



**EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY**

**ESJ GWA Board Meeting
April 11, 2018**

Agenda



- ▶ 1. Approval of Minutes of March 14, 2018 (See Attachment)
- ▶ 2. Update on Advisory Committee Appointment (See Attachment)
- ▶ 3. Discussion and Possible Action to Change Time of May GWA Board Meeting (See Attached)
- ▶ 4. Lathrop Boundary Change

Agenda



5. Presentation by Woodard & Curran on GSP Development Process

- ▶ 1. Stakeholder Engagement and Public Outreach Plan
- 2. Stakeholder Committee Progress and Update
- 3. Physical Setting and Undesirable Results
- 4. Materials for GSA Outreach
- 6. Update from the Department of Water Resources

Stakeholder Engagement and Outreach Plan



Crocker & Crocker Team



**EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY**



Lucy Eidam Crocker
Lead Strategist and Facilitator



Lori Denaro
Project Manager



Ronald Barnes
Stakeholder Outreach Lead



SGMA Stakeholder Engagement Requirements

SGMA Requirements



- Consider the interests of all beneficial uses and users of groundwater (Sec. 10723.2)
- Encourage active involvement of diverse social, cultural and economic elements of the population (Sec. 10727.8(a))
- Establish and maintain a list of persons interested in receiving notices, meeting announcements ... and other relevant documents (10723.4)
- Make available to the public and the department a written statement describing the manner in which interested parties may participate in the development and implementation (10727.8(a))

Requirements Cont.



- Any federally recognized Native American Tribe... may voluntarily agree to participate in the preparation and administration of the GSP (Sec. 10720.3)
- A GSA may adopt or amend a GSP after a public hearing (Sec. 10728.4)
- Prior to imposing or increasing a fee, GSA staff shall hold at least one public meeting (Sec. 10730(b)(1))



Stakeholder Engagement and Outreach Plan

Plan Purpose



*Outreach Goal
Inform
stakeholders and
the public about
GSP planning
and offer
opportunities for
involvement.*

- Serve as a roadmap to comply with SGMA's requirements for GSP planning
- Meet GSP submittal requirements for notice and communications (Sec. 354.10) with the following components:
 - Description of beneficial uses and users in the basin (stakeholders)
 - Description of decision-making process
 - Public engagement opportunities
 - Methods to encourage active involvement and inform the public on GSP progress
 - Evaluation metrics (involvement and communications reporting)

Stakeholders to Engage



Stakeholders represent groups potentially affected by the GSP outside of the JPA and GSAs

- Agricultural users
- Environmental groups
- Native American tribes
- Disadvantaged communities
- Federal and state land representatives
- Local business interests

Stakeholder Engagement



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Establish stakeholders as ambassadors to support broader outreach to public.

- Inform and obtain feedback through monthly committee meetings
- Develop situation assessment to uncover levels of understanding, interests, concerns and additional outreach opportunities
- Conduct ongoing outreach through personal communications, e-mail and distribution of meeting notices, planning updates, meeting summaries, etc.
- Equip with materials to share through their internal and external communications/outreach

Public Outreach Audiences & Activities



Elected Officials Boards/Commissions

- GSP kick-off announcement
- GSA member presentations and outreach
- Electronic communication
- Newsletters (quarterly updates)
- Notification of meetings, planning updates and summaries
- Invitation to public workshops
- Website/social media

Chambers of Commerce/Business Groups

- GSP kick-off announcement
- Electronic communications
- Newsletters (quarterly updates)
- Notification of meetings, planning updates and summaries
- Invitation to public workshops
- Stakeholder committee member(s) outreach
- Website/social media

GSA Customers NGOs/Community Groups

- GSP kick-off announcement
- Electronic communications
- Newsletters (quarterly updates)
- Notification of meetings, planning updates and summaries
- Invitation to public workshops
- Stakeholder committee member(s) outreach
- Website/social media

Media

- GSP kick-off announcement with background and public participation opportunities
- Quarterly news releases to announce public workshops and planning milestones
- Media outreach to facilitate interviews and/or attendance at workshops
- Distribute to GSAs for their use – repurpose for newsletters, share on websites, post on social, etc.

Measurement & Evaluation



Supporting documents to accompany the GSP:

- Communications tracking tool with lists of all meetings, workshops and supporting documentation
- Stakeholder Engagement and Outreach Plan
- Robust stakeholder database with stakeholder assessment
- Summary of outreach activities to inform and engage stakeholders and diverse audiences
- Summary of media outreach and coverage

Project Timeline



	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Form stakeholder committee/Committee Charter/first stakeholder meeting														
Launch resources to GSAs	■	■												
Website launch and refinement		■												
Announce public meeting: Media relations, newsletter/flyer, e-blast, social media and GSA outreach			■											
Public meeting one				■										
Post public meeting materials to website; follow-up as necessary				■	■									
Announce public meeting two						■								
Public meeting two							■							
Update website with public meeting materials							■	■						
Announce public meeting three									■					
Public meeting three										■				
Update website with public meeting materials										■	■			
Announce public meeting four												■		
Public meeting four													■	
Update website with public meeting materials													■	■
Announce public hearing													■	■
Public hearing														■

Ongoing Activities

- Monthly stakeholder committee meetings and stakeholder outreach
- GSA outreach across planning milestones
- Media relations, social media, outreach to interested parties and website updates

Questions



Agenda



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 3. Physical Setting and Undesirable Results
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6. Update from the Department of Water Resources

Stakeholder Committee Update



March

Develop application to invite stakeholders to serve on the committee

April

Distribute application to comprehensive list of diverse stakeholders as specified in the SGMA

Interested Parties complete and submit applications

- Collaborate with staff to review applicants and form recommendation

May

Provide update to JPA

Develop and finalize charter for stakeholder committee

Notify applicants of the selected stakeholder committee

Committee members sign charter

Hold first meeting (target late May)

Agenda



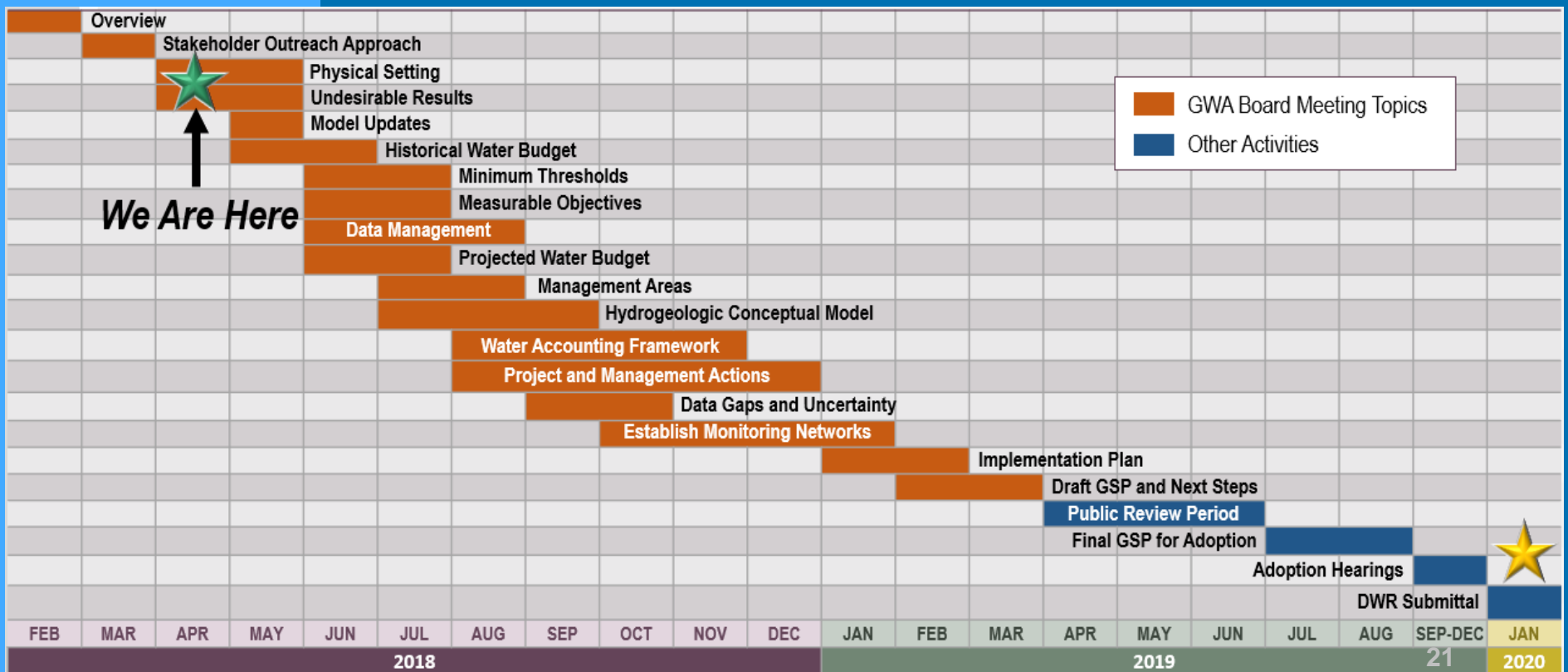
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GSP Development – Physical Setting and Undesirable Results

GSP Roadmap Update & Project Schedule



Goals of this Module



- Understand key terminology
- Discuss potential undesirable effects and receive preliminary feedback on existing / current undesirable effects
- Review next steps

So Many Terms, So Little Time



Measurable
Objective

Sustainable Groundwater Management Act

Hydrogeologic
Conceptual Model

Interim Milestone

Significant and
Unreasonable

Minimum
Threshold

Groundwater
Conditions

Sustainability
Indicator

Water
Budget

Undesirable
Results

Basin Settings

Margin of Operational Flexibility

Let's Talk Terminology




- Why are terms important?
 - Established by regulation
 - Used by regulators during GSP review
 - Consistency of terms assists SGMA discussion
- Today's focus is the relationship between:
 - Sustainability Indicators
 - Undesirable Results
 - Minimum Thresholds
 - Measurable Objectives
 - a. Interim Milestones
 - b. Margin of Operational Flexibility
 - Monitoring Network

Six “Sustainability Indicators” - Categories of Negative Groundwater-Related Impacts




- Need to be described and managed through the GSP


 Chronic Lowering of Groundwater Levels

 Reduction in Groundwater Storage

 Seawater Intrusion

 Degraded Water Quality

 Land Subsidence

 Depletion of Interconnected Surface Water

Undesirable Results are Negative Impacts that can Occur for Each Sustainability Indicator



- Conditions that we do not want to have happen
- Will be used to guide and justify other GSP components:
 - Monitoring Network
 - Minimum Threshold
 - Projects and Management Actions

Undesirable Results are Significant and Unreasonable Impacts



Chronic Lowering of Groundwater Levels



Reduction in Groundwater Storage



Seawater Intrusion

- "Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon"
- "Significant and unreasonable reduction in groundwater storage"
- "Significant and unreasonable seawater intrusion"

Undesirable Results are Significant and Unreasonable Impacts



Degraded Water Quality



Land Subsidence



Depletion of Interconnected
Surface Water

- “Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies”
- “Significant and unreasonable land subsidence that substantially interferes with surface land uses”
- “Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water”

Minimum Thresholds



- Point at which undesirable results may begin to occur
 - The lowest the basin can go at this monitoring point without something significant and unreasonable happening to groundwater
- Quantitative thresholds

Measurable Objectives are 2040 targets that provide a buffer to prevent Undesirable Results



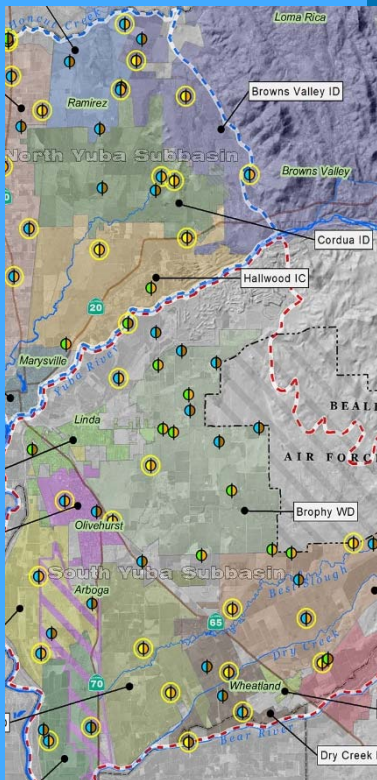
- Establish the high side of an operating margin that the basin will be managed to in order to prevent undesirable results (above the minimum thresholds)
- Quantitative targets

Interim Milestones are established to chart progress toward meeting objectives



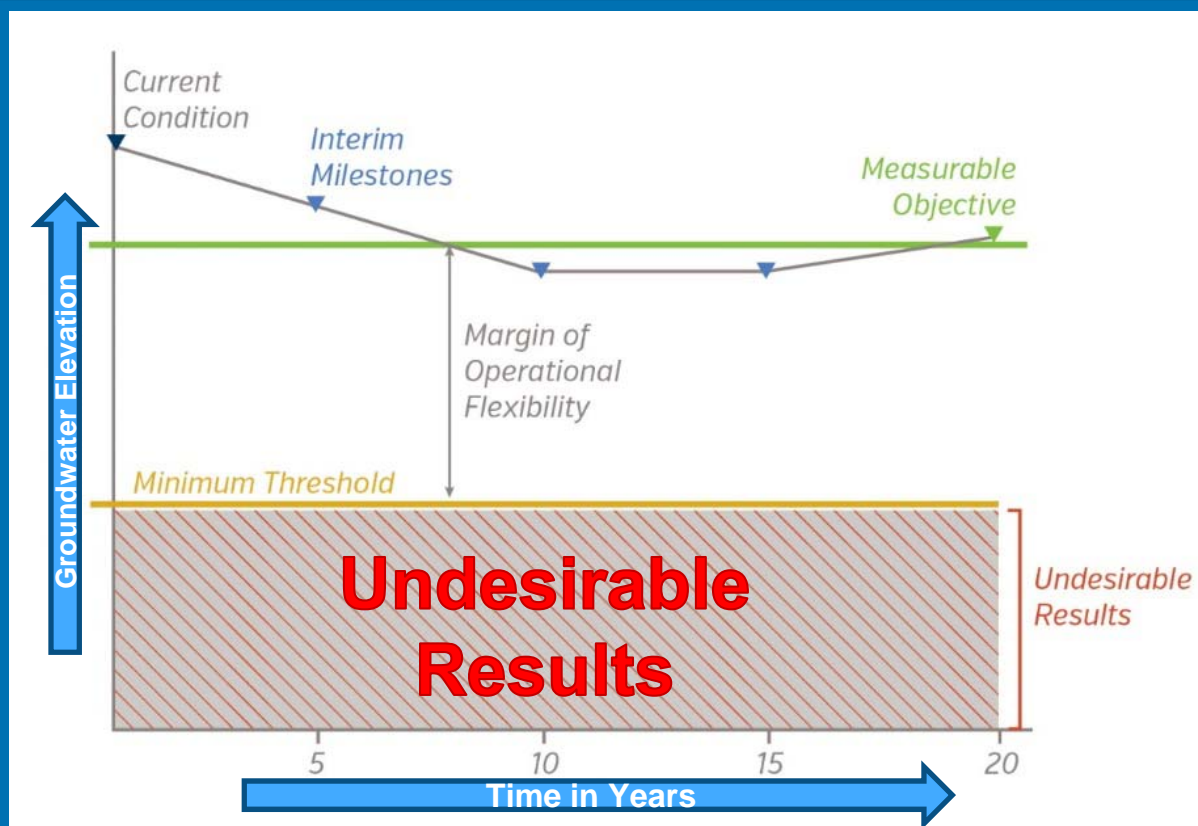
- Interim Milestone
 - Interim Milestones are the 5 year targets for the Measurable Objective
- Margin of Operational Flexibility
 - Margin of Operational Flexibility is the space between the measurable objective and the minimum threshold

Monitoring Network



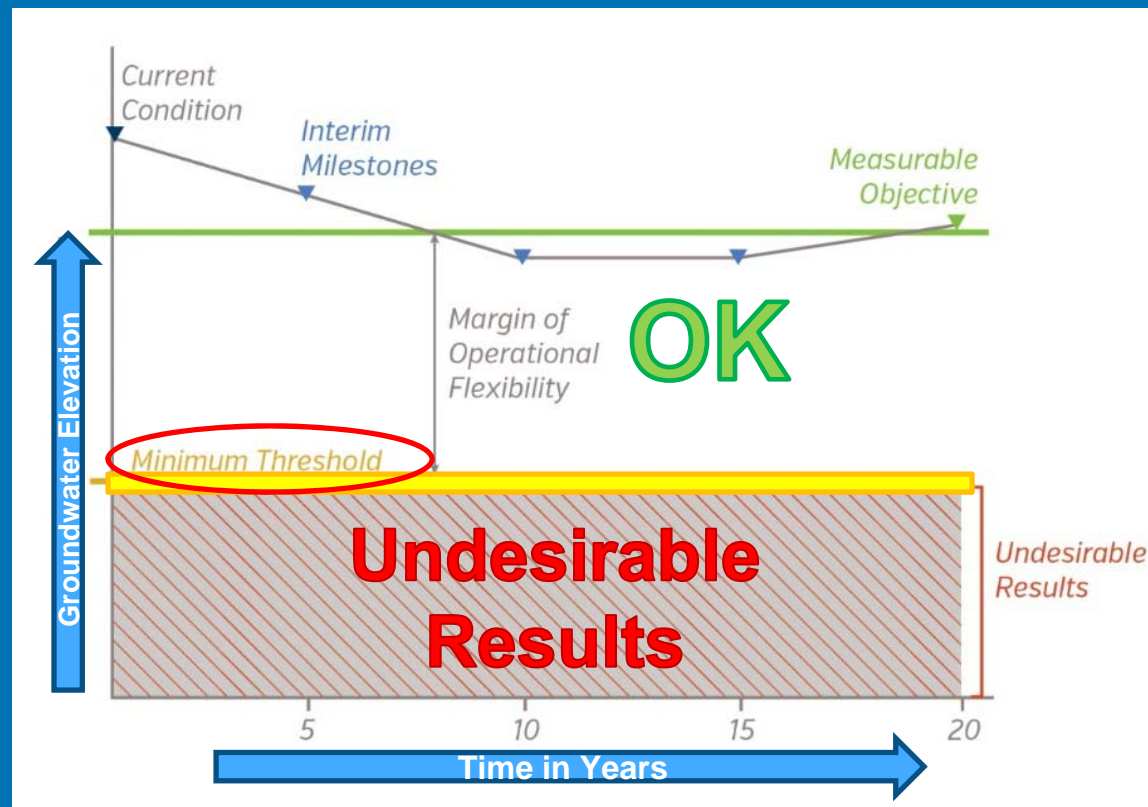
- Is used to monitor for conditions that would cause undesirable results
- Must address the six sustainability indicators
- Adequate spatial and temporal coverage for each primary aquifer
- Need minimum thresholds and measurable objectives for each monitoring point used in the network

Example: Lowering of Groundwater Levels



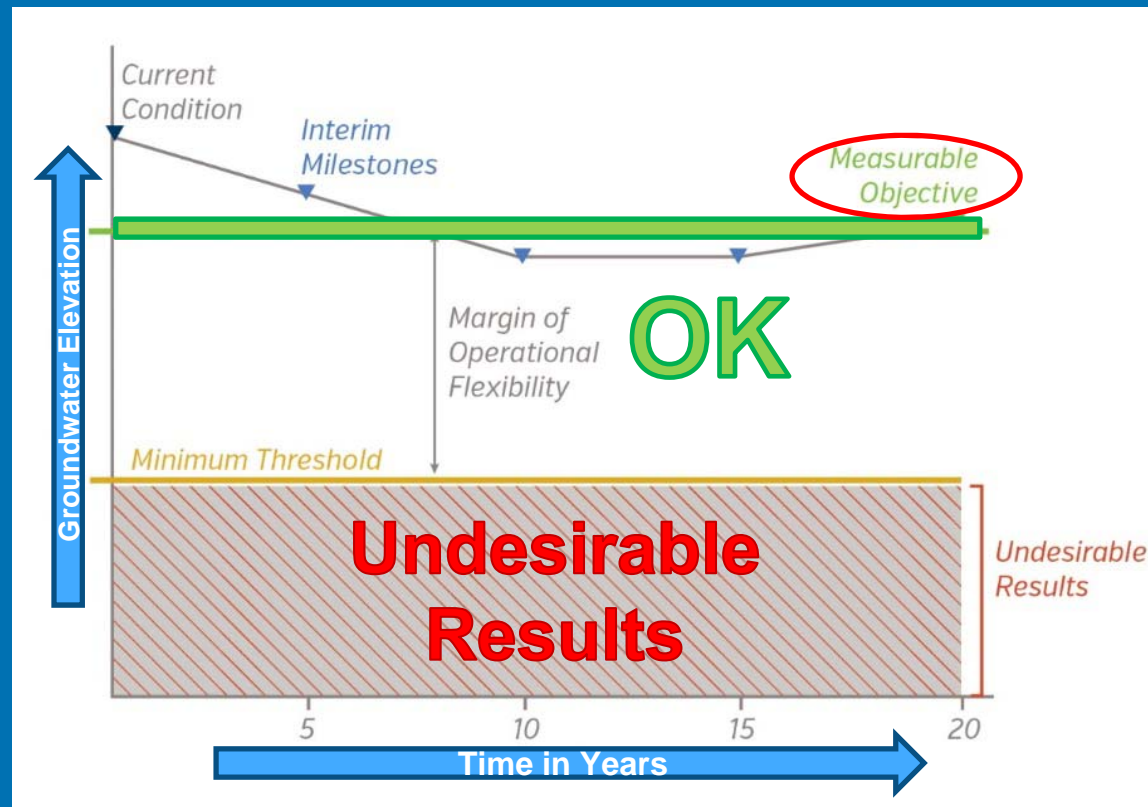
Minimum Thresholds

Minimum
Thresholds **border**
on Undesirable
Results



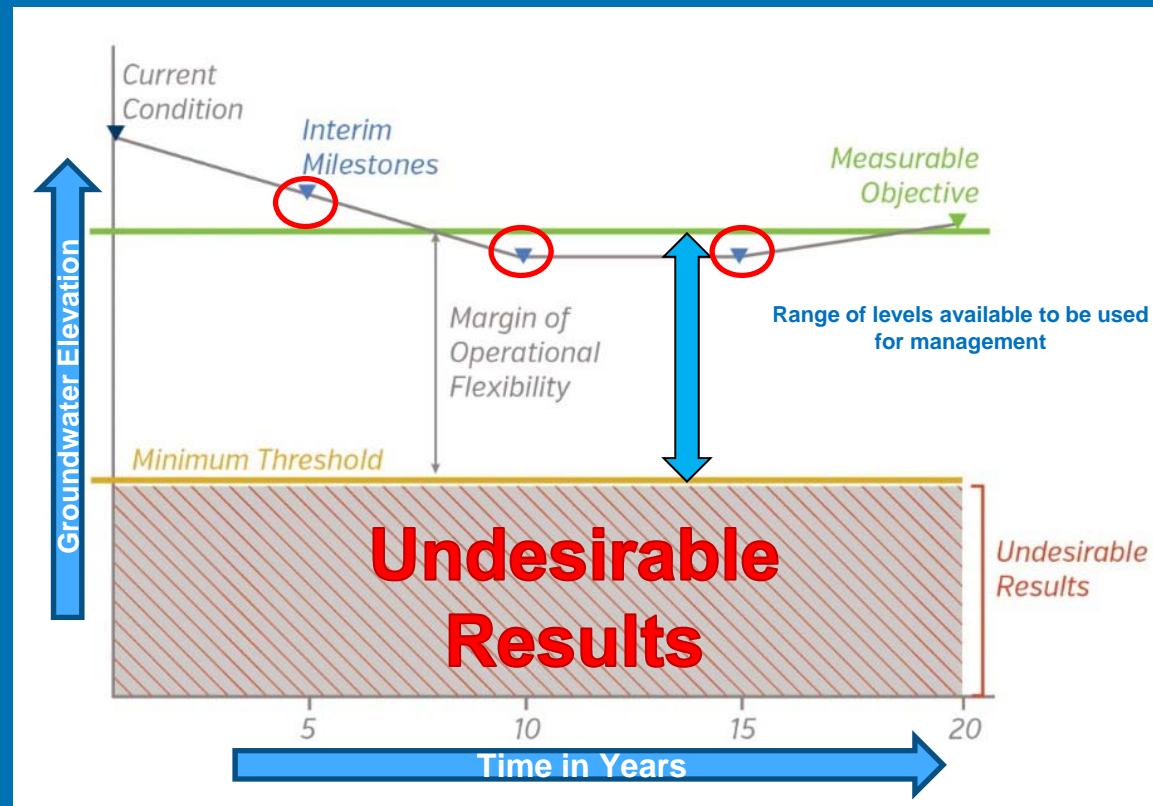
Measurable Objectives

Measurable
Objectives provide
buffer to prevent
Undesirable Effects



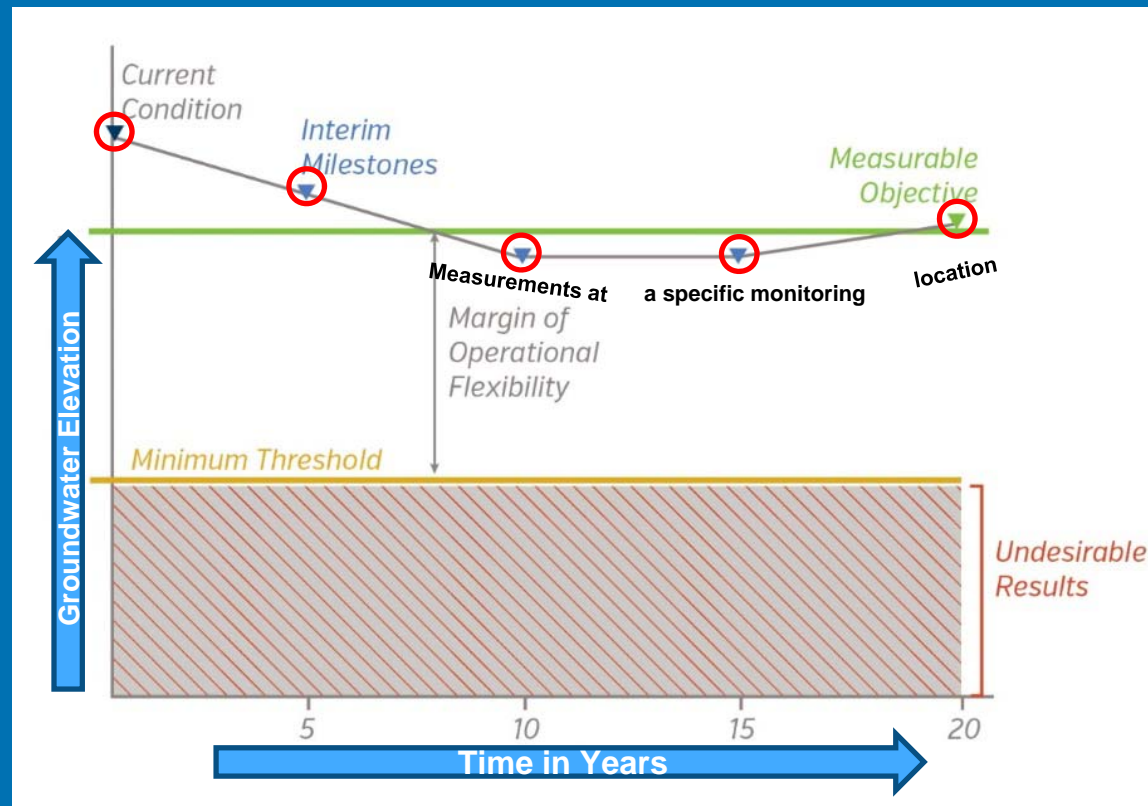
Margin of Operational Flexibility

Margin of Operational Flexibility is the **buffer** between the Measurable Objective and the Minimum Threshold



Monitoring Network

The Monitoring Network is used to **chart progress** toward meeting objectives



Goals of this Module



- Understand key terminology
- Discuss potential undesirable effects and receive preliminary feedback on existing / current undesirable effects
- Review next steps

Next Steps for Advisory Group and JPA Board



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Document Potential
Undesirable Effects
for Each
Sustainability
Indicator

Identify Appropriate
Monitoring /
Measurement
Locations
throughout
Subbasin

Identify Minimum
Thresholds for Each
Location







Develop
Measurable
Objectives above
Each Minimum
Threshold

Undesirable Results for Sustainability Indicators



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-  Chronic Lowering of Groundwater Levels
-  Reduction in Groundwater Storage
-  Seawater Intrusion
-  Degraded Water Quality
-  Land Subsidence
-  Depletion of Interconnected Surface Water

Undesirable Results for Lowering Groundwater Levels



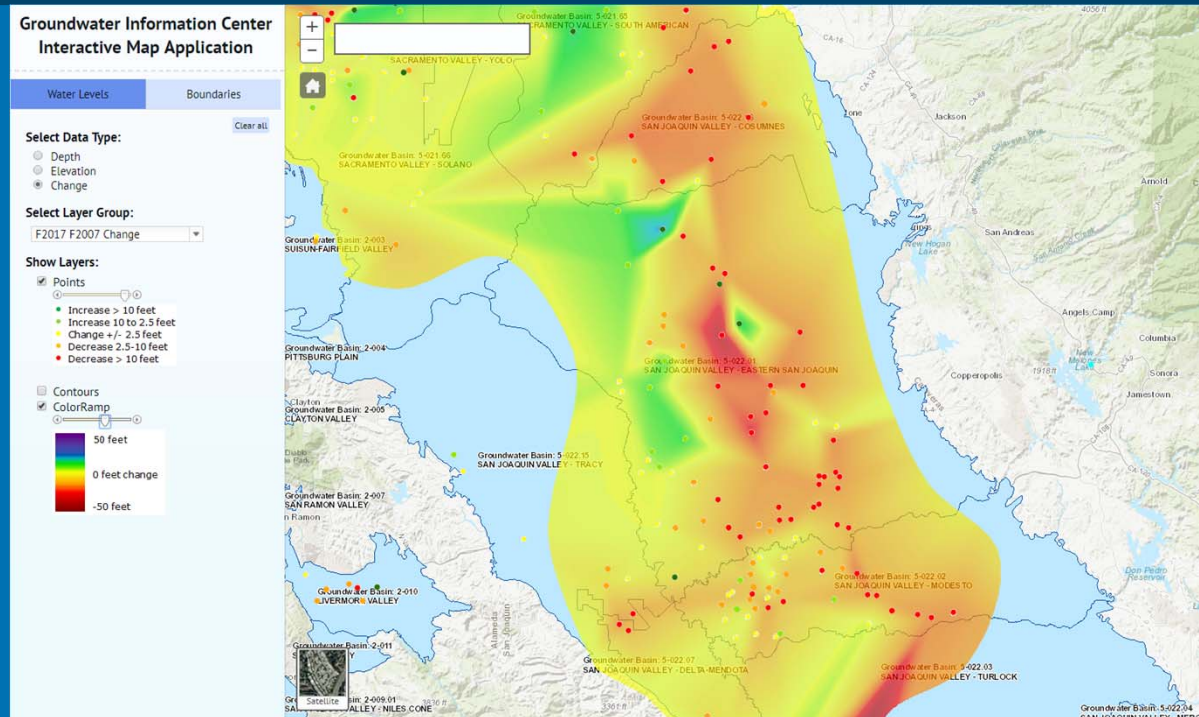
Chronic Lowering of Groundwater Levels

Why is this a concern? What are we trying to avoid?

- Wells going dry
- Reduced production
- Higher pumping costs due to greater lift
- Deeper installation (more expensive drilling)

Discussion: other potential effects to consider?

Current Conditions (example): Groundwater Elevations









Discussion: other potential effects to consider?

Undesirable Results for Sustainability Indicators



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-  Chronic Lowering of Groundwater Levels
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Undesirable Results for Reduction of Storage



Reduction in Groundwater Storage

Why is this a concern? What are we trying to avoid?

- This is not a major concern
- Large basin storage (42 MAF), no chronic reduction that impacts supply needs
- Undesirable result = running out of sufficient storage to get through drought







****This does not mean we do not need to bring the basin into balance, it only means that groundwater-related impacts will be more sensitive to other indicators, such as groundwater elevations.*

Undesirable Results for Sustainability Indicators



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Undesirable Results for Seawater Intrusion



Seawater Intrusion








Why is this a concern? What are we trying to avoid?

- **Direct seawater intrusion does not occur in the subbasin and thresholds do not need to be addressed; salinity will be addressed via the Water Quality Sustainability Indicator**

Undesirable Results for Sustainability Indicators



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-  Chronic Lowering of Groundwater Levels
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Undesirable Results for Degraded Water Quality



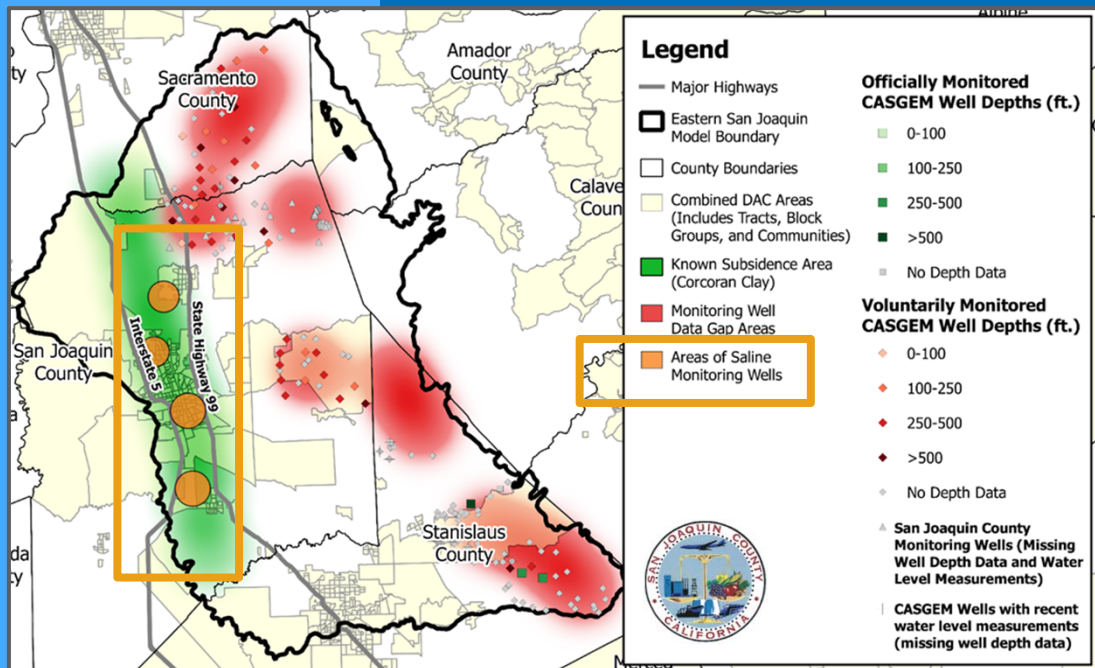
Degraded Water Quality

Why is this a concern? What are we trying to avoid?

- **Localized salinity issues – connate water and delta brackish water intrusion from reduced water levels**
- **Nitrates – septic and agricultural historical issues. Being addressed through CV Salts and Irrigated Lands programs.**

Discussion: other potential effects to consider?

Current Conditions (example): Salinity



Map Source: Pat Dunn, NV5








- Delta influences contribute to elevated salinity in western portions of the Subbasin
- Eastward progression of salinity is a concern

Discussion: other potential effects to consider?

Undesirable Results for Sustainability Indicators



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Undesirable Results for Land Subsidence



Land Subsidence

Why is this a concern? What are we trying to avoid?

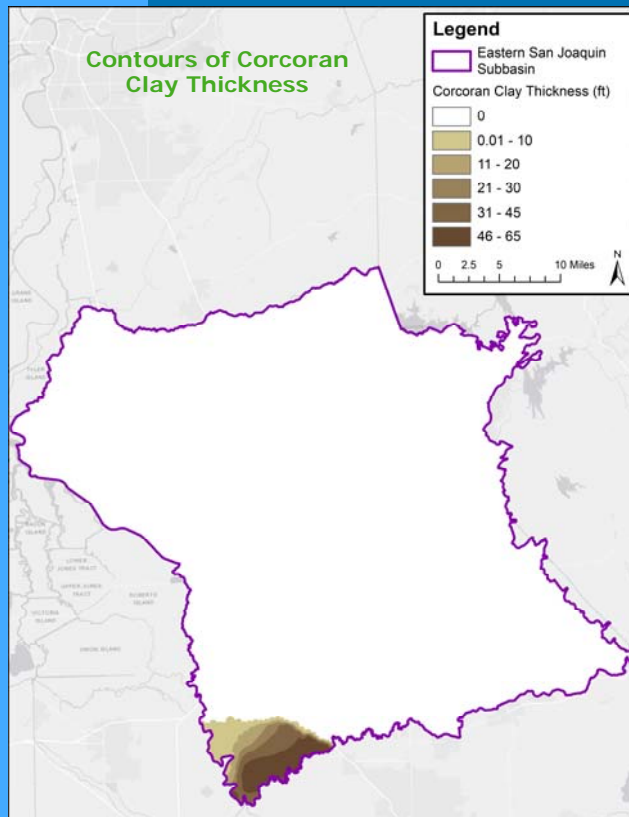
- Impacts to private and public infrastructure

Discussion: other potential effects to consider?

Current Conditions (example): Subsidence



Data Source: USGS, by Page (1986), Central Valley Hydrogeologic Model









- Known subsidence area (Corcoran Clay) is limited in extent
- Primarily seen in the lower-west corner of the Subbasin

Discussion: other potential effects to consider?

Undesirable Results for Sustainability Indicators



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-  Seawater Intrusion
-  Degraded Water Quality
-  Land Subsidence
-  Depletion of Interconnected Surface Water



Undesirable Results for Surface Water Depletion



Depletion of Interconnected Surface Water

Why is this a concern? What are we trying to avoid?

- Ability to meet minimum flow requirements
- Recreation impacts
- Fisheries impacts/temperature
- Habitat impacts
- GDEs
- Impacts to water supply for reservoirs
- Water rights issues
- Water quality issues

Discussion: other potential effects to consider?

Current Conditions (example): Instream Flow Requirements



Lower Mokelumne

- Species of concern: Central Valley Spring Chinook Salmon, Fall Chinook Salmon, Central Valley Steelhead Trout, Sierra Nevada Yellow-Legged Frog, California Red-Legged Frog, Western Pond Turtle

Stanislaus

- Species of concern: Central Valley Spring Chinook Salmon, Fall Chinook Salmon, Central Valley Steelhead Trout, Yosemite Toad, Sierra Nevada Yellow-Legged Frog, California Red-Legged Frog, Western Pond Turtle

Calaveras







- Species of concern: Fall Chinook Salmon, Central Valley Steelhead Trout, Sierra Nevada Yellow-Legged Frog, Foothill Yellow-Legged Frog, California Red-Legged Frog, Western Pond Turtle

Discussion: other potential effects to consider?

Undesirable Results for Sustainability Indicators



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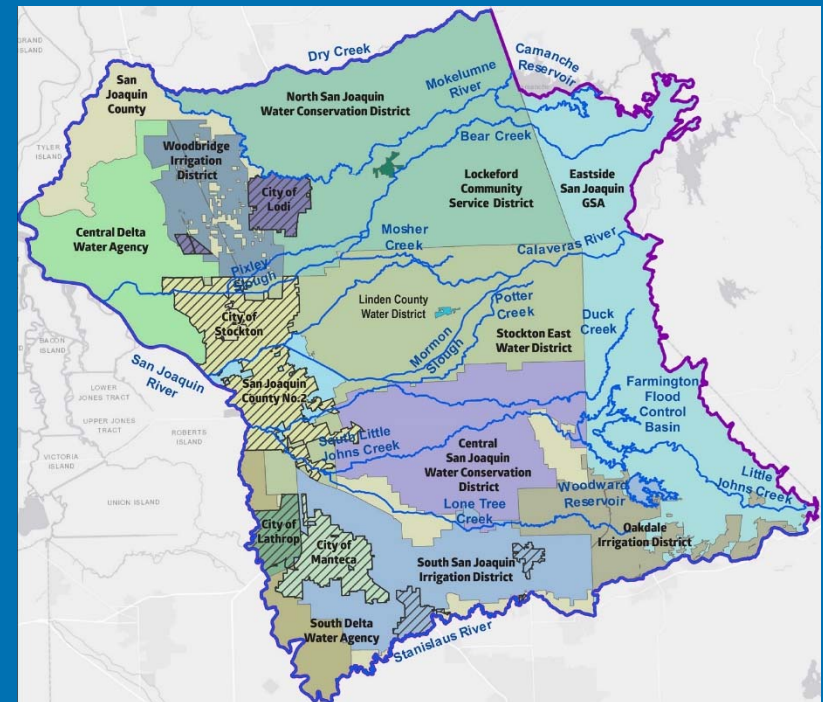
Materials for GSA Outreach

What is the ESJ GWA?

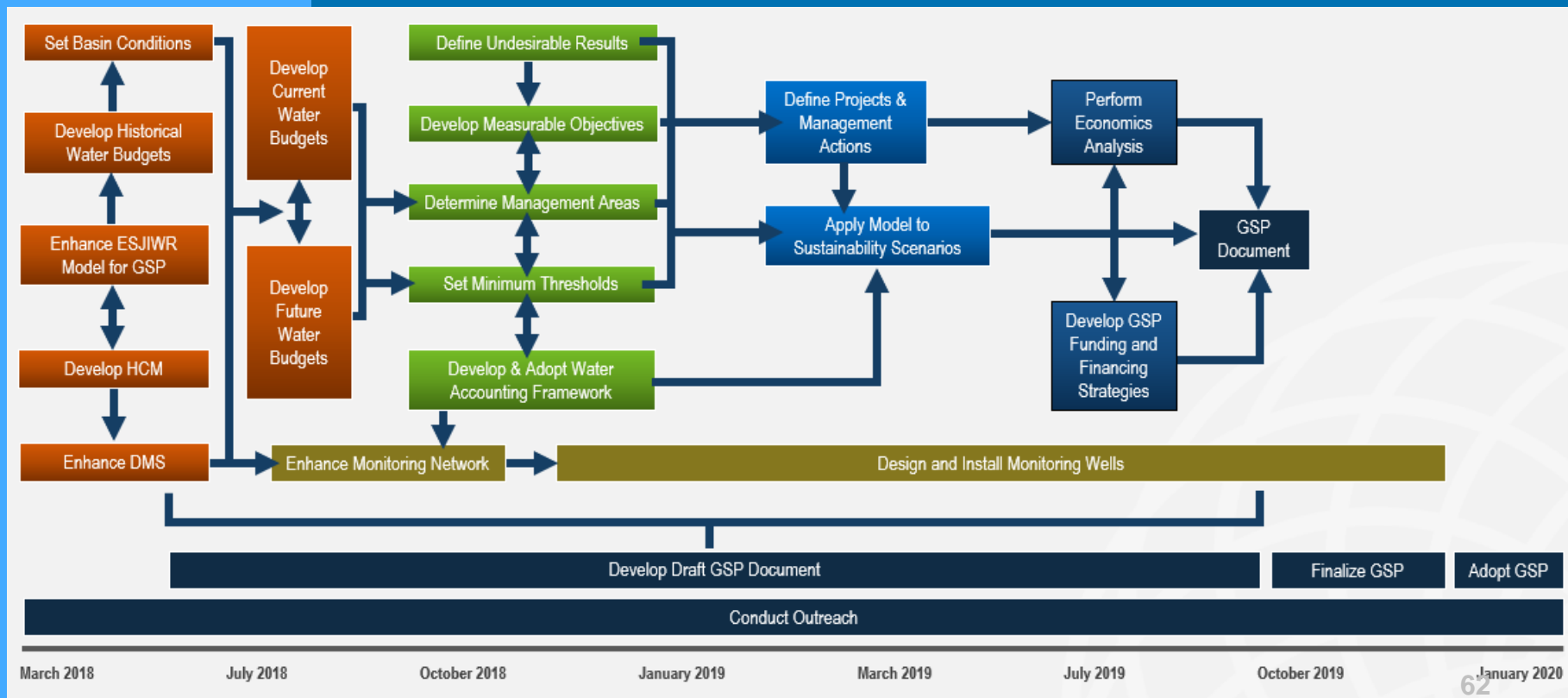


Joint Powers Authority, established to complete a single Groundwater Sustainability Plan.

Includes 17 GSAs in the Eastern San Joaquin Subbasin.



The GSP will be complete by August 2019 allowing for adoption prior to January 31, 2020 deadline



The ESJ GWA Filed its Initial Notification with DWR



Initial Notification to develop a GSP is required by SGMA legislation

Submitted online to the Department of Water Resources (DWR)

Describes how interested parties may participate in GSP development and implementation

Provides link to where information regarding GSP will be posted (website)

Department of Water Resources
CA.GOV SGMA PORTAL

Home GSA GSP Alternatives Adjudicated Areas Basin Modification

Sign In
User ID
Password
Remember User ID
Forgot password? Create an account
Sign In Close

SUBMIT AND VIEW SGMA INFORMATION AND DATA

GSA GSP ALT ADJ BBM
GSA Formation GSP Submittal Alternative Submittal Adjudicated Areas Basin Modification

Welcome to DWR's SGMA Portal

This portal allows local agencies, groundwater sustainability agencies (GSAs), and watermasters to submit, modify, and view the information required by the Sustainable Groundwater Management Act (SGMA), and enables the public and interested stakeholders to view submitted information and provide comments, where applicable. **No login is required for public access.**

- For local agency, GSA, and watermaster access an account is required.
- If you have an account, [sign in here](#).
- If you do not have an account, you can [register here](#).
- If you forgot your password, you can [recover it here](#).
- Once an account is created in the SGMA Portal, a local agency, GSA, or watermaster will only have access to the information that it has uploaded, as well as the information available on the public access site.



Coordination & Collaboration

Multiple Types and Levels of Stakeholders will be Involved



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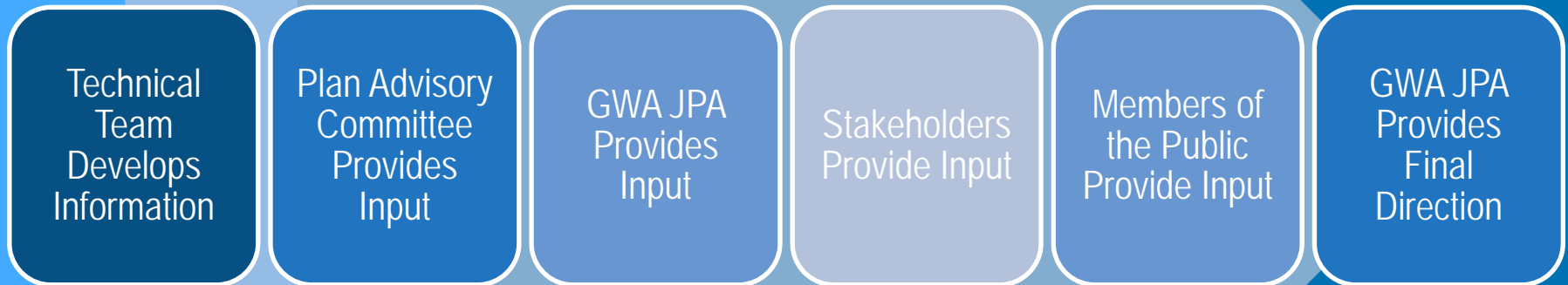


- GWA JPA members are stakeholders
- Each member GSA is a stakeholder, and represents and includes multiple other stakeholders
- Other organizations in the basin are stakeholders
- Members of the public are stakeholders

Information Flow



Information Flow will Provide Opportunities for Broad Input Throughout GSP Development



Stakeholder Committee



- The Stakeholder Committee will Include Interested / Potentially Affected User Groups Required by SGMA and will Provide Process Feedback
- Various groups will provide input to GSP elements
 - Plan Advisory Committee
 - Stakeholder Committee
 - General Public

Stakeholder Committee



Structure

- 15 to 20 representatives of organizations the GSP will potentially affect
- Individuals representing groundwater users outside the JPA and GSAs, such as:
 - Agricultural users
 - Environmental groups
 - Native American tribes
 - Disadvantaged communities
 - Federal and state land representatives
 - Local business interests

Role

- Commit to charter that describes roles and responsibilities for committee participation
- Participate in monthly meetings to review GSP components
- Represent the interests of and report back to their organizations
- Provide feedback and input through facilitated meeting discussions

Formation: Timeline and Approach



March

Develop application to invite stakeholders to serve on the committee

April

Distribute application to comprehensive list of diverse stakeholders as specified in the SGMA

Interested Parties complete and submit applications

- Collaborate with staff to review applicants and form recommendation

May

Provide update to JPA
Develop and finalize charter for stakeholder committee

Notify applicants of the selected stakeholder committee

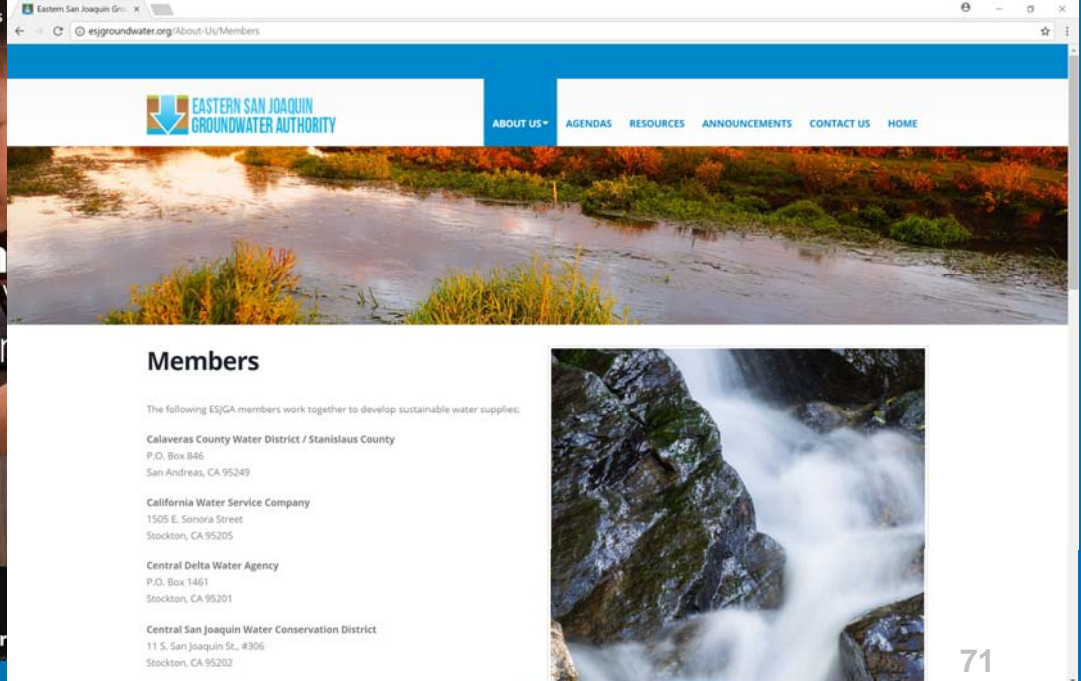
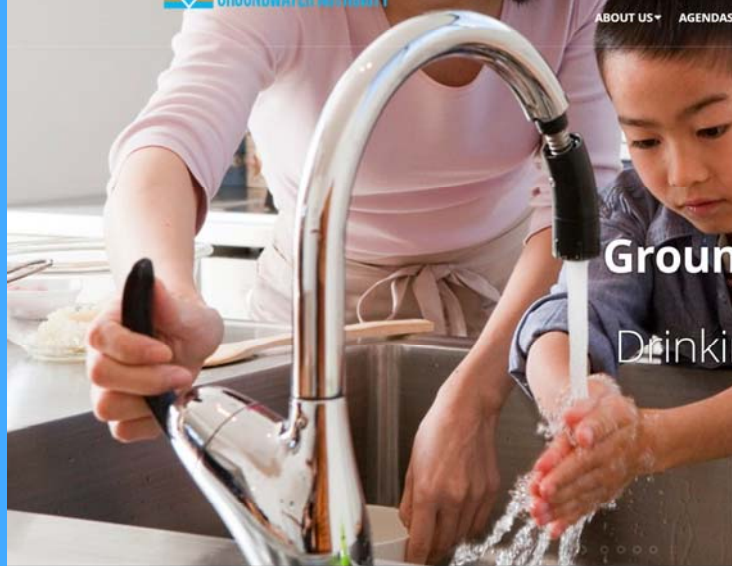
Committee members sign charter

Hold first meeting (target late May)



GWA Information and Resources

GWA Website is Being Updated!



Members

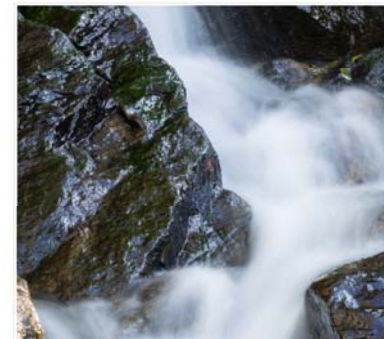
The following ESJGA members work together to develop sustainable water supplies:

Calaveras County Water District / Stanislaus County
P.O. Box 846
San Andreas, CA 95249

California Water Service Company
1505 E. Sonora Street
Stockton, CA 95205

Central Delta Water Agency
P.O. Box 1461
Stockton, CA 95201

Central San Joaquin Water Conservation District
11 S. San Joaquin St., #306
Stockton, CA 95202



Other Happenings



Technical Support Services (TSS)









ESJ GWA Pursuing Funding for Technical Support Services (TSS)

- Goal: Provide education, data and tools to GSA
- Applications for TSS in Spring 2018, evaluated on continuous basis
- Critically overdrafted basins have priority for funding
- Technical Support Services offered:
 - Field activities including groundwater level monitoring training, borehole video logging, geophysical logging, geologic logging, monitoring well installation
- Modeling training and support
- No match or fronting costs – DWR provides direct services

Next up in April...

Undesirable Results within the Six Sustainability Indicators



-  Chronic Lowering of Groundwater Levels
-  Reduction in Groundwater Storage
-  Seawater Intrusion
-  Degraded Water Quality
-  Land Subsidence
-  Depletion of Interconnected Surface Water

- The significant and unreasonable occurrence of any of the six sustainability indicators constitutes an undesirable result.

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