San Benito County Water District
and Valley Water
Groundwater Sustainability Agencies

Workshop

Sustainable Groundwater Management:
Presentation of North San Benito Draft Plan

August 4, 2021

Agenda

- Overview of SGMA and GSP process
- North San Benito Basin
- Sustainable Management
- Projects and Management Actions
- Next Steps

Sustainable Groundwater Management Act (SGMA)

Landmark legislation in 2014 in response to groundwater overdraft in other California groundwater basins

Includes comprehensive requirements for:

- Forming a groundwater sustainability agency (GSA)
- Preparing a groundwater sustainability plan (GSP)
- Meeting deadlines

Promotes local control

Provides for State assistance and if needed, State intervention

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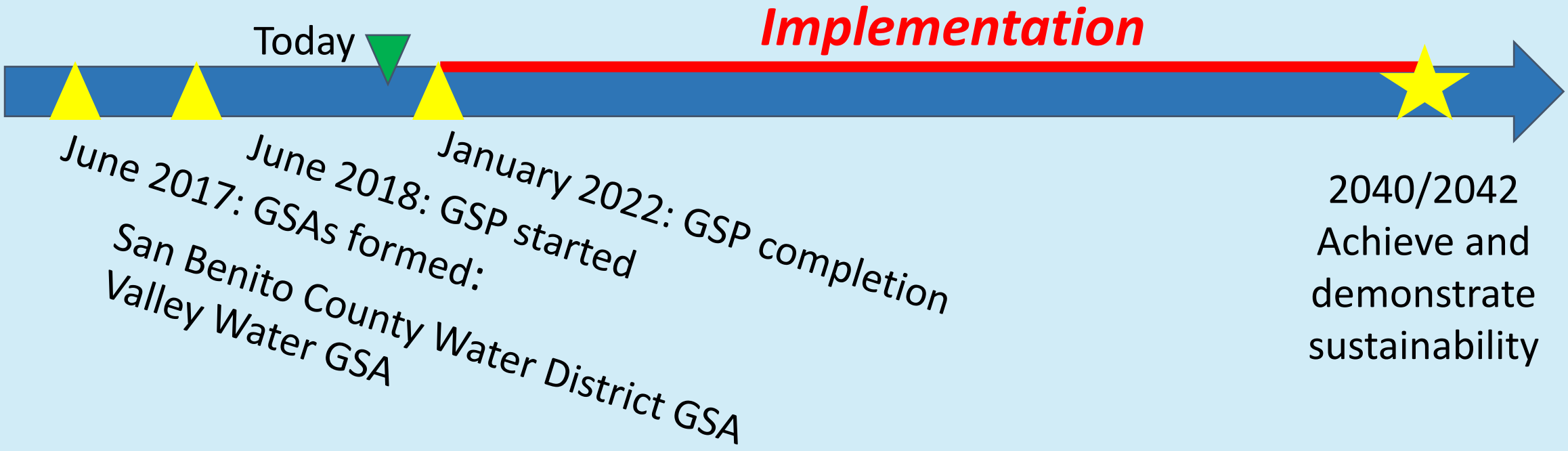
SGMA and the GSP process



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SGMA applies to San Benito

DWR prioritized all 515 basins based on:

- Population and rate of growth
- Number of public supply wells
- Total number of wells
- Irrigated acreage
- Reliance on groundwater
- Groundwater impacts (e.g., overdraft, subsidence)

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SGMA applies to San Benito

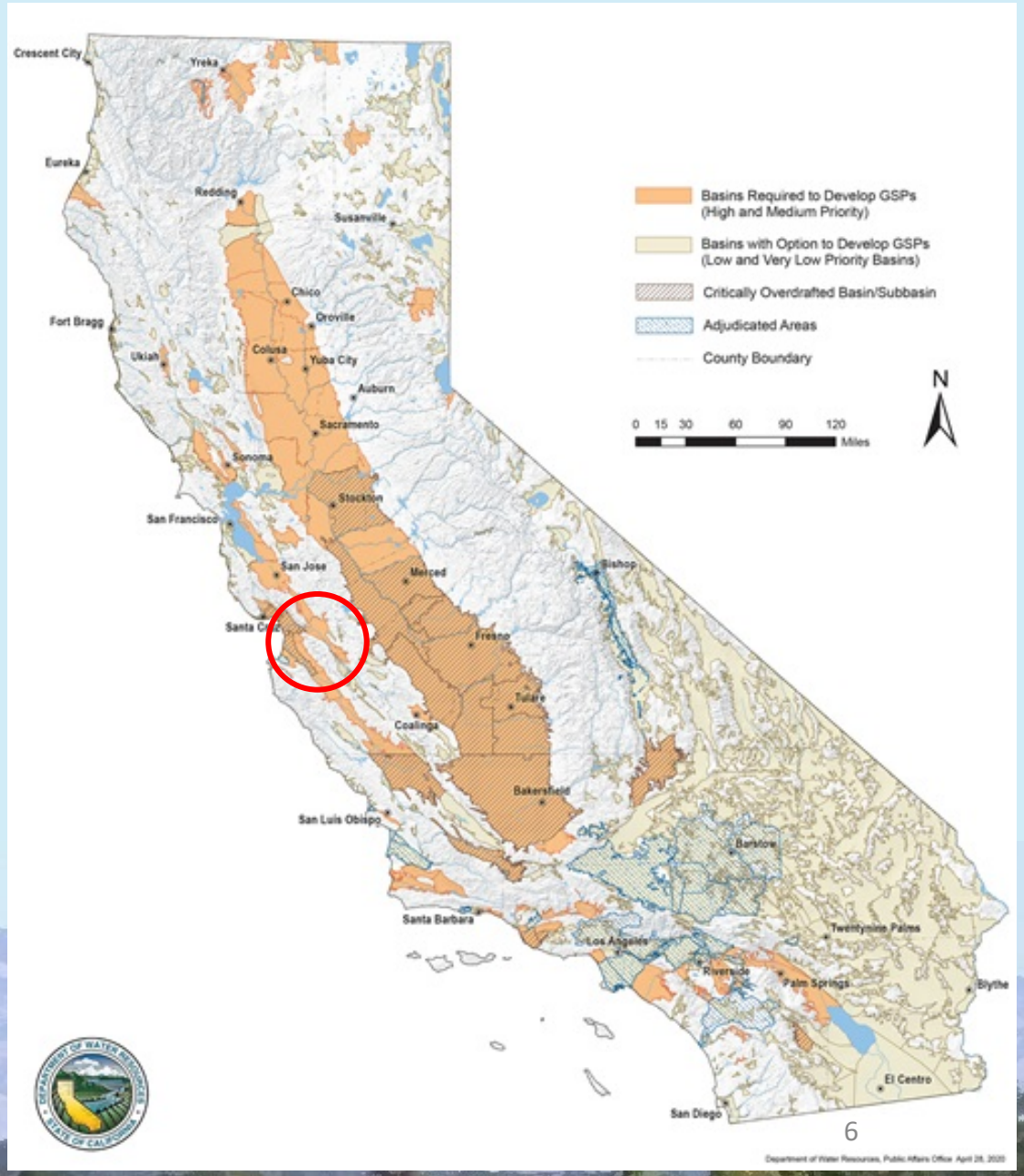
DWR assigned priorities:

- High
- Medium
- Low
- Very low

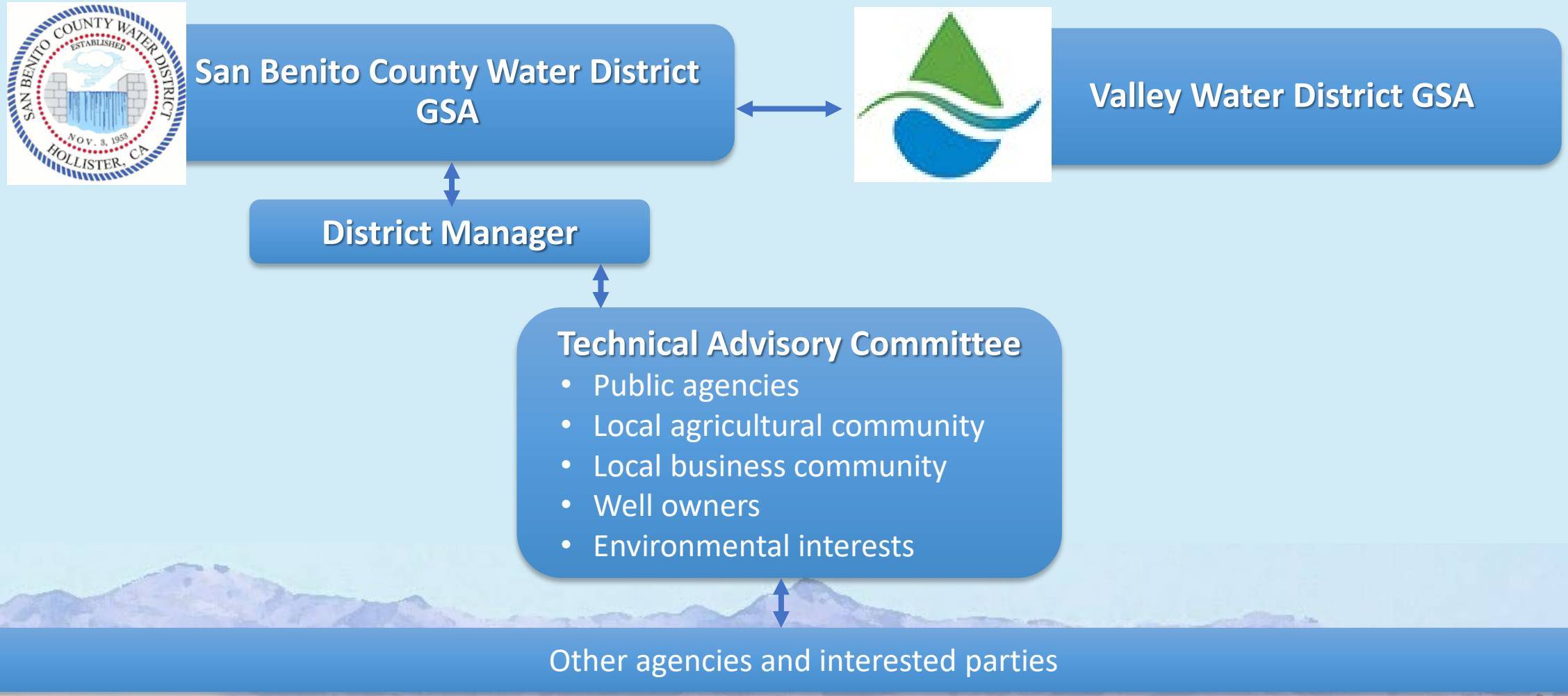
SGMA requirements apply

➢ North San Benito is medium priority and subject to SGMA

- Not critically overdrafted



Agency collaboration and community input



Technical Advisory Committee Members

- John Guertin, Harry Mavrogenes, Benny Young, Mike Chambless: County of San Benito
- Mary Paxton, Bryan Swanson, Abraham Prado: City of Hollister
- Don Ridenhour, Drew Lander: Sunnyslope County Water District
- Garrett Haertel: San Benito County Water District:
- Roger Pierno: Santa Clara Valley Water District
- Stan Pura: Mission Ranches
- Bob Swanson: Bob Swanson Ranch LLC
- Greg Swett: San Benito County Farm Bureau
- Jeff Micko: Micko Consultants
- Paul Rovella: Johnson, Rovella, Retterer, Rosenthal & Gilles, LLP

Community Workshops

- Nov 14, 2018: Introduction to SGMA and GSP Process
- June 18, 2019: Hydrogeologic Conceptual Model
- Sept 23, 2020: Management Areas, Water Budgets, Sustainability Criteria
- Dec 10, 2020: GSP Presentation to Public and Elected Officials of San Benito County, Hollister, Sunnyslope CWD, San Juan Bautista
- Mar 10, 2021: Implementation, Monitoring, Reporting, Projects, Management Actions, Funding
- July 14, 2021: Public Meeting on Groundwater Management Fee
- Aug 4, 2021: Presentation of Draft GSP
- Nov 17, 2021: SBCWD GSA Adoption Hearing
- Dec 14, 2021: Valley Water Adoption Hearing

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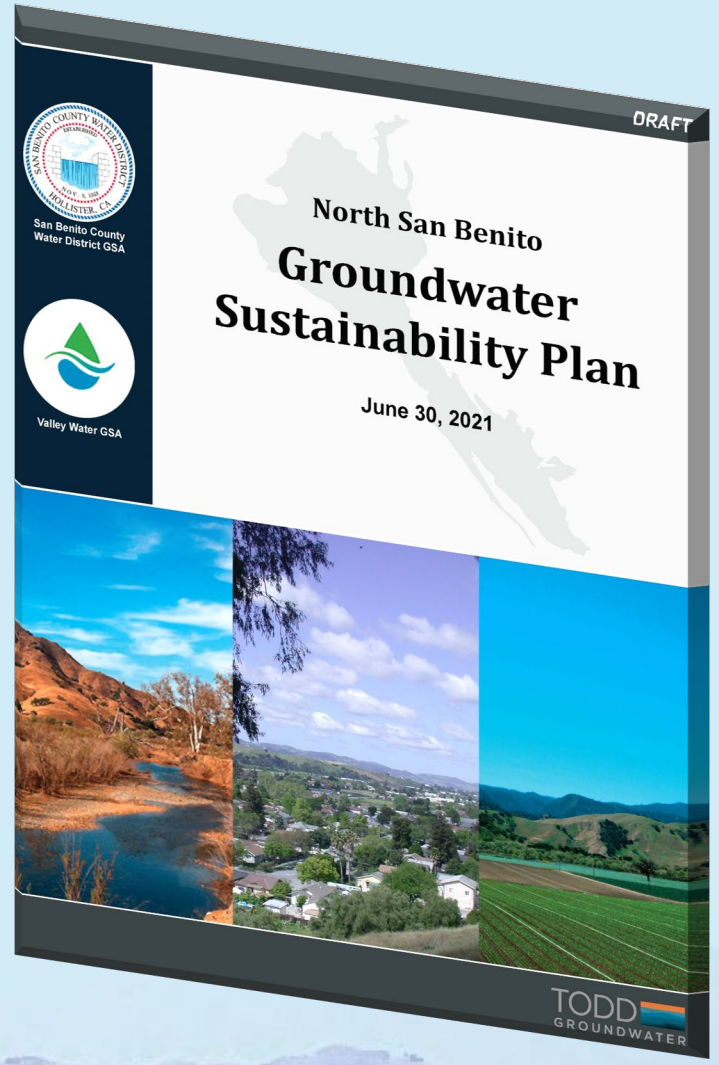
Overview of the GSP

1. Introduction
2. Plan Area
3. Hydrogeologic Conceptual Model
4. Groundwater Conditions
5. Water Balance
6. Sustainable Management Criteria
7. Monitoring Network
8. Projects and Management Actions
9. Implementation Plan
10. References



Overview of the GSP: 10 Appendices

A – SBCWD Notices/ Resolutions

B – Memorandum of Understanding available upon request

C – GSP Preparation Checklist *(to be added later)*

D – Communication Plan *(to be added later)*

E – Technical Memoranda (Data, Management Areas, DMS)

F – Annual Reports

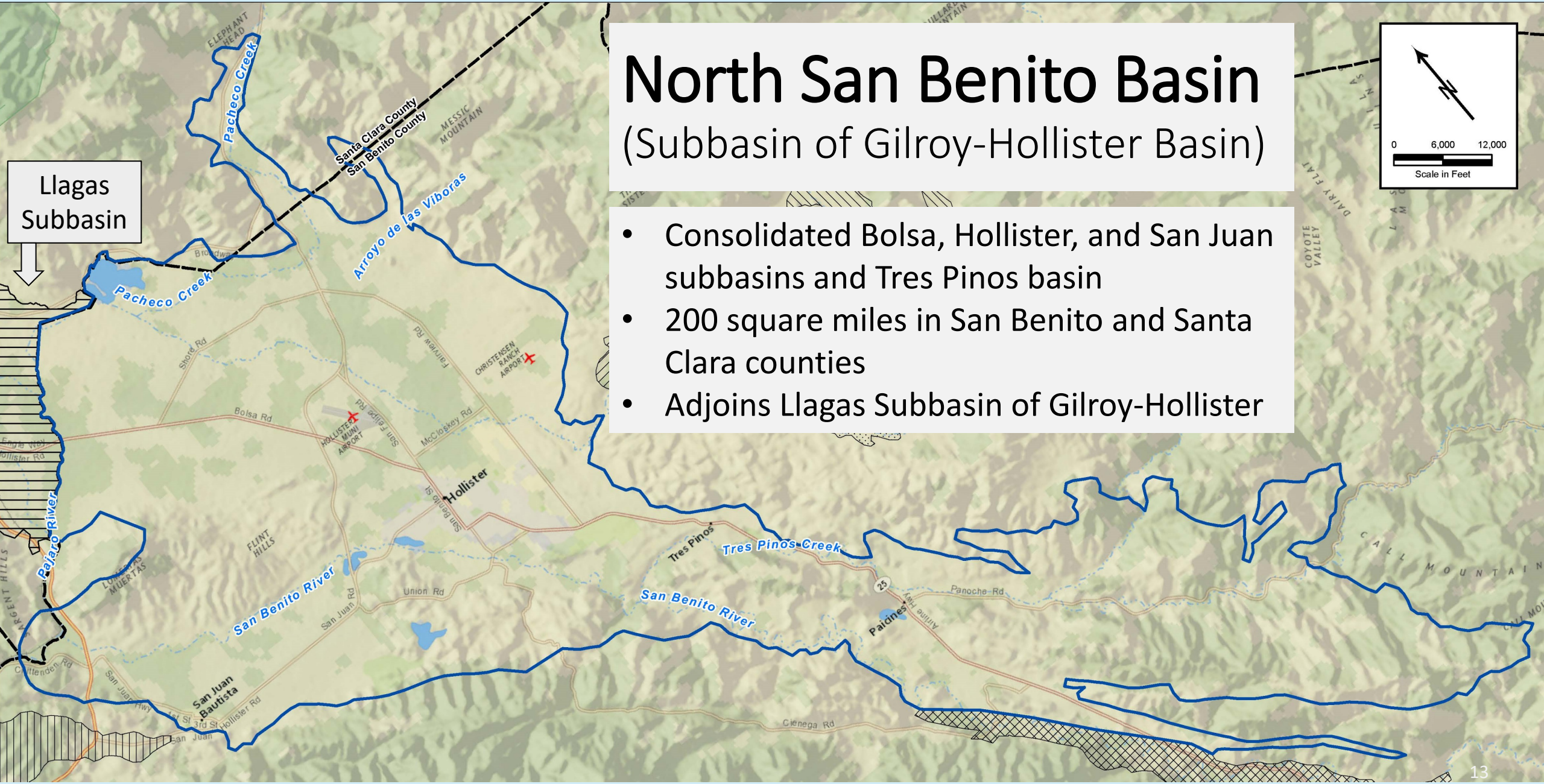
G – Groundwater Model Update and Enhancement Report

H – Dedicated Monitoring Well Program Technical Memorandum *(to be added later)*

I – Managed Aquifer Recharge Technical Memorandum *(to be added later)*

J – List of Public Meetings and Comments on the Plan

Questions?



North San Benito Basin

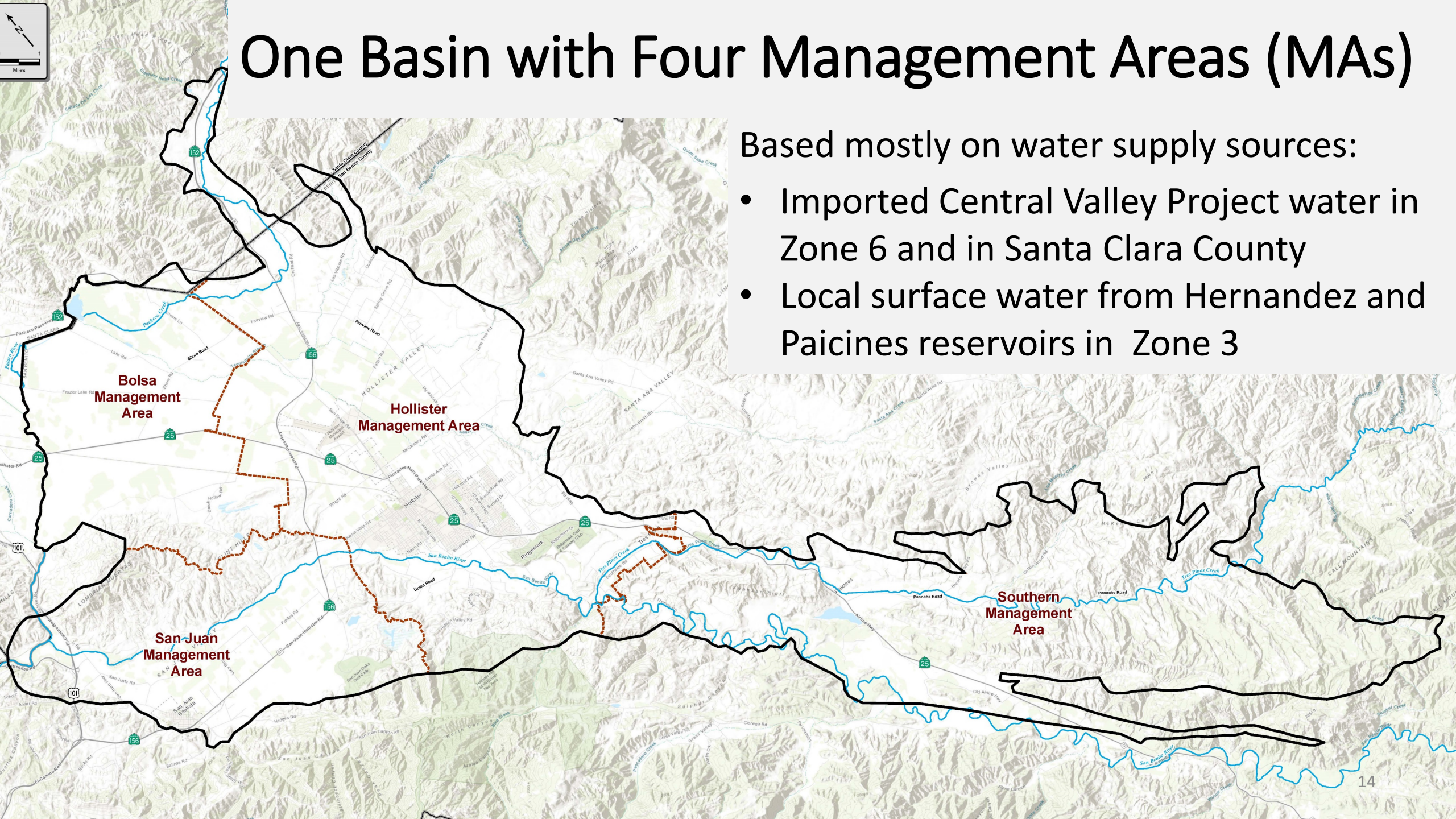
(Subbasin of Gilroy-Hollister Basin)

- Consolidated Bolsa, Hollister, and San Juan subbasins and Tres Pinos basin
- 200 square miles in San Benito and Santa Clara counties
- Adjoins Llagas Subbasin of Gilroy-Hollister

One Basin with Four Management Areas (MAs)

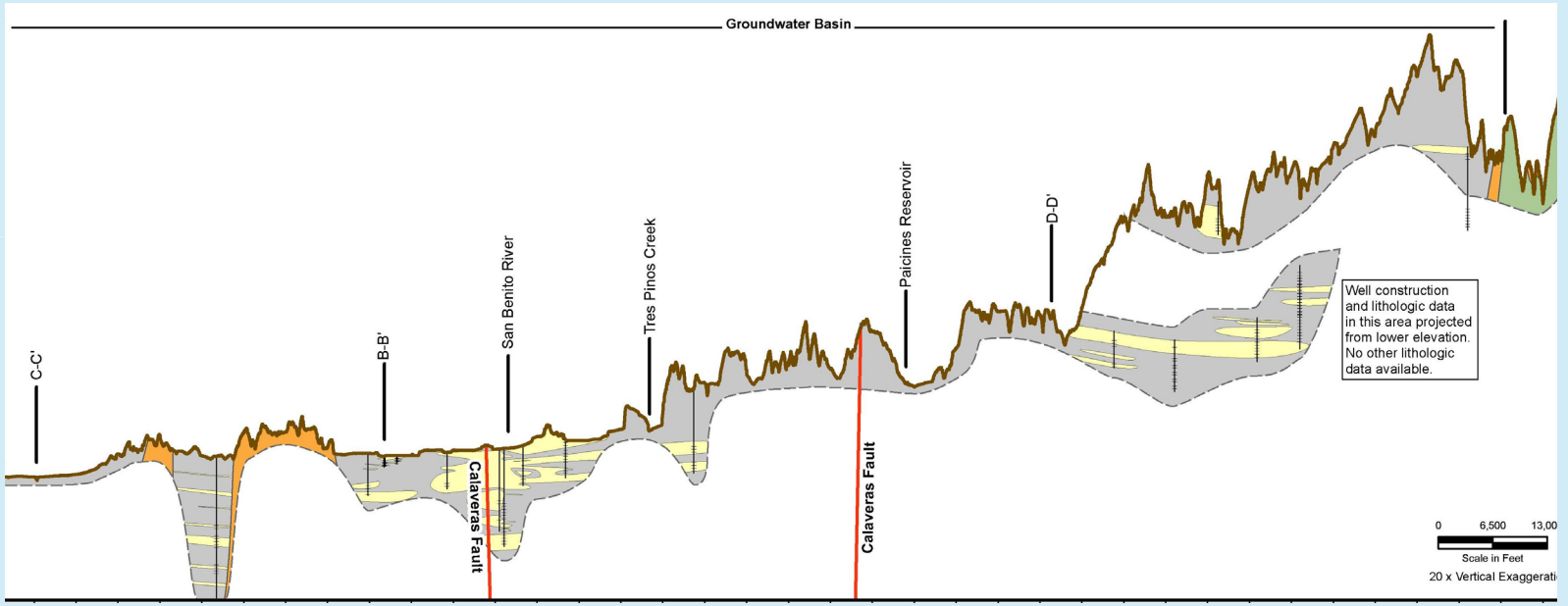
Based mostly on water supply sources:

- Imported Central Valley Project water in Zone 6 and in Santa Clara County
- Local surface water from Hernandez and Paicines reservoirs in Zone 3



Hydrogeologic setting

- A long, irregular but continuous basin with one principal aquifer
- Lenses of coarse-grained and fine-grained materials

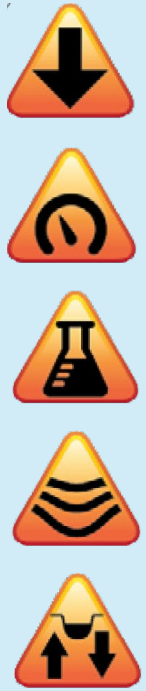


Groundwater Conditions

Documented for SGMA sustainability indicators

- Groundwater elevations
- Groundwater storage
- Land subsidence
- Interconnected surface water and groundwater dependent ecosystems (GDEs)
- Groundwater quality
- No seawater intrusion.

Sustainable Management

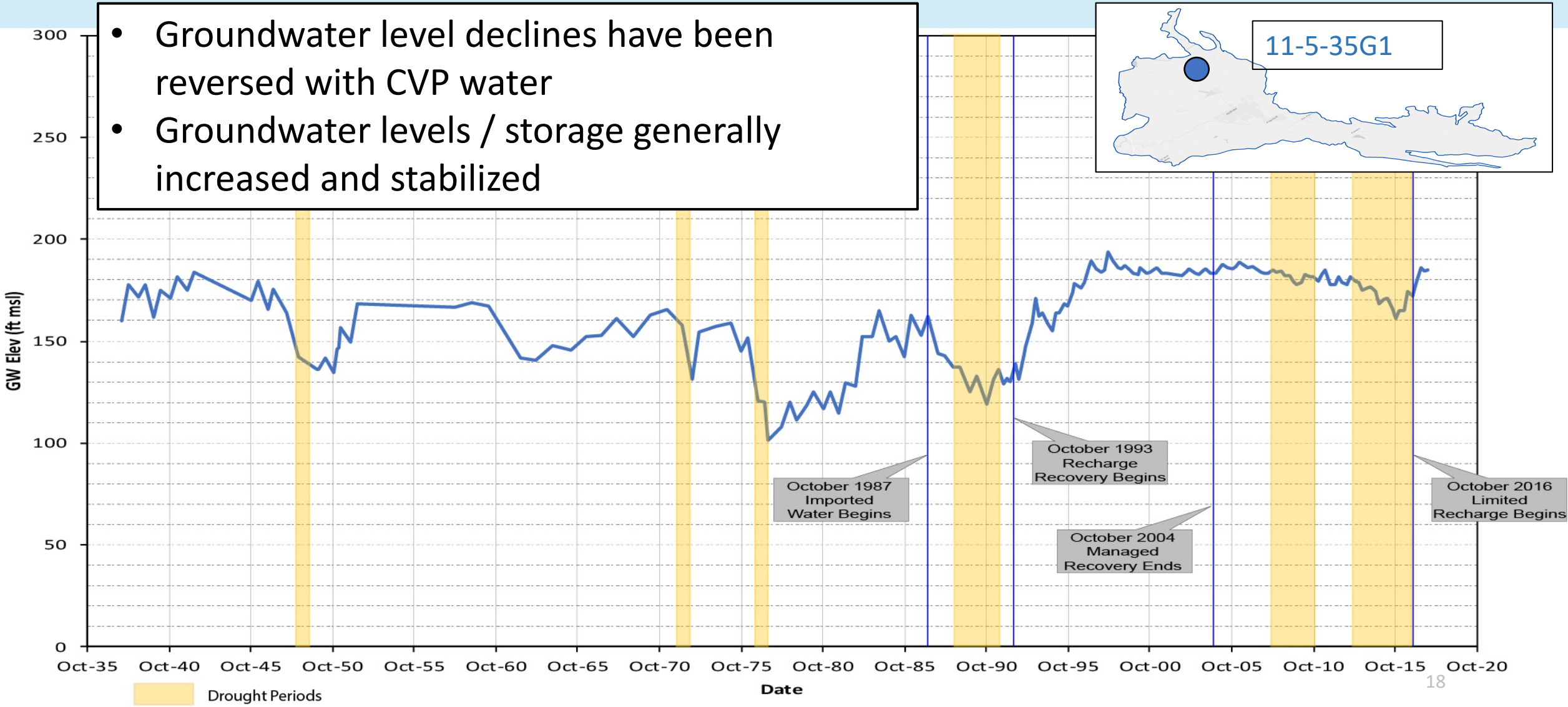


For each sustainability indicator, the GSP defines

- Undesirable Result – significant and unreasonable conditions for any of the sustainability indicators
- Minimum Threshold (MT) – numeric value used to define undesirable results for each sustainability indicator.
- Measurable Objective (MO) – specific, quantifiable goal to track the performance of sustainable management along with interim milestones.

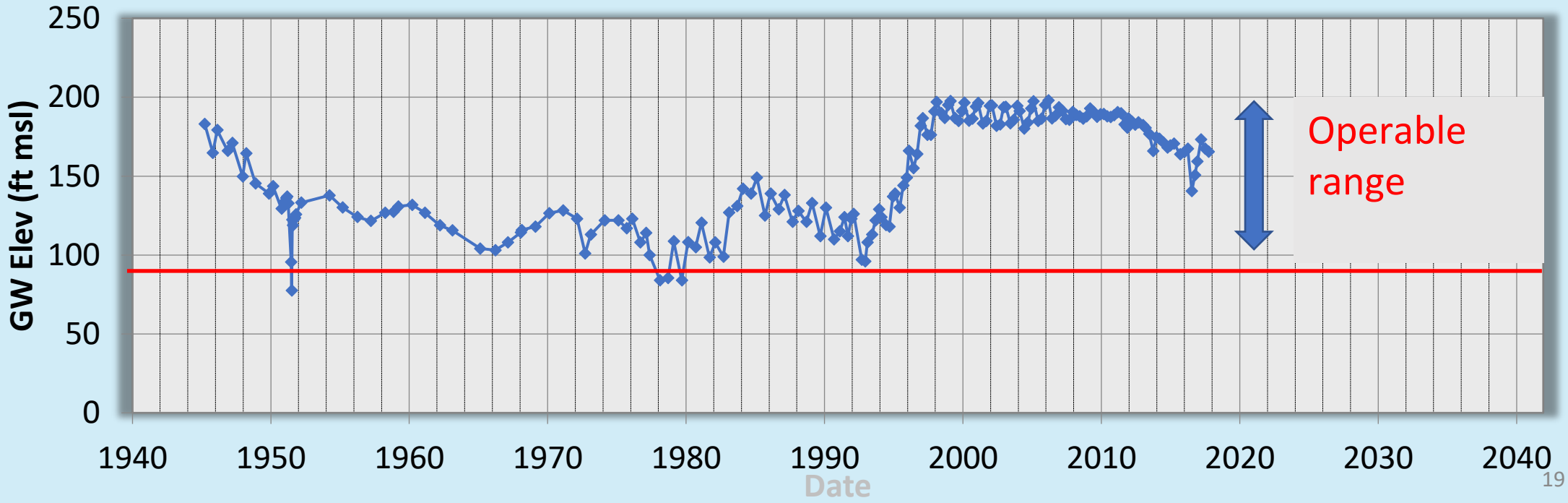
Groundwater levels and storage

- Groundwater level declines have been reversed with CVP water
- Groundwater levels / storage generally increased and stabilized



Groundwater levels

- Groundwater levels are sustainable
- Objective: avoid widespread loss of well output during drought
  - MT is based on historical low levels or adjusted higher
  - Measured at 22 key wells
  - Two consecutive occurrences in 60% of key wells would be undesirable



Groundwater storage

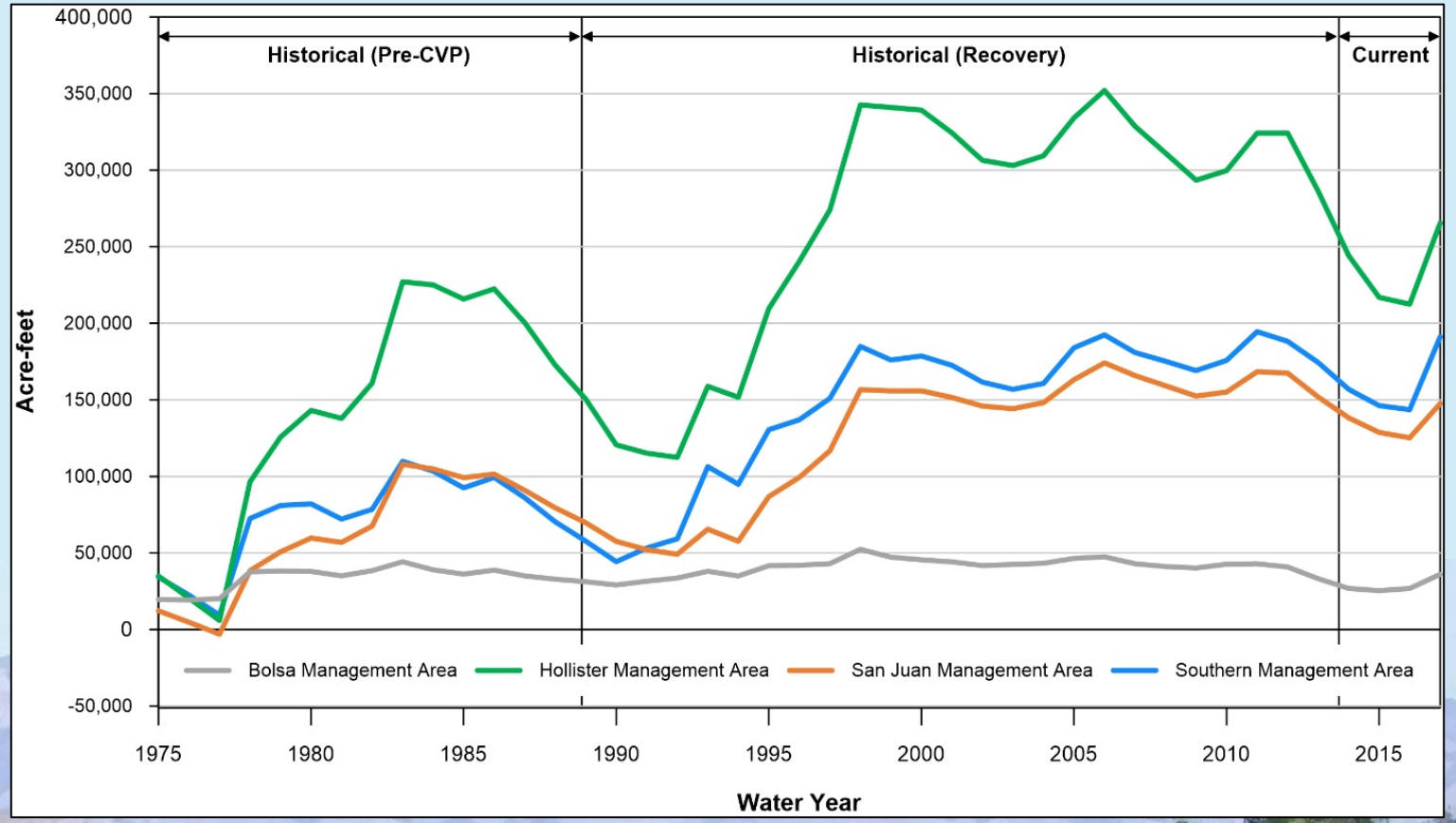
- Groundwater basin has provided water supply during prolonged and severe droughts (1922-1934, 1987-1990)
- The amount of storage in the operating range of water levels is enough to meet demands during future droughts
- The basin is sustainably managed relative to storage: no overdraft since CVP imports
- Objective: provide reliable storage for water supply resilience during drought
  - Groundwater levels MT is the proxy, protective of storage

Water balances

Developed using numerical model:

- Historical and current conditions
  - Pre-CVP Historical
  - Historical Recovery
  - Current
- Future Baseline
- Future Climate Change
- Future Growth

Cumulative change in storage, historical and current conditions



Water balance findings

- Baseline pumping of 90,089 AFY is sustainable into the future: no limits on pumping are planned
- Climate change scenarios
  - Hollister, San Juan, Bolsa MAs have lower water levels between wet periods, but declines did not become larger over time
  - In Southern MA, increased storage and water levels is indicated
- Growth scenarios
  - Lowered water levels in Hollister and Bolsa MAs, raised levels in San Juan MA, and little effect in Southern MA
- Effects of climate change and growth would be additive: lowered water levels might reach minimum thresholds locally

Questions?

Land subsidence

- Uneven land settlement due to pumping and groundwater level decline
- Undesirable results can include:
  - Reduction in drainage capacity; drainage problems
  - Impacts on grade of facilities, e.g., pipelines, roads
  - Subsidence around a wellhead, e.g., casing collapse
  - Loss of storage capacity in the aquifers
- Not a known problem in North San Benito Basin
- Indicated by satellite data to occur locally
- Can be minimized by keeping groundwater levels above historical lows

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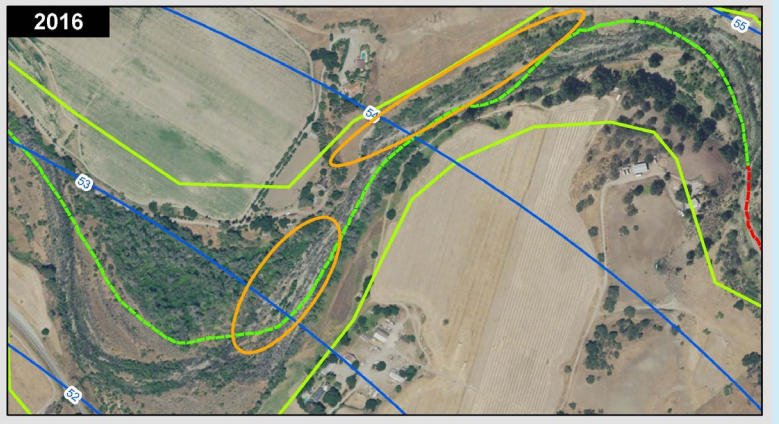
Land subsidence

- No undesirable results have been reported, but potential exists
- Objective is to prevent subsidence
- MT is defined as a decline of more than 0.2 feet/5 years or a cumulative decline more than 1 foot since 2015
- Significant subsidence is unlikely to occur if groundwater levels stay above historical lows

Interconnected surface water and GDEs

- Evaluated areas of connected surface water and groundwater including site visits
- Identified stream reaches with riparian vegetation and investigated relationship of groundwater levels to riparian health
- Assessed potential impacts of pumping, drought, floods
- Simulated pumping effects on stream flow and assessed steelhead passage



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Interconnected surface water and GDEs

- Distribution and health of riparian vegetation show little correlation to groundwater levels
- Steelhead smolt migration might be impacted by pumping
- Objective is to protect beneficial uses of connected surface water
- Groundwater levels in near-stream wells from 1987-1992 drought used as proxy
- Near-stream shallow monitoring wells needed (six being installed 2021)

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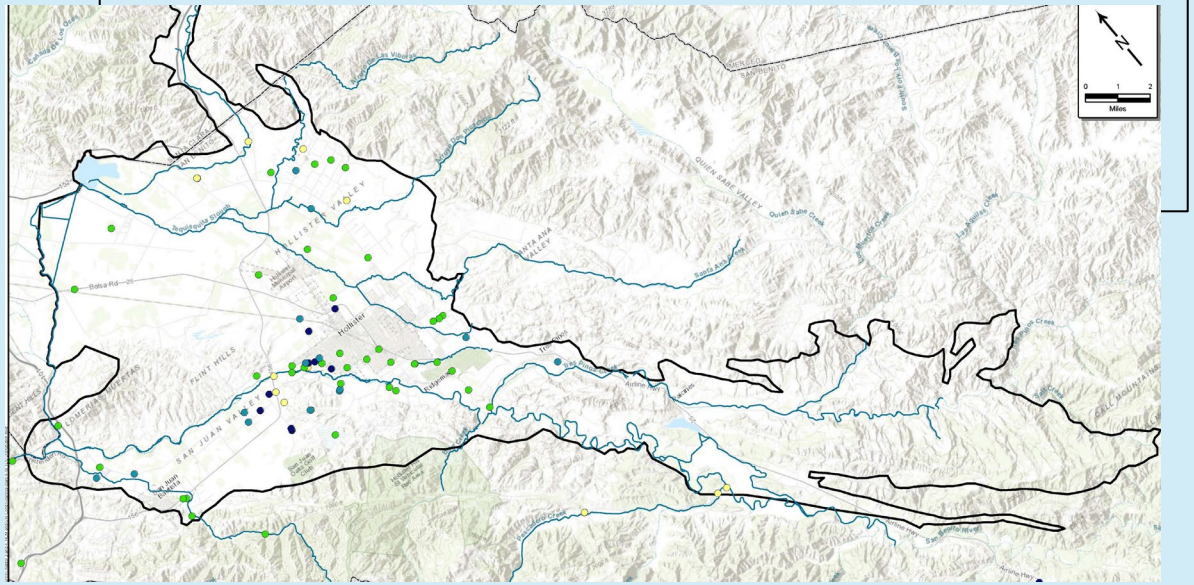
Groundwater quality: key constituents

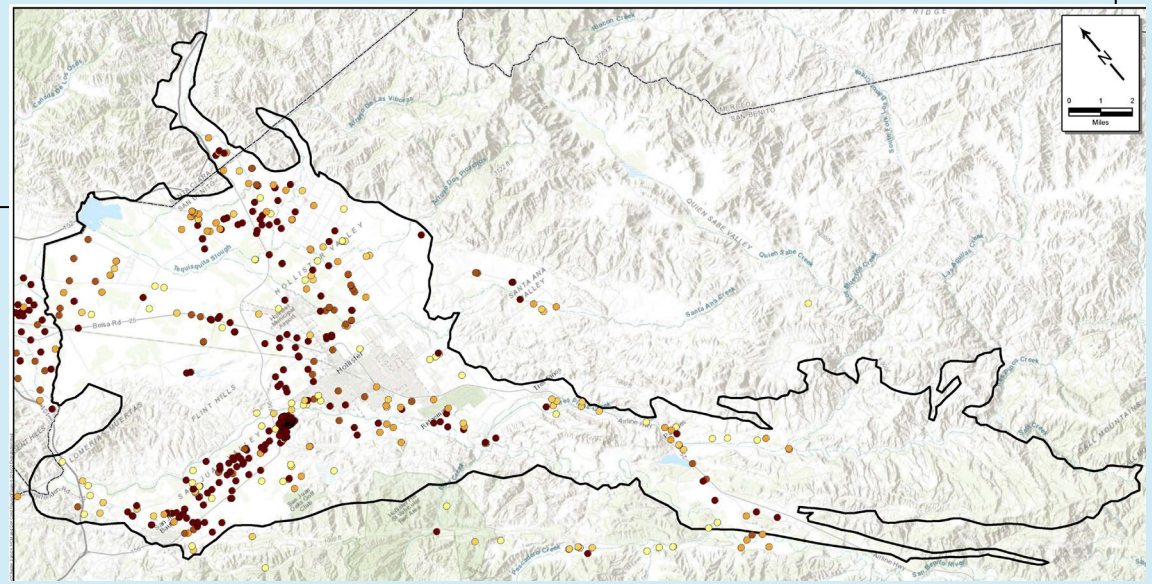
Total dissolved solids (TDS)

- Naturally high
- Affected by irrigation return flows, wastewater disposal, etc.



Nitrate

Elevated due to agricultural activities, confined animal facilities, landscape fertilization, septic systems, and wastewater treatment facility discharges



Groundwater quality

- Considered sustainable given that beneficial uses are continuing
- Objective is to protect and improve groundwater quality
- Legacy loading is a source of uncertainty in the short term
- Implementation of management actions will make a difference in the long run

Total dissolved solids

- Using data from triennial updates
- MT is defined as % wells exceeding the Basin Plan Objective of 1,200 mg/L

Nitrate

- Using data from triennial updates
- MT is defined as % wells exceeding the MCL of 45 mg/L

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Questions?

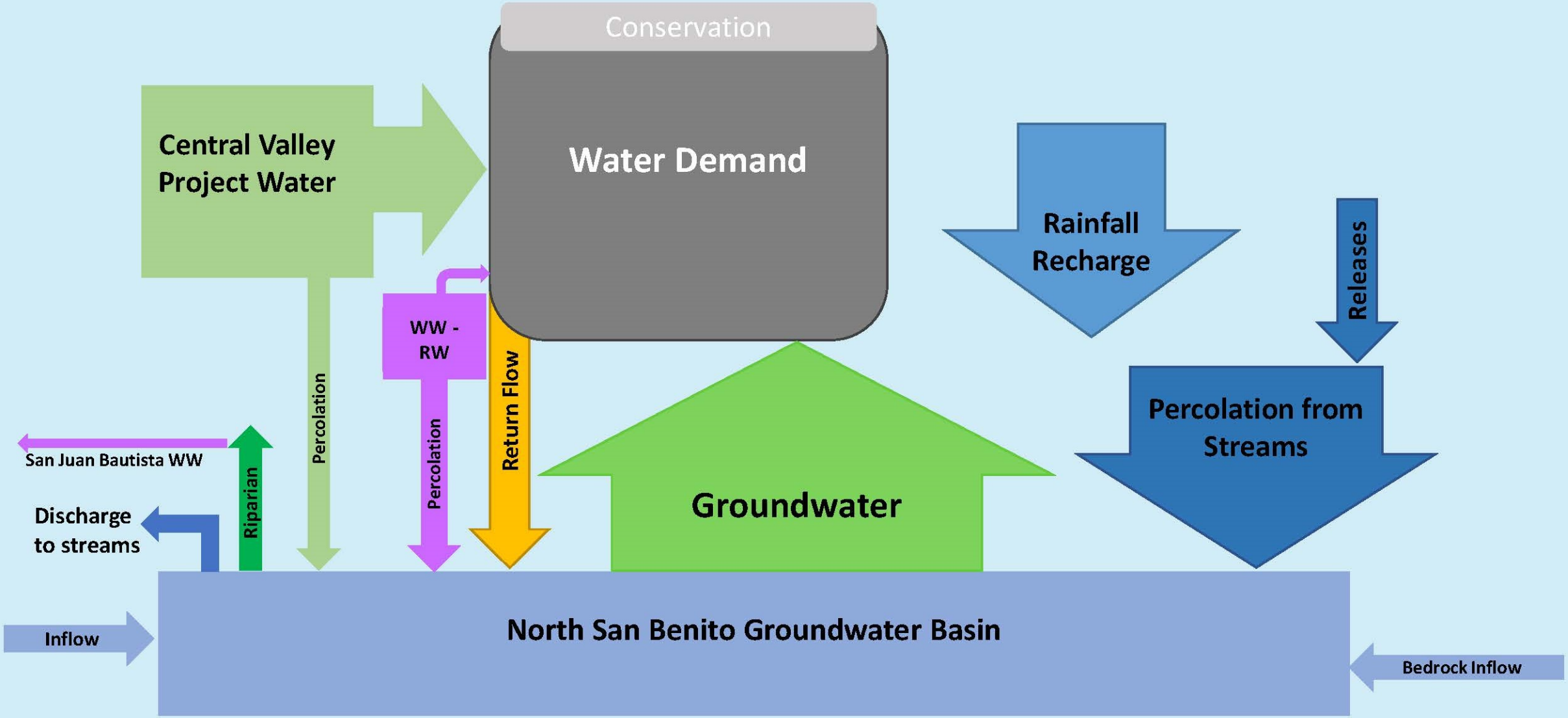
Projects and Management Actions are planned to maintain sustainability

Projects are substantial efforts that involve an increase in water supply or a reduction in demand

Actions provide a framework for groundwater management

- establishing policies
- filling data gaps with scientific studies or improved monitoring
- providing for funding

Projects address water demand and supply



Projects improve water balance and quality

Develop Surface Water Storage	Expand Managed Aquifer Recharge	Enhance Conjunctive Use	Enhance Conservation
• Pacheco Reservoir Expansion Project • New local reservoir?	• MAR project	• Hollister Urban Area Water / WW Plan • San Juan Bautista Regional Solution • North County Project • Zone 3 Operations Planning Tool	• Urban • Agricultural

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Management actions and monitoring

- Management actions do not include any long-term planned reductions in groundwater pumping
- Improve monitoring program and data management system (DMS)
- Develop response plans
- Enhance water quality improvement programs
- Reduce potential impacts to GDEs (steelhead and riparian vegetation)
- Provide long-term basin-wide funding mechanism
- Provide administration, monitoring, and reporting

Monitoring Well Installation

- Existing monitoring well network evaluated
- Sites identified for shallow and deep wells
  - Six deep wells
  - Five shallow wells (one pending)
- Installation is happening now
- Technical memorandum to be GSP Appendix H

TODD GROUNDWATER

Managed Aquifer Recharge Study

- Evaluated recharge feasibility basin-wide using CVP supply
- Considered different methods (ponds, AgMAR, injection wells)
- Identified best areas for each method
- Applied numerical model for feasibility screening
- Selected injection wells and ASR wells in Hollister MA as best option
- Sampling water quality now for hydrogeologic characterization
- Conducting preliminary engineering feasibility studies
- Technical memorandum to be GSP Appendix I

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Questions?

TODD GROUNDWATER

2021

2020

2019

2018

Next Steps

GSP Public Review
July 29 through October 27

Adoption hearings:
SBCWD GSA - November 17, 2021

Valley Water GSA - December 14, 2021

San Benito County Water District

Information is available at www.sbcwd.com

Current Board Agenda | Board of Directors | About Us | Customer Service | Current Local Water Data | Sustainable Groundwater Management

GSP Development

Draft GSP

The Draft Groundwater Sustainability Plan is available for review at the links below. Comments can be submitted using the form provided or by mail to:

GSP Comments
c/o San Benito County Water District
30 Mansfield Road
Hollister, CA 95023

Comment Form

Your comments on the Draft GSP are appreciated and will be considered in preparation of the final GSP. Please enter comments by section and subsection number and/or heading.

- Name*
  First Last
- Agency/Organization/Resident*
- Contact Preference*
  - Address
  - Email

- About SGMA
- GSP Development
- SBCWD's Role & Responsibilities
- About Groundwater & Our Basins
- Community Involvement
- Resources and Documents
- Frequently Asked Questions
- Gestión sustentable del agua subterránea