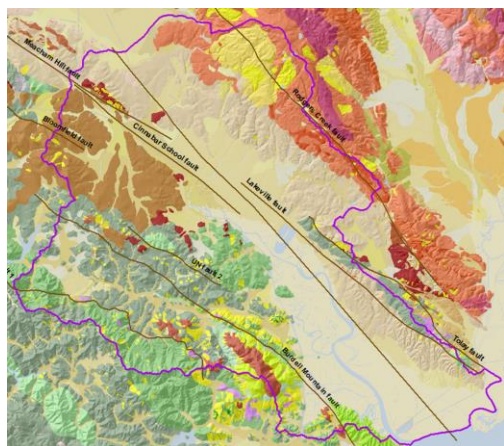


USGS Petaluma Valley Groundwater Study



Tracy Nishikawa, PhD, PE
Research Hydrologist
U.S. Geological Survey

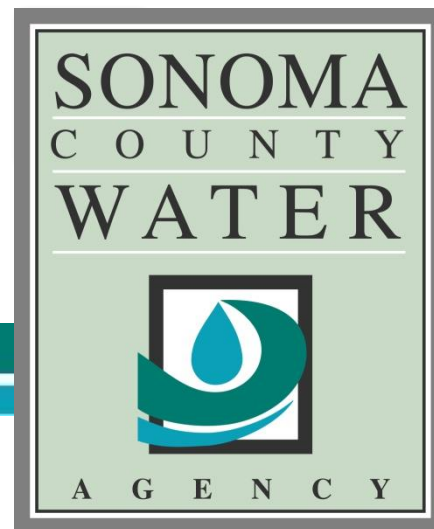


www.sonomacountywater.org

Petaluma Valley Groundwater
Sustainability Agency
Board Meeting
October 26, 2017



Marcus Trotta, PG, CHg
Principal Hydrogeologist
Sonoma County Water Agency



Historical Petaluma Valley Groundwater Studies

Geology and Ground Water in the Santa Rosa and Petaluma Valley Areas Sonoma County California

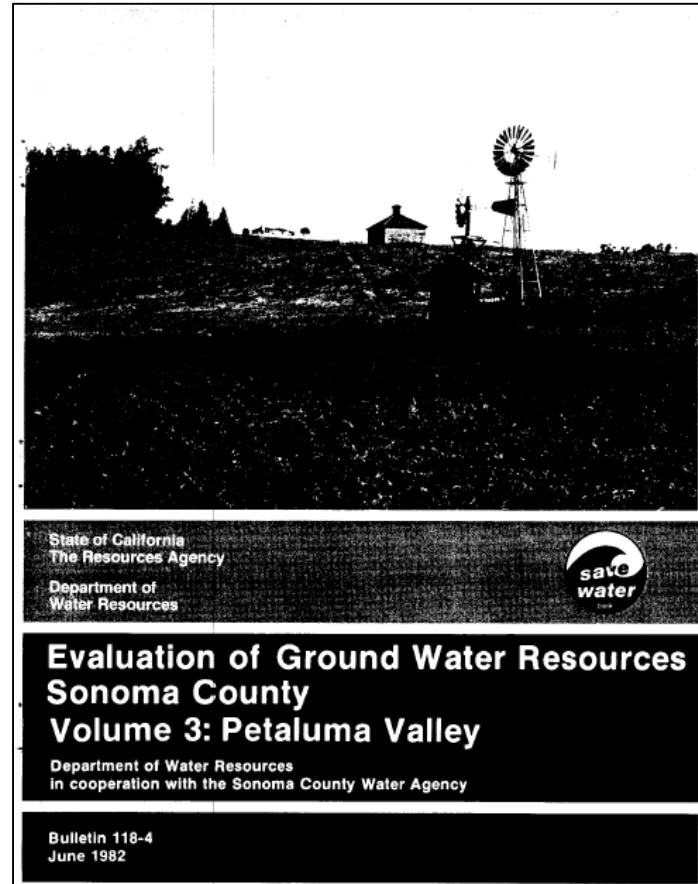
By G. T. CARDWELL

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1427

*Prepared in cooperation with the
California Department of
Water Resources*



USGS, 1958



DWR, 1982

Groundwater Plays Important Role in Building Resiliency

Alexander Valley Study completed 2006

Sonoma County Water Agency Transmission System - Connecting Surface & Groundwater

Santa Rosa Plain Study completed 2014. Groundwater management plan since 2014

Sonoma Valley Study completed 2006. Groundwater management plan since 2007

Petaluma Valley Study initiated Sept 2014

Overarching Goal: Proactive Management of Surface Water & Groundwater Resources to Promote Reliability for All Users



U.S. Geological Survey

Groundwater Study

- 3-Year Study
 - Compiling & evaluating existing data
 - Collecting new data (geologic data, groundwater levels, groundwater quality and streamflows)
 - Developing groundwater flow model
- Cooperative Funding Agreement for \$1.2M Study
 - ~\$477,000 each from City of Petaluma and Sonoma County Water Agency
 - ~\$275,000 in Federal funding from USGS
- Will form technical foundation for developing **Groundwater Sustainability Plan** (required by SGMA)

GSP Requirements

Groundwater Sustainability Plans must:

- Describe the basin conditions, using a hydrologic conceptual model
- Describe the basin-specific monitoring network
- Establish minimum thresholds and measurable objectives to avoid undesirable results:
 - Groundwater-level Declines
 - Reduction in Groundwater Storage
 - Seawater Intrusion
 - Water Quality Degradation
 - Land Subsidence
 - Surface Water Depletion
- Identify projects and actions needed to achieve or maintain sustainable conditions within 20 years

