SCV GSA

MEMBER AGENCIES

SCV WATER

CITY OF SANTA CLARITA

LOS ANGELES COUNTY DEPARTMENT OF REGIONAL PLANNING

LACWD

Public Workshop
Draft GSP Review

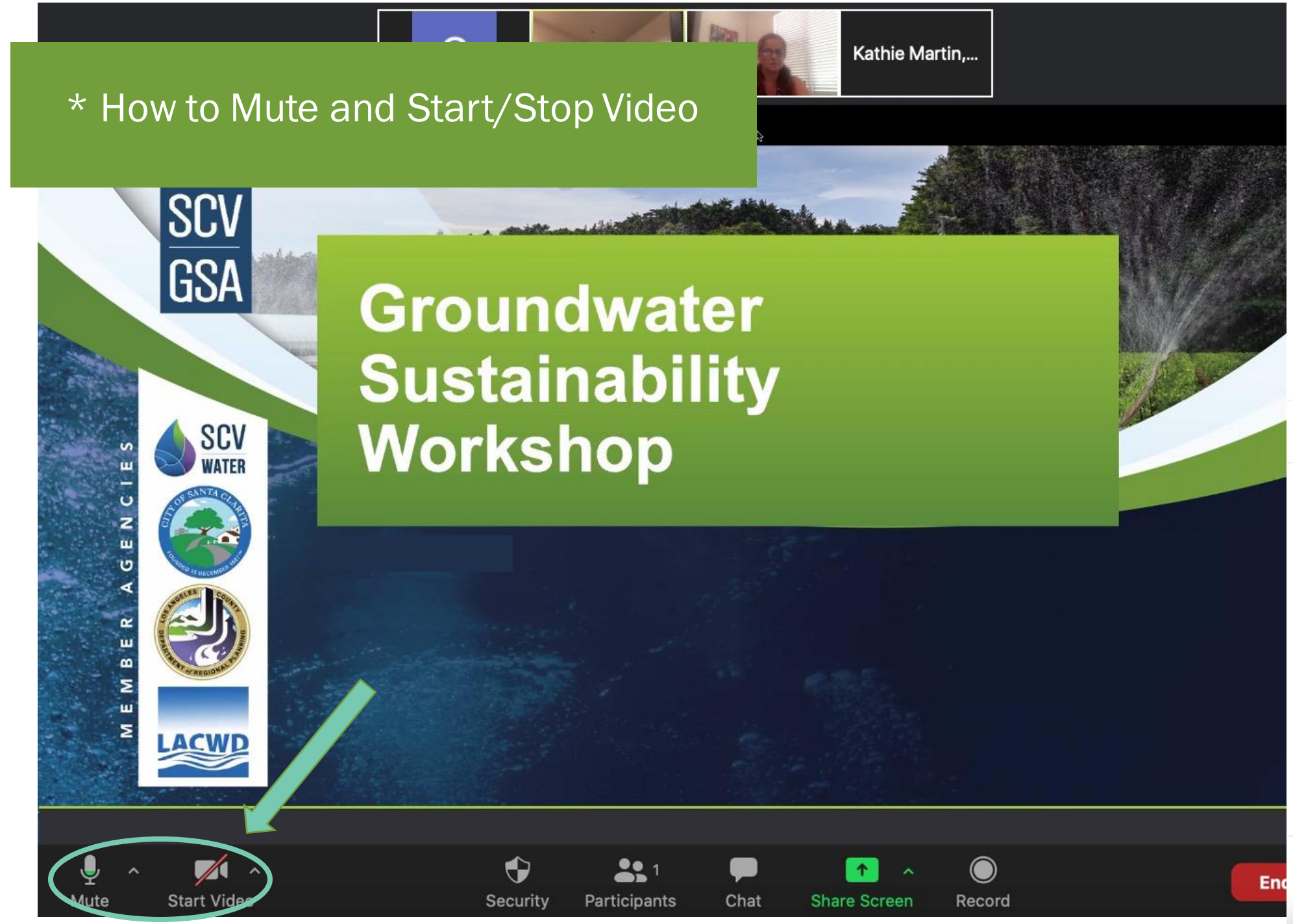
Rick Viergutz/SCV Water

Jeff Barry/GSI Water Solutions

August 25, 2021

Workshop Topics and Objective

- Sustainable Groundwater Management Act 101
- Organization of GSA and Role of Stakeholder Advisory Committee
- Stakeholder Input
- Activities Leading to Completion of GSP
- What We Know Now
- Measuring Sustainability in the Future
- Management Actions and Projects
- Next Steps and Schedule
- Objective: share information and obtain your input


* How to Mute and Start/Stop Video
Kathie Martin,...
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Groundwater Sustainability Workshop
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LOS ANGELES COUNTY DEPARTMENT of REGIONAL PLANNING
LACWD
Mute
Start Video
Security
Participants
1
Chat
Share Screen
Record
End
Participants (4)
Tara Bravo (Host, me)
AM
Amanda McCarthy
CA
Catherine Abbott
Chelsea Van Es
Invite
Mute All
More
Chat
To: Everyone
File
Type message here...

*How to Enter Questions and Input in Chat
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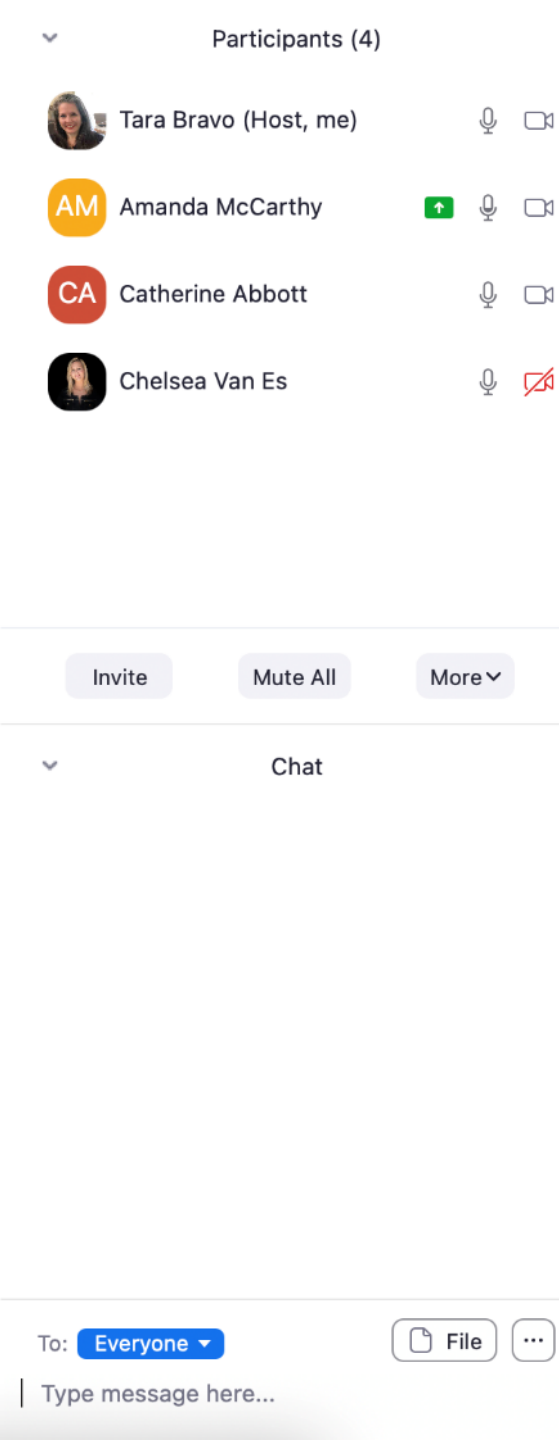
Step 1
Mute
Start Video
Participants
2
Chat
Share Screen
Record
Reactions
End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Type message here...

*How to Enter Questions and Input in Chat

Sustainable Groundwater Management Act 2014 (SGMA)

"A central feature of these bills is the recognition that groundwater management in California is best accomplished locally."

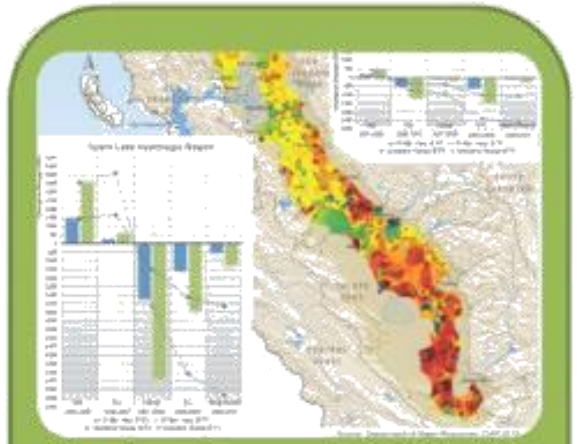
– Governor Edmund G. Brown Jr.

Agency Roles in SGMA

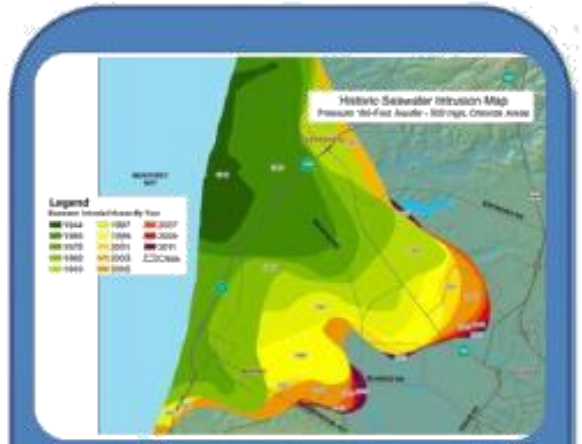
- **DWR:** CA Department of Water Resources
- **SWRCB:** State Water Resources Control Board
- **GSA:** Groundwater Sustainability Agency

Undesirable Results

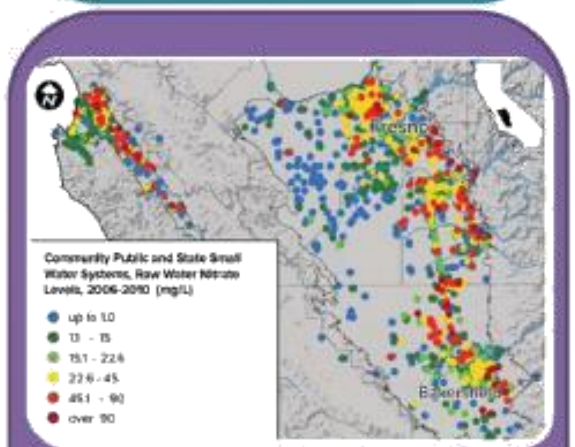
Lowering of GW Levels



Reduction of GW Storage



Seawater Intrusion



Degraded Water Quality

Land Subsidence

Depletion of Inter-connected Streams

SGMA Steps

June 2017	Form GSA
Jan 2022	Develop GSP
Over 20 yrs	Implement GSP
2042	Achieve Sustain-ability

More than 260 GSA's formed

Organization of SCV-GSA Board of Directors

- Formed in 2017
- Members operating under a Joint Powers Agreement:
  - County Waterworks District No. 36
  - County Regional Planning
  - City of Santa Clarita
  - SCV Water
- Meets quarterly or as needed
- www.scvgsa.org

SCV
GSA

Stakeholder Advisory Committee

The GSA SAC provides insight, support and expertise on various social, cultural and economic issues impacting groundwater management in the SCV.

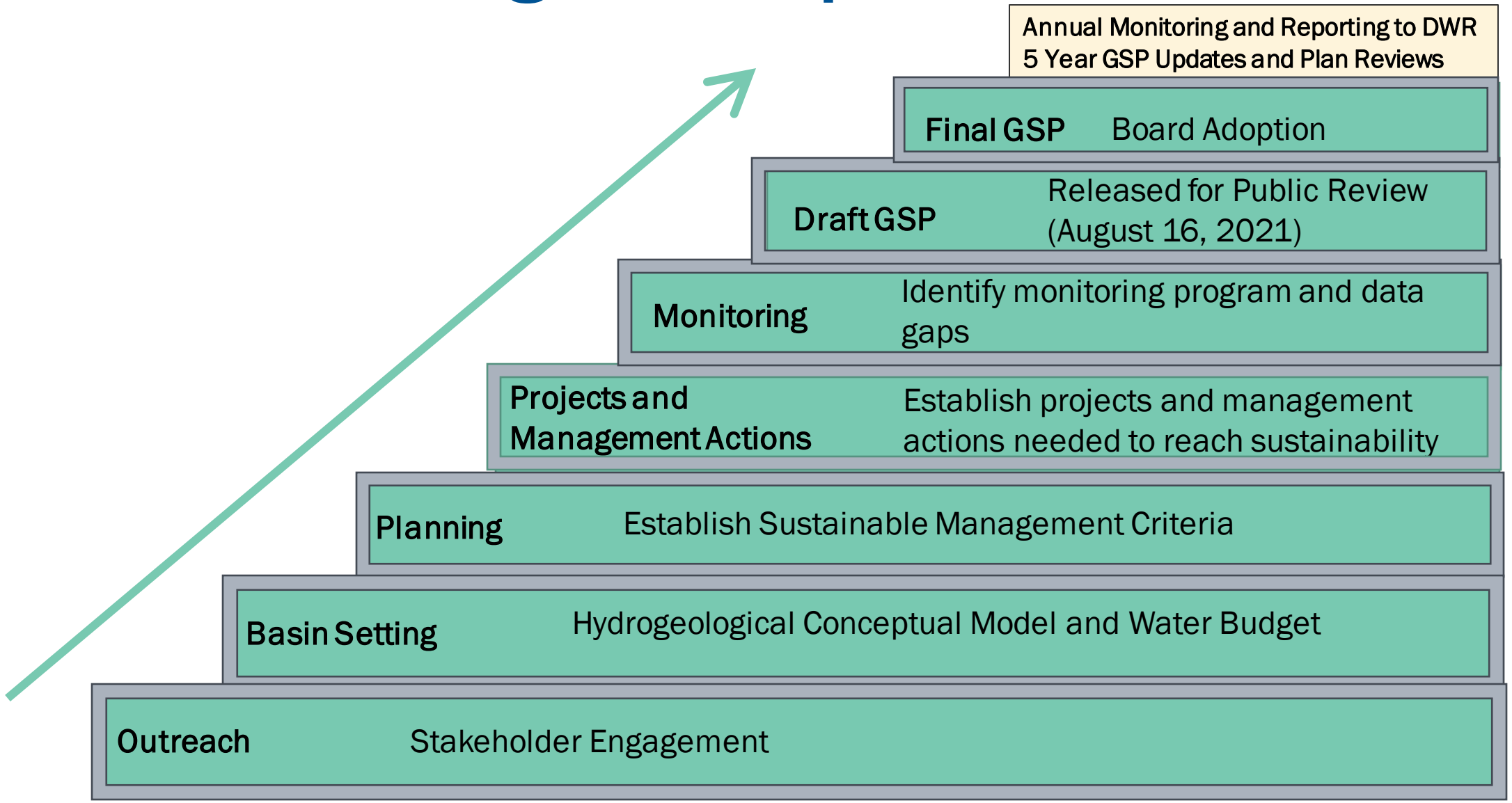
- Represents environmental interests, groundwater pumpers, business and members-at-large
- Participated in planning for, and debriefing after, 6 public workshops (including today)
- Provided input on draft GSP components along the way

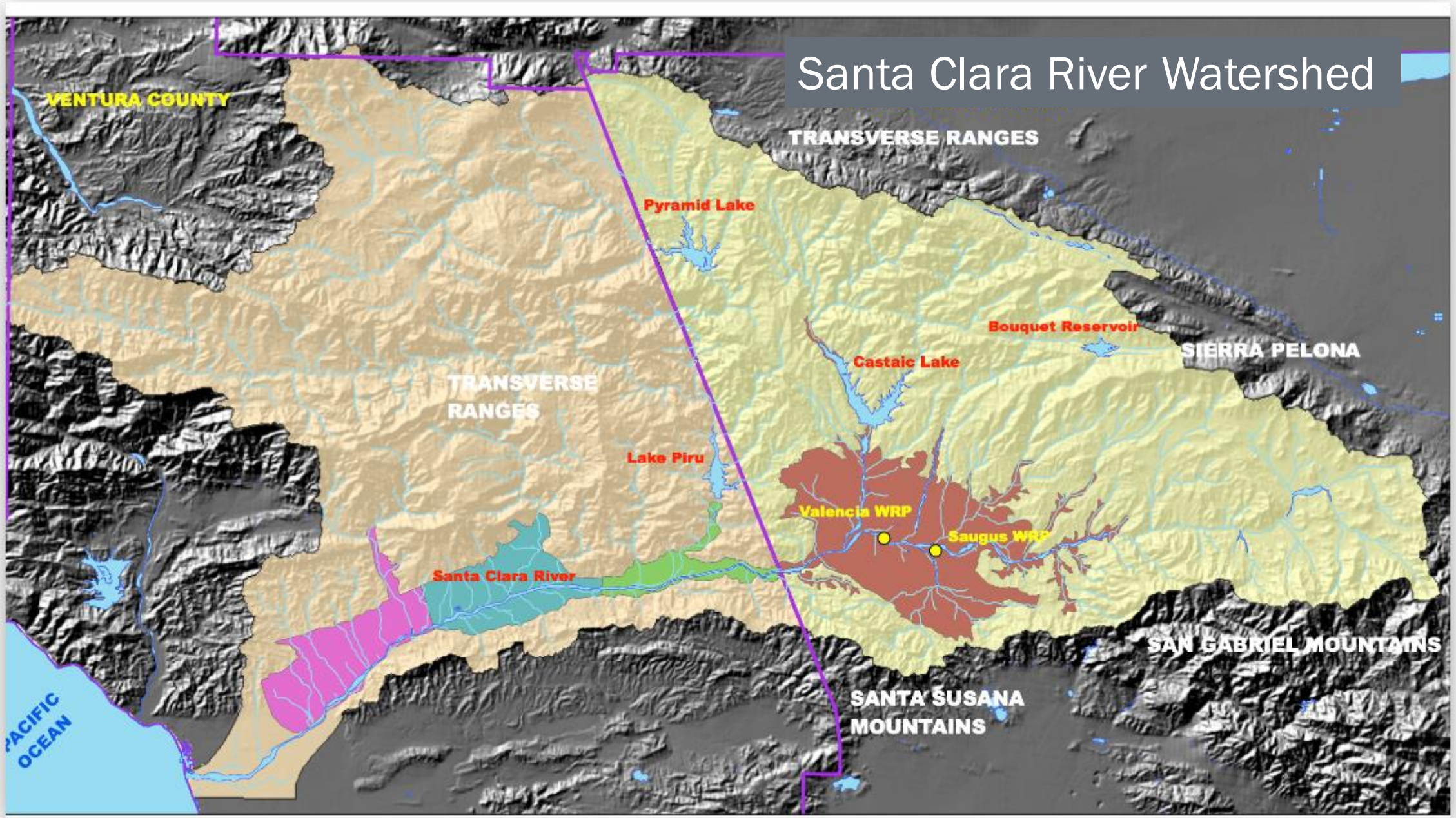
Stakeholder Meetings and Public Workshops

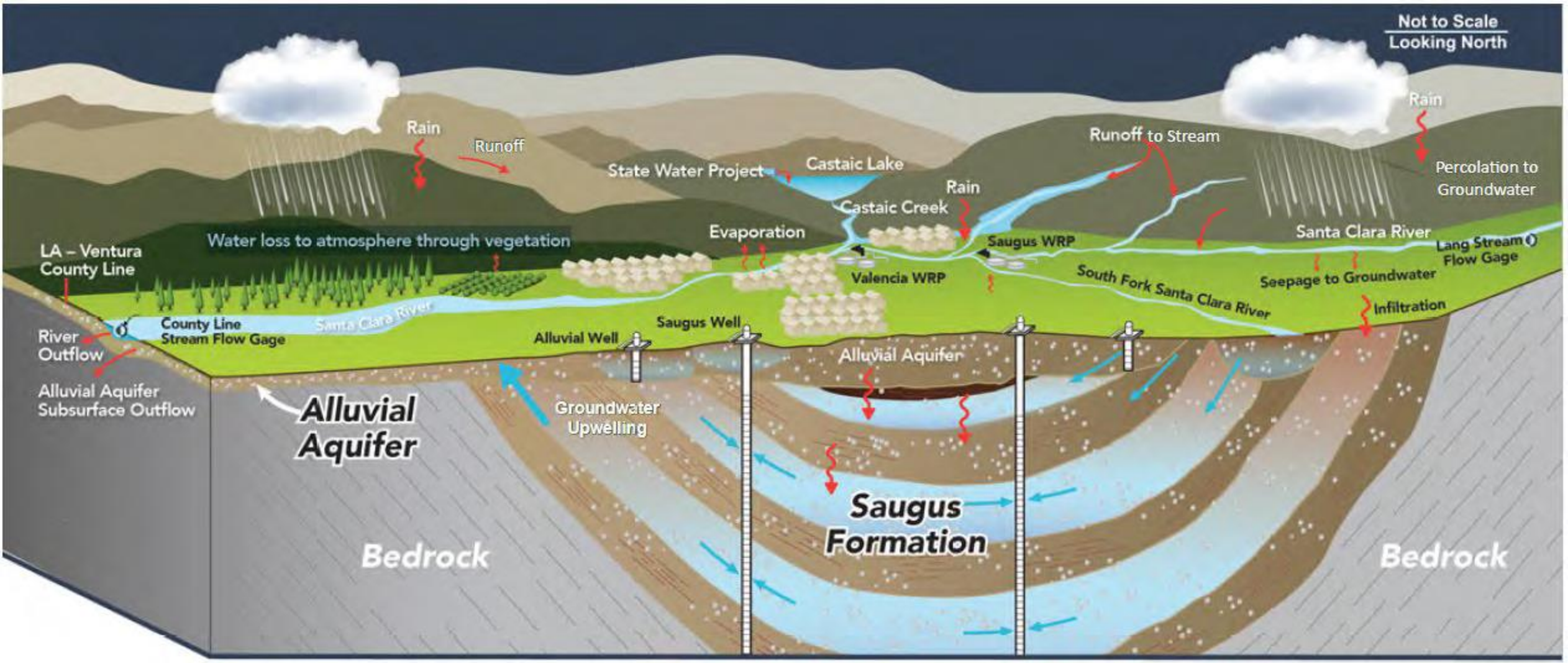
- More than 15 public Stakeholder Advisory Committee Meetings
- 6 Public Workshops

PUBLIC WORKSHOPS	
June 17, 2020	Hydrogeological Conceptual Model
August 5, 2020	GW/SW Interactions and Groundwater Dependent Ecosystems
November 4, 2020	Water Budget
March 10, 2021	Sustainable Management Criteria
June 2, 2021	Management Projects and Actions
August 25, 2021	Draft Groundwater Sustainability Plan

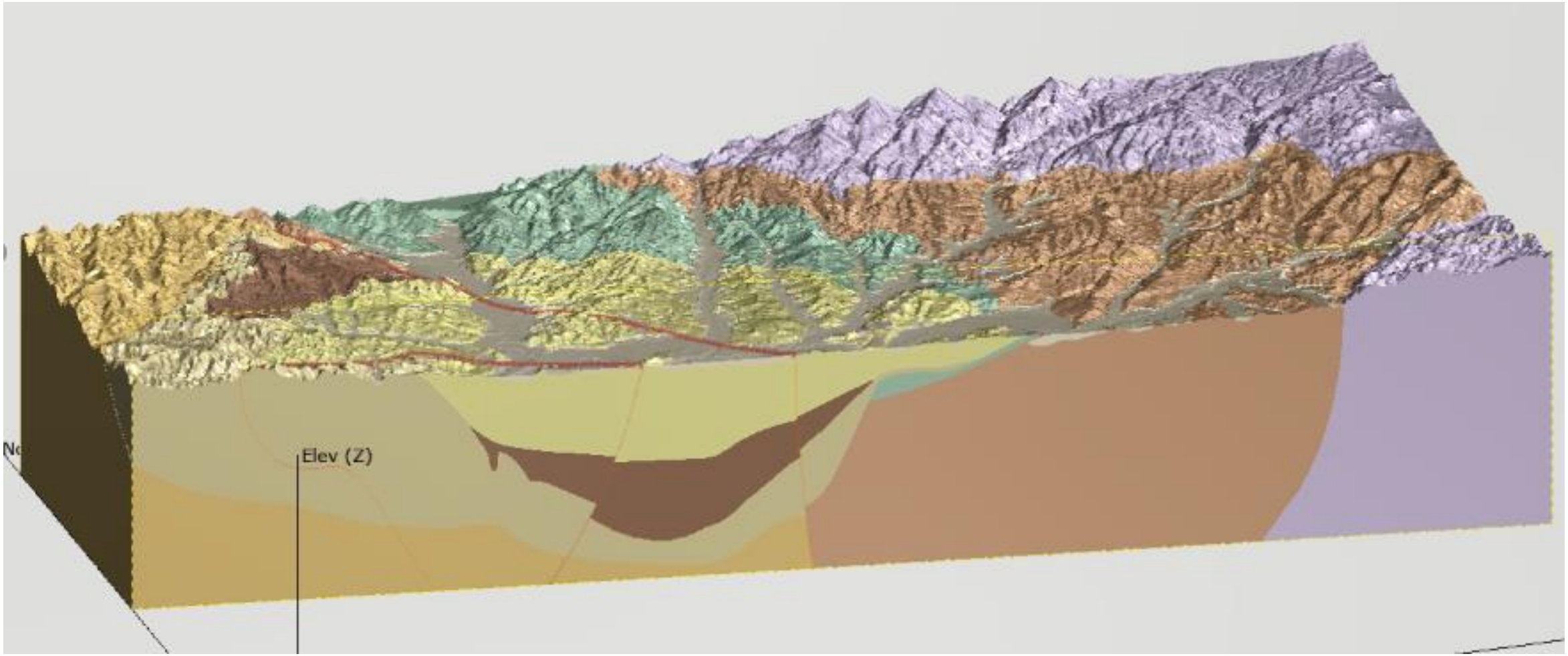
Activities Leading to Completion of GSP



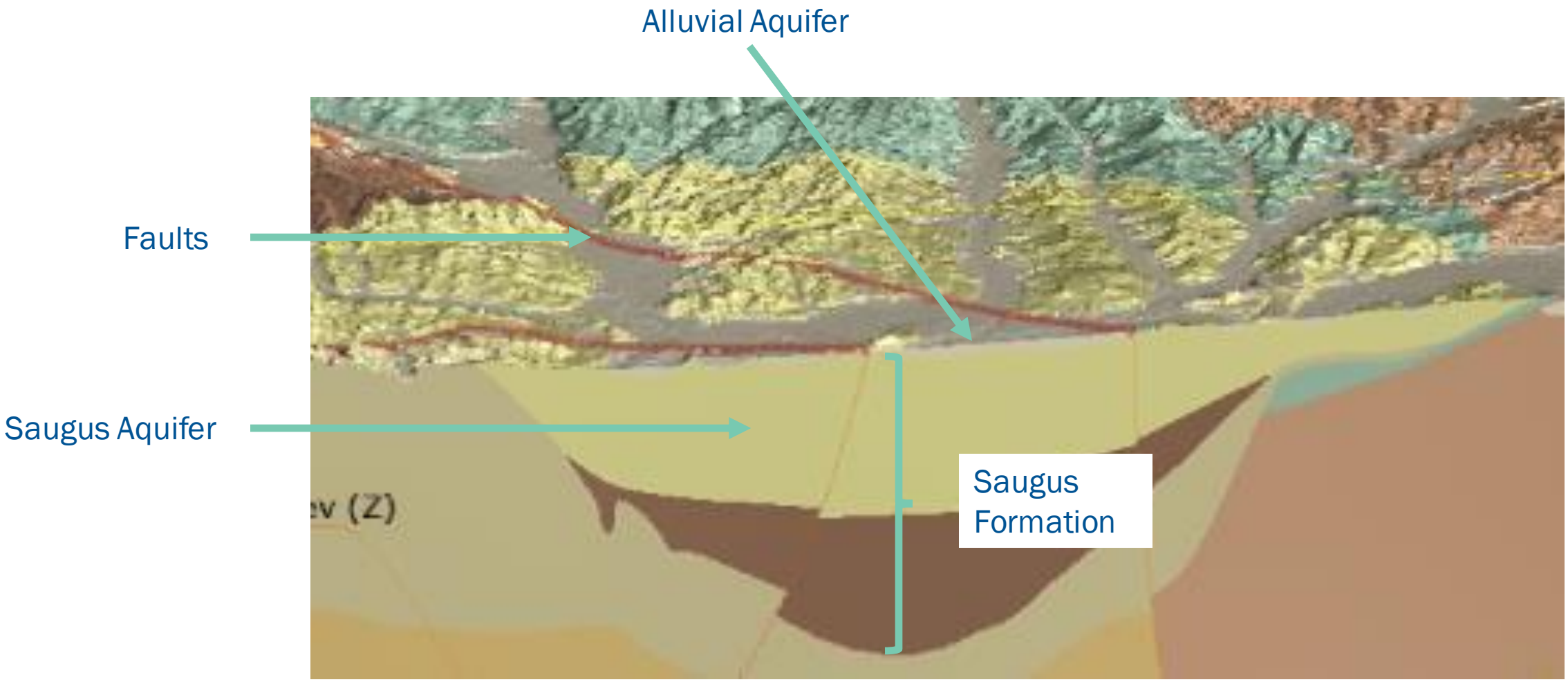

Santa Clara River Watershed
VENTURA COUNTY
TRANSVERSE RANGES
Pyramid Lake
Bouquet Reservoir
SIERRA PELONA
Castaic Lake
TRANSVERSE
RANGES
Lake Piru
Valencia WRP
Saugus WRP
Santa Clara River
SAN GABRIEL MOUNTAINS
SANTA SUSANA
MOUNTAINS
PACIFIC
OCEAN

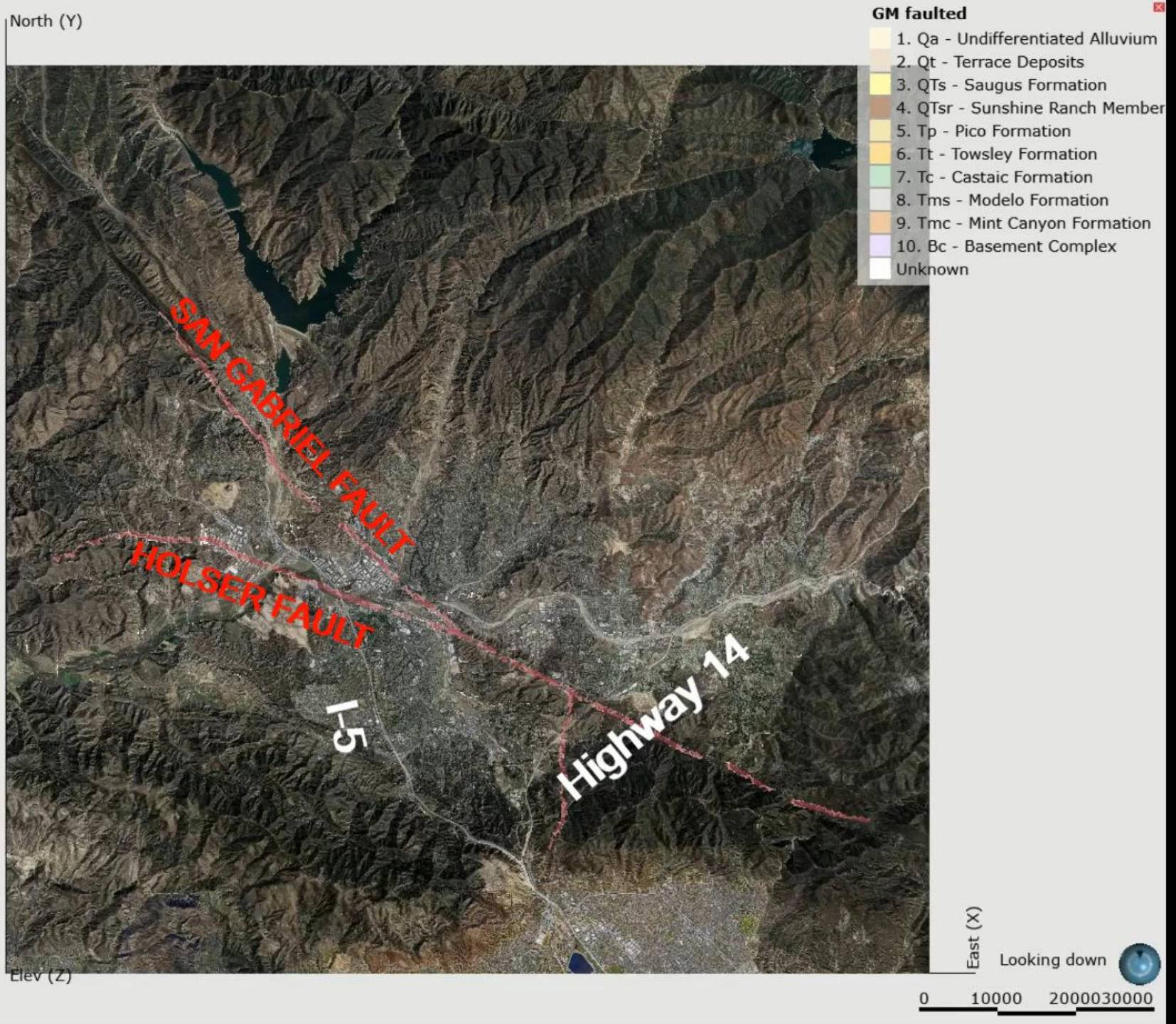

Not to Scale
Looking North
Rain
Runoff
State Water Project
Castaic Lake
Rain
Runoff to Stream
Rain
Percolation to Groundwater
Castaic Creek
Water loss to atmosphere through vegetation
Evaporation
Saugus WRP
Santa Clara River
Lang Stream Flow Gage
LA – Ventura County Line
Valencia WRP
South Fork Santa Clara River
Seepage to Groundwater
Infiltration
County Line Stream Flow Gage
Santa Clara River
River Outflow
Alluvial Well
Saugus Well
Alluvial Aquifer
Alluvial Aquifer Subsurface Outflow
Alluvial Aquifer
Groundwater Upwelling
Saugus Formation
Bedrock
Bedrock

Geologic Mapping



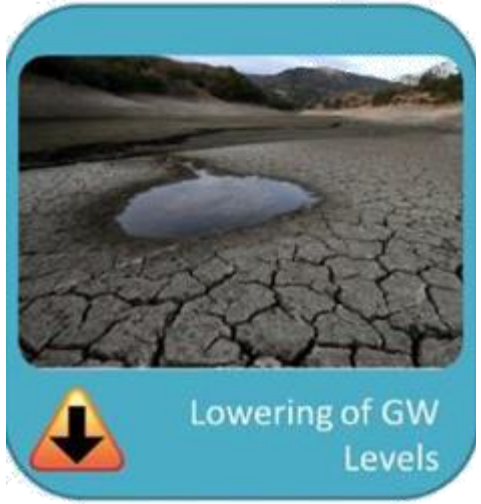
Geologic Mapping



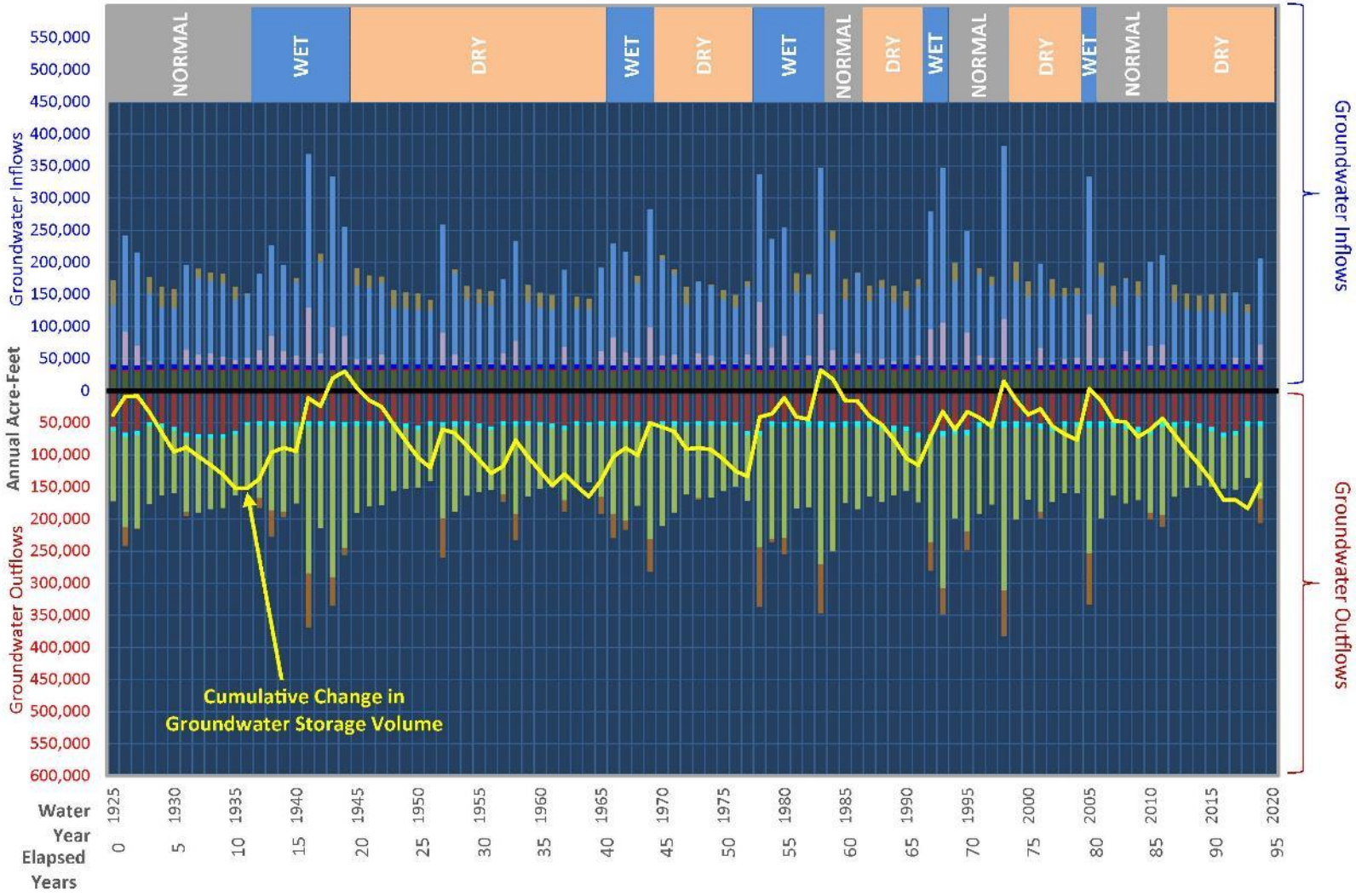

North (Y)
GM faulted
1. Qa - Undifferentiated Alluvium
2. Qt - Terrace Deposits
3. QTs - Saugus Formation
4. QTsr - Sunshine Ranch Member
5. Tp - Pico Formation
6. Tt - Towsley Formation
7. Tc - Castaic Formation
8. Tms - Modelo Formation
9. Tmc - Mint Canyon Formation
10. Bc - Basement Complex
Unknown
SAN GABRIEL FAULT
HOLSER FAULT
5
Highway 14
Elev (Z)
East (X)
Looking down
0
10000
2000030000

What We Know Now – GW Levels & Storage

- ✓No long-term decline in groundwater levels
- ✓No continuing decrease in storage
- ✓No chronic overdraft predicted
- ✓*SCV Water's groundwater operating plan is unlikely to exceed the basin's safe yield in the future under the modeled climatic conditions (which include future climate change).*



What We Know Now – GW Levels & Storage



What We Know Now – SW Depletion

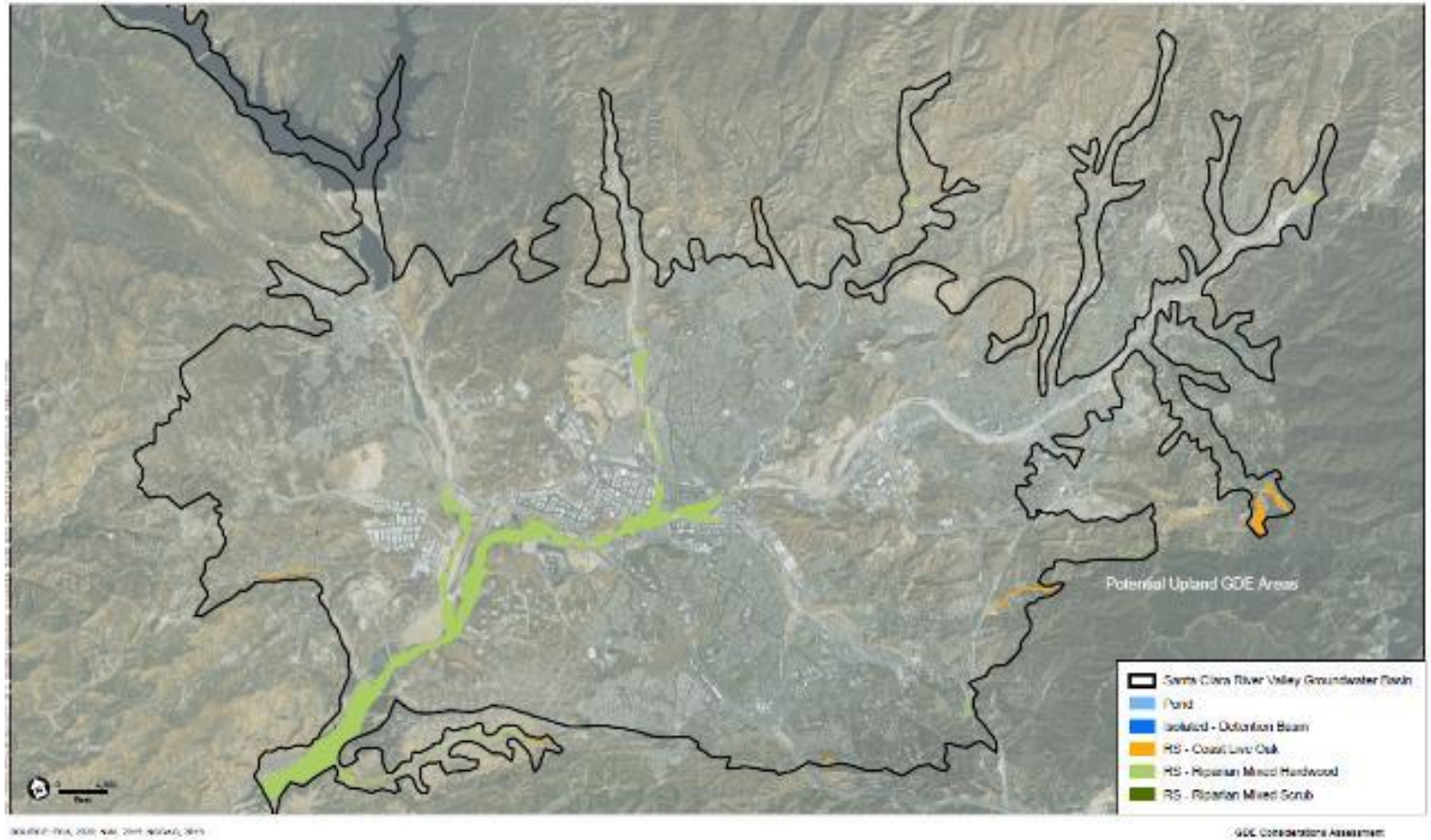
- ✓No significant or unreasonable surface water depletion
  - ✓Surface water flows are largely maintained.

- ✓SGMA also requires we consider Groundwater Dependent Ecosystems (GDEs).
  - ✓GDEs are present and should be protected from undesirable results caused by pumping
  - ✓As a result, a special monitoring and evaluation program is included in the draft GSP

What We Know Now - GDEs

- Identified potential GDEs using online datasets from DWR
- Refined potential GDEs based on field survey
- Further defined GDEs based on depth to groundwater < 30 feet

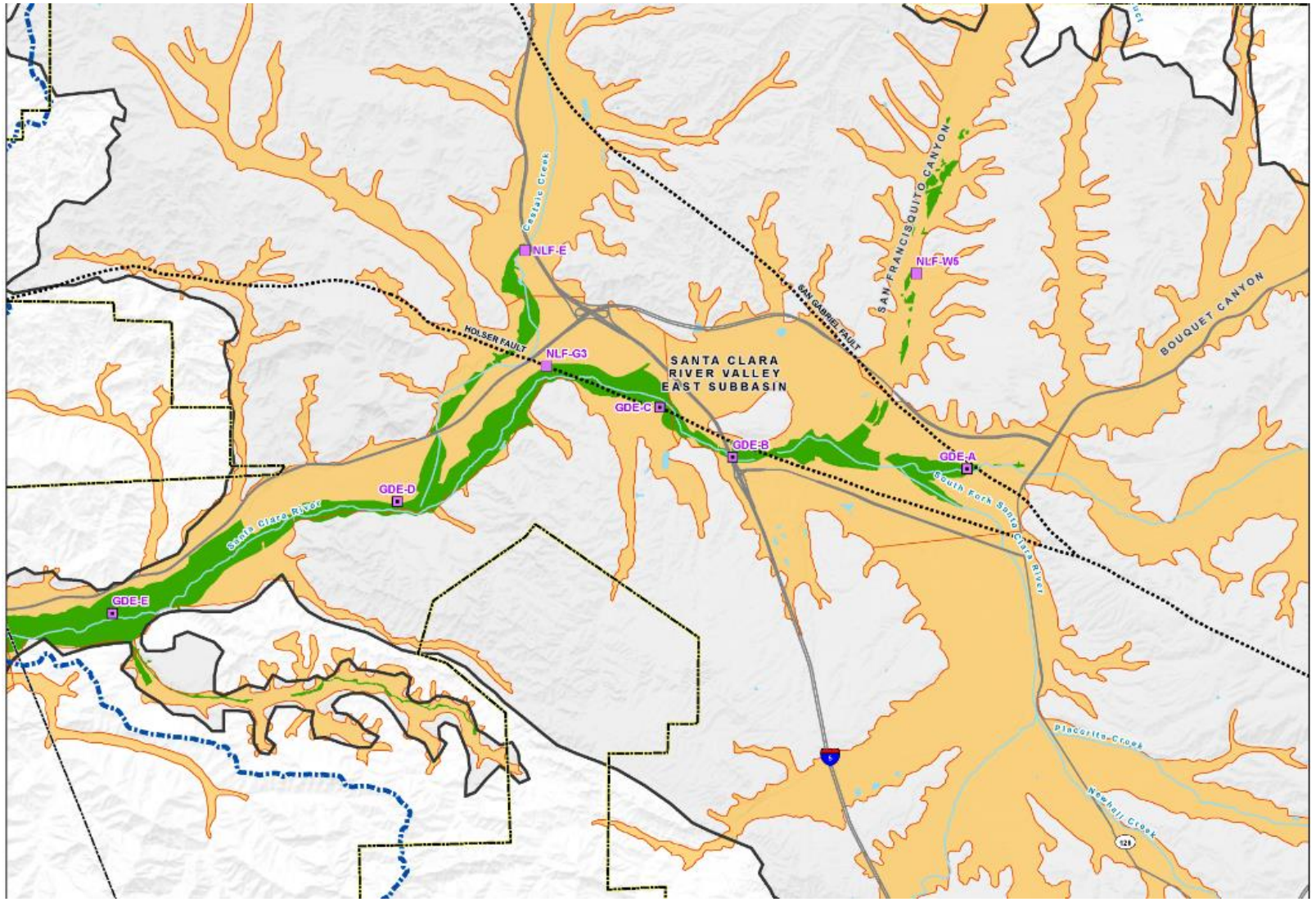
Groundwater Dependent Ecosystems



Special Monitoring and Evaluation with GDEs

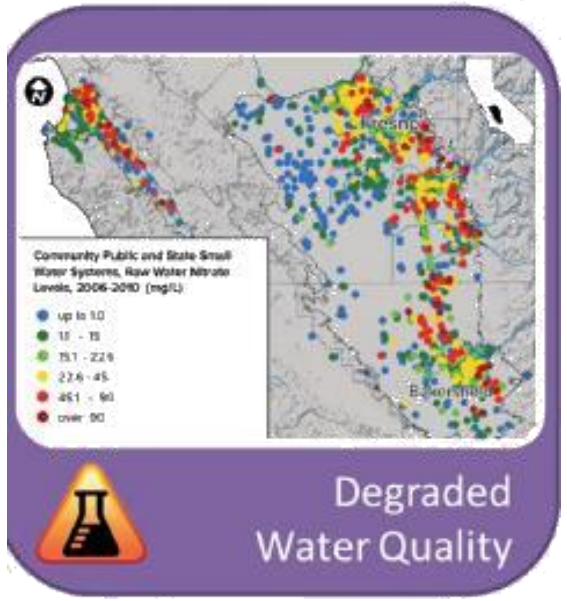
Groundwater Dependent Ecosystems

- GDE Triggers
- Evaluation Process and Management Actions



What We Know Now – Water Quality

- Groundwater quality has been impacted by contamination in some locations – SCV Water is working with State regulatory agencies and has installed wellhead treatment on affected wells

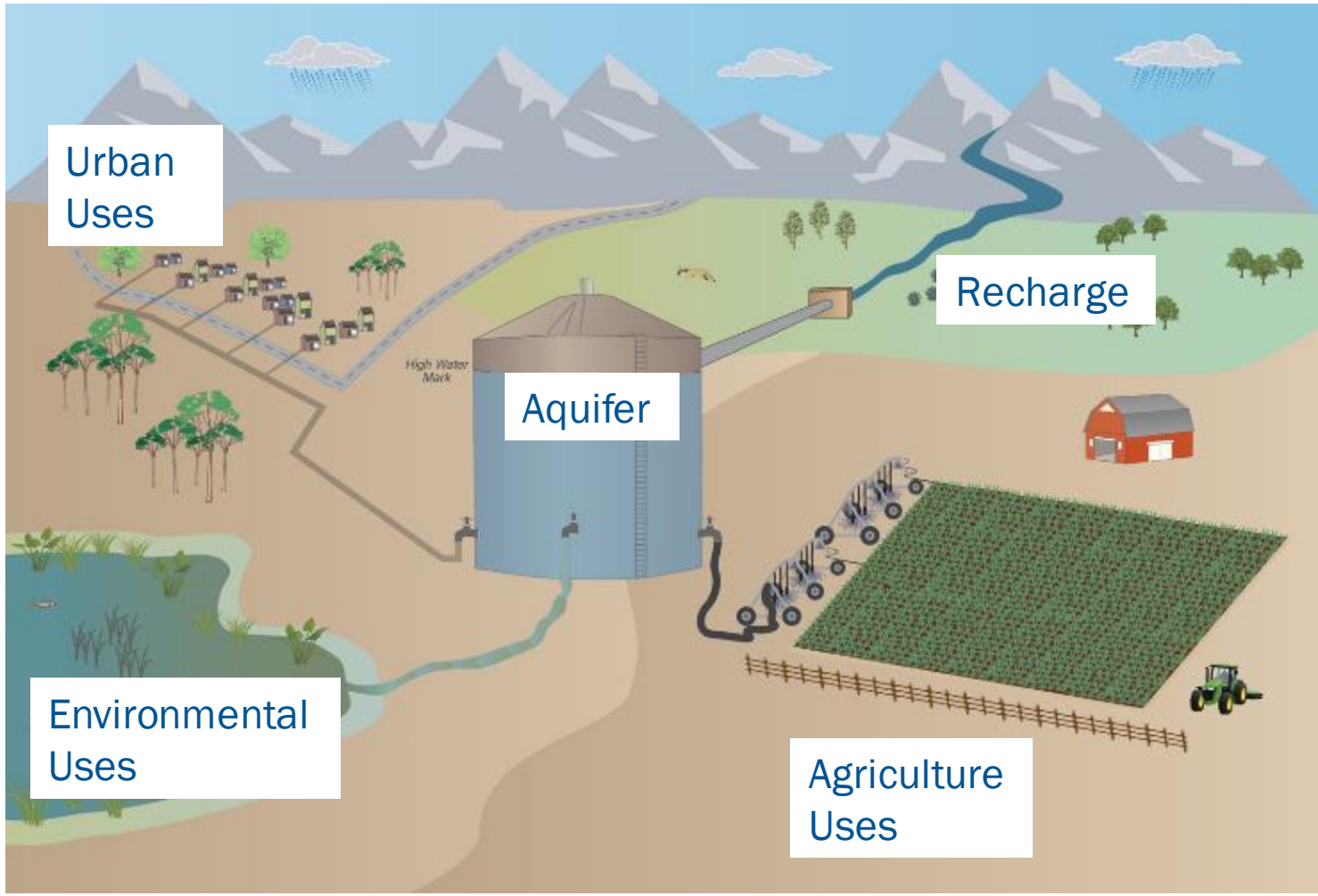


What We Know Now – Land Subsidence

- Small land surface elevation changes (+/-) have occurred for a number of reasons including tectonics, oil and gas development, and potentially groundwater extraction. Changes are small, occur valley wide, and more monitoring is needed. It isn't clear that groundwater extraction is a driver.

What We Know Now

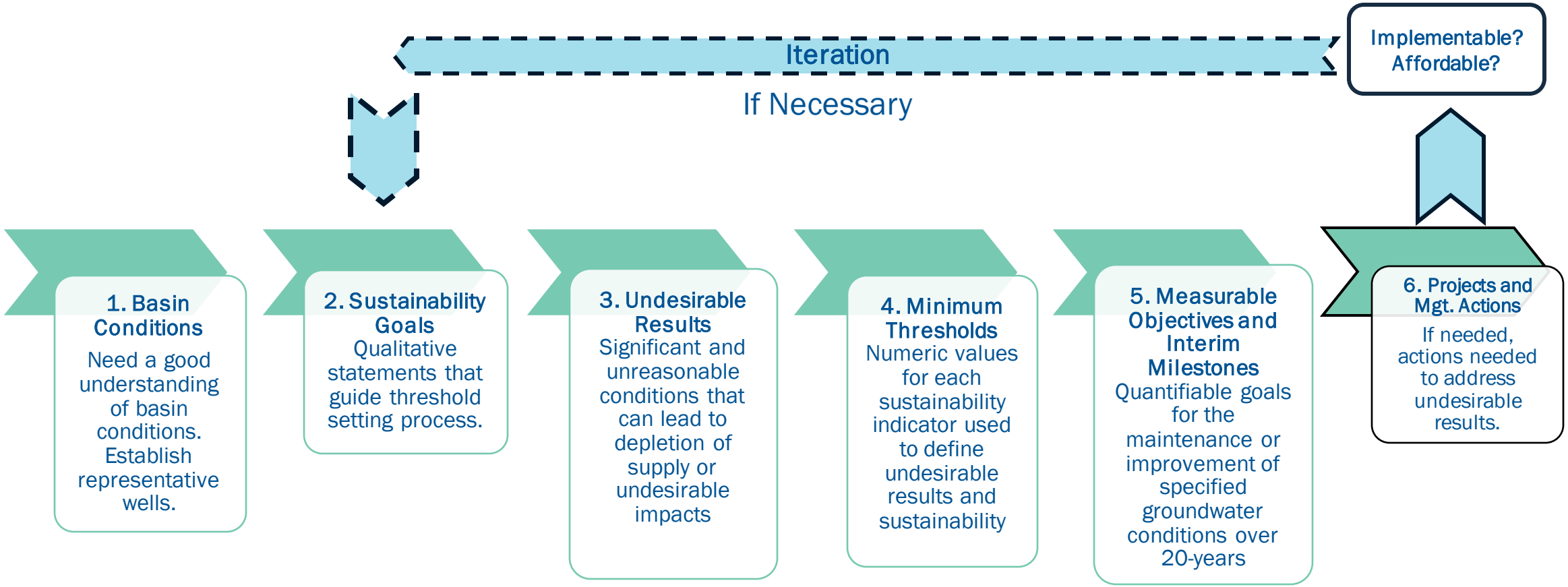
- Recharge balances with discharge
- Sustainable yield is approximately 52,200 AFY but may be more than 67,500 AFY over multiple dry years.



Measuring Sustainability

- We track groundwater elevations and other measurements against minimum thresholds.
- Exceeding multiple minimum thresholds as defined in the GSP means an undesirable result has taken place.
- If monitoring show an undesirable result is anticipated, then management actions are implemented.
- Ongoing monitoring and study will improve our understanding

Sustainable Management Criteria (SMC) Development Process



Potential Undesirable Results	Minimum Threshold	Measurable Objective
Chronic Lowering of Groundwater Levels and Chronic Reduction in Storage		
Inability to meet groundwater demands during a multi-year drought. Groundwater levels fall below minimum thresholds throughout a 3-year period in: • 25 percent of representative wells in the Alluvial Aquifer, or • 50 percent of representative wells in the Saugus Formation	Lowest groundwater elevation from the 95-year future-conditions model, or Lowest historically observed groundwater elevation in modern era (i.e., since 1980), whichever is lower.	Average of the future modeled or historically observed groundwater elevations (using the same data set as for the minimum threshold).

Potential Undesirable Results	Minimum Threshold	Measurable Objective
Degraded Groundwater Quality		
Degradation of groundwater quality beyond WQOs and assimilative capacities established in the SNMP.	• WQOs for TDS, chloride, nitrate, and sulfate, or • ambient water quality if it exceeds the WQO.	Prevent water quality degradation for salts and nutrients and for contaminants.
Land Subsidence		
Substantial interference with land uses, impacts on the use of critical infrastructure and roads, or subsidence greater than minimum thresholds at 10 percent of monitoring locations.	• 0.1 feet of subsidence during a single year, or • 0.5 feet of subsidence during a 5-year period.	Maintenance of current ground surface elevations.

Potential Undesirable Results	Minimum Threshold	Measurable Objective
Depletion of Interconnected Surface Water		
Permanent loss or significant degradation of existing native riparian or aquatic habitat due to lowered groundwater levels caused by groundwater use throughout the GDE area. In areas that currently provide essential habitat to UTS (sensitive aquatic species in the vicinity of I-5 Bridge), cessation of surface flow during low-flow conditions in the river channel caused by groundwater extraction is an undesirable result.	Surface water depletion caused by groundwater extraction as measured by groundwater levels falling below the lowest predicted future groundwater elevation measured at GDE-area monitoring wells.	Average of future modeled groundwater elevations (using the same data set as for the minimum threshold).

Robust Monitoring is Essential to Sustainability

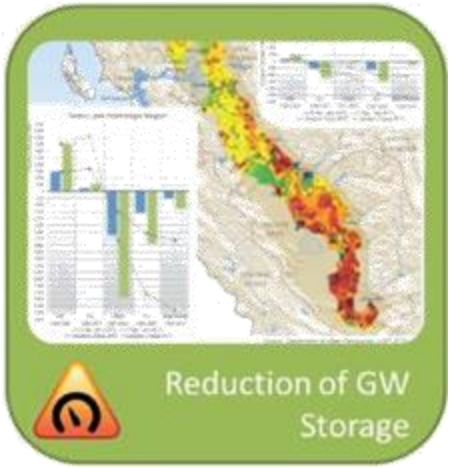
- Monitoring network consists of 65 wells.
- 16 Alluvial and 9 Saugus representative wells – monitored for water levels twice per year.
- 10 shallow monitoring wells in GDE area – monitored monthly (or more if needed)
- Groundwater quality monitoring conducted by SCV Water at supply wells (SWRCB required frequency). Baseline sampling of selected domestic wells and agricultural wells planned.
- Monitoring for subsidence consists of satellite data (inSAR) reviewed annually and twice per year benchmark surveys.

Basin Wide Management Actions

- Addressing data gaps
- Monitoring, reporting, and outreach
- Promoting best water use practices

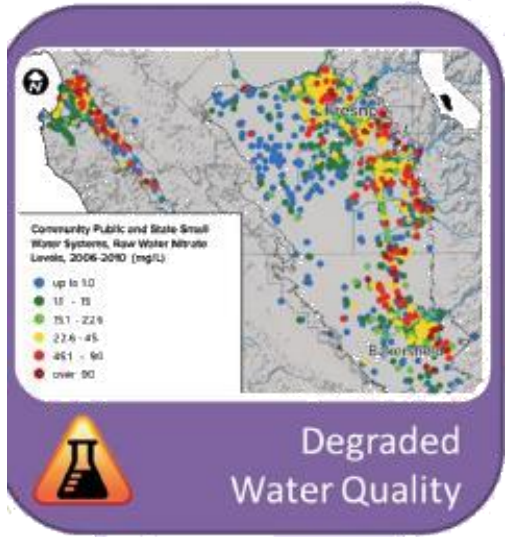
If Undesirable Results are Anticipated

- For declining water levels or subsidence:
  - Redistribute or reduce pumping
  - Additional surface water releases from Castaic Lake
  - Import additional State Water Project and/or banked water
  - Implement tiered water conservation measures for the basin



If Undesirable Results are Anticipated

- For degraded water quality
  - Consult with regulatory agencies
  - Review alternatives to improve groundwater quality
  - Work with affected groundwater users to deploy well head treatment systems
  - Arrange for alternate water supply
  - Shift pumping to other locations, and/or
  - Reduce or stop pumping near the affected area



Actions if GDE Triggers are Reached

- Evaluation Process Takes Place
  - Includes 6 steps
  - Results in Evaluation Report and Communication to GSA
- Management actions may be called upon
  - Redistribute pumping (shift and/or stop pumping)
  - Increase imported water
  - Water conservation
  - Outreach to private well owners
  - Evaluate additional projects

Considerations When Triggers are Reached

1. Is the affected river segment supported by surface flow from WRP discharges?
2. Is the historic low groundwater level already below the tree/shrub root depths?
3. Will the vegetation and sensitive species survive the temporary loss of access to groundwater?
4. Has the Management Action Trigger been reached often in recent years, and have water levels recovered quickly?
5. Are the declines in groundwater levels resulting from pumping?
6. Has new information been obtained that can be used to refine the trigger level?

Timely management actions would be implemented including redistributing or reducing pumping, if necessary, to protect GDEs

Next Steps

PATH TO GSP ADOPTION	
Sept. 8, 2021	Stakeholder Advisory Committee Meeting
Oct. 20, 2021	Special GSA Board Workshop
Nov. 22, 2021	Release of Final GSP
Dec. 15, 2021	GSA Board Consideration of Adoption
Jan. 31, 2022	Provide GSP to DWR

- Questions/Discussion

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