

# **FINAL REPORT**

*Los Molinos Subbasin*

**Sustainable Groundwater  
Management Act**

## **Groundwater Sustainability Plan (Chapter 6 References)**

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Tehama County Flood Control and Water Conservation District

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## 6 REFERENCES

- Bailey EH, MC Blake, and DL Jones. 1970. "On-land Mesozoic oceanic crust in California coast ranges." U.S. Geological Survey Professional Paper 700-C:C70-C81.  
<https://books.google.com/books?hl=en&lr=&id=mwQIAQAIAAJ&oi=fnd&pg=SL3-PA70&dq=Onland+Mesozoic+oceanic+crust+in+California+coast+ranges&ots=KFmxOUOdf&si=6g6JwC7hGvNIZKexz7JHPzC8A#v=onepage&q=Onland%20Mesozoic%20oceanic%20crust%20in%20California%20coast%20ranges&f=false>
- Bennett, G.L., V, Fram, M.S., and Belitz, Kenneth, 2011. Status of groundwater quality in the Southern, Middle, and Northern Sacramento Valley study units, 2005-08: California GAMA Priority Basin Project. U.S. Geological Survey Scientific Investigations Report 2011-5002
- Bertucci PF. 1983. Petrology and provenance of the Stony Creek Formation, northwestern Sacramento Valley, California. Concord, CA: Chevron U.S.A. Exploration Department. 1-22  
[http://archives.datapages.com/data/pac\\_sepm/048/048001/pdfs/1.htm](http://archives.datapages.com/data/pac_sepm/048/048001/pdfs/1.htm)
- Blake MC, DS Harwood, EJ Helley, WP Irwin, AS Jayko, and DL Jones.1999. "Geologic Map of the Red Bluff 30' X 60' Quadrangle, California." U.S. Geological Survey Miscellaneous Investigations Series Map I-2542, scale 1:100000.<https://pubs.usgs.gov/imap/2542/>
- Brown and Caldwell, 2013. Lower Tuscan Aquifer Monitoring, Recharge, and Data Management Project  
<https://www.buttecounty.net/Portals/26/Tuscan/LTAFinalReport.pdf>
- California Department of Conservation, 2021. DOGGR Well Finder.  
<https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-118.94276/37.09381/6>
- California Department of Fish and Wildlife, 2015, Biographic Information and Observation System  
<https://wildlife.ca.gov/Data/BIOS>
- California Department of Water Resources (DWR), 2003, Tehama County Groundwater Inventory, Pre-Publication Draft
- California Department of Water Resources (DWR), 2003. California's Groundwater, Bulletin 118 – Update 2003. Available online: <https://data.cnra.ca.gov/dataset/california-s-groundwater-bulletin-118-archive>
- California Department of Water Resources (DWR), 2004, Sacramento Valley Groundwater Basin, Los Molinos Subbasin, California's Groundwater, Bulletin 118. [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5\\_021\\_56\\_LosMolinosSubbasin.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/5_021_56_LosMolinosSubbasin.pdf)

California Department of Water Resources (DWR), 2008, Lower Mill Creek Watershed Project Conjunctive Use Study. [https://cawaterlibrary.net/wp-content/uploads/2017/11/lower\\_mill\\_creek\\_watershed\\_conjunctive\\_use\\_project\\_2008.pdf](https://cawaterlibrary.net/wp-content/uploads/2017/11/lower_mill_creek_watershed_conjunctive_use_project_2008.pdf)

California Department of Water Resources (DWR), 2009. GAMA DOMESTIC WELL PROJECT GROUNDWATER QUALITY DATA REPORT TEHAMA COUNTY FOCUS AREA. [https://www.waterboards.ca.gov/gama/docs/tehama/tehama\\_summary\\_report.pdf](https://www.waterboards.ca.gov/gama/docs/tehama/tehama_summary_report.pdf)

California Department of Water Resources (DWR), 2014, Geology of the Northern Sacramento Valley. <https://cawaterlibrary.net/wp-content/uploads/2017/05/Geology-of-the-Northern-Sacramento-Valley.pdf>

California Department of Water Resources (DWR), 2021. California Data Exchange Center (CDEC). <https://cdec.water.ca.gov/>

California Department of Water Resources (DWR), 2021. California Statewide Groundwater Elevation Monitoring (CASGEM) Program. <https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Elevation-Monitoring--CASGEM>

California Department of Water Resources (DWR), 2021. Groundwater Ambient Monitoring and Assessment Program (GAMA), Groundwater Information System. <https://gamagroundwater.waterboards.ca.gov/gama/gamamap/public/>

California Department of Water Resources (DWR), 2021. The Water Data Library. <https://wdl.water.ca.gov/>

California Department of Water Resources (DWR). 2016a. Best Management Practices for Sustainable Management of Groundwater, Water Budget, BMP. California DWR Sustainable Groundwater Management Program. December 2016. Available online: [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-4-Water-Budget\\_ay\\_19.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-4-Water-Budget_ay_19.pdf).

California Department of Water Resources (DWR). 2016b. 2016 Statewide Crop Mapping Metadata. Updated January 2020. Available online: <https://data.cnra.ca.gov/dataset/statewide-crop-mapping/resource/d5841996-ba8b-455c-819f-222006db7b85>

California Department of Water Resources (DWR). 2021. SVSim: Sacramento Valley Groundwater-Surface Water Simulation Model. Downloaded May 5, 2020. Available online: <https://data.cnra.ca.gov/dataset/svsim>.

California Department of Water Resources, 2021. Crop Mapping 2018. <https://data.cnra.ca.gov/dataset/crop-mapping-2018>

California Geological Survey. 2002. "California Geomorphic Provinces." Note 36. 4 pp.  
<https://www.contracosta.ca.gov/DocumentCenter/View/34134/CGS-2002-California-Geomorphic-ProvincesNote-36-PDF>

California Natural Resources Agency, 2021. Natural Communities Commonly Associated with Groundwater (NCCAG). <https://data.cnra.ca.gov/dataset/natural-communities-commonly-associated-with-groundwater>

California State Water Resources Control Board, 2021. GeoTracker.  
<https://geotracker.waterboards.ca.gov/>

California Waterboards, 2020. Irrigated Lands Regulatory Program (ILRP).  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/irrigated\\_lands/](https://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/)

Clemmens, A. J. and C. M. Burt. 1997. Accuracy of irrigation efficiency estimates. J. Irrig. and Drain. Engng. 123(6): 443-453.

Clyne, M.A., and Muffler, L.J.P., Geologic map of Lassen Volcanic National Park and vicinity, California: U.S. Geological Survey Scientific Investigations Map 2899, scale 1:50,000.  
<https://pubs.usgs.gov/sim/2899/>

Consensus Building Institute, 2020. Tehama County Flood Control and Water Conservation District Groundwater Sustainability Agency: Stakeholder Communications and Engagement Plan

CV-SALTS, 2020. <https://www.cvsalinity.org/>

Department of Water Resources (DWR), 2016c. California Code of Regulations.  
[https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I74F39D13C76F497DB40E93C75FC716AA&originationContext=documenttoc&transitionType=Default&contextD ata=\(sc.Default\)](https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I74F39D13C76F497DB40E93C75FC716AA&originationContext=documenttoc&transitionType=Default&contextD ata=(sc.Default))

Department of Water Resources (DWR), 2016d. Groundwater Sustainability Plan (GSP) Annotated Outline. <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Groundwater-Sustainability-Plans/Files/GSP/GSP-Annotated-Outline.pdf>

Dickinson WR and El Rich. 1972. Petrologic intervals and petrofabrics in the Great Valley sequence, Sacramento Valley, California. Geological Society of America bulletin 83(10):3007-3024.  
<https://pubs.geoscienceworld.org/gsa/gsabulletin/article-abstract/83/10/3007/7369/Petrologic-Intervals-and-Petrofacies-in-the-Great?redirectedFrom=fulltext>

Dudley and Fulton, 2006. CONJUNCTIVE WATER MANAGEMENT: WHAT IS IT? WHY CONSIDER IT? WHAT ARE THE CHALLENGES? <https://ucanr.edu/sites/Tehama/files/20596.pdf>

DWR, 2018 (a). 2017 Sacramento Valley GPS Survey of the Sacramento Valley Subsidence Network. [http://www.yolowra.org/documents/2017\\_GPS\\_Survey\\_of\\_the\\_Sacramento\\_Valley\\_Subsidence\\_Network.pdf](http://www.yolowra.org/documents/2017_GPS_Survey_of_the_Sacramento_Valley_Subsidence_Network.pdf)

DWR, 2018 (b). Groundwater Basin Boundary Assessment Tool. <https://gis.water.ca.gov/app/bbat/>

DWR, 2018 (c). Well Completion Report Map Application. <https://data.cnra.ca.gov/showcase/well-completion-report-map-app>

DWR, 2020. CASGEM Online System. <https://www.casgem.water.ca.gov/OSS/>

Ely, K.E., 1994, An Evaluation of Aquifer Characteristics Within The Tuscan Formation, Northeastern Sacramento Valley, Tehama County, California [Master's Thesis]: CSU, Chico, 292 p. Garrison, Lowell E. "The Marysville (Sutter) Buttes." *Sutter County, California: California Division of Mines and Geology Bulletin* 181 (1962): 69-72.

Gonzalez, M., 2014, Stratal Geometries of Tuscan Deposits In Big Chico Creek Canyon Outcrops And In The Subsurface Underlying Chico, California [Master's Thesis]: CSU, Chico, 125 p. <https://www.csuchico.edu/bccer/assets/documents/research-docs/tuscan-geology-11-30-2014-marisol-gonzalez.pdf>

Harwood DS, EJ Helley, and MP Doukas. 1981. "Geologic Map of the Chico Monocline and Northeastern Part of the Sacramento Valley, California." U.S. Geological Survey Miscellaneous Investigations Series Map I-1238, scale 1:62,500. <https://pubs.er.usgs.gov/publication/i1238>

Helley EJ and C Jaworowski. 1985. The Red Bluff pediment, a datum plane for locating Quaternary structures in the Sacramento Valley, California. Washington, DC: U.S. Government Printing Office. U.S. Geological Survey Bulletin 1628: 13 pp. <https://pubs.usgs.gov/bul/1628/report.pdf>

Helley, E., and Harwood, D., 1985, Geologic map of the late Cenozoic deposits of the Sacramento Valley and northern Sierran foothills, California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1790: 24 pp., 5 sheets, scale 1:62,500. <https://pubs.er.usgs.gov/publication/mf1790>

Ingersoll RV and WR Dickinson. 1981. "Great Valley Group (Sequence), Sacramento Valley, California," in V Frizzell, ed., Upper Mesozoic Franciscan rocks and Great Valley Sequence, Central Coast ranges, California. Society of Economic Paleontologists and Mineralogists, Pacific Section, Los Angeles, CA: p. 1-33. [http://archives.datapages.com/data/pac\\_sepm/033/033001/pdfs/1.htm](http://archives.datapages.com/data/pac_sepm/033/033001/pdfs/1.htm)

Klausmeyer, K., Howard J., Keeler-Wolf T., Davis-Fadtke K., Hull R., and Lyons A. 2018. Mapping Indicators of Groundwater dependent ecosystems in California. [https://groundwaterresourcehub.org/public/uploads/pdfs/iGDE\\_data\\_paper\\_20180423.pdf](https://groundwaterresourcehub.org/public/uploads/pdfs/iGDE_data_paper_20180423.pdf)

Klausmeyer, Kirk R., Tanushree Biswas, Melissa M. Rohde, Falk Schuetzenmeister, Nathaniel Rindlaub, Ian Housman, and Jeanette K. Howard. 2019. GDE Pulse: Taking the Pulse of Groundwater Dependent Ecosystems with Satellite Data. San Francisco, California. Available at <https://gde.codefornature.org>.

Lydon, Philip A. "Geology and lahars of the Tuscan Formation, northern California." *Geological Society of America Memoir* 116 (1968): 441-475.

<https://pubs.geoscienceworld.org/books/book/128/chapter/3789088/Geology-and-Lahars-of-the-Tuscan-Formation>

Mansfield CF. 1979. "Upper Mesozoic subsea fan deposits in the southern Diablo Range, California: Record of the Sierra Nevada magmatic arc." *Geologic Society of America Bulletin* 90(11) (November):1025-1046. <https://pubs.geoscienceworld.org/gsa/gsabulletin/article-abstract/90/11/1025/189567/Upper-Mesozoic-subsea-fan-deposits-in-the-southern?redirectedFrom=fulltext>

Marchand DE and A Allwardt. 1981. Late Cenozoic stratigraphic units, northeastern San Joaquin Valley, California. Washington: U.S. Government Printing Office. U.S. Geological Survey Bulletin 1470:1- 70. <https://pubs.er.usgs.gov/publication/b1470>

Northern California Water Association (NCWA), 2006. Sacramento Valley Integrated Regional Water Management Plan. <https://norcalwater.org/efficient-water-management/efficient-water-management-regional-sustainability/regional-planning/irwmp/>

O'Geen, A., Saal, M., Dahlke, H., Doll, D., Elkins, R., Fulton, A., Fogg, G., Harter, T., Hopmans, J., Ingels, C., Niederholzer, F., Sandoval, S., Verdegaal, P., and Walkinshaw, M., 2015, Soil suitability index identifies potential areas for groundwater banking on agricultural lands, *California Agriculture*, 69(2):75-84. <http://calag.ucanr.edu/Archive/?article=ca.v069n02p75>

Ojakangas RW. 1968. "Cretaceous Sedimentation, Sacramento Valley, California." *Geological Society of America Bulletin* 79(8):973-1008. <https://pubs.geoscienceworld.org/gsa/gsabulletin/article-abstract/79/8/973/6386/Cretaceous-Sedimentation-Sacramento-Valley?redirectedFrom=fulltext>

Olmstead, F. H., and Davis, G. H., 1961, Geologic features and ground-water storage capacity of the Sacramento Valley, California: U.S. Geological Survey Water Supply Paper 1497, 241 p. <https://pubs.usgs.gov/wsp/1497/report.pdf>

Page, R.W., United States Geological Survey, 1974, Base and Thickness of the Post-Eocene Continental Deposits in the Sacramento Valley, California. <https://pubs.usgs.gov/wri/1973/0045/report.pdf>

PMC, March 2009. Tehama County General Plan Update 2009-2029. <https://tehamartpa.org/wp-content/uploads/2020/06/2009-2029-Tehama-County-General-Plan-r1.pdf>

Redwine LE. 1972. "The Tertiary Princeton submarine valley system beneath the Sacramento Valley, California." University of California, Los Angeles, unpublished Ph.D. thesis. 480 pp.  
[http://archives.datapages.com/data/pacific/data/069/069001/53\\_ps0690053.htm](http://archives.datapages.com/data/pacific/data/069/069001/53_ps0690053.htm)

Sanden et al., 2016: Sanden, B.L., Prichard, T.L., and Fulton, A.E., 2016. Assessing And Improving Water Penetration. In L. Ferguson and D.R. Haviland (Eds.), Pistachio Production Manual, Publication 3545. University of California Agriculture and Natural Resources (UCANR) Publications

Soil Science Division Staff. 2017. Soil survey manual. C. Ditzler, K. Scheffe, and H.C. Monger (eds.). USDA Handbook 18. Government Printing Office, Washington, D.C.  
[https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054262](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054262)

Soil Survey Staff, 2021. USDA SSURGO Database.  
[https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2\\_053627](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/?cid=nrcs142p2_053627)

Tehama County Flood Control and Water Conservation District, 2012. Coordinated AB 3030 Groundwater Management Plan 2012. <https://tehamacountywater.org/wp-content/uploads/2020/09/ab3030-groundwater-management-plan.pdf>

Tehama County Flood Control and Water Conservation District, 2015. Ordinance No. 2006: An Ordinance of the County of Tehama Amending Titles 9 and 10 of the Tehama County Code Relating to Groundwater Aquifer Protection and Water Wells.

Tehama County Flood Control and Water Conservation District, 2016. Ordinance No. 2016-1: An Ordinance of the Tehama County Flood Control and Water Conservation District Board of Directors Establishing the Tehama County Groundwater Commission. <https://tehamacountywater.org/wp-content/uploads/2020/08/signed-ordinance-2016-1.pdf>

Tehama County Public Works, 1994. Ordinance No. 1617: An Ordinance Repealing, Enacting and Reenacting the Substantive Provisions of Ordinances 1552 and 1553 of the County of Tehama.  
<https://tehamacountywater.org/wp-content/uploads/2020/09/ordinance-1617.pdf>

Tehama County, 1984. A Code of the General Ordinances of Tehama County, California: Section 9.42 – Well Construction, Rehabilitation, Repair, and Destruction.  
[https://library.municode.com/ca/tehamacounty/codes/code\\_of\\_ordinances?nodetid=TIT9HESA\\_CH9.4\\_2WECOREREDE](https://library.municode.com/ca/tehamacounty/codes/code_of_ordinances?nodetid=TIT9HESA_CH9.4_2WECOREREDE)

Tehama County, 2015. Permit Information. <https://www.co.tehama.ca.us/permit-information>

The Nature Conservancy (TNC). 2021. Interconnected Surface Water in California's Central Valley, Version 1.0.1. <https://icons.codefornature.org/>

The U.S. Geological Survey's National Water Information System (USGS NWIS).  
<https://waterdata.usgs.gov/nwis>

The U.S. Geological Survey's National Water Information System (USGS NWIS) stream flow data (accessed in January 2021)

UC Davis ANR, 2021. SAGBI | Soil Agricultural Groundwater Banking Index.

<https://casoilresource.lawr.ucdavis.edu/sagbi/>

USDA-NRCS, 2014: United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS), 2014. Soil Infiltration: Soil Health – Guides for Educators. May 2014. Available from:

[https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_051576.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051576.pdf).

USGS NHD Dataset. [https://www.usgs.gov/core-science-systems/ngp/national-hydrography/national-hydrography-dataset?qt-science\\_support\\_page\\_related\\_con=0#qt-science\\_support\\_page\\_related\\_con](https://www.usgs.gov/core-science-systems/ngp/national-hydrography/national-hydrography-dataset?qt-science_support_page_related_con=0#qt-science_support_page_related_con)

USGS station #11383500 Deer Ck Near Vina CA:

[https://waterdata.usgs.gov/nwis/inventory/?site\\_no=11383500&agency\\_cd=USGS](https://waterdata.usgs.gov/nwis/inventory/?site_no=11383500&agency_cd=USGS)

USGS, 2021. USGS DEM. <https://apps.nationalmap.gov/datasets/>

USGS/USBR station #11381500 Mill Ck Near Los Molinos CA:

[https://waterdata.usgs.gov/nwis/inventory/?site\\_no=11381500&agency\\_cd=USGS](https://waterdata.usgs.gov/nwis/inventory/?site_no=11381500&agency_cd=USGS)