

Groundwater Reliability Partnership for the San Mateo Plain Sub-basin



January 11, 2016

BAWSCA

“A multicounty agency authorized to plan for and acquire supplemental water supplies, encourage water conservation and use of recycled water on a regional basis.”

[Bay Area Water Supply and Conservation Agency Act, AB2058(Papan-2002)]

Welcome!

- Agenda for today's meeting:
 - Welcome and introductions
 - Summary of meeting on October 19
 - Sustainable Groundwater Management Act (SGMA) updates
 - Use and management of basins adjacent to the San Mateo Plain Sub-basin
 - Westside basin
 - Santa Clara basin
 - San Mateo County's Groundwater Assessment for the San Mateo Plain
 - Activities in the San Mateo Plain Sub-basin
 - Next Steps

Strong Stakeholder Turnout for First Groundwater Partnership Meeting

- The first meeting was October 19th, 2015
 - Approximately 60 attendees
- Presenters included:
 - BAWSCA
 - San Mateo County staff
 - City of East Palo Alto
- Good discussion on potential goals:
 - Increased understanding of the hydrology and geology of the Basin
 - Serving as a forum for sharing information among all stakeholders
 - Continued sustainable use of the Basin to maintain groundwater quality and quantity and protect beneficial uses
- Feedback on what to discuss in future meetings

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UPDATE ON IMPLEMENTATION OF THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

BAWSCA GROUNDWATER RELIABILITY PARTNERSHIP
11 JANUARY 2016

PRESENTATION OVERVIEW

SGMA Implementation

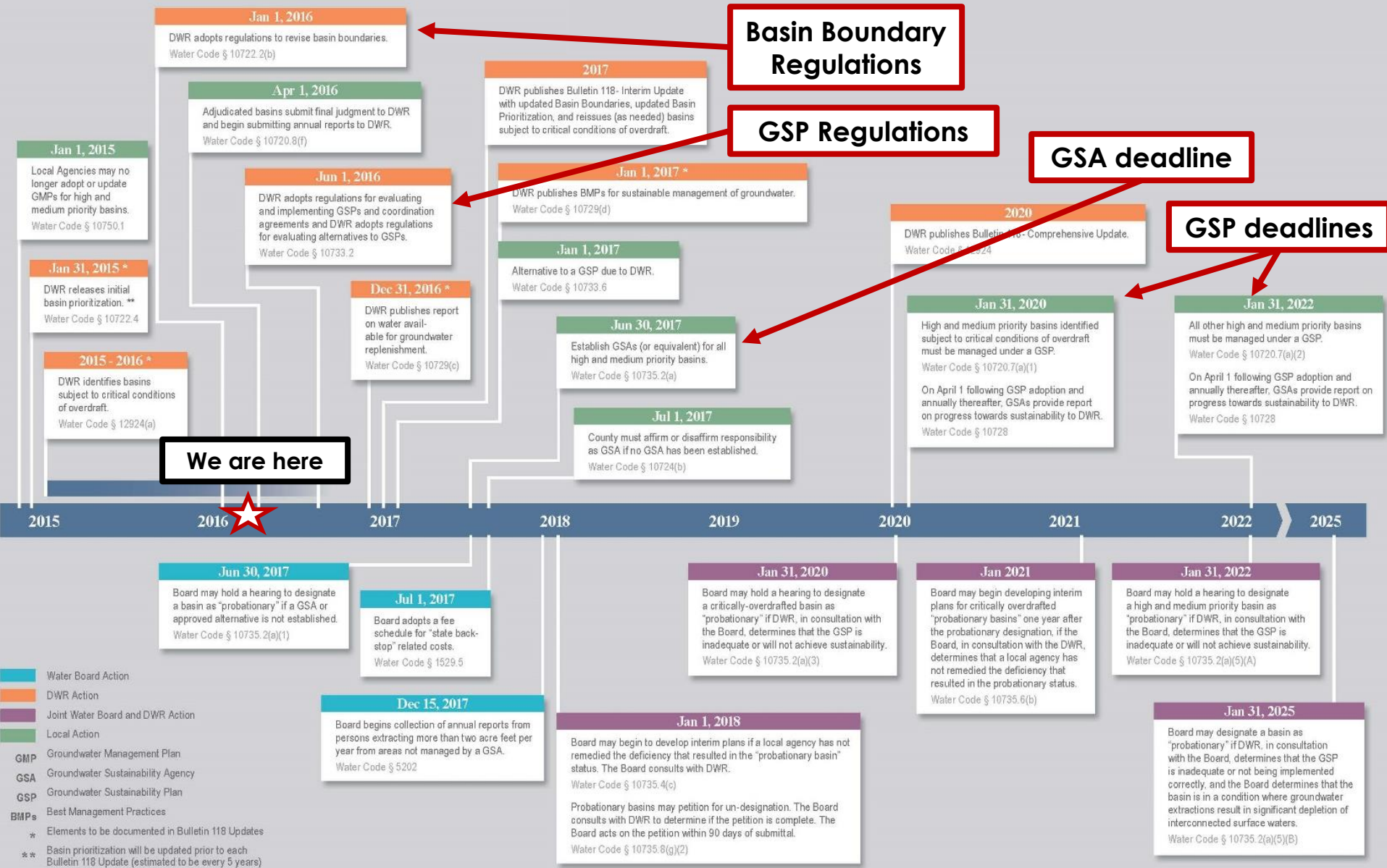
- Basin Boundary Modification Regulations
- GSP Regulations



Legislative Changes

- Senate Bill 13
- Adjudication Streamlining

WHERE ARE WE IN SGMA IMPLEMENTATION?



THE BASIN BOUNDARY MODIFICATION WHEELS ARE IN MOTION

- DWR adopted final regulations in November 2015
- Online request system created to support submission

The screenshot shows the website interface for the Department of Water Resources Basin Boundary Modification Request System. The header features the CA.GOV logo and the text "Department of Water Resources Basin Boundary Modification Request System". Below the header, there are two main sections: "Local Agency Submissions Tools" and "Public and Interested Party Tools".

Local Agency Submissions Tools

- [Click Here to Submit Initial Notification \(Pursuant to Section 343.9\)](#)
- [Click Here to Submit Basin Boundary Modification Request \(Submission Period: January 1, 2016 through March 31, 2016\)](#)

Public and Interested Party Tools

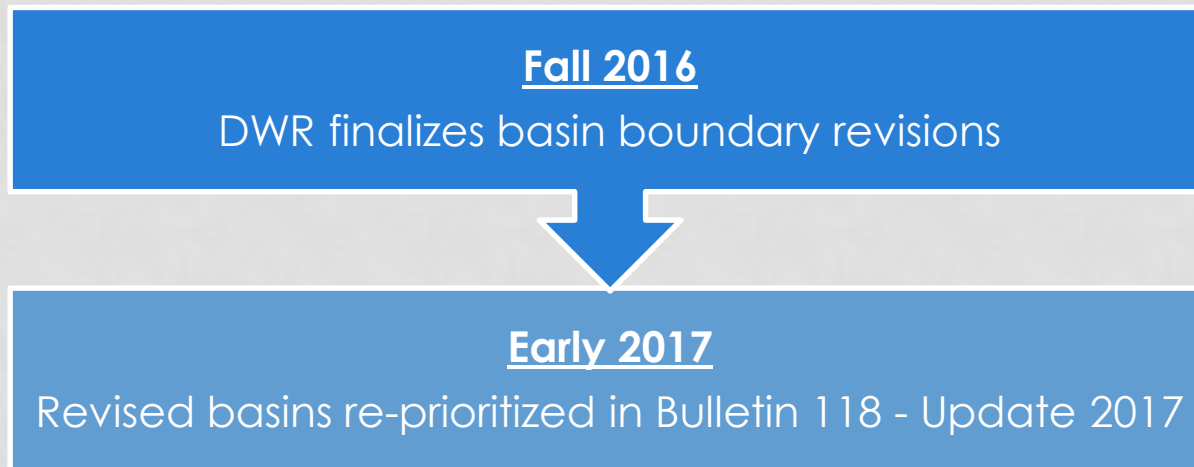
- [View List of Submitted Initial Notifications](#)
- [View List of Submitted Modification Requests](#)
- [View Map of Submitted Initial Notifications](#)
- [View Map of Submitted Modification Requests](#)

REQUIREMENTS OF BOUNDARY MODIFICATION REQUESTS

- Scientific requests require technical information
- Jurisdictional requests must demonstrate:
 - Local support
 - Sustainable management

		Required Components of Submittal Information required is dependent upon type of modification.								
		(1) Local Info			(2) Local Agency Input			(3) Technical Information		
Reason	Type of Modification	Agency Information and Resolution	Notification & Consultation	Affected Agencies and Systems - Must be Notified - Provided an Opportunity to Support or Oppose	Supported by 75% of Agencies	Desc. of Basin Boundaries (Map, GIS data)	Existing Water Management in Basin	Hydrogeologic Conceptual Model	Historic and Current Conditions	Technical Study
Scientific	Hydrogeologic	✓	✓	✓	✓	✓	✓	✓	✓	✓
Jurisdictional	Internal	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Consolidation	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Subdivision	✓	✓	✓	✓	✓	✓	✓	✓	✓

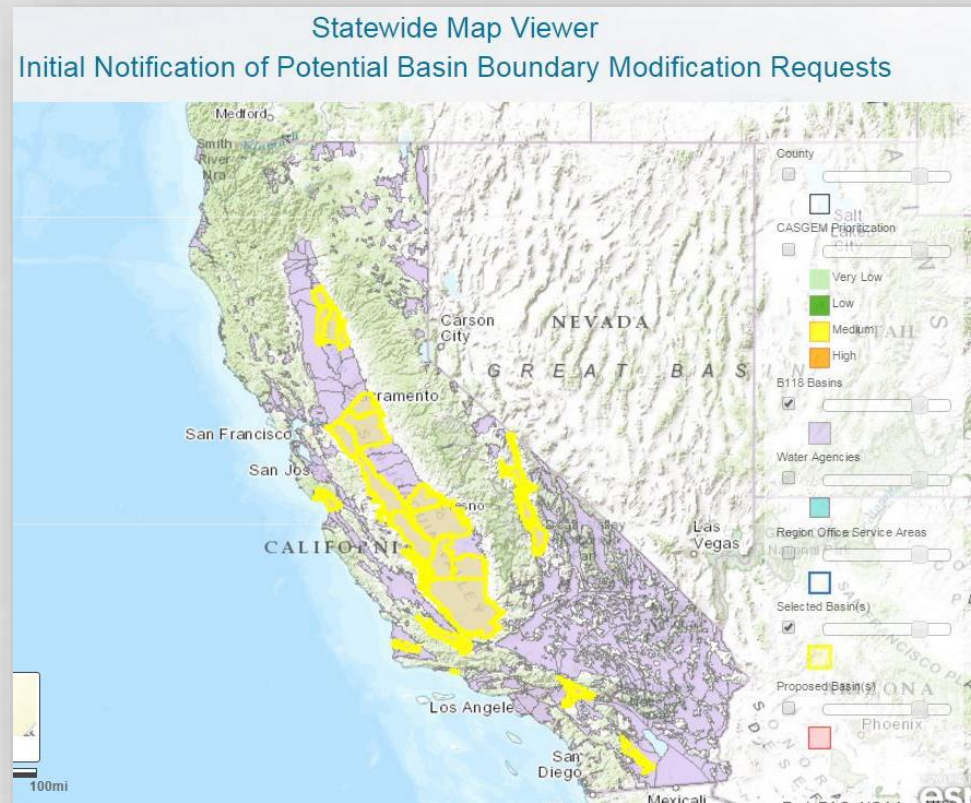
REQUESTS ARE NOW BEING ACCEPTED



INTEREST IN BOUNDARY MODIFICATION IS HIGH

- To date, 20 notices of intent have been submitted
- More modification requests are anticipated
- These potential revisions impact counties across the state

<i>Northern</i>	
Butte	Colusa
Yuba	Tehama
Sutter	
<i>Central Valley</i>	
Sacramento	Madera
Amador	San Benito
San Joaquin	Fresno
Stanislaus	Kings
Contra Costa	Kern
Merced	Tulare
<i>Coastal</i>	
Santa Cruz	Santa Barbara
San Luis Obispo	Ventura
<i>Eastern</i>	
Inyo	Mono
<i>Southern</i>	
San Bernardino	San Diego
Riverside	Imperial



DRAFT GSP REGULATIONS ARE ANTICIPATED SOON

- Regulation development process:

Fall 2015

- Issue papers for 10 topics
- Public meetings for three batches of topics

Early 2016

- Draft GSP regulations
- Three public meetings
- Final GSP regulations

- Deadline to adopt regulations is **June 1, 2016**
- Deadline to submit an alternative plan is **January 1, 2017**



Batch 1

Batch 2

Batch 3

WHAT MIGHT THE GSP REGULATIONS LOOK LIKE?

Overview	Potential Regulation Content
Governance & Coordination "Who is managing & participating"	Governance Coordination Land Use
Basin Setting "What are the current conditions"	Basin Conditions
SGM Planning "How will GW be managed & measured"	Sustainability Goal (Sustainable Yield, SGM) Measurable Objectives & Undesirable Results Monitoring Plan
Evaluation "Reporting, Evaluation, & Adaptive Management"	Implementation & Reporting
Equivalent GSPs	Alternative GSPs & Fringe Areas

State-developed minimum threshold for each undesirable result?

"Significant and unreasonable" defined at the local level?

Will all GSPs be reviewed with the same level of scrutiny?

LEGISLATIVE ACTIONS HAVE MODIFIED SGMA

SGMA “Clean up” Legislation

- SB 13 Passed in September 2015 and became law in January 2016
- Amended and clarified numerous sections of SGMA
- Being applied retroactively

Adjudication Streamlining

- AB 1390 and SB 226 passed in October 2015 and became law in January 2016
- Streamlined the adjudication process
- Intended to work side-by-side with SGMA

MAJOR CHANGES OF SB 13

Overlapping GSAs

- GSAs with overlapping boundaries will be deemed incomplete by DWR and the agencies must coordinate and re-submit
- If a GSA is filed for a portion of an agency's service area, the agency has 90 days to file a competing GSA

Exceeding Service Area Boundaries

- If a local agency files to be a GSA for an area exceeding its service area boundaries, the notification will be deemed incomplete by DWR
- This has been interpreted to exclude spheres of influence from potential GSA boundaries

Private & Mutual Water Companies

- Water corporations regulated by the CA PUC (e.g., Cal Water) and mutual water companies may participate in GSAs through MOUs
- They may not form their own GSAs, however

RACE TO FORM GSAS HAS BEGUN ACROSS THE STATE

- SB 13 changed the rules of the game
- Everyone wants a “seat at the table”
- Defensive strategy is to file to be a GSA now, sort out boundary issues later
- Many coalitions are falling apart and agencies are acting unilaterally



NEW LEGISLATION STREAMLINES ADJUDICATION PROCESS

- In the past, adjudication has been complex and expensive process
 - Procedurally Complex – Parties to include, judicial venue, basin boundaries
 - Long – Average length of 7 years
 - Expensive – Santa Maria adjudication cost more than \$10 M
- New legislation intended to streamline process
 - Standardized use of Bulletin 118 boundaries
 - Methodology for judicial selection
 - Procedures for notice/disclosure
 - “Cramdown” provision to prevent a small group from holding negotiations hostage

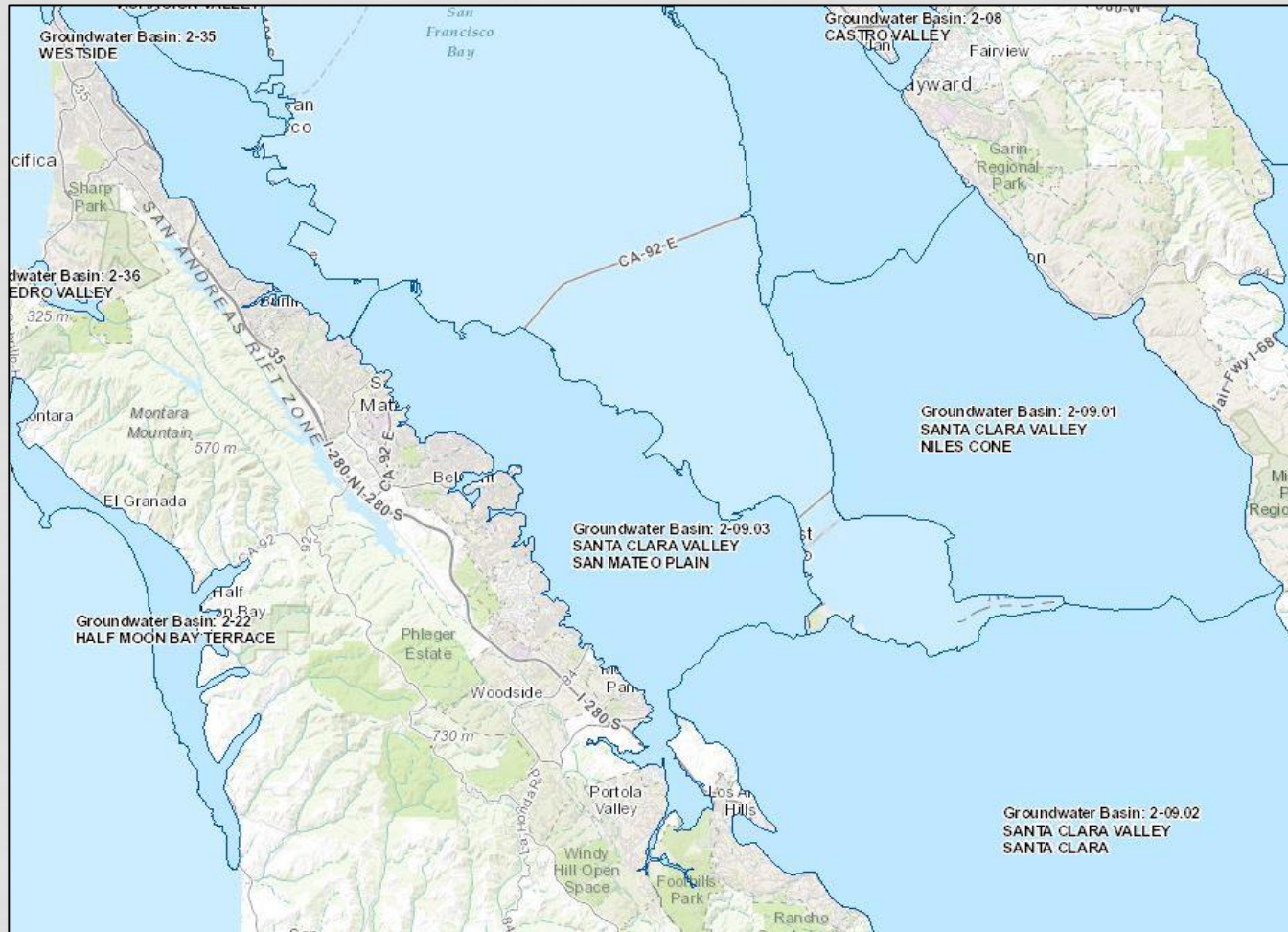
ADJUDICATION TO PROCEED IN PARALLEL TO SGMA

- SGMA applies regardless of whether an adjudication is filed*
- Parties have two options:
 1. Separate from SGMA – Court must find that a judgement will not substantially impair the ability to comply with SGMA
 2. Coordinated with SGMA – Judgement to serve as an “alternative plan” under SGMA
- GSAs and the State have the right to intervene
- Courts may pause an adjudication to allow for SGMA implementation
- Injunctions may be ordered in overdrafted basins to limit pumping

CONCLUSIONS

- SGMA implementation is real and deadlines are fast approaching
- Basin Boundary Modifications:
 - Requests accepted for the next three months
 - New boundaries will determine how SGMA is implemented locally (e.g., GSA formation, basin ranking)
- GSP Regulations:
 - Draft regulations are anticipated soon
 - Agency input is important
 - Content of these regulations will provide insight into how SGMA will be implemented

QUESTIONS?



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Groundwater Reliability Partnership for the San Mateo Plain Sub-Basin

Use and Management of Basins Adjacent to the San Mateo Plain

Westside Basin

Patrick Sweetland, City of Daly City
Greg Bartow, SFPUC

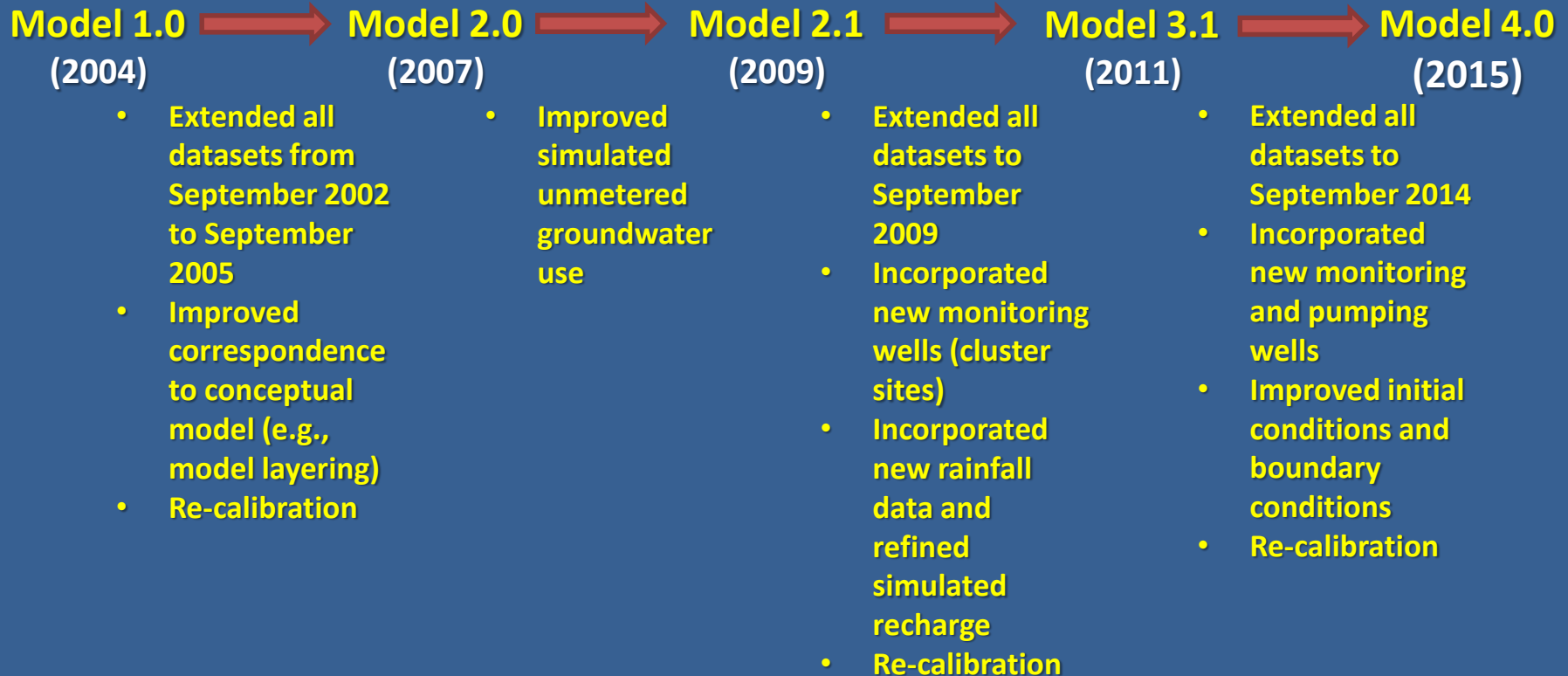
January 11, 2016



Services of the San Francisco Public Utilities Commission



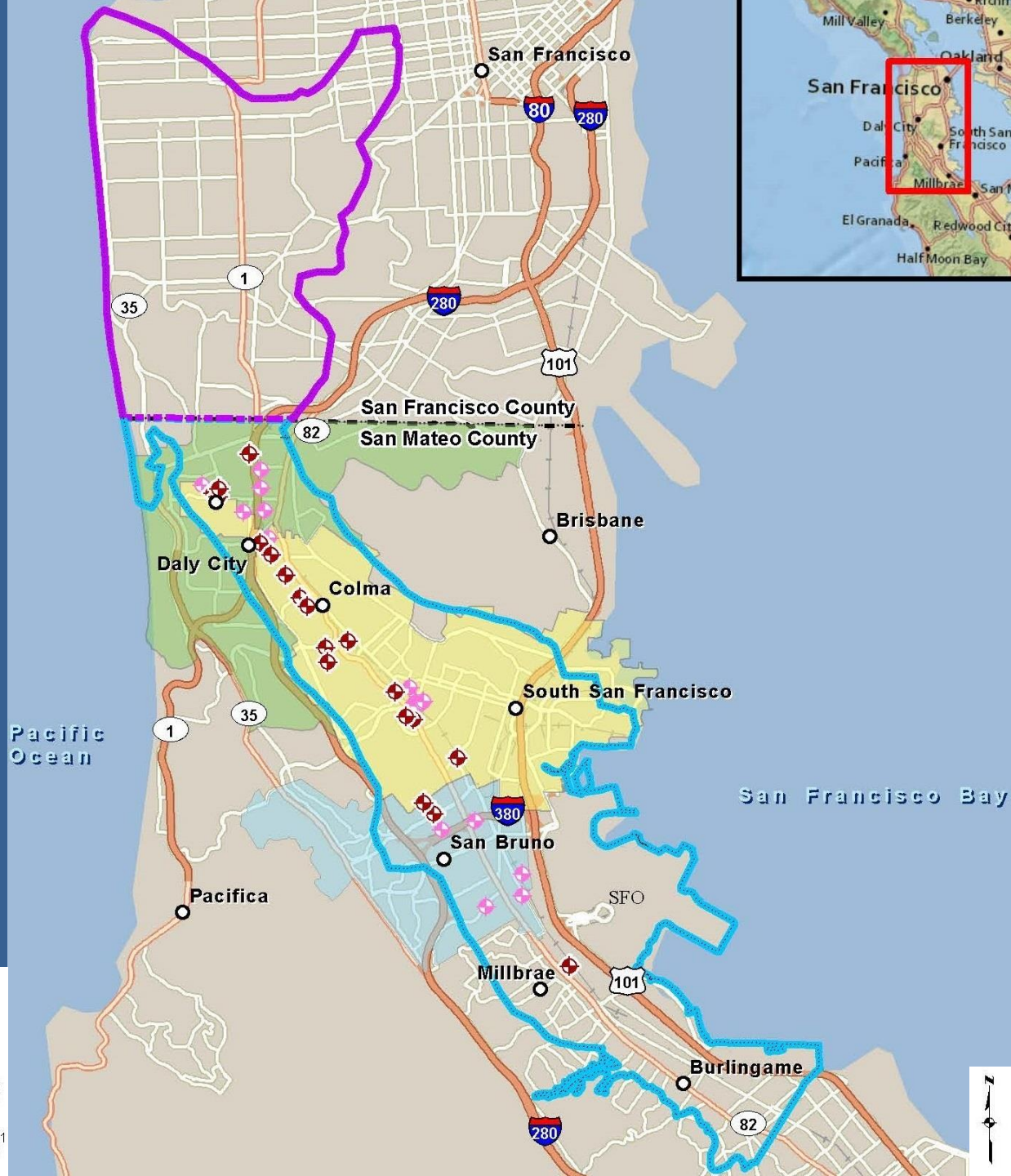
Timeline of Westside Basin Model Updates



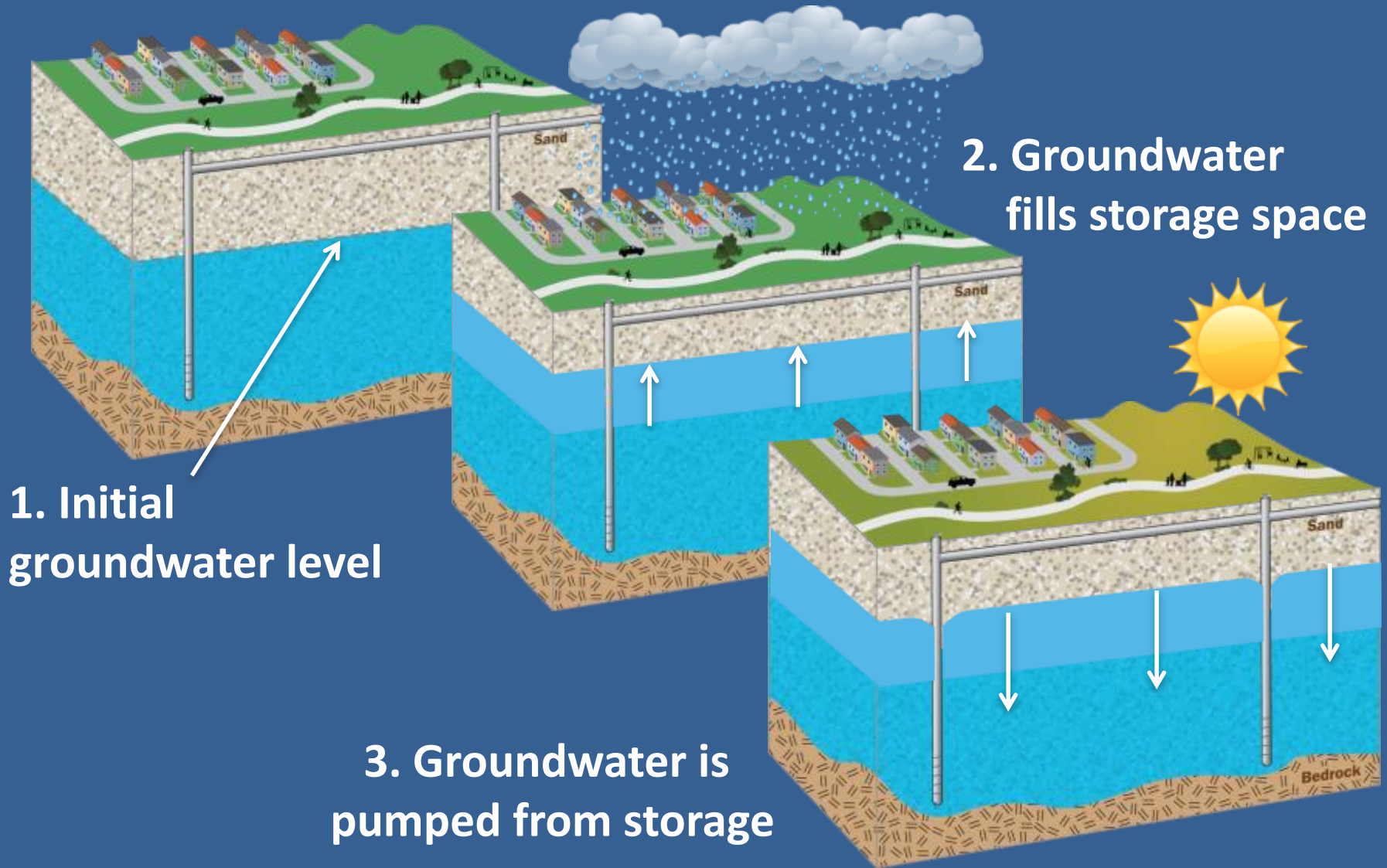
Project Vicinity Map

Legend

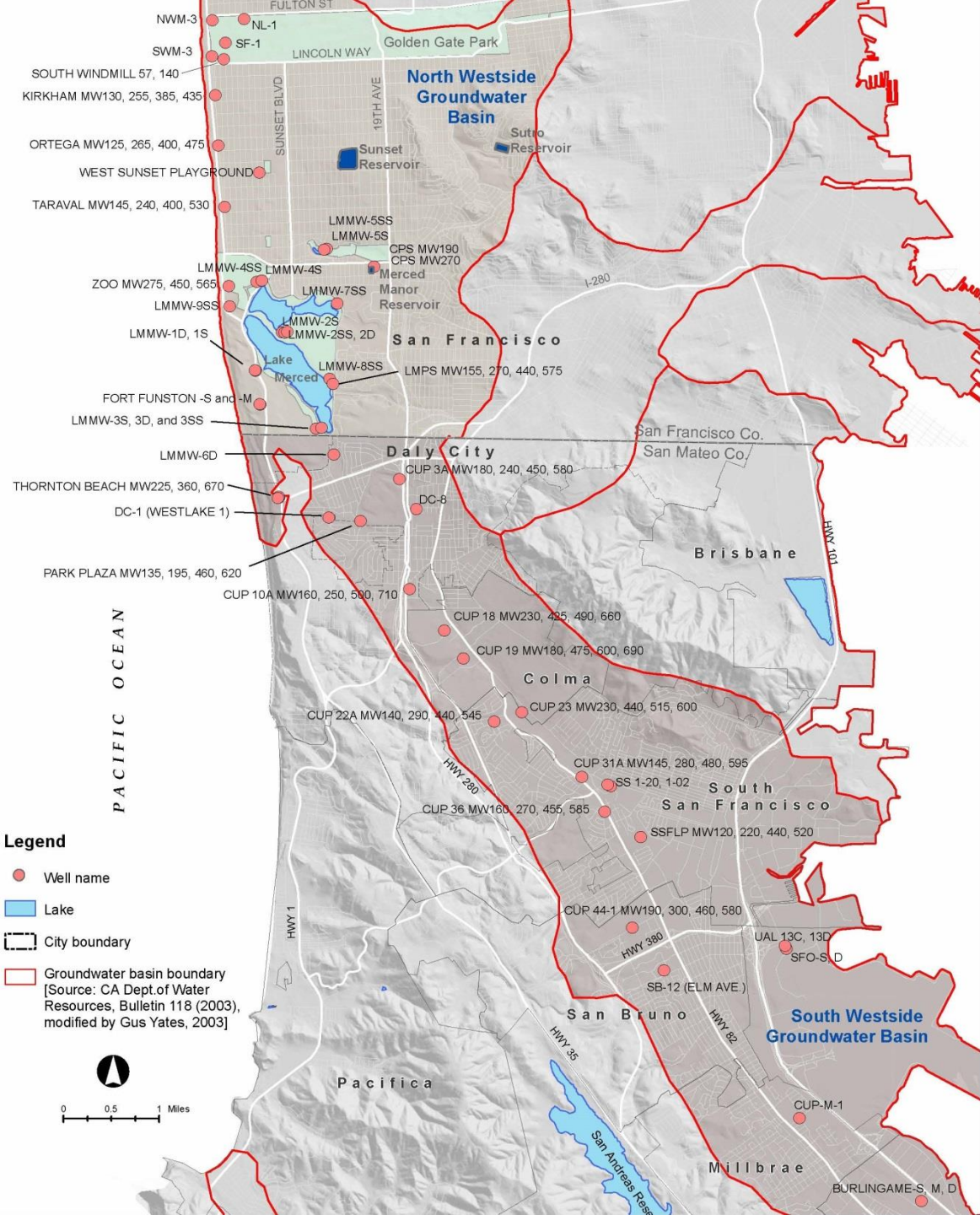
-  Partner Agency Wells
-  Proposed Project Well Facility Sites
-  County Boundary
-  Cal Water Service Co. Service Area
-  Daly City Water Service Area
-  San Bruno Water Service Area
-  North Westside Groundwater Basin¹
-  South Westside Groundwater Basin¹



How the Proposed GSR Project Works

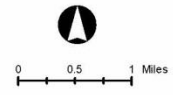


Westside Basin Monitoring Program

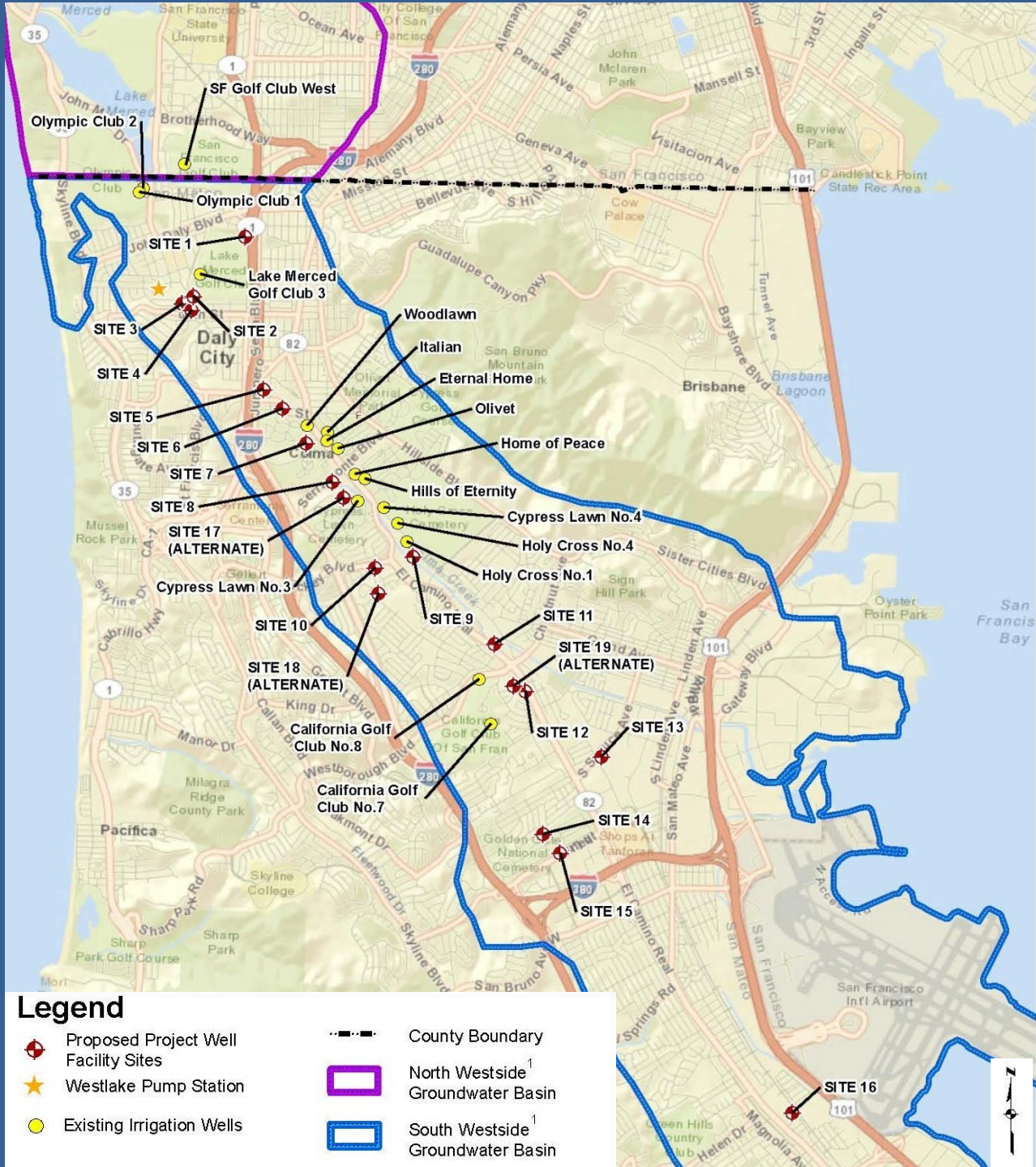


Legend







- Well name
- Lake
- City boundary
- Groundwater basin boundary
[Source: CA Dept. of Water Resources, Bulletin 118 (2003), modified by Gus Yates, 2003]



Irrigation Well Locations



Legend

- | | | | |
|---|--------------------------------------|---|---|
|  | Proposed Project Well Facility Sites |  | County Boundary |
|  | Westlake Pump Station |  | North Westside ¹ Groundwater Basin |
|  | Existing Irrigation Wells |  | South Westside ¹ Groundwater Basin |



SF Groundwater Supply Project Overview

- Project will supply up to **4 mgd** of groundwater from the Westside Basin aquifer in San Francisco
- Pumping will start at 1 mgd and **slowly ramp up** by approximately 1 mgd/yr
- Groundwater will be **blended** with SFPUC regional water supplies at 2 reservoirs
- Blended water will be **distributed** throughout the City



Observations from working with Westside Basin Partners

- Cooperation on monitoring, modeling and project planning & implementation is essential.
- DWR Grants provided seed money for monitoring, modeling and management plans.
- Developing a conceptual groundwater model based on actual geologic information is valuable.



Official Agreement Signing
Westside Basin - Regional Groundwater Storage and Recovery
Operating Agreement
December 16, 2014

Sustainable Groundwater Management in Santa Clara County

Vanessa De La Piedra

January 11, 2016

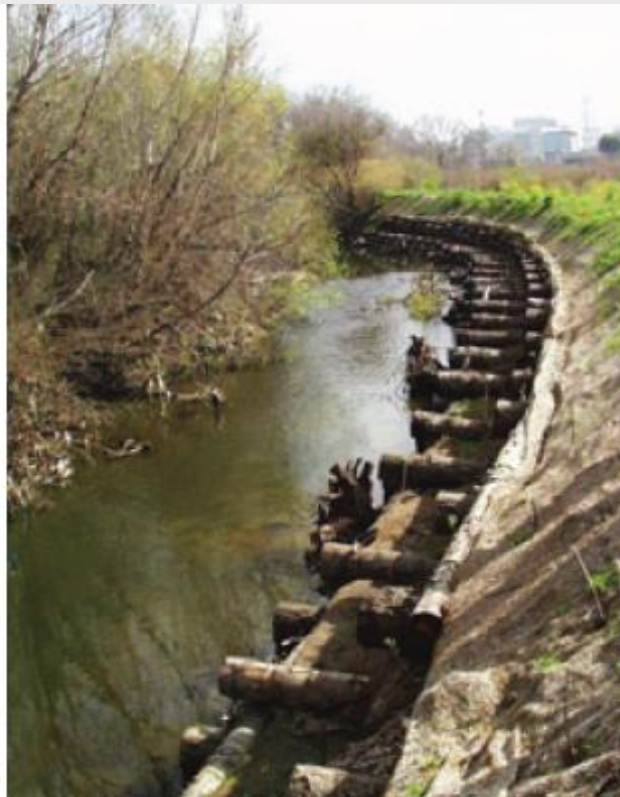


An integrated approach

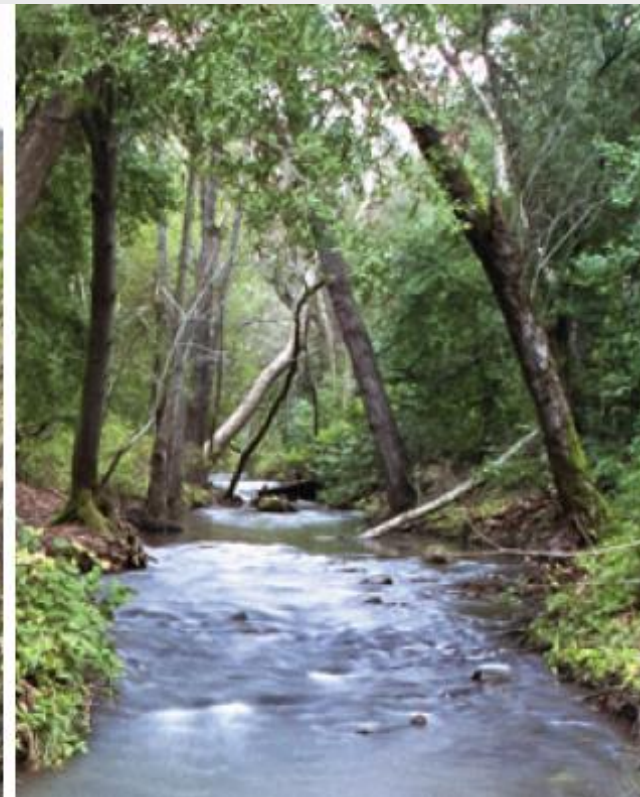
Providing Silicon Valley safe, clean water for a healthy life, environment and economy



CLEAN, RELIABLE WATER



FLOOD PROTECTION



**HEALTHY CREEKS &
ECOSYSTEMS**

Who we serve

2,000,000 people

15 cities

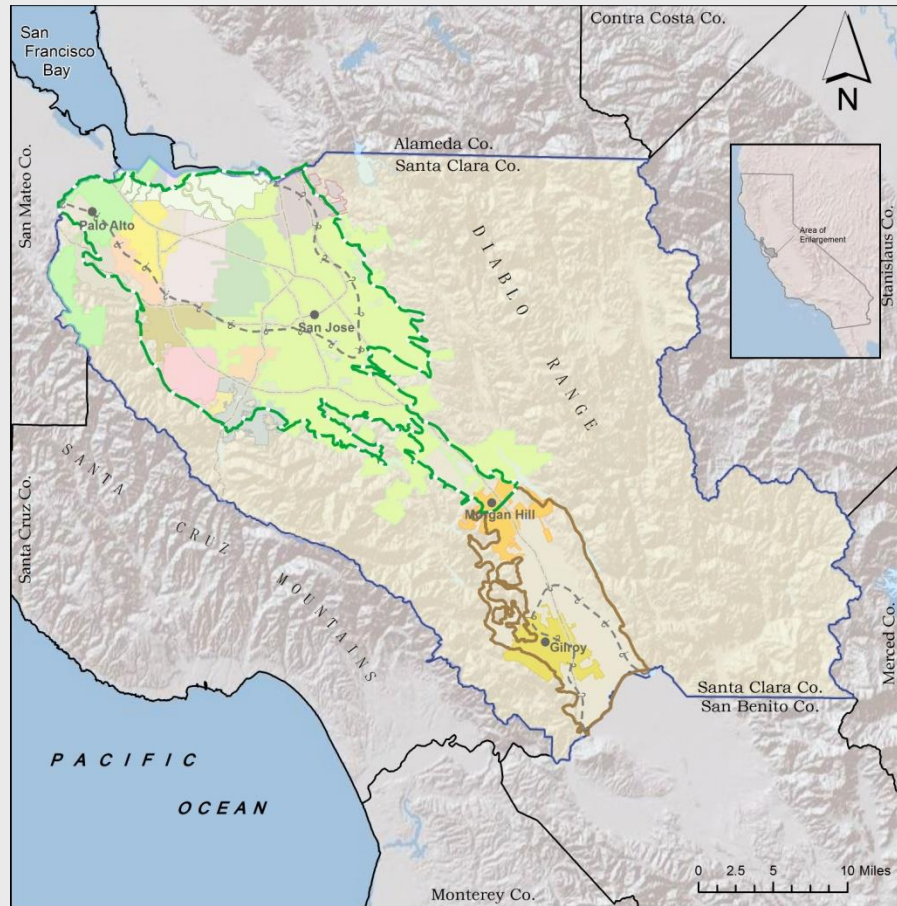
4,700 well owners

13 water retailers



An essential local resource

- ▶ Santa Clara and Llagas Subbasins
- ▶ 40-50% of the water used in the county
- ▶ Primary reserve for multi-year droughts



Legend



District history begins with groundwater

Feb 27-41

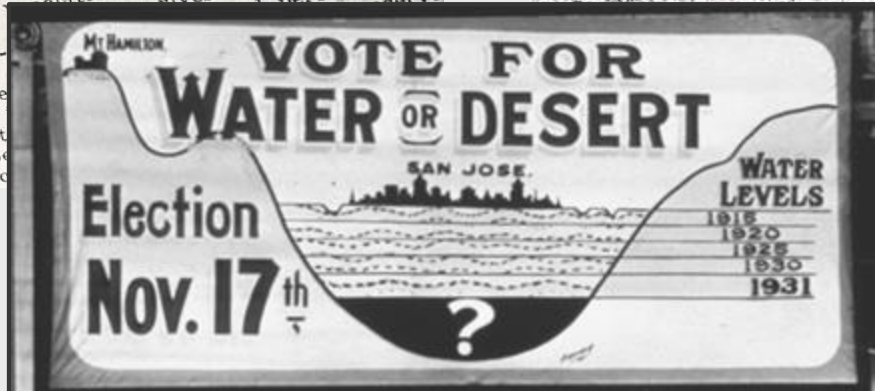
AMPLE SUPPLY OF WATER ESSENTIAL TO PROSPERITY

Conservation Held Necessary to Check Falling Water Level, and to Save Thousands of Acres of Valley Orchards.

WATER FOR FUTURE.
By MAX WATSON,
Secretary Valley Water Conservation Association.
The problem of the future water supply of the Santa Clara valley is not to every one, no matter how distant. The prospect of a dire

SAN JOSE SINKS 4 FEET DURING LAST 14 YEARS

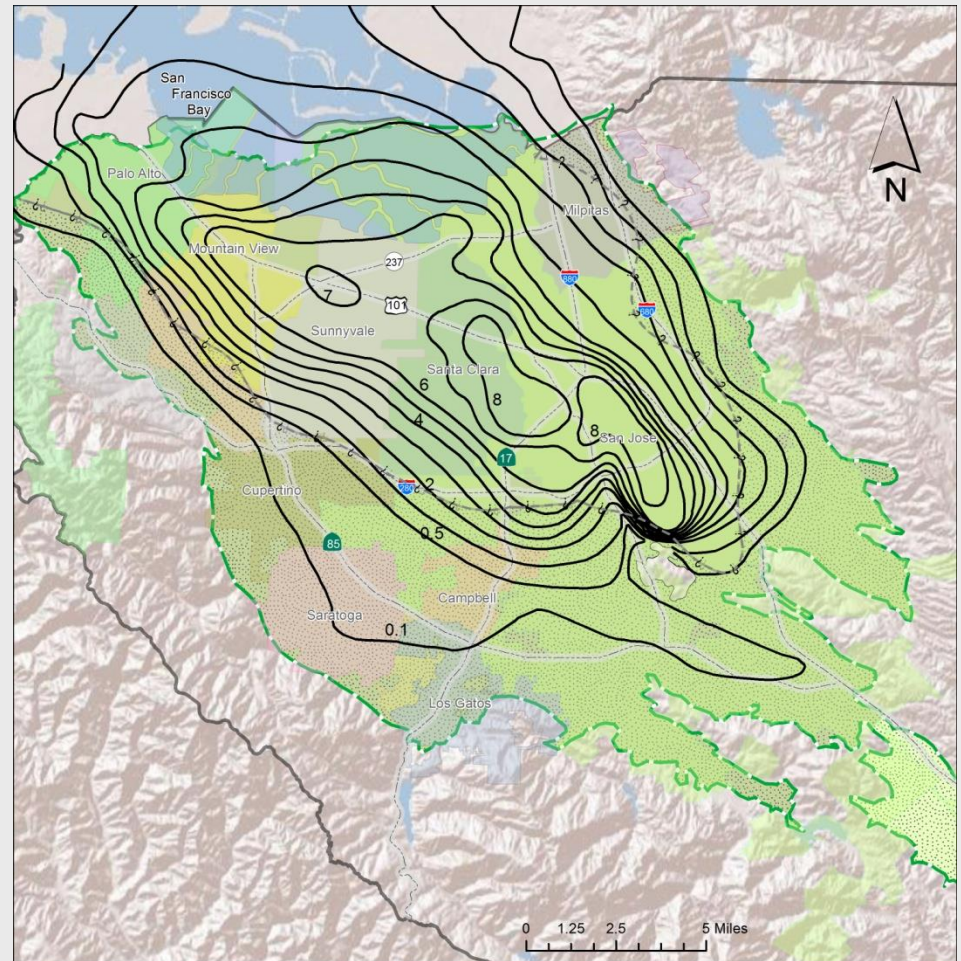
Stanford Scientists Announce Study of Surrounding










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Land subsidence – a costly problem

- ▶ Over 13 feet in San Jose
- ▶ Over 1 foot over 100 square mile area
- ▶ Effectively halted by early 1970s



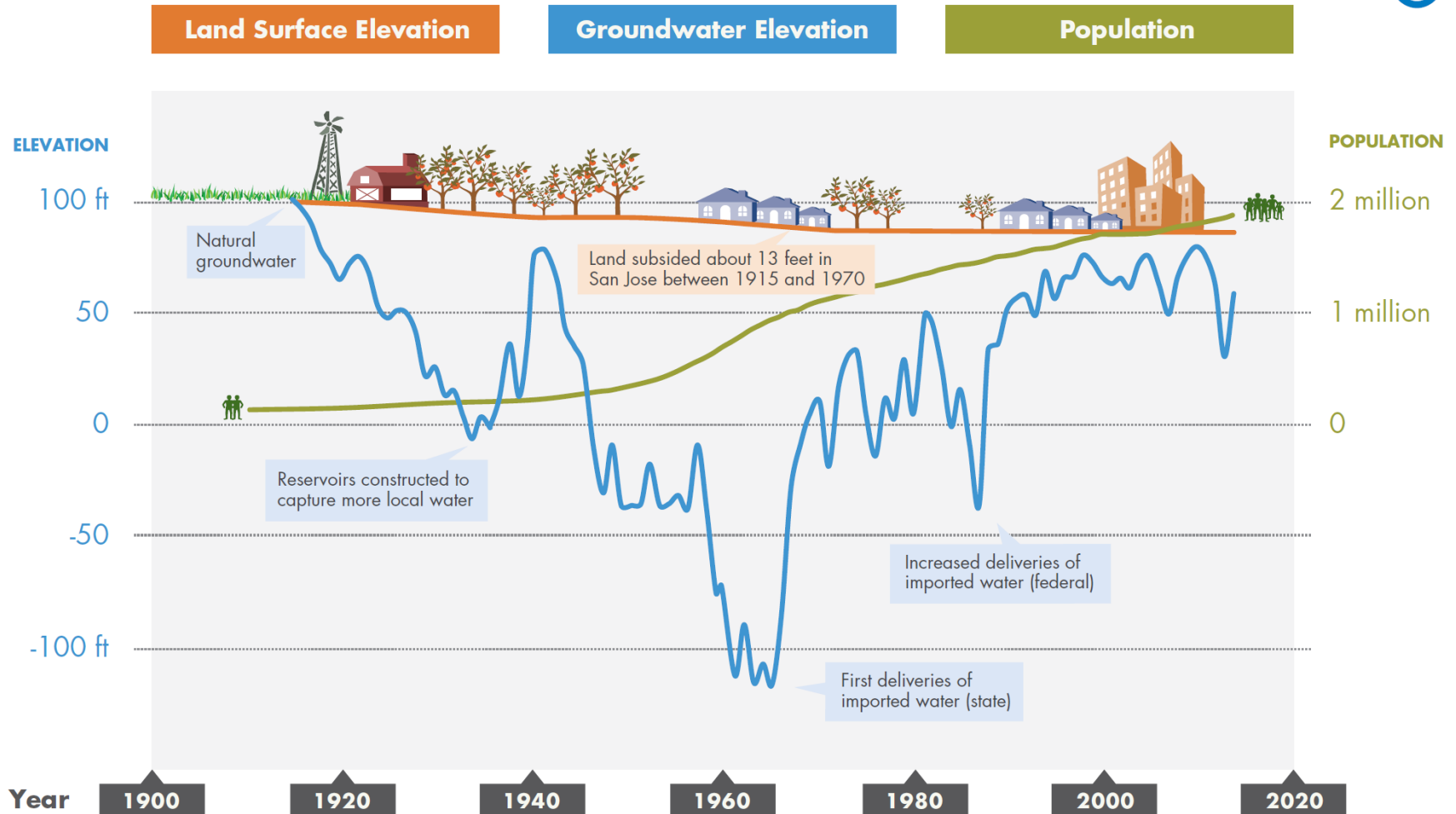
Legend

- | | | | | | |
|---|--|---|---------------------------------|---|-----------------------------|
|  | Historical Land Subsidence between 1934 and 1967 (in feet as labeled, subsidence prior to 1934 is not shown) |  | Santa Clara Plain Confined Area |  | Coyote Valley Recharge Area |
|  | Santa Clara Subbasin (DWR Basin 2-9.02) |  | Santa Clara Plain Recharge Area |  | Santa Clara County |
|  | Approximate Extent Confined Area | | | | |

History of sustainable management

SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit



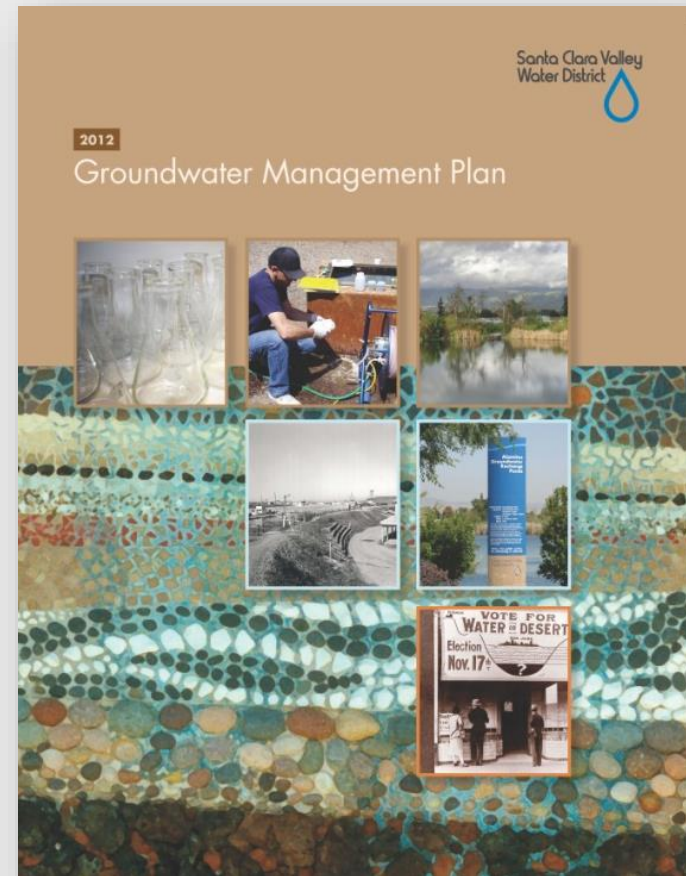
Integrated water management



- Recharge local and imported surface water
- Reduce groundwater pumping through:
 - Treated water deliveries
 - Water conservation
 - Recycled water

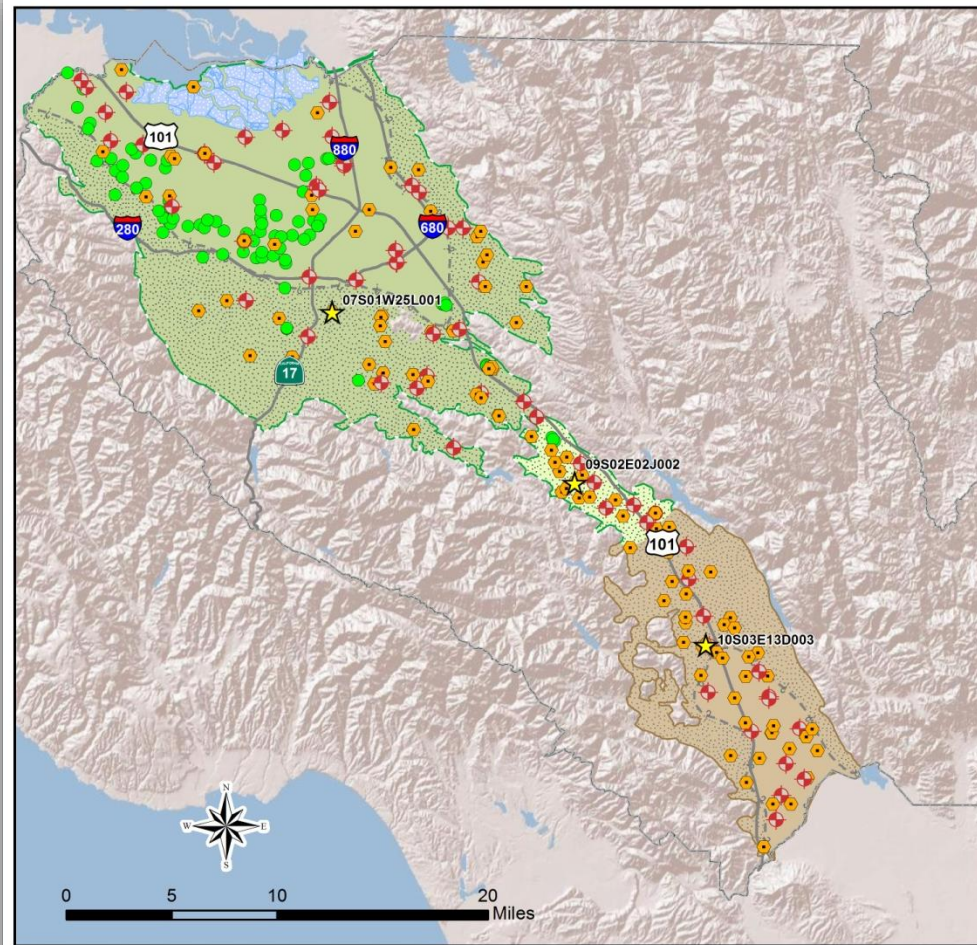
Groundwater management framework

- ▶ Authority to implement and fund projects
- ▶ Partnerships
- ▶ Basin management objectives
- ▶ Adequate data
- ▶ Outcome measures



Groundwater level monitoring

- ▶ Monthly District measurements at over 200 wells in county
- ▶ Santa Clara Subbasin
 - ▶ District: 163
 - ▶ Retailers: 76

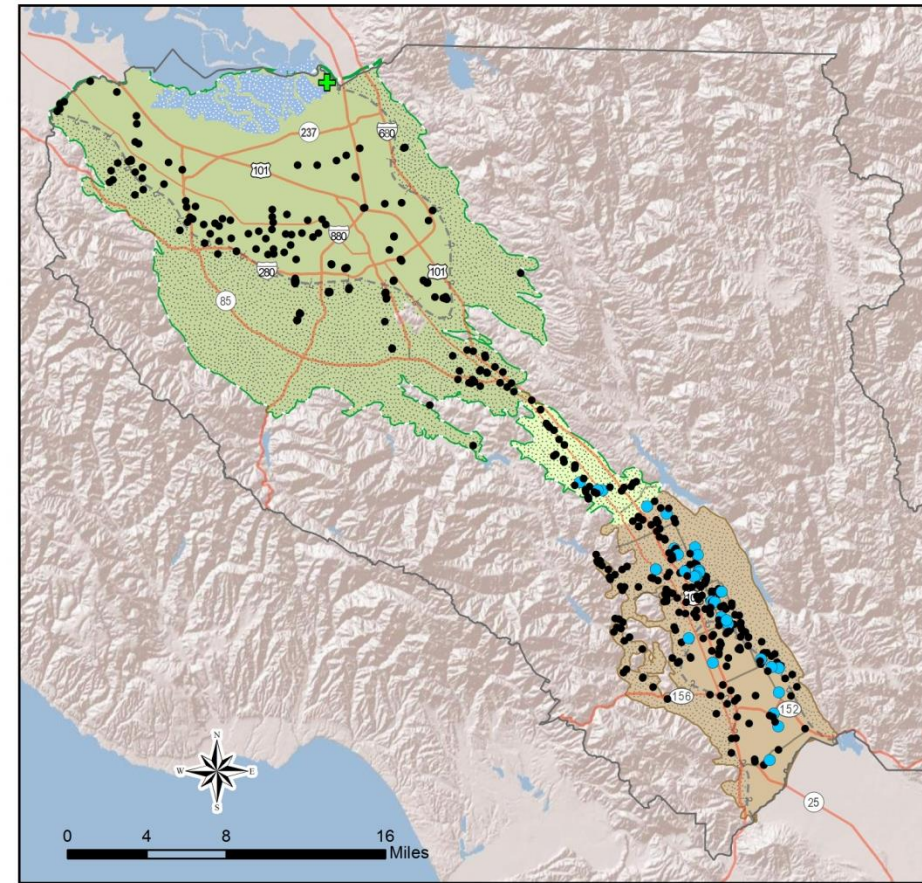


Water Level Monitoring

- | | | |
|-------------------------------------|---|---|
| ★ Index Well | ☐ Salt Ponds | ☐ Santa Clara Plain Recharge Area |
| ◆ Automated Reading | ☐ Santa Clara County | ☐ Coyote Valley Recharge Area |
| ● Manual Reading | --- Approximate Extent of Confined Area | ☐ Llagas Confined Area |
| ● Wells Measured by Water Retailers | ☐ Santa Clara Plain Confined Area | ☐ Llagas Recharge Area |
| | | ☐ Santa Clara Subbasin (DWR Basin 2-9.02) |
| | | ☐ Llagas Subbasin (DWR Basin 3-3.01) |

Groundwater quality monitoring

- ▶ Annual District sampling at over 300 wells in county
- ▶ Santa Clara Subbasin
 - ▶ District: 44
 - ▶ Retailers: 183

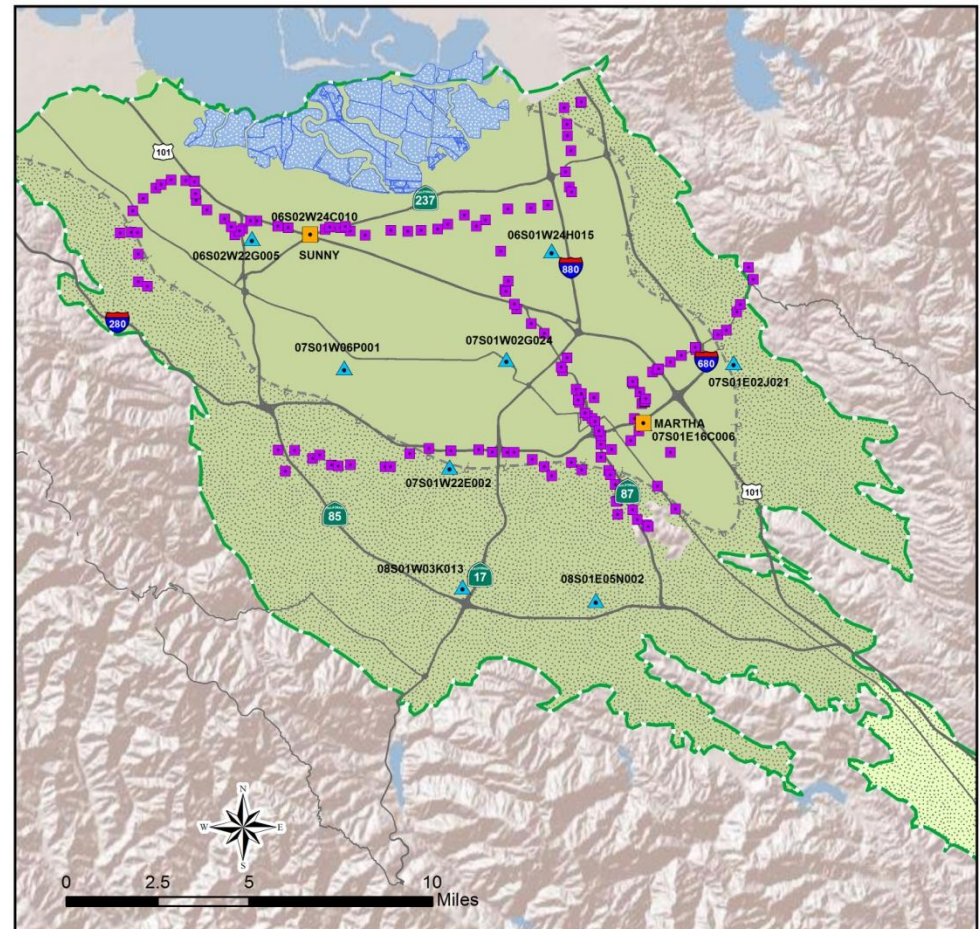


Legend

- Nitrate
- ✚ Aluminum, Nickel
- Meets all standards
- Santa Clara County
- Salt Ponds
- Approximate Extent of Confined Area
- Santa Clara Plain Confined Area
- Santa Clara Plain Recharge Area
- Coyote Valley Recharge Area
- Llagas Confined Area
- Llagas Recharge Area
- Santa Clara Subbasin (DWR Basin 2-9.02)
- Llagas Subbasin (DWR Basin 3-3.01)

Subsidence monitoring

- ▶ Annual survey of over 140 benchmarks
- ▶ Hourly compaction readings at two extensometers
- ▶ Threshold water levels at ten index wells



- 1000' Extensometer
- Benchmarks
- Subsidence Threshold Index Well
- Salt Ponds
- Approximate Extent of Confined Area
- Santa Clara Subbasin (DWR Basin 2-9.02)
- Santa Clara Plain Confined Area
- Santa Clara Plain Recharge Area
- Coyote Valley Recharge Area

Data and tools to address key questions

- ▶ What are groundwater level and storage conditions?
 - ▶ Operations
 - ▶ Long-term water supply planning
- ▶ Are our basins in balance?
 - ▶ Well metering
 - ▶ Stream gauging
- ▶ How is water quality changing?

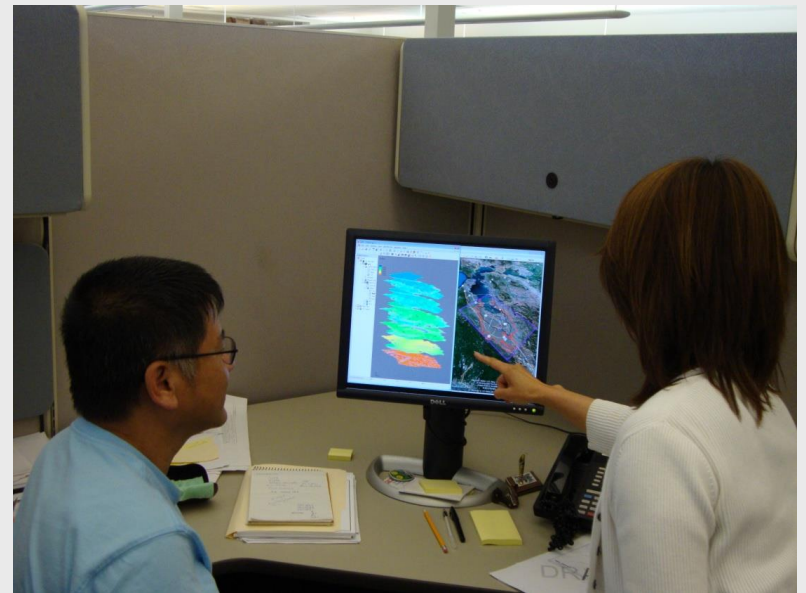


Source: 2012 Groundwater Management Plan

Outcome measures

Numeric targets measure performance in meeting basin management objectives:

- ▶ Groundwater storage
- ▶ Groundwater levels and land subsidence
- ▶ Groundwater quality



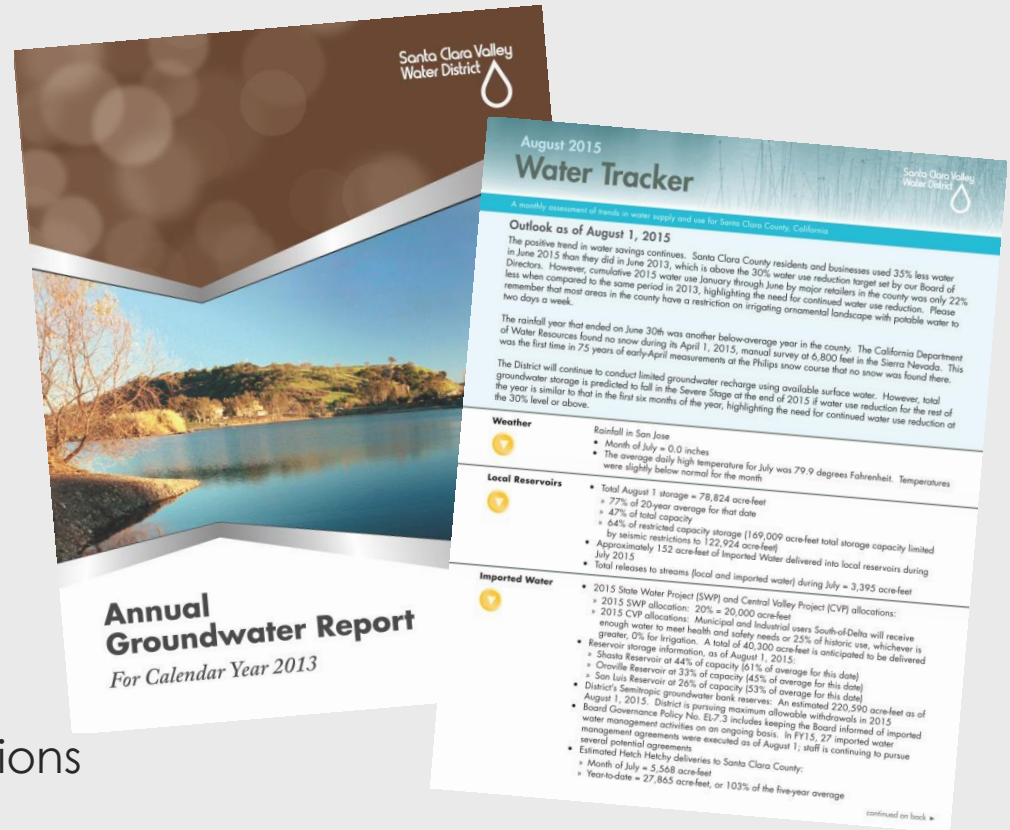
Coordination and reporting

▶ Partners

- ▶ Water retailers
- ▶ Regulatory agencies
- ▶ Land use agencies
- ▶ Well owners
- ▶ Basin stakeholders
- ▶ Adjacent water agencies

▶ Regular reporting

- ▶ Monthly water supply conditions
- ▶ Annual GW report
- ▶ CASGEM reporting





Providing safe, clean water for Santa Clara County

For more information on groundwater, visit
valleywater.org/Services/Groundwater.aspx



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San Mateo County's Involvement in Groundwater

- Provided oversight of groundwater contamination sites, in conjunction with RWQCB, DTSC, and USEPA, since early 1990s
- Well permitting authority throughout County, except City of Daly City
- Facilitated South Westside Basin Partners groundwater monitoring program
- Provide drinking water for County Service Areas

Environmental Health Services

Heather Forshey, Director

Charles Ice, Groundwater Protection Program Lead



COUNTY OF SAN MATEO
HEALTH SYSTEM

Issues with Groundwater From County's Perspective

- 8 out of the last 9 years have had below average rainfall causing severe drought
 - Drought Task Force
- Increased attention and use of groundwater within the County
 - Conjunctive use, desalination, emergency and additional water supply wells, sea level rise impacts
- Passage of Sustainable Groundwater Management Act
 - Potential for CASGEM reprioritization in 2 out of 9 Very Low basins/sub-basins, land use agency

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COUNTY OF SAN MATEO
HEALTH SYSTEM

County's Approach to San Mateo Plain Sub-Basin

- Gather as much information as possible
 - Technical, Legal, Jurisdictional
- Interact with all interested parties
 - BAWSCA, Sustainable San Mateo, CHARG, SCVWD, ACWD, Westside Basin Partners, cities, and water utilities
- Not assume any management role in but also stay involved in all discussions regarding groundwater

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COUNTY OF SAN MATEO
HEALTH SYSTEM

County's Actions in San Mateo Plain Sub-Basin

- Measure A Letter of Intent (January 2015)
 - Joint submittal from Environmental Health and Office of Sustainability
- Revised Groundwater Assessment Plan for San Mateo Plain (September 2015)
 - Presented draft to BAWSCA members August 2015
- Request for Proposal (October 2015)

Environmental Health Services

Heather Forshey, Director

Charles Ice, Groundwater Protection Program Lead



COUNTY OF SAN MATEO
HEALTH SYSTEM

County's Objectives for Assessment of San Mateo Plain Sub-Basin

- Assess the groundwater resources, current usage, and current condition
 - Evaluate the hydrogeologic and groundwater conditions of the entire sub-basin
 - Evaluate surface water and groundwater interactions in the sub-basin
 - Evaluate threats to the sub-basin quality and quantity
 - Assess recharge areas

Environmental Health Services

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Charles Ice, Groundwater Protection Program Lead



COUNTY OF SAN MATEO
HEALTH SYSTEM

County's Objectives for Assessment of San Mateo Plain Sub-Basin

- Describe all of the various groundwater management strategies available and identify all GSA-eligible and non-GSA-eligible agencies and various interested stakeholder groups
- Identify long-term strategies to sustainably manage groundwater resources through local policies and cooperative relationships

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Next Steps

- Draft resolution for adoption by stakeholders
- Potential agenda items for future meetings:
 - Updates on ongoing studies and projects in the Basin
 - Updates on the Sustainable Groundwater Management Act
 - Information about adjacent basins