

Protecting our Water Resources

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Planning Commission Meeting

June 26, 2014

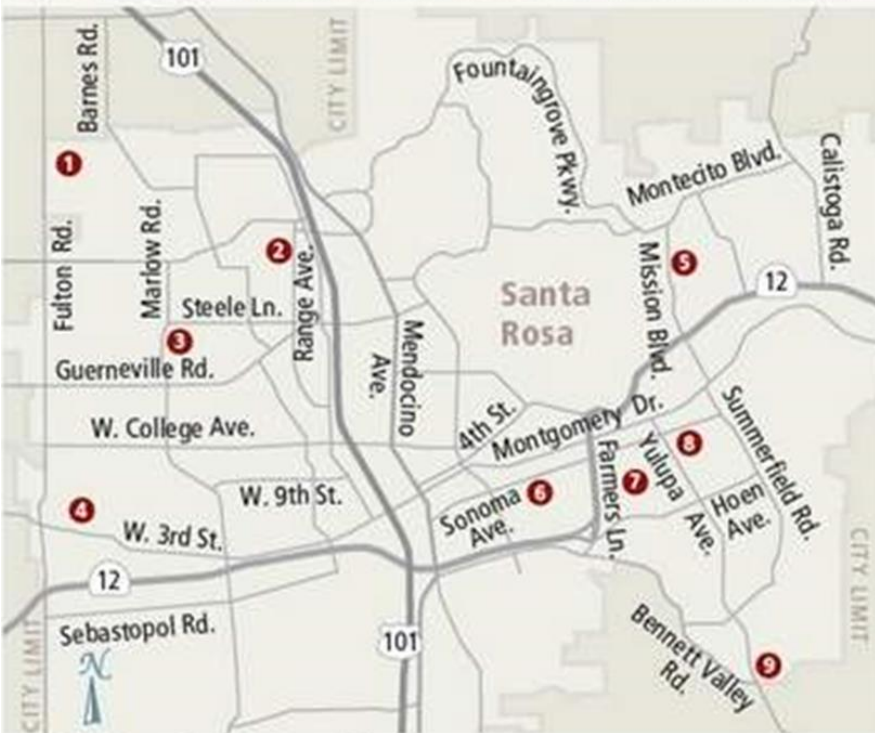
Water is a Scarce Resource

- The City of Santa Rosa relies on groundwater wells during the summer months.
- The City has drilled 9 test wells since 2006 to find other sources of water. Only two wells on the east side of Santa Rosa showed promise
- We need to protect our existing water resources especially given the present drought conditions

The Search for Water in Santa Rosa

Drilling for water

Santa Rosa has drilled nine test wells since 2006 hunting for potential sites for emergency backup wells to protect the city against interruption in its supply of drinking water from the Russian River. A few on the east side of the city have shown promise.



- 1 **North Village**, 360 ft., 60-80 gallons per minute
- 2 **Bicentennial Park**, depth and gpm N/A
- 3 **Northwest Community Park**, 394 ft., 300 gpm
- 4 **A Place to Play**, 694 ft., 475 gpm
- 5 **Madrone Elementary School**, 480 ft., 550-700 gpm
- 6 **Doyle Park**, 200 ft., 10 gpm
- 7 **Martha Way**, 870 ft., 1,000 gpm
- 8 **Slater Middle School**, 670 ft., 375 gpm
- 9 **Galvin Park**, 380 ft., 400-700 gpm

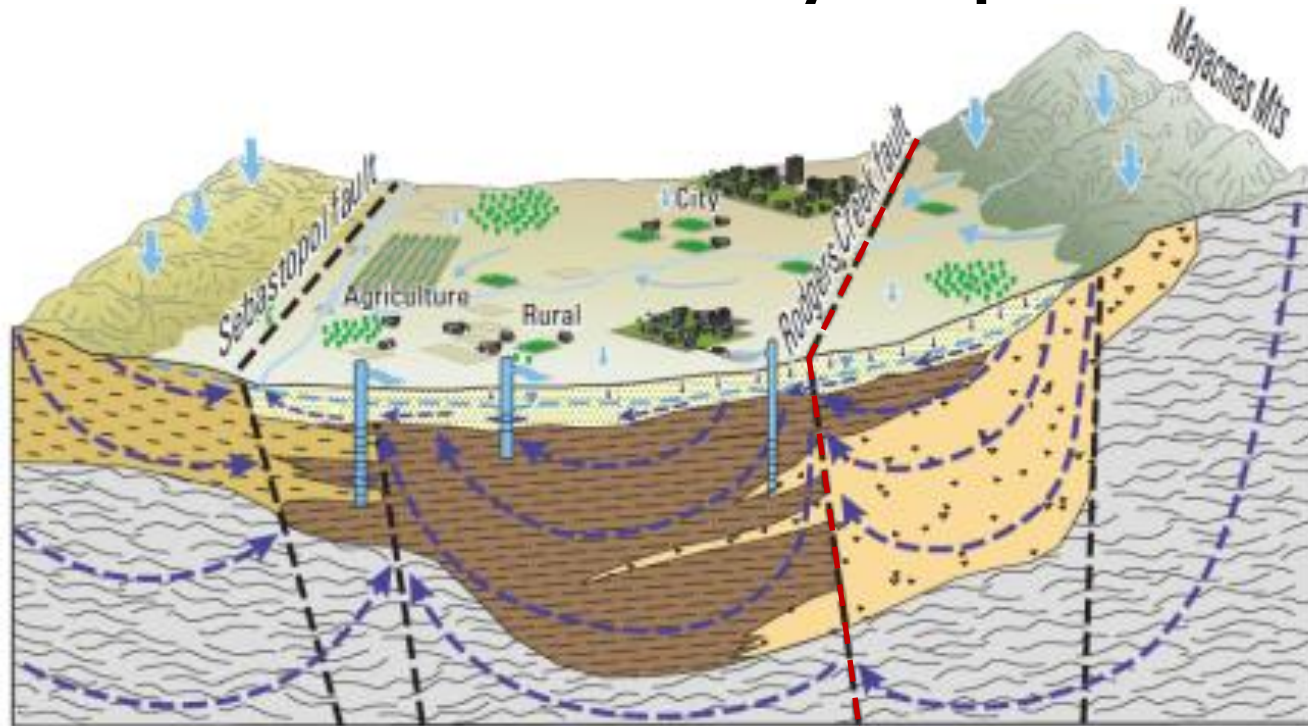
SOURCE: Santa Rosa Groundwater Master Plan

LOREN DOPPENBERG / For The Press Democrat

The Rincon Valley Aquifer

- The USGS Scientific Investigations 2014 concluded that the only real source of water, besides the Russian River, comes from the western slope of the Macayamas Mountains
- Every winter, rain on the Macayamas Mountains flows downhill into the Rincon Valley aquifer, a natural underground storage tank

Rincon Valley Aquifer

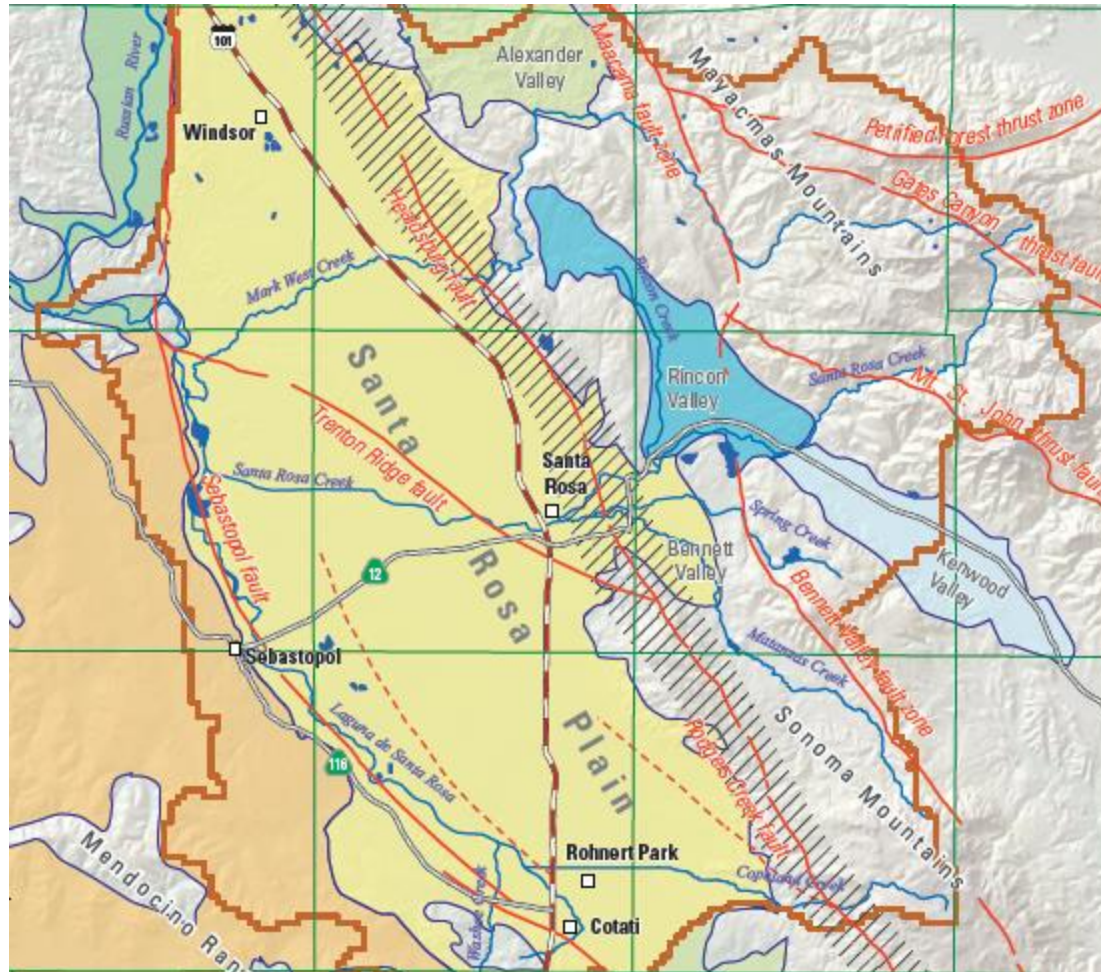


Water Flow Stops Here

Water Flow Pattern

- Our neighborhood was built before City services were available, so most properties rely on private wells for drinking water
- Our well is located 57 ft from the property line of 408 Calistoga Road
- Water collected in the Rincon Valley Aquifer also flows downhill through creeks and underground pathways to the City wells, located at Farmer's Lane and Sonoma Avenue

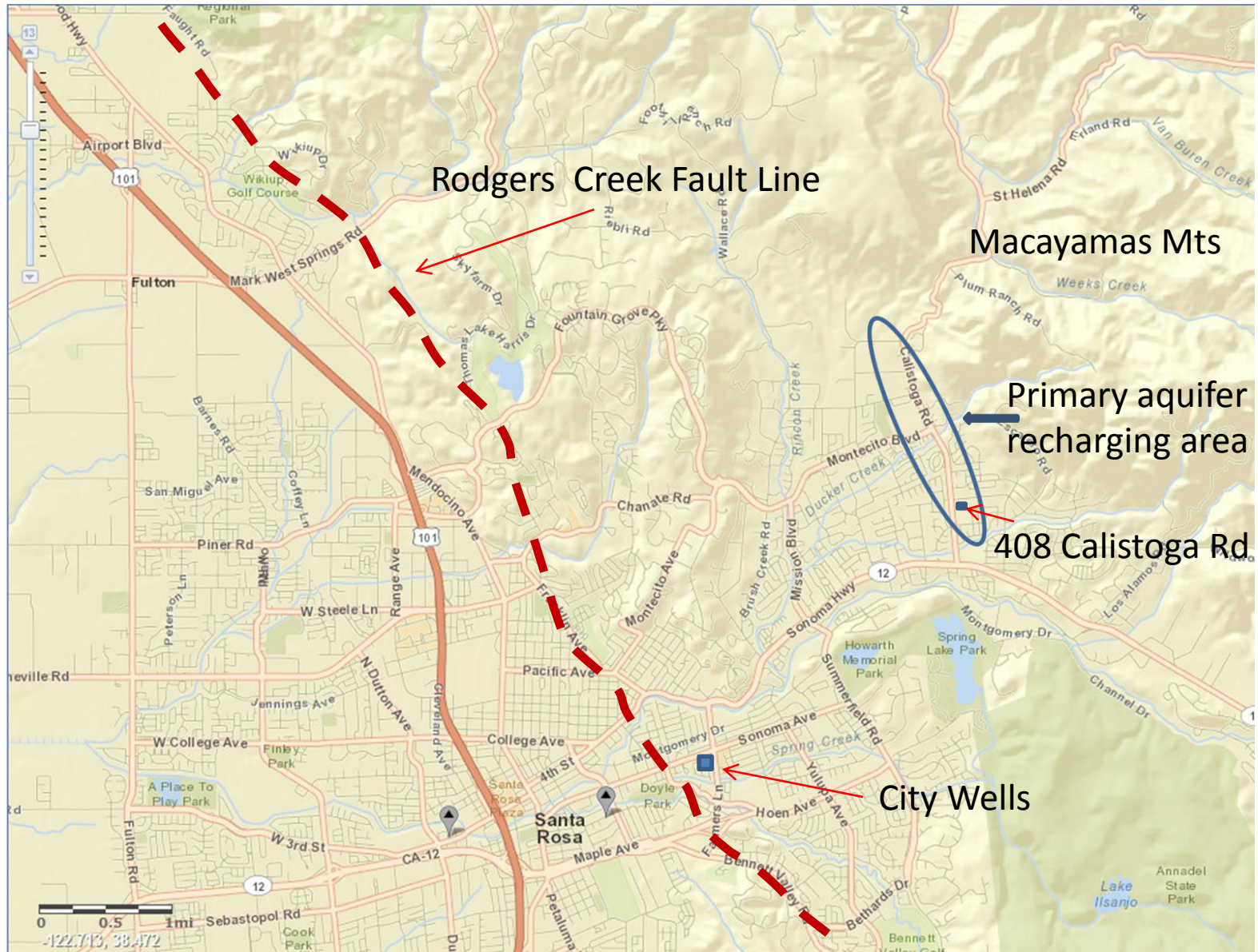
Rincon Valley Aquifer



Water Recharging Area

- The primary recharging area for the Rincon Valley Aquifer is along Calistoga Road
- Most of Rincon Valley is already developed with paved driveways, patios and roadways
- There are only a few open spaces left along Calistoga Road where water can be harvested
- So, it is important for 408 Calistoga Road to remain undeveloped, so as much water as possible can be harvested during the rainy season

Rincon Valley Aquifer



Recharging the Aquifer

- 408 Calistoga Road is a flat, one-acre parcel at the base of the Macayamas Mountains
- Valley Oak trees and natural grass on the property help absorb the water and recharge the Rincon Valley aquifer
- And it is all done naturally, every year with no cost to the city

Water Recharging at Work



408 Calistoga Road

408 Calistoga Road

- Is currently zoned RR-40, which is one house per acre
- The feeder roots of the Valley Oaks break up the hard clay soil and keep it porous – like a sponge, so it can absorb the maximum amount of water
- The roots of every Valley Oak work like a recharging well. They direct rain water from the surface down into the soil

How Important is 1 Acre?

- An **acre-foot** is a unit of volume commonly used in reference to water resources.
- An acre-foot of water = 325,851 gallons
- The average rainfall in Rincon Valley is from 32" to 40" per year*, so one-acre of flat, open land in the primary recharging area gathers ~870,000 to 1,080,000 gallons of water every year

*California's Groundwater Bulletin 118, page 1

Groundwater Harvesting Areas



Sequoia Elementary and the adjoining neighborhood of one-acre parcels harvests ~30 million gallons of water every year for the Rincon Valley Aquifer

Protecting Our Water Resources

- Good quality water is in short supply
- The Rincon Valley Aquifer is a significant water resource that should be protected for the benefit of all city residents
- There are only a few water-recharging properties left along Calistoga Road
- So, an Environmental Impact Report is essential before there is any development at 408 Calistoga Road
- The Mitigated Negative Declaration EIR should not be approved
- Our opinion is this property should remain zoned RR-40 and the proposed site improvements should not be permitted