

# Eastern San Joaquin Subbasin Groundwater Sustainability Workgroup March 13, 2019



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# Agenda



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- Meeting Objectives
- Roadmap Update
- Groundwater-Dependent Ecosystems
- Policy Elements Related to Implementation Plan
- Announcements



# Meeting Objectives

# Meeting Objectives



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1. Review and discuss groundwater-dependent ecosystems (GDEs)
  - Working session: Map mark up activity to ground-truth areas identified as potential GDEs based on preliminary analysis
2. Review and Discuss Advisory Committee recommendations on policy decisions related to Implementation Plan
3. Consider approaches to addressing undeveloped agricultural land
  - Discussion Item: Options for addressing undeveloped agricultural land in the Implementation Plan



# Roadmap and Deliverables Update

# Updated Schedule to Include Administrative Review Period



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Reminder from last time:

There was a request for an administrative review of the chapters by GSA attorneys/staff prior to release to the GWA Board, Advisory Committee, and the public.

# Updated GSP Deliverables Review Schedule



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Deliverable	Public Draft#1 goes to Board for Review	<b>BOARD MEETING</b> JPA Board - Discussion (if areas of disagreement)	Possible Public Draft#2 goes to Board for Review	<b>BOARD MEETING</b> JPA Board – Action	Public Review Period	Staff provide response to comments/ discussion of proposed revisions	GSA Review	Final Draft of GSP Distributed	<b>BOARD MEETING</b> JPA Board Action	GSA Final Approval
<b>Bundle 1</b> (Administrative Information; Plan Area; HCM)	May 1	May 8	June 5	June 12	July 10-Aug 25	Sept 15	Oct 15	Nov 5	Nov 13	Dec/Jan
<b>Bundle 2</b> (Water Budget – at basin-scale)	June 5	June 12	July 1	July 10	July 10-Aug 25	Sept 15	Oct 15	Nov 5	Nov 13	Dec/Jan
<b>Bundle 3</b> (Undesirable Results & Minimum Thresholds, Monitoring Network, Projects)	June 5	June 12	July 1	July 10	July 10-Aug 25	Sept 15	Oct 15	Nov 5	Nov 13	Dec/Jan



# Groundwater-Dependent Ecosystems



# Preliminary Methodology and Results



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- Today we are presenting a preliminary methodology for identifying GDEs in the Subbasin
- The draft results will be reviewed with GSAs to ground-truth areas that have and have not been identified as GDEs areas through this analysis

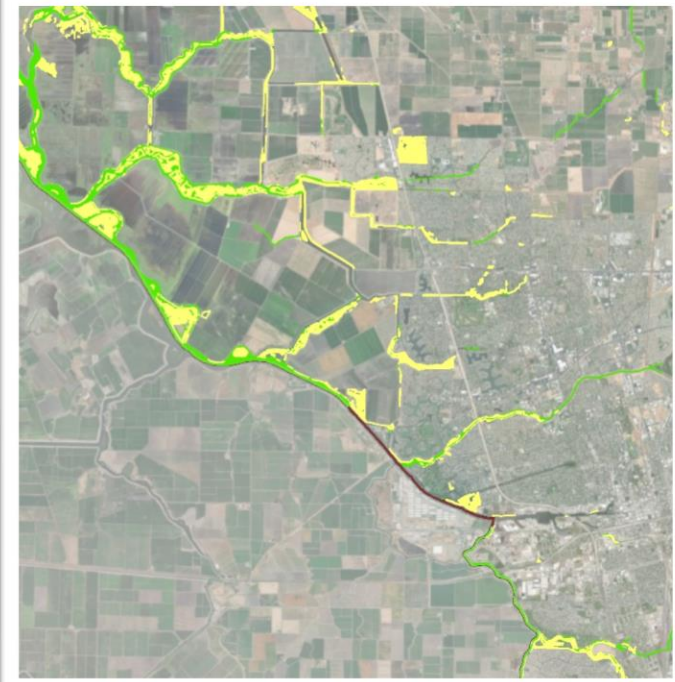
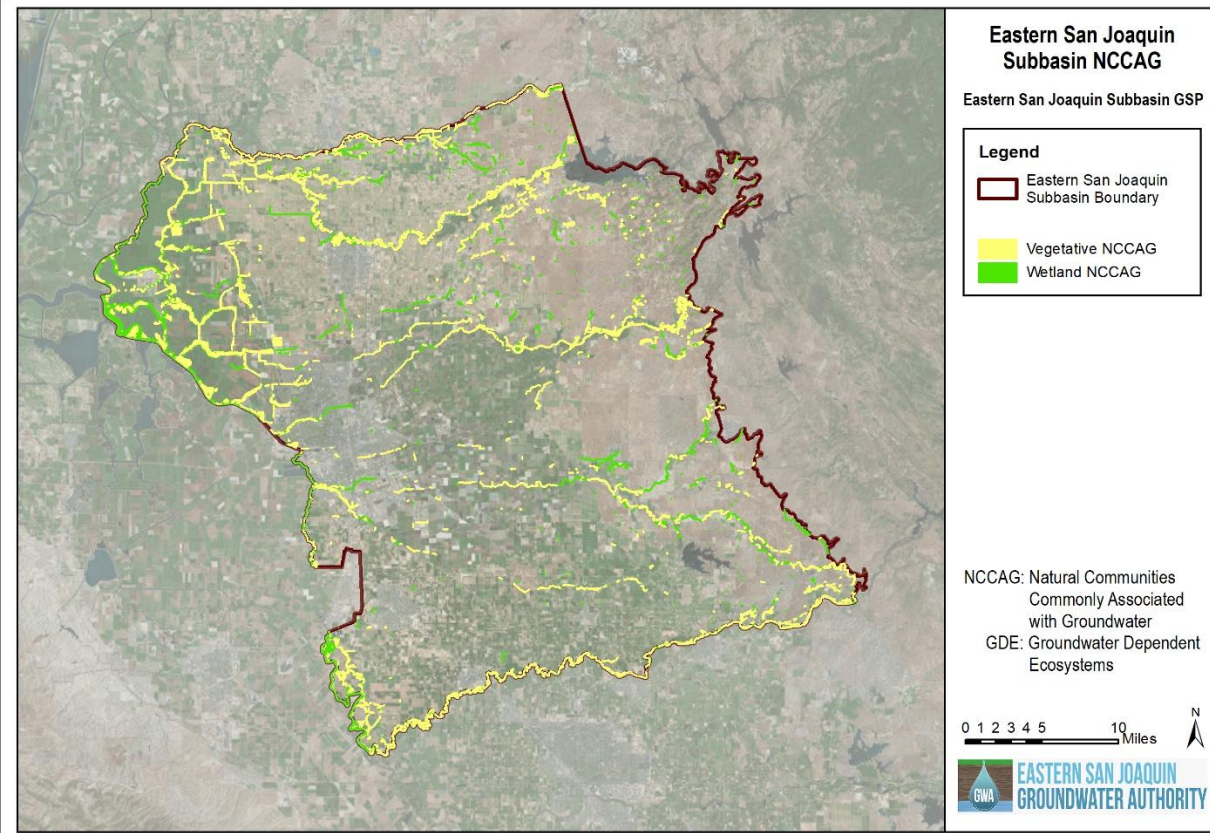
# Preliminary Methodology for Assessing GDEs



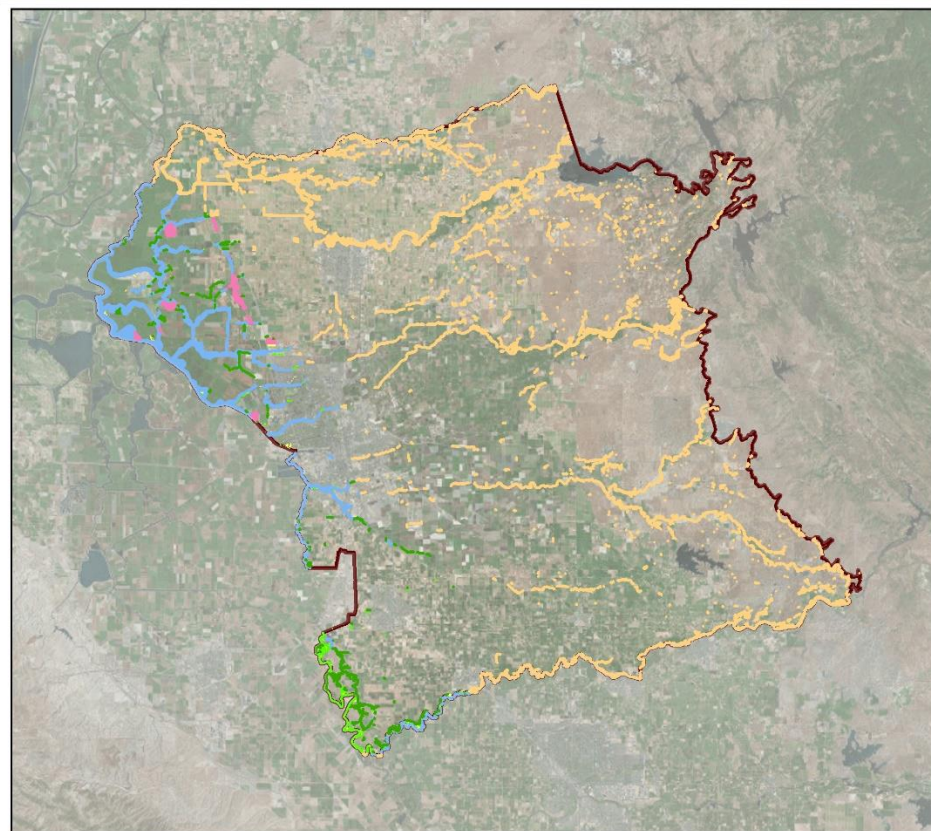
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- DWR's Natural Communities Commonly Associated with Groundwater (NCCAG) dataset was used, developed with The Nature Conservancy
- Areas with access to supplemental water supplies were removed, including
  - Managed wetlands and areas without shallow groundwater
  - Areas adjacent to canals and ditches, irrigated ag fields, losing streams, perennial rivers, and managed wetlands.

# Full NCCAG Dataset










# NCCAG Dataset: Potential GDEs and Other



## Identified GDEs and NCCAGs not Identified as GDEs

Eastern San Joaquin Subbasin GSP

### Legend

-  Eastern San Joaquin Subbasin Boundary
- NCCAG GDEs**
-  NCCAG Vegetative GDE
-  NCCAG Wetland GDE
- NCCAG Not GDEs**
-  Depth to Water > 30 ft.
-  Managed Wetland
-  Adjacent to Agriculture
-  Perennial Surface Water Bodies

NCCAG: Natural Communities Commonly Associated with Groundwater  
GDE: Groundwater Dependent Ecosystems



## Buffers Used

DTW 30+ ft.	Drawn from area of shallow DTW measurements
Managed Wetland	150 ft.
Adjacent to Ag.	50 ft.
Losing or Perennial Streams	150 ft.
Canals and Ditches	150 ft.

# NCCAG Dataset: Potential GDEs and Other



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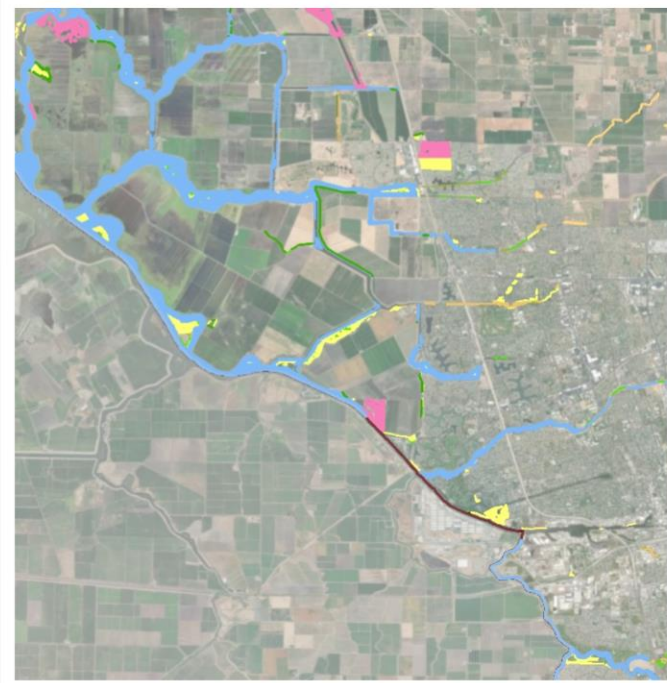
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Eastern San Joaquin Subbasin GSP

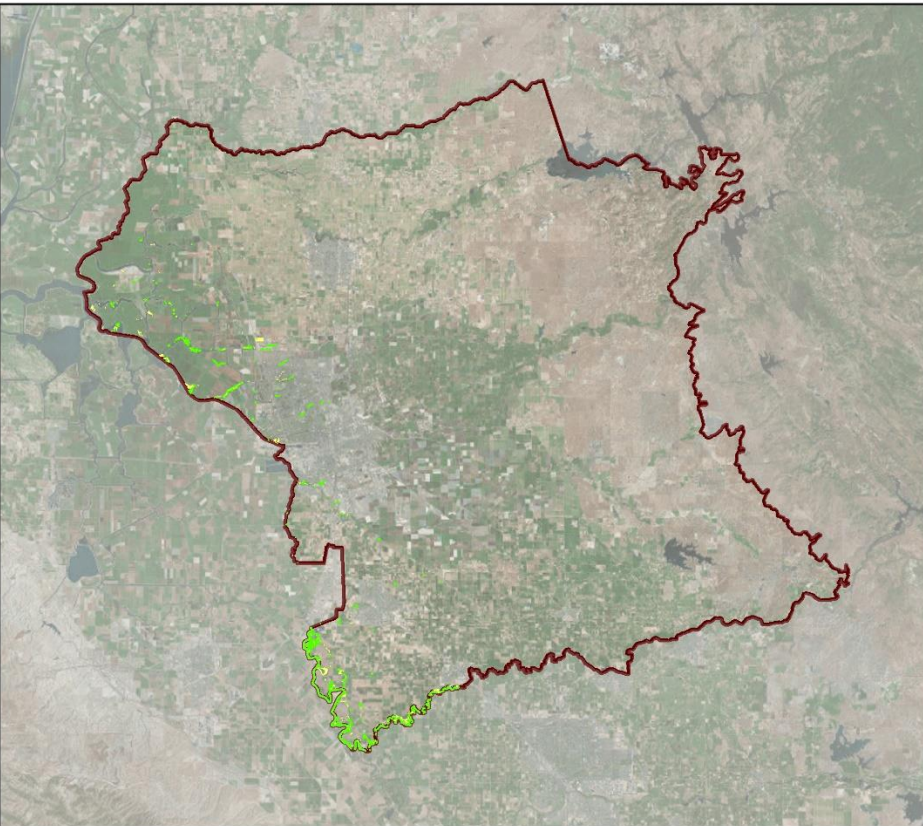
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- Eastern San Joaquin Subbasin Boundary
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NCCAG: Natural Communities Commonly Associated with Groundwater  
GDE: Groundwater Dependent Ecosystems



# Identified Potential GDEs



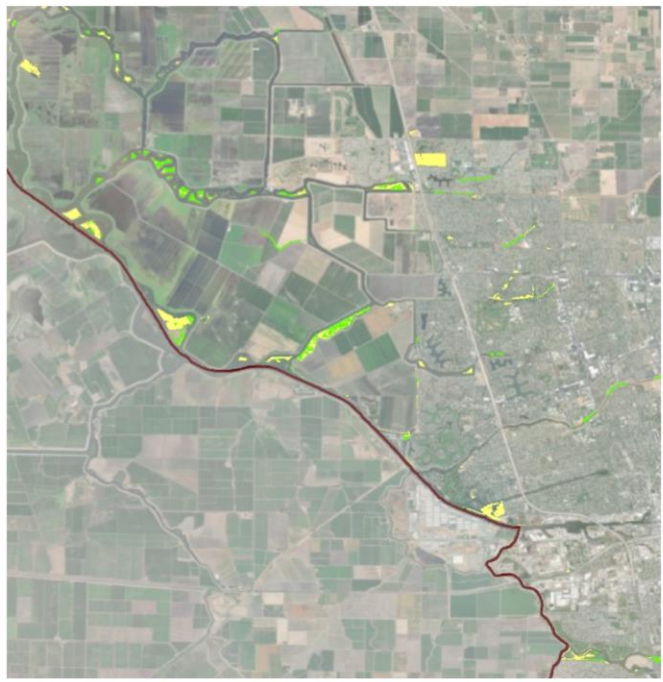
## Groundwater Dependent Ecosystems (GDEs)

Eastern San Joaquin Subbasin GSP

**Legend**

- Eastern San Joaquin Subbasin Boundary
- GDEs
  - NCCAG Vegetative GDE
  - NCCAG Wetland GDE

NCCAG: Natural Communities Commonly Associated with Groundwater  
GDE: Groundwater Dependent Ecosystems



# Working Session



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- Map mark up activity to ground-truth areas identified as potential GDEs based on preliminary analysis



# Policy Elements Related to Implementation Plan



# Policy Elements Related to Implementation Plan



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1. Water Budget Planning Estimates
2. Sustainability Indicators
3. Monitoring, Measuring and Model Refinements
4. Project Implementation
5. Management Actions

# 1. Water Budget Planning Estimates – Issue Summary



Due to uncertainties inherent in projecting future groundwater conditions, a range of assumptions can be made in determining water budget planning estimates for long-term average imbalance and sustainable yield, which will impact planning targets.

## Planning Estimates

- Long-term Average GW Deficit (low-end, average, high-end)
- Pumping Offset Needed to Meet Sustainable Yield (low-end, average, high-end)

# 2. Sustainability Indicators – Issue Summary



SGMA requires the GSP to address six sustainability indicators:

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

SGMA allows Basins to not fully address an indicator if the sustainability indicator is not applicable to their basin. To do this, GSAs must provide evidence that the indicator does not exist and could not occur.

# 3. Monitoring, Measuring, and Model Refinements – Issue Summary



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Following GSP approval, SGMA compliance will require Basin-scale monitoring and reporting, as well as model validation and verification at the Subbasin scale. The following activities are expected to be required.

- Monitoring and reporting
- Data collection and analysis
- Administrative actions
- 5-year update
- DMS updates
- Public outreach
- Website maintenance
- Legal support (potentially)
- Grant writing

# 4. Project Implementation – Issue Summary



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SGMA projects that go into the GSP Implementation Plan can be developed and implemented at the GSA level, at a regional level, or the Subbasin level. The level at which projects are implemented could have implications for project implementation, authority, control, and cost.

# 5. Management Actions – Issue Summary



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SGMA requires GSAs to implement projects and management actions to reach sustainability. What kinds of projects and management actions should be included in the GSP implementation plan?



# **Policy Elements Related to Implementation Plan: Approach to Undeveloped Ag. Land**

# *Discussion*



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- Consider and discuss various approaches to addressing undeveloped agricultural land





# Announcements

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