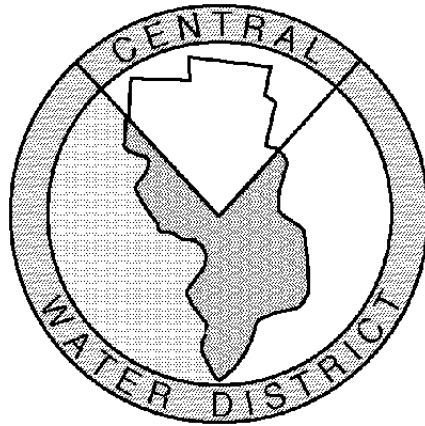


# Mid-County Groundwater Stakeholder Meeting

Seventh Meeting  
June 30, 2015

# Meetings are Sponsored by:



# Purpose of Groundwater Stakeholder Meetings

- ▶ Convene Mid-County groundwater basin users in a series of discussions.
- ▶ Share information about groundwater hydrology, groundwater rights, water use efficiency, basin sustainability and management approaches.
- ▶ Develop common understanding of issues.
- ▶ Develop recommendations for basin protection and management strategies.
- ▶ Address the role and responsibilities of non-agency groundwater pumpers.

# Meeting Topics

- ▶ May 13, 2014: Overview of basin conditions and management
- ▶ July 8: Detail on basin hydrology and issues
- ▶ August 27: More time for discussion
- ▶ September 9: State and local groundwater law and new approaches to management
- ▶ December 18: the new sustainable groundwater management act, key basin management questions, and process for future decision-making
- ▶ January 27: Develop recommendations for moving toward sustainable basin management
- ▶ June 30: Drought, Updates on GW Mgt. Plan, Discuss Approaches

# Agenda

- I. **Updates on Drought, Sea Water Intrusion, Q&A**  
(25 min)
- II. **SGMA Refresher & Your Early Input re: Plan**  
(50 min)
  - A. Water management strategies to consider
  - B. How to cover groundwater management costs
- III. **Next Steps (45 min)**
  - A. Establishing Groundwater Sustainability Agency
  - B. Your input on community engagement approach

# Updates

## ➤ Drought

- John Ricker, Santa Cruz County

## ➤ Sea Water Intrusion & Progress on Related Modeling Work

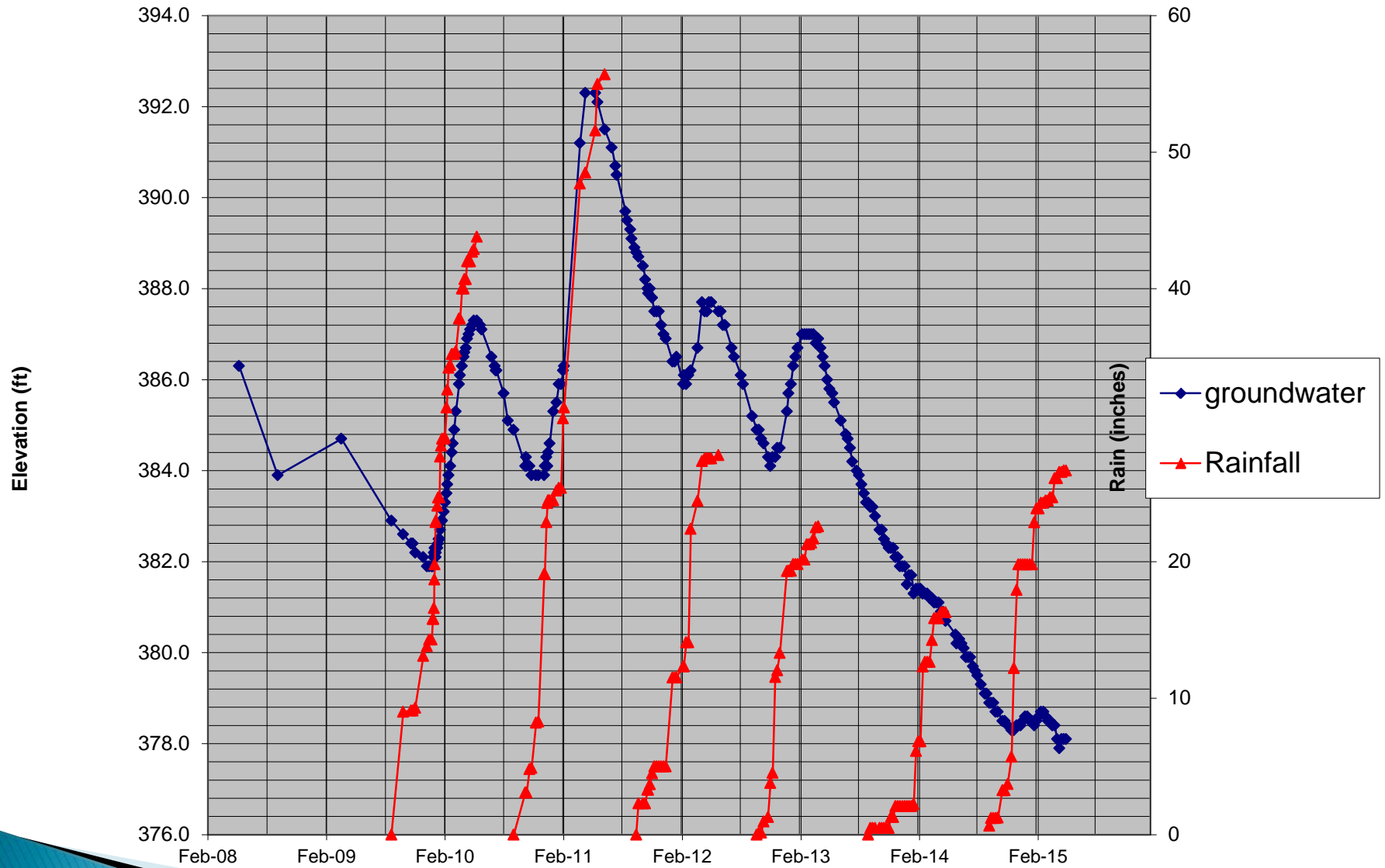
- Ron Duncan, Soquel Creek Water District

## ➤ Questions?

# Continuing Drought

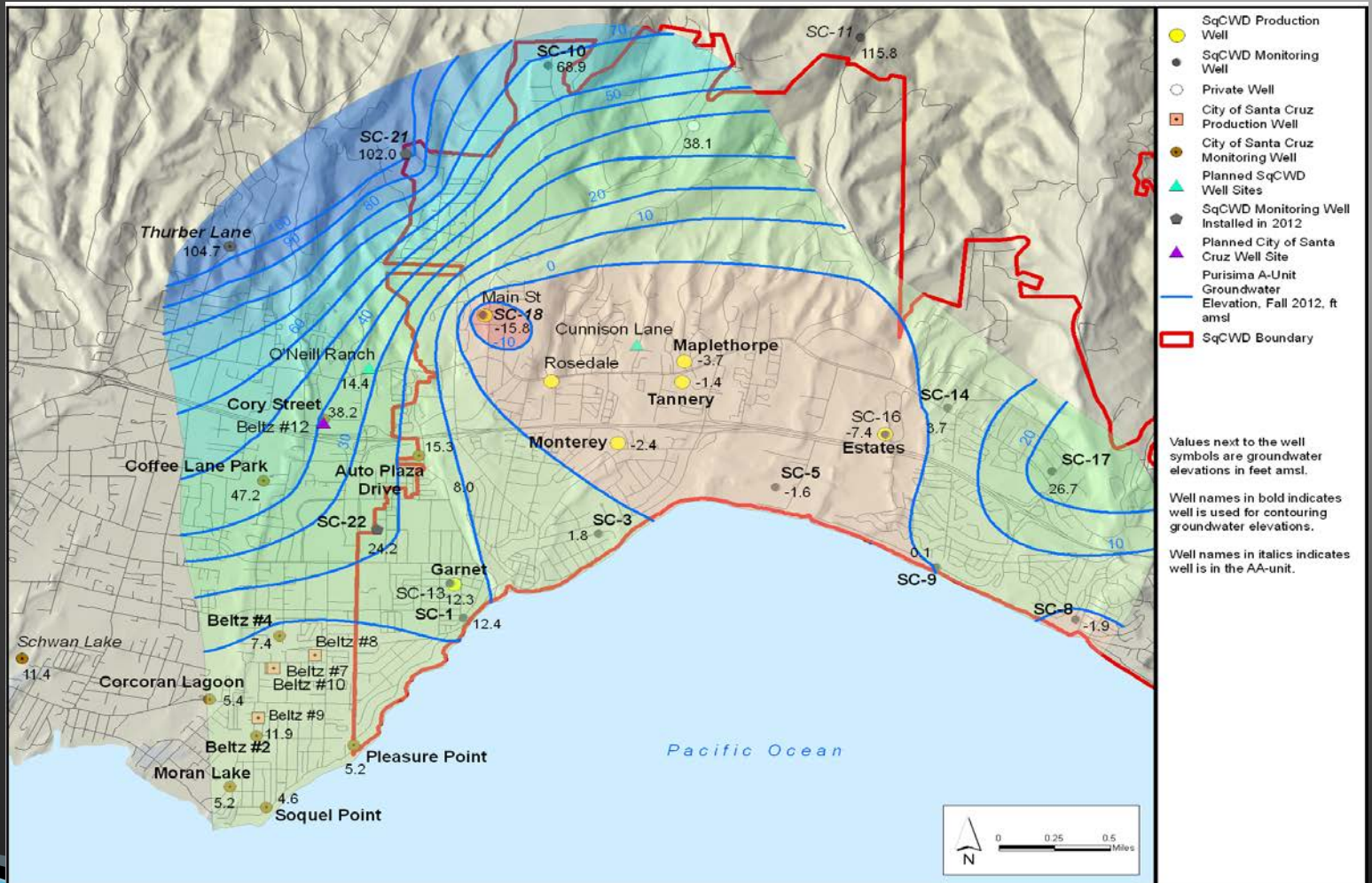
- ▶ Impacts in Fourth Year of Drought:
  - Declining streamflow and water quality; Soquel Creek less than 30% of normal
  - Declining groundwater levels, limited recharge
  - Benefits of reduced pumping on coastal groundwater levels
- ▶ Even after drought we still have overdraft conditions
- ▶ This is likely just the beginning; Need to plan for future droughts

# Inland Groundwater Levels, Soquel

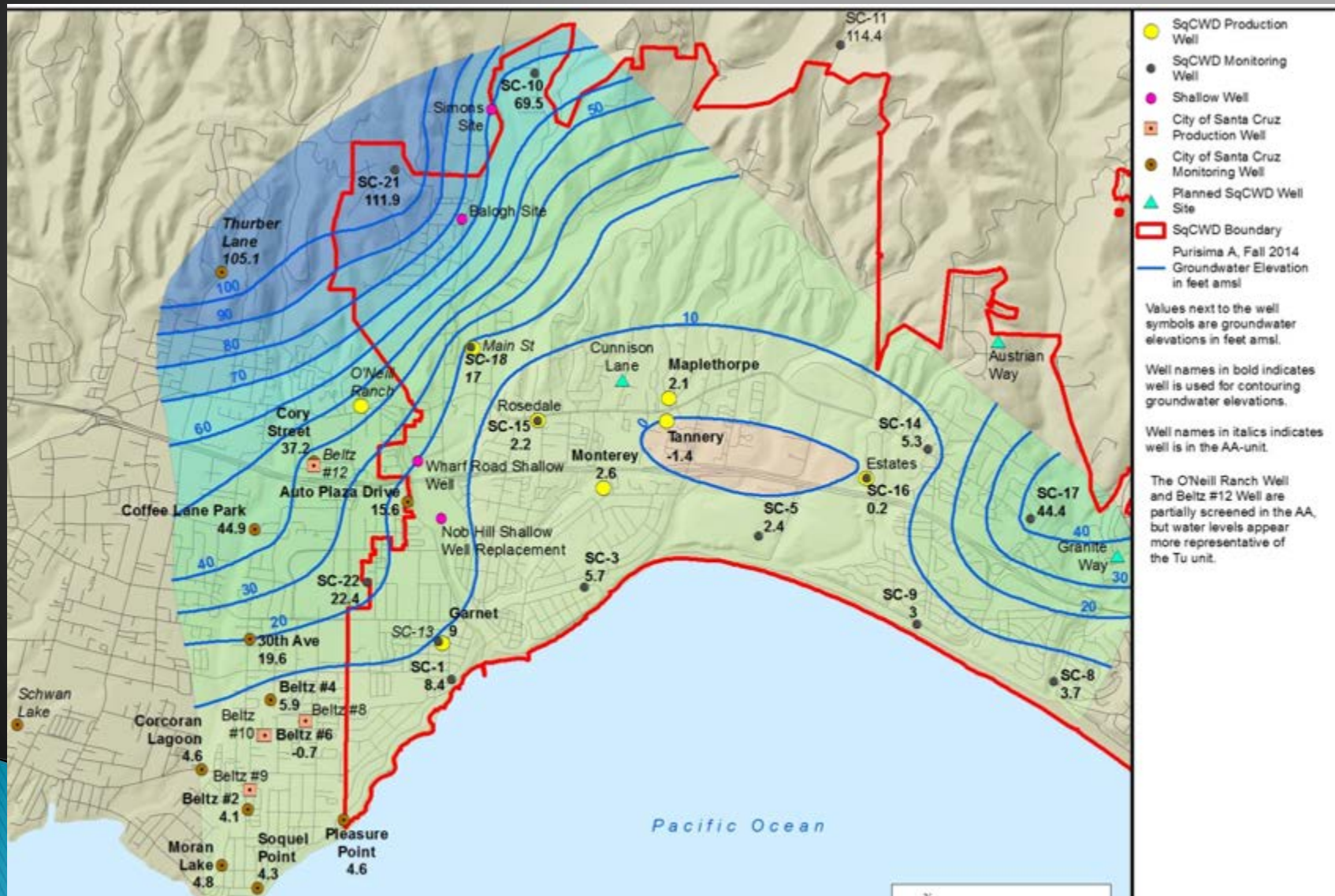




# Purissima A, Fall 2012



# Purisima A, Fall 2014

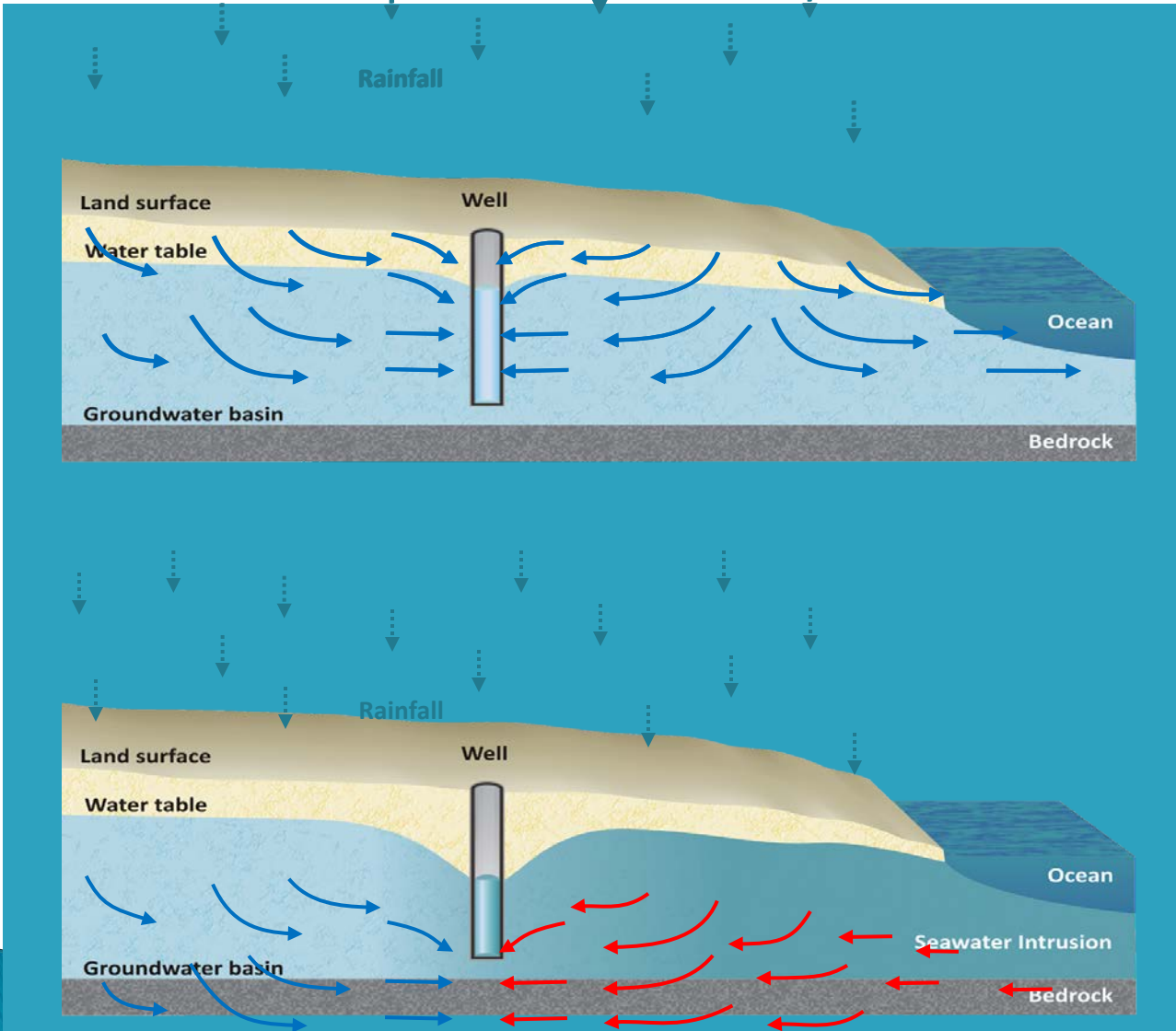


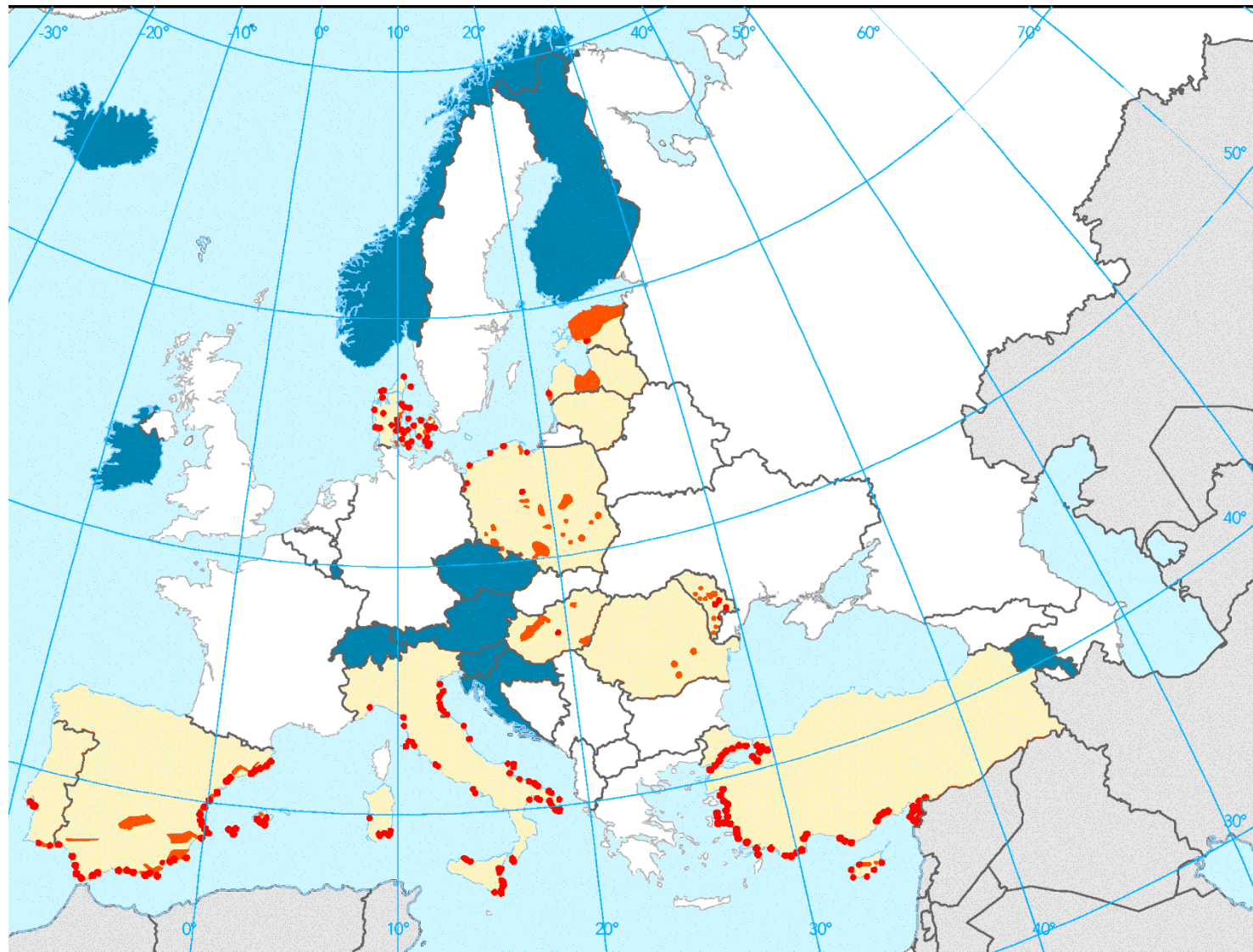
# Conservation and Restrictions

- ▶ Reduce Use by 25% since 2013 (state and County)
- ▶ Limit irrigation to 2 days per week 5 pm–10 am
- ▶ Automatic shut-offs on hoses
- ▶ No water on pavement or runoff
- ▶ New metering requirements for small water systems (5–199 connections)
- ▶ Good time to have individual meters
- ▶ County Assistance Available
  - Groundwater Level Measurements
  - Technical Assistance
  - Water Waste Enforcement
  - Contact Sierra Ryan: 454–3133






▶ Questions?

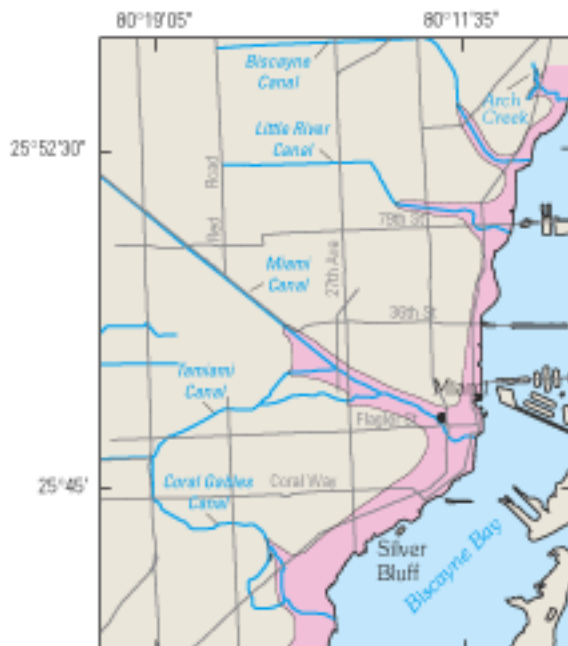
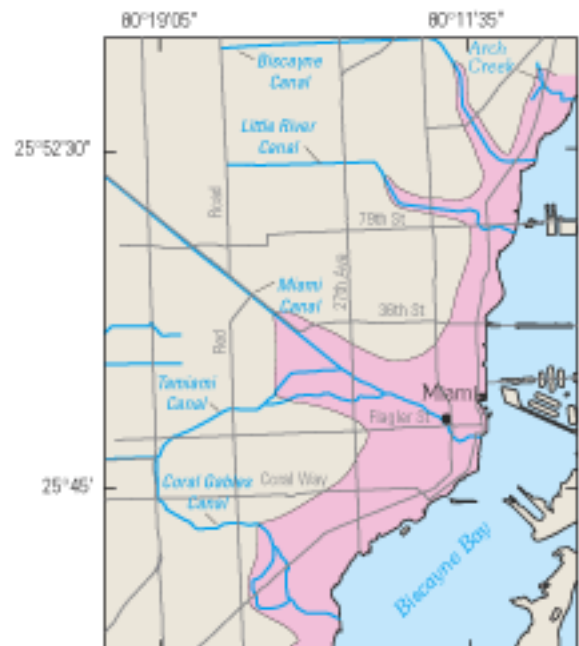
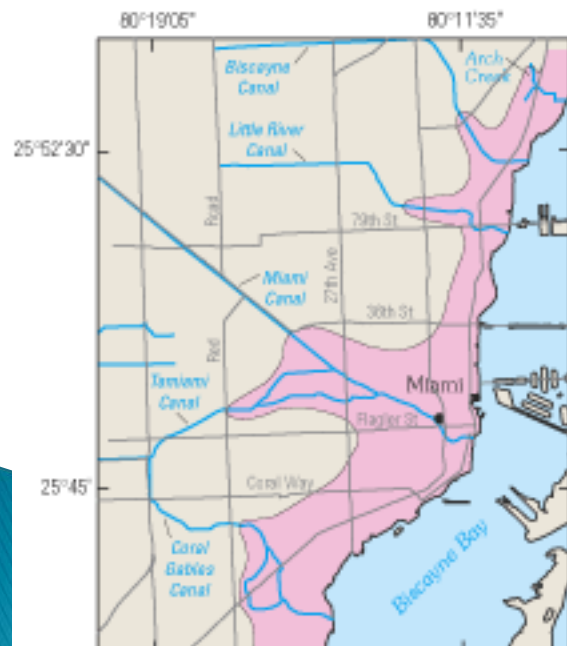
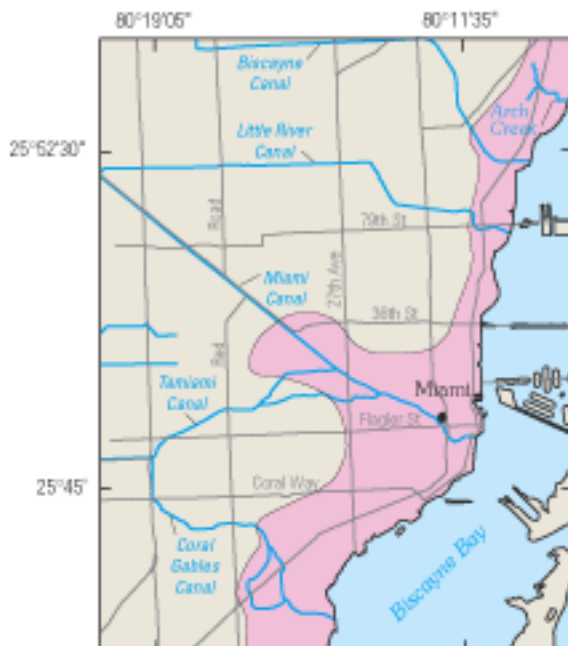
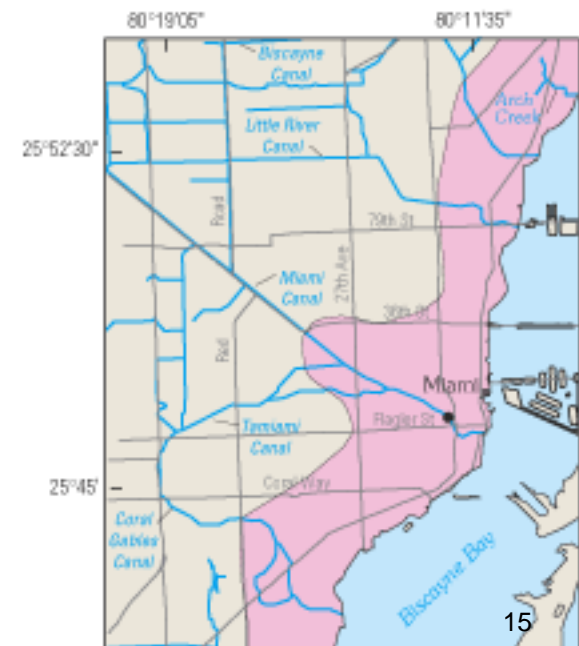
# Seawater Intrusion





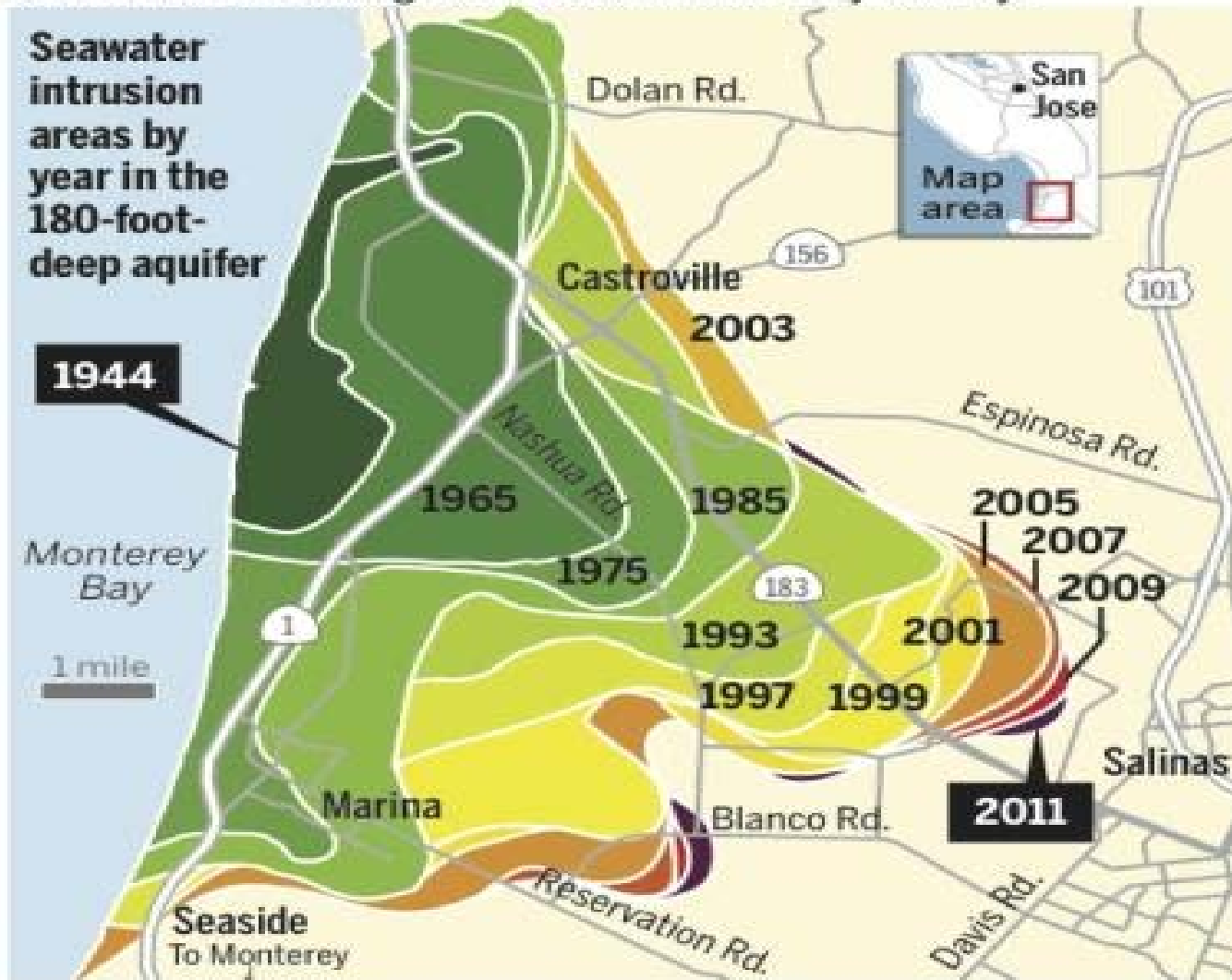
### Salt water intrusion due to groundwater overexploitation

-  Salt water intrusion
-  Groundwater overexploitation
-  No groundwater overexploitation
-  No data
-  Outside data coverage

**A. 1904****B. 1943****C. 1946****D. 1953****E. 1977****F. 1995**

# Slowing seawater intrusion

Narrowing bands representing brackish water reflect actions to conserve groundwater in Monterey County.

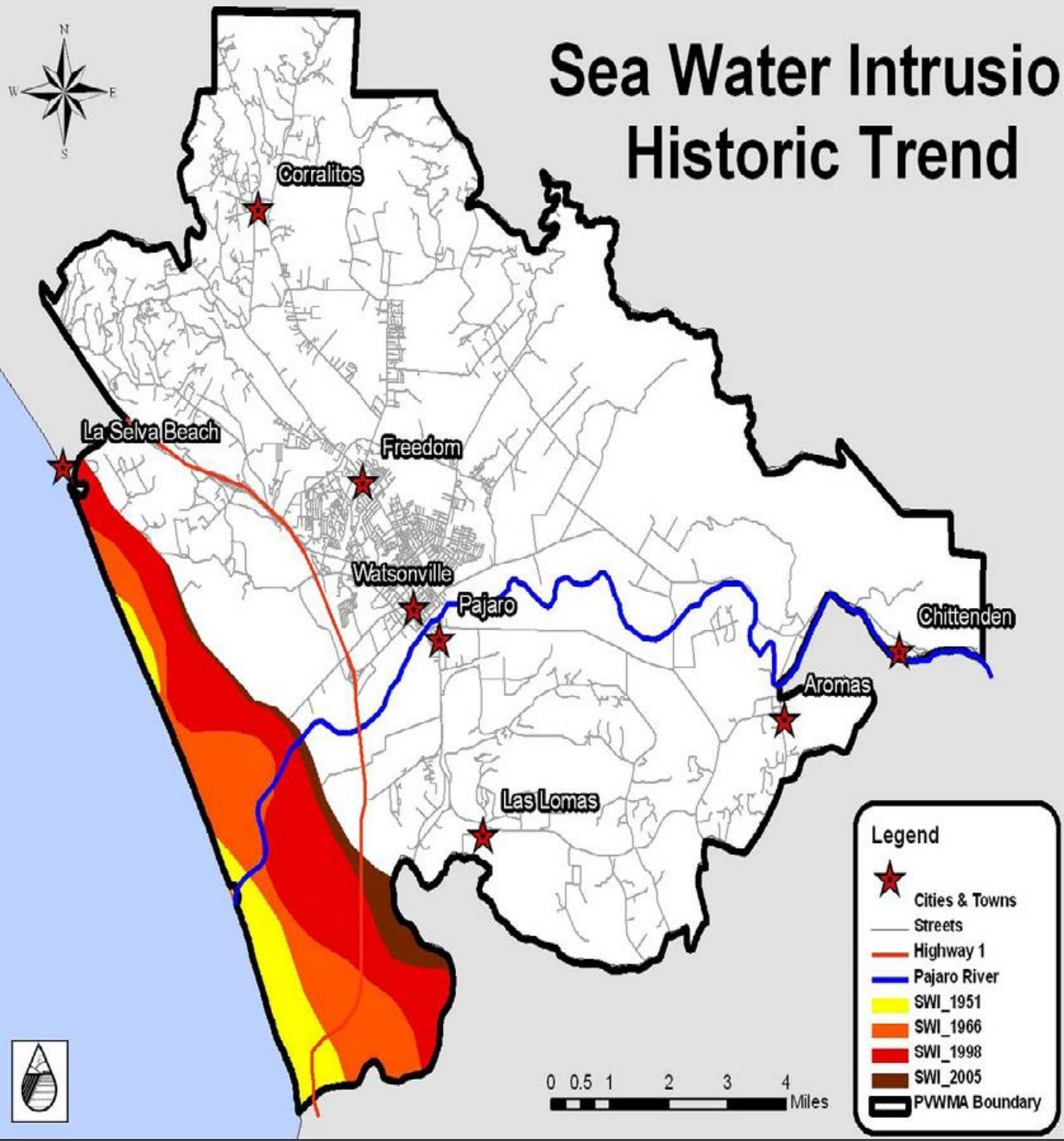


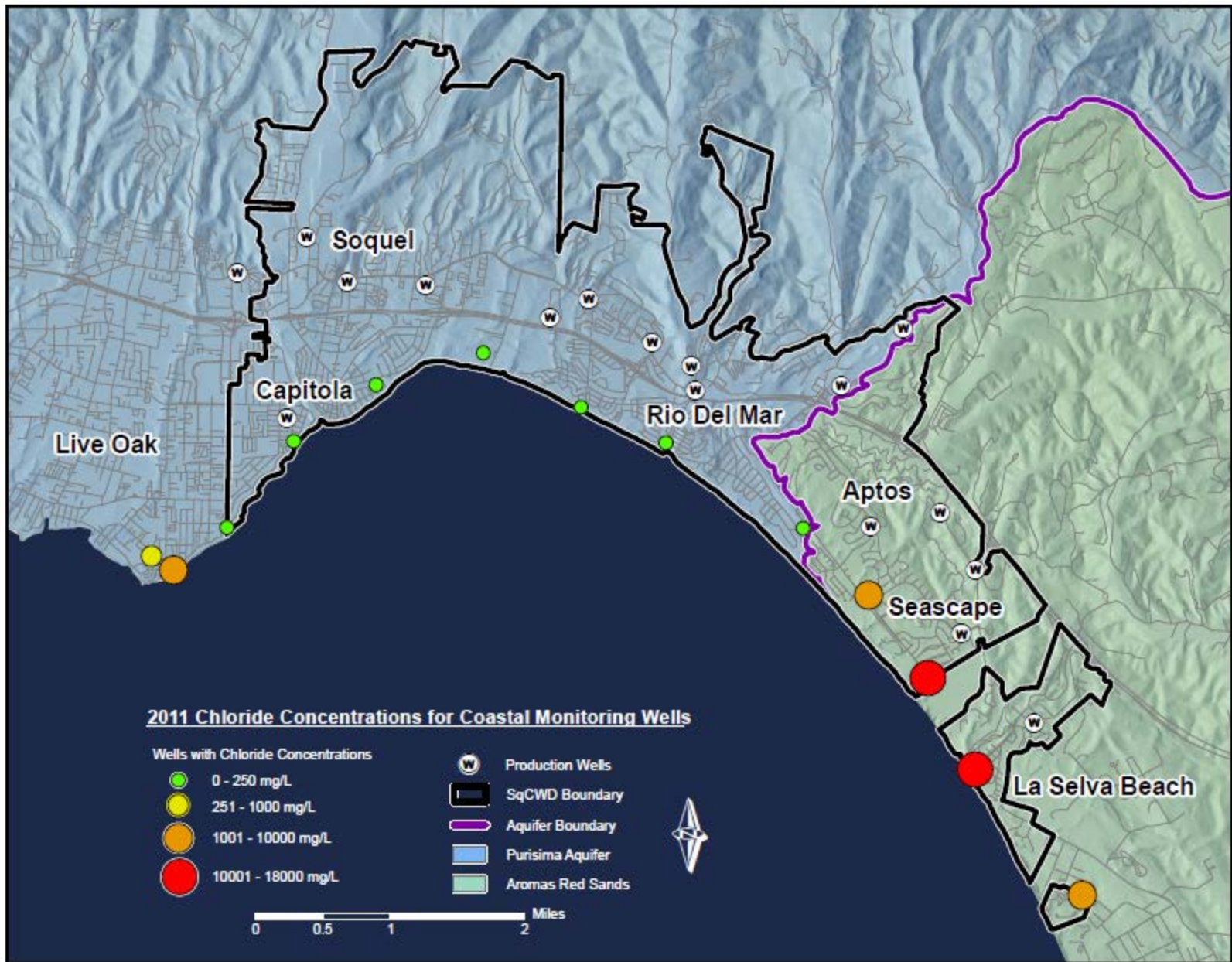
Source: Monterey County Water Resources Agency

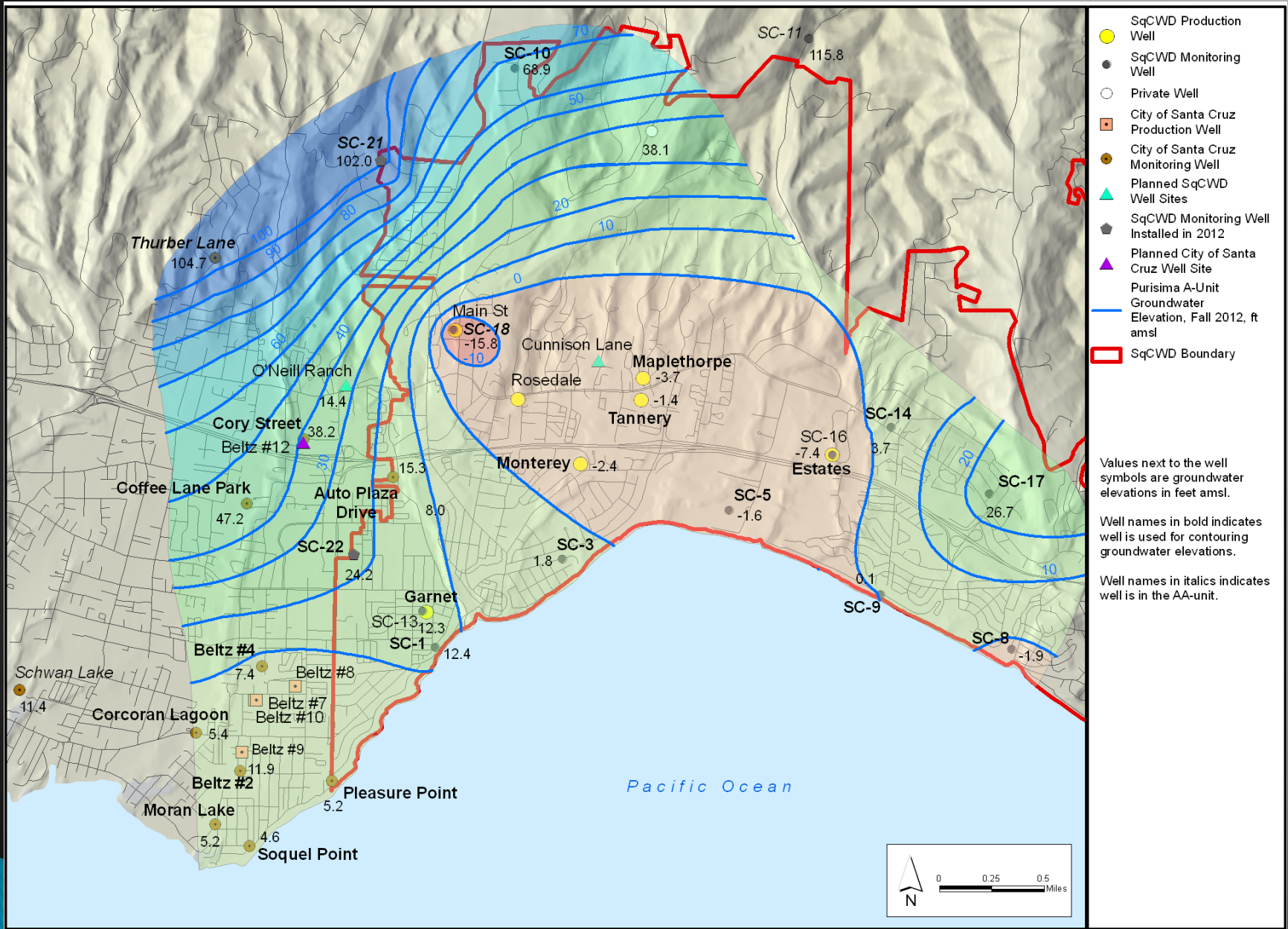
BAY AREA NEWS GROUP



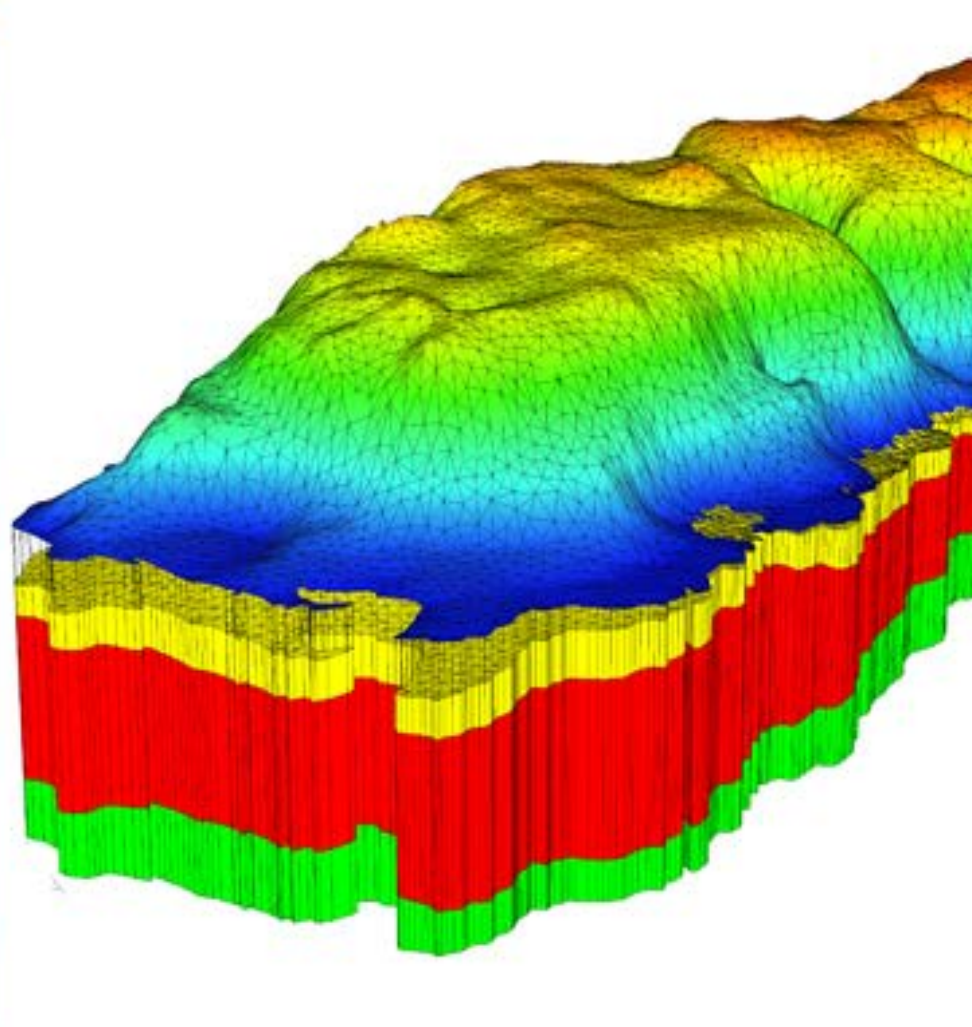
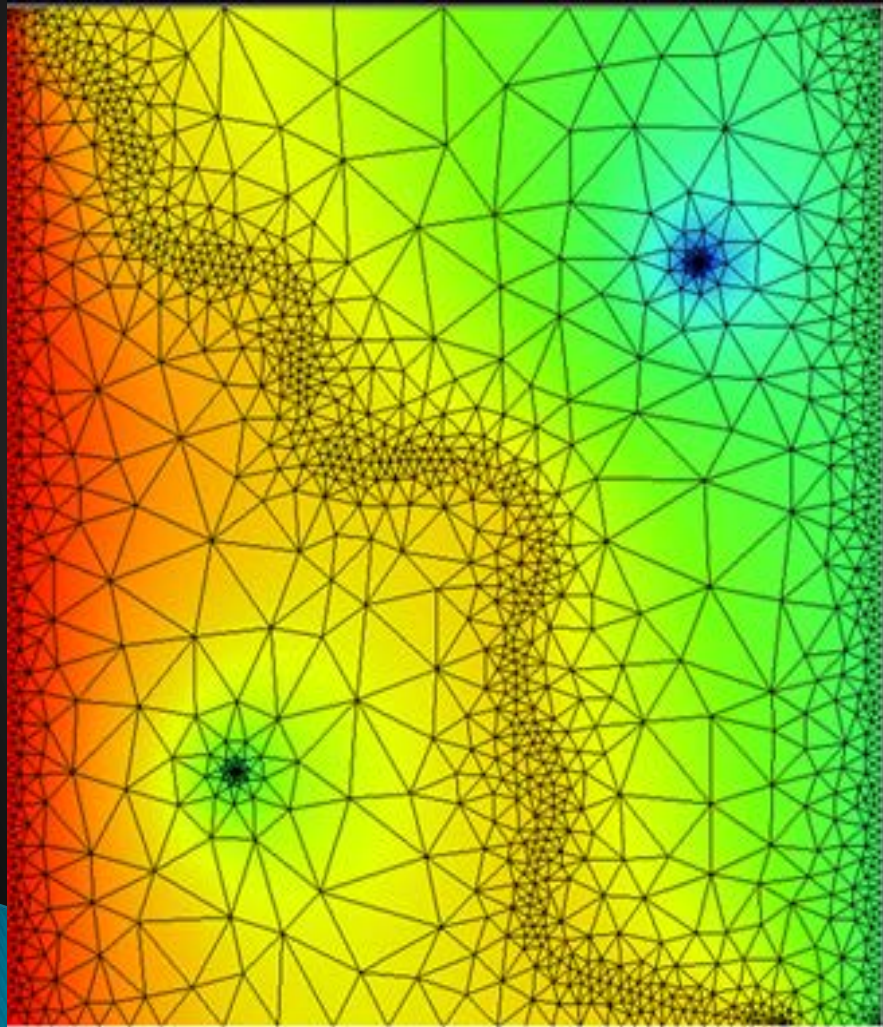
# Sea Water Intrusion Historic Trend







# Modflow – USGS Model



# 1 hour ~ GSA Area Yearly Water Use



▶ Questions?

- ▶ **Brief Refresher on Requirements of Sustainable Groundwater Management Act (John Ricker)**

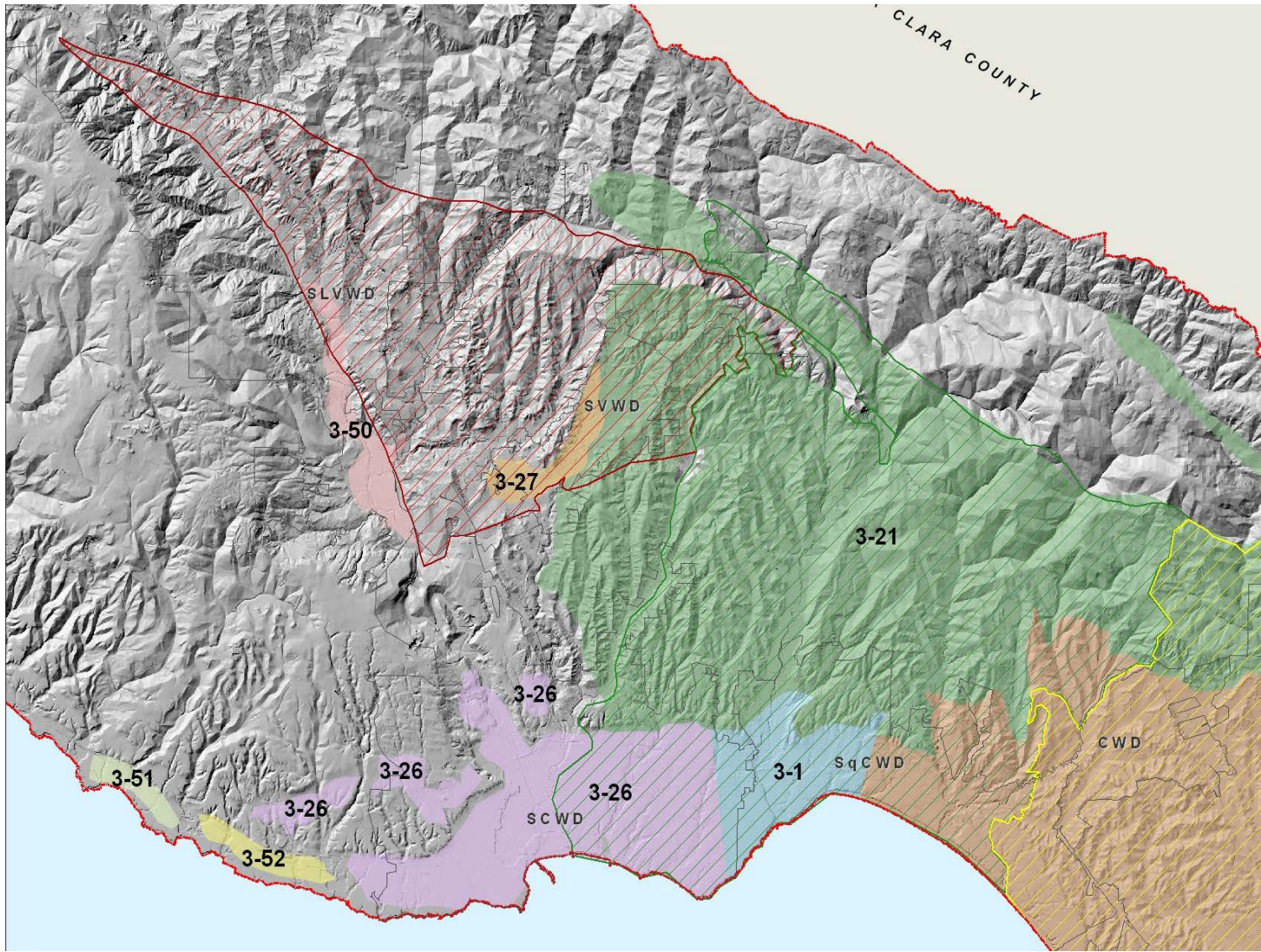
# Sustainable Groundwater Management Act

- ▶ Develop and implement a plan that will prevent undesirable results:
  - Chronic lowering of groundwater levels
  - Significant, unreasonable reductions in storage
  - Significant, unreasonable degradation of water quality, seawater intrusion
  - Significant, unreasonable depletion of surface water
- ▶ Local agency or combination of agencies may form Groundwater Sustainability Agency (GSA)
- ▶ GSA may measure and limit extraction, impose management fees, enforce the terms of the groundwater sustainability plan
- ▶ Involvement of Stakeholders
- ▶ Coordination with land use agencies
- ▶ Funding and technical assistance
- ▶ State oversight and action if locals fail to act



# The Sustainable Groundwater Management Act

- ▶ January 1, 2015 – Legislation went into effect
- ▶ January 31, 2015 – DWR completes initial basin prioritization
- ▶ January 1, 2016 – DWR adopts criteria for modifying basin boundaries
- ▶ June 30, 2017 – Local GSA's must be formed
- ▶ January 31, 2020 – GSP's for basins in critical overdraft
- ▶ January 31, 2022 – GSP's for other medium and high priority basins
- ▶ Annually – GSA submits report on elevation, extraction, storage
- ▶ 20 years after plan adoption: sustainability achieved

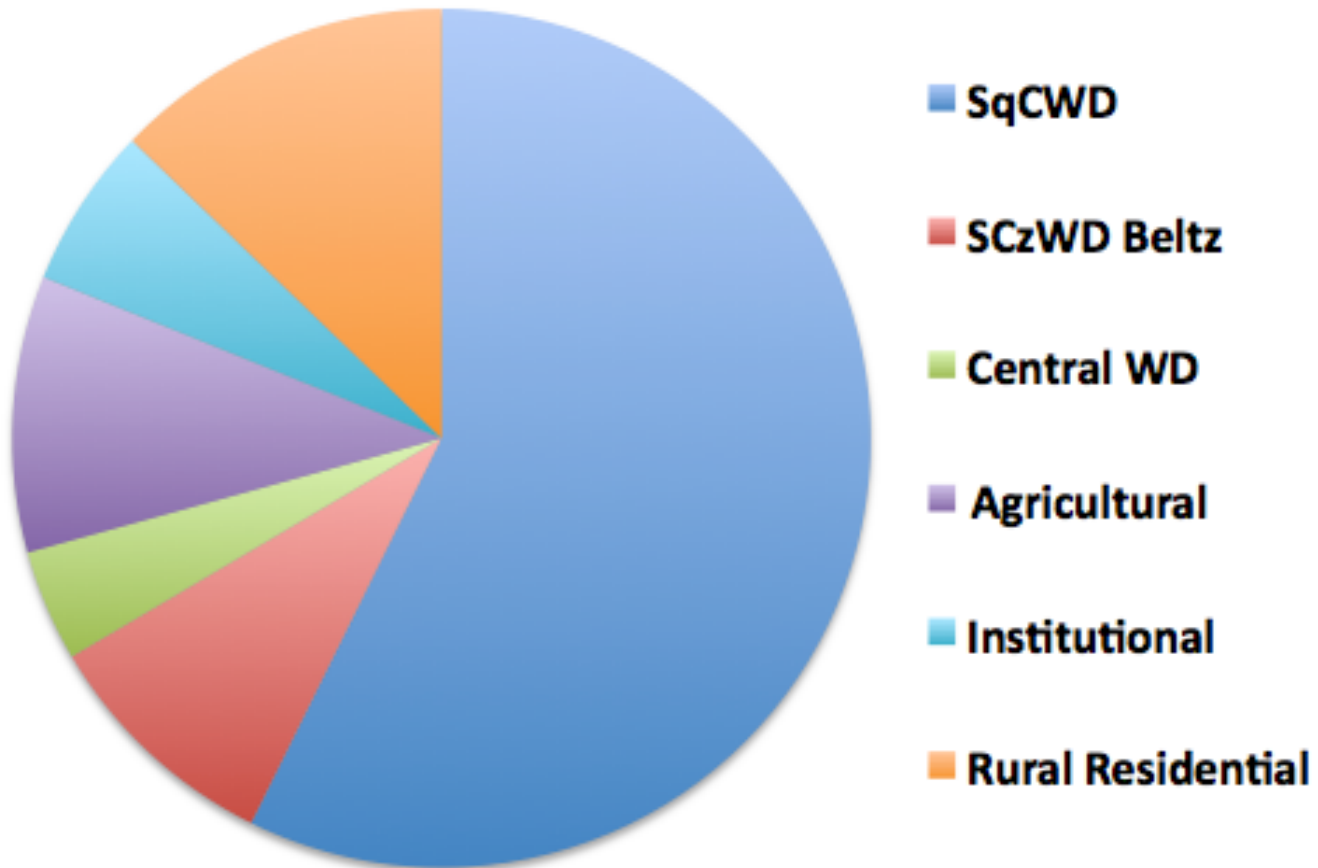


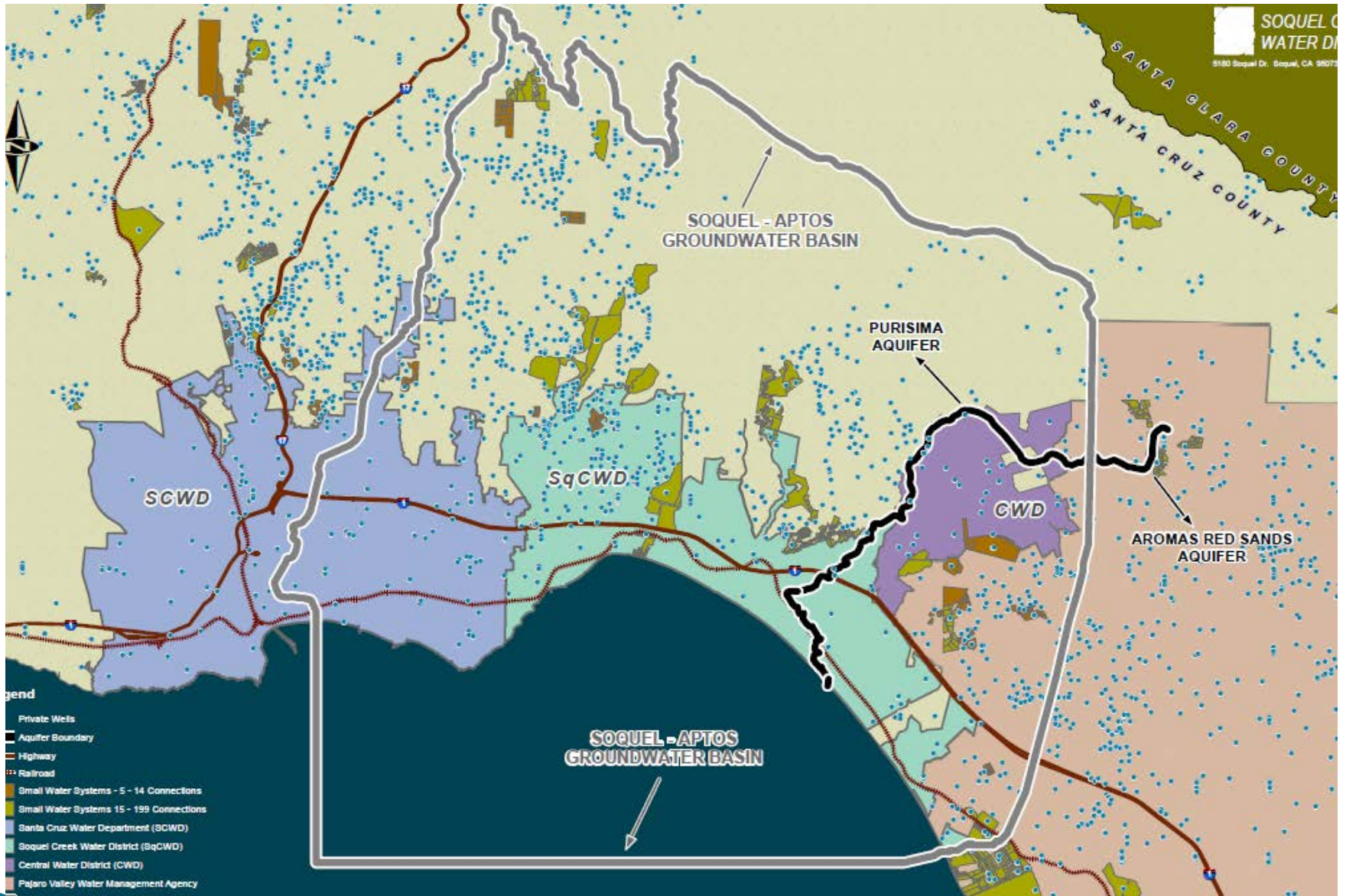
# SGMA Efforts in Soquel–Aptos

- ▶ Work with State on Regulations for Boundaries, GSA, and Plans
- ▶ Update Basin Boundary and Priority – January 2017
- ▶ Form Soquel–Aptos Groundwater Management Committee
  - SqCWD
  - CWD
  - City of Santa Cruz
  - County
- ▶ Engage with stakeholders, users
- ▶ Form Groundwater Sustainability Agency – by June 2017
- ▶ Evaluate groundwater use and model groundwater basin conditions
- ▶ Update Groundwater Plan to meet requirements of a Groundwater Sustainability Plan – 2020 or 2022
- ▶ Implement Plan for Sustainability by 2040 or 2042

# Consumptive Water Use

**Total Area 2014**  
After return flow 5,763 AFy





▶ Questions?

# Discussion Questions (Part 1)

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## Water Management Strategies:

1. Can we manage our groundwater sustainably through conservation alone or do we need to expand supply?
2. Where are the best opportunities for expanded conservation?
3. Where are the best opportunities for expanded supply?

# Discussion Questions (Part 2)

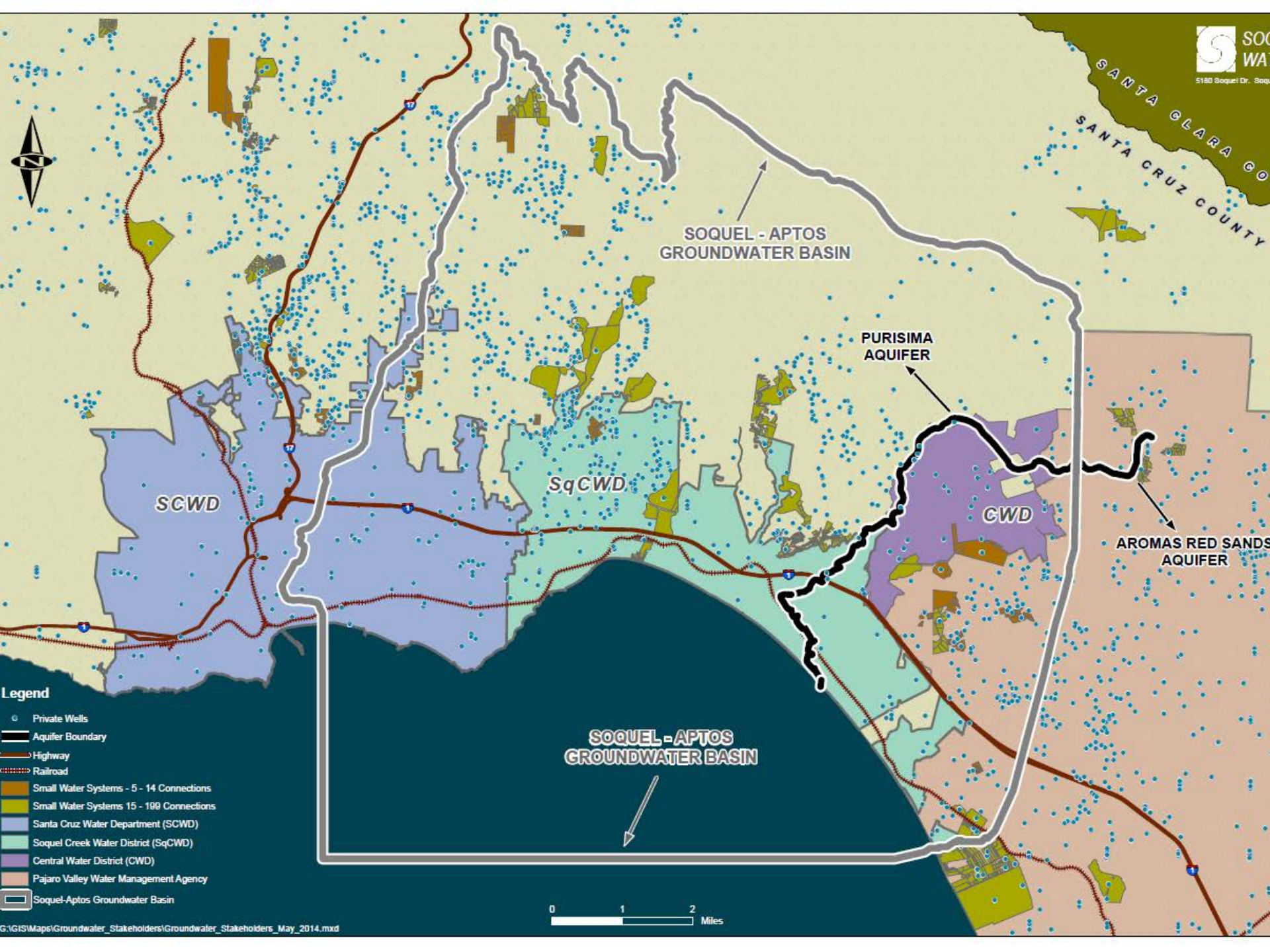
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## Cost Allocation

1. If a surcharge is required to cover the cost of managing groundwater sustainably, what functions should the surcharge support?
2. If such a surcharge is needed, how can it be shared fairly by water customers? Should all contribute, or only certain types? Should all contributors pay equally?



- ▶ Next Steps in Managing Our Groundwater Sustainably
  - Forming Groundwater Sustainability Agency
  - Establishing community engagement approach



SOQUEL - APTOS  
GROUNDWATER BASIN

PURISIMA  
AQUIFER

AROMAS RED SANDS  
AQUIFER

SCWD

SqCWD

CWD

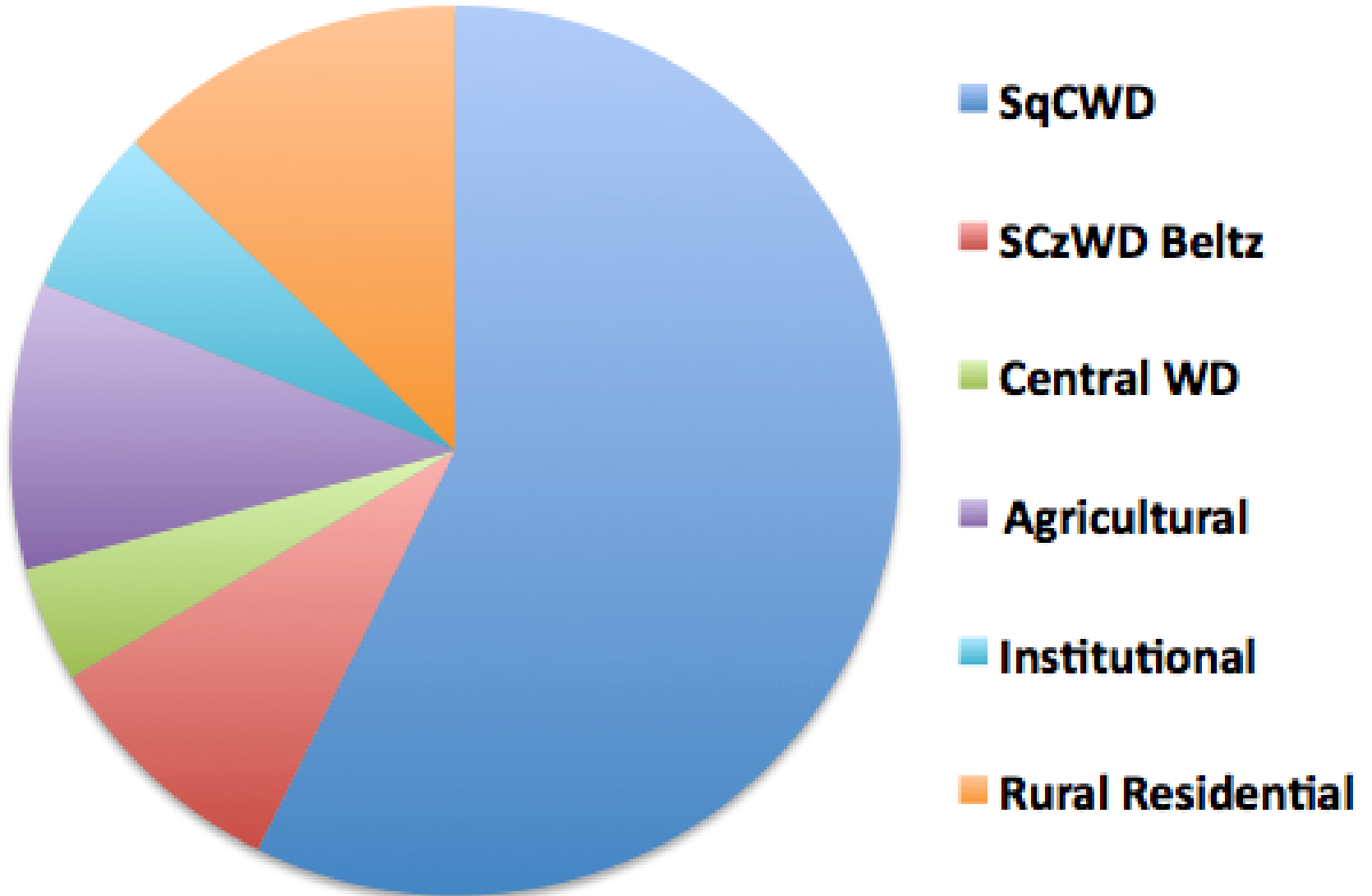
SOQUEL - APTOS  
GROUNDWATER BASIN

**Legend**

- Private Wells
- Aquifer Boundary
- Highway
- Railroad
- Small Water Systems - 5 - 14 Connections
- Small Water Systems 15 - 199 Connections
- Santa Cruz Water Department (SCWD)
- Soquel Creek Water District (SqCWD)
- Central Water District (CWD)
- Pajaro Valley Water Management Agency
- Soquel-Aptos Groundwater Basin

0 1 2 Miles

**Total Area 2014**  
After return flow 5,763 AFy



# Sustainability Agency Timeline

BIG already working

New Law: SGMA

SAGMC expands

GSA notice of intent

Initial Susty Plan in place

State required GSA

2013

2015

2016

2017

2017



Sep 2014

Mar 2015

Feb 2016

Jun 2017

Jun 2017



GSA Formation

Apr '15

Jun '17

# GSA Formation

- ▶ Understand requirements and possible structures
- ▶ Model for governance; scope
- ▶ Timeline
- ▶ Involvement of stakeholders
- ▶ Data: groundwater model, usage by groups, sea water intrusion
- ▶ Sustainability with climate change, sea rise
- ▶ Mechanisms for management

# Community Involvement

- ▶ How to structure input during GSP formation
- ▶ Several engagement meetings; breakouts?
- ▶ Need to understand system details
- ▶ Voices for differing groups of stakeholders
  - Agriculture
  - Small Water Systems
  - Camps, recreation
  - Business, schools
  - Rural residences
  - Environment

# Between now and then...

- ▶ Formation subcommittee: 8 – 10 mtgs
- ▶ Models and scenarios
- ▶ Enough detail to understand
- ▶ Bylaws; initial goals and objectives
- ▶ How to measure use, refine rural estimates
- ▶ Include climate effects in projections
- ▶ Community work on goals, focus

# Developing Community Engagement Plan to Inform Development of Groundwater Sustainability Plan

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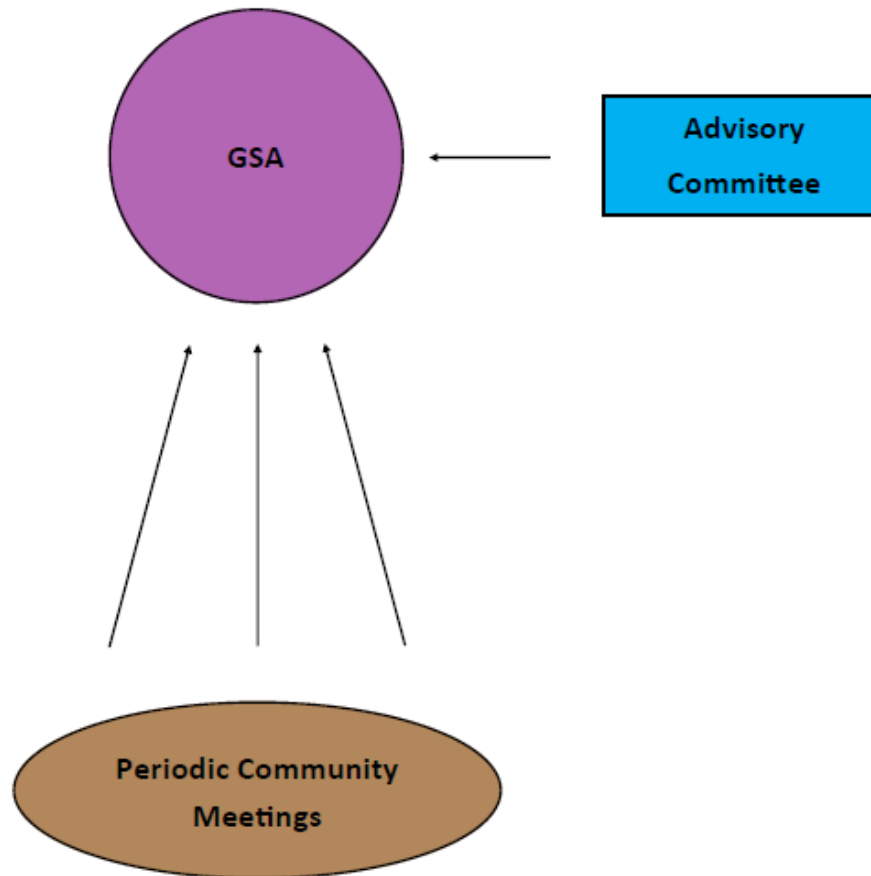
- S-AGMC leadership via GSA Formation Subcommittee
- State Water Resources Control Board funds made consultant support available through CSUS Sacramento's Center for Collaborative Policy (CCP)
- CCP developing recommendations based on 20 stakeholder interviews with:
  - Private and public groundwater suppliers & users
  - Environmental groups
  - Reps of nearby basins & related initiatives
  - Elected and appointed officials



# Emerging Themes

- GSA Formation: Periodic community meetings
- GSP Development:
  - Expanded stakeholder engagement opportunities
  - Ensure all get value from GSP
- Varied forums for varying interest levels
- Independent pumper involvement is key
- Emphasize “carrots” (vs. “sticks”)
- Make groundwater sustainability a community challenge & celebrate progress

# Community Engagement During GSP Development For the Soquel–Aptos Groundwater Management Area Model 1: Input–Oriented Advisory Committee

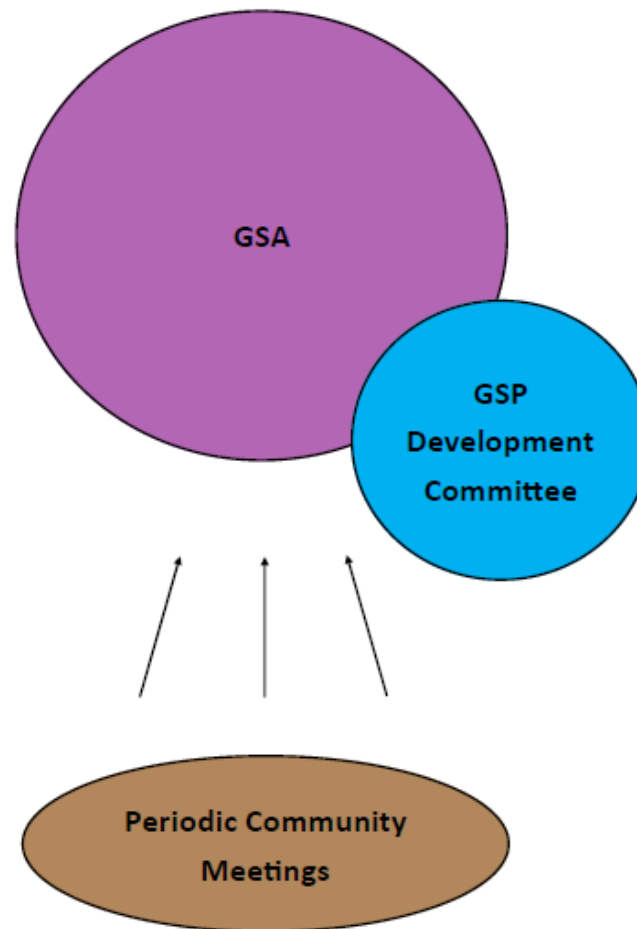


# Community Engagement During GSP Development For the Soquel-Aptos Groundwater Management Area

## Model 2.A: GSA/Advisory Committee Collaboration

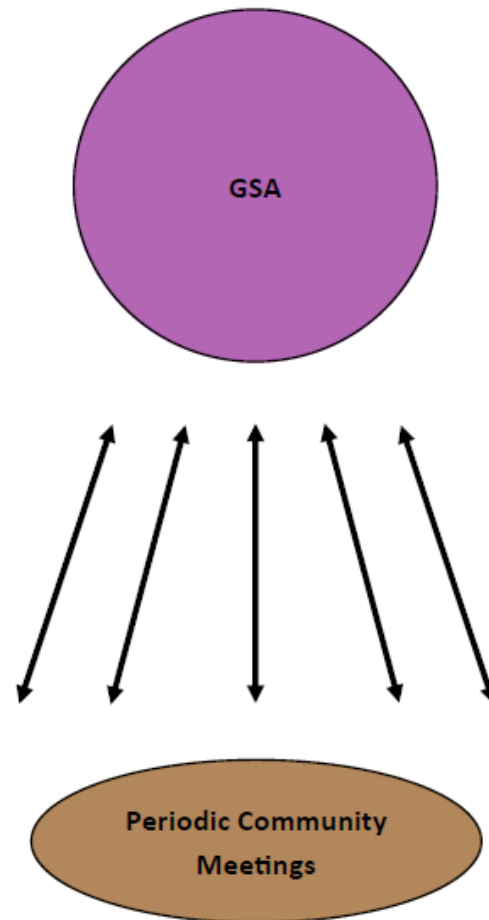


# Community Engagement During GSP Development For the Soquel-Aptos Groundwater Management Area Model 2.B: GSA/Advisory Committee Collaboration via Subgroup



# Community Engagement During GSP Development For the Soquel-Aptos Groundwater Management Area

## Model 3: Expanded Community Input Opportunities



# Feedback?

- ▶ Which model do you prefer?
- ▶ Which model would best meet community's needs?
- ▶ Why?
- ▶ Further feedback welcome:  
Marci DuPraw, Center for Collaborative  
Policy  
916-995-5725 / [mdupraw@ccp.csus.edu](mailto:mdupraw@ccp.csus.edu)

# Closing Comments

- How this input will be used
- When to expect next meeting (fall)
- For information in the meantime:

Melanie Schumacher

Soquel Creek Water District

[MelanieS@soquelcreekwater.org](mailto:MelanieS@soquelcreekwater.org),

831-475-8501

**~THANK YOU!**