SCV GSA

MEMBER AGENCIES

SCV WATER

CITY OF SANTA CLARITA

LOS ANGELES COUNTY DEPARTMENT of REGIONAL PLANNING

LACWD

Public Workshop Draft Technical Memo for GSP Projects and Management Actions

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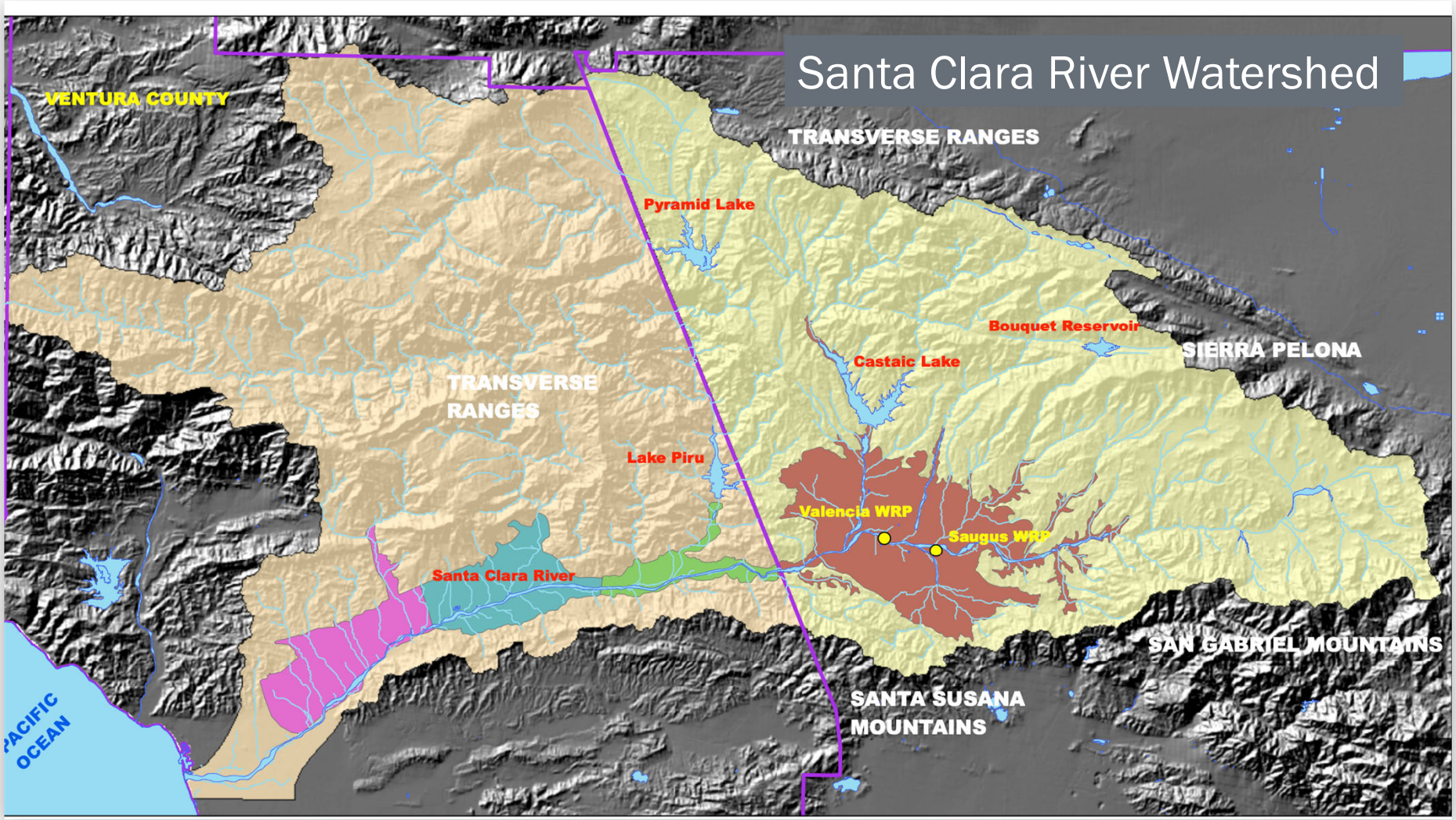
June 2, 2021

Today's Meeting Topics

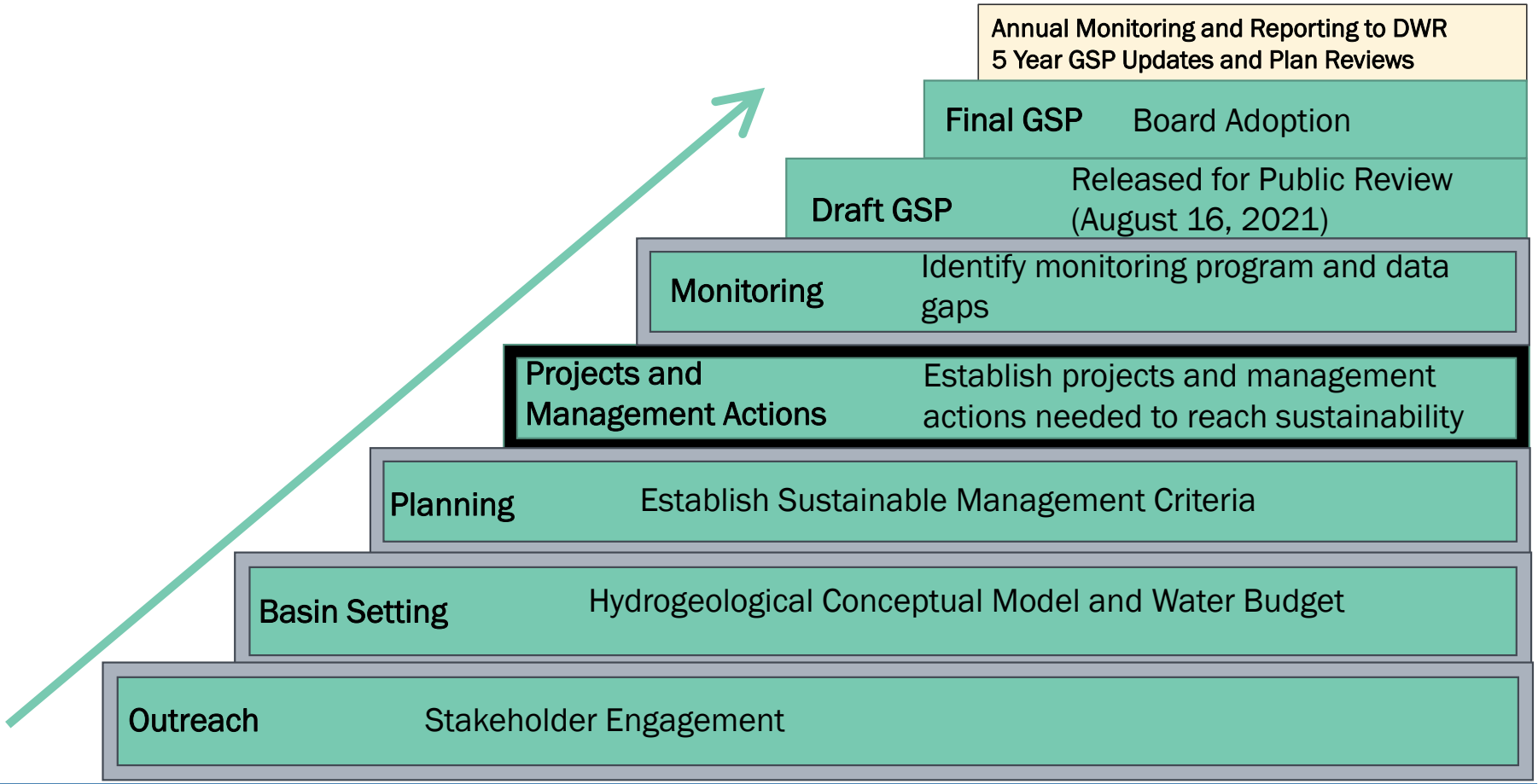
- Public Workshop Review
- Review GSP Development Process
- Review Basin Wide Management Actions
- Review Examples of Management Actions and Projects use
- Q&A

Public Workshops

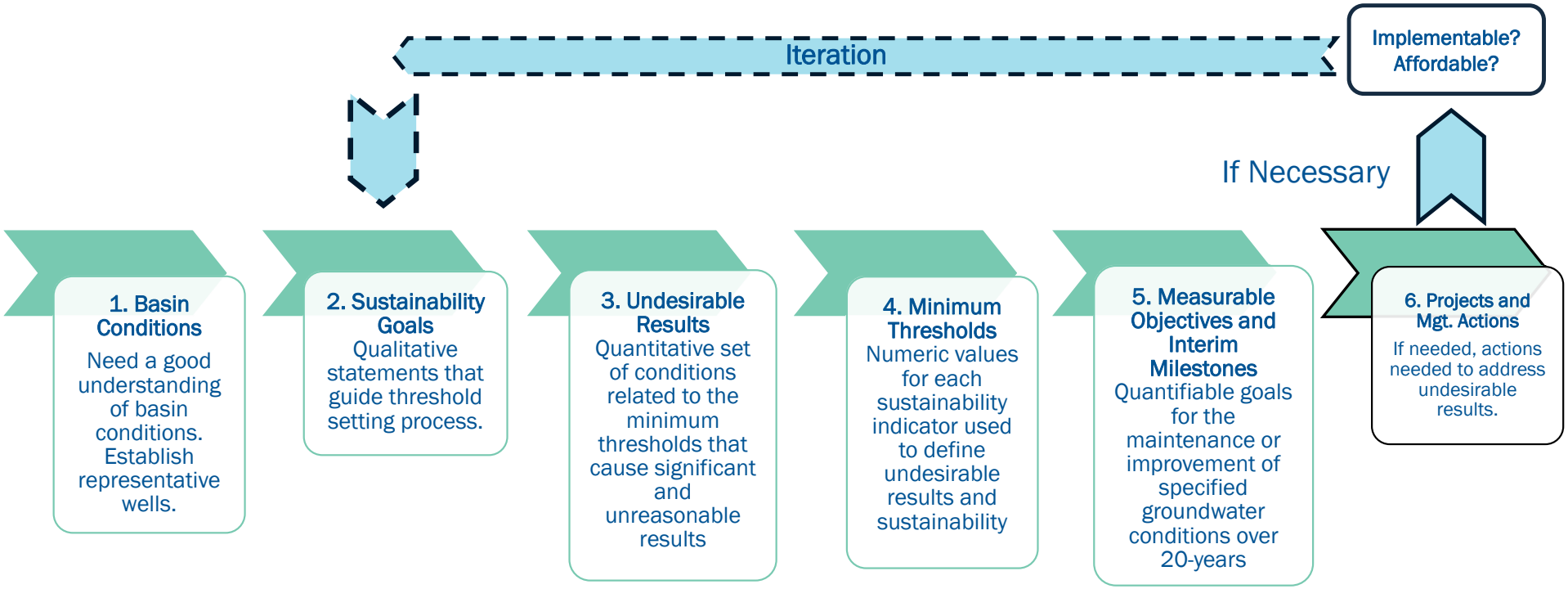
- June 17, 2020 Hydrogeological Conceptual Model
- August 5, 2020 GW/SW Interactions and Groundwater Dependent Ecosystems
- November 4, 2020 Water Budget
- March 10, 2021 Sustainable Management Criteria
- Today's Workshop Management Actions and Projects
- August 25, 2021 Draft Groundwater Sustainability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


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

Activities Leading to an Accepted GSP



Sustainable Management Criteria (SMC) Development Process



Overview

- The Draft TM Describes
  - Key information about the basin, wells, and the potential for undesirable results during GSP implementation.
  - Steps that will be taken to improve sustainability (such as filling in data gaps and with monitoring and analysis) and how responses to the potential for undesirable results work.

Basin Wide Management Actions

- Addressing data gaps
- Monitoring, reporting, and outreach
- Promoting best water use practices
- Actions if Minimum Thresholds are reached
- Actions if GDE Action Triggers are reached
- Other management actions and projects

Addressing Data Gaps

- Certain actions and projects to fill data gaps proposed
  - Installation of piezometers
  - Elevation Survey
  - Domestic Well Water Quality
  - Monitoring land surface for subsidence

Monitoring, Reporting, and Outreach

- Despite the many monitoring programs in place in the basin, some new monitoring is necessary to fill data gaps
  - Domestic water quality monitoring
  - GDE monitoring
  - Subsidence monitoring
  - Groundwater extraction data from non-*de minimis* well owners

Promoting Best Water Use Practices

- The GSA will support the existing and future conservation programs by municipal water providers
- The GSA will perform outreach to private well operators regarding water conservation

Basin Wide Management Actions

- Addressing data gaps
- Monitoring, reporting, and outreach
- Promoting best water use practices
- Actions if Minimum Thresholds are reached
- Actions if GDE Action Triggers are reached
- Other management actions and projects

Actions if Minimum Thresholds are Reached

- The cause will be evaluated
- If the cause is due to groundwater extraction and/or the trend indicates that undesirable results are imminent then management actions would be called upon.
  - Recall that undesirable results are defined by exceeding minimum thresholds for a certain number of monitoring points over a certain period of time.

Drought and GSA Response

- The relative effect of drought v. pumping on water levels may be complex.

- If water levels fall below MTs, an evaluation is performed

  - If water level decline during drought is expected to reverse before undesirable results are reached, the GSA may defer implementing management actions and reevaluate later. However, if the downward trend toward undesirable results continues then management actions would be implemented.

Actions if Minimum Thresholds are Reached

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

Actions if Minimum Thresholds are Reached

- Chronic Lowering of Groundwater Levels and Chronic Reduction in Storage
  - Evaluate Cause
  - Evaluate Trend
  - If Undesirable Results are anticipated, then management actions taken.
- Management Actions Include
  - 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

Actions if Minimum Thresholds are Reached

- Depletion of Interconnected Surface Water
  - Minimum thresholds shared with criteria for
    - Chronic Lowering of Groundwater Levels
    - Chronic Decline in Storage
  - Management actions same as with Chronic Lowering of Groundwater Levels and Chronic Depletion in Storage

- Primary focus with this indicator is with Groundwater Dependent Ecosystems (more slides on this later)
  - Special GDE Monitoring and Evaluation Program
  - Includes Triggers based on Historic Lows

Actions if Minimum Thresholds are Reached

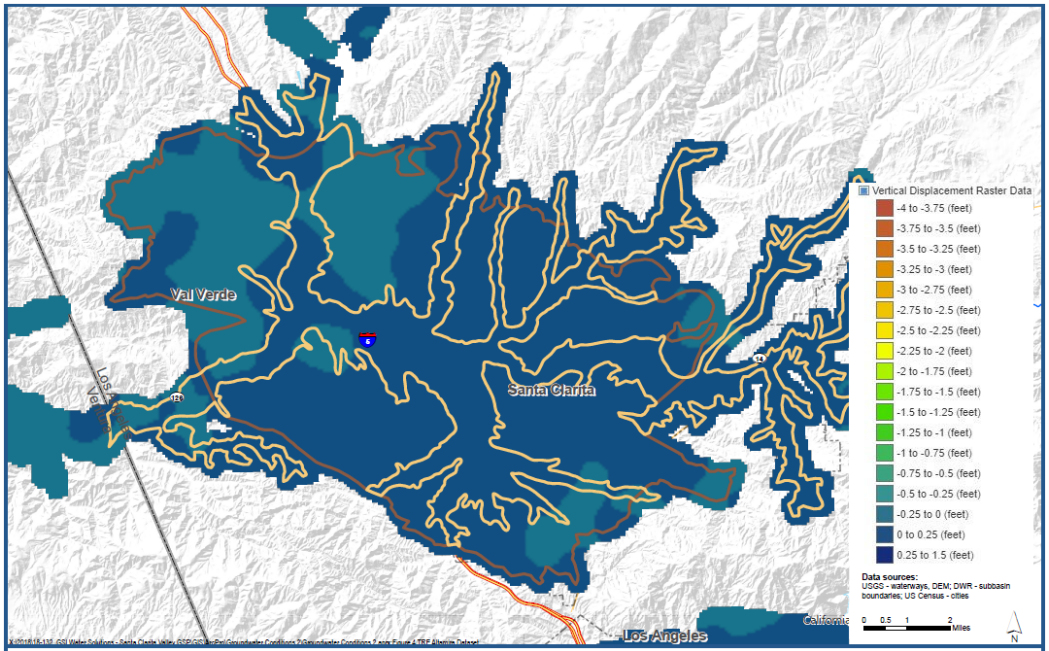
- Degraded Water Quality
  - Evaluate Cause
  - Evaluate Trend
  - Consult with regulatory agencies
  - If Undesirable Results are anticipated, then management actions taken.
- Management Actions Include
  - Review alternatives to improve groundwater quality
  - Work with affected groundwater users to 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 Minimum Thresholds are Reached

- Subsidence
  - Evaluate Cause
  - Evaluate Trend
  - If Undesirable Results are anticipated, then management actions taken.
- Management Actions are same for Chronic Lowering of Water Levels
  - Redistribute or reduce pumping
  - Additional surface water releases, such as from Castaic Lake
  - Import additional State Water Project and/or banked water
  - Implement tiered water conservation measures for the basin

Satellite Data

- Satellite Data (inSAR)
  - Provides land surface elevation every 2 weeks
  - Resolution: 0.06 feet (0.7 inches) over a 100m X 100m area
  - Data processed and reported once per year by Tre-Altamira company
  - Can look at specific locations



Actions if GDE Triggers are Reached

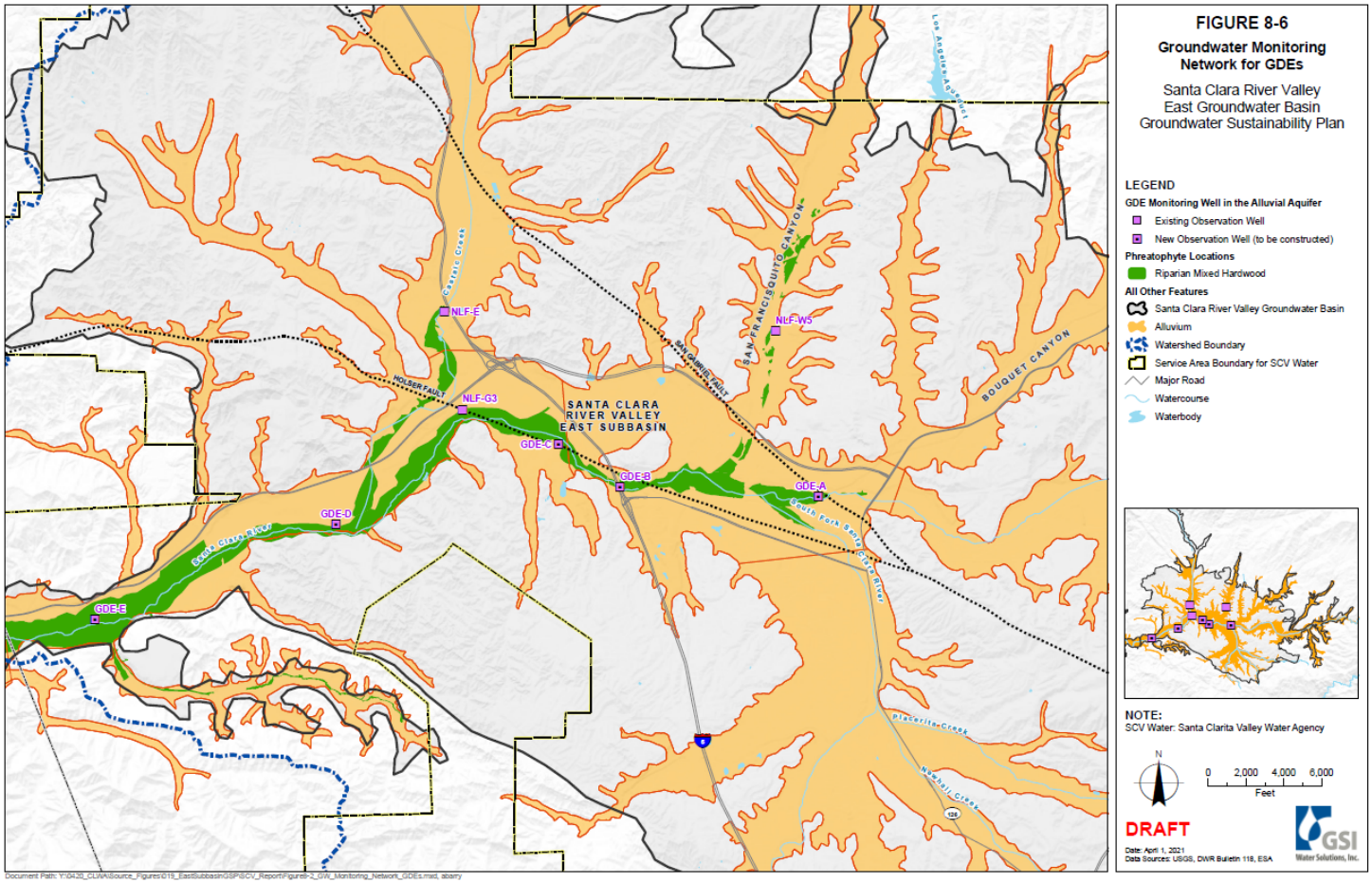
- Use of triggers based on historic low groundwater elevations
  - One location has trigger 2 feet higher
- Evaluation Process Takes Place
  - Includes 6 steps
  - Results in Evaluation Report and Communication to GSA BoD
- Management actions may be called upon
  - Redistribute pumping (shift and/or stop pumping)
  - Increase imported water
  - Water conservation
  - Outreach to private well owners
  - Evaluate additional projects

Considerations When Triggers are Reached

- Is the affected river segment supported by surface flow from WRP discharges?
- Is the historic low groundwater level already below the tree/shrub root depths?
- Will the vegetation and sensitive species survive the temporary loss of access to groundwater?
- Has the Management Action Trigger been reached often in recent years, and have water levels recovered quickly?
- Are the declines in groundwater levels resulting from pumping?
- 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

Proposed GDE Monitoring Locations



Other Management Actions and Projects

- Ongoing Agency Coordination
- Removal of Invasive Species
- Optional Managed Aquifer Recharge Projects
  - Improve drought resiliency
  - Old Castaic School Site/Potential Eastern Recharge
  - Potable water in vicinity of Placerita Nature Center
  - Off Stream Recharge with Recycled Water
  - Aquifer Storage and Recovery

Next Steps

- SCV GSA Stakeholder Advisory Committee meeting June 9, 2021
- Release of Draft GSP August 16, 2021
- Public Workshop August 25, 2021

- Questions/Discussion