

Santa Clara Valley Water District Regional Groundwater Monitoring Program

Central Coast Water Board Meeting
May 10, 2018



Our mission

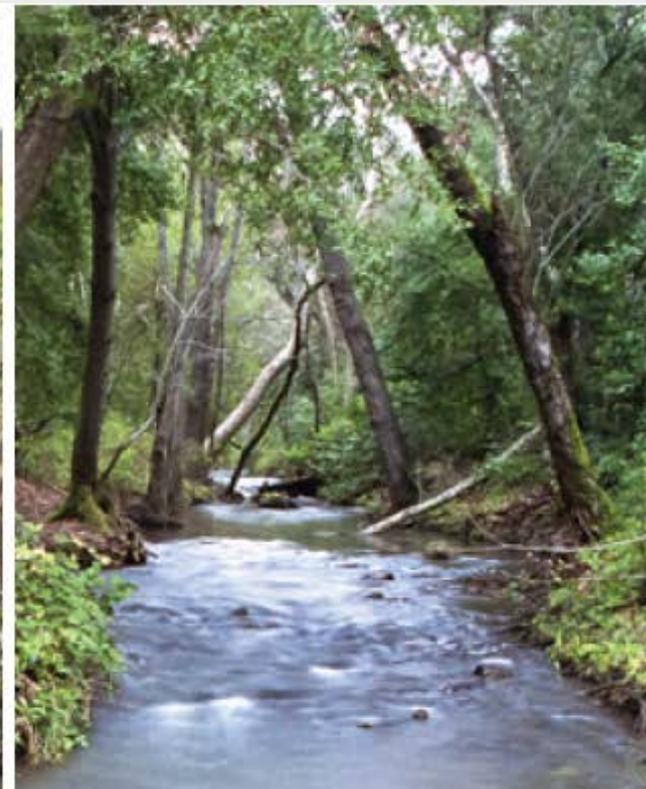
Providing Silicon Valley safe, clean water for a healthy life, environment and economy



CLEAN, RELIABLE WATER



FLOOD PROTECTION



HEALTHY CREEKS &
ECOSYSTEMS

Who we serve

2,000,000 people

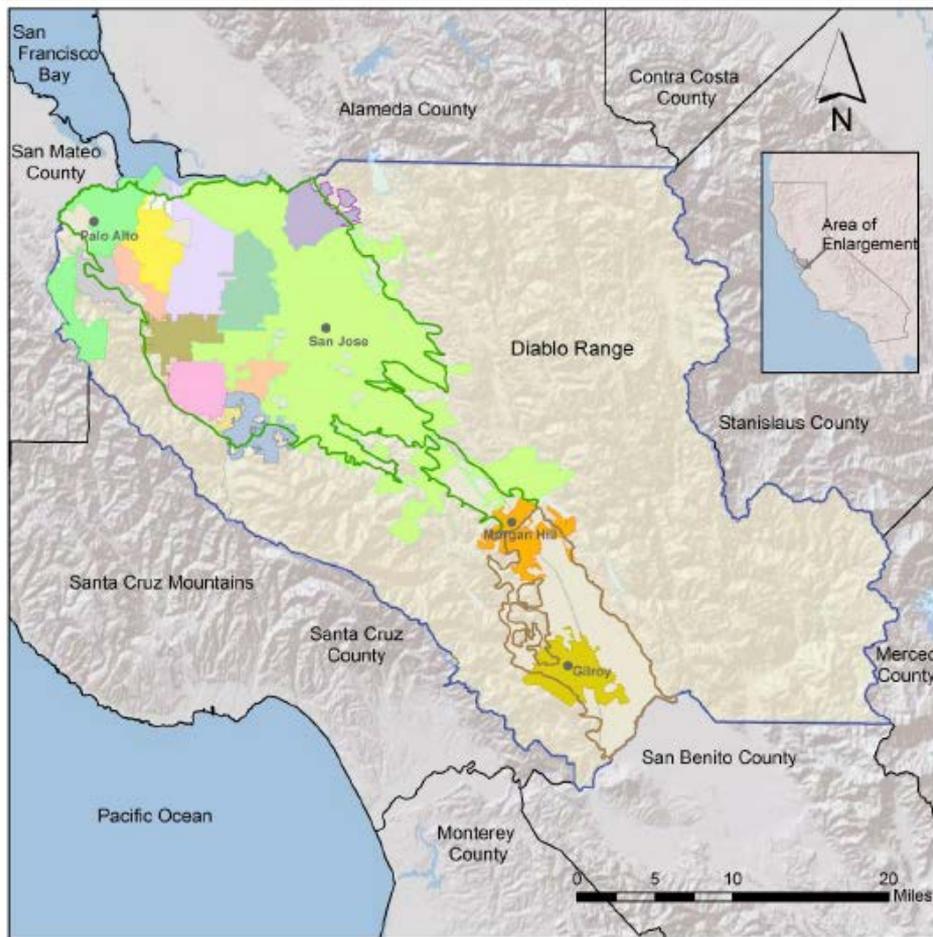
15 cities

4,700 well owners

13 water retailers



Groundwater – an essential local resource



- ▶ Santa Clara Subbasin (~300 square miles)
- ▶ Llagas Subbasin (~90 square miles)
- ▶ Groundwater reliance
 - ▶ 40% countywide
 - ▶ 95% in Llagas Subbasin

Regional groundwater quality monitoring

- ▶ Supports the evaluation of:
 - ▶ Aquifer conditions
 - ▶ Extent and severity of contaminants
 - ▶ Water quality changes
 - ▶ Potential threats
 - ▶ Groundwater Management Plan targets

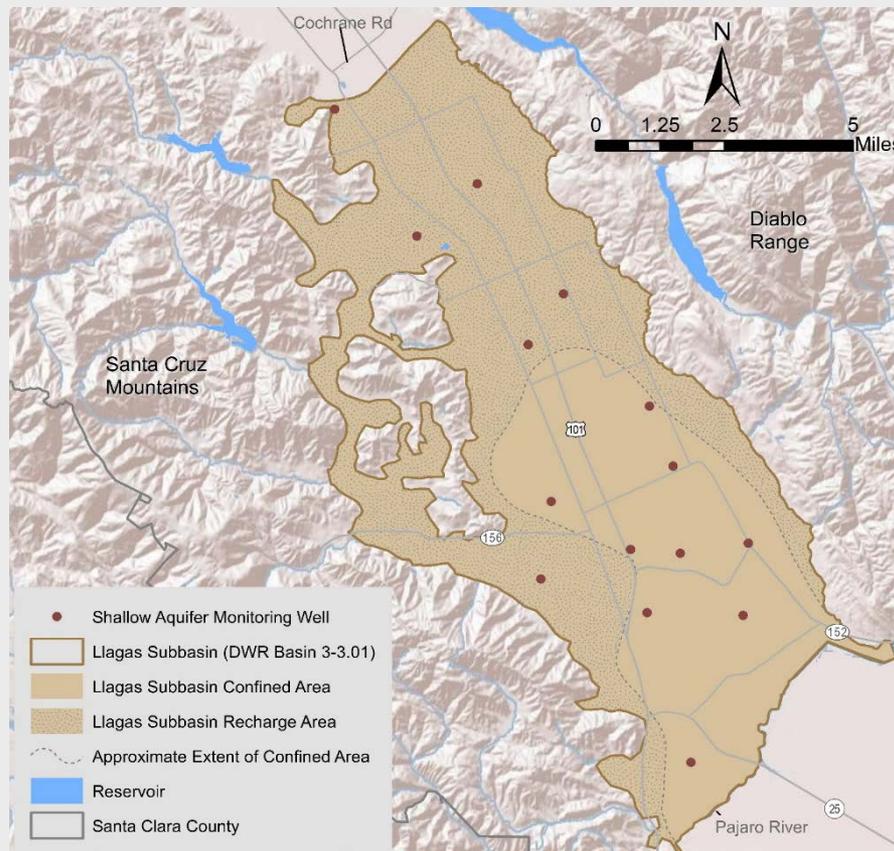
Wells monitored

- ▶ Regional network includes:
 - ▶ Installed monitoring wells
 - ▶ Existing wells the District has obtained
 - ▶ Privately-owned wells
- ▶ About 90 wells countywide
- ▶ Wells sampled may vary over time due to condition or access

Monitoring frequency and parameters

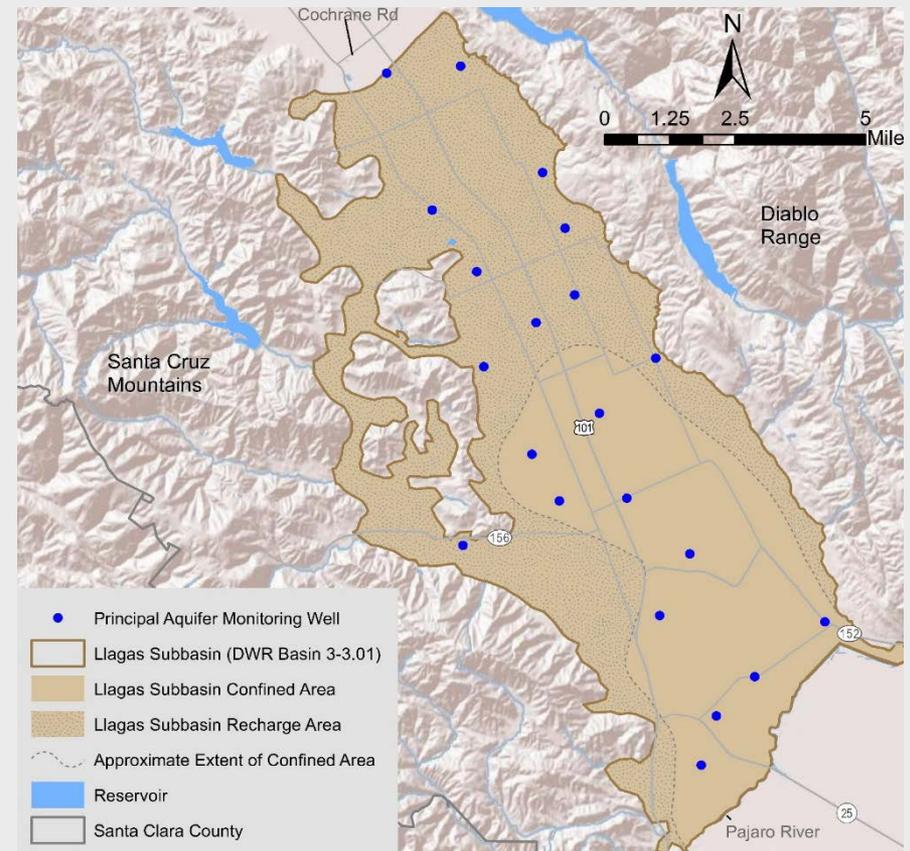
- ▶ Sampling each fall
- ▶ Parameters analyzed include
 - ▶ Major ions
 - ▶ Nutrients
 - ▶ Trace elements
 - ▶ Volatile organic compounds (every 3 years)

Llagas Subbasin regional monitoring wells



15 shallow zone wells (<150 feet)

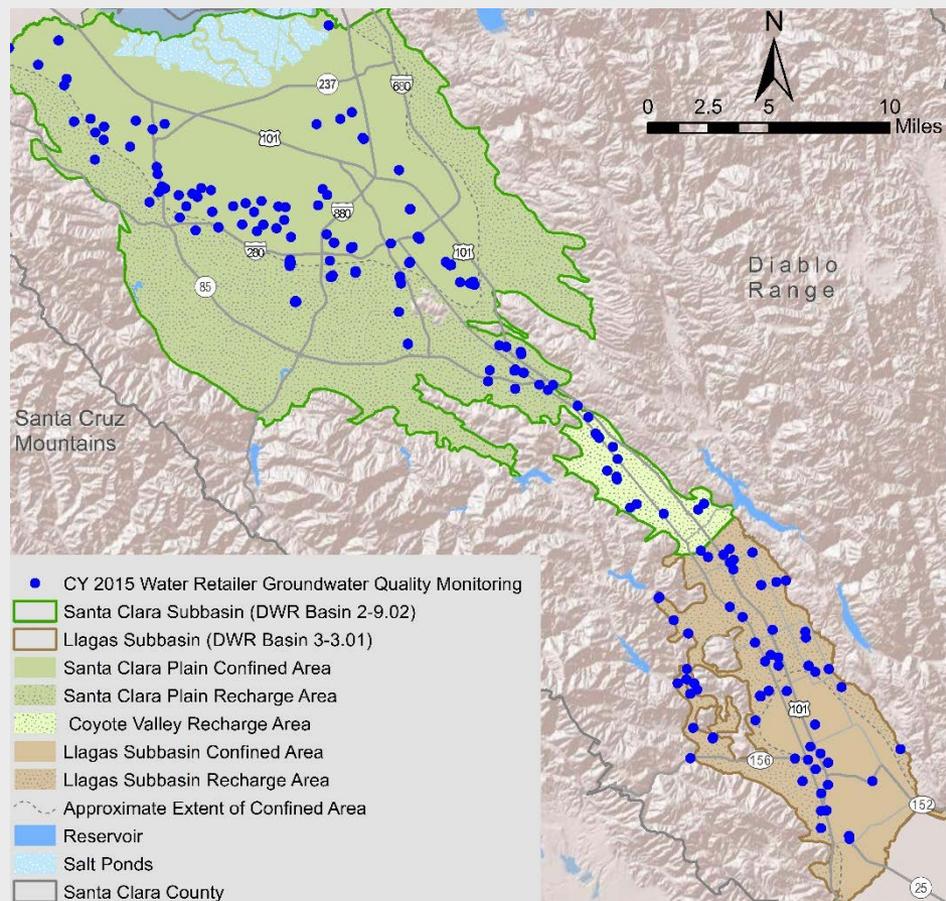
- 11 monitoring wells
- Average depth ~90 feet
- 10 owned by District



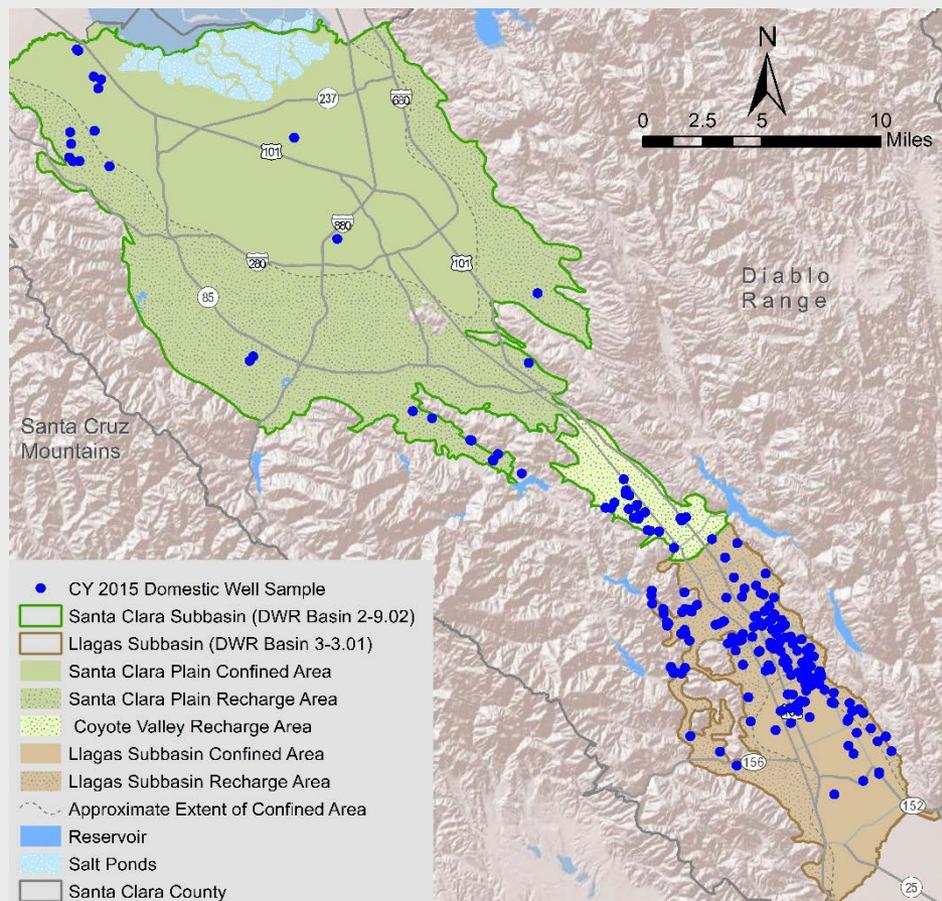
20 principal zone wells (>150 feet)

- 5 monitoring wells
- Average depth ~250 feet
- 3 owned by District

Supplemental data



Public water system data via
Division of Drinking Water website
(~60 wells in Llagas)



District voluntary domestic
well testing program
(~150 wells in Llagas)

Domestic well testing program

Free basic testing,
including:

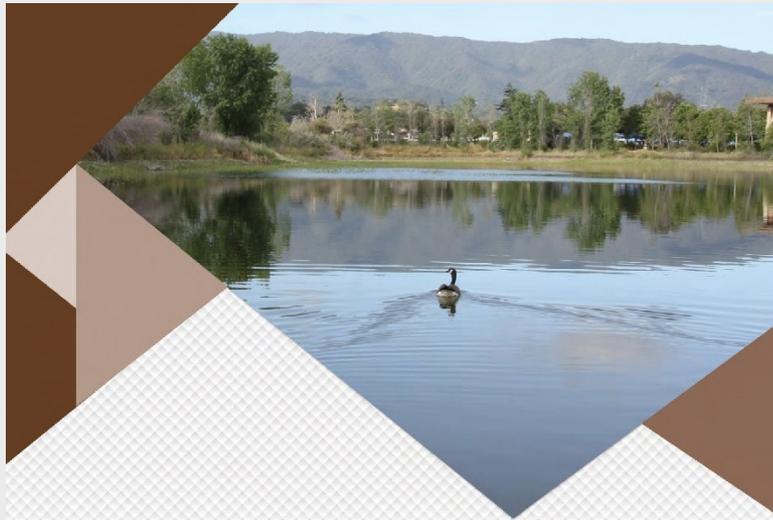
- ▶ Nitrate
- ▶ Bacteria
- ▶ TDS



Groundwater quality monitoring costs

- ▶ Annual investment of ~\$750K
 - ▶ Includes sampling, network maintenance, analysis, data management, and reporting
- ▶ Funded primarily by groundwater charges

Data reporting



Annual Groundwater Report

For Calendar Year 2016



Detailed groundwater
information



Groundwater Quality Summary Report

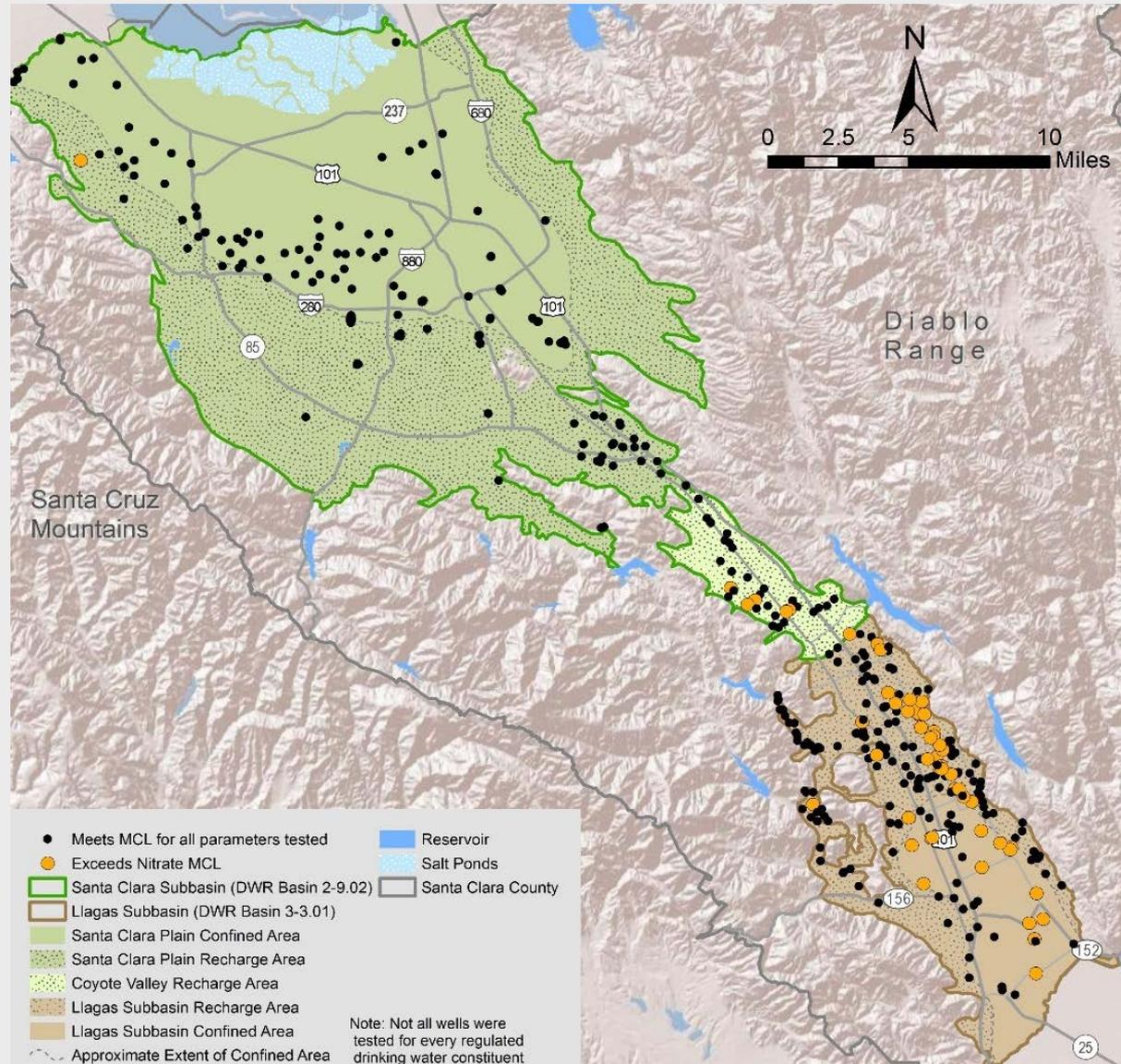
For Testing Performed in Calendar Year 2016



Similar to Consumer
Confidence Report,
mailed to well owners

Nitrate is an ongoing challenge

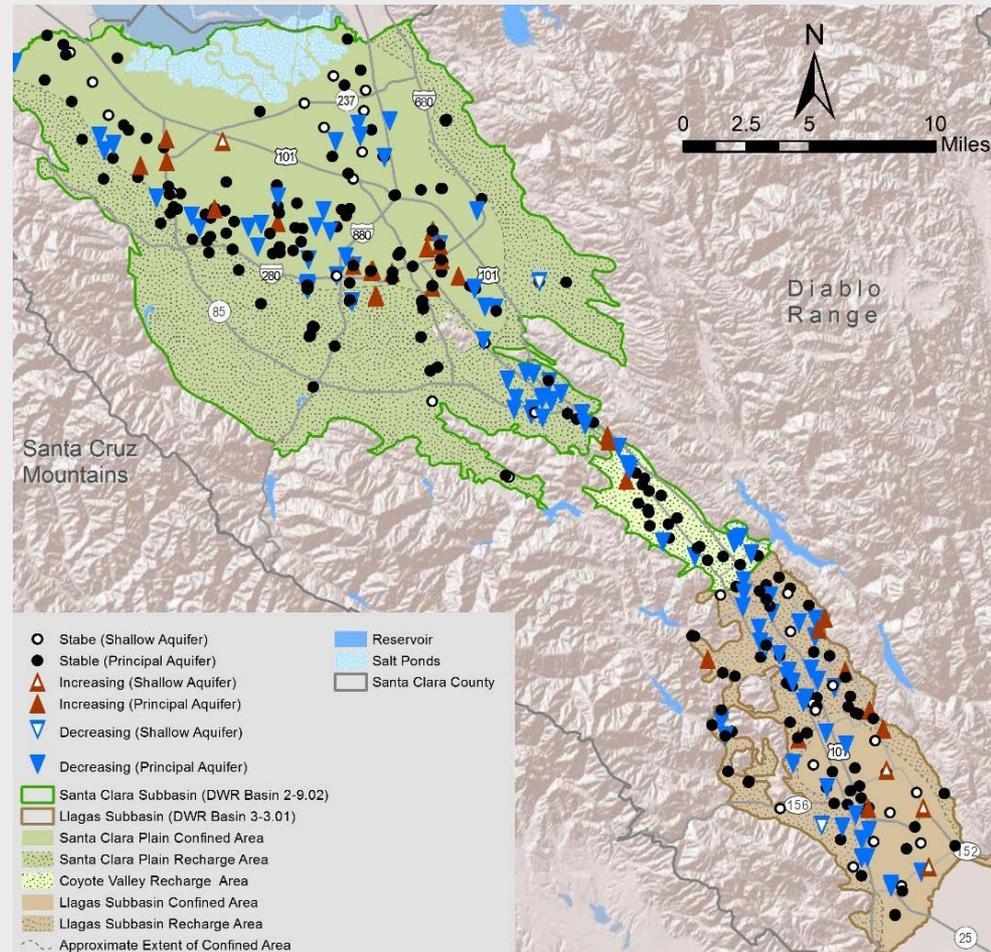
About 25% of Llagas Subbasin wells tested have high nitrate.



Long-term nitrate trends (2002-2016)

Most Llagas Subbasin wells have stable or decreasing nitrate:

- ▶ Shallow zone (26 wells)
 - ▶ 81% stable
 - ▶ 8% decreasing
- ▶ Principal zone (110 wells)
 - ▶ 60% stable
 - ▶ 33% decreasing



How we're working to address nitrate

- ▶ Understand conditions and trends
 - ▶ Continued monitoring
 - ▶ Explore monitoring network improvements
- ▶ Reduce well owner exposure
 - ▶ Free well testing
 - ▶ Nitrate treatment rebates of up to \$500
- ▶ Reduce nitrate in groundwater
 - ▶ Implement Salt and Nutrient Management Plan
 - ▶ Managed recharge
 - ▶ Support regulatory and land use agencies



Providing safe, clean water for Santa Clara County

Groundwater information
available at:
valleywater.org/groundwater

