesirable Result Criteria

- Any sentinel well exceeding the minimum threshold (MT) will constitute an undesirable result (based on a 3-year running average)

If concentration is below the MT, but a distinct rising trend is observed, the following actions will be implemented:

- *Conduct investigation of potential cause(s) in coordination with agencies*
- *If cause is related to pumping, restrictions may be imposed by GSA, if appropriate*

Minimum Threshold

- 500 mg/L
- If baseline concentration exceeds or is within 20% of 500 mg/L, set MT at baseline concentration plus 20%

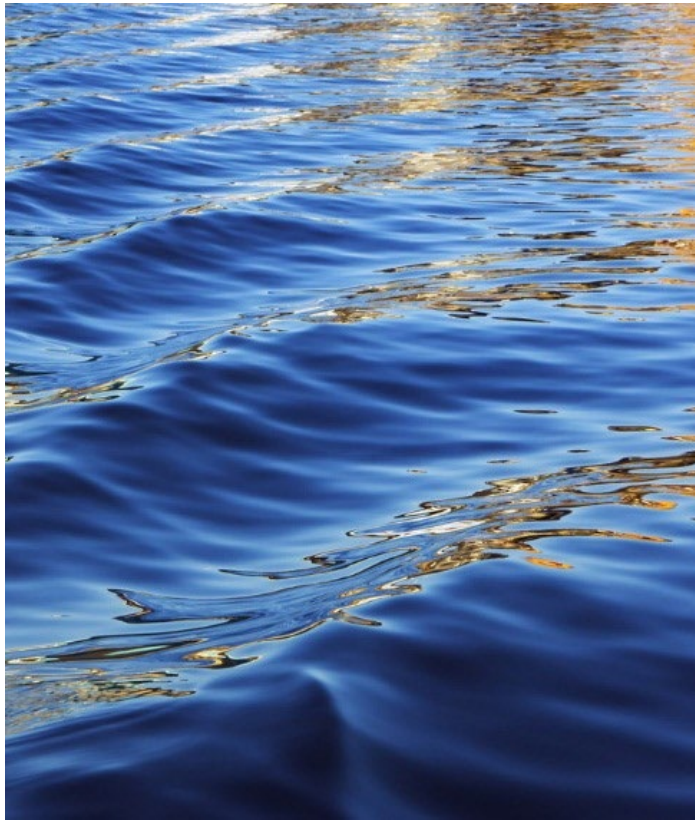
20% increase is based on evaluation of 3 potential sources of fluctuations:

1. *Analytical lab methods*
2. *Sampling methods*
3. *Variability in GW system*

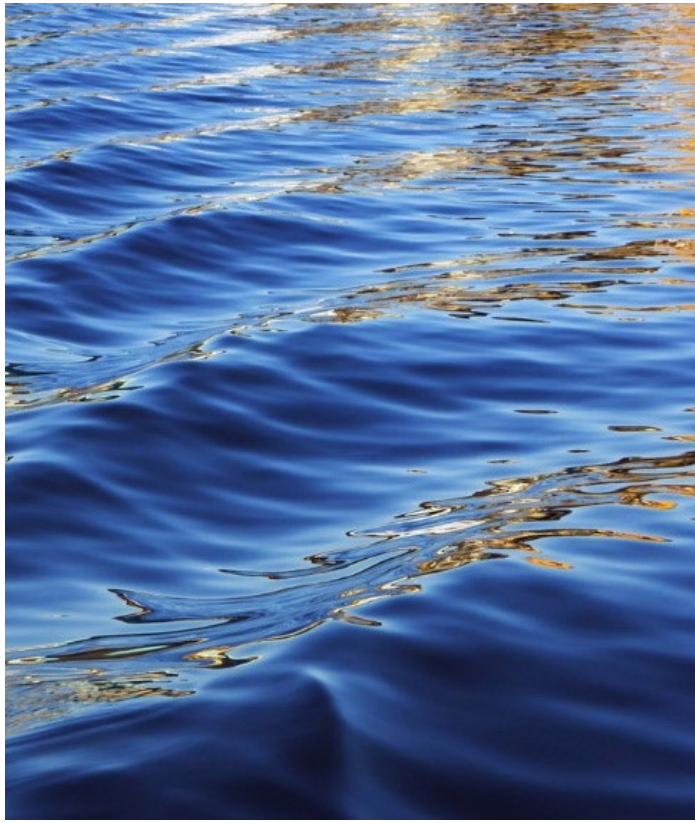
Measurable Objective

- Average baseline conditions

Comments and Questions



Next Steps

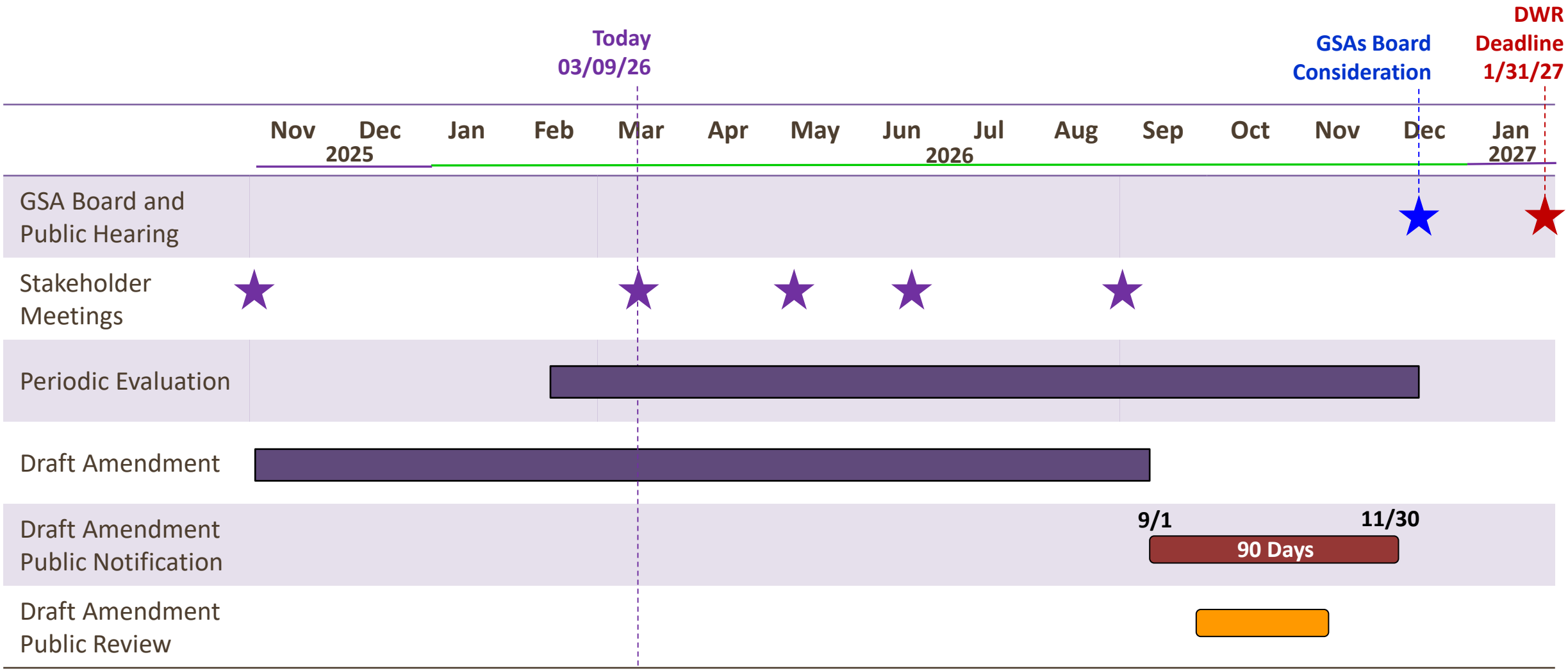


Key Ongoing GSP Updates

Evaluating coastal groundwater-dependent ecosystems (GDEs) to refine the GDEs list and developing the monitoring approach

Developing proposed approach to address DWR's corrective action on interconnected surface water

Schedule


Today
03/09/26
GSAs Board
Consideration
DWR
Deadline
1/31/27
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
2025
2026
2027
GSA Board and
Public Hearing
Stakeholder
Meetings
Periodic Evaluation
Draft Amendment
Draft Amendment
Public Notification
9/1
11/30
90 Days
Draft Amendment
Public Review

Key Dates for General Stakeholders

Anticipated Upcoming Stakeholders Meetings	• May • June • Late August/early September
Draft GSP Amendment for Public Review	• Released around mid-September • 45-day review period
EBMUD Board and Hayward City Council Consideration of GSP Amendment	• December

EBMUD and City of Hayward SGMA Webpages
www.ebmud.com/sgma
www.hayward-ca.gov/your-government/departments/utilities/sustainable-groundwater-management