MoundBasin

GROUNDWATER SUSTAINABILITY AGENCY

GROUNDWATER SUSTAINABILITY PLAN WORKSHOP NO. 3

JULY 15, 2021

WORKSHOP COMPONENTS

- SGMA and GSP Background
- Summary of Draft GSP Contents
- Questions and Stakeholder Feedback

WORKSHOP CAVEAT

- Most slides are recycled from prior workshops.
- There may be minor differences between slide content and draft GSP.

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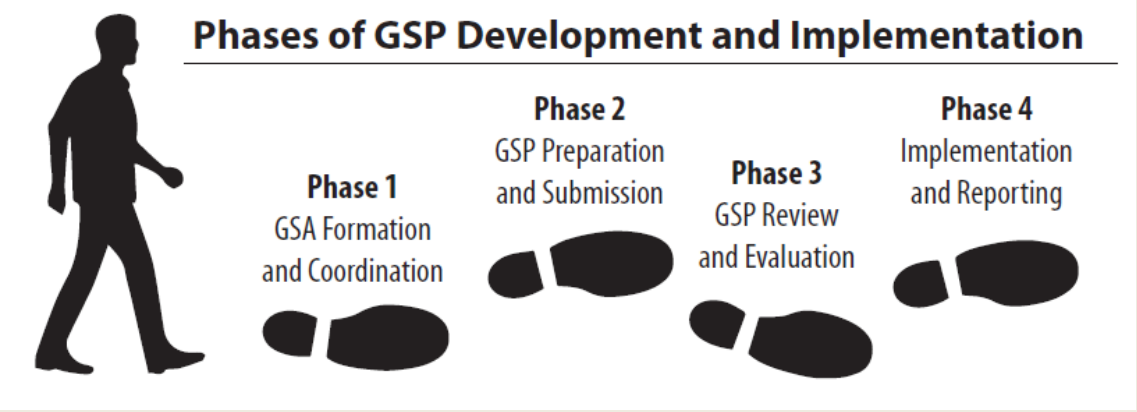
SGMA AND GSP BACKGROUND

WHAT IS SGMA?

- Sustainable Groundwater Management Act
  - Three bill package signed into CA law in late 2014
  - Provides a statewide framework for long-term sustainable groundwater management in CA
  - Requires basins subject to the act to be managed sustainably 20 years after adopting a Groundwater Sustainability Plan (GSP) by a local Groundwater Sustainability Agency (GSA)

SGMA REQUIREMENTS

1. Form a Groundwater Sustainability Agency (GSA)
2. Adopt a Groundwater Sustainability Plan (GSP)
   - Due January 31, 2022
3. Achieve Sustainable Groundwater Management
   - 20 years following GSP adoption



WHAT IS A GSP?

The GSP is a flexible road map for how a groundwater basin will achieve long term sustainability by avoiding undesirable results through data-driven adaptive management

PURPOSE OF THE GSP IS TO AVOID "UNDESIRABLE RESULTS"

- Overarching goal of SGMA is to <u>avoid undesirable results</u> for each of the six SGMA sustainability indicators:

- Undesirable results and actions to prevent them are <u>defined at the local level by the GSA in the GSP</u>

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United Water CONSERVATION DISTRICT

VENTURA WATER

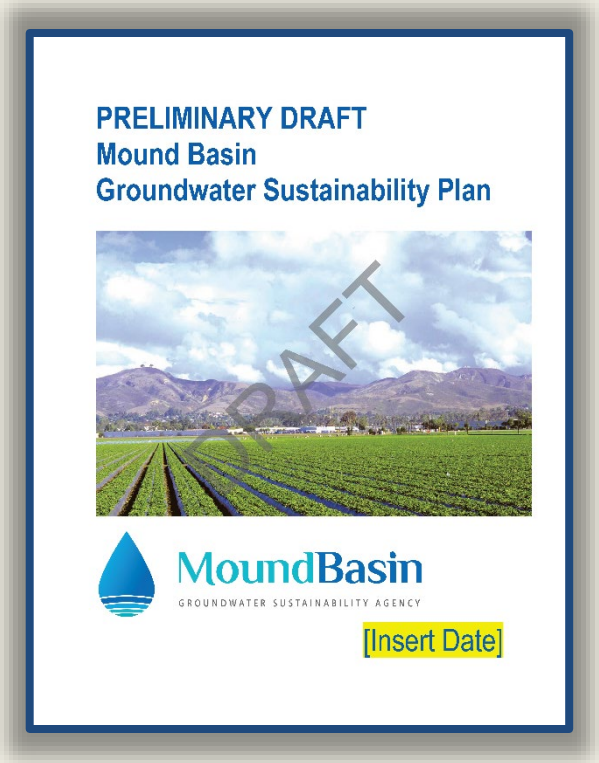
OVERVIEW OF GSP CONTENTS

GSP CONTENTS

GSP Contents are per GSP Emergency Regulations:

- Executive Summary

1. Introduction to Plan Contents
2. Administrative Information
3. Basin Setting
4. Sustainable Management Criteria
5. Monitoring Networks
6. Projects and Management Actions
7. GSP Implementation

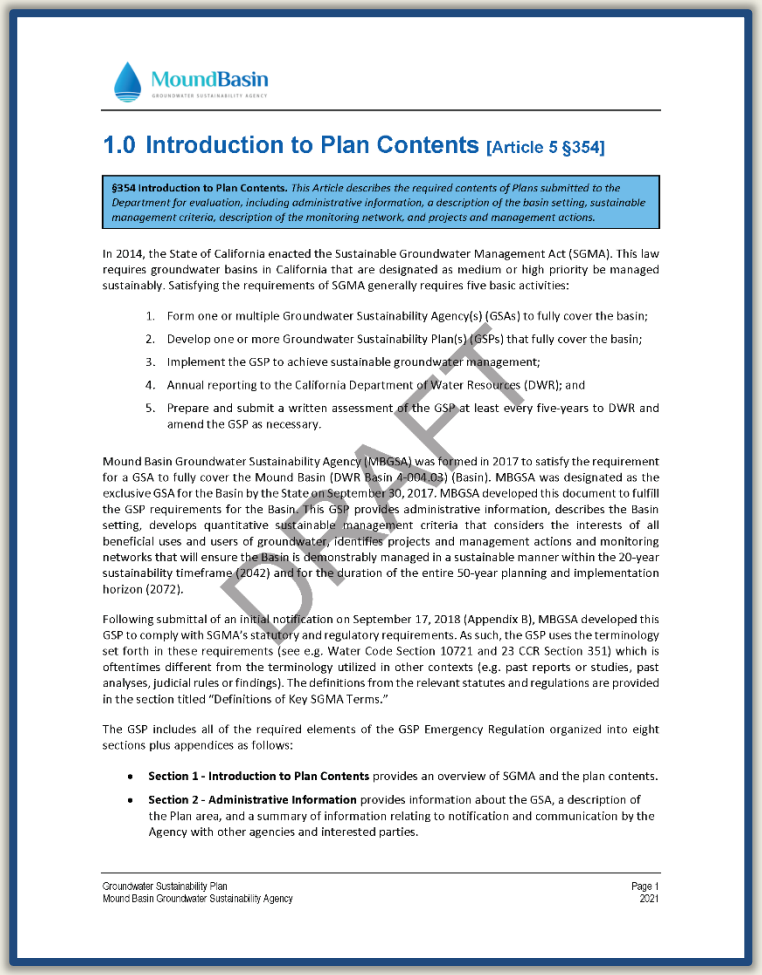


*** *Preliminary Draft GSP Available On MBGSA Website***

GSP LAYOUT

"Regulation Box" Describes the GSP Emergency Regulation that is addressed by the GSP section.

GSP content that addresses the GSP Emergency Regulation.



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1.0 Introduction to Plan Contents [Article 5 §354]

§354 Introduction to Plan Contents. *This Article describes the required contents of Plans submitted to the Department for evaluation, including administrative information, a description of the basin setting, sustainable management criteria, description of the monitoring network, and projects and management actions.*

In 2014, the State of California enacted the Sustainable Groundwater Management Act (SGMA). This law requires groundwater basins in California that are designated as medium or high priority be managed sustainably. Satisfying the requirements of SGMA generally requires five basic activities:

1. Form one or multiple Groundwater Sustainability Agency(s) (GSAs) to fully cover the basin;
2. Develop one or more Groundwater Sustainability Plan(s) (GSPs) that fully cover the basin;
3. Implement the GSP to achieve sustainable groundwater management;
4. Annual reporting to the California Department of Water Resources (DWR); and
5. Prepare and submit a written assessment of the GSP at least every five-years to DWR and amend the GSP as necessary.

Mound Basin Groundwater Sustainability Agency (MBGSA) was formed in 2017 to satisfy the requirement for a GSA to fully cover the Mound Basin (DWR Basin 4-004.03) (Basin). MBGSA was designated as the exclusive GSA for the Basin by the State on September 30, 2017. MBGSA developed this document to fulfill the GSP requirements for the Basin. This GSP provides administrative information, describes the Basin setting, develops quantitative sustainable management criteria that considers the interests of all beneficial uses and users of groundwater, identifies projects and management actions and monitoring networks that will ensure the Basin is demonstrably managed in a sustainable manner within the 20-year sustainability timeframe (2042) and for the duration of the entire 50-year planning and implementation horizon (2072).

Following submittal of an initial notification on September 17, 2018 (Appendix B), MBGSA developed this GSP to comply with SGMA's statutory and regulatory requirements. As such, the GSP uses the terminology set forth in these requirements (see e.g. Water Code Section 10721 and 23 CCR Section 351) which is oftentimes different from the terminology utilized in other contexts (e.g. past reports or studies, past analyses, judicial rules or findings). The definitions from the relevant statutes and regulations are provided in the section titled "Definitions of Key SGMA Terms."

The GSP includes all of the required elements of the GSP Emergency Regulation organized into eight sections plus appendices as follows:

- **Section 1 - Introduction to Plan Contents** provides an overview of SGMA and the plan contents.
- **Section 2 - Administrative Information** provides information about the GSA, a description of the Plan area, and a summary of information relating to notification and communication by the Agency with other agencies and interested parties.

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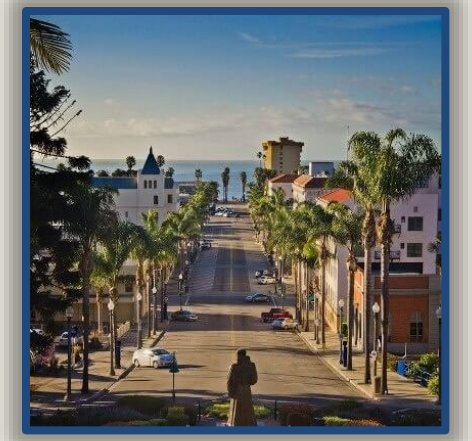
SECTION 1
INTRO TO PLAN CONTENTS

- SGMA Background
- Overview of GSP Contents

SECTION 2
ADMINISTRATIVE INFO

- Information about the GSA
- Description of the Plan area
  - Jurisdictional areas
  - Water resources programs that impact groundwater management
  - Land use plans
- Public Notice and Communication



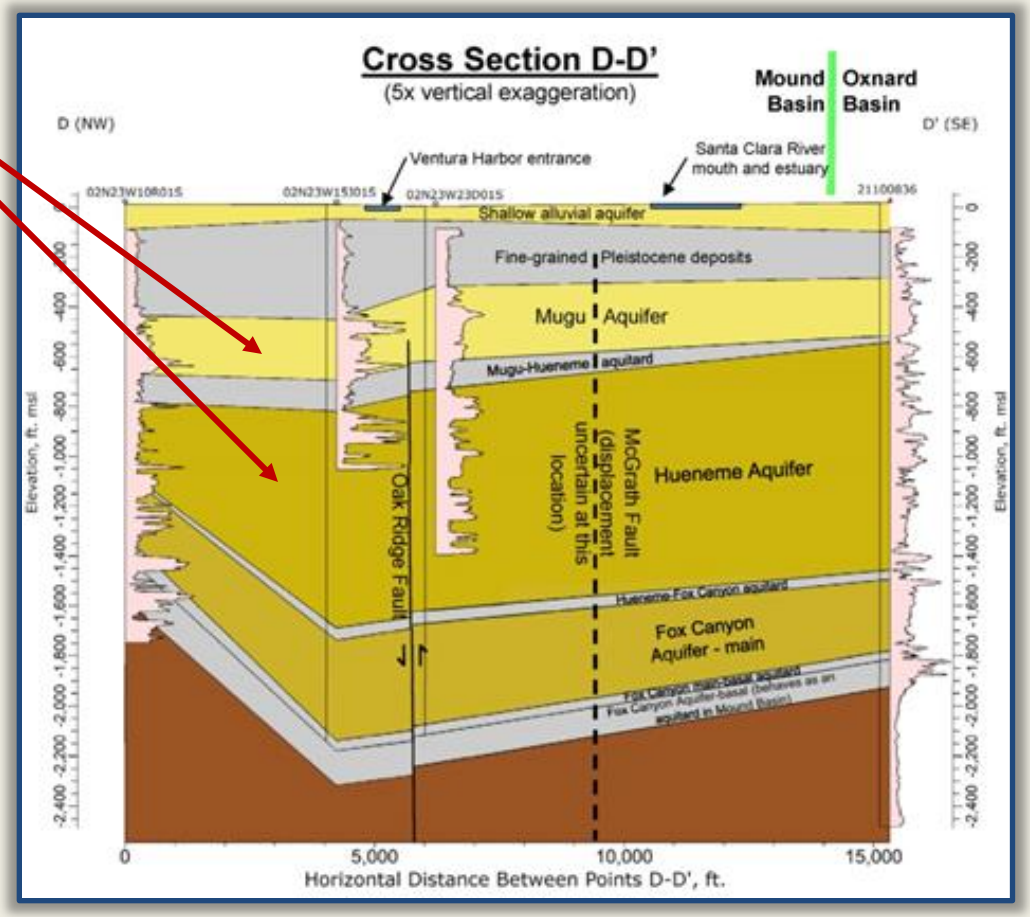
SECTION 1 & 2 QUESTIONS

SECTION 3
BASIN SETTING

Sect. 3.1: Hydrogeologic Conceptual Model ("HCM")	• Description of the groundwater basin
Sect. 3.2: Groundwater Conditions	• Description of historical conditions in the Basin
Sect. 3.3: Water Budgets	• Description of water inflows and outflows

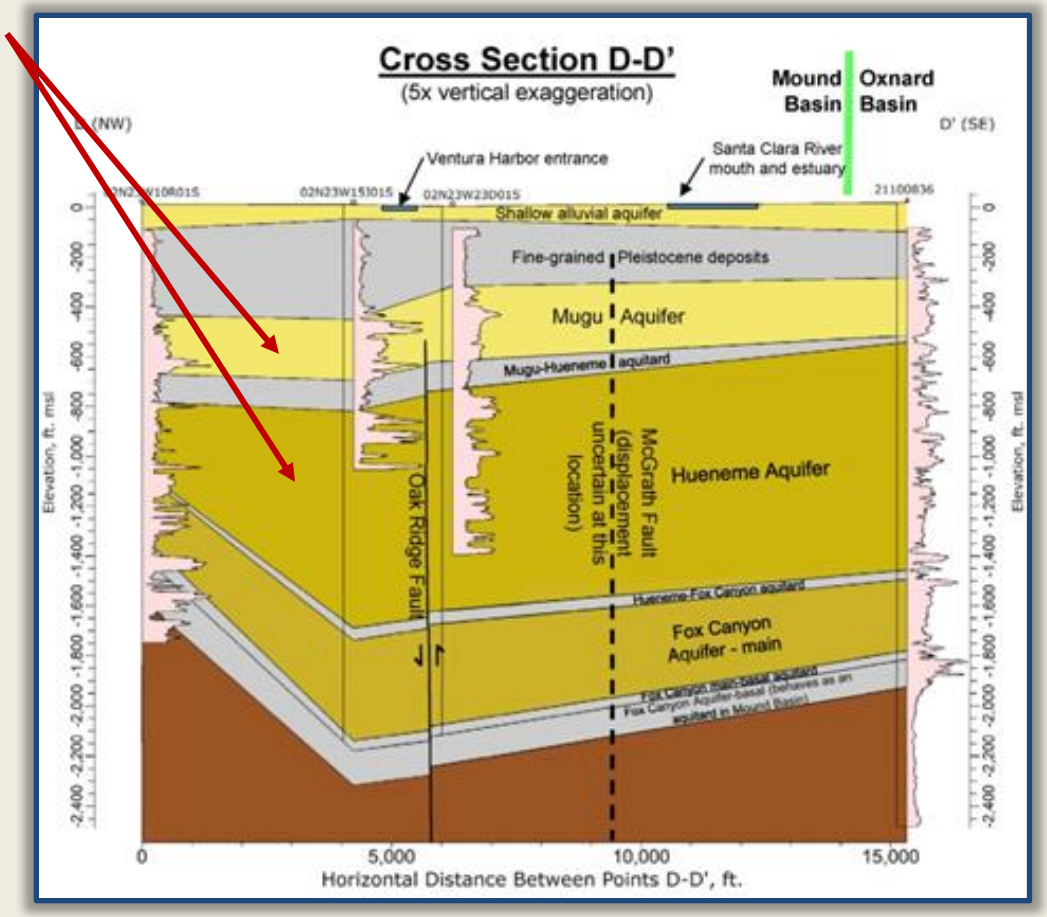
SECTION 3.1 HCM KEY INFO: AQUIFERS

- Two "principal" aquifers:
  - Deep
  - Confined
- Other units do not provide significant quantities of water to wells and will not managed by MBGSA



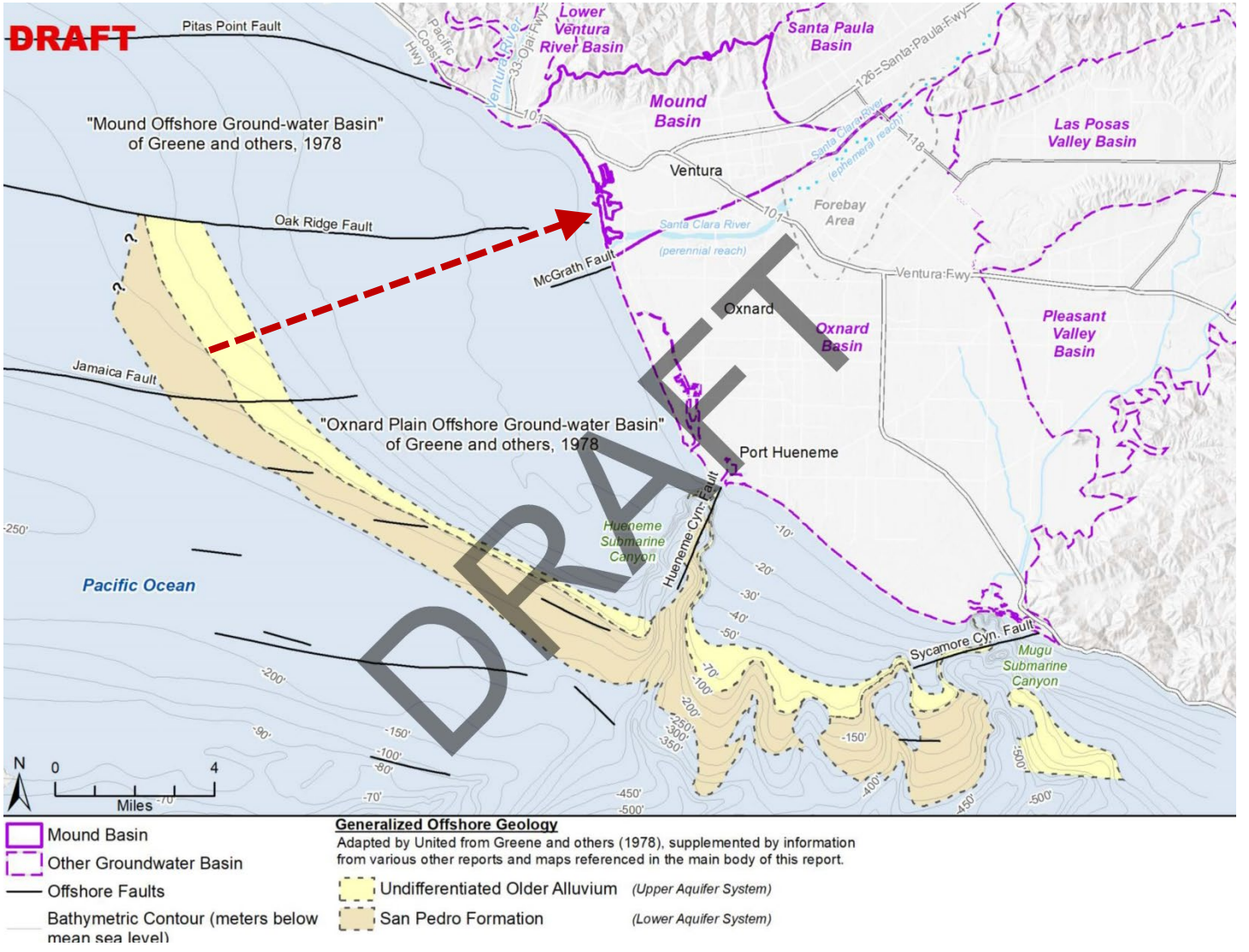
SECTION 3.1 HCM KEY INFO: PRINCIPAL AQUIFERS & SURFACE WATER

- Principal" aquifers are not materially connected with surface water
  - Mugu Aquifer ~300-400 ft below Santa Clara River
  - Separated by thick zone of fine-grained sediments



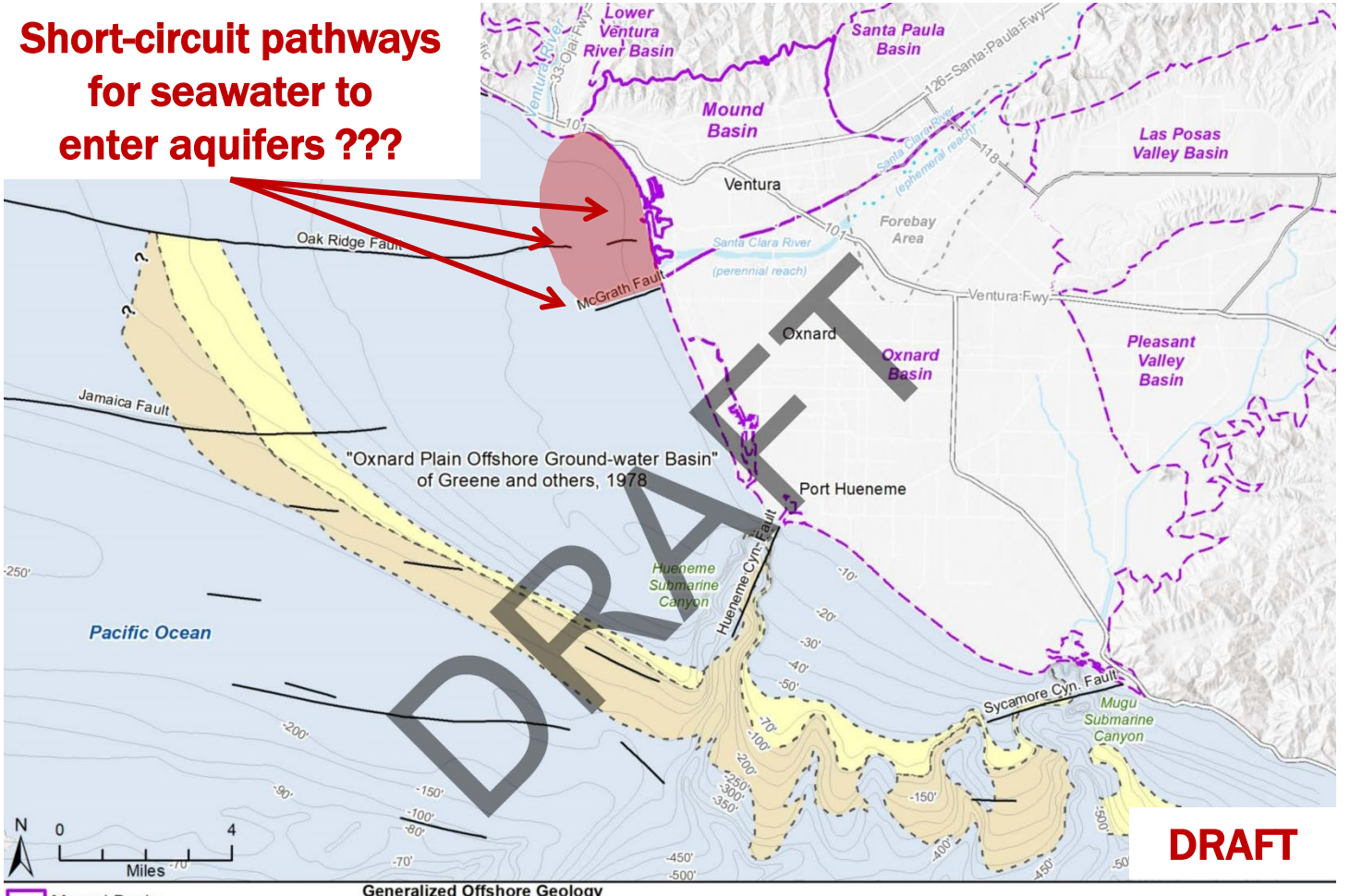
SECTION 3.1 HCM KEY INFO: PRINCIPAL AQUIFER CONNECTION TO SEAWATER

Seawater would need to flow approximately 10 miles within the aquifer to reach the shoreline, which would require hundreds of years at a consistently low groundwater level condition in the basin. Such a timeframe extends past the GSP planning horizon.



SECTION 3.1 HCM KEY INFO: PRINCIPAL AQUIFER CONNECTION TO SEAWATER

Potential gaps in the confining layer above the aquifers and/or faulting could possible provide short-circuit pathways for seawater intrusion near the shoreline. If such short-circuit pathways exist, seawater could reach the shoreline within the GSP implementation period.



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Note: Area depicted in red is conceptual and provided for discussion purposes only.

SECTION 3.2 GW CONDITIONS KEY INFO: GROUNDWATER FLOW

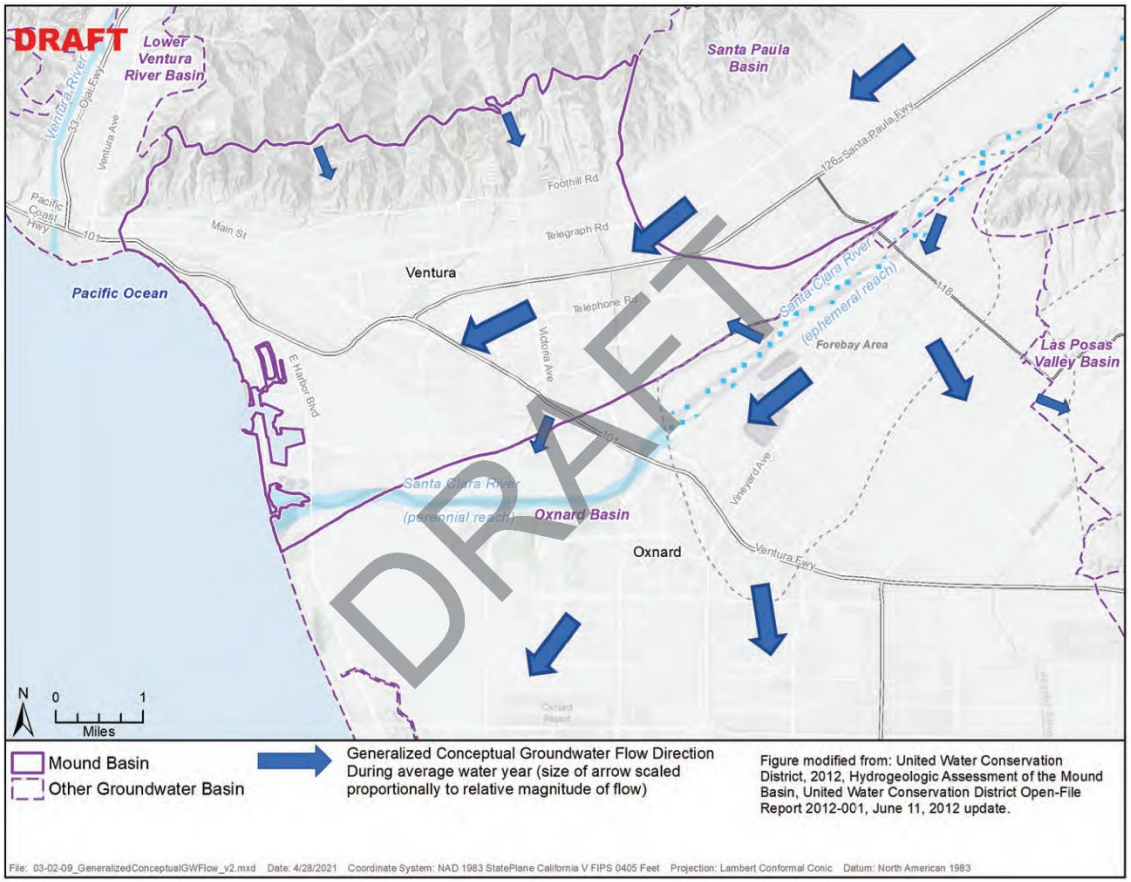
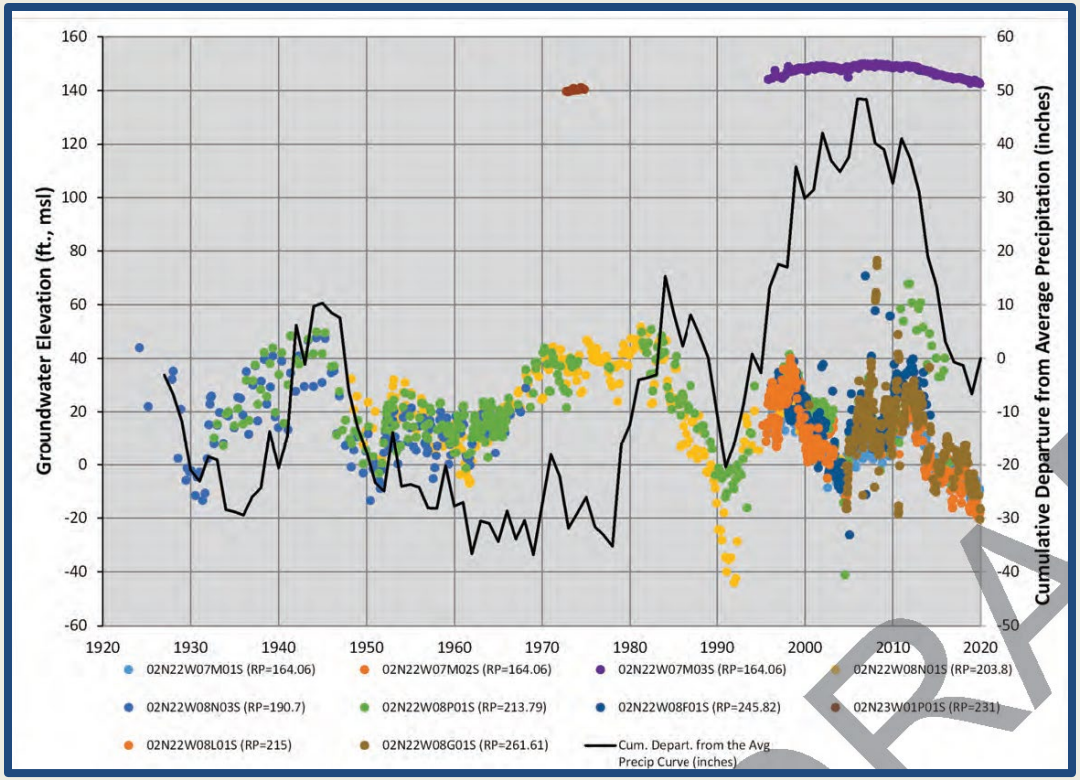


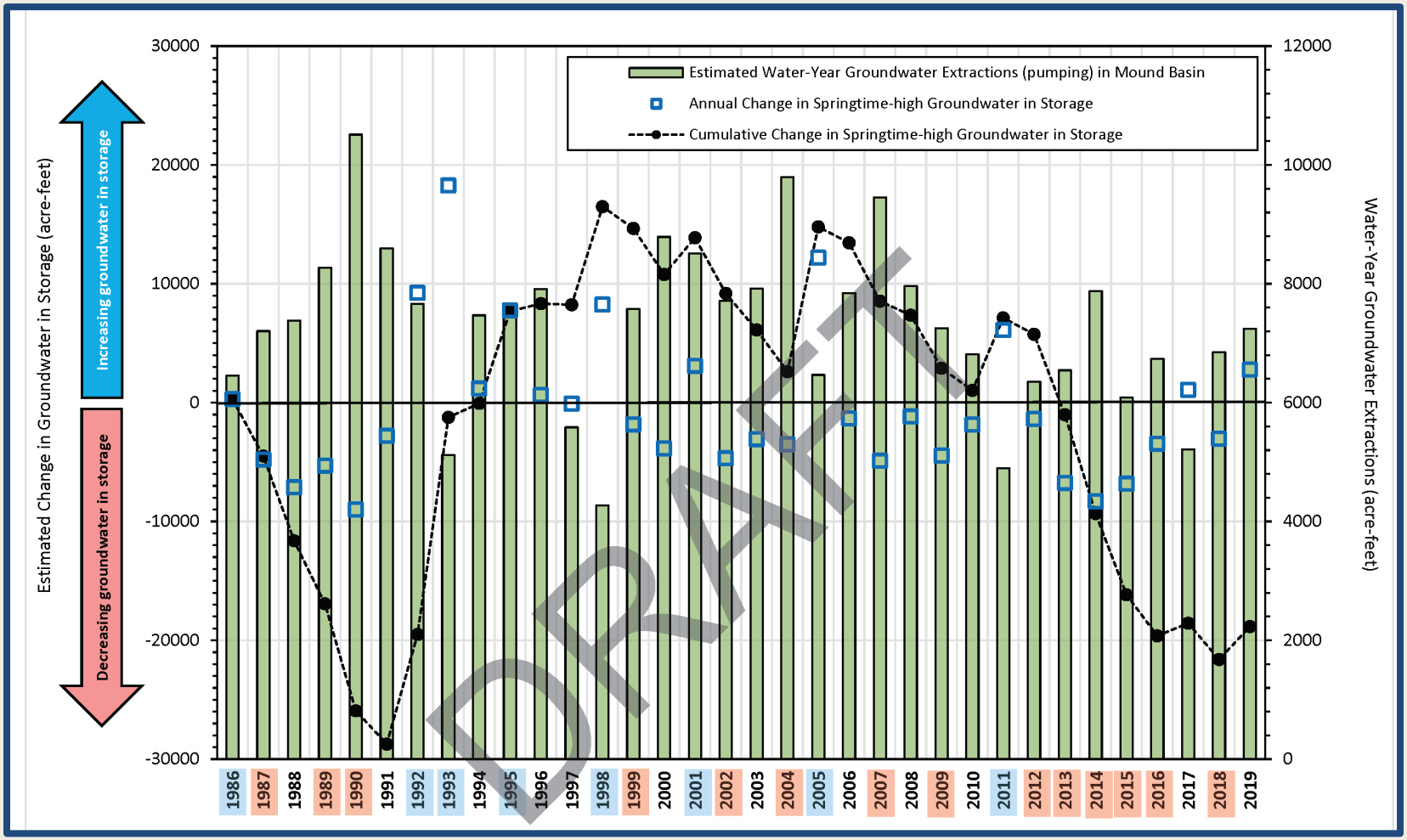
Figure 3.2-09 Generalized Conceptual Groundwater Flow Paths for the Principal Aquifers.

SECTION 3.2 GW CONDITIONS KEY INFO: GROUNDWATER ELEVATIONS

- *Groundwater levels have historically risen and fallen in sync with climatic trends.*
- *Chronic lowering of groundwater levels or long-term reduction of groundwater storage has not been observed.*



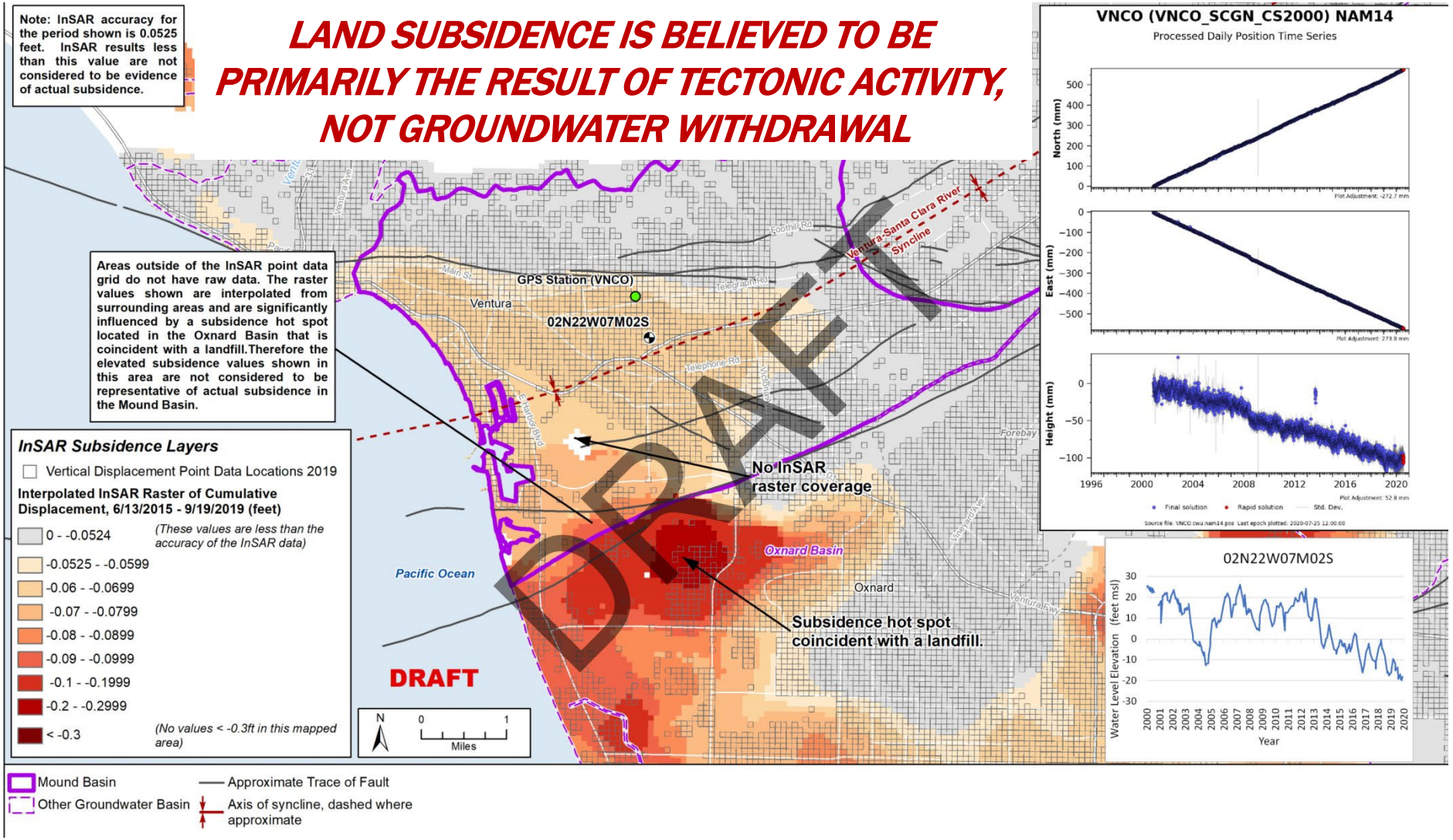
SECTION 3.2 GW CONDITIONS KEY INFO: GROUNDWATER STORAGE



SECTION 3.2 GW CONDITIONS KEY INFO: GROUNDWATER QUALITY

Constituent	Relevant Standard (mg/L)	Mugu Aquifer Representative Concentration (mg/L)	Hueneme Aquifer Representative Concentration (mg/L)
Nitrate (as NO3)	45	Non-Detect	Non-Detect
Total Dissolved Solids	1,200	902	1,171
Sulfate	600	350	488
Chloride	150	50	76
Boron	1	0.47	0.62
Contaminants	*No contaminant plumes identified in Mound Basin*		

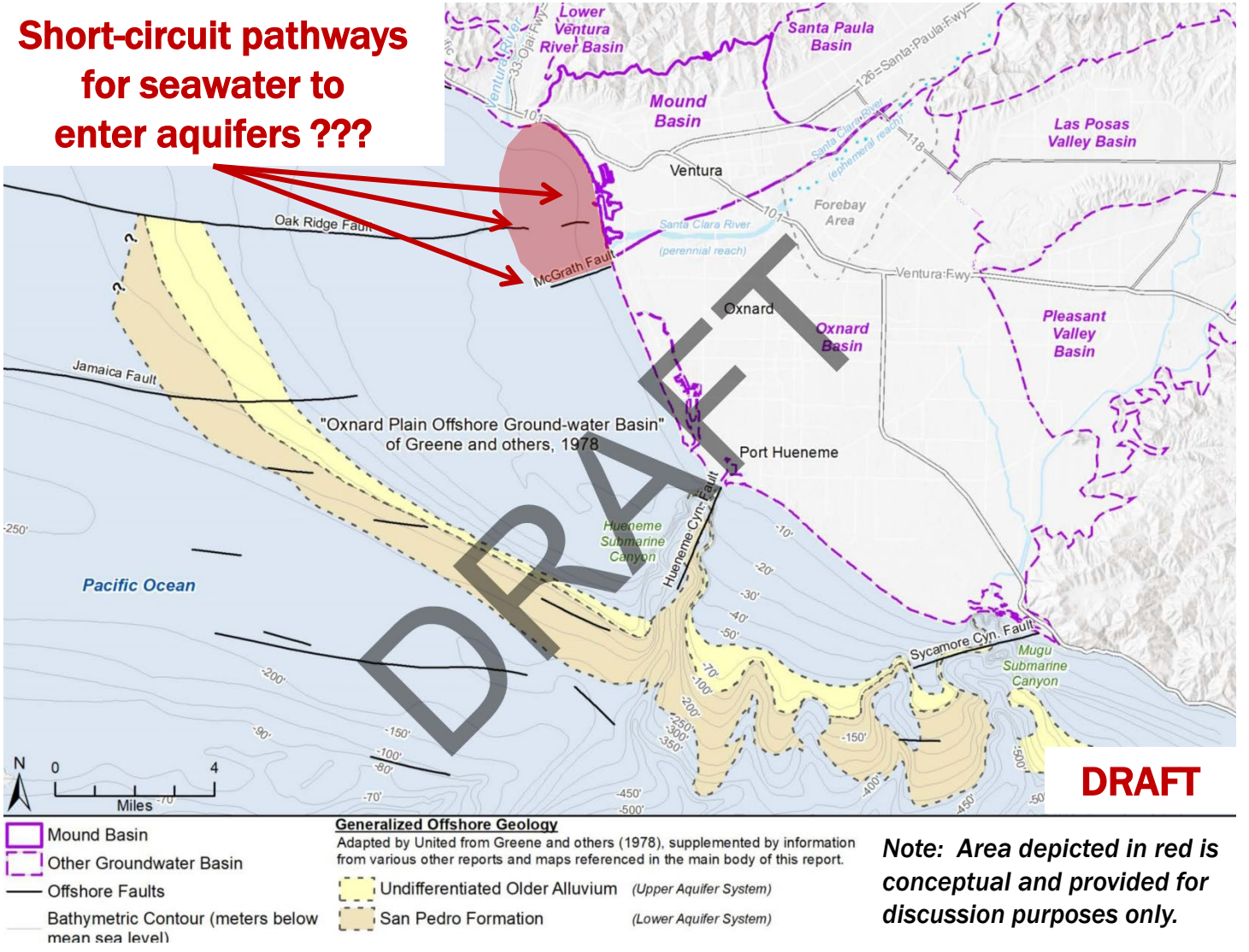
SECTION 3.2 GW CONDITIONS KEY INFO: LAND SUBSIDENCE



SECTION 3.2 GW CONDITIONS KEY INFO: SEAWATER INTRUSION

Seawater has not been detected in Mound Basin wells.

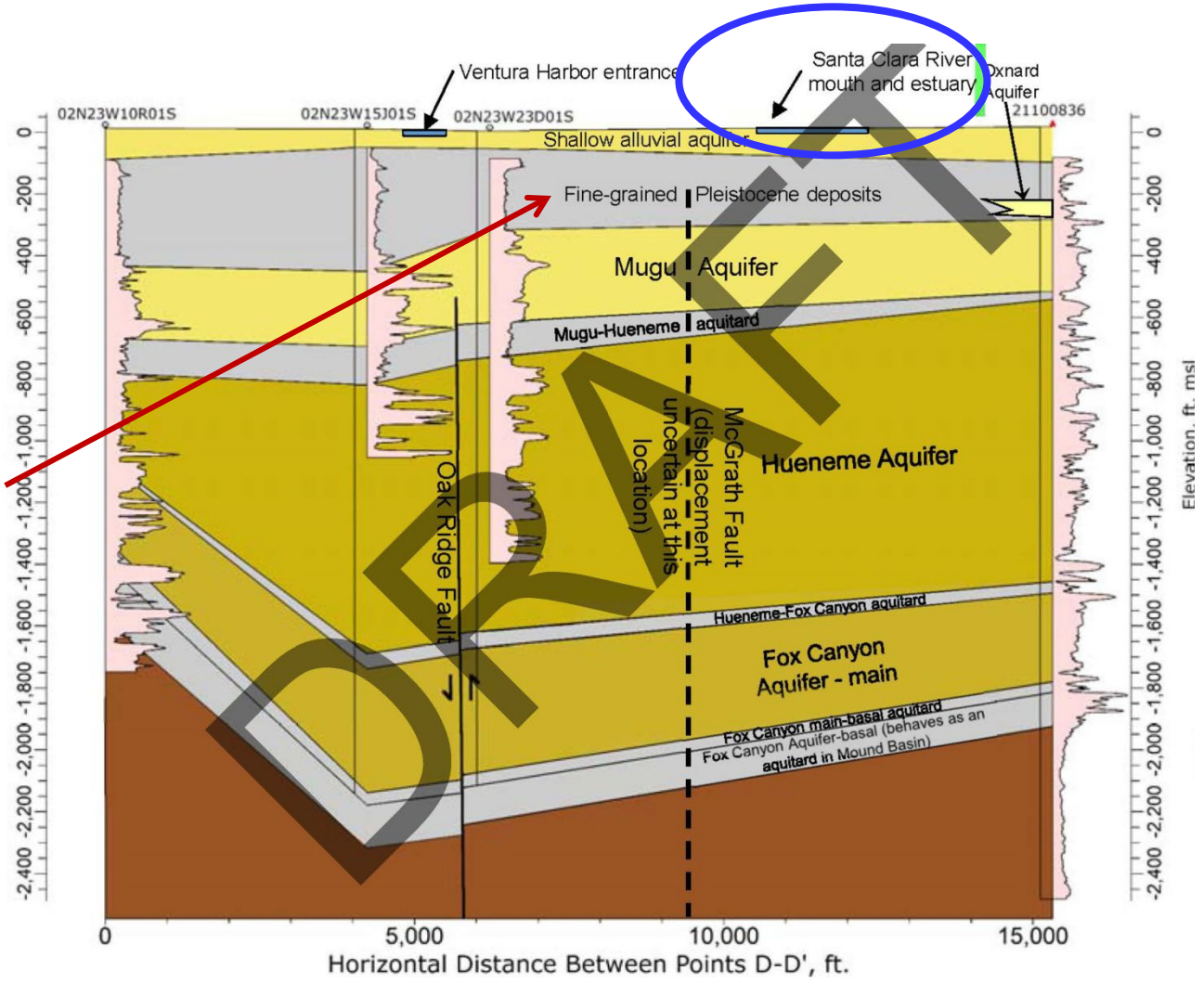
However, GSP should consider potential for seawater intrusion along potential short-circuit pathways located nearshore.



Note: Area depicted in red is conceptual and provided for discussion purposes only.

SECTION 3.2 GW CONDITIONS KEY INFO: INTERCONNECTED SURFACE WATER

- *Shallow GW likely interconnected with river, however, there is no pumping from shallow aquifer.*
- *Surface water and principal aquifers are separate by thick aquitards. Pumping in principal aquifers is not believed to materially affect surface water (i.e., no measurable depletion of surface water by pumping).*

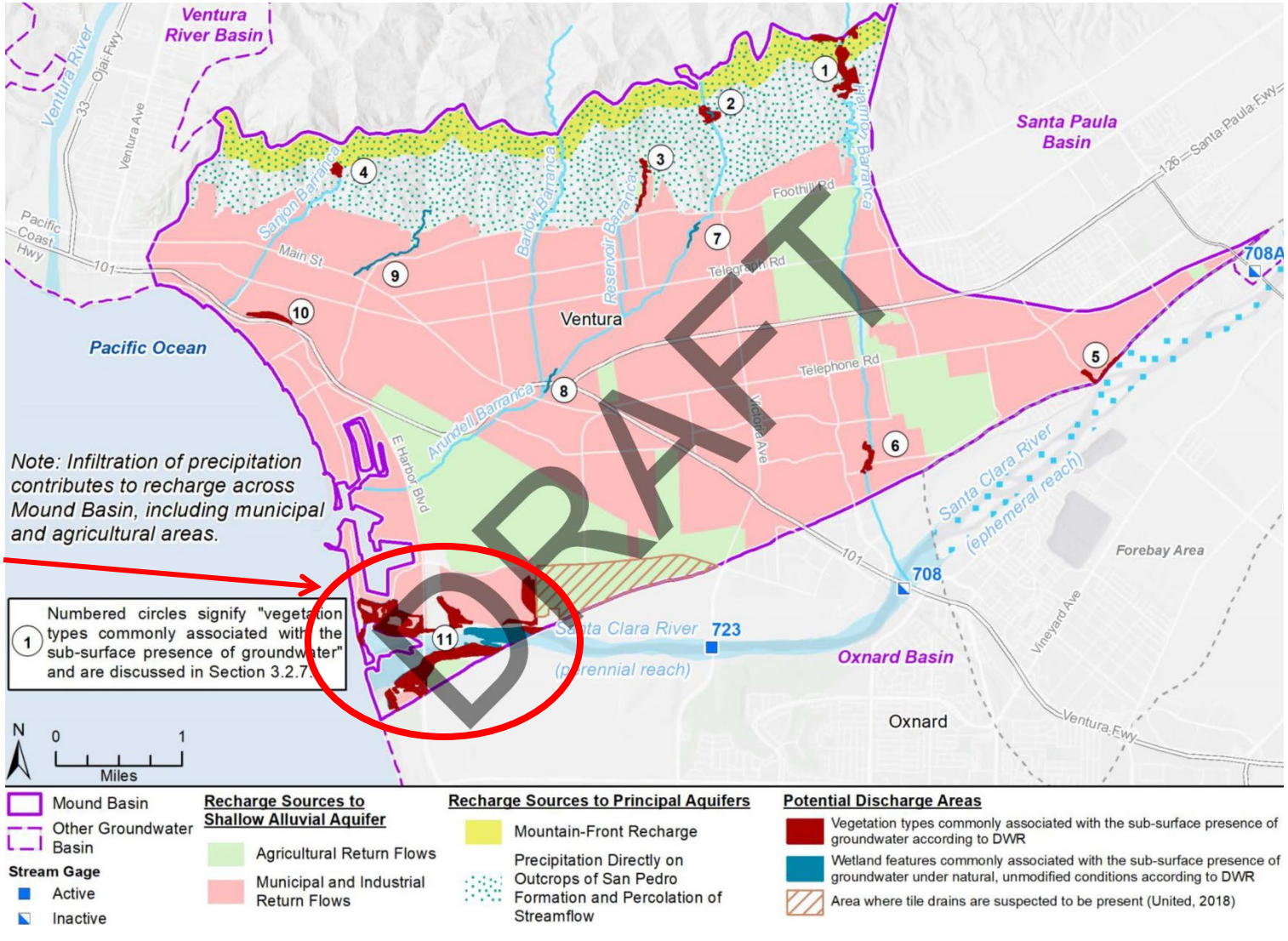


SECTION 3.2 GW CONDITIONS KEY INFO: GROUNDWATER DEPENDENT ECOSYSTEMS

11 areas of potential GDEs were identified and reviewed

10/11 areas were determined not to be actual GDEs.

Area #11 (Santa Clara River and adjacent riparian area) was retained as a GDE. However, there is no shallow GW pumping.



SECTION 3.3 WATER BUDGET KEY INFO:

- Water budget is an accounting of water inflows and outflows to/from the Basin
- GSP requirements
  - Historical/Current Water Budget
  - Future Water Budgets
- Estimation methods vary by water budget term

HISTORICAL/CURRENT WATER BUDGET ESTIMATION METHODS:

Measured Component	Estimated Component	Numerical Model Calculated Component
Groundwater pumping	Recharge (infiltration) of rainfall	Groundwater underflows to/from Mound Basin
Surface-water imports	Mountain-front recharge	Surface-water/groundwater interaction
Groundwater imports	Return flows (Ag and M&I)	Evapotranspiration from shallow groundwater
Rainfall	Surface flows in the Santa Clara River watershed	Change in storage
		Discharge to tile drains

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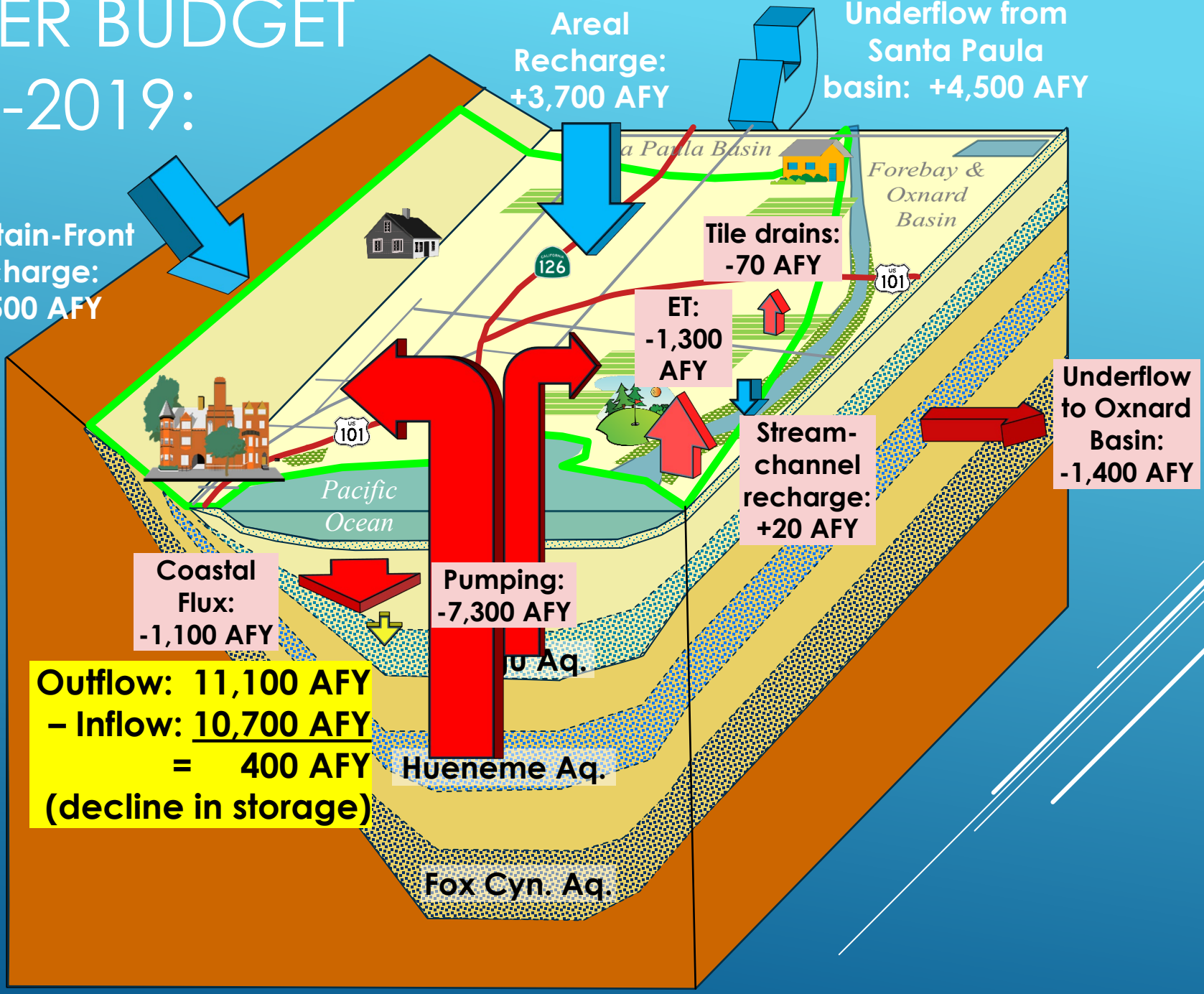
WATER BUDGET 1986-2019:



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FUTURE WATER BUDGET REQUIREMENTS

- SGMA requires minimum 50-yr future projections of groundwater conditions, including water budget for the basin
- Must use >= 50 yrs. of *historical* hydrology
- Must use most recent conditions for baseline estimate of future water demands
- Must evaluate potential effects on water demand due to:
  - Land Use Change
  - Population Change
  - Climate Change

FUTURE WATER BUDGET KEY ASSUMPTIONS

- Hydrology
  - 1943 – 2019 (77 yrs.) is proxy for future conditions
    - Wide range of conditions during this period
- Groundwater Pumping
  - Agricultural – per MBAWG
    - Ranges from 2,873 AFY in wet yrs. to 3,548 AFY in dry yrs.
  - City of Ventura planned pumping = 4,000 AFY
  - Two industrial wells – same as recent historical pumping

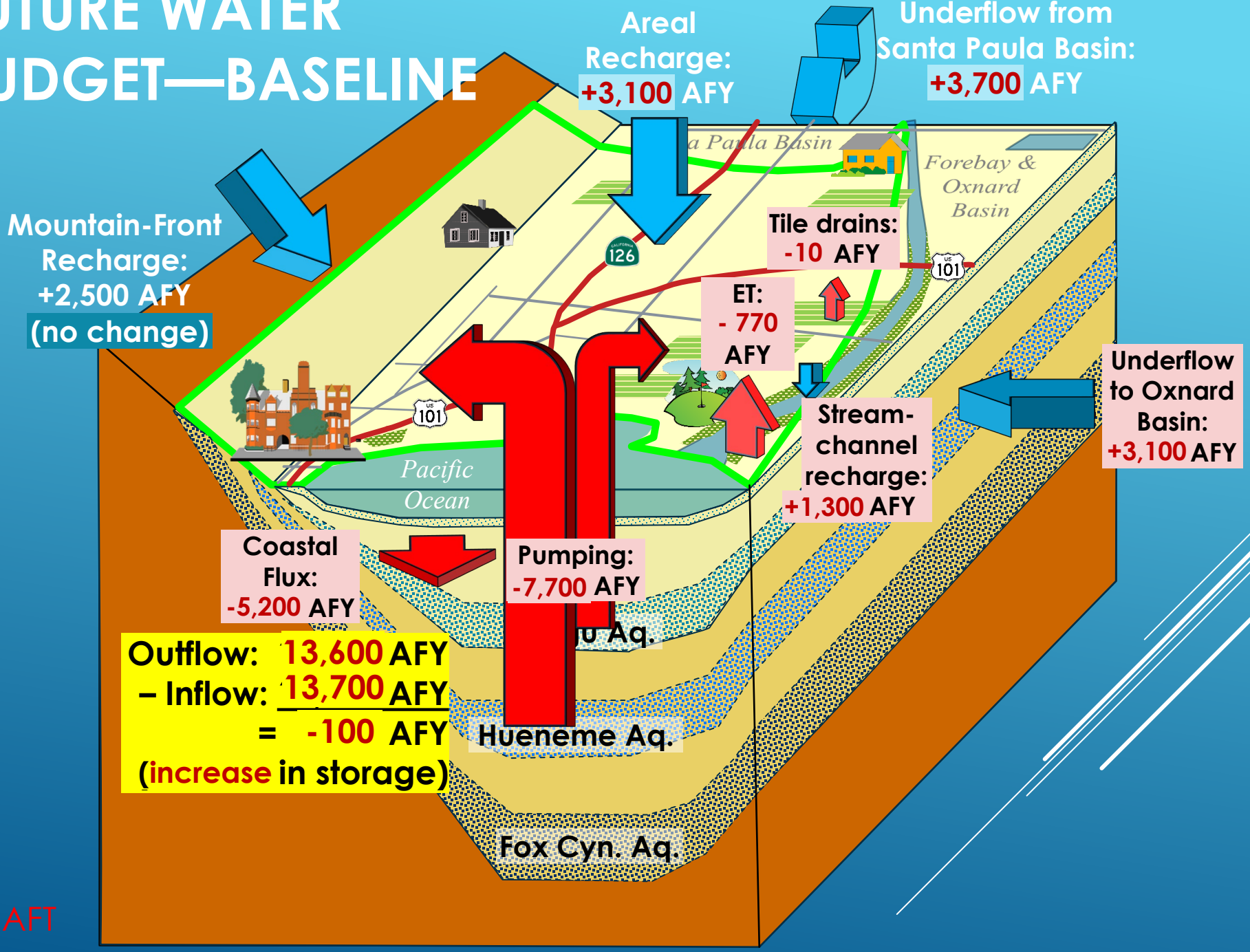
FUTURE WATER BUDGET KEY ASSUMPTIONS (CON'T)

- Adjacent Basins
  - Santa Paula – assume future pumping consistent with recent pumping (adjudicated)
  - Oxnard Basin – used FCGMA "Reduction with Projects Scenario from GSP per FCGMA staff recommendation
    - Adjustments made to reduce unrealistically high groundwater levels in Oxnard Basin Forebay (GW levels above land surface)
- Artificial Recharge (UWCD)
  - Existing Freeman Diversion operations + planned expansion project per UWCD staff

FUTURE WATER BUDGET SGMA REQUIRED ANALYSIS

- Land Use Impact
  - Assume no material change due to SOAR voter initiatives approved through 2050.
  - City has net zero policy for development
- Population Change
  - Same as above.
- Climate Change
  - Evaluated climate change using DWR change factors for 2030 and 2070 climate change conditions
  - Sea level rise 15 cm (2030) and 45 cm (2070)

FUTURE WATER BUDGET—BASELINE



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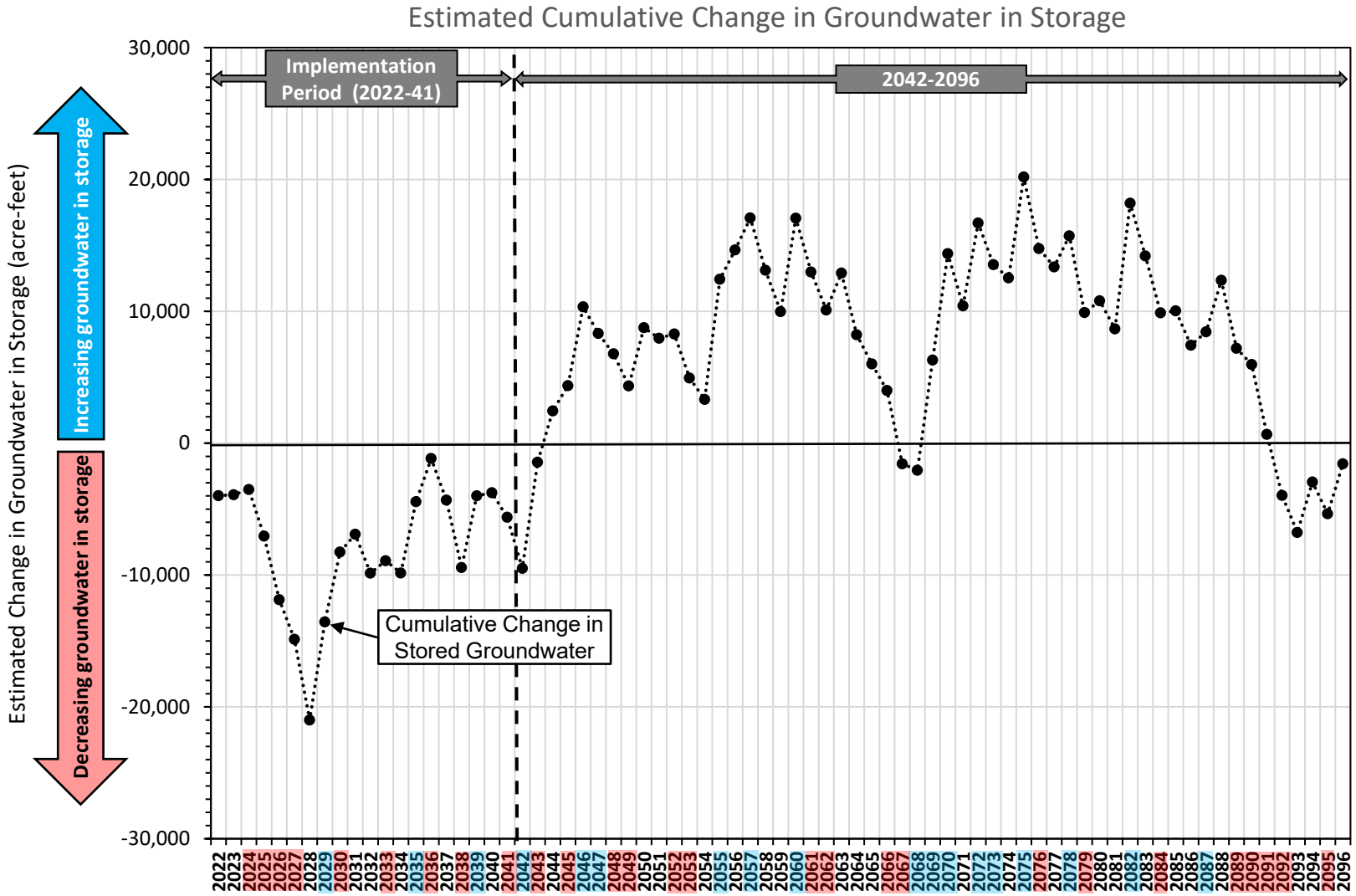
PROJECTED CHANGES IN GROUNDWATER IN STORAGE: BASELINE, TOTAL BASIN



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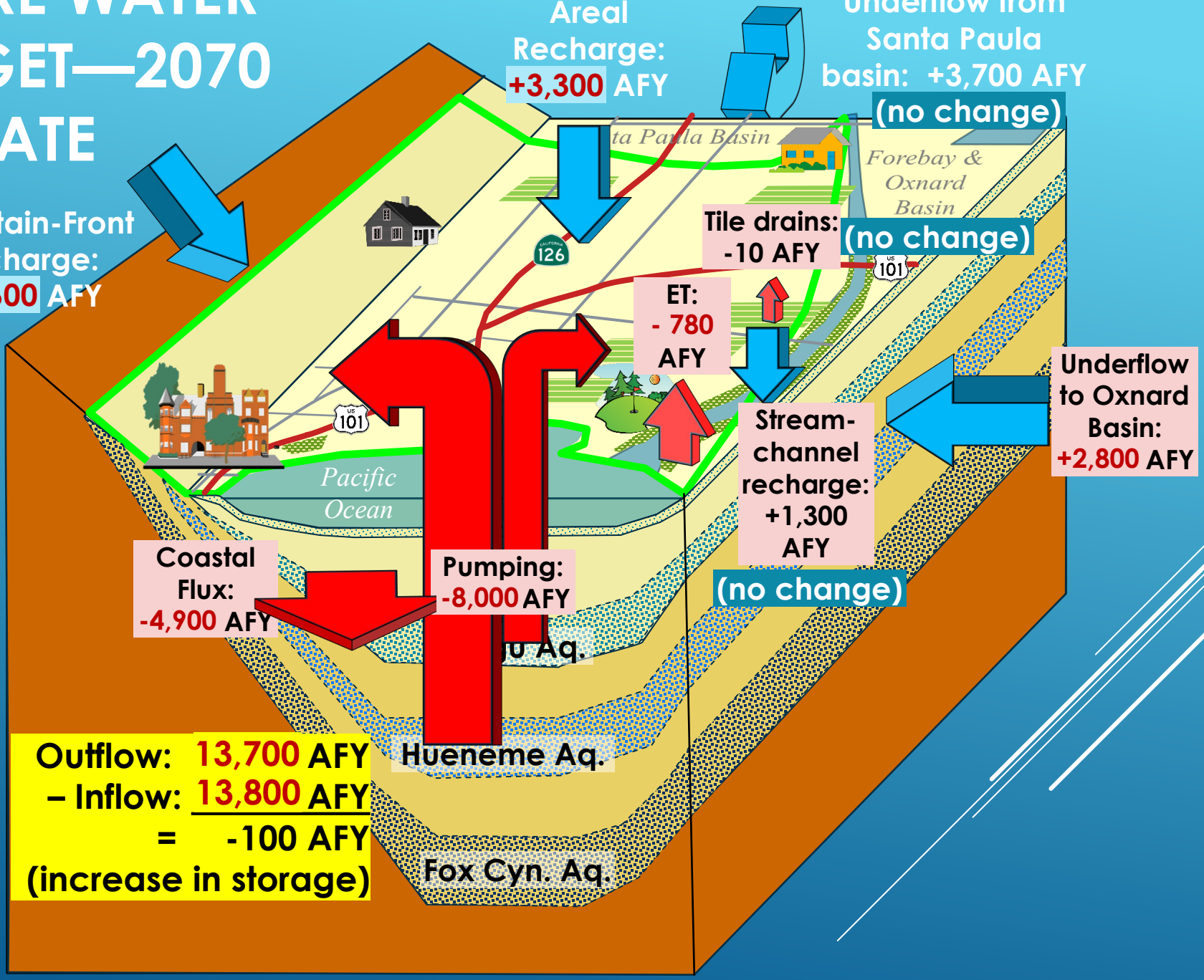
FUTURE WATER BUDGET—2070 CLIMATE



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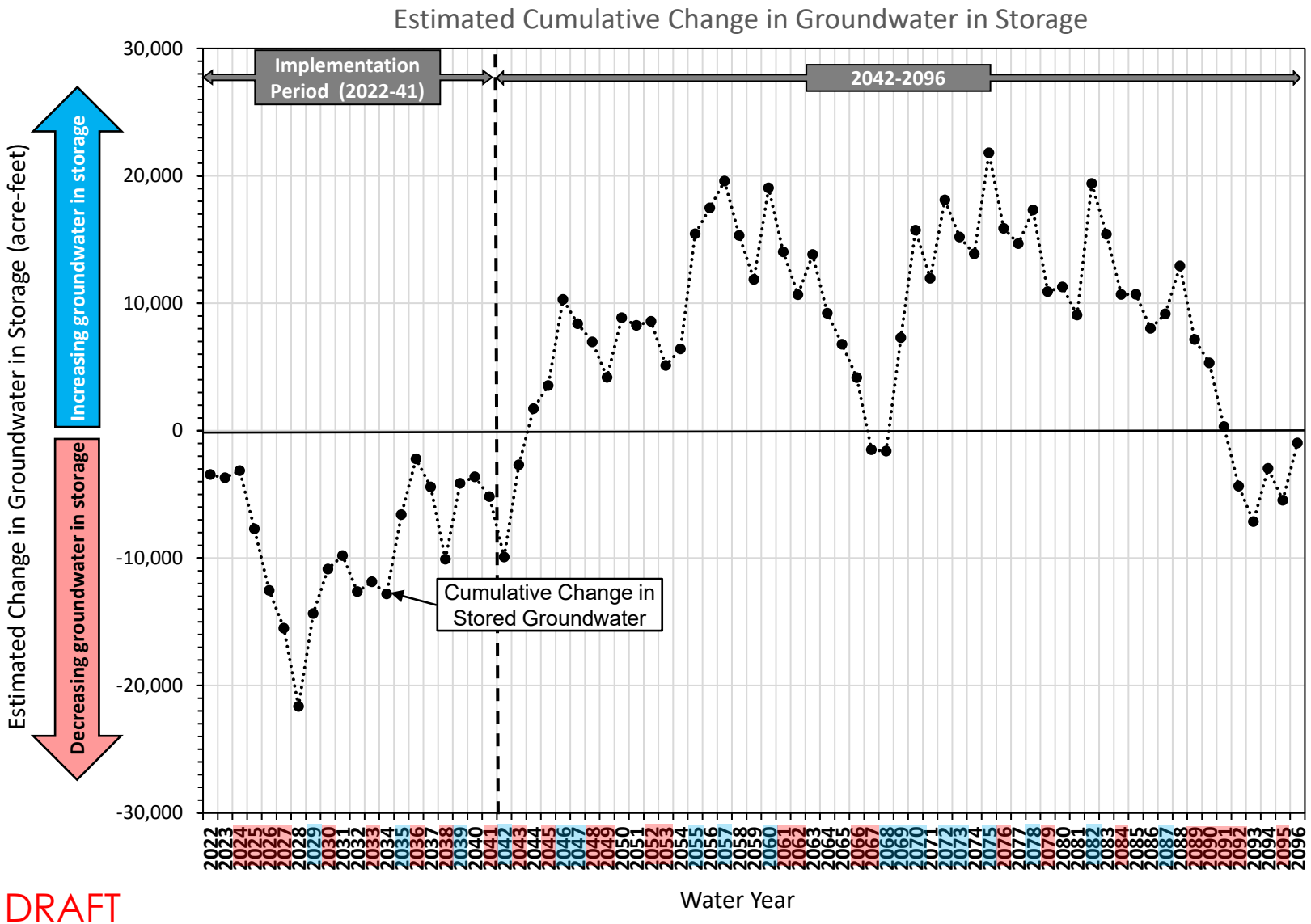
PROJECTED CHANGES IN GROUNDWATER IN STORAGE: 2070 CLIMATE FACTOR, TOTAL BASIN



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SIMULATED FUTURE GROUNDWATER LEVELS

1. Future groundwater levels are predicted to be higher than historical levels due to anticipated increases in Oxnard Basin groundwater levels.
2. The impact of climate change on groundwater levels is typically less than approximately 5 ft.
3. The impact of the Freeman Diversion expansion project is almost undetectable.

SELECTED MODEL OUTPUT LOCATIONS

Figure 1a. Historical and Projected Groundwater Levels, Mugu Aquifer at Marina Park

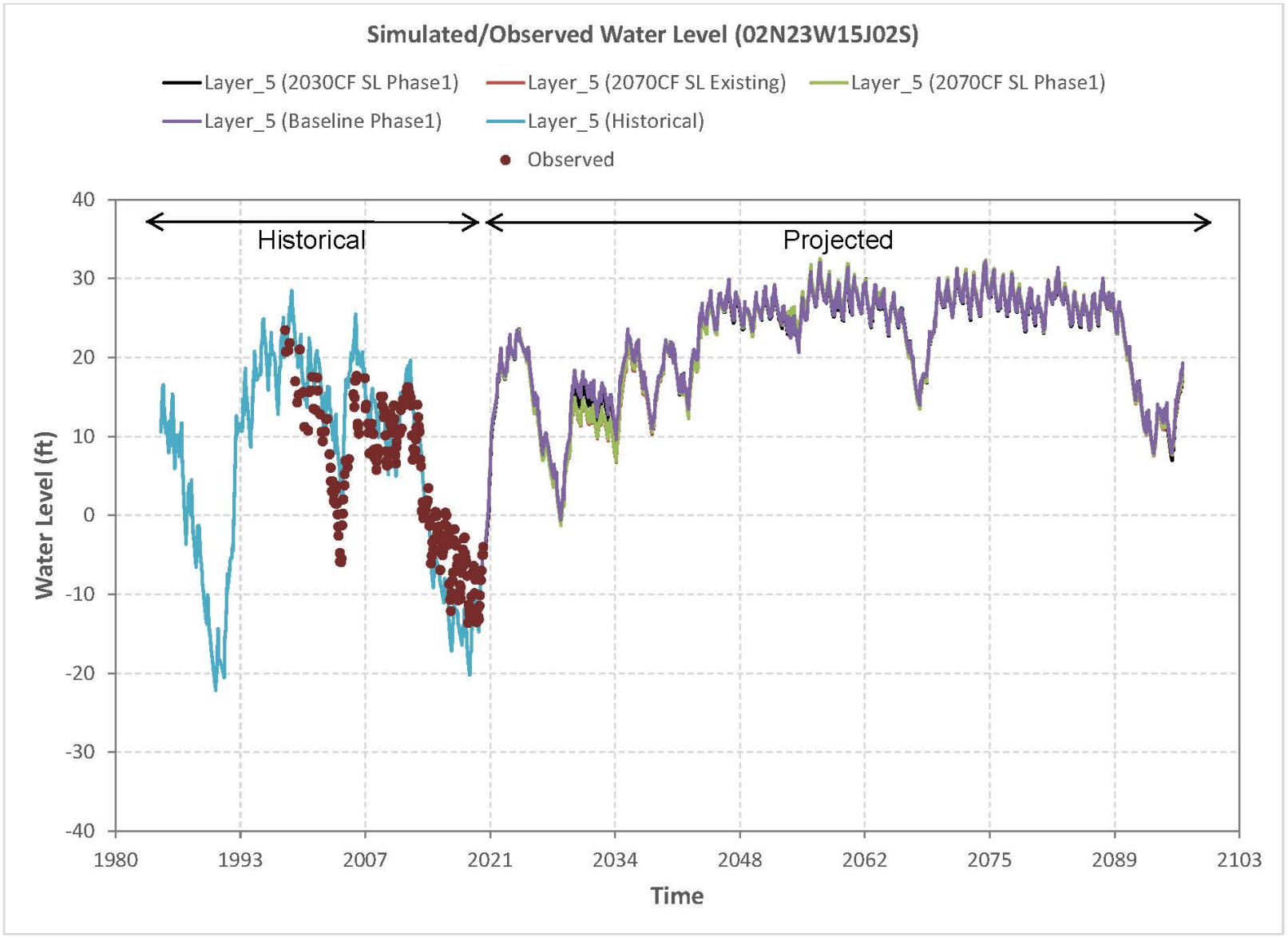

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Figure 1c. Historical and Projected Groundwater Levels, Mugu Aquifer at Camino Real Park

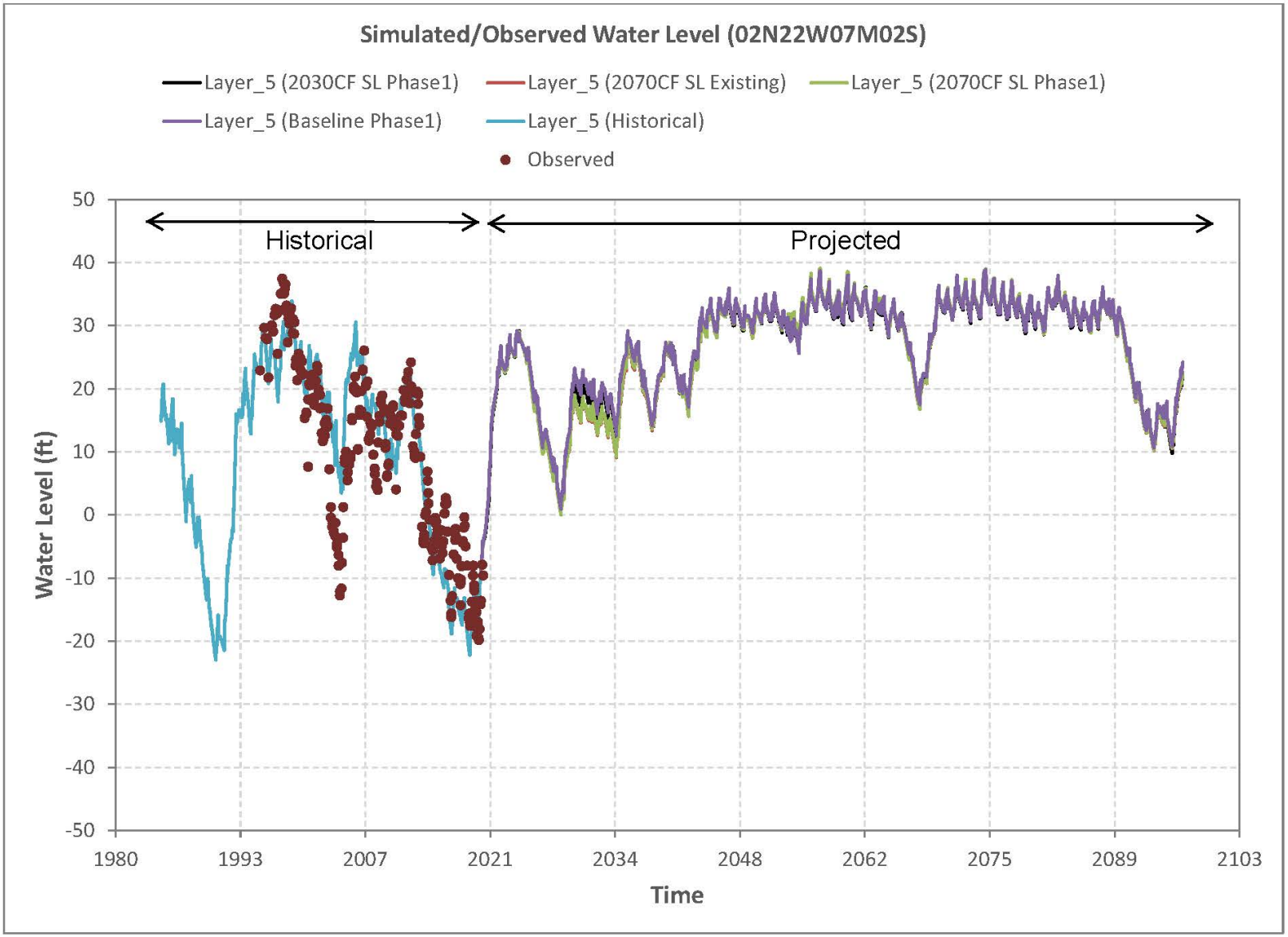

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Figure 1b. Historical and Projected Groundwater Levels, Hueneme Aquifer at Marina Park

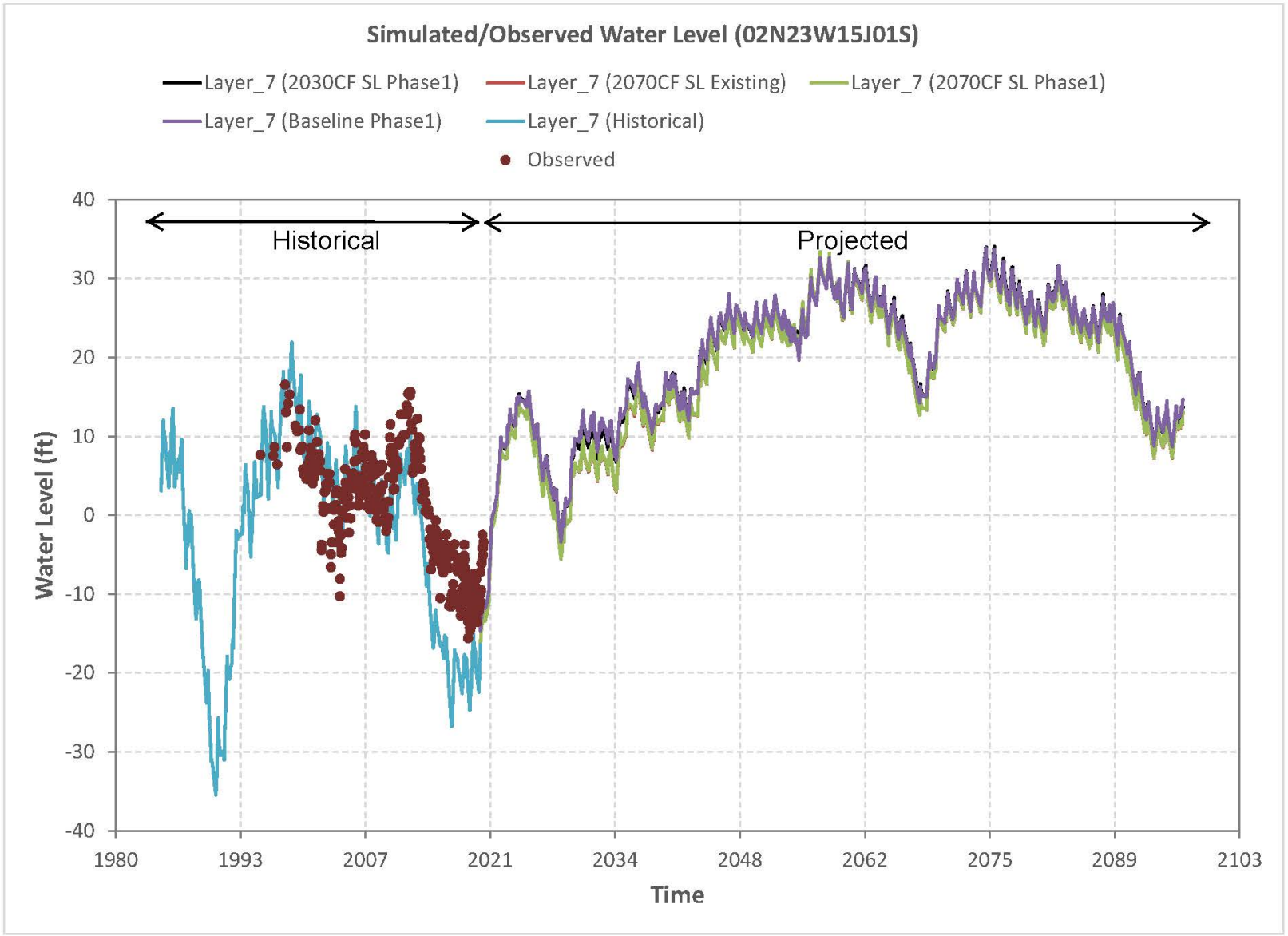

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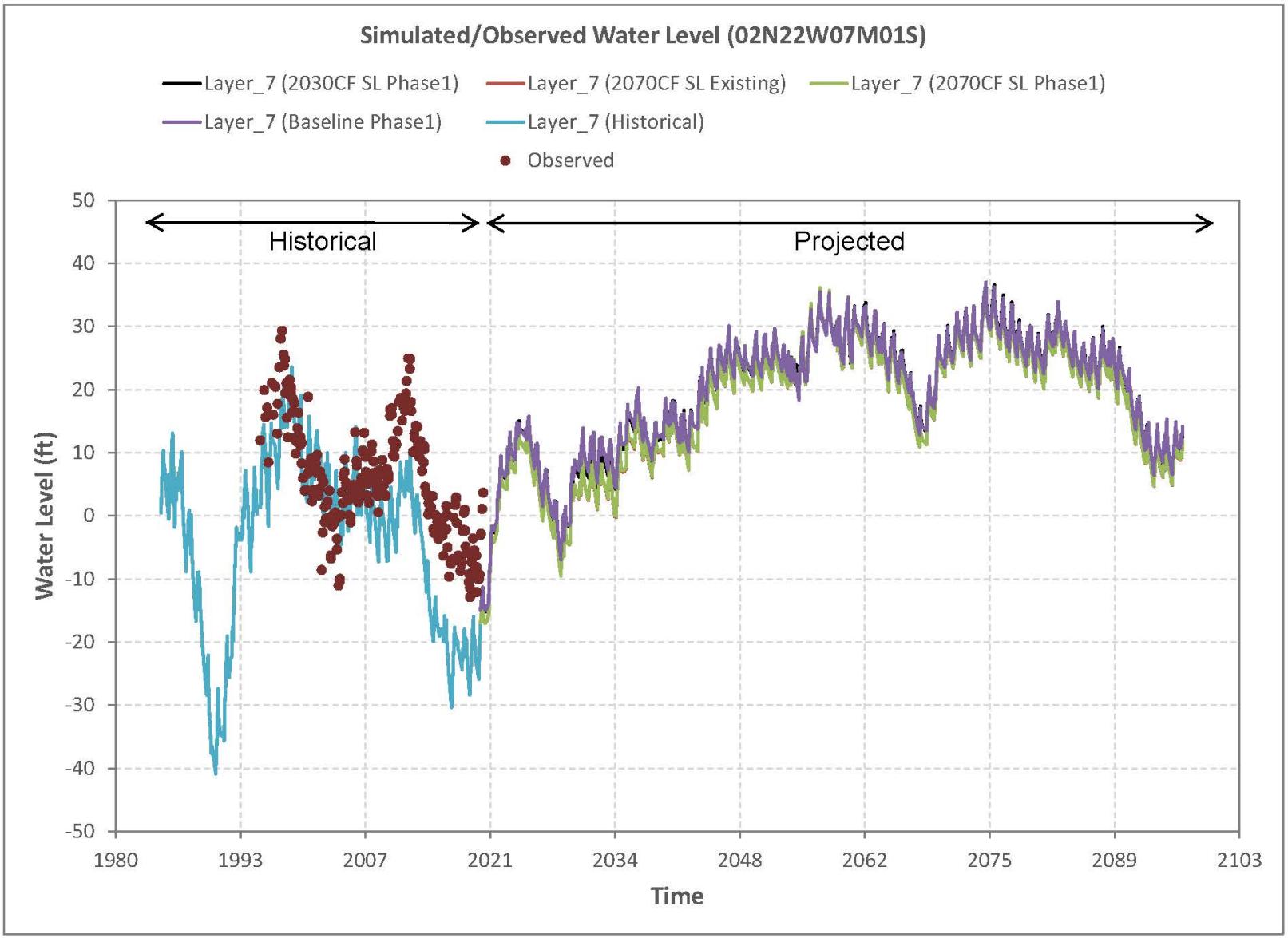
Figure 1d. Historical and Projected Groundwater Levels, Hueneme Aquifer at Camino Real Park



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SECTION 3
BASIN SETTING QUESTIONS

View looking southeast from Grant Park

SECTION 4
SUSTAINABLE MANAGEMENT CRITERIA

- Overarching goal of SGMA is to <u>avoid undesirable results</u> for each of the six SGMA sustainability indicators:

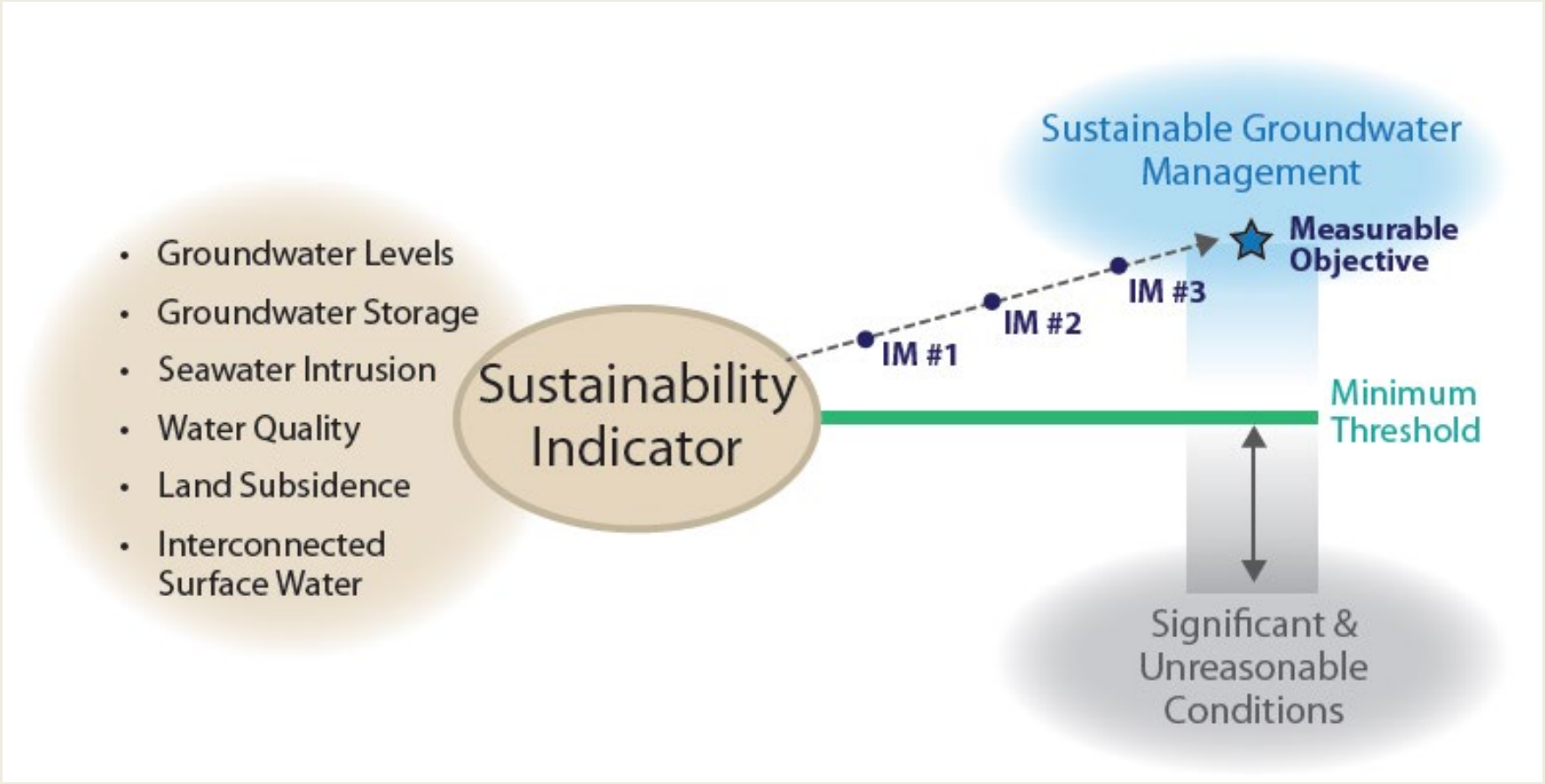
- One section for each sustainability indicator

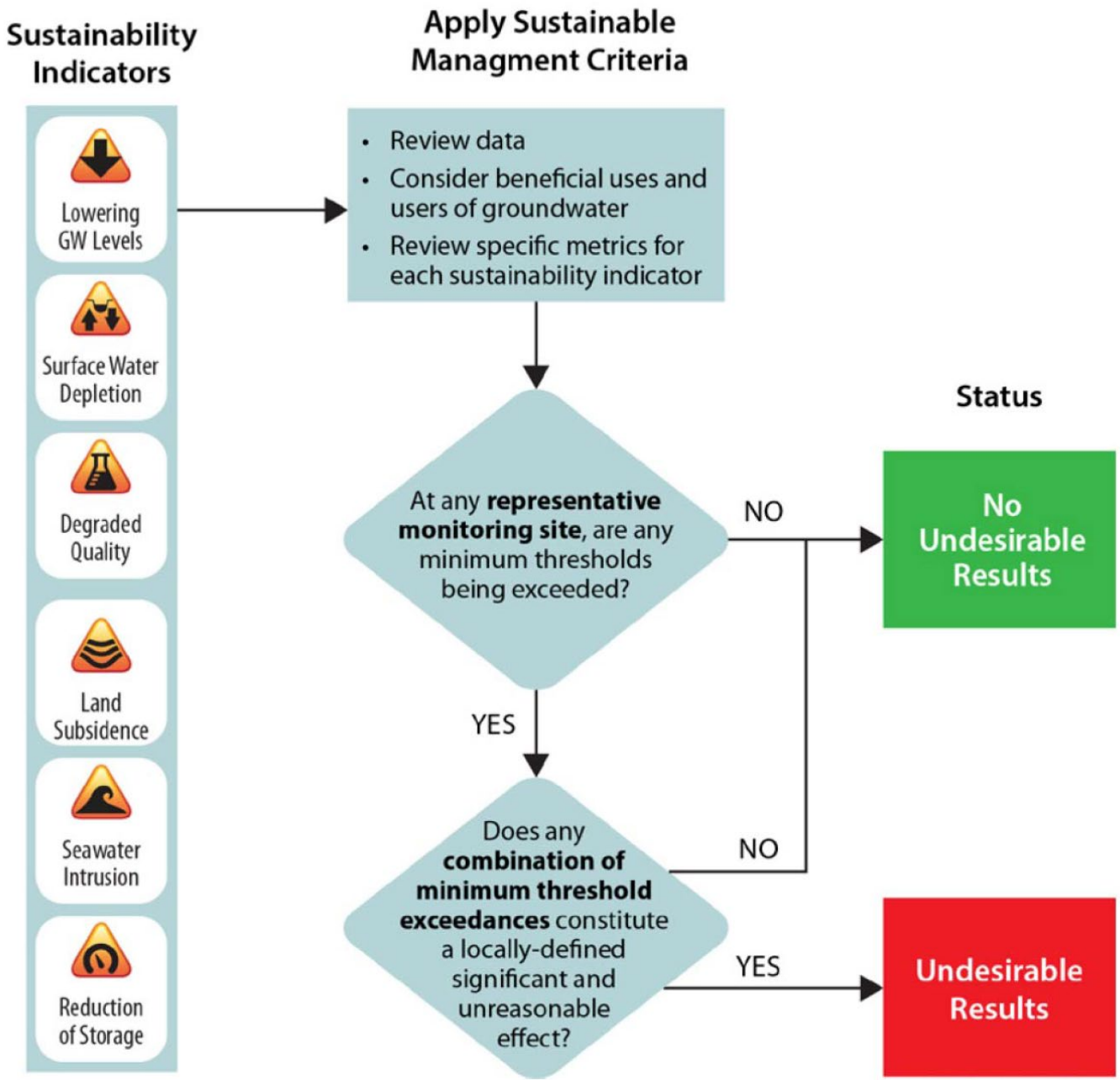
SECTION 4
SUSTAINABLE MANAGEMENT CRITERIA

- Sustainability Goal
- Undesirable Results
  - Significant and unreasonable effects for sustainability indicators caused by groundwater conditions occurring throughout the basin; identified as a combination of minimum threshold exceedances
- Minimum Thresholds
  - Quantitative metrics indicating significant and unreasonable effect likely exist
- Measureable Objectives
  - Quantitative metrics that reflect basin desired conditions

SUSTAINABLE MANAGEMENT CRITERIA

The overarching goal of SGMA is to avoid undesirable results





UR PROCESS

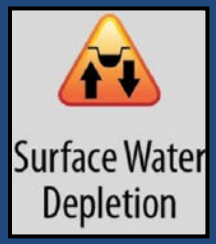
Minimum Thresholds:

Quantitative measures that indicate significant and unreasonable effects in a particular area

Undesirable Results:

<u>Combination</u> of minimum thresholds exceedances that defines undesirable results

DEPLETIONS OF INTERCONNECTED SURFACE WATER



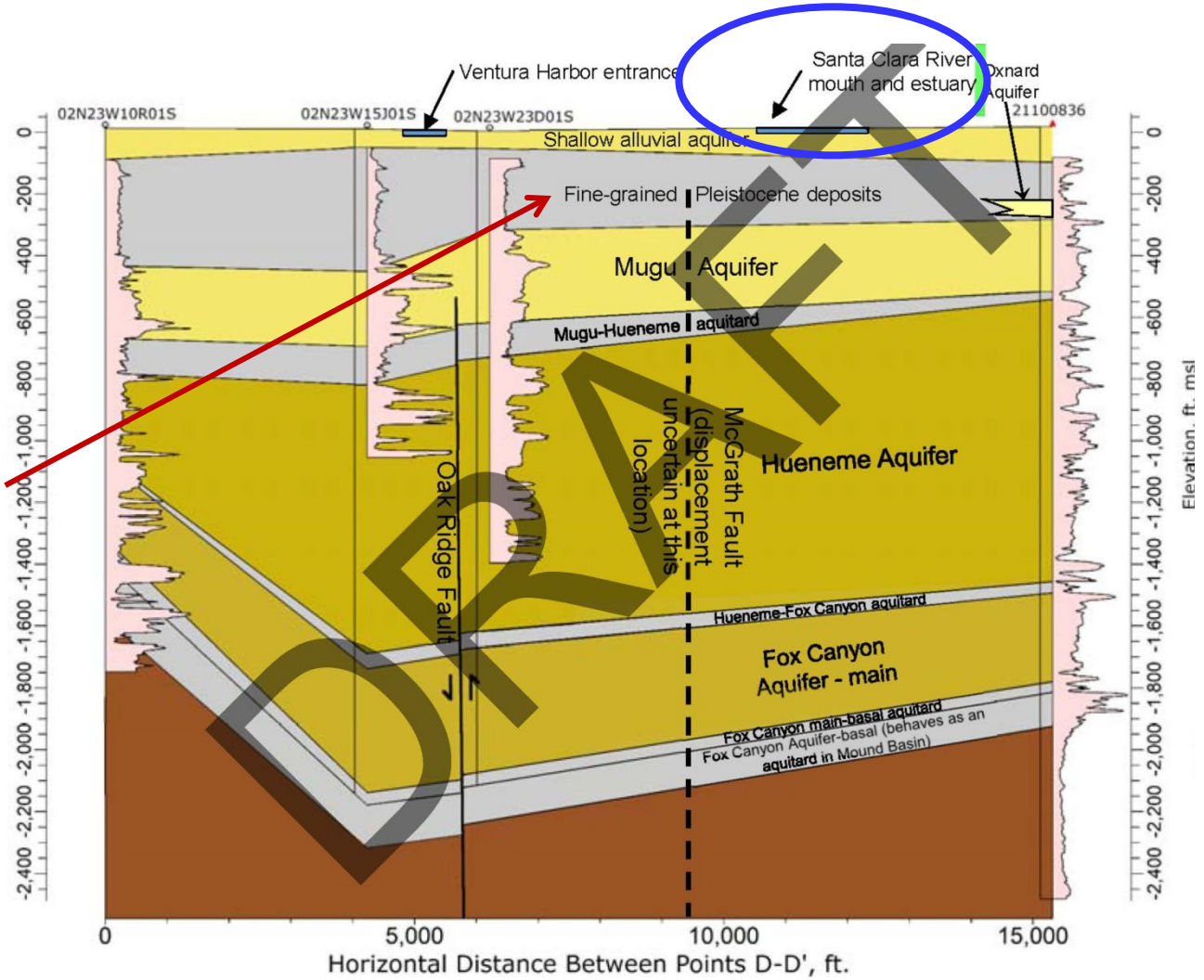
- Surface Water Depletion is not an applicable sustainability indicator.

- Surface water is not materially connected to principal aquifers (not affected by pumping).

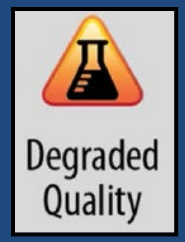
DEPLETIONS OF INTERCONNECTED SURFACE WATER

Surface Water Depletion

- *Shallow GW likely interconnected with river, however, there is no pumping from shallow aquifer.*
- *Surface water and principal aquifers are separate by thick aquitards. Pumping in principal aquifers is not believed to materially affect surface water (i.e., no measurable depletion of surface water by pumping).*

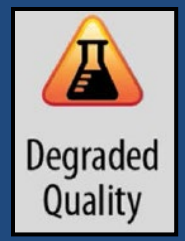


WATER QUALITY SMC



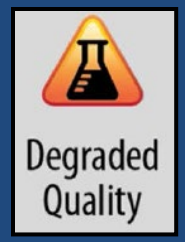
- Current water quality supports beneficial uses (currently no undesirable results)
- Nexus between URs and groundwater conditions
  - Pumping could increase downward movement of poor quality water
- Potential Effects on Beneficial Users
  - Increased costs for treatment, decreased crop yield, increased water demand for leaching, etc.

WATER QUALITY MINIMUM THRESHOLDS



- Criteria for Minimum Threshold Development
  - Maximum Contaminant Levels (MCLs)
  - RWQCB Water Quality Objectives (WQOs)
  - Agricultural Toxicity Thresholds
  - Existing Water Quality
- MTs based on significant and unreasonable effects consistent with sustainability goal
  - RWQCB WQOs used except in one case where existing water quality does not meet WQO (Hueneme Aquifer – TDS)

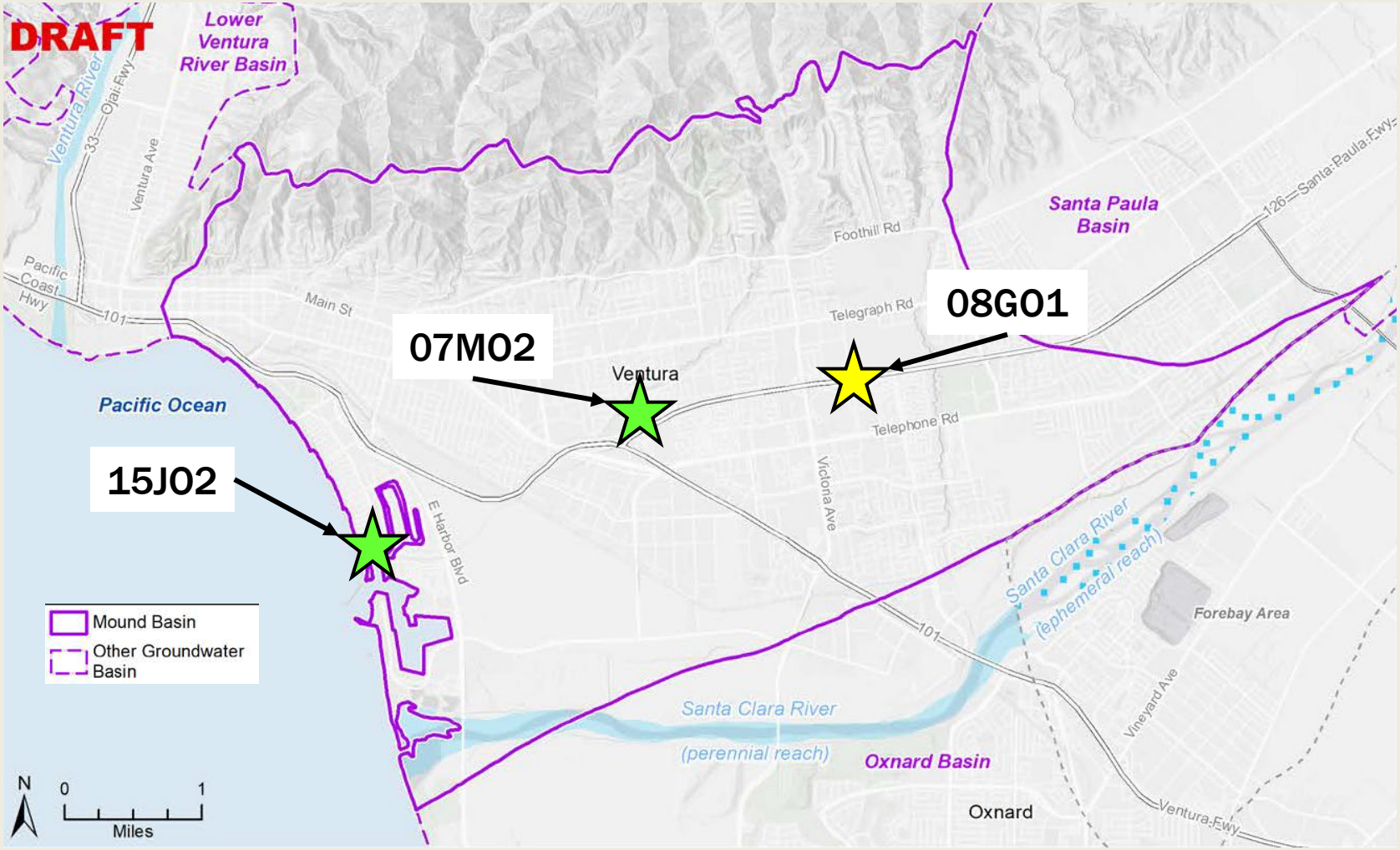
WATER QUALITY UNDESIRABLE RESULTS



- Criteria for Undesirable Results:
  - SGMA undesirable results are considered to be occurring when all representative wells in a principal aquifer (Mugu or Hueneme) exceed a minimum threshold concentration continuously for two years and MBGSA determines that the exceedances are caused by groundwater pumping.

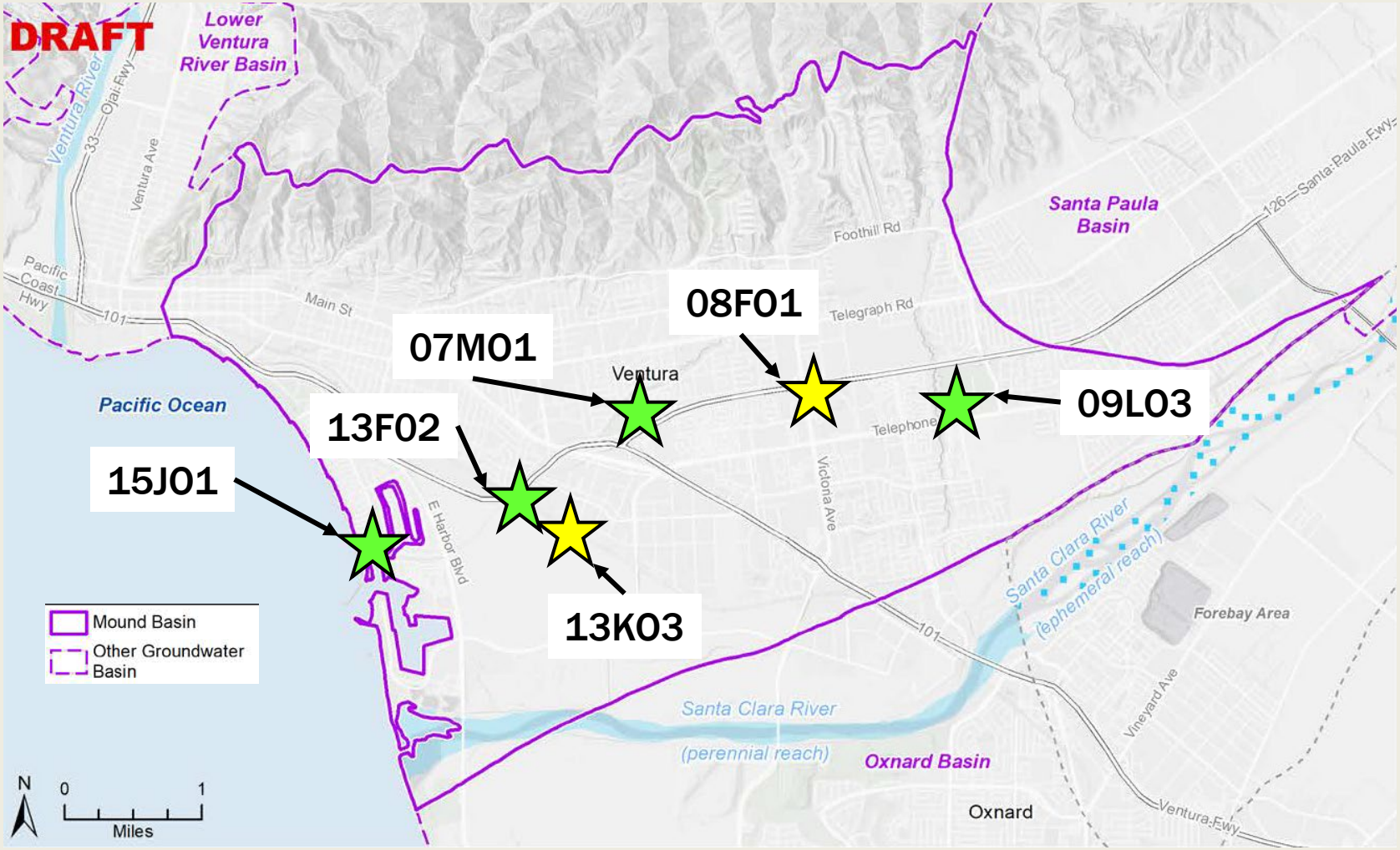
WATER QUALITY MONITORING LOCATIONS – MUGU AQUIFER

Degraded Quality

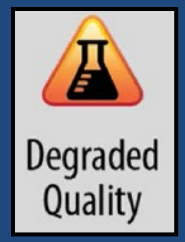


WATER QUALITY MONITORING LOCATIONS – HUENEME AQUIFER

Degraded Quality



WATER QUALITY MEASURABLE OBJECTIVES

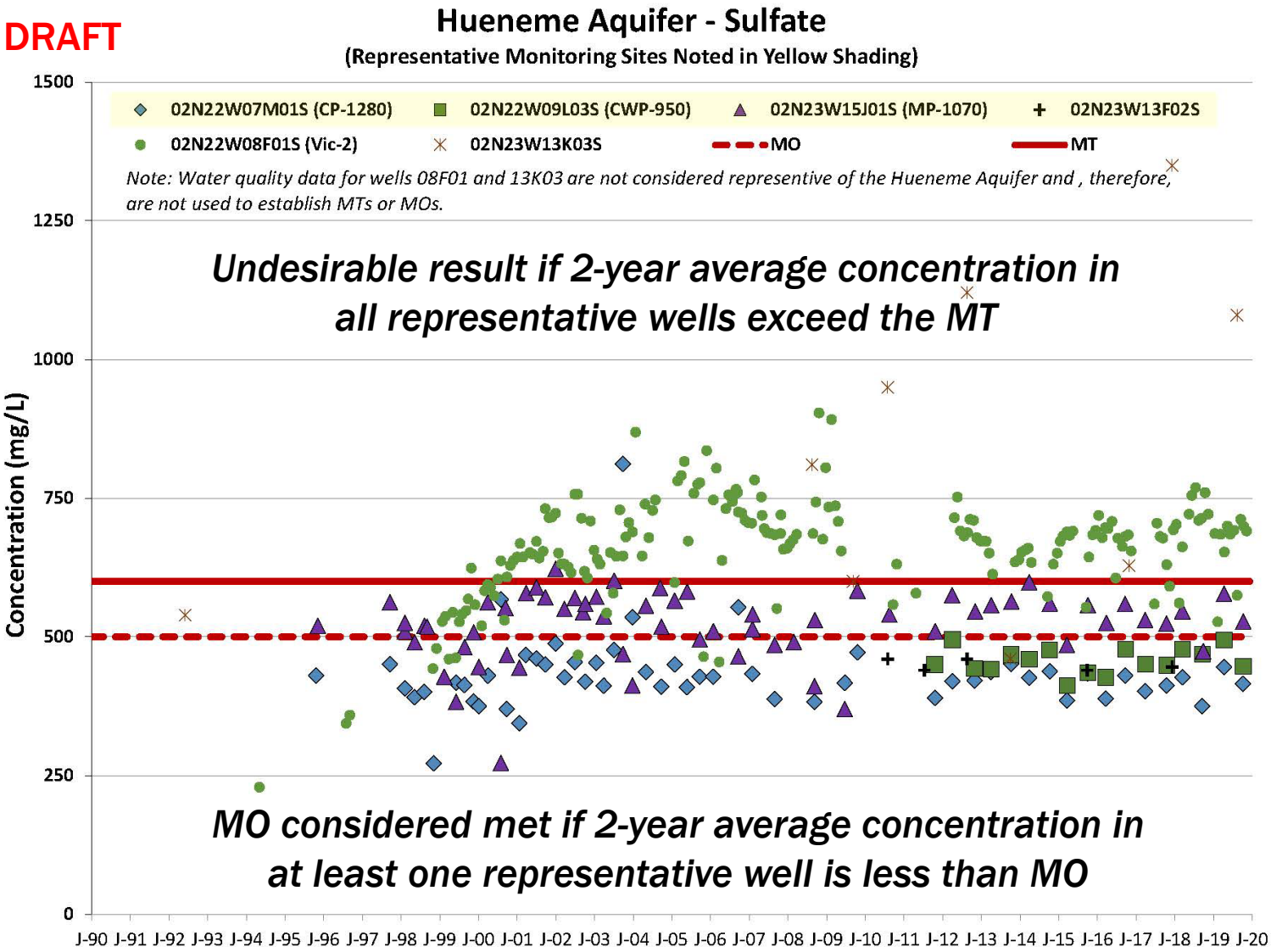


- Goal is to preserve existing water quality
- MOs are based recent historical water quality

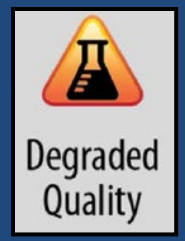
EXAMPLE WQ SMC CHART

Degraded Quality

DRAFT



DRAFT WATER QUALITY SMC



Constituent	MCL (mg/L)	Sec. MCL (R/U/ST) (mg/L)	RWQCB WQO (mg/L)	Average Conc. Representative Monitoring Wells Last 10 Years (mg/l)	Proposed MT (mg/L)	MT Rationale	Proposed MO (mg/L)	MO Rationale
Mugu Aquifer								
Nitrate	45	N/A	45	Non-Detect	45	Protect water quality for potable uses.	5	Preserve existing water quality for potable uses.
TDS	N/A	500/1,000/1,500	1,200	902	1,200	Protect agricultural, municipal, and industrial beneficial uses consistent with RWQCB WQOs.	1,000	Preserve existing water quality for agricultural, municipal, and industrial beneficial uses. MO is set at Upper Consumer Acceptance Level to support potable uses.
Sulfate	N/A	250/500/600	600	350	600	Protect municipal beneficial use consistent with RWQCB WQOs and prevent exceedances of Short-Term Consumer Acceptance Level.	500	Preserve existing water quality for municipal beneficial use. MO is set at Upper Consumer Acceptance Level to support potable uses.
Chloride	N/A	250/500/600	150	50	150	Protect agricultural beneficial use consistent with RWQCB WQOs.	75	Preserve existing water quality for agricultural beneficial use. MO is selected to preserve existing water quality.
Boron	N/A	N/A	1	0.47	1	Protect agricultural beneficial use consistent with RWQCB WQOs.	0.75	Preserve existing water quality for agricultural beneficial use. MO is selected to preserve existing water quality.
Hueneme Aquifer								
Nitrate	45	N/A	45	Non-Detect	45	Protect water quality for potable uses.	5	Preserve existing water quality for potable uses.
TDS	N/A	500/1,000/1,500	1,200	1,171	1,400	Protect agricultural, municipal, and industrial beneficial uses. MT is 200 mg/L higher than RWQCB WQO based on current and historical data at representative monitoring wells (set at upper range of data from past ten years).	1,200	Preserve existing water quality for agricultural, municipal, and industrial beneficial uses.
Sulfate	N/A	250/500/600	600	488	600	Protect municipal beneficial use consistent with RWQCB WQOs and prevent exceedances of Short-Term Consumer Acceptance Level.	500	Preserve existing water quality for municipal beneficial use. MO is set at Upper Consumer Acceptance Level to support potable uses.
Chloride	N/A	250/500/600	150	76	150	Protect agricultural beneficial use consistent with RWQCB WQOs.	100	Preserve existing water quality for agricultural beneficial use. MO is selected to preserve existing water quality.
Boron	N/A	N/A	1	0.62	1	Protect agricultural beneficial use consistent with RWQCB WQOs.	0.75	Preserve existing water quality for agricultural beneficial use. MO is selected to preserve existing water quality.

[1] Consumer Acceptance Levels, where R = Recommended, U = Upper, and ST = Short Term

[2] 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] 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 measurable objective.

SEAWATER INTRUSION

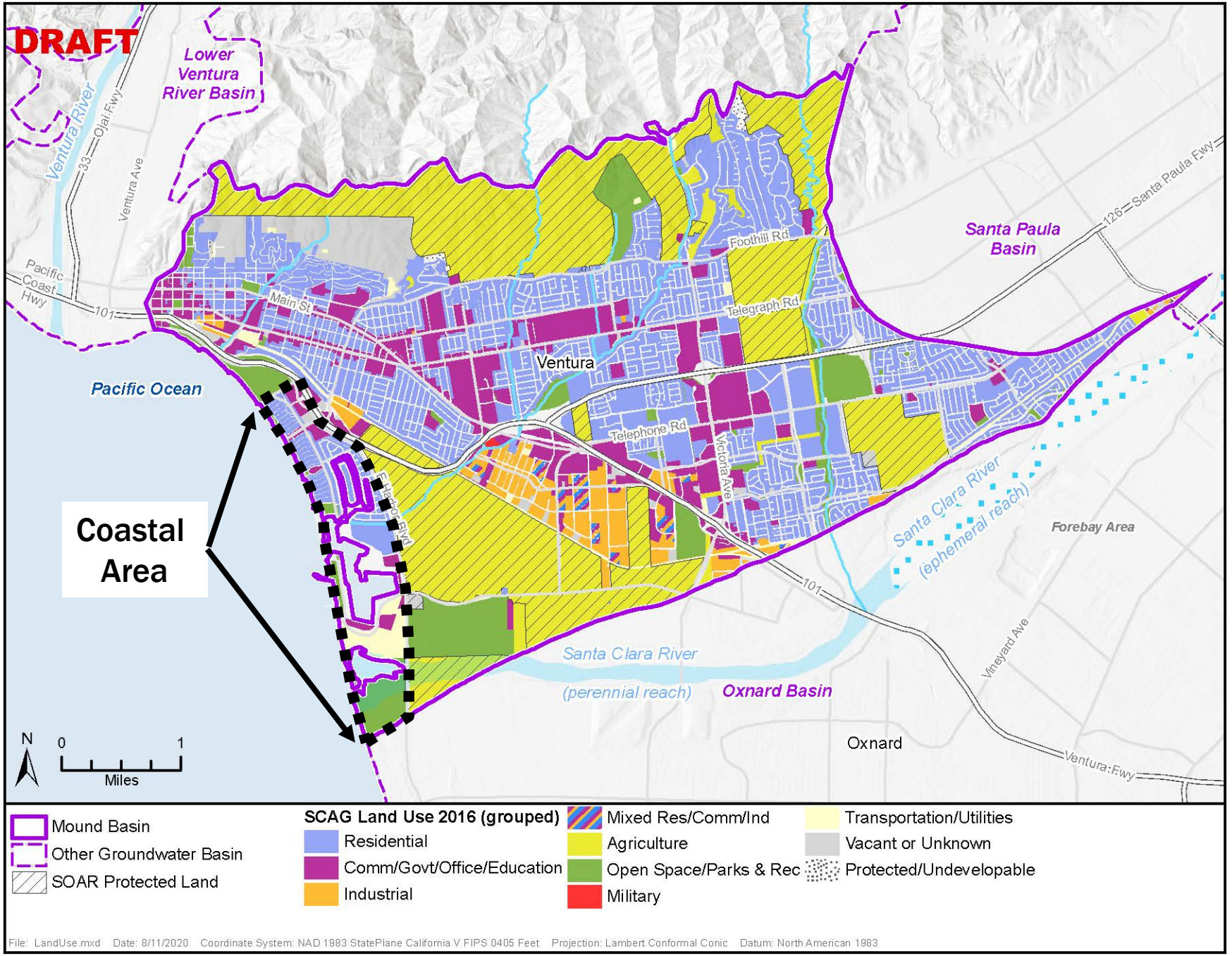
- Seawater intrusion is not anticipated to be an issue for the Mound Basin during the 50-year SGMA planning horizon;

- <u>However</u>:
  - SMC are required because seawater intrusion cannot be ruled out
  - Monitoring and contingency plan is warranted to address potential short-circuit pathways for seawater.

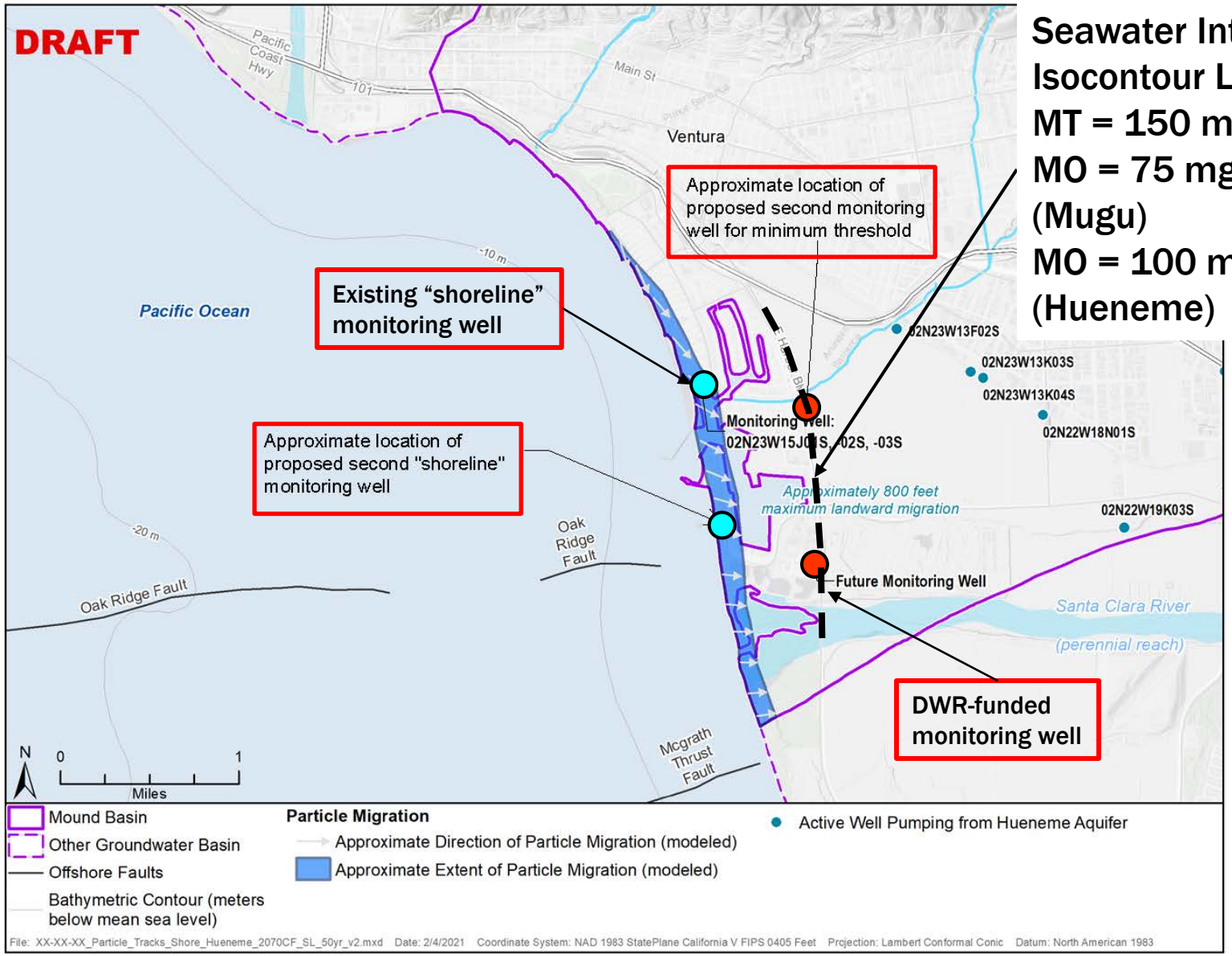
SEAWATER INTRUSION SMC

- Undesirable Result: Seawater intrusion east of Harbor Blvd.
  - No current or anticipated future beneficial uses of groundwater west of Harbor Blvd.
  - Protect existing beneficial uses east of Harbor Blvd.
- Minimum Threshold:
  - Seawater in monitoring wells near Harbor Blvd.
- Measurable Objective:
  - No indication of seawater in monitoring wells near Harbor Blvd.

Mound Basin Land Use



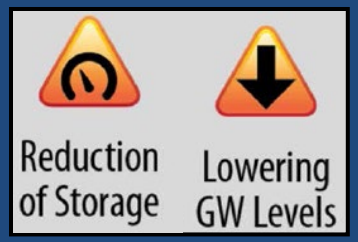
Seawater Intrusion SMC and Monitoring Locations



Seawater Intrusion Isocontour Location
MT = 150 mg/L
MO = 75 mg/L (Mugu)
MO = 100 mg/L (Hueneme)

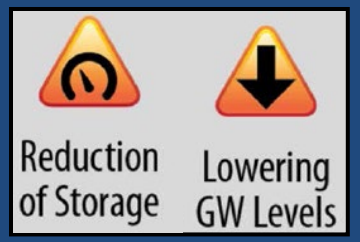
Figure 2b Estimated Landward Movement of Groundwater During 50-Year SGMA Planning Period (with 2070 Climate Change and Sea Level Rise).

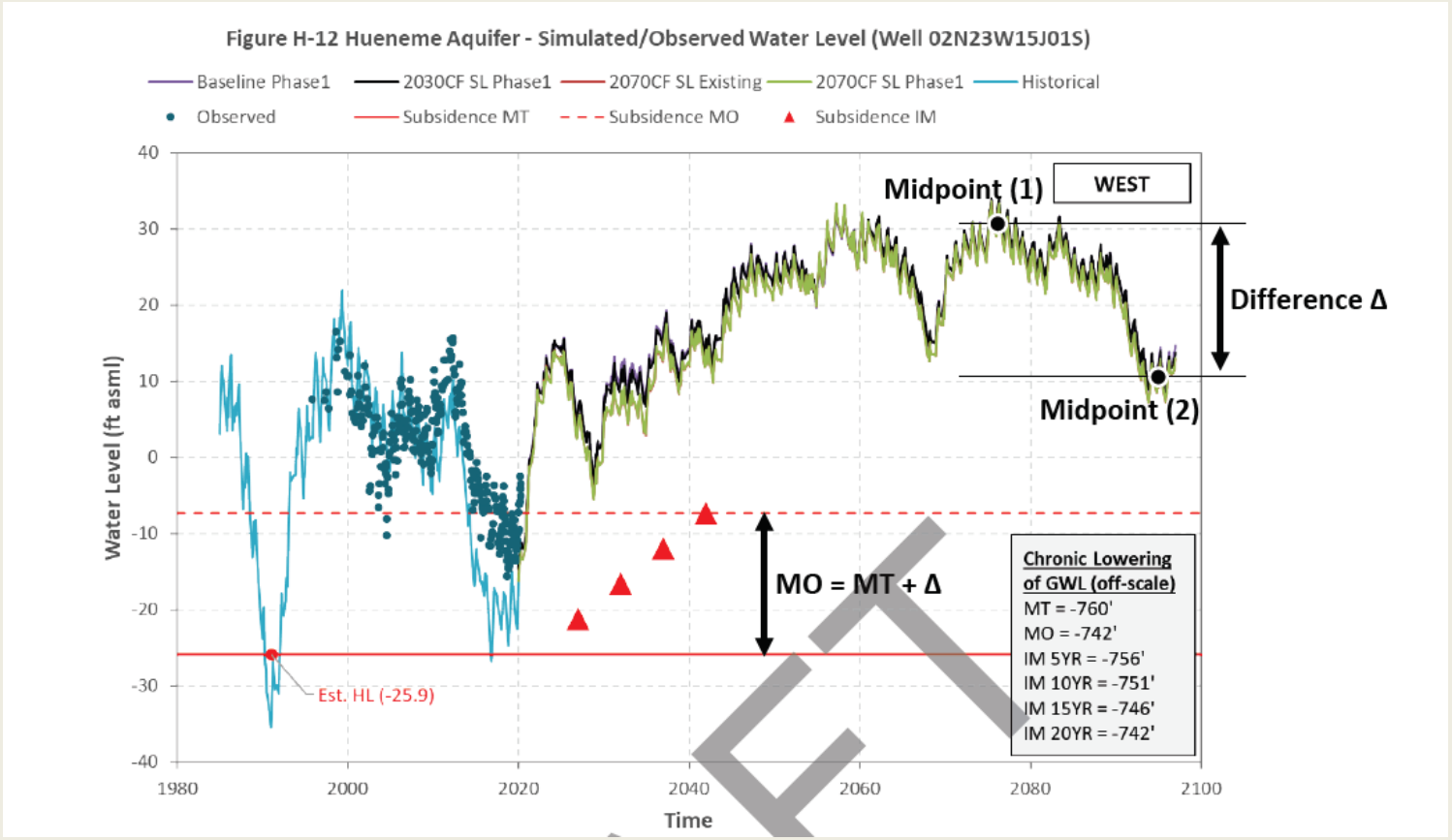
GROUNDWATER LEVELS AND STORAGE SMC



- GW Levels and Storage SMC are handled together
  - Storage is directly correlated to groundwater levels
- MT is based on groundwater level necessary to prevent drawdown below top of aquifer (proxy for top of screen) OR historical low level, whichever is deeper.
- MO is based on amount of groundwater level decline anticipated during drought (add to MT)

GROUNDWATER LEVELS AND STORAGE SMC



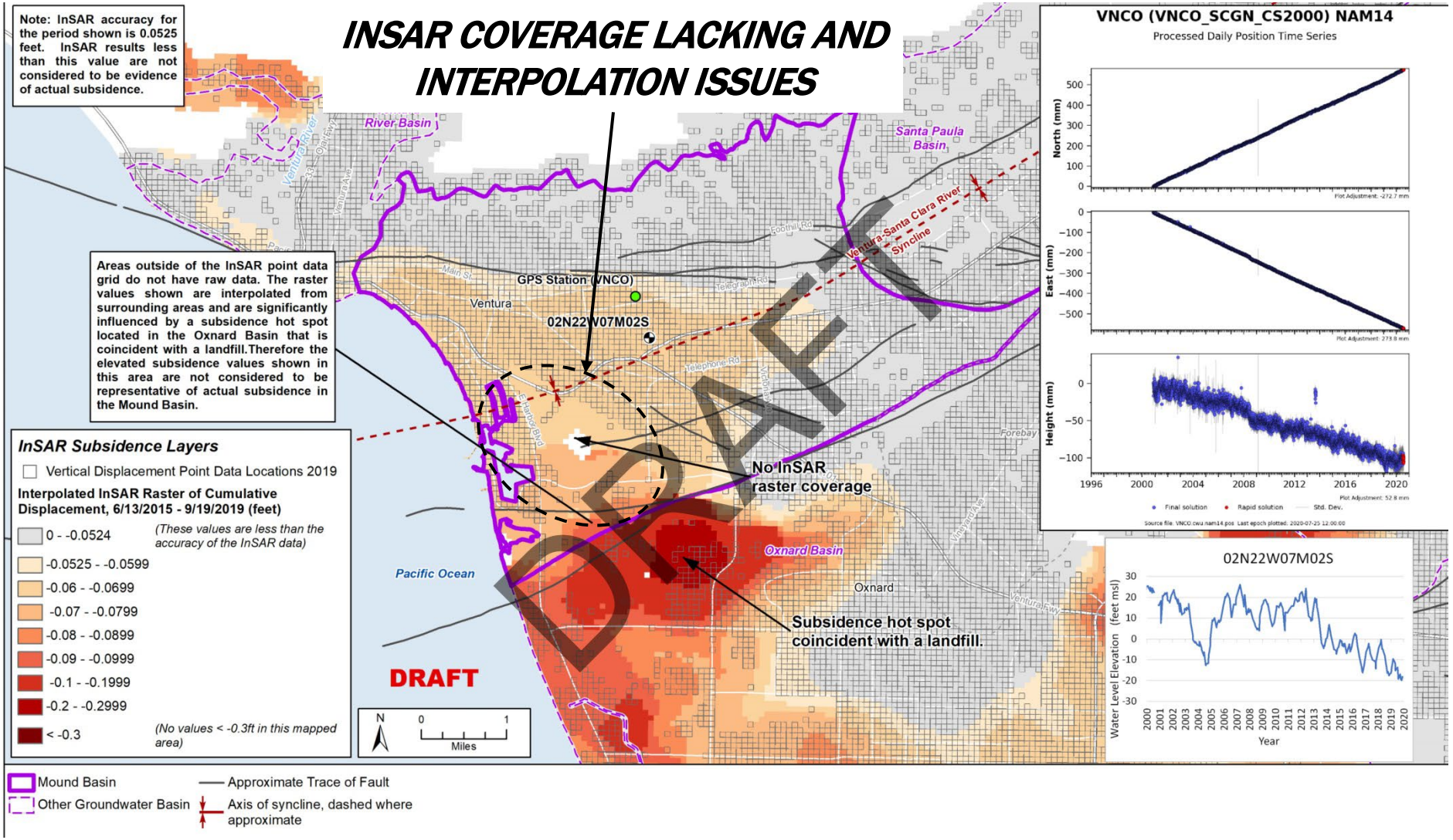


SUBSIDENCE SMC

- Undesirable Result: measurable inelastic subsidence due to groundwater pumping
  - "Coastal Area" west of Harbor Blvd. is particularly susceptible to land subsidence
    - City sewer main running along Harbor Blvd has low slope
    - Sea level rise impacts to Coastal Area predicted – subsidence would exacerbate sea level rise impacts
  - Eastern part of basin appears to be less susceptible to effects of subsidence

SUBSIDENCE SMC INSAR DATA ISSUES

Land Subsidence



SUBSIDENCE SMC

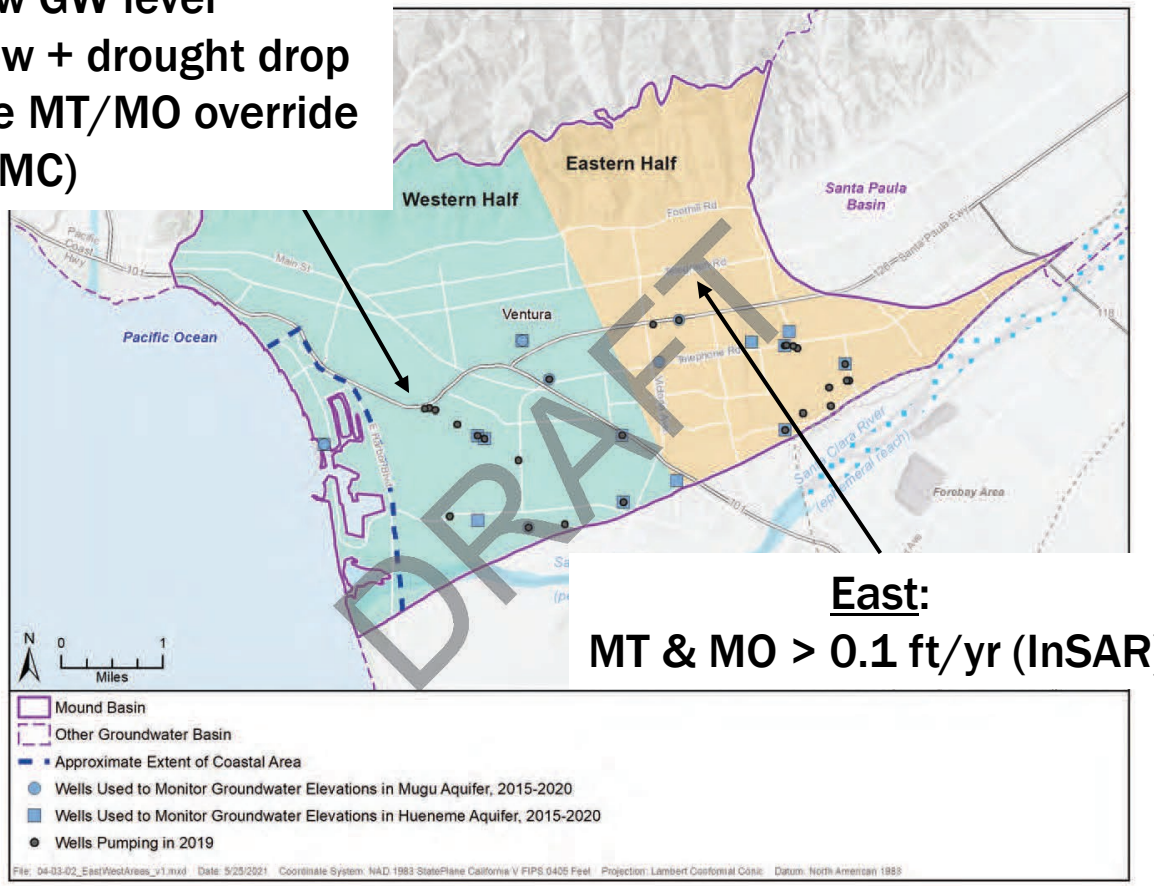
Land Subsidence

West:

MT = historical low GW level

MO = historical low + drought drop

(Note: Subsidence MT/MO override GWL & Storage SMC)



East:

MT & MO > 0.1 ft/yr (InSAR)

Figure 4.1-01 Mound Basin Eastern Half, Western Half, and Coastal Areas.

SECTION 4
SMC QUESTIONS

View looking north from Olivas Park Drive.

SECTION 5
MONITORING NETWORKS

- Existing UWCD and VCWPD monitoring
- Three new monitoring wells to monitoring for seawater intrusion

GROUNDWATER LEVELS - MUGU

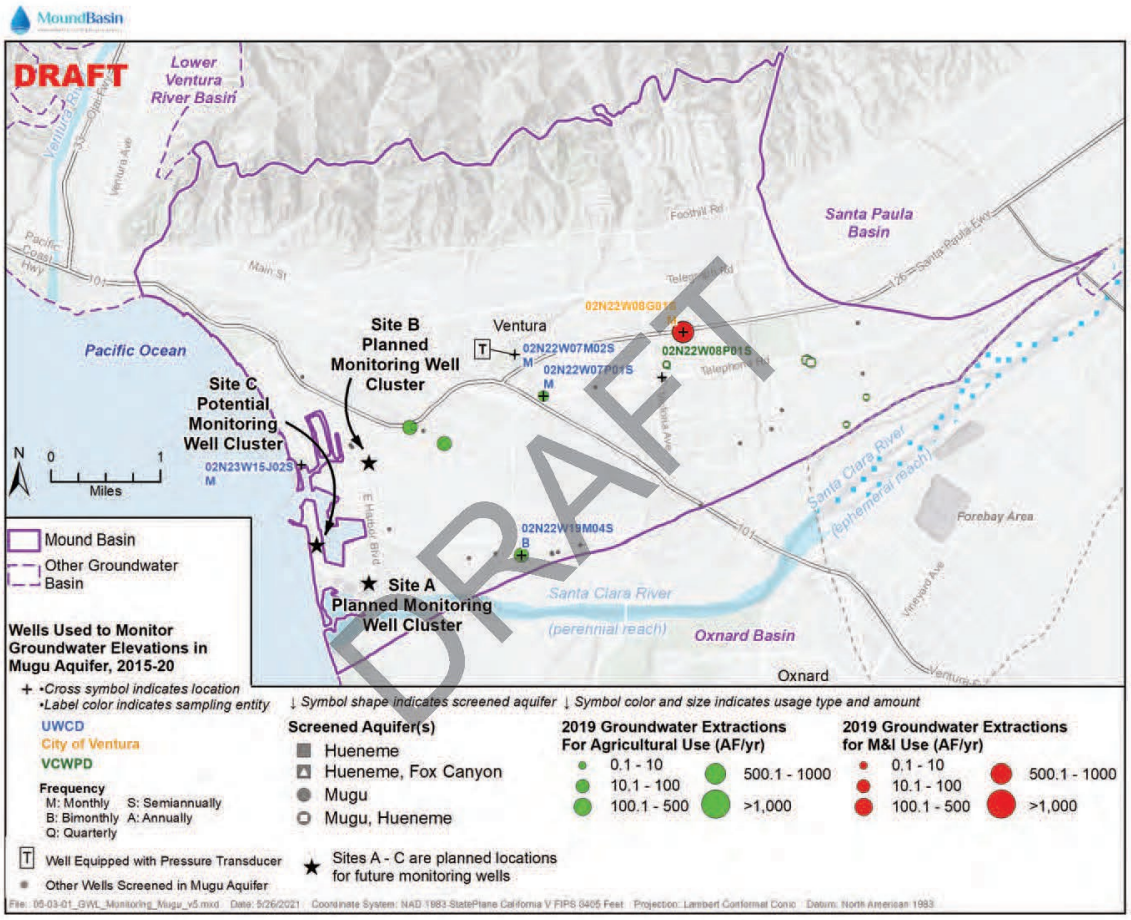


Figure 5.3-01 Map Showing the Groundwater Elevation Monitoring Network in the Mugu Aquifer of Mound Basin.

GROUNDWATER LEVELS - HUENEME

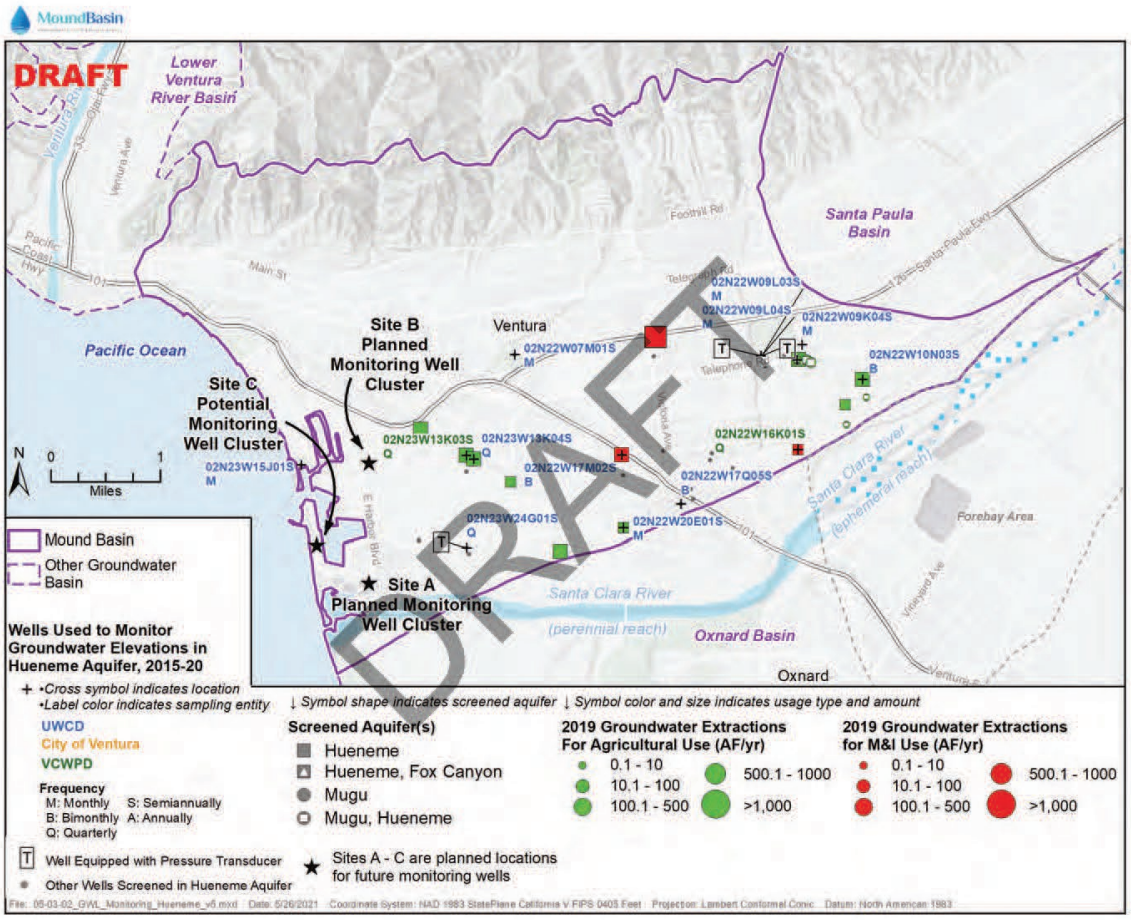


Figure 5.3-02 Map Showing the Groundwater Elevation Monitoring Network in the Hueneme Aquifer of Mound Basin.

GROUNDWATER QUALITY AND SEAWATER INTRUSION - MUGU

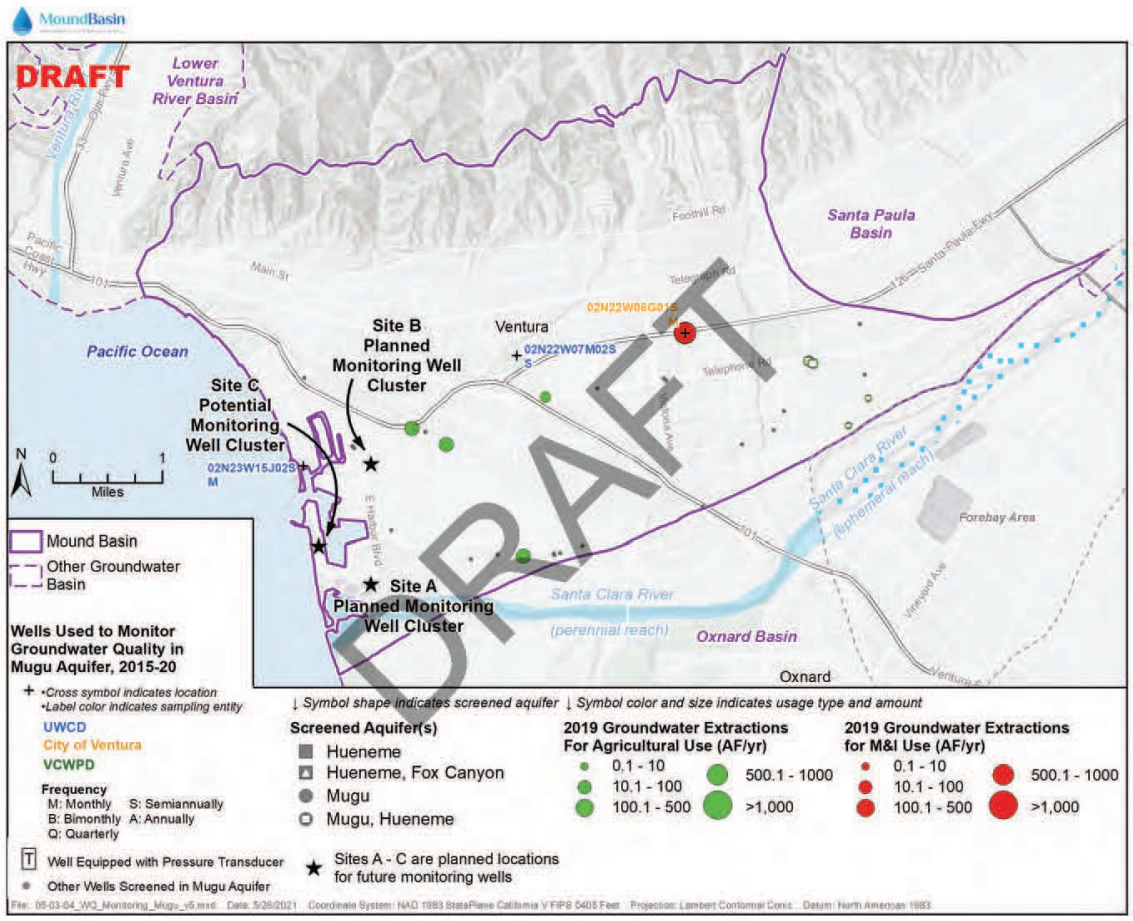


Figure 5.3-04 Map Showing the Groundwater Quality and Seawater Intrusion Monitoring Networks in the Mugu Aquifer of Mound Basin.

GROUNDWATER QUALITY AND SEAWATER INTRUSION - HUENEME

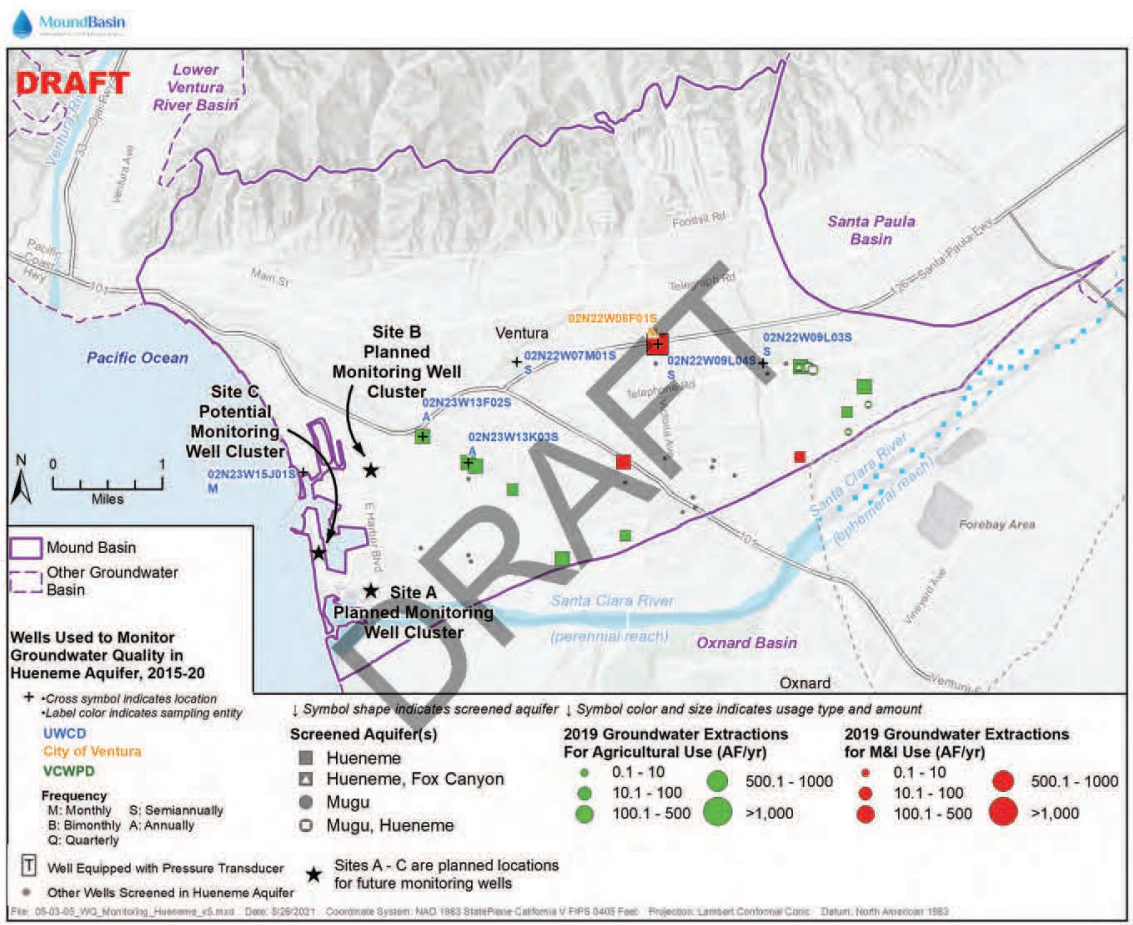


Figure 5.3-05 Map Showing the Groundwater Quality and Seawater Intrusion Monitoring Networks in the Hueneme Aquifer of Mound Basin

Mound Basin Groundwater Sustainability Agency Groundwater Sustainability Plan

SECTION 5
MONITORING NETWORK QUESTIONS

Main Street Ventura

SECTION 6
PROJECTS AND MANAGEMENT ACTIONS

- Seawater Intrusion Monitoring Wells for Sustainable Management Criteria Implementation
- Seawater Intrusion Contingency Plan and Additional Shoreline Monitoring Well
- Land Subsidence Contingency Plan
- Groundwater Quality Protection Measures

SECTION 6
PROJECTS AND MANAGEMENT ACTIONS

- Seawater Intrusion Monitoring Wells for Sustainable Management Criteria Implementation

  - Well Sites A & B needed to monitoring for seawater intrusion MT & MO
    - Site A funded by DWR
    - Site B part of GSP implementation budget

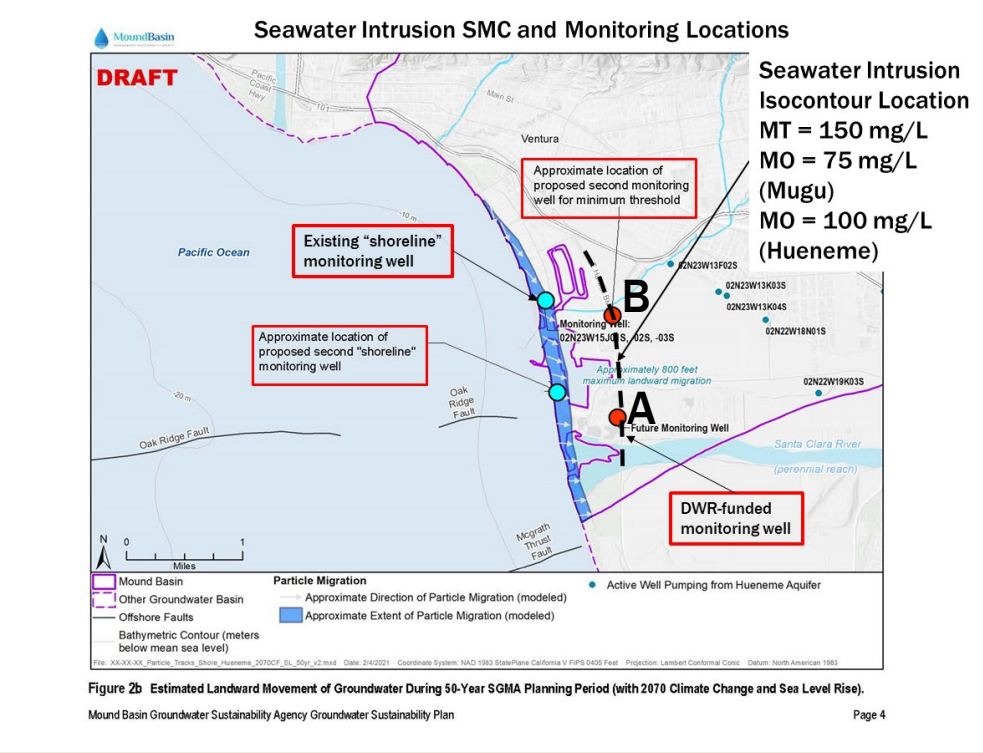


Figure 2b Estimated Landward Movement of Groundwater During 50-Year SGMA Planning Period (with 2070 Climate Change and Sea Level Rise).

Mound Basin Groundwater Sustainability Agency Groundwater Sustainability Plan Page 4

SECTION 6
PROJECTS AND MANAGEMENT ACTIONS

- **Seawater Intrusion Contingency Plan and Additional Shoreline Monitoring Well**
  - Develop contingency plan to identify measures that would be taken to address unexpected seawater intrusion.
  - Well Site C for early warning of seawater and to ensure seawater does not "sneak through"
    - Would trigger contingency actions

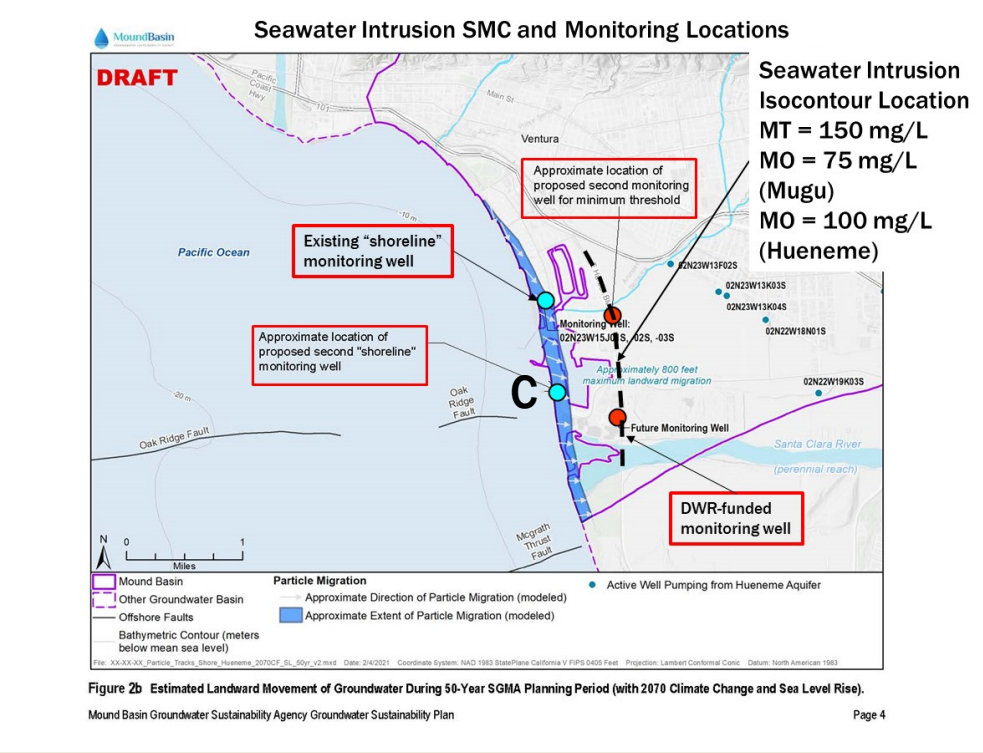
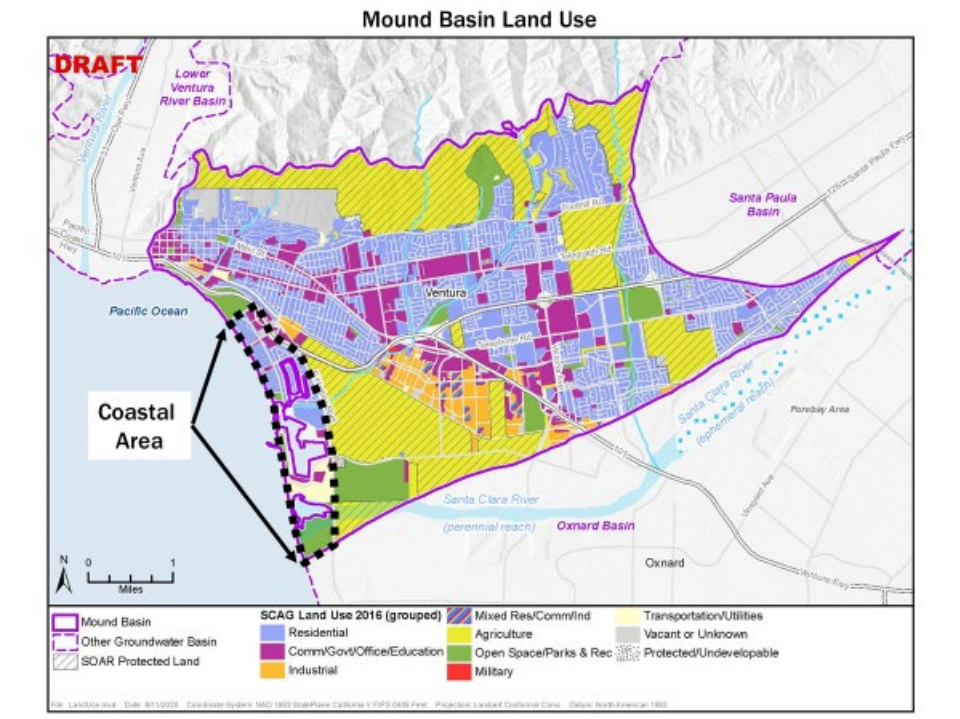


Figure 2b Estimated Landward Movement of Groundwater During 50-Year SGMA Planning Period (with 2070 Climate Change and Sea Level Rise).

SECTION 6
PROJECTS AND MANAGEMENT ACTIONS

Land Subsidence Contingency Plan

- Develop contingency plan to address unexpected groundwater level declines that could trigger inelastic land subsidence in the Coastal Area.
- The contingency plan will be developed to identify triggers and measures that would be taken to halt groundwater level declines before historical low levels are exceeded in the western half of the Basin.



SECTION 6
PROJECTS AND MANAGEMENT ACTIONS

- Groundwater Quality Protection Measures
  - Goal = prevent wells from being conduits for downward migration of poor-quality water from shallow zones into principal aquifers
  - Coordinate with County of Ventura to identify and address improperly constructed or abandoned wells
  - Coordinate with County of Ventura to review well permit ordinance and, if necessary, modify to ensure the future wells are properly sealed to prevent downward migration of poor-quality water

SECTION 6
PROJECTS AND MANAGEMENT ACTIONS
QUESTIONS

Community Park Monitoring Well

SECTION 7
GSP IMPLEMENTATION

Costs and Schedule

Table 7.1-01 Costs Associated with GSP Implementation Activities.

Fiscal Year	Agency Administration	Legal Counsel	GW Mgmt., Coord., & Outreach	Groundwater Level and Quality Monitoring	Annual Reports	Projects and Mgmt. Actions	Model Simulations	GSP Evaluation	GSP Update	Respond to DWR Comments and Requests	Contingency Non-Capital	Monitoring Well Construction	Contingency Capital Projects	Totals	Extraction Fee ($/AF)	Ending Cash
2022	$57,538	$7,500	$45,000	$4,500	$53,000	$-	$-	$-	$-	$-	$16,754	$30,000	$3,000	$217,292	$59.00	$443,817
2023	$39,638	$7,725	$20,600	$5,150	$35,000	$10,000	$-	$-	$-	$-	$11,811	$10,000	$1,000	$140,924	$59.00	$680,493
2024	$54,148	$7,957	$21,218	$6,365	$36,050	$25,000	$-	$-	$-	$50,000	$20,074	$30,000	$3,000	$253,812	$59.00	$804,280
2025	$41,986	$8,195	$21,855	$6,556	$37,132	$25,000	$-	$-	$-	$-	$14,072	$60,000	$6,000	$220,796	$59.00	$961,085
2026	$57,851	$8,441	$22,510	$8,310	$38,245	$25,000	$15,000	$25,000	$50,000	$-	$25,036	$754,000	$75,400	$1,104,794	$59.00	$233,891
2027	$44,546	$8,695	$23,185	$4,620	$39,393	$-	$10,000	$25,000	$65,000	$-	$22,044	$-	$-	$242,483	$59.00	$369,008
2028	$61,380	$8,955	$23,881	$4,759	$40,575	$-	$-	$-	$-	$28,138	$16,769	$35,700	$3,570	$223,726	$59.00	$522,882
2029	$47,263	$9,224	$24,597	$4,902	$41,792	$-	$-	$-	$-	$-	$12,778	$11,900	$1,190	$153,646	$59.00	$746,836
2030	$65,124	$9,501	$25,335	$5,049	$43,046	$-	$-	$-	$-	$-	$14,805	$35,700	$3,570	$202,130	$59.00	$922,306
2031	$50,146	$9,786	$26,095	$5,200	$44,337	$-	$17,389	$28,982	$57,964	$-	$23,990	$71,400	$7,140	$342,429	$59.00	$957,477
2032	$69,097	$10,079	$26,878	$5,356	$45,667	$-	$11,593	$28,982	$75,353	$-	$27,301	$897,260	$89,726	$1,287,292	$59.00	$47,785
2033	$53,205	$10,382	$27,685	$5,517	$47,037	$-	$-	$-	$-	$32,640	$17,646	$-	$-	$194,111	$41.00	$116,074
2034	$73,312	$10,693	$28,515	$5,682	$48,448	$-	$-	$-	$-	$-	$16,665	$-	$-	$183,316	$41.00	$195,158
2035	$56,450	$11,014	$29,371	$5,853	$49,902	$-	$-	$-	$-	$-	$15,259	$-	$-	$167,848	$41.00	$289,710
2036	$77,784	$11,344	$30,252	$6,028	$51,399	$-	$20,159	$33,598	$67,196	$-	$29,776	$-	$-	$327,535	$41.00	$224,574
2037	$59,894	$11,685	$31,159	$6,209	$52,941	$-	$13,439	$33,598	$87,355	$-	$29,628	$-	$-	$325,907	$41.00	$161,067
2038	$82,529	$12,035	$32,094	$6,395	$54,529	$-	$-	$-	$-	$37,862	$22,544	$-	$-	$247,989	$41.00	$175,478
2039	$63,547	$12,396	$33,057	$6,587	$56,165	$-	$-	$-	$-	$-	$17,175	$-	$-	$188,928	$40.00	$242,550
2040	$87,563	$12,768	$34,049	$6,785	$57,850	$-	$-	$-	$-	$-	$19,901	$-	$-	$218,916	$40.00	$279,634
2041	$67,424	$13,151	$35,070	$6,988	$59,585	$-	$23,370	$38,949	$77,898	$-	$32,244	$-	$-	$354,680	$40.00	$180,955
2042	$92,904	$13,546	$36,122	$7,198	$61,373	$-	$15,580	$38,949	$101,268	$-	$36,694	$-	$-	$403,634	$40.00	$33,321
Yrs.1-5	$251,161	$39,819	$131,183	$30,882	$199,427	$85,000	$15,000	$25,000	$50,000	$50,000	$87,747	$884,000	$88,400	$1,937,618		
Yrs.6-20	$1,052,167	$175,255	$467,347	$93,129	$794,036	$-	$111,529	$228,058	$532,033	$98,640	$355,219	$1,051,960	$105,196	$5,064,570		
Total	$1,303,328	$215,074	$598,530	$124,011	$993,463	$85,000	$126,529	$253,058	$582,033	$148,640	$442,967	$1,935,960	$193,596	$7,002,188		

NEXT STEPS


Workshop #3
July 15, 2021
Obtain Feedback on Proposed SMC
Finalize SMC
Issue Draft GSP
GSP Comment Period Ends August 23, 2021
Final Draft GSP
Adopt GSP
Dec. 16, 2021
GSP Process does not end in 2022!
GSP will be refined and update every 5 yrs. or more frequently, as warranted.
March
April
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
Jan

Mound Basin

GROUNDWATER SUSTAINABILITY AGENCY

Q&A
&
FEEDBACK

PLEASE STAY ENGAGED!

- Track status at: https://www.moundbasingsa.org/
- Join the MBGSA Interested Parties List: https://www.moundbasingsa.org/contact-us/
- Email inquiries to: Jackie Lozano Jackiel@unitedwater.org