Ad Hoc Sustainable Groundwater Planning Advisory Committee

Meeting No. 3

GoToMeeting Teleconference

December 15, 2020

Pajaro Valley Water Management Agency

Introductions

- Welcome
- Review Meeting Guidelines
- Roll Call
- Review Meeting Schedule
- Review Meeting Objectives
- Comments for Items Not on Agenda

Review Meeting Protocols

1) Permit the Facilitator / Host to lead.
2) Respond to roll call of Committee Members /Public/Identify Phone numbers.
3) Follow the Agenda to ensure meeting objectives are met.
4) Empower facilitator to queue and prioritize speakers.
5) Minimize disruption by allowing speakers to own the mic.
6) Alert the Facilitator through “requesting the mic” via the “chat bubble” are “raising hand” through the messaging function.
7) Try to be brief in communications in order for others to participate.
8) Be patient with technology and each other as we adapt to remote communication.

GoToMeeting Technical Guidelines

1) Use the phone icon to mute via the computer and sign on with a muted phone
2) Use *6 to mute and unmute on phone
3) When not speaking, mute your computer to eliminate and reduce feedback.
4) Use the “chat bubble” to message and alert Facilitator when you want to speak.
5) If on phone and logged in online, please enter PIN on phone.
6) This meeting is being recorded.

Roll Call

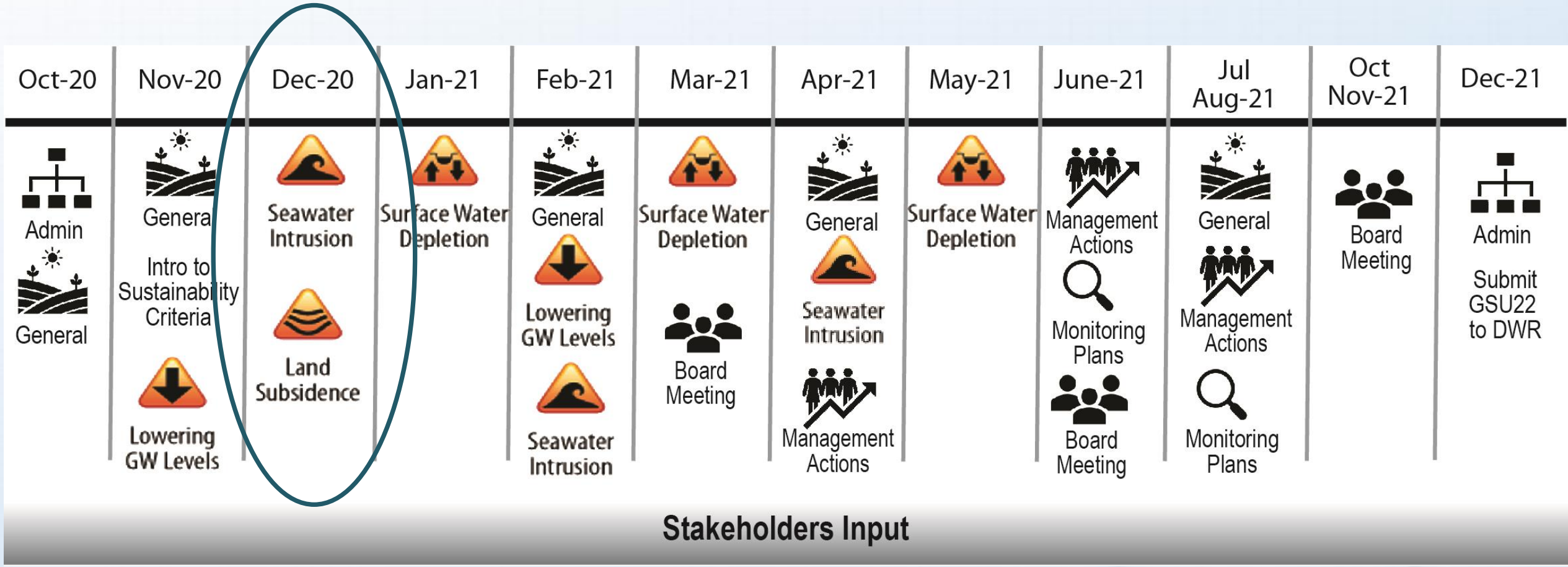
AFFILIATION	COMMITTEE MEMBER
Santa Cruz County Farm Bureau	Chair Kirk Schmidt
PV Water Board	Vice-Chair Bob Culbertson
PV Water Board	Javier Zamora Alternate: Tom Broz
PV Water Board	Amy Newell Alternate: Mary Bannister
Santa Cruz County	John Ricker
Monterey County	Unfilled
San Benito County	Unfilled
Monterey County Farm Bureau	Robert Rodoni
City of Watsonville	Beau Kayser
Pajaro Sunny Mesa Community Services District	Sandy Coplin
Aromas Water District	Robert Johnson
California Water Service Company	Gary Vincelet

AFFILIATION	COMMITTEE MEMBER
Rural Residential Well Owner Representative	Prime Position: Available Alternate: Mayra Hernandez Community Water Center
Environmental Representative	Jonathan Pilch, Watsonville Wetlands Watch
Mutual Water Company Representative	Sandra Hoppe, San Andreas Mutual Water Company
Disadvantaged Community Group Representative	Christi Suchil, City of Watsonville Resident
Agriculture Representative	Tannis Thorlakson, Driscoll's Berries

Review Meeting Objectives

- Discussions and priorities on GSU22 development
  - Management / Governance
  - Communication & Engagement (C&E)
  - GSU22 Development
  - Next Steps/Actions/Information Needed

Review Meeting Schedule



Comment for Items not on Agenda

Management/Governance

- Consider Corrections of GSU22 November 4th Meeting Summary
- Receive Report on PV Water Board Meeting
- Consider GSU22 Committee Member Alternates
- Reiterate GSU22 Roles & Responsibilities for complying with SGMA requirements

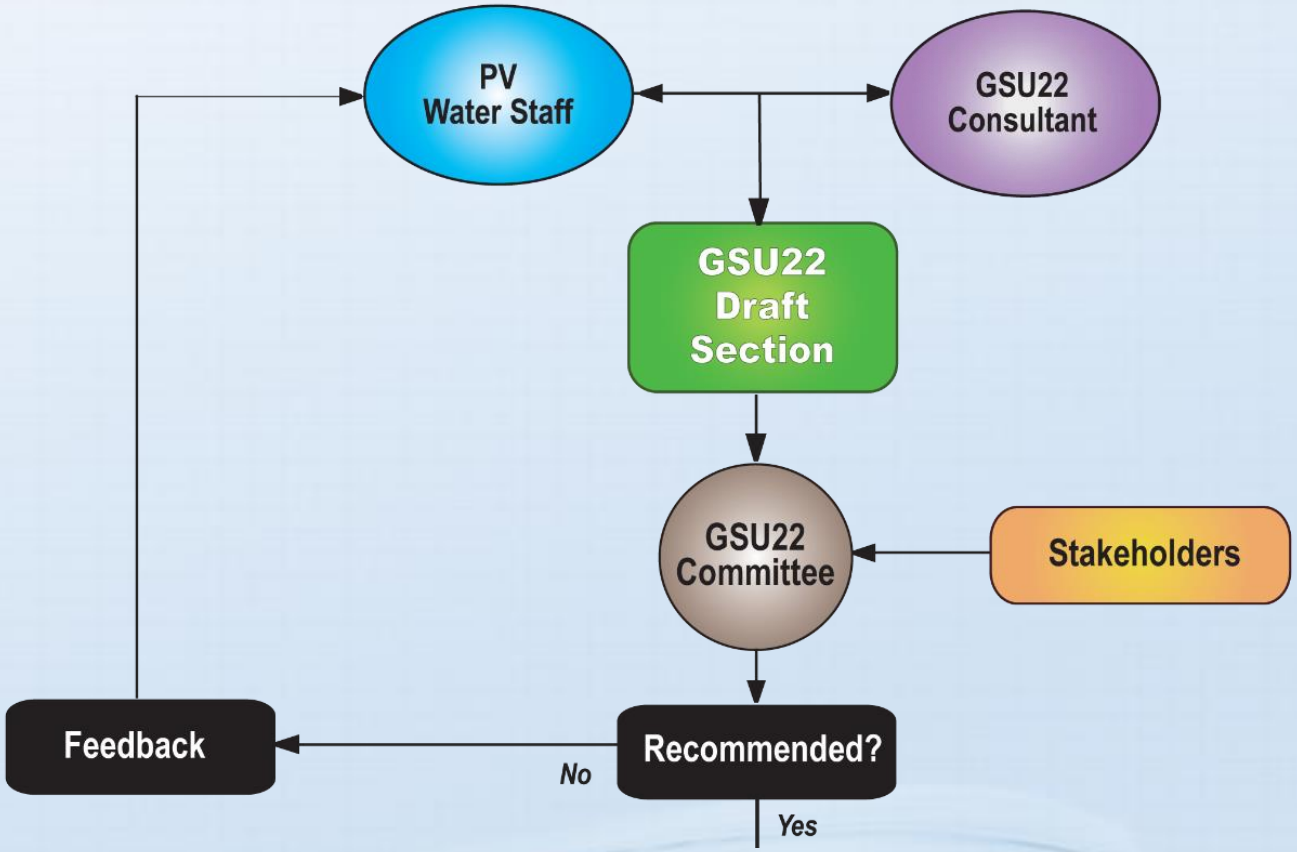
November 4 Meeting Summary

PV Water Board Meeting Update

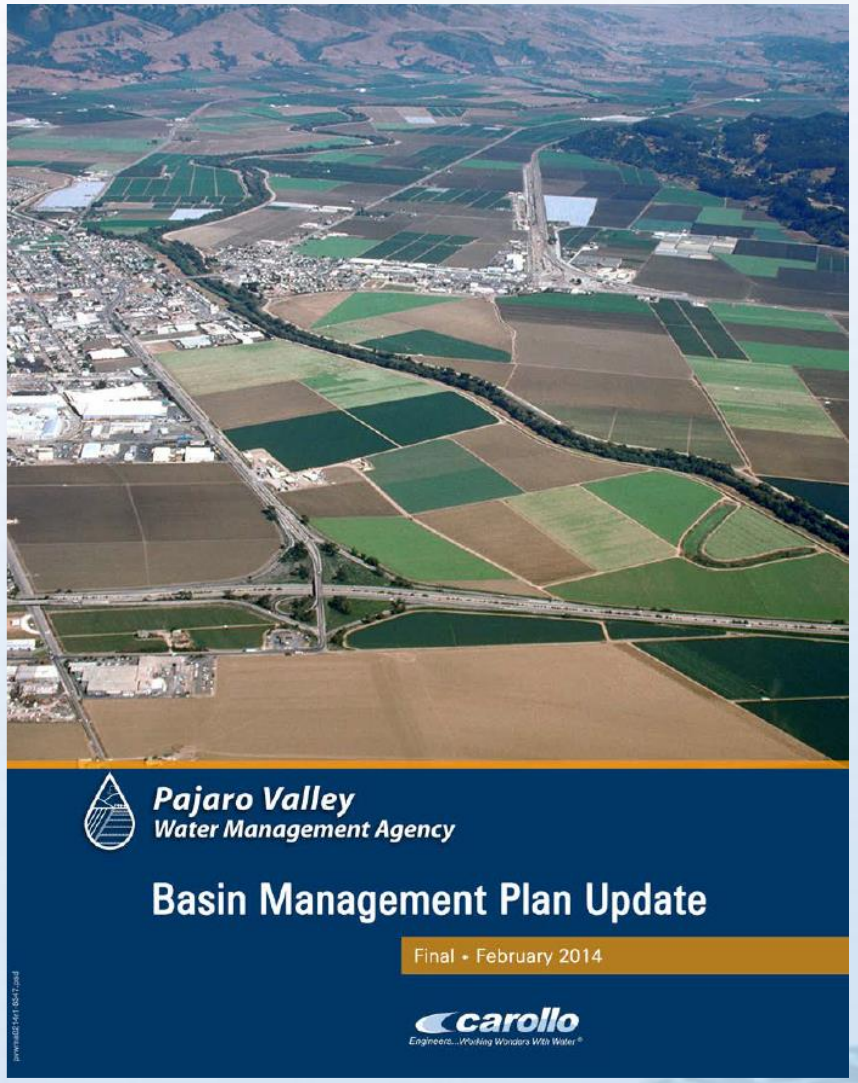
Consider Committee Alternates

GSU22 Committee Roles and Responsibilities

- Sharing feedback
- Making recommendations
- Ensuring timely responses to consultants and PV Water Board
- Performing coordinated outreach to stakeholders
- Delivering an acceptable GSU22 to the PV Water Board for adoption



GSU22 Framework under SGMA



Sustainable Groundwater Management Program

Alternative Assessment Summary

Pajaro Valley Subbasin

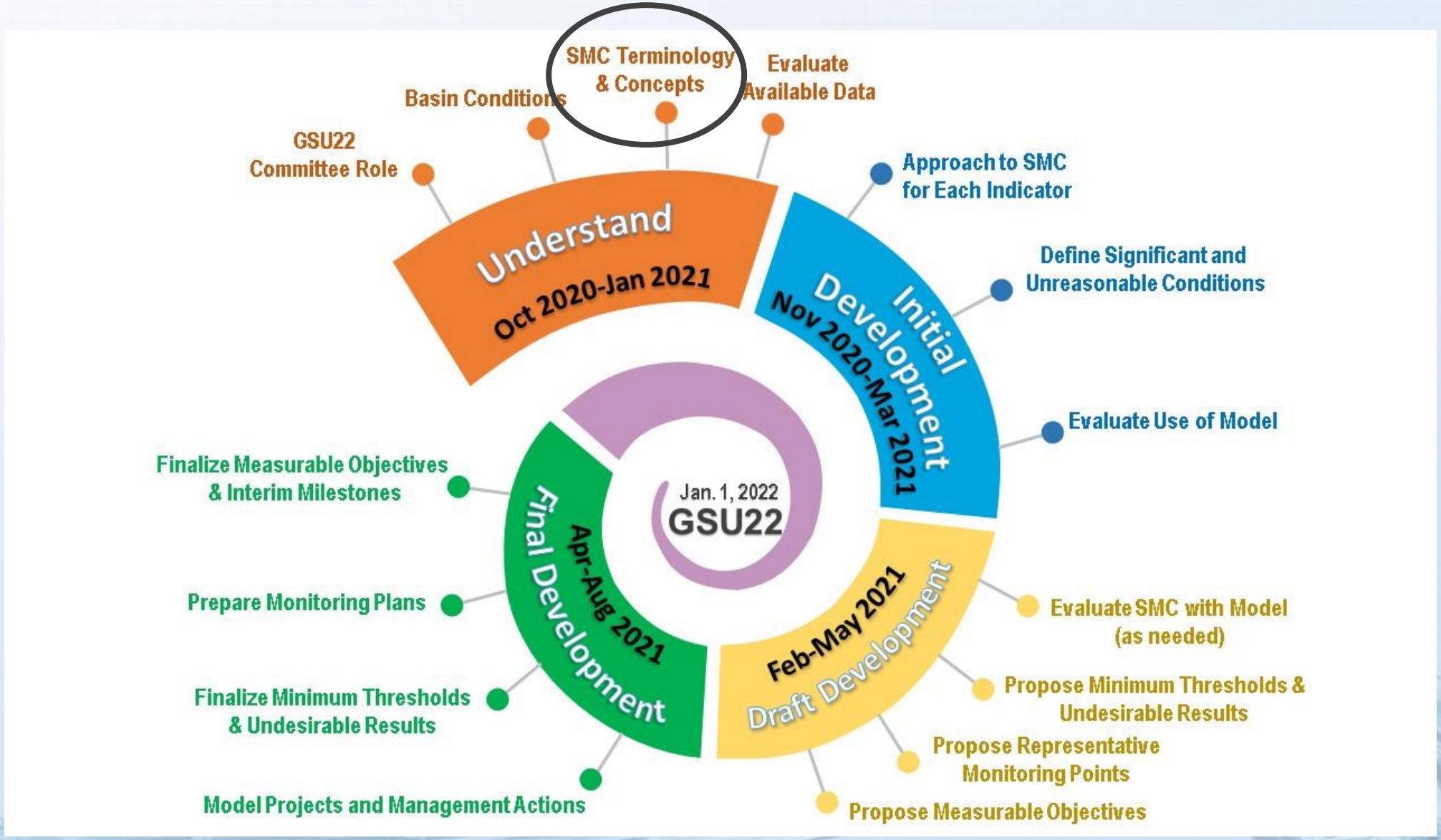
- State DWR approved PV Water's Basin Management Plan as an Alternative Plan for Sustainable Groundwater Management Act (SGMA)
- GSU22 is Five Year Update for Alternative Plan Required by SGMA
- Scope of GSU22 addresses the 10 recommendations by DWR for Five Year Update
- GSU22 focus is on strengthening the plan and continuing to meet SGMA requirements

GSU22 Development

- Review Sustainable Management Criteria (SMC)
- Update on Groundwater Levels (GWLs) SMC
- Receive Preliminary Subsidence Analysis
- Review and Provide Feedback on Chloride Concentrations to use for Seawater Intrusion SMC
- Review Schedule – Jan: Surface Water Depletion, Groundwater Dependent Ecosystems
- Committee/Public Questions & Comments

Review Sustainable Management Criteria

Understanding Sustainable Management Criteria (SMC)



Sustainability in SGMA is based on aquifer condition

- Sustainability indicators help quantify aquifer condition
- Sustainability indicators are assessed using sustainable management criteria (SMC)
- Sustainability is **outcome based**

DWR recommended evaluating 4 of 6 sustainability indicators

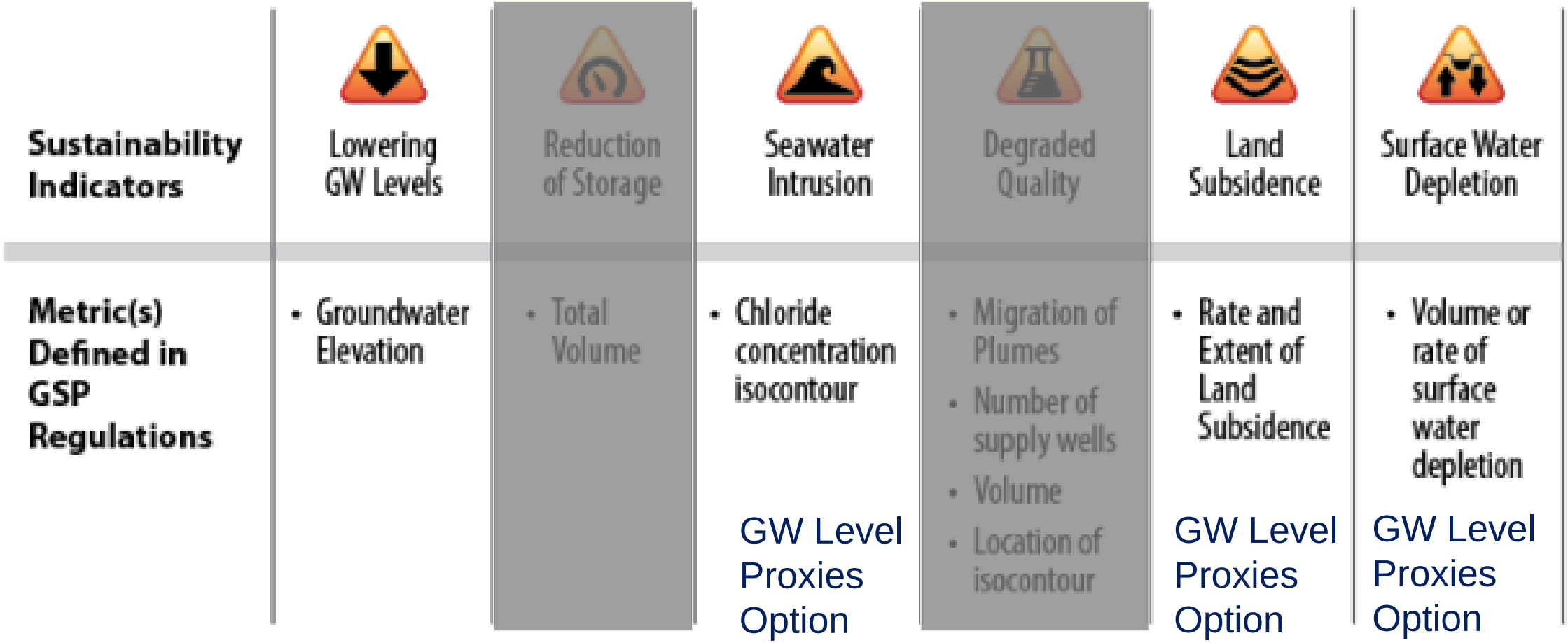


Figure 2. Minimum Threshold Metrics

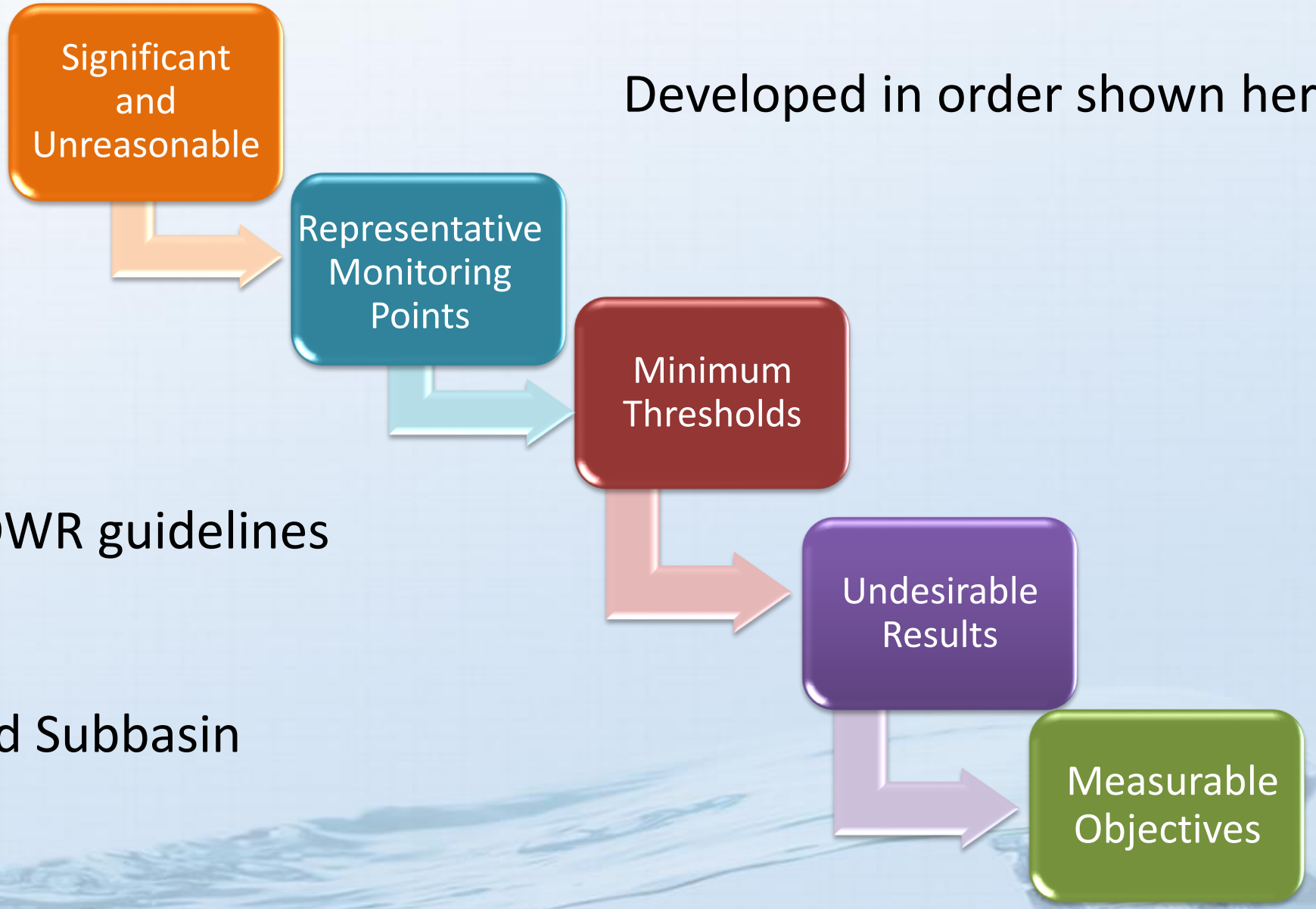
DWR, BMP, 2017

We will develop a complete set of SMC for each recommended and relevant sustainability indicator

- Significant and Unreasonable — descriptive
- Undesirable Results — descriptive / numeric
- Minimum Threshold
- Measurable Objective
- Interim Milestones

Numeric

SMC will be developed within the below framework



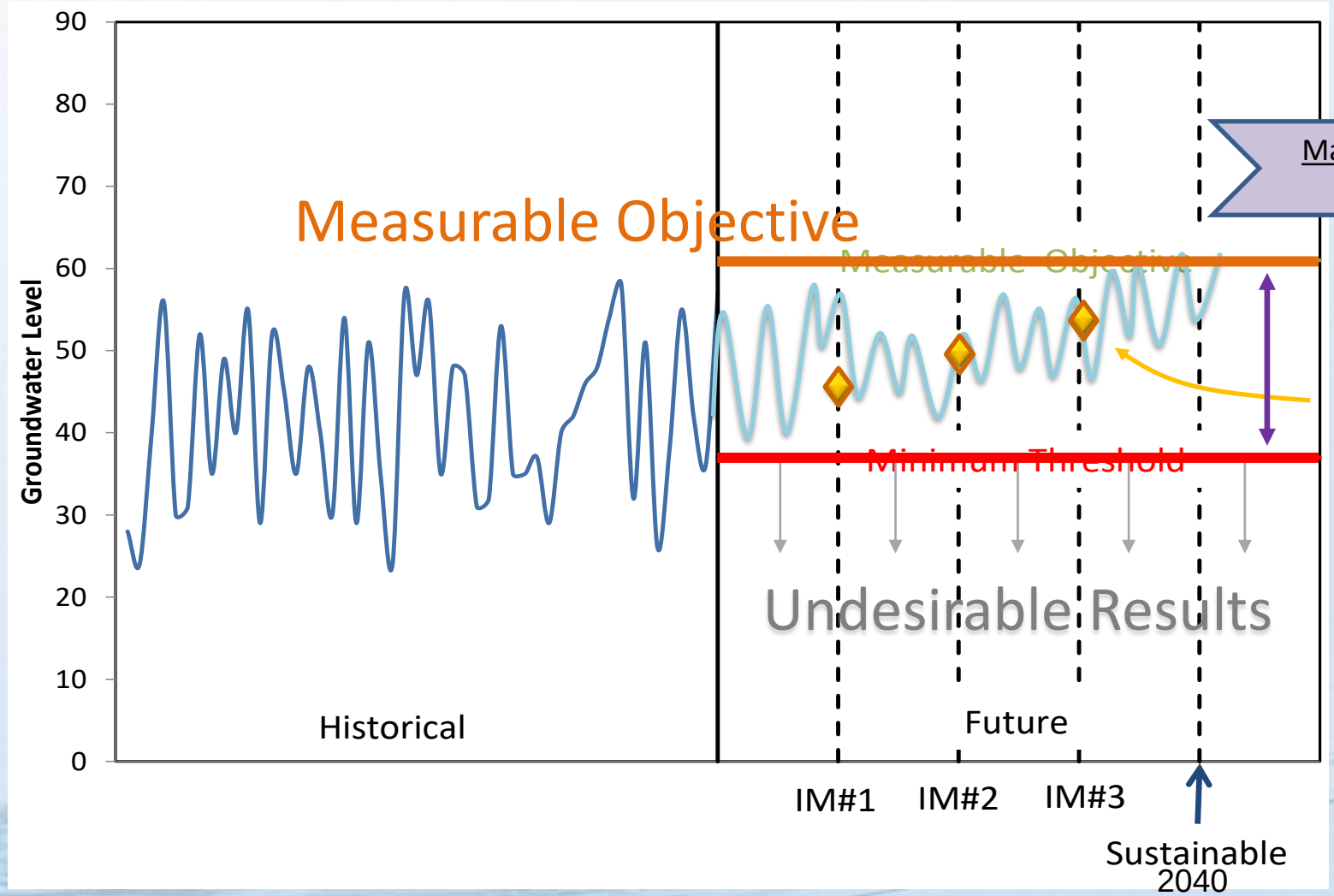
Developed in order shown here

SMC will be:

- Consistent with DWR guidelines
- Cohesive
- Feasible
- Account for varied Subbasin objectives

Overview of Quantitative SMC

- Interim Milestones are measurable objectives set every 5 years



Maintain Sustainability for next 30 years

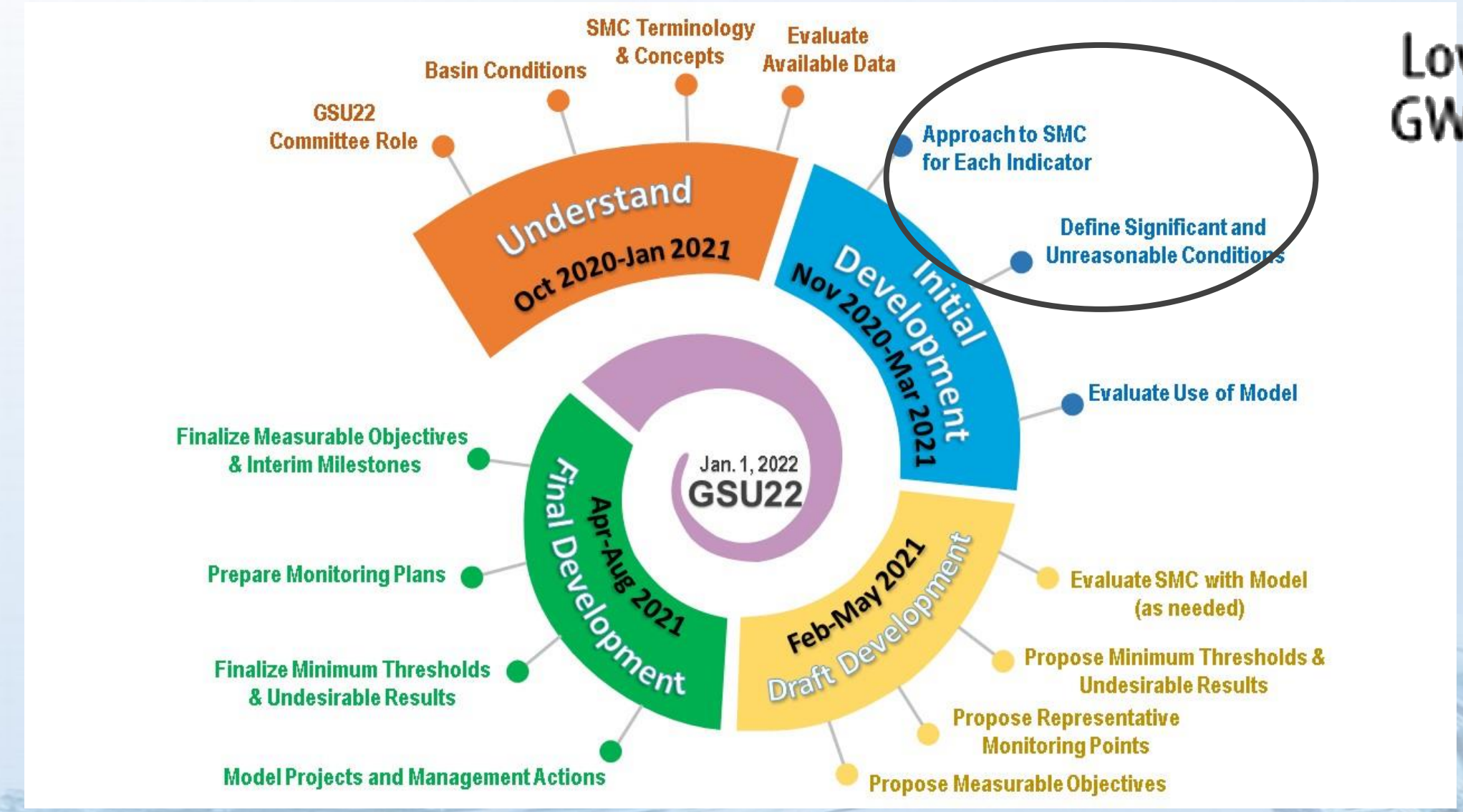
Operational Flexibility

Interim Milestones (5 Years)

Minimum Threshold

Update on Groundwater Level (GWL) SMC

We started with initial development for groundwater levels



Draft Statement of Significant and Unreasonable Conditions

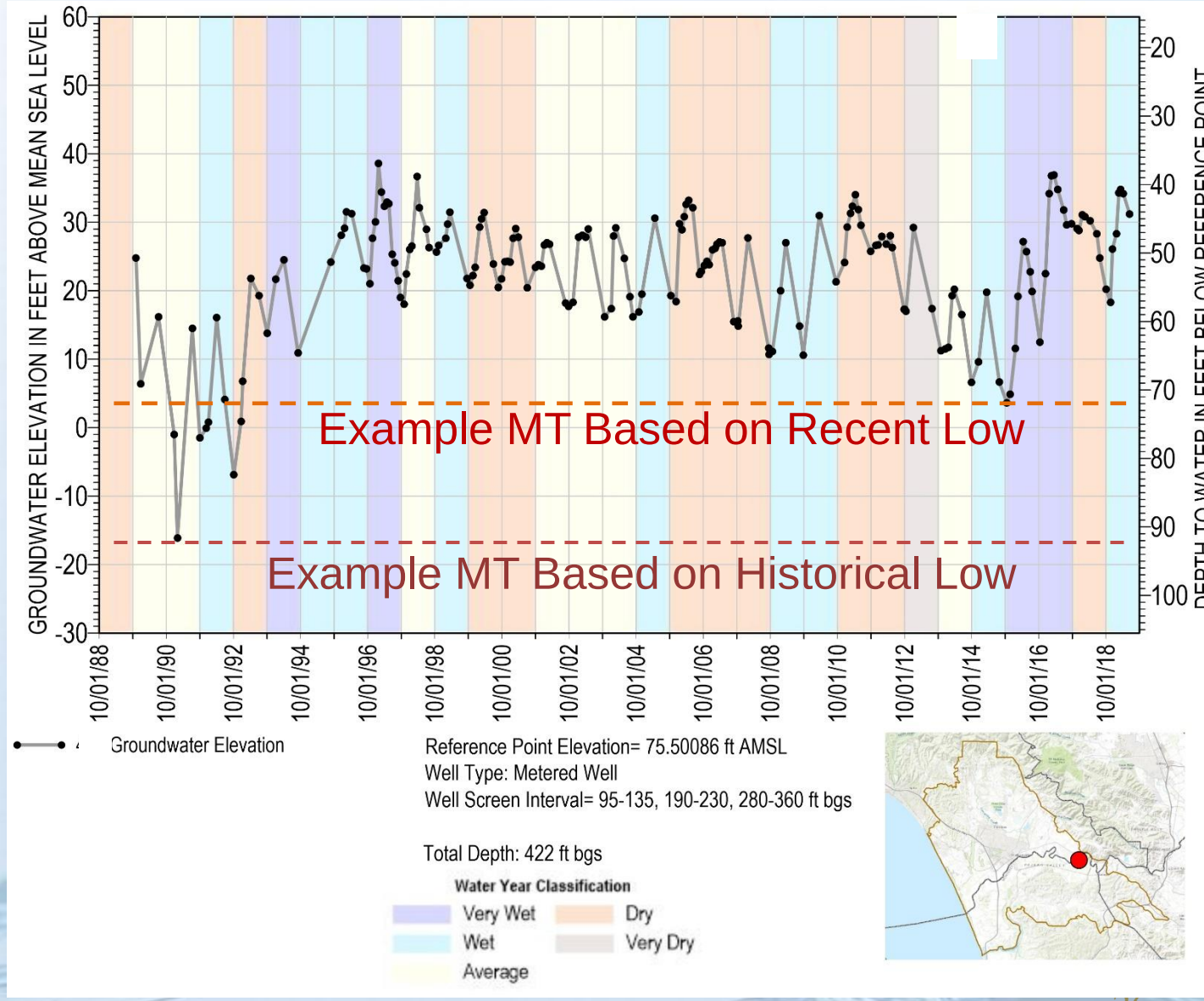
- Current draft statement:

"Significant and unreasonable chronic lowering of groundwater levels occurs when ***groundwater falls to long-term levels that negatively impact a significant number of domestic, agricultural, or municipal wells, and cause a long-term reduction in groundwater supply****."*

-Draft Statement including Committee Comment

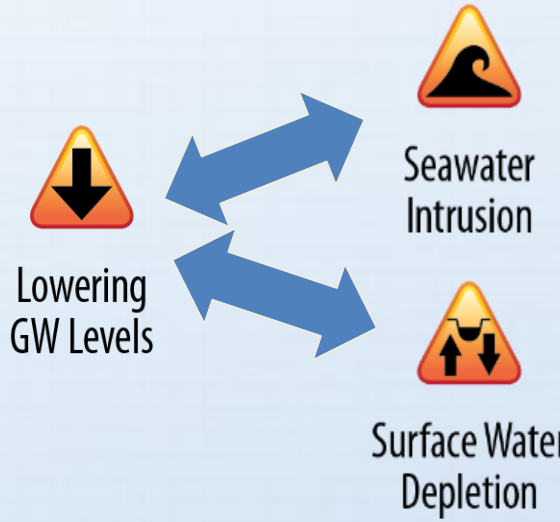
GWL Minimum Thresholds (MT) Proposed Approach

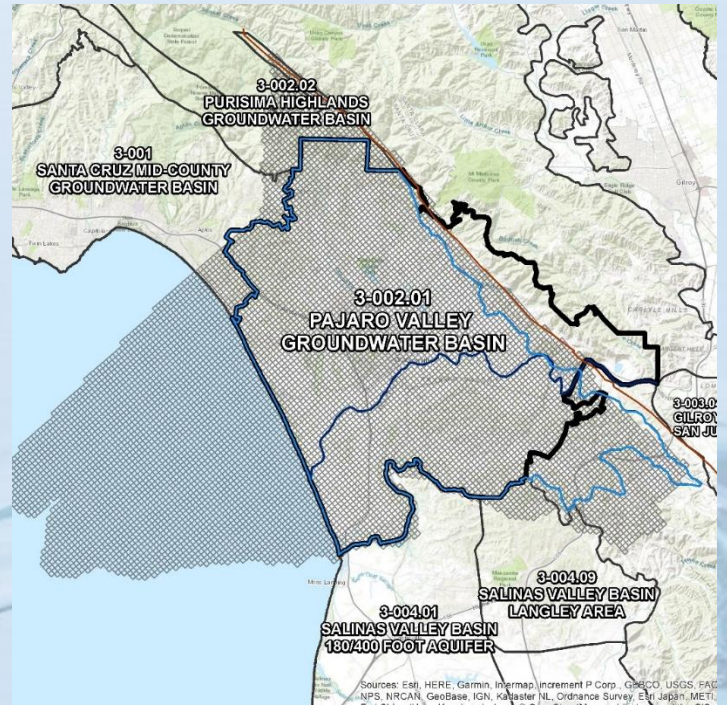
- **Development** will include thorough review of historical groundwater elevations, land use, and production well screen depths
  - Including domestic well analysis
  - No recent observation of wells going dry based on driller permit applications to County
- Will focus on ensuring that a high percentage of production wells will not dry out if GWL remains above MT
- Resulting MT will ensure groundwater access remains reliable



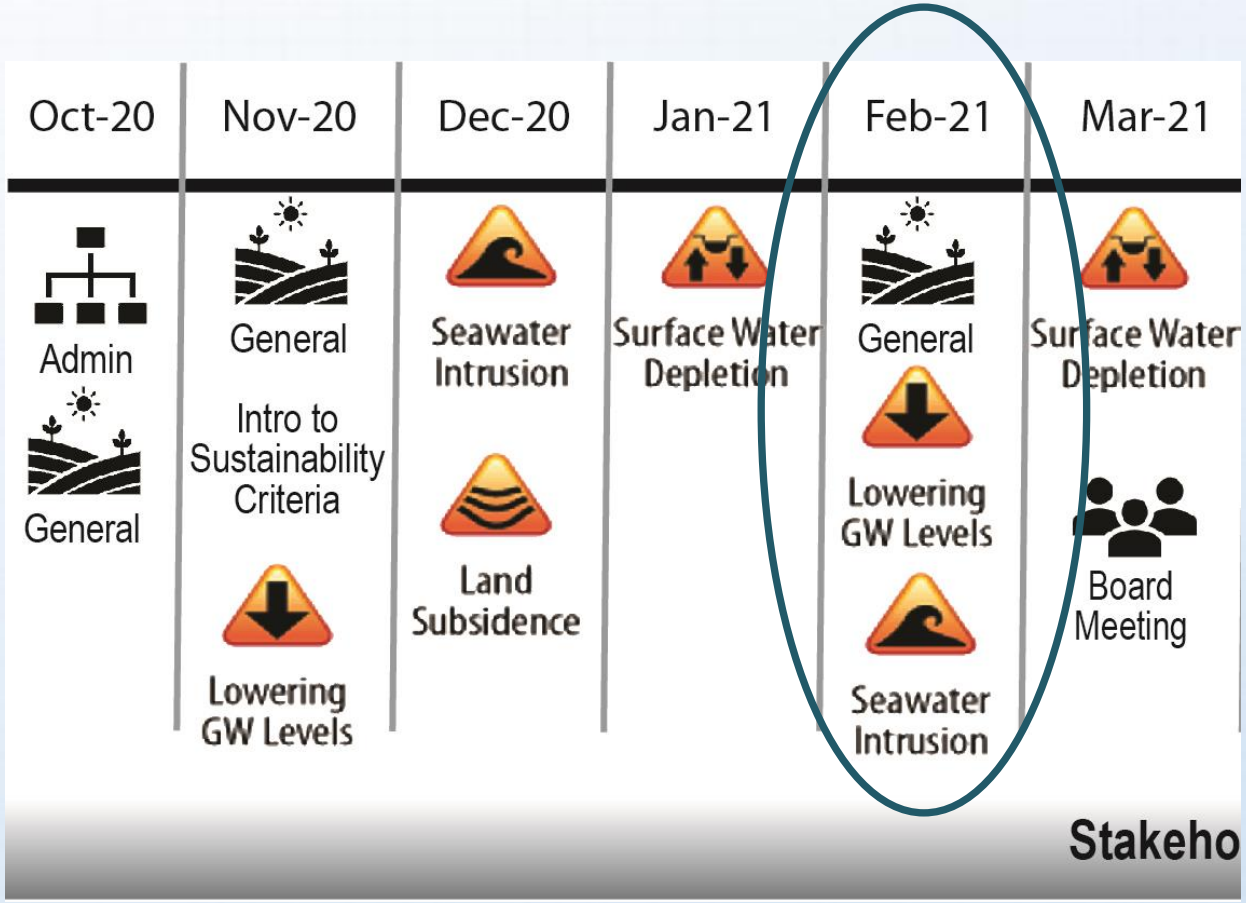
GWL approach focuses on well supply but there are other considerations

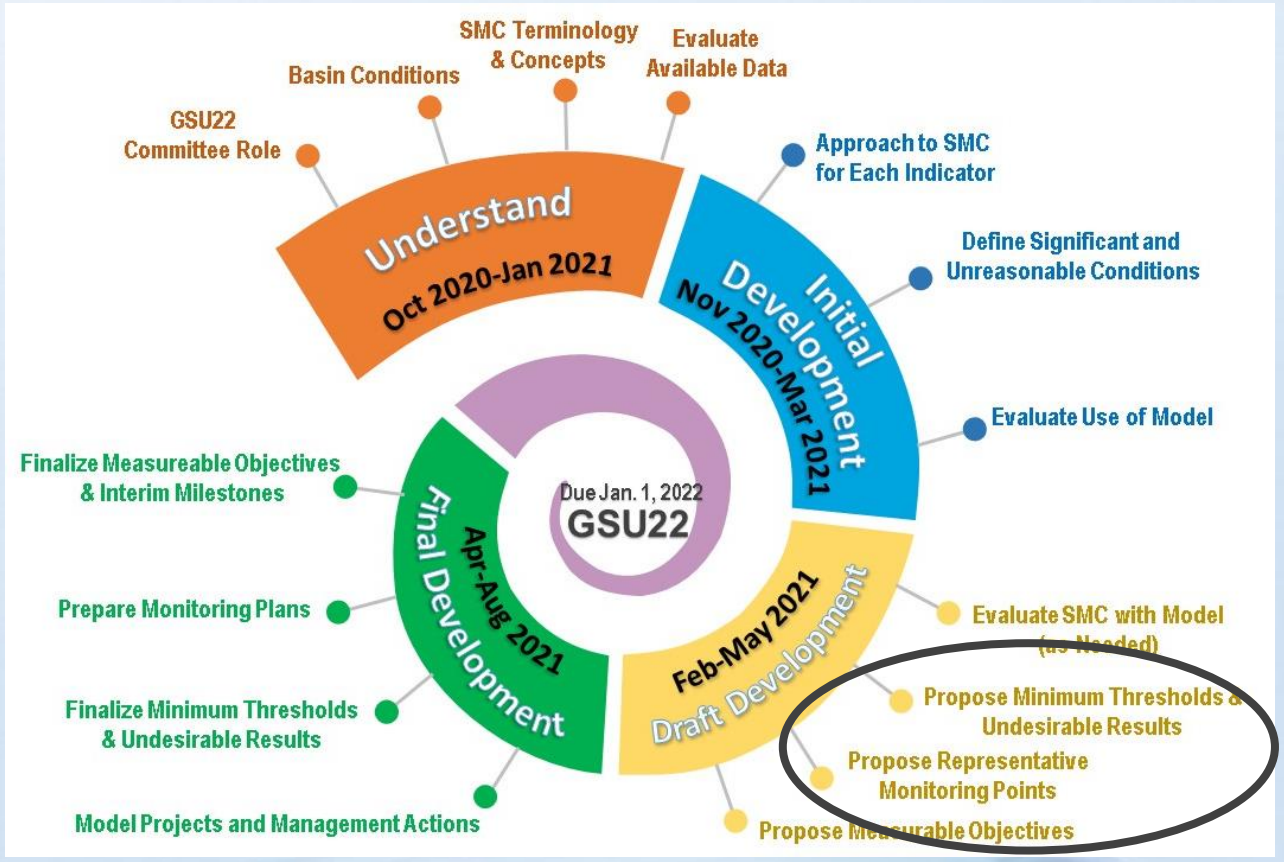
- Focus consistent with statement of significant and unreasonable conditions
- Other indicators affected by groundwater levels but will be evaluated separately
- All SMC need to be met to achieve sustainability
- MT documentation will describe relationship with:
  - other indicators
  - existing standards
  - MTs in neighboring basins





We will propose SMC for committee review in February





Questions and Comments

Subsidence Analysis for USGS

DWR Alternative Assessment Staff Report on Subsidence

Land Subsidence

- "The Agency provides a reasonable description of why the undesirable result of land subsidence is not likely to occur in the Subbasin."

- This assumption "is reasonable but has not been confirmed by historical monitoring data."

- Recommended Action 9: "Staff recommend that the Agency determine a means by which the Subbasin may be assessed to confirm that no significant land subsidence has occurred. This can be accomplished by incorporating subsidence monitoring information from statewide or local studies into the monitoring program for the Basin."

PV Water initiated subsidence evaluation as part of long term collaboration with USGS to support basin management

- Consistent with PV Water Charter objective to prevent subsidence

Year	PV Water Collaboration with USGS	Basin Management Milestones
2005	Agreement for USGS to transition PVIGSM model (proprietary) to MODFLOW (public domain)	Technical Advisory Committee (TAC) formed to oversee model development
2010	Amendment for USGS to update Pajaro Valley Hydrologic Model (PVHM)	TAC approves calibrated model for use in Basin Management Plan (BMP) Update
2014	USGS publishes PVHM report. Amendment for USGS to upgrade and update PVHM and conduct climate change analysis of BMP	PV Water approves BMP Update and EIR SGMA enacted
2016		PV Water submits BMP as Groundwater Sustainability Plan (GSP) Alternative
2018	Amendment for USGS to update PVHM through 2020, use PVHM to support SGMA, install new stream gauge, and **evaluate subsidence**	
2019		DWR approves GSP Alternative with recommendation to **evaluate subsidence**

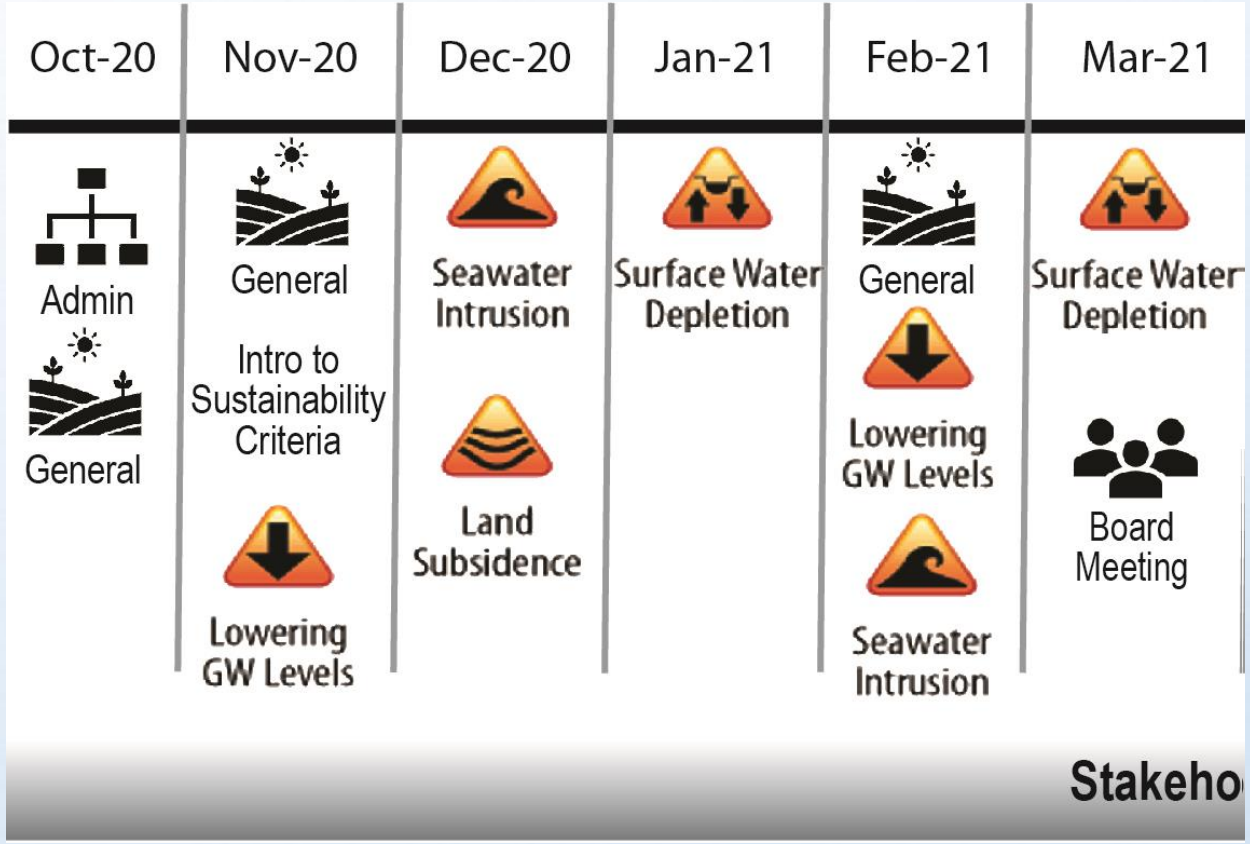
Switch to USGS presentation

Questions and Comments

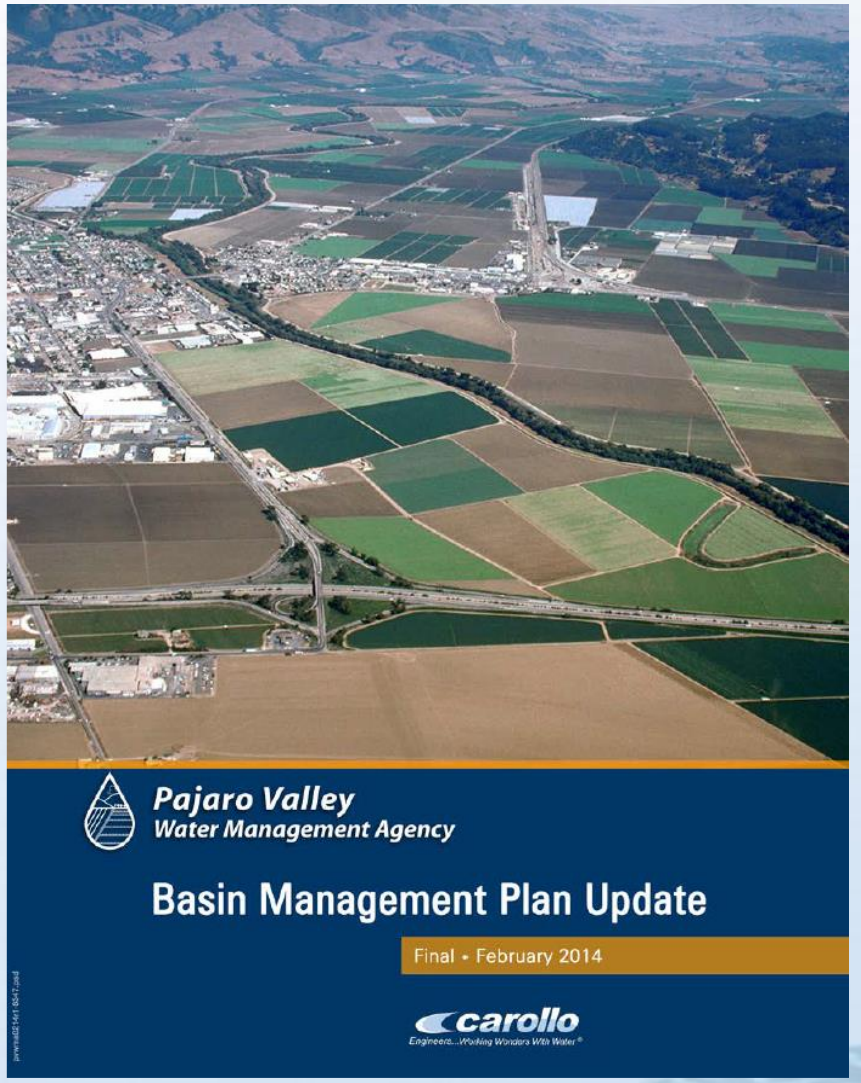
Seawater Intrusion Chloride Concentration

We begin development of seawater intrusion SMC

Seawater Intrusion



Basin Management Plan (BMP) includes focus on seawater intrusion



Sustainable Groundwater Management Program
Alternative Assessment Summary
Pajaro Valley Subbasin

- DWR designated Basin as critically overdrafted in 1980 citing seawater intrusion
- BMP adopted in response to deteriorating groundwater conditions caused by seawater intrusion before SGMA
- DWR: PV Water's "Agency's decision to focus on restoring groundwater elevations to a condition that eliminates seawater intrusion is reasonable"

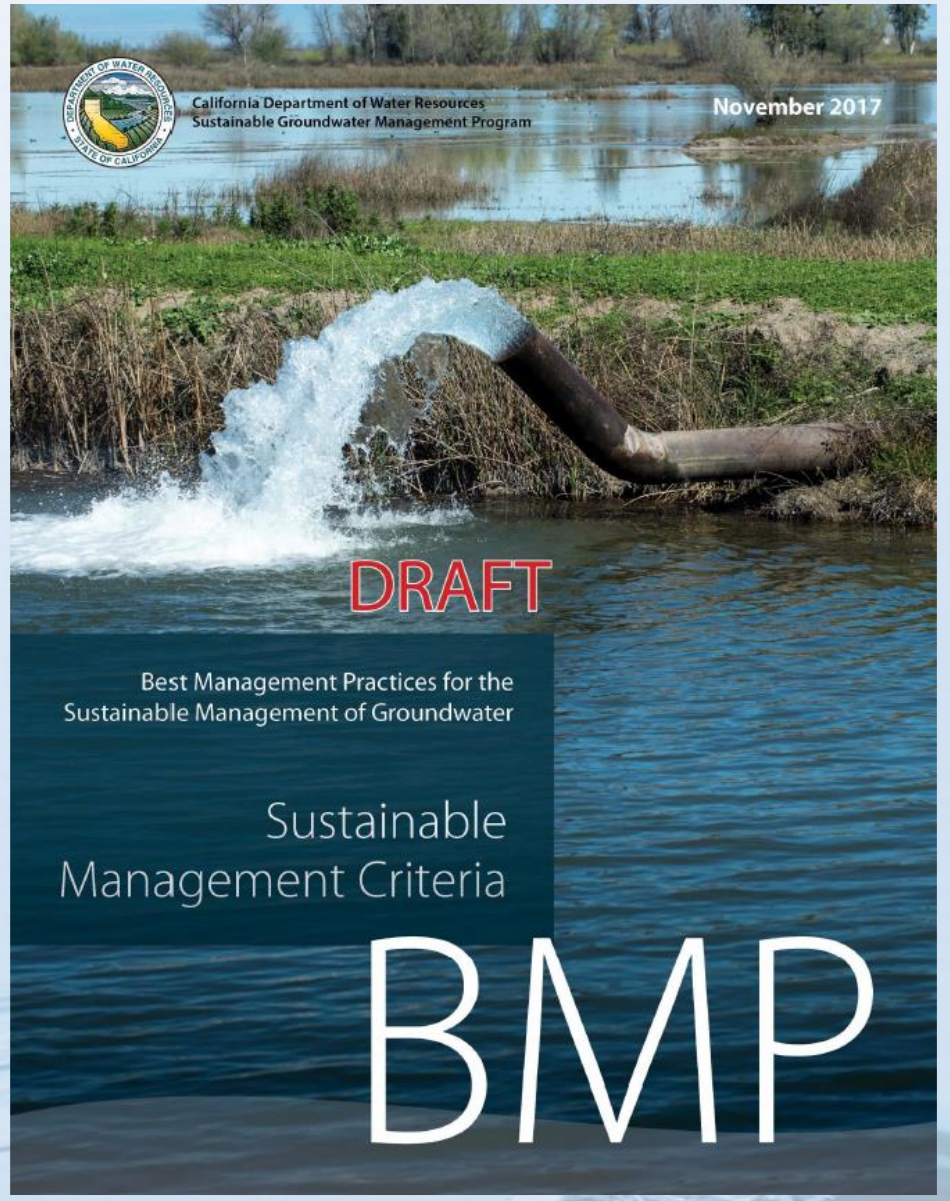
DWR Recommends Developing Seawater Intrusion SMC

Sustainable Groundwater Management Program
Alternative Assessment Summary
Pajaro Valley Subbasin

- PV Water's Alternative GSP describes pre-SGMA *rate* of seawater intrusion as minimum threshold for seawater intrusion
- Recommended Action 6: ... the Agency should define a specific *location* of an isoconcentration contour or some other equivalent method that can be used on an ongoing basis to assess progress toward eliminating undesirable results associated with seawater intrusion to assess the goal of eliminating seawater intrusion through implementation of projects and management actions as described in the Plan.
- Recommended Action 7: ... the Alternative should be updated…to quantify the *extent* to which *additional* seawater intrusion would not be significant and unreasonable

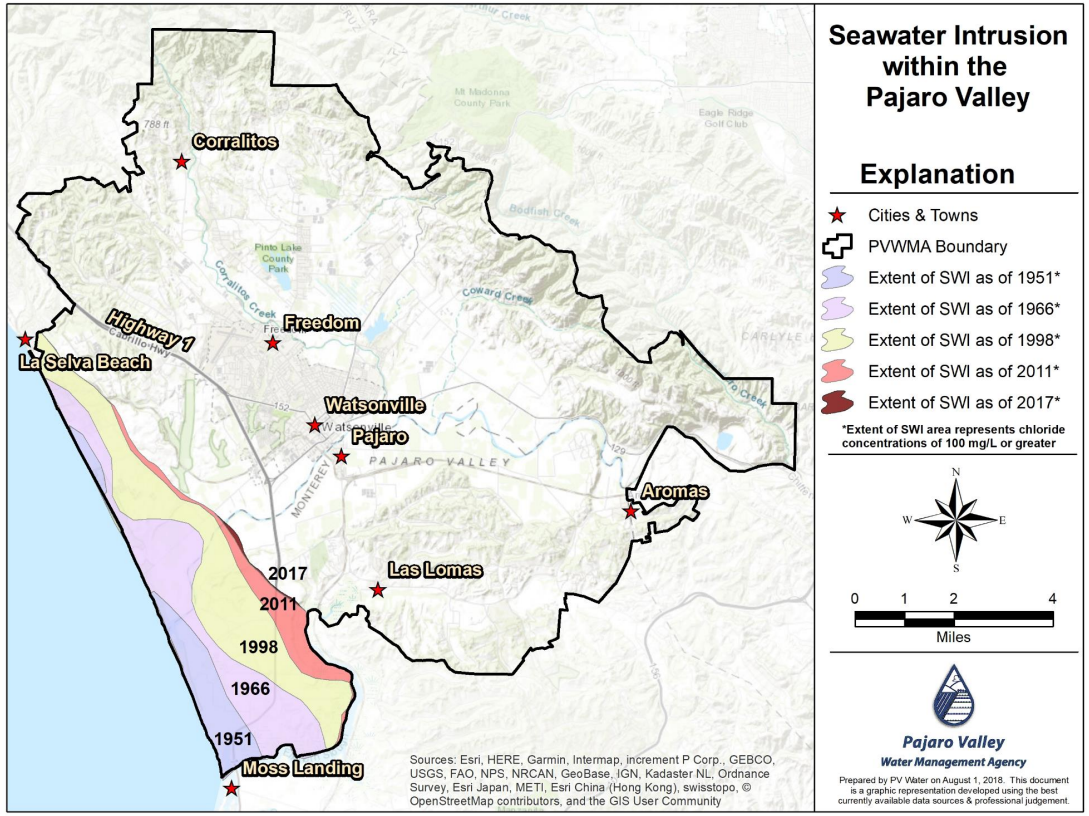
DWR Best Management Plan Considerations

- Historical rate and extent of intrusion in principal aquifers
- Land uses sensitive to salt
- Financial impacts of seawater intrusion
- Basin Plan objectives
- Adjacent basin minimum thresholds



Questions on Significant and Unreasonable Conditions for PV Basin

2017 Basin Conditions



- How far inland for seawater intrusion is acceptable and why?
- How should we define whether seawater intrusion is occurring?

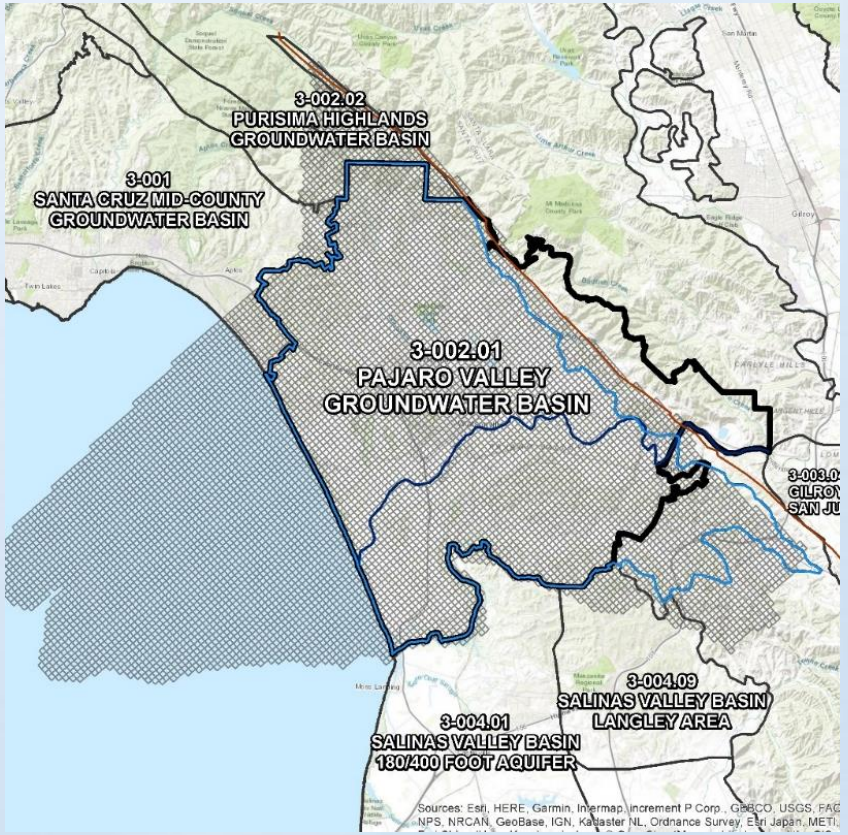
Examples of Descriptions of Significant and Unreasonable Conditions from Adjacent Basins

SANTA CRUZ MID-COUNTY GROUNDWATER AGENCY

Seawater moving farther inland than has been observed from 2013 through 2017.

Salinas Valley Basin Groundwater Sustainability Agency

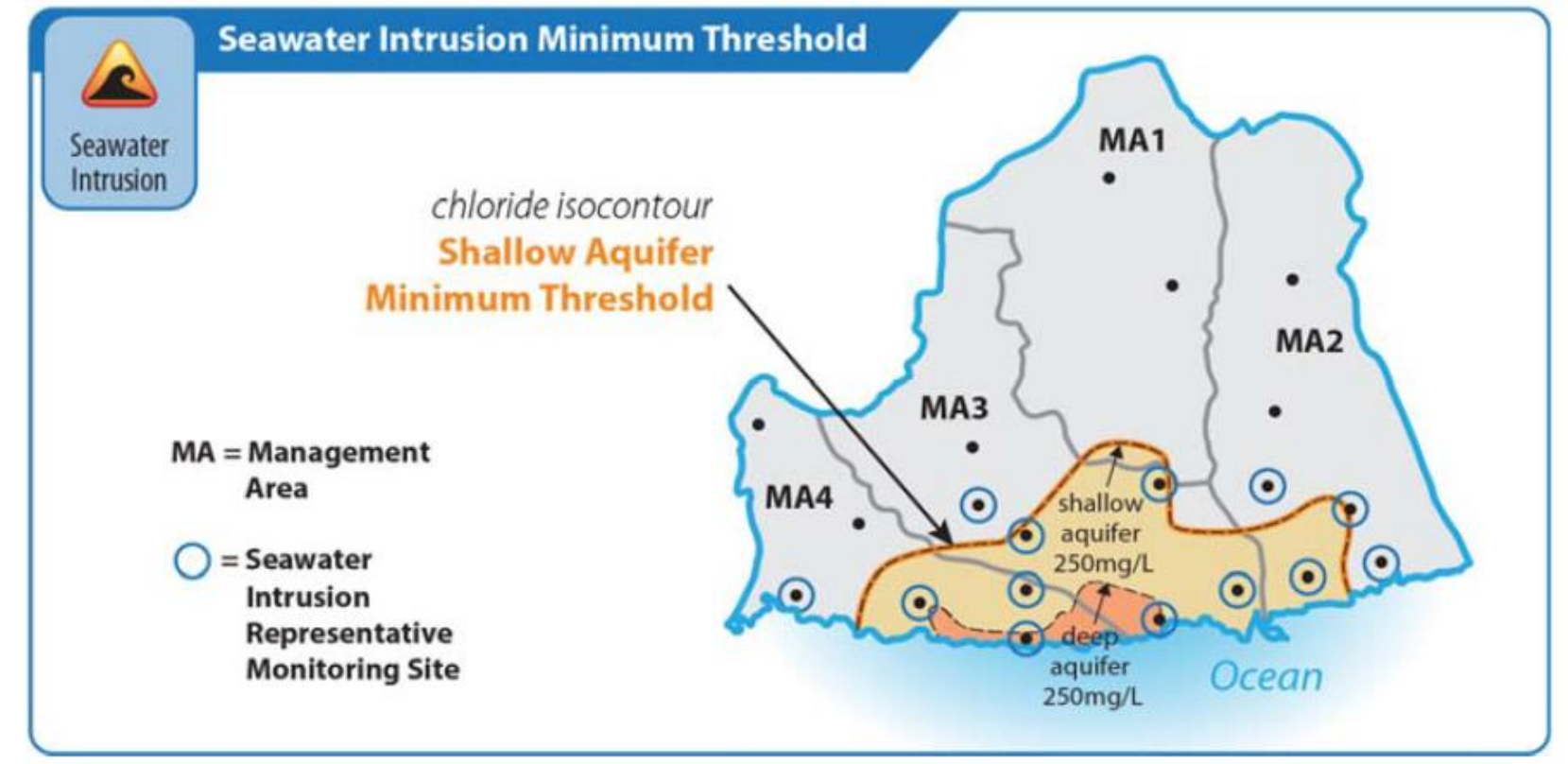
Seawater intrusion in excess of the seawater intrusion line defined by MCWRA in 2017.



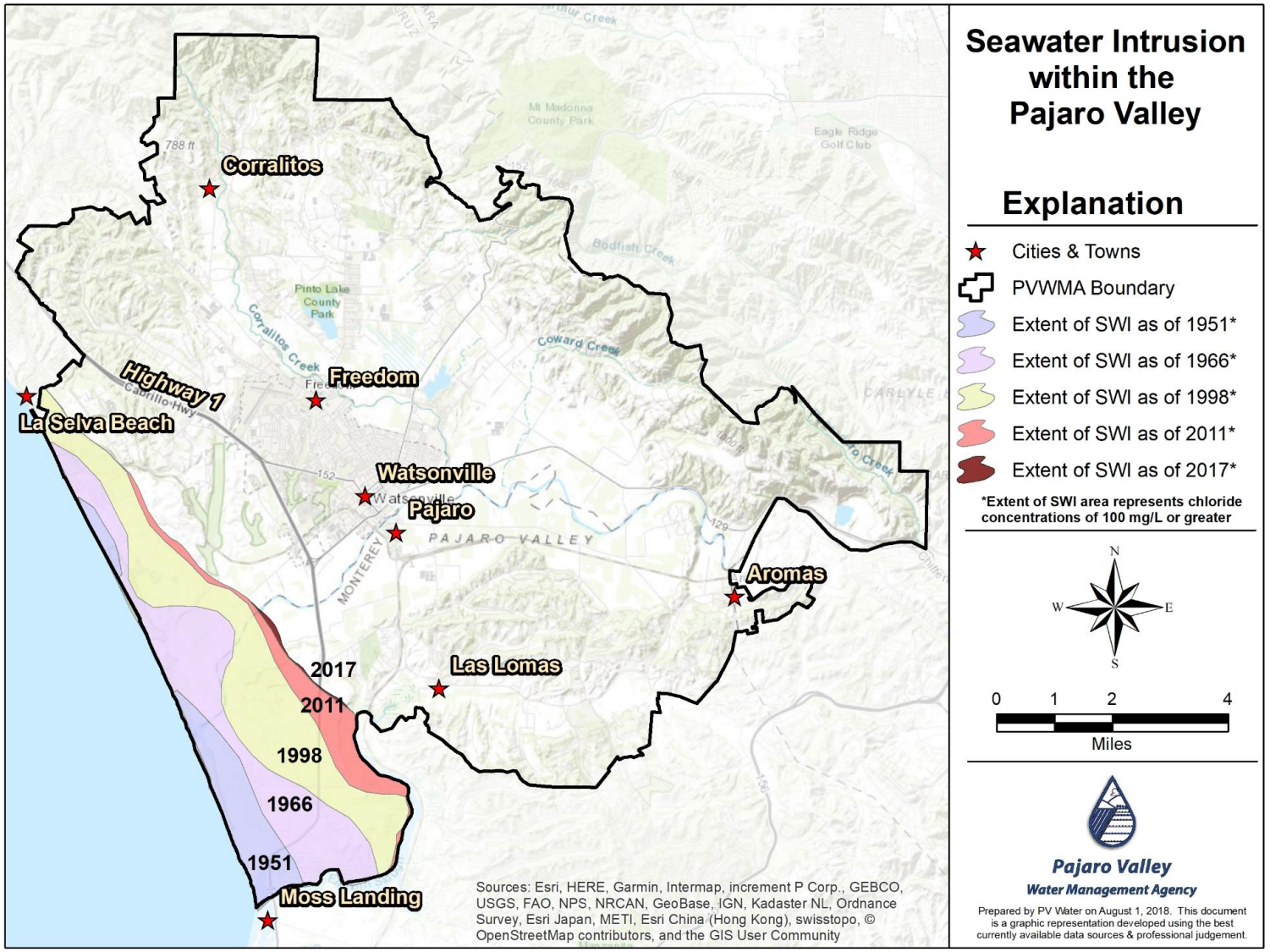
Based on not allowing additional intrusion from what was observed through 2017 but PV Water may do differently

How do we define whether seawater intrusion is occurring?

- SGMA requires use of chloride concentration isocontour
- Isocontour is geographic line where chloride in groundwater is estimated be a specified concentration
- Can be addressed before defining representative monitoring points



PV Water has used 100 mg/L chloride isocontour for seawater intrusion

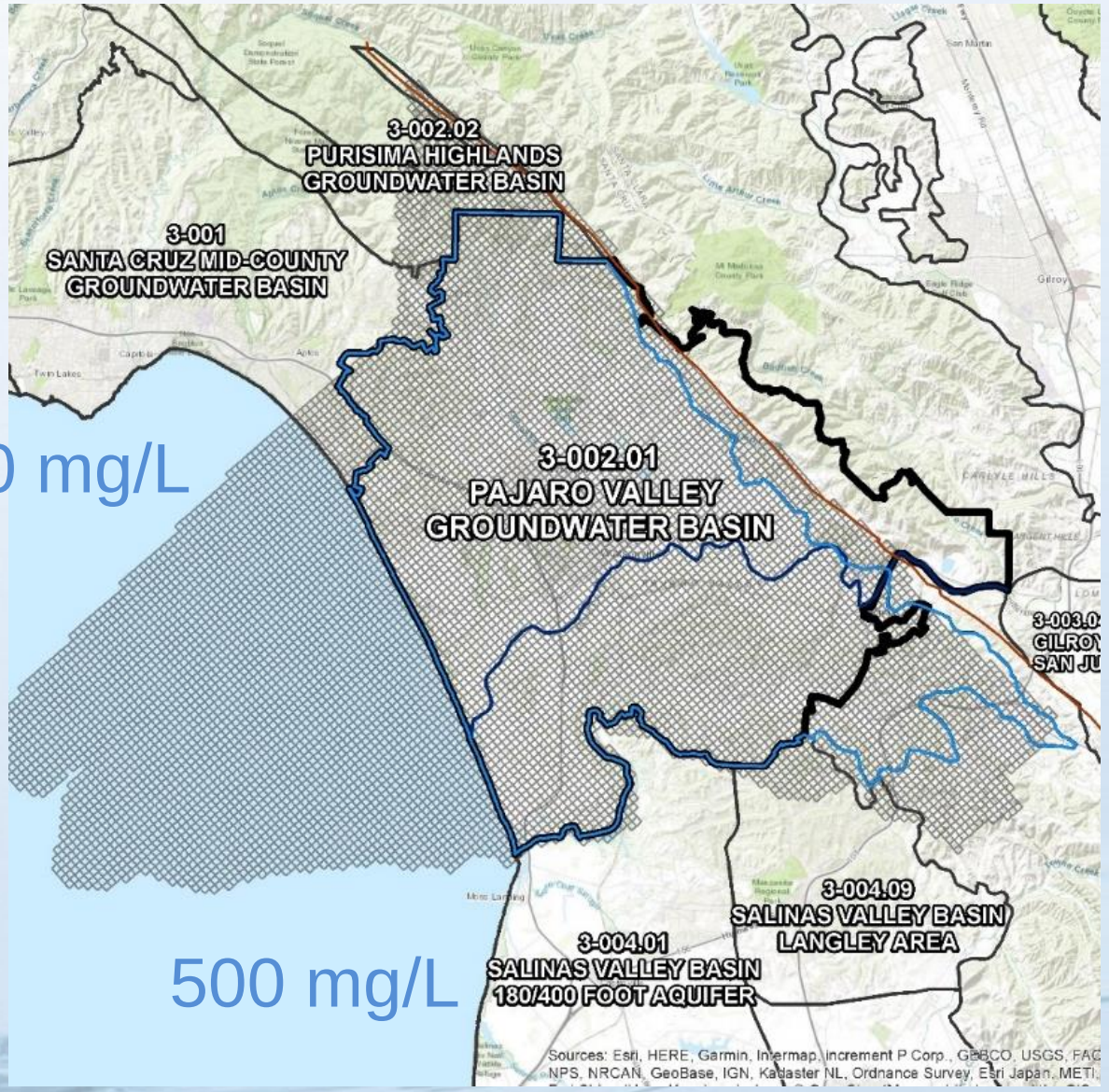


Does >100 mg/L represent significant and unreasonable conditions?

Should a different concentration be used to define undesirable results?

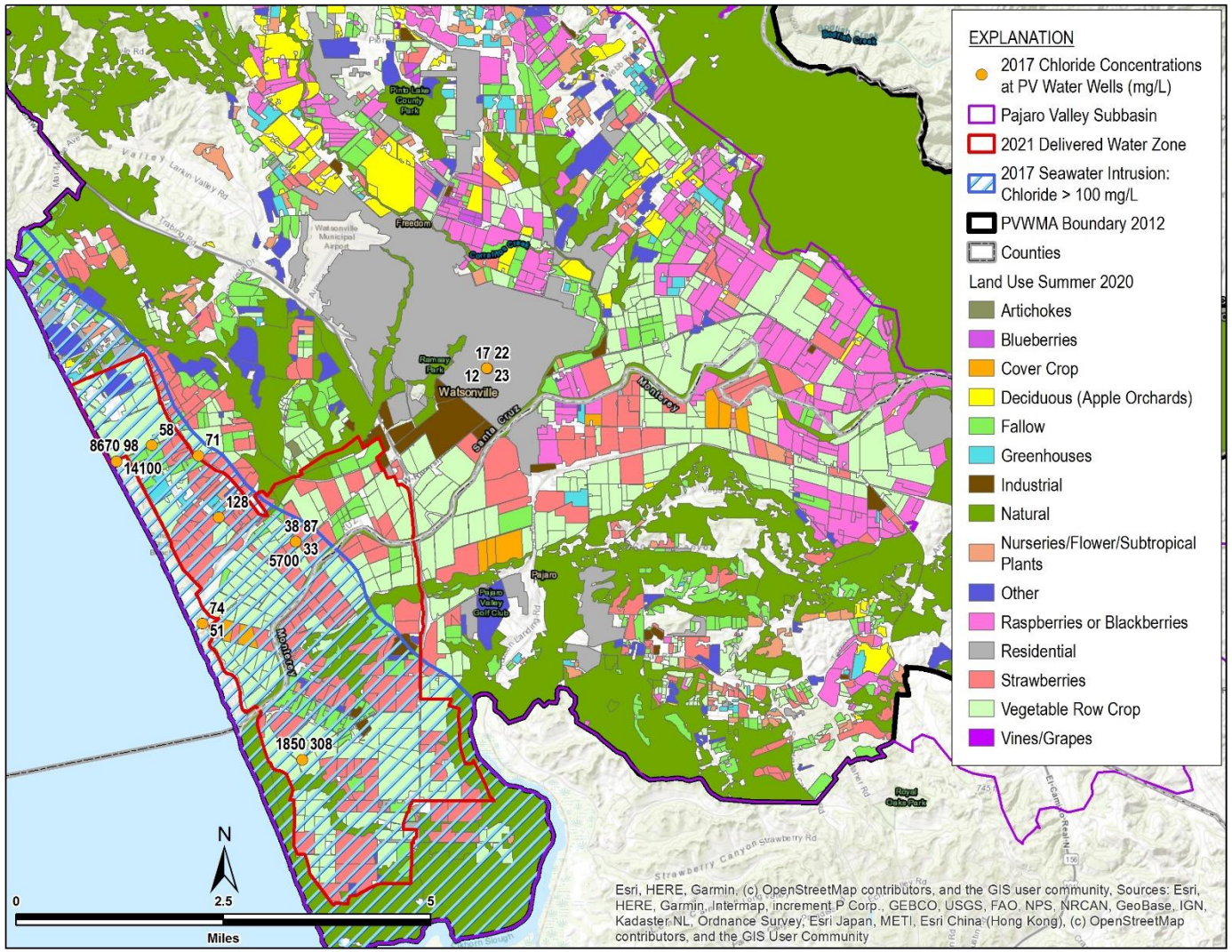
Adjacent Basin Minimum Thresholds and Basin Plan Objectives

Adjacent Basin GSP Chloride Minimum Thresholds for Seawater Intrusion



Central Coastal Basin Plan does not have Groundwater Quality Objectives for Pajaro Valley (Hollister/Tres Pinos Chloride = 150 mg/L)

Agricultural Land Use



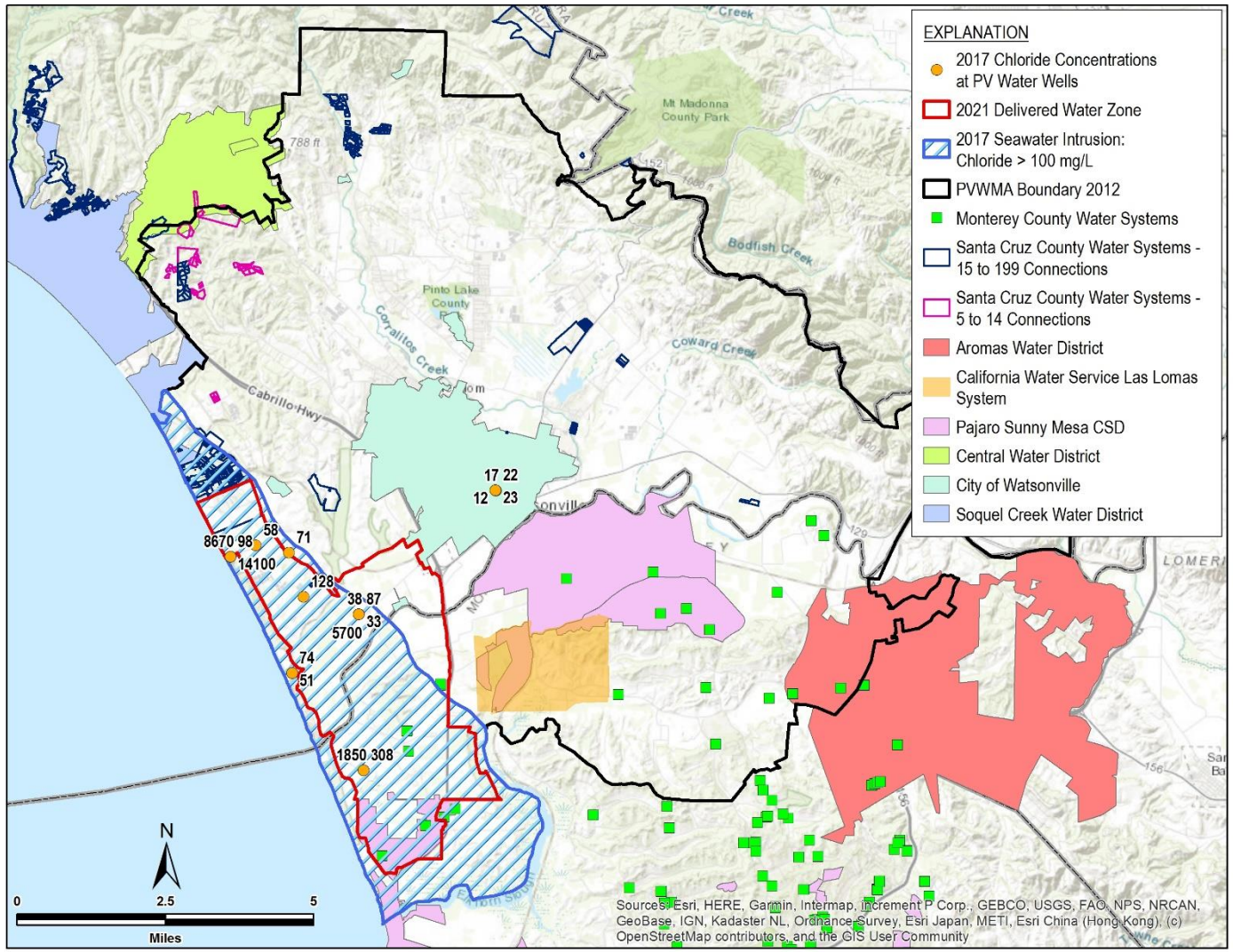
Strawberries and Vegetable Row Crops closest to seawater intrusion

Delivered Water Zone Extends farther inland From mapped seawater intrusion

Crop Sensitivity to Chloride

Relevant Crops	Effect Level	Chloride Concentration (mg/L)	Source
Tree crops and woody ornamentals	No Issues	<142	RWQCB, 2019
	Increasing Problems	142-355	
	Severe	>355	
Berries and avocado	Tolerant	<120	ANR, 2002
CDS Water Quality Objective		<150	PV Water
Monterey One Water CSIP Water Quality Objective		<250	Platts, 2020

Domestic Use and Secondary Drinking Water Standards



Secondary MCL chloride based on taste and odor effects:

250 mg/L recommended

500 mg/L Upper limit

Implications for Isocontour Location

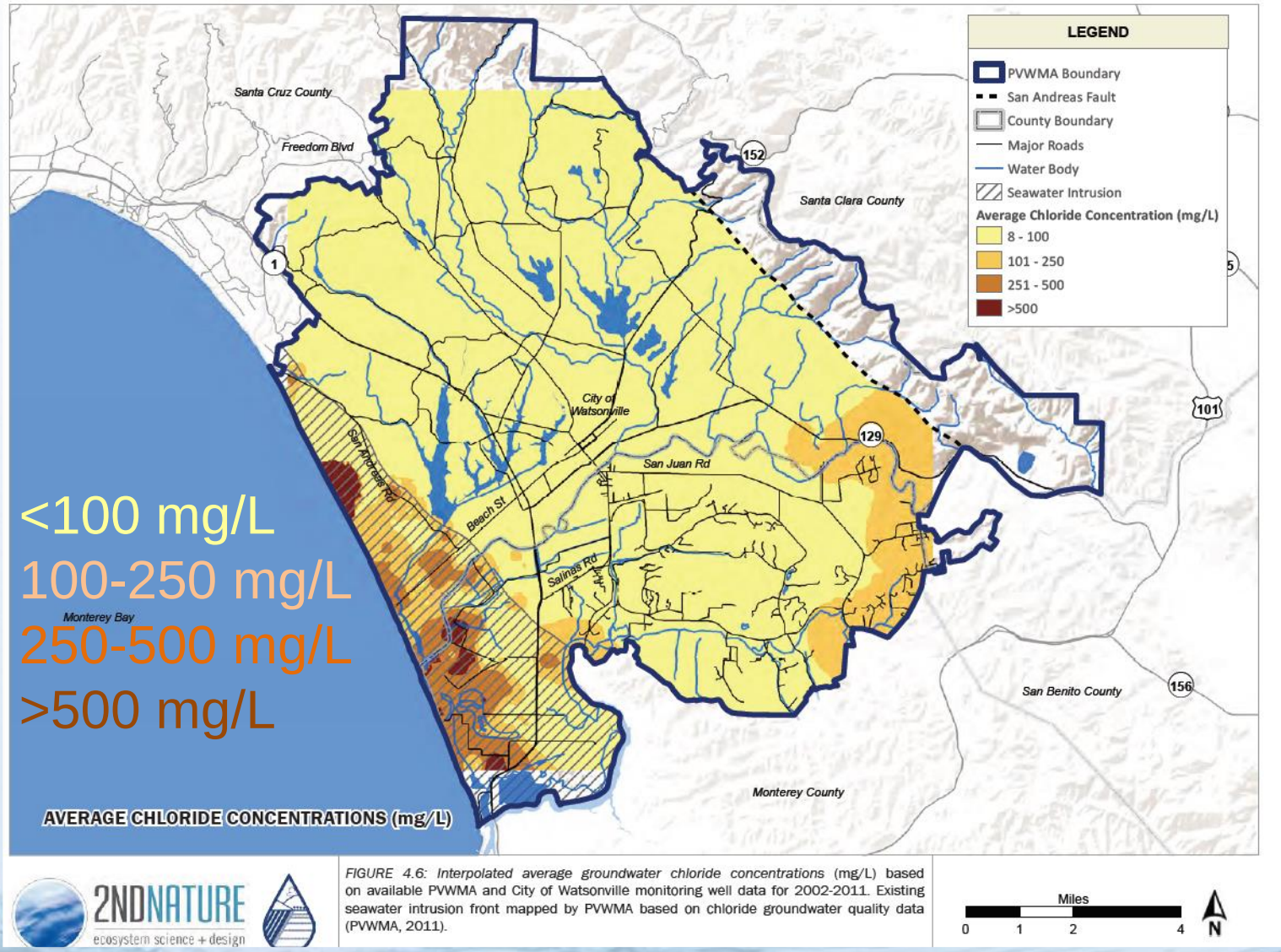


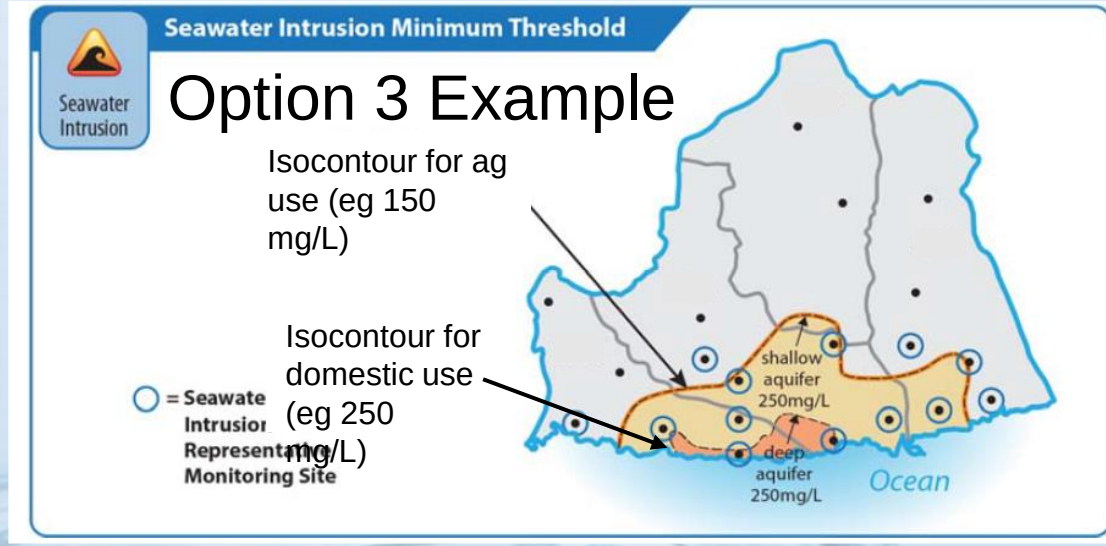
FIGURE 4.6: *Interpolated average groundwater chloride concentrations* (mg/L) based on available PVWMA and City of Watsonville monitoring well data for 2002-2011. Existing seawater intrusion front mapped by PVWMA based on chloride groundwater quality data (PVWMA, 2011).

- Location to protect domestic closer to coast than for ag
- Higher concentrations occur closer to the coast

Interpolated Chloride Concentrations in SNMP

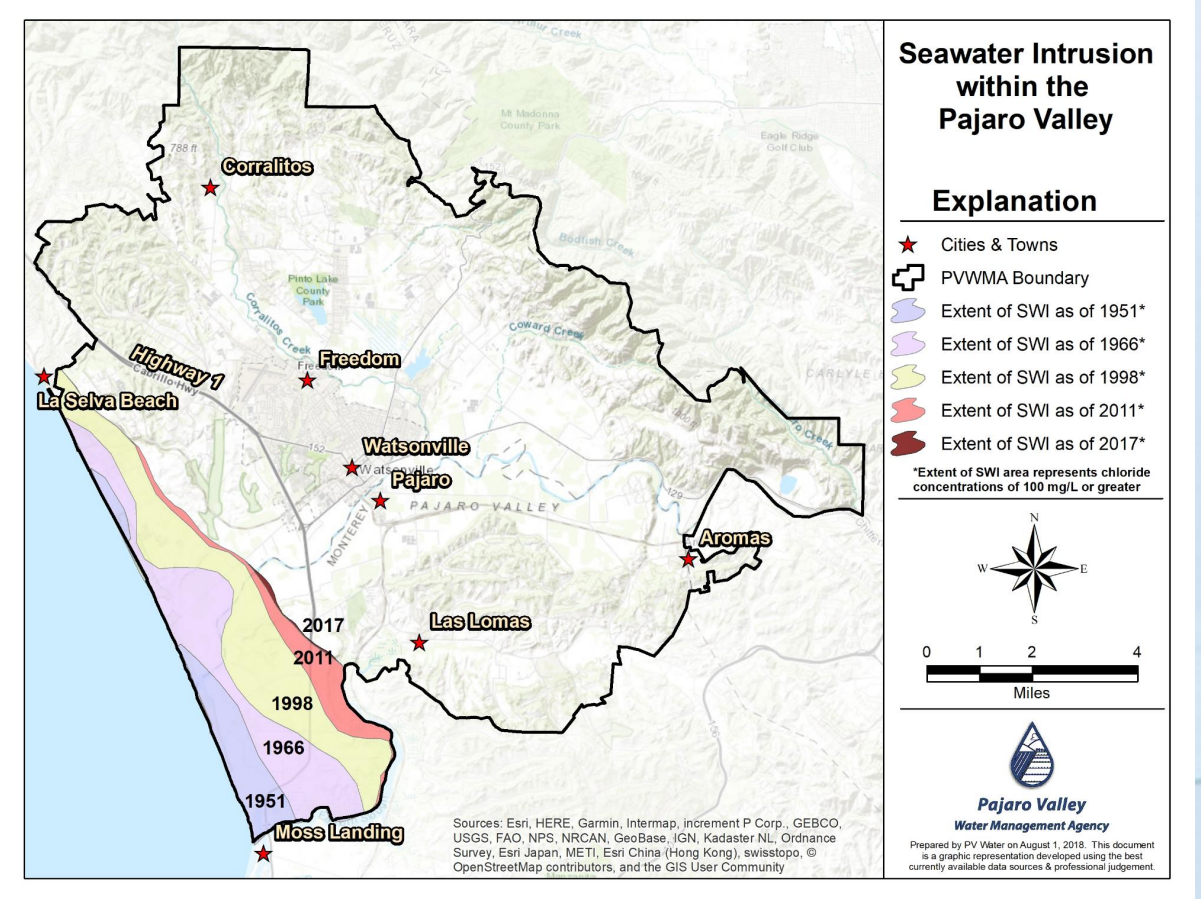
Options for Minimum Thresholds

Option	Chloride Conc. (mg/L)	Basis	Beneficial Uses Protected
1	120-150	Crop Sensitivity	Ag and Domestic
2	250-500	Drinking Water Standard	Ag and Domestic
3	120-150	Crop Sensitivity	Ag
	250-500	Drinking Water Standard	Domestic

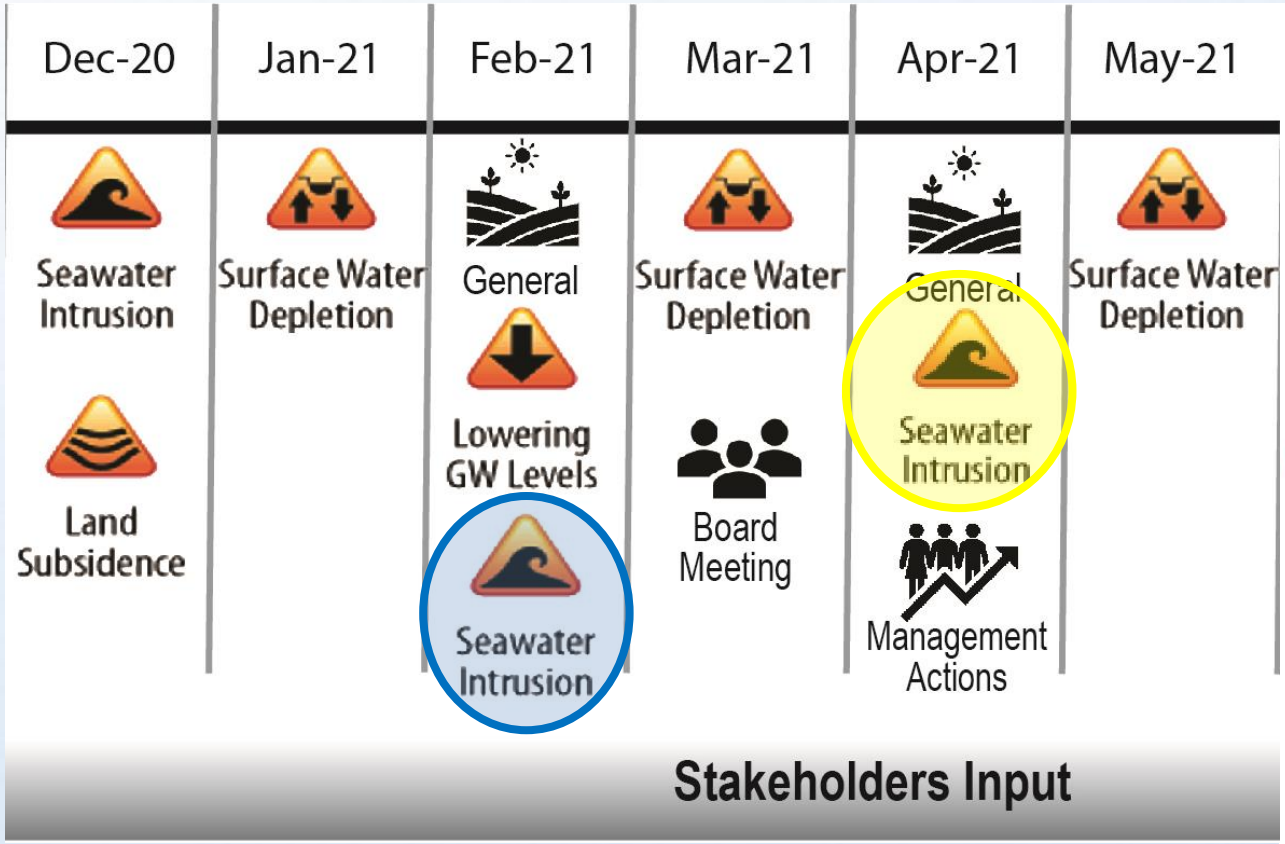


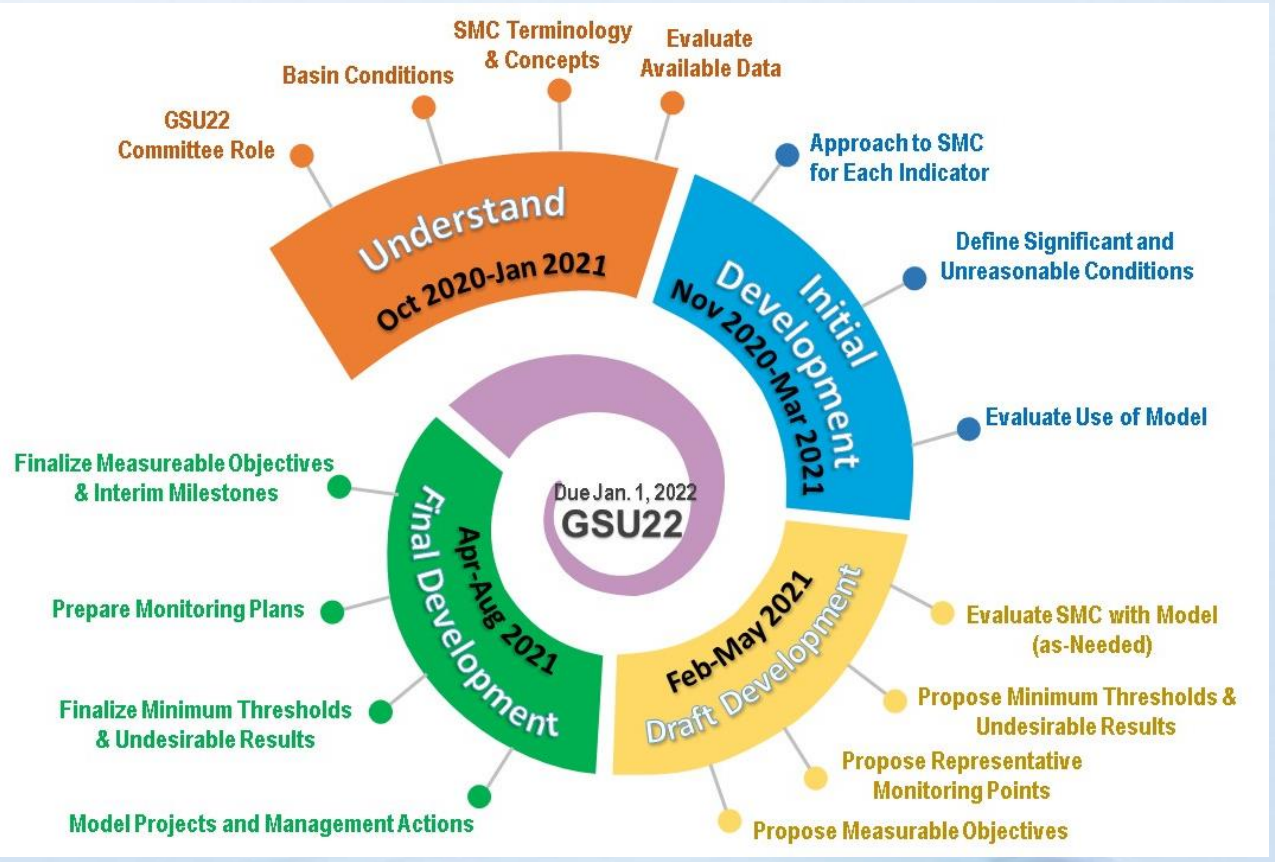
Recommendation for Measurable Objective Concentration

- Using 100 mg/L will allow for consistency in tracking progress vs. historical conditions and development of BMP goals

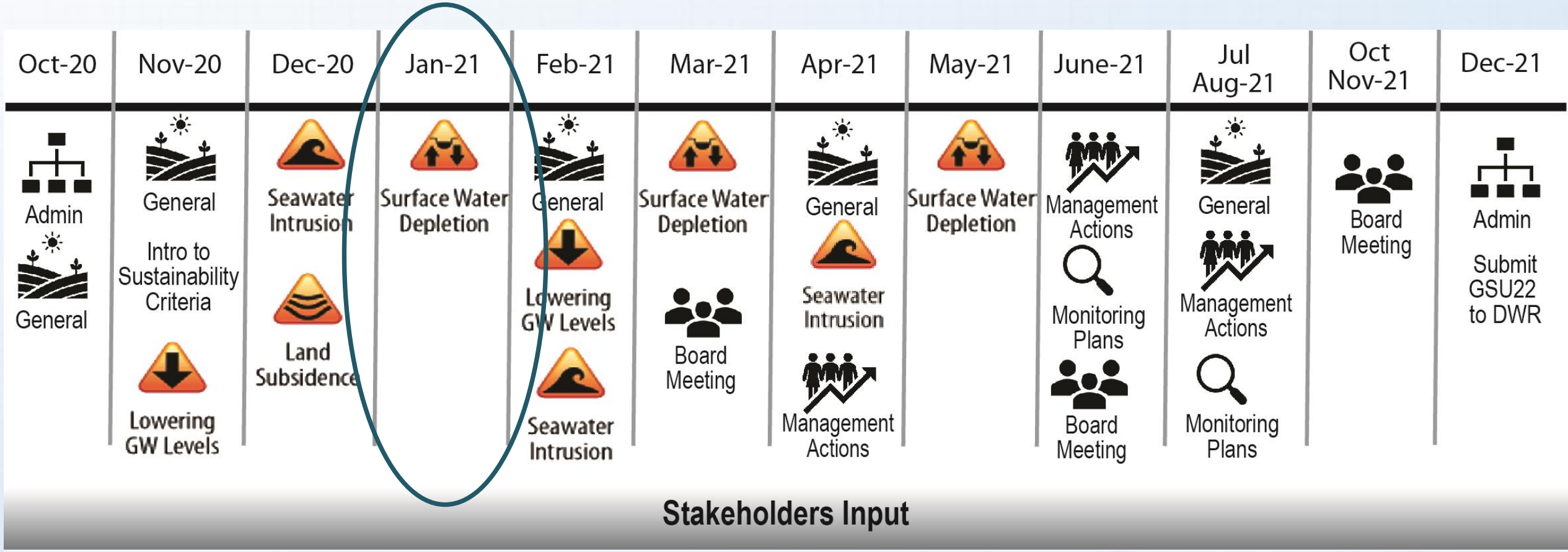


Schedule for Committee Consideration of Seawater Intrusion SMC





Upcoming Schedule



Communication & Engagement

- Update on C&E Activities
- Committee/Public Questions & Comments

We communicated with these tribes

- Muwekma Ohlone Indian Tribe of the San Francisco Bay
- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of San Juan Bautista
- Costanoan Ohlone Rumsen-Mutsen Band
- Indian Canyon Mutsun Band of Costanoan

Future Communications

- Draft Fact Sheet on GSU22 Process in Spanish and English
- PV Water Newsletters in Spanish and English
  - December: Overview of Meetings to Date and Invitation to Community
- Community Dialog Meeting
  - Planned for Fall 2021 to present results

Pajaro Valley
Water Management Agency

Boletín Otoño 2020

Proyecto para ampliar el servicio de suministro de agua se acerca a su finalización

PV Water ha construido aproximadamente 9,900 pies de nueva tubería, que van desde 10 a 30 pulgadas de diámetro, con el propósito de ampliar el servicio de suministro de agua a 700 acres de tierras de cultivo de regadío al oeste del camino San Andreas hasta McQuaide Drive (también conocido como Academy Road) con el fin de reducir el bombeo de agua subterránea, lo que ayudará a reducir la intrusión de agua de mar. El proyecto cuenta con el apoyo de aproximadamente 3,4 millones de dólares en fondos de subvención de una subvención regional integrada de emergencia por sequía de gestión del agua de la Propuesta 84 de Agua Potable Segura, Calidad y Suministro de Agua, Control de Inundaciones, Bonos de Protección de Ríos y Costas de 2006 y emitidos a través del Departamento de Recursos Hídricos de California (DWR por sus siglas en inglés).

Esta obra apoya la implementación continua del Plan de Gestión de Cuencas impulsado por las partes interesadas con el objetivo de frenar el sobre bombeo de aguas subterráneas, la intrusión de agua salada y el apoyo a la economía del Valle del Pájaro mediante el logro de la sostenibilidad de las aguas subterráneas. La cuenca de aguas subterráneas del Valle del Pájaro es una cuenca de alta prioridad, una cuenca sumamente sobre bombeada, según lo determinado por el DWR.

Tubería F se ata a la tubería principal del CDS, con la cuenca de recarga de Harkins Slough en el fondo.

Borrador del Informe Medio Ambiental para las Obras de los Pantanos

El Borrador del Informe del Medio Ambiental (DEIR sus sigla en inglés) para la obras de Recarga y Recuperación de la Gestión de la Cuenca del Sistema de Pantanos de Watsonville (WSS-MARR por sus siglas en inglés) está disponible para su estudio y comentarios públicos. Éste fue publicado el 1 de septiembre y estará disponible para comentarios hasta el cierre del día laboral el 19 de octubre. El informe se puede encontrar en nuestro sitio web, www.pvwater.org/wss-marr. Puede enviar sus comentarios a través de eir@pvwater.org o una carta escrita a nuestra dirección de la agencia.

El proyecto WSS-MARR consiste en la obra de mejoras de instalaciones de Harkins Slough y la obra de Struve Slough. La obra de Harkins Slough incluiría mejoras en la estación de bombeo de Harkins Slough, instalación de pantallas de filtro, instalación de una contra-corriente y tubería de agua cruda desde la planta de filtración de la estación de bombeo Harkins Slough hasta un alcantarillado por gravedad existente en la calle West Beach, y la construcción de dos nuevas cuencas de recarga y pozos de recuperación asociados, pozos de monitoreo y tuberías. La obra Struve Slough facultaría a Struve Slough como una fuente de suministro de agua mediante la instalación de una nueva toma con pantalla, una nueva estación de bombeo, un sistema de tubería para conectar la nueva estación de bombeo de Struve Slough a la estación de bombeo Harkins Slough, un sistema de tubería para conectar la estación de bombeo de Harkins Slough a las cuencas de recarga, y una nueva cuenca de recarga y pozos de recuperación asociados, pozos de monitoreo y tuberías. El propósito de las obras es ayudar a equilibrar la cuenca de las aguas subterráneas, prevenir más intrusiones de agua de mar y ayudar a satisfacer las necesidades de suministro de agua en el Valle del Pájaro.

Struve Slough, una parte del Sistema del Pantano Watsonville Slough.

Questions and Comments

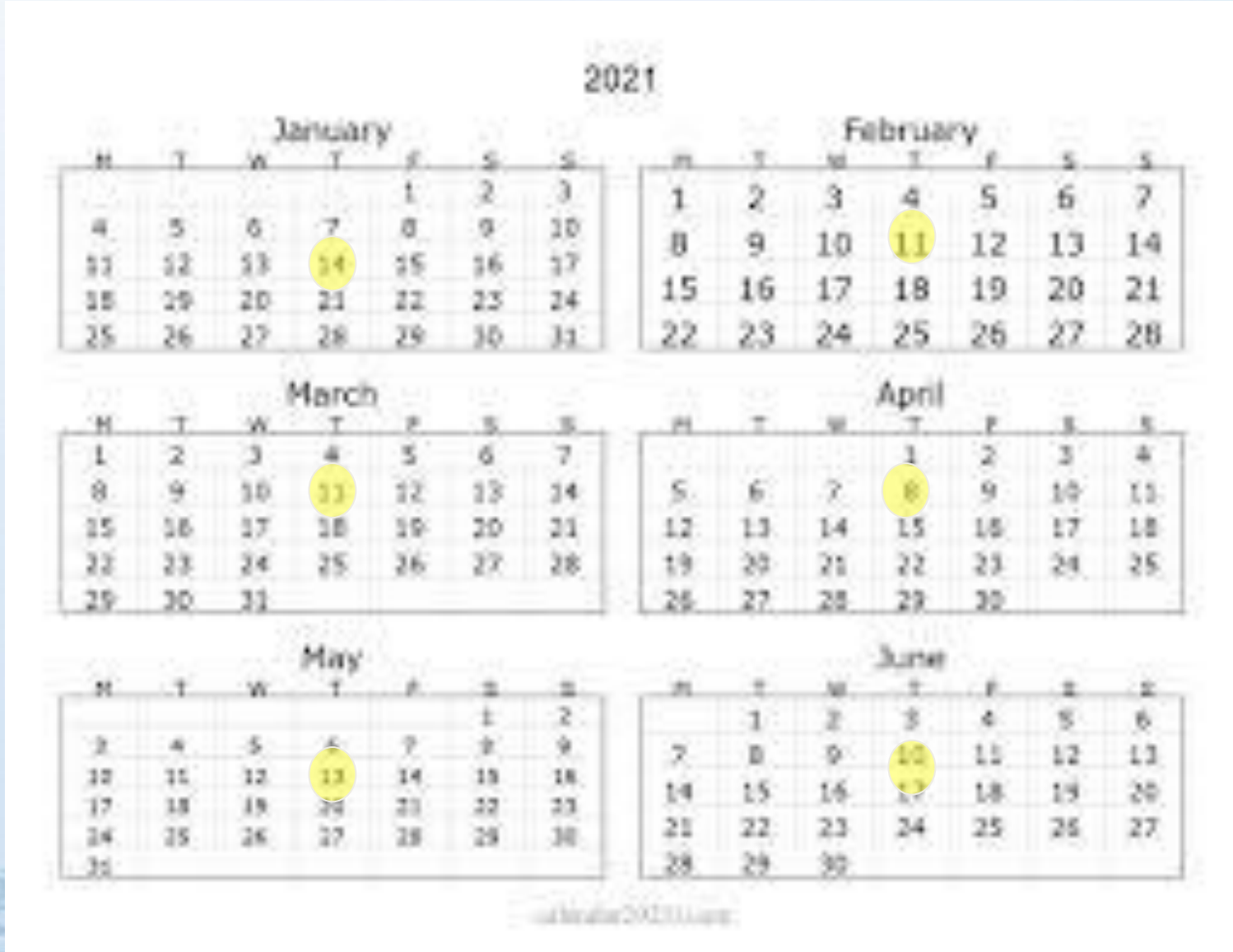
Next Steps

- Identify Items for Next Meeting Agenda
- Confirm Meeting Schedule
- Recommend Survey
- Identify Actions / Information Needed

Identify Items for Next Meeting Agenda

Confirm Meeting Schedule

- Next Meeting: Thursday, January 14 2-4 PM
- 2nd Thursday of Month through August 2021



Please complete survey

https://www.pvwater.org/sustainable-gw-committee

Ad Hoc Sustainable Groundwater Committee

Last modified on October 29, 2020.

Purpose

PV Water has formed an Ad Hoc Sustainable Groundwater Committee (Committee) to evaluate technical information presented by staff and consultants related to the existing and projected conditions of the groundwater basin, consider sustainable management criteria that would avoid significant and unreasonable impacts to the groundwater basin, and make recommendations to the PV Water Board.

The Committee is comprised of 17 voting members, 12 appointed, and 5 selected through an open application process. The composition of the Committee is structured to provide a diverse representative cross-section of community stakeholder interests, as well as incorporate water managers within the Pajaro Valley. Attendance and engagement at Committee meetings by the public and other interested parties is highly encouraged to provide input. Voting seats are dedicated to individuals serving as representatives for the Committee members listed below.

Meeting Materials

Meetings will occur at: https://www.gotomeet.me/PVWater/sustainable-groundwater

Or by phone: 1 (866) 899 4679 Access Code: 563-967-333#

After Meeting Survey

Videos Recordings last for a period of one year after the meeting date.

PV Water

PV Water Meeting Survey

Please provide feedback to improve our communication and engagement process.

Name: _____

Contact: _____

Date: _____

Survey Questions

Survey Question	Please Select One
1) Information provided was useful and understandable?	Yes ☐ No ☐
2) Meeting noticing was timely, informative about location, and meeting topic(s)?	Yes ☐ No ☐
3) Opportunity to comment was provided?	Yes ☐ No ☐
4) Can we contact you regarding your survey to follow up?	Yes ☐ No ☐

Other SGMA topics and information of interest to you: _____

Other Suggestions on communication and engagement that would be helpful for the SGMA process:

Identify Actions/Info Needed

Thank you.

Comments / Questions?