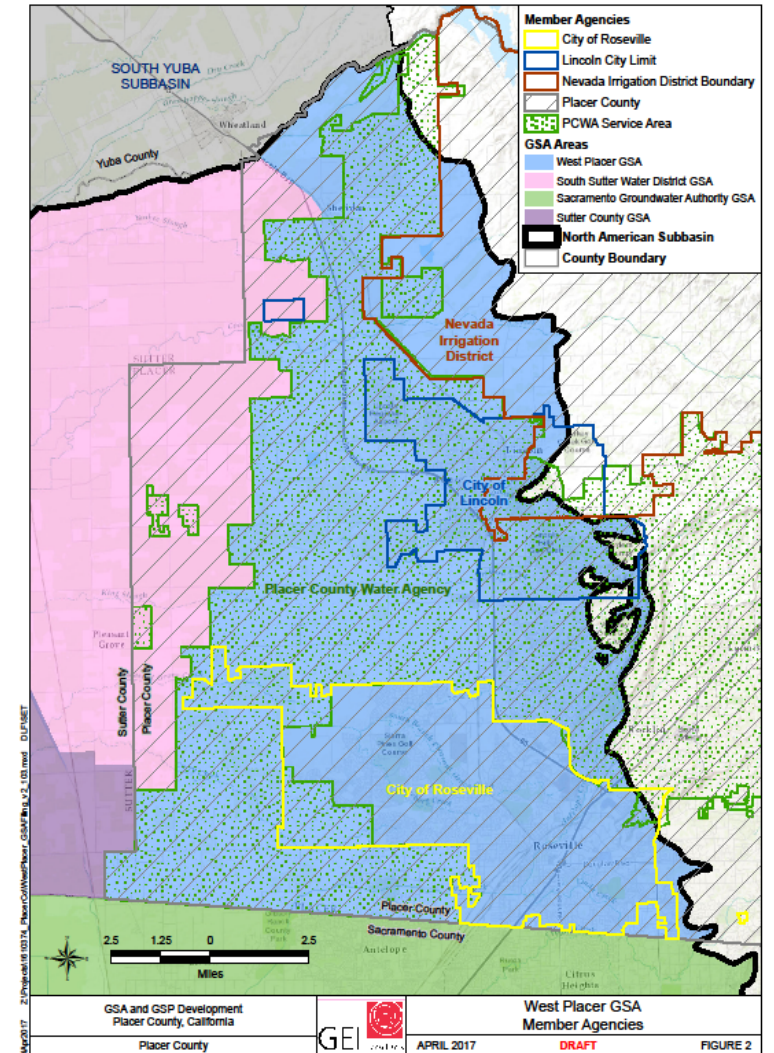




# West Placer Groundwater Sustainability Agency Public Meeting February 8, 2018



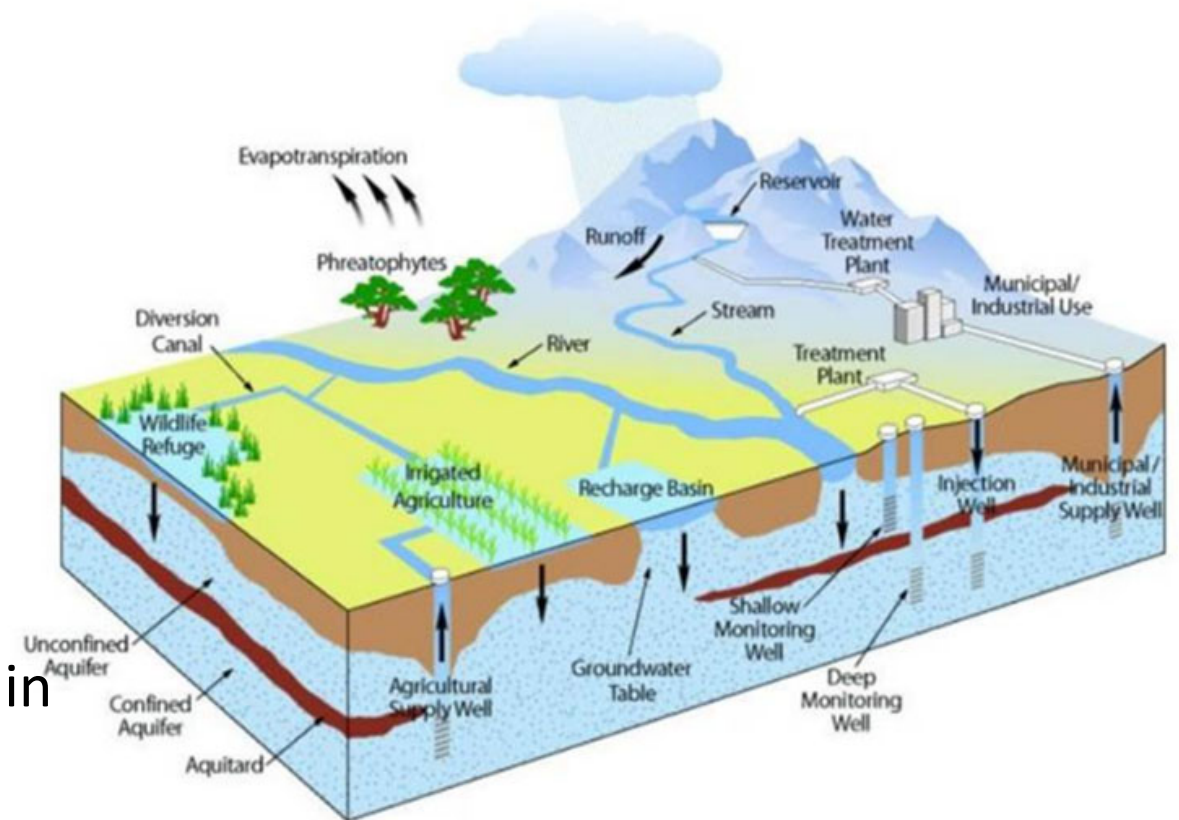


# Agenda

1. Public comment period
2. Public Information: Grant opportunities
3. GSA Discussion Items
4. GSP Discussion Items
5. Current Placer County Prop. 1 Grant Status
6. Items anticipated at next Public Meeting
7. Agency Updates

# West Placer Groundwater Sustainability Agency

- Covers portion of North American Sub Basin
- Forming Agencies:
  - City of Lincoln
  - City of Roseville
  - Placer County Water Agency (PCWA)
  - Placer County
  - Nevada Irrigation District
  - Cal American Water (Cal Am)
- GSA approved by DWR to implement SGMA in western Placer County.





# Sustainable Groundwater Management Act of 2014

- Enacted by state of California in 2015
- Framework for local groundwater basin management
- Brings together all stakeholders – agencies, groundwater users, public
- Groundwater Sustainability Plan due by January 31, 2022
- Only applies to wells using more than two acre feet of water per year  
***average family of 4 uses less than one acre foot/year***



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# Public Meeting

# Public Comment Period



# Public Meeting

## Grant Possibilities:

**Heather Kuklo**  
**Placer County Air Pollution**  
**Control District**



# GSA Discussion Items

- **West Placer Member Agency Activities**
  - Completed working on Grant Application
  - Reviewing the Groundwater Basin Water Quality Report
  - Developing Budget/Funding for 2018/2019
- **Consultant Activities (GEI Consultants)**
  - Supporting above actions



## **GSA Discussion Items**

**Groundwater Basin Water Quality  
Report:**

**David Fairman (GEI Consultants)**





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# West Placer County Water Quality Sampling

February 8, 2018



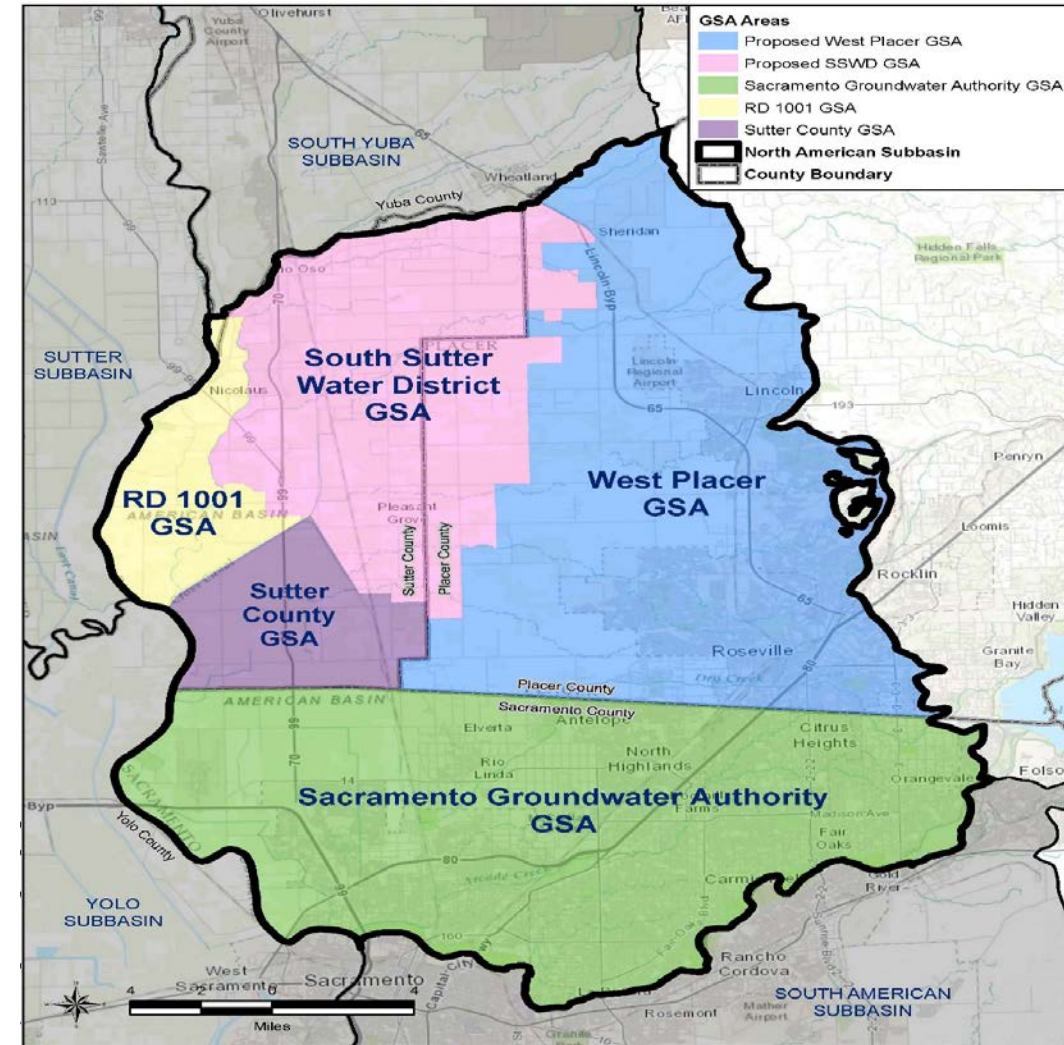


## Why was groundwater quality sampling performed in West Placer?

- The Sustainable Groundwater Management Act (SGMA) identifies degraded water quality as an “undesirable result” that must be avoided
- To protect primary beneficial uses of groundwater in West Placer (e.g. ag, drinking water/municipal)
- Existing groundwater quality information was sporadic
- Need to establish the “baseline” groundwater quality conditions and identify regional issues to be monitored and/or managed through SGMA



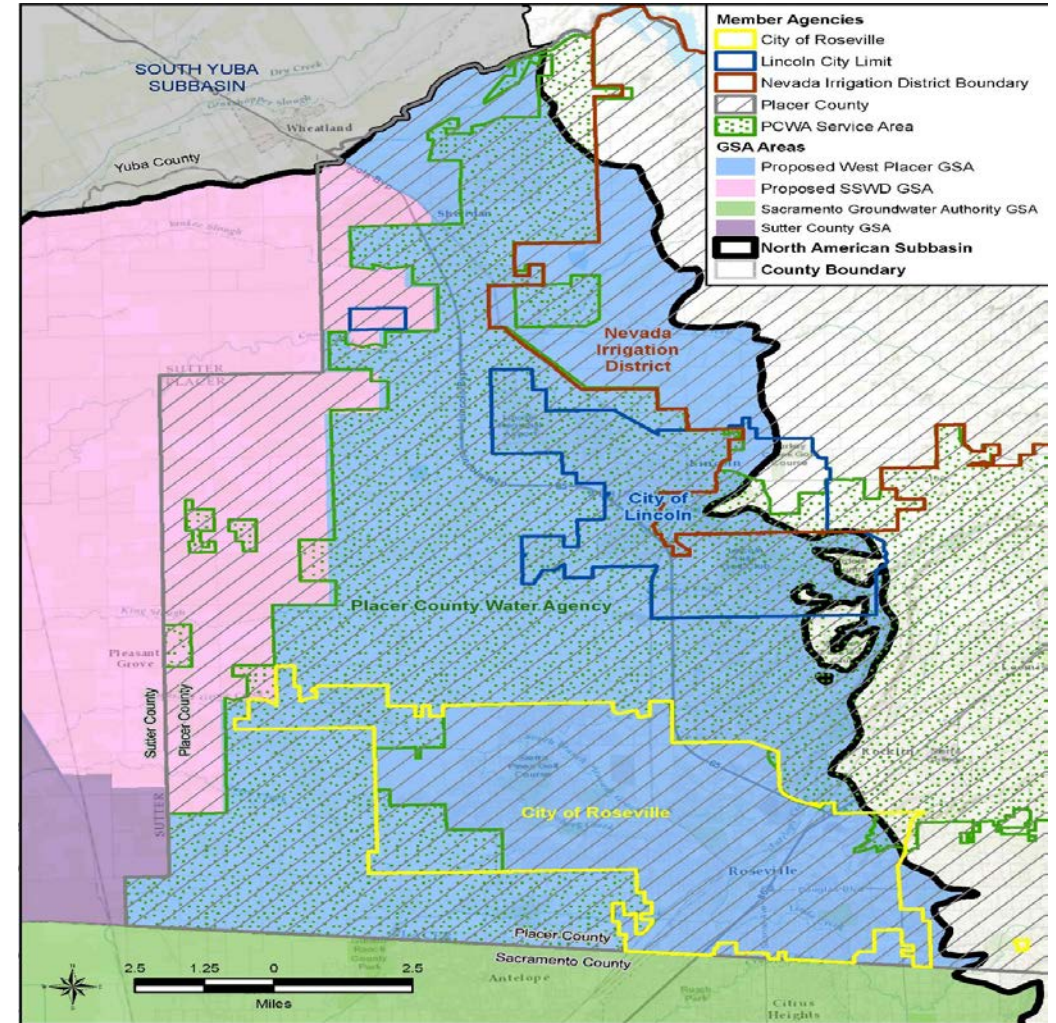
# North American Subbasin Groundwater Sustainability Agencies (GSAs)





# West Placer GSA Area and Member Agencies

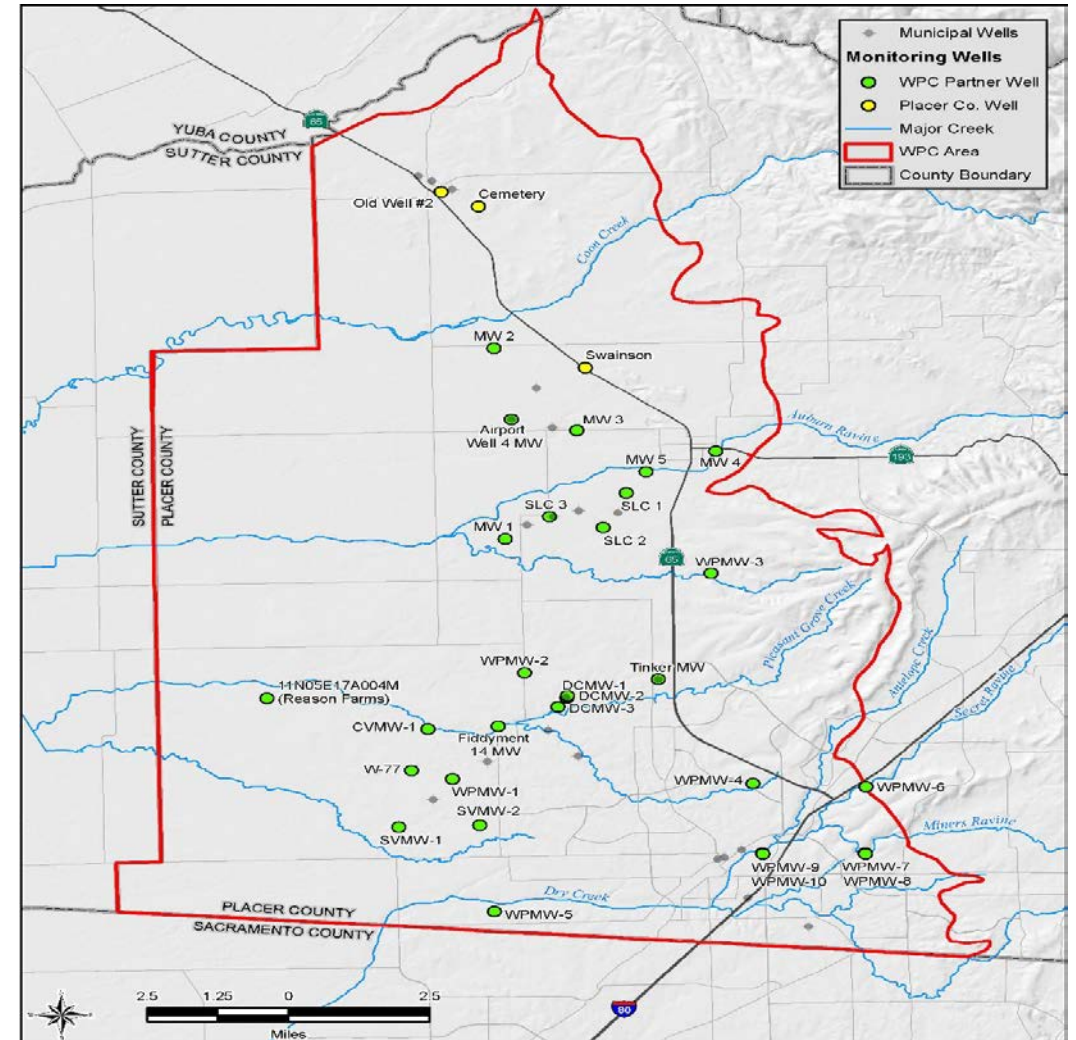
- City of Roseville
- City of Lincoln
- County of Placer
- Nevada Irrigation District
- Placer County Water Agency
- Cal American Water





# Baseline Groundwater Quality Study: Fall 2015 to Winter 2016

- ▶ 58 samples collected from 55 monitoring wells throughout West Placer
- ▶ Over 100 chemicals analyzed:
  - ▶ General minerals
  - ▶ Metals
  - ▶ Volatile organic compounds
  - ▶ Nitrate and Perchlorate
- ▶ **All water delivered through municipal systems meets drinking water standards**





## **Baseline Groundwater Quality Study: Agricultural**

- Results in comparison to key agricultural water quality constituents
  - Total Dissolved Solids (TDS or total salts)
    - Crops vary in their tolerance for salts, but some are experience reduced yields as low as 500 parts per million (ppm)
    - About 20% of wells had concentrations greater than 500 ppm



## **Baseline Groundwater Quality Study: Agricultural**

- Results in comparison to key agricultural water quality constituents
  - Sodium Adsorption Ratio (SAR)
    - 3.0 ppm is considered the threshold for potentially damaging soil structure
    - Shallow wells (< about 300 feet) had no samples above 3.0 ppm
    - Deeper wells (> about 300 feet) had about 40% of the samples above 3.0 ppm



# Baseline Groundwater Quality Study: Agricultural

- Results in comparison to key agricultural water quality constituents
  - Boron
    - 1.5 parts per million (ppm) is the threshold for potential damage to Boron sensitive crops
    - 3 of the 58 wells sampled had concentrations above 1.5 ppm





# Baseline Groundwater Quality Study: Drinking Water

- Results shown here are in comparison to drinking water standards
- All samples were from monitoring wells
- **All water delivered through municipal systems meets drinking water standards**

## Results for Primary Maximum Contaminant Levels (regulated to protect human health)

Constituent	Number of Samples <sup>1</sup>		Percent of Samples Below MCL
	Below MCL	Exceeding MCL	
Nitrate (as nitrate)	57	1	98%
Fluoride	57	1	98%
Arsenic	57	1	98%
Perchlorate	58	0	100%
Total Chromium	58	0	100%
Other Metals <sup>2</sup>	58	0	100%
Volatile Organic Compounds	58	0	100%

## Results for Secondary Maximum Contaminant Levels (regulated for aesthetics such as taste, color, and odor)

Constituent	Number of Samples <sup>1</sup>		Percent of Samples Below MCL
	Below MCL	Exceeding MCL	
Total Dissolved Solids (salts)	47	11	81%
Chloride	50	8	86%
Sulfate	57	1	98%
Manganese	36	22	62%
Iron	52	6	90%

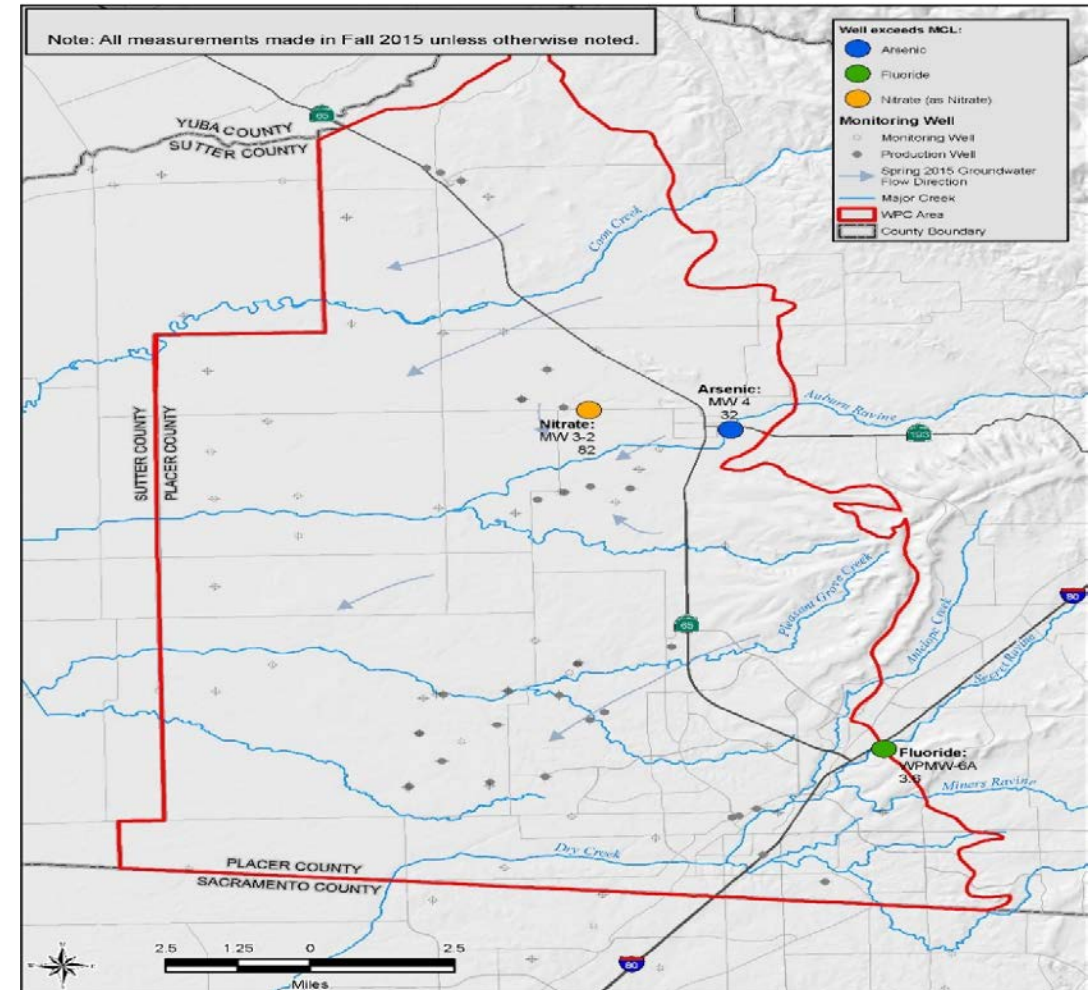
**Notes:**

<sup>1</sup> Total of 58 samples analyzed for each constituent

<sup>2</sup> Includes Al, B, Ba, Be, Cd, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn, Total Cr

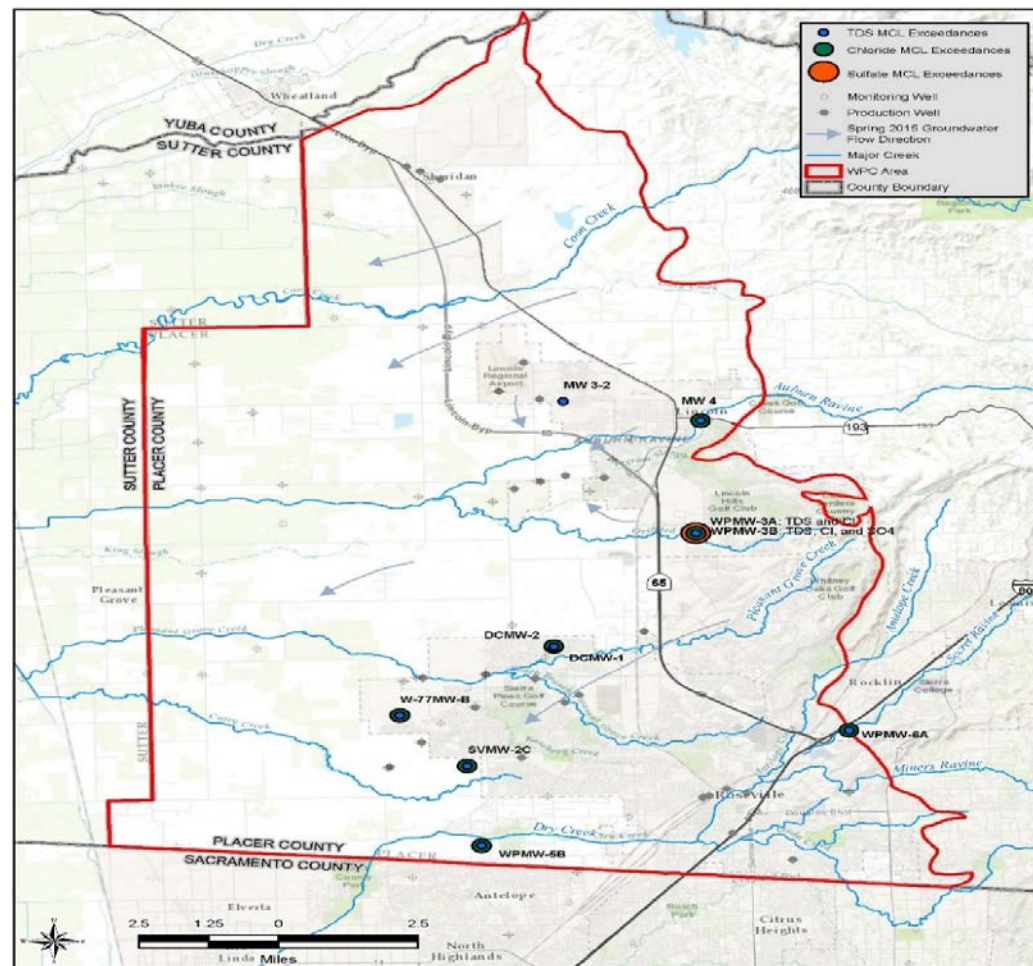
# Primary MCL Exceedances

- Exceedances shown here are in comparison to drinking water standards
- All samples were from monitoring wells
- **All water delivered through municipal systems meets drinking water standards**



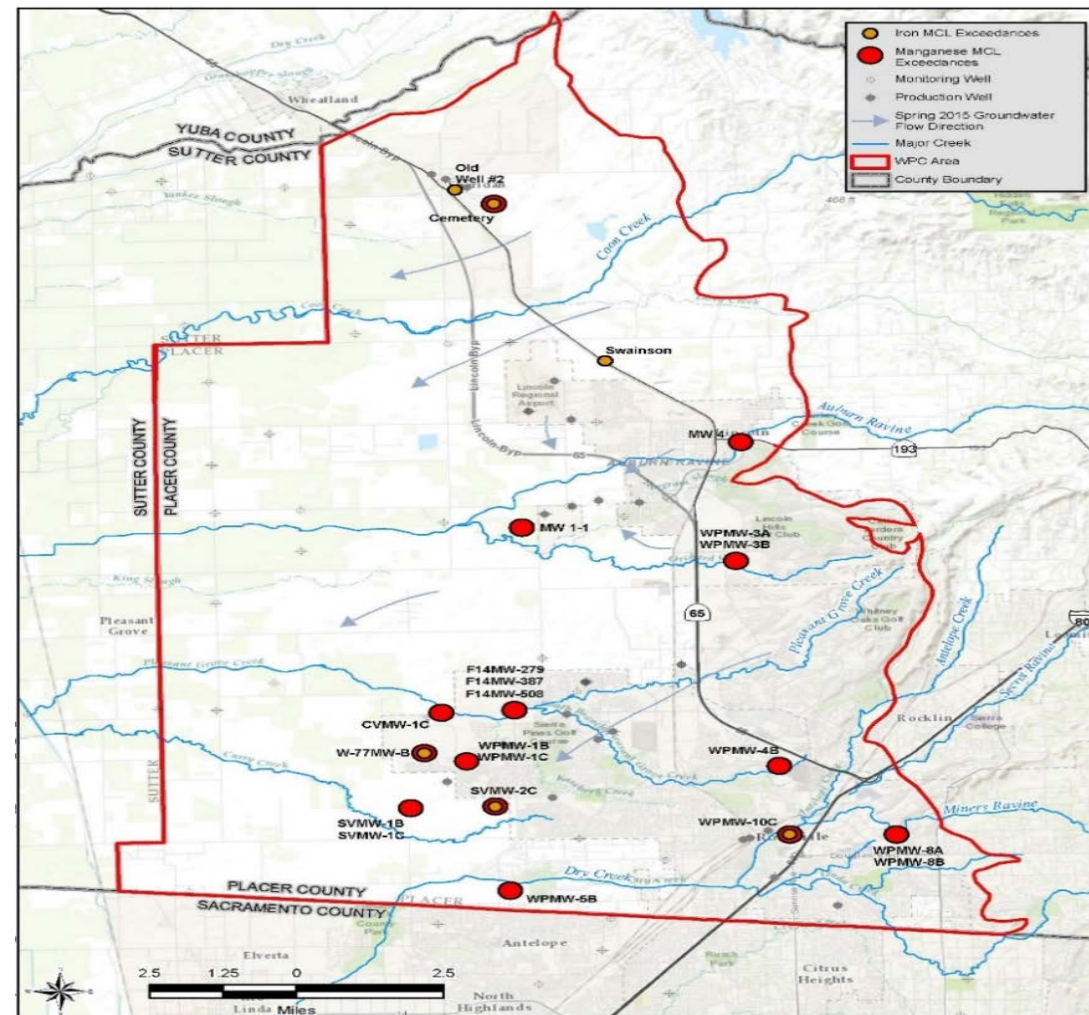
# Secondary MCL Exceedances for TDS, Chloride, and Sulfate

- Exceedances shown here are in comparison to drinking water standards for taste, color, and odor
- All samples were from monitoring wells
- **All water delivered through municipal systems meets drinking water standards**



# Secondary MCL Exceedances for Iron and Manganese

- Exceedances shown here are in comparison to drinking water standards for taste, color and odor.
- All samples were from monitoring wells.
- **All water delivered through municipal systems meets drinking water standards**



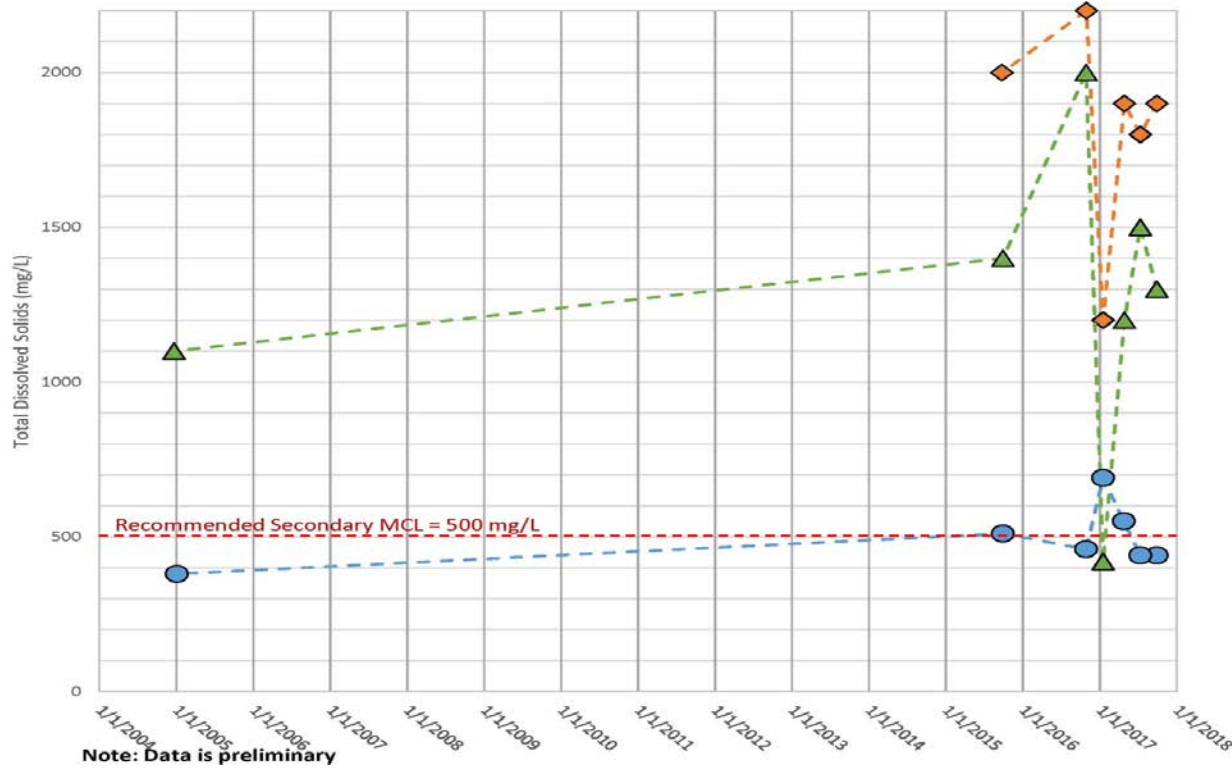


## **Follow-up sampling trends: Fall 2016 to Fall 2017**

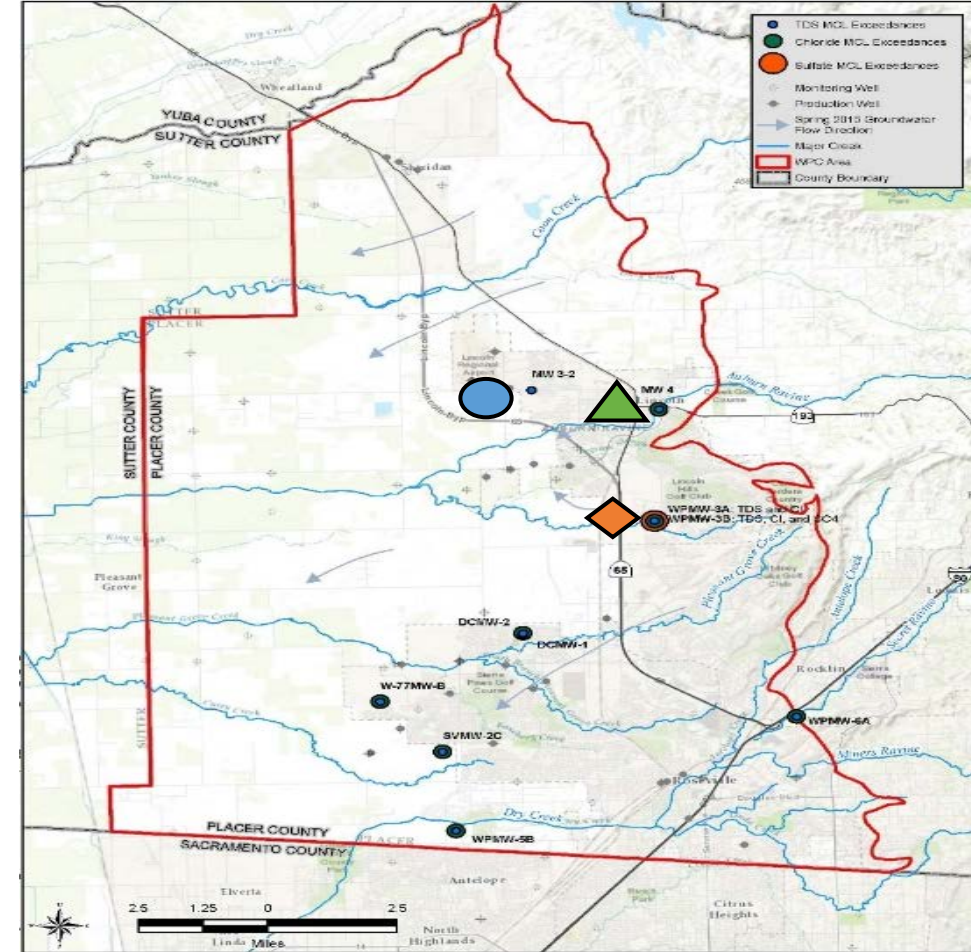
- ▶ Quarterly sampling of 6 wells for TDS (salt content)
- ▶ Biannual sampling of 14 wells for a variety of constituents (TDS, Hexavalent Chromium, Trihalomethanes, Nitrate, and/or Arsenic)



# Total Dissolved Solids (TDS) Trends in the Lincoln Area

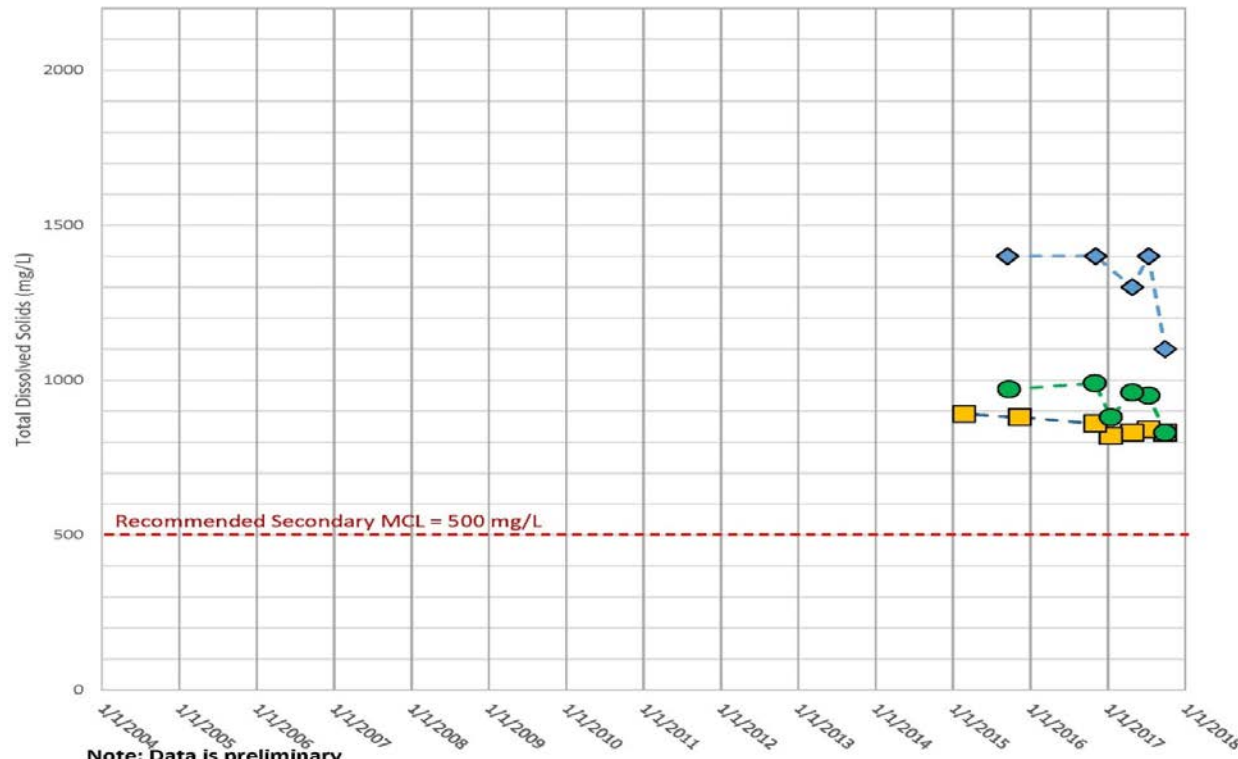


- ◆ WPMW-3A (Lower Mehrten)
- ▲ MW-4 (Lower Mehrten)
- MW 3-2 (Shallow)

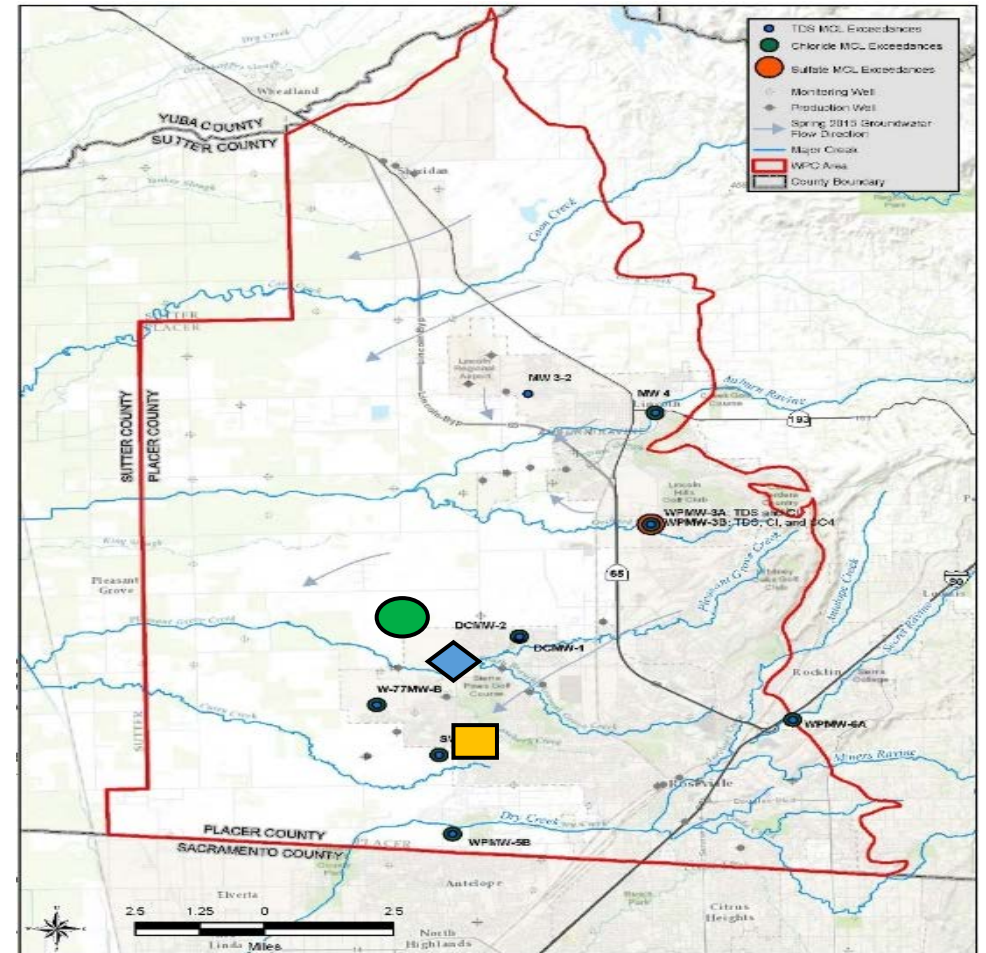




# Total Dissolved Solids (TDS) Trends Southwestern Area



- WPMW-5B (Lower Mehrten)
- W77-B (Lower Mehrten)
- ◆ SVMW-2C (Lower Mehrten)





## Conclusions

- **Groundwater is generally of good quality throughout the basin**
- **A few selected wells and constituents are being monitored for long-term trends**
- **This water quality data will be used during development of GSP**





## References

- Baseline Groundwater Quality Study, Western Placer County, California, December 7, 2017.
- Groundwater Quality Sampling, West Placer County, California, December 21, 2017.
- Memorandum: Water Quality Trends Assessment Western Placer County Groundwater Management Program – Year 9, October 02, 2017
- Groundwater Quality Sampling Fall 2017, West Placer County, California, in progress



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# **West Placer County Summary of State of the Basin Report 2013-2016**

February 8, 2018





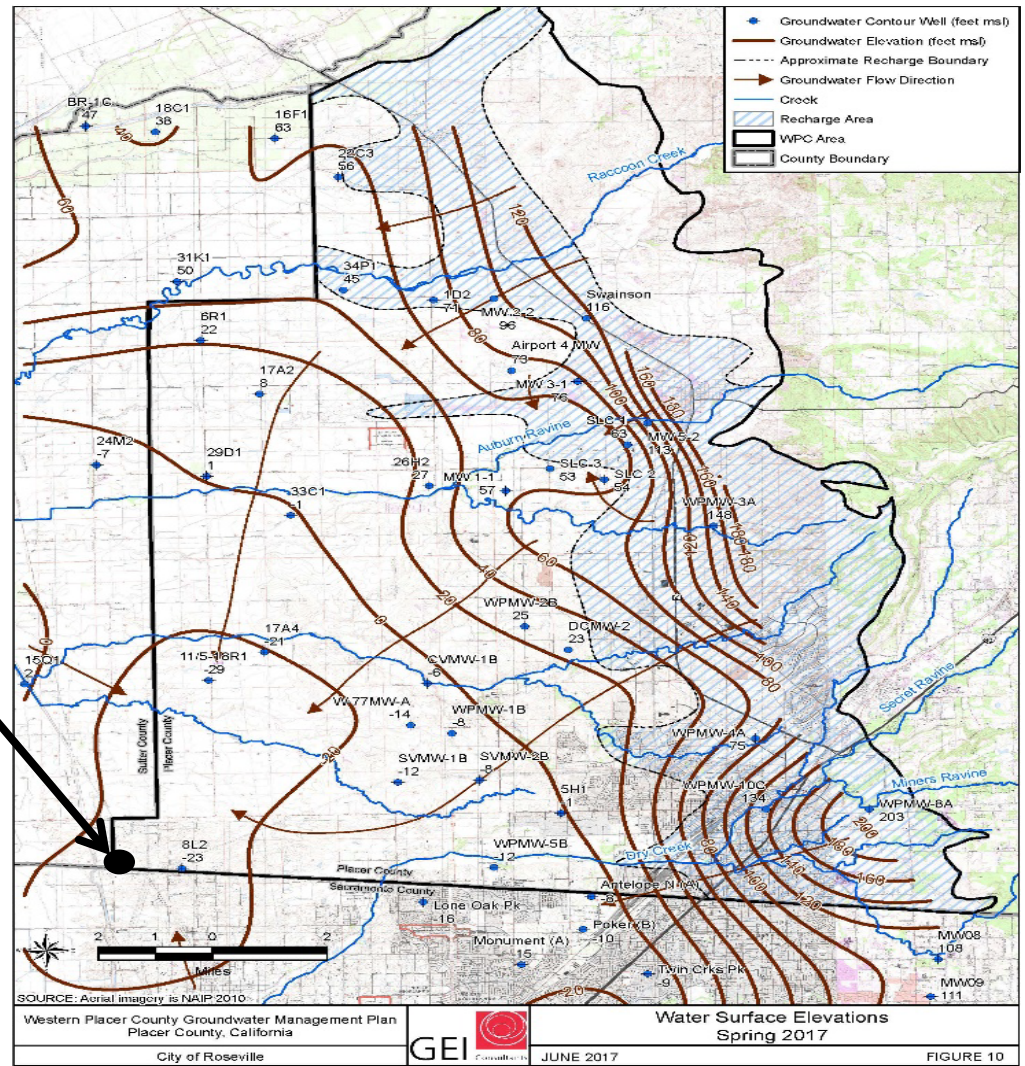
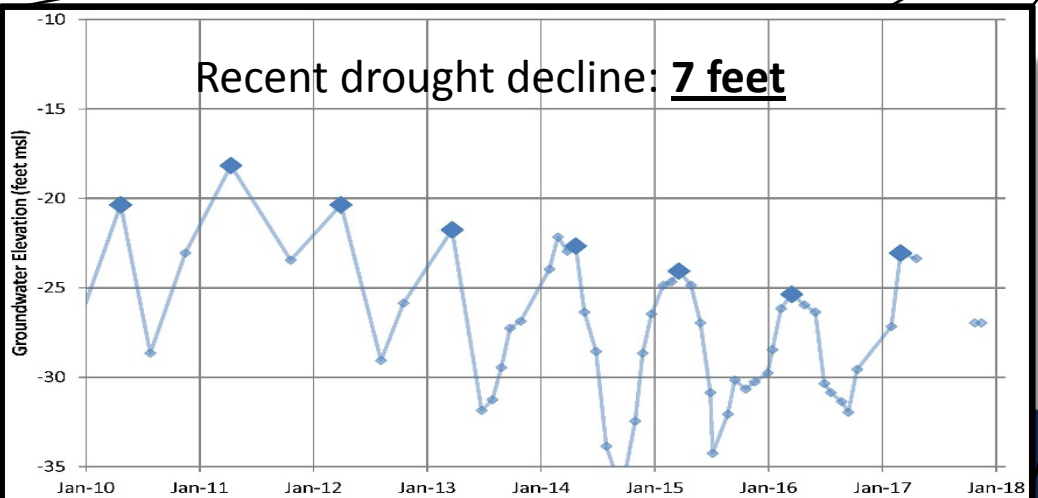
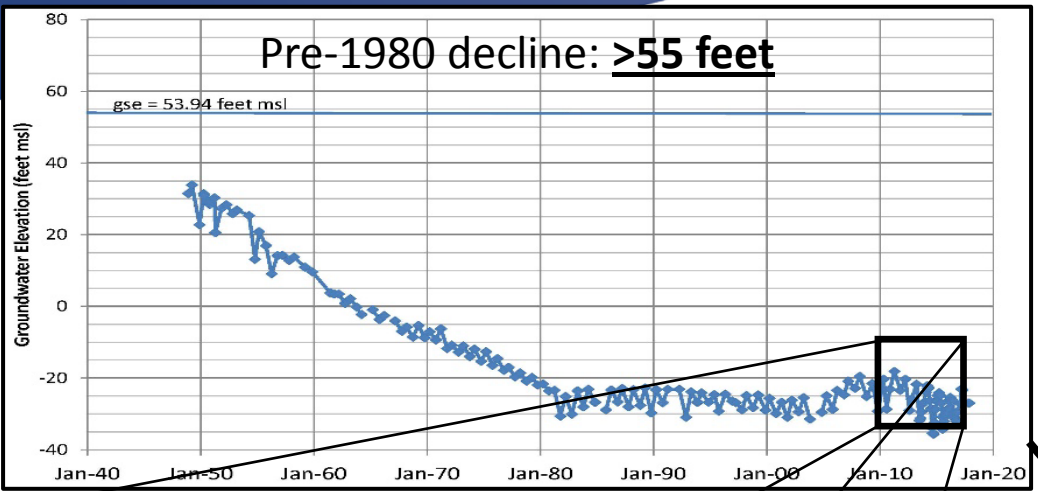
## General information reported

- Groundwater pumping (estimates)
- Inventory of recycled water uses and discharges to streams
- Period covers mostly drought years where groundwater levels expected to go down
- 2016 was close to an average year. Water levels were stable during this year indicating at safe yield
- 2017 (after the report period) was a wet year and groundwater levels showed upward trend

# Recent drought conditions: historic perspective



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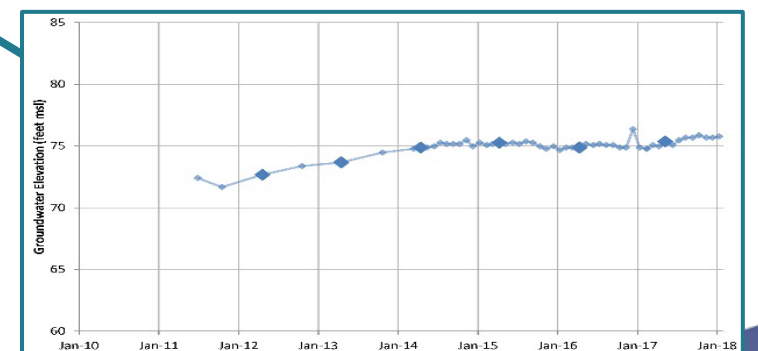
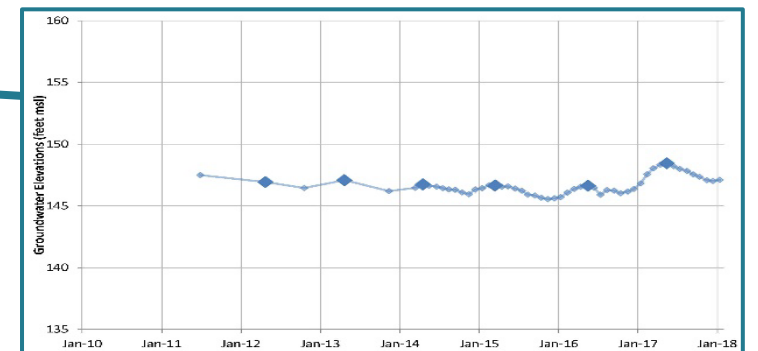
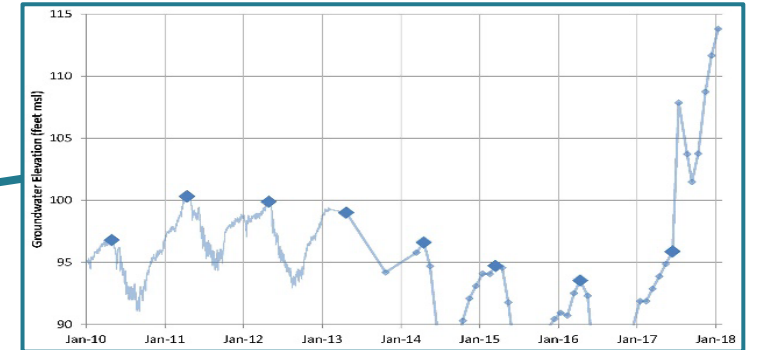
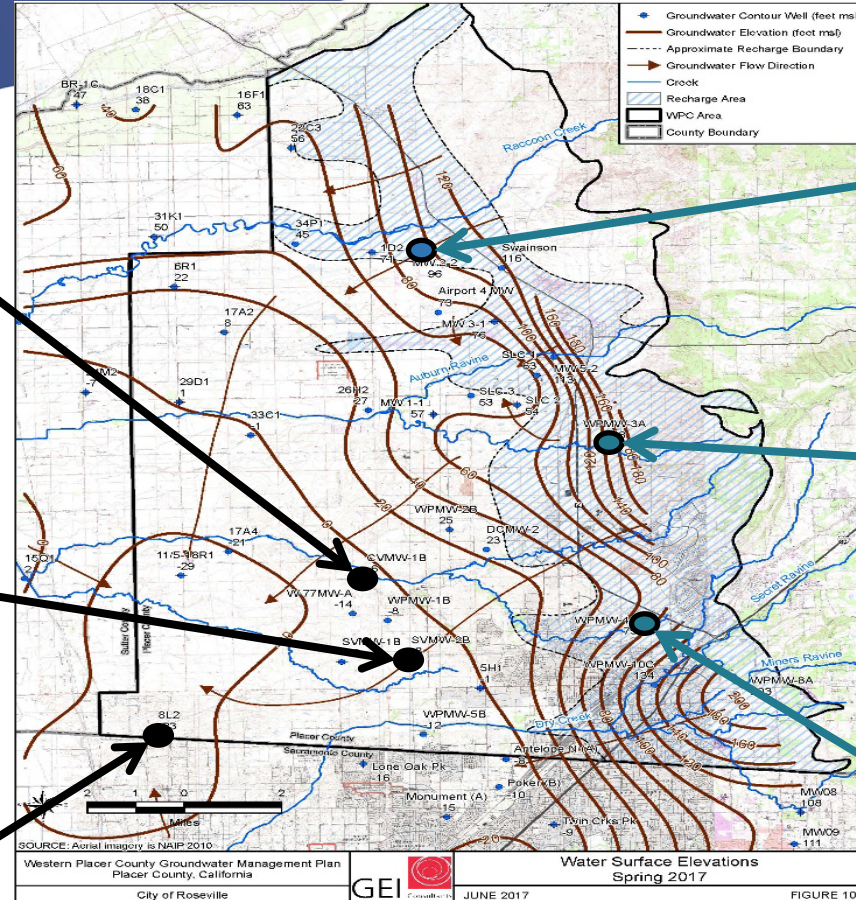
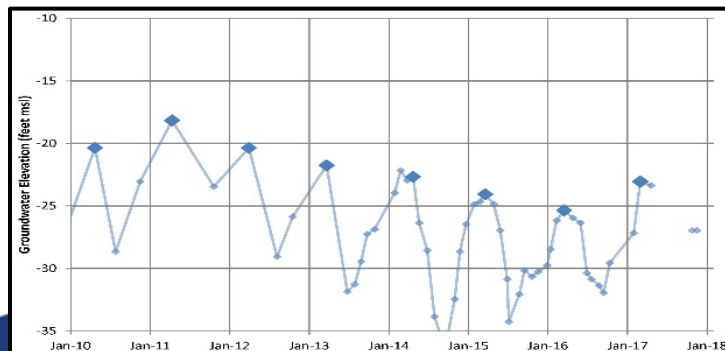
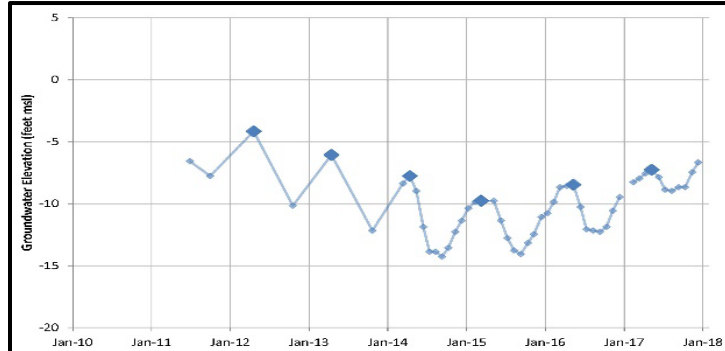
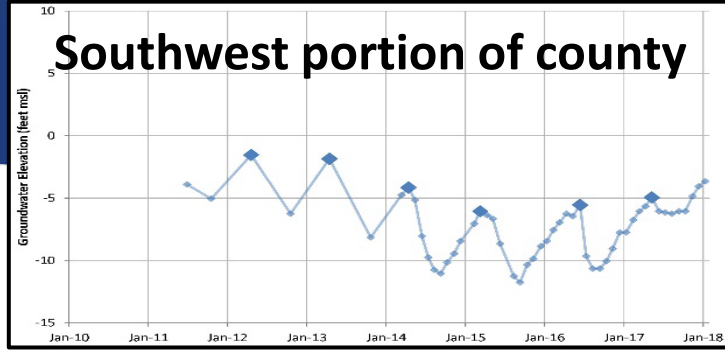
# Recent drought conditions: Responses throughout the basin



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## throughout the basin

### Mountain front recharge area





## Conclusions

- **Drought declines were modest**
- **Water levels have been rising since 2016**
- **Overall: water levels are stable**



## Next Steps

- ▶ **Continue monthly water level monitoring**
- ▶ **Use data for development of groundwater sustainability plan (GSP)**
- ▶ **Updates can be received during stakeholder outreach events**
- ▶ **Annual reports will be part of GSP implementation**



## **GSA Discussion Items**

### **Water Quality Public Service Information:**

**Kurtis Zumwalt**

**Placer County Division Manager**

**Environmental health**





## **GSP Discussion Items**

### **Public Notification Process regarding GSP Development (State of California Water Code Section 10727.8)**

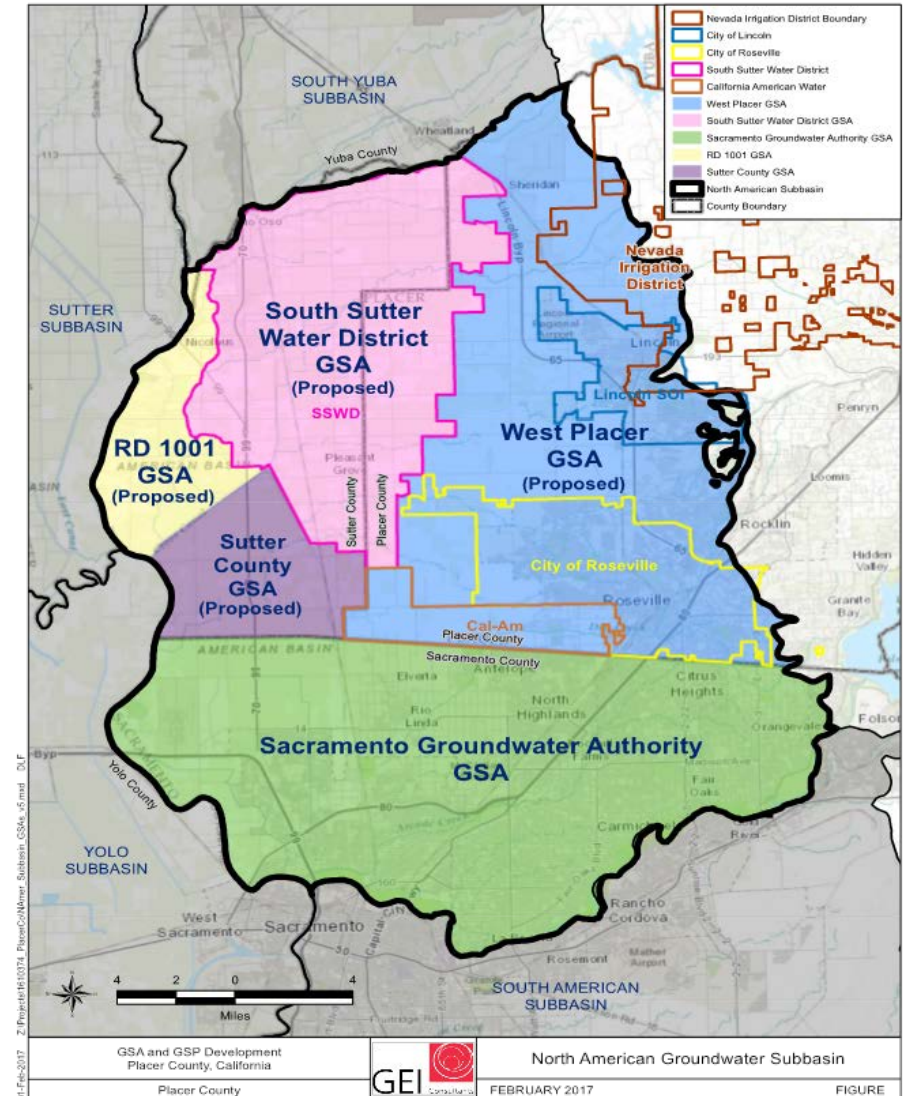
“Prior to initiating the development of a Groundwater Sustainability Plan (GSP) the GSA shall provide a written statement describing the manner in which interested parties may participate in the development and implementation of the GSP to the legislative body of any city or county located within the geographic area of the GSA”

In addition, because of our Memorandum Of Agreement (MOA) between the GSA agency members, we will provide this written statement in a public meeting for each of the agencies



## North American Subbasin – One GSP

- Sacramento GSA
- West Placer GSA
- South Sutter Water District GSA
- Sutter County GSA
- RD 1001 GSA





## **GSP Budget and Funding**

### **BUDGET**

- NASb submitted proposal request was for \$1.91M

### **FUNDING**

- GSAs will cost share by acreage
- Prop 1 Grant – up to \$1M from DWR available
- Requires 50% cost share
- WP GSA est. share - \$241K



## Proposition 1 Grant for GSP Development

- Sacramento GSA has agreed to be lead for our basin
- DWR has issued recommended grant funding
- **We Won !!!!**
- Project Agreement will follow after grant contract



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# **Proposition 1 Groundwater Grant**

## **Groundwater Well Information System (GWIS) Development report**

**David Fairman (GEI Consultants)**



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# Placer County Groundwater Well Inventory System (GWIS)

February 8, 2018





## What is GWIS?

- **GWIS = Groundwater Well Inventory System**
- **County-wide inventory of known wells (Placer Co only)**
- **Stores information about the well location, construction (depth, diameter, etc), and geology**
- **Displays the well information for GSA staff in a secure, web-based mapping interface**
- **Yearly updates to system will be performed by the well permitting agencies**



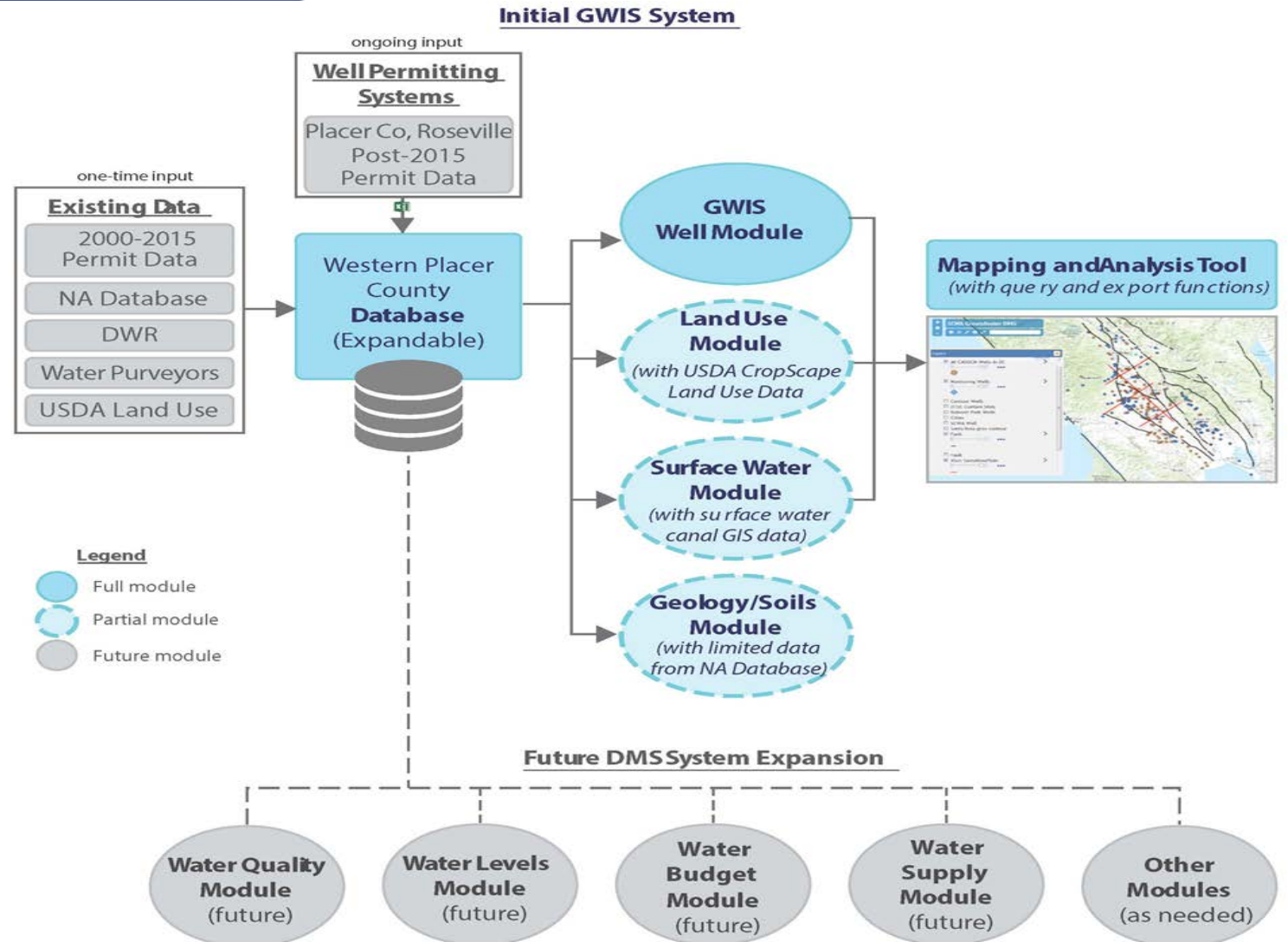
## Why does WPGSA need GWIS?

- ▶ SGMA requires GSAs to report the density of wells and well types in the basin
- ▶ Helps organize information to further understand geology (Supports groundwater modeling)
- ▶ First module of a Data Management System (DMS) required by SGMA.
  - Will be expanded to store and display water level, water quality, and data to support water budget.
- ▶ Identifies locations of high capacity wells to better understand the location of groundwater use
- ▶ Database may be useful for other programs such as irrigated lands regulatory program (ILRP) and well permitting





# GWIS Modules





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# Brief Demo of GWIS



## **Items anticipated at next Public Meeting**

- **Prop 1 Grant Kick off Discussions/Schedule**
- **GSP Development Discussions**
- **Seasonal Water Update (PCWA)**

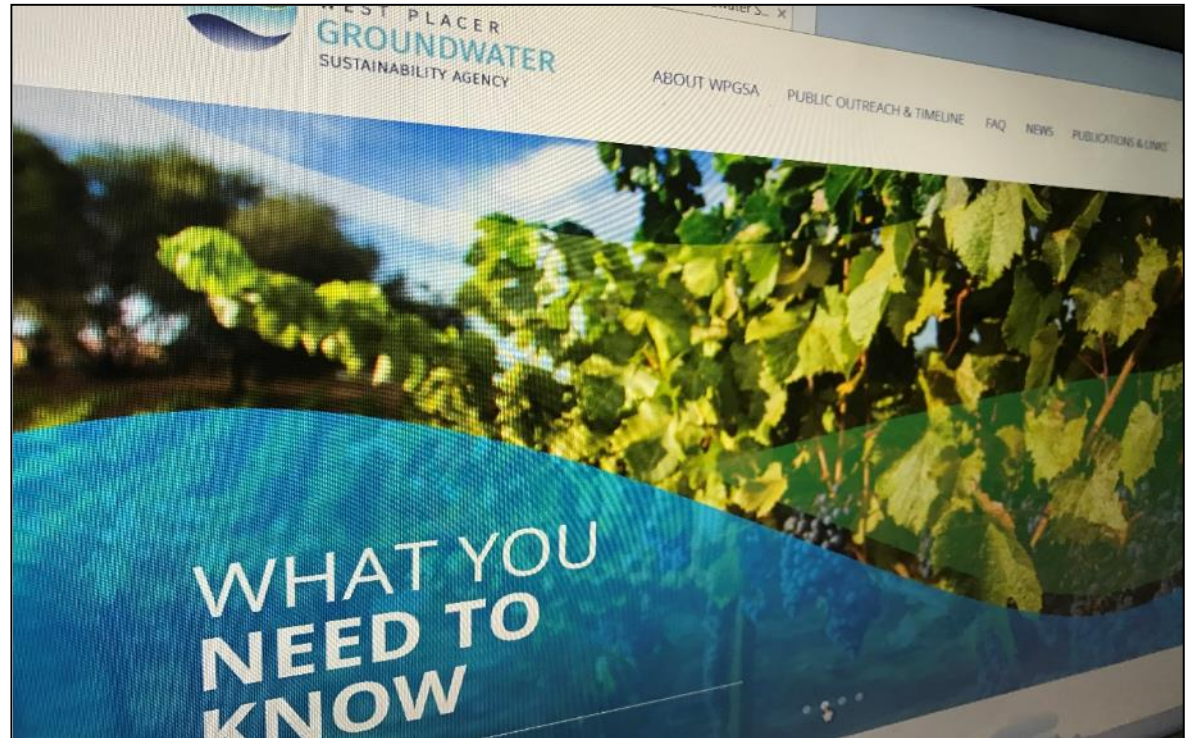


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# Agency Updates

## How to Stay Involved and Informed

- **Visit project website:**
- **Subscribe to email list**
- **Provide written comments**
- **Attend future stakeholder workshops**





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**Thank you for attending !**