



Well Owner Report

Field ID	UP04D02	GAMA ID	S14-BUSY-UP07
Station ID	395609121432401	Sample Date	10/4/2021 @ 1130
Station Name	024N002E14P001M	Water level	127.77 feet below Land Surface Datum

Your well was one of several sampled for the Butte, Sutter, and Yuba Subbasins study unit of the Groundwater Ambient Monitoring and Assessment (GAMA) Priority Basin Project (PBP). Results from all sites will be published in a USGS Data Release report (see publications in <https://ca.water.usgs.gov/projects/gama/>); your well will be identified by only the GAMA and Station IDs in all publications and presentations.

This report lists the concentrations of chemical constituents detected in raw groundwater collected from your well. The State of California does not regulate domestic well water quality. To put your results in some context, the concentrations are compared to regulatory (r) and non-regulatory (nr) benchmarks set for public drinking water by the U.S. Environmental Protection Agency (EPA), the California State Water Resources Control Board Division of Drinking Water (SWRCB-DDW), or the USGS National Water-Quality Assessment Program. Health-based benchmarks generally correspond to a risk that one person in one million people consuming water with concentrations above the benchmark over a lifetime may suffer an adverse health effect. More information about potential health effects and well water treatment can be found on the SWRCB and EPA websites.

https://www.waterboards.ca.gov/water_issues/programs/gama/well_owners.html

<https://www.epa.gov/privatewells>

The chemical constituents are organized in the following groups: 1) field water-quality indicators, 2) major ions, 3) nutrients, 4) trace elements, 5) radioactivity, 6) volatile organic compounds, 7) pesticides, 8) geochemical and age-dating tracers, 9) microbiological constituents, and 10) constituents of special interest. Only detected constituents are reported here. Typical uses or sources are listed for all constituents; other sources not listed also may affect the concentrations of constituents in groundwater in your area. Volatile organic compounds and pesticides reported at concentrations less than half of the laboratory reporting limit are not counted as detections in the GAMA Project and are not reported here.

Thank you again for allowing the USGS to sample your well for the GAMA Project.

Andrew Soldavini
asoldavini@usgs.gov
(619) 225-6139

mg/L = milligrams per liter	AL-US = USEPA Action Level (r)	MCL-CA = SWRCB-DDW Maximum Contaminant Level (nr)
µg/L = micrograms per liter	HAL-US = USEPA Lifetime Health Advisory (nr)	
µS/cm = microsiemens per centimeter	HBSL-C = USGS Cancer Health-Based Screening Level	MCL-US = USEPA Maximum Contaminant Level (r)
ppm = parts per million	HBSL-NC = USGS Noncancer Health-Based Screening Level	NL-CA = SWRCB-DDW Notification Level (nr)
ppb = parts per billion	HHBP-C = USEPA Cancer Human Health Benchmark for Pesticide	RL-CA = SWRCB-DDW Response Level (nr)
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Concentrations of all chemical constituents detected in raw groundwater collected from your well were less than USEPA and SWRCB-DDW regulatory and non-regulatory benchmarks applied to drinking water, with the following exceptions:

Field Water Quality Indicators: pH, field

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<i>Constituent Name</i>	<i>Units</i>	<i>Value</i>	<i>Benchmark Value and Type</i>	<i>Typical Use or Source</i>
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1 Field Water Quality Indicators

Barometric pressure	mm of mercury	684			
Flow rate	gal/min	5			
Water Temperature	deg Celsius	11.5			
Specific Conductance, field	µS/cm	39	1600	SMCL-CA	Naturally occurring
pH, field	standard units	6.3	<6.5, >8.5	SMCL-US	Naturally occurring
Dissolved Oxygen	mg/L	9.9			Naturally occurring

2 Major and Minor Ions

Calcium	mg/L	1.86			Naturally occurring
Magnesium	mg/L	3.8			Naturally occurring
Sodium	mg/L	0.92			Naturally occurring
Chloride	mg/L	1.08	500	SMCL-CA	Naturally occurring
Silica	mg/L	16.4			Naturally occurring
Sulfate	mg/L	0.12	500	SMCL-CA	Naturally occurring
Alkalinity (CaCO3), laboratory	mg/L	21.7			Naturally occurring
Total dissolved solids (TDS)	mg/L	38	1000	SMCL-CA	Naturally occurring
Hardness	mg/L as CaCO3	20.3			Naturally occurring

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3 Nutrients

Nitrate, as nitrogen	mg/L	0.142	10	MCL-US	
Ammonia, as nitrogen	mg/L	0.02	24.7	HAL-US	Natural, fertilizer, sewage
Orthophosphate, as phosphorus	mg/L	0.005			Natural, fertilizer, sewage

4 Trace Elements

Barium	µg/L	0.58	1000	MCL-CA	Naturally occurring
Chromium	µg/L	0.76	50	MCL-CA	Naturally occurring
Copper	µg/L	5.6	1300	AL-US	Natural, pipe corrosion
Iron	µg/L	22.3	300	SMCL-CA	Naturally occurring
Lead	µg/L	1.98	15	AL-US	Natural, pipe corrosion
Lithium	µg/L	0.26			Naturally occurring
Manganese	µg/L	0.91	50	SMCL-CA	Naturally occurring
Nickel	µg/L	0.32	100	MCL-US	Naturally occurring
Strontium	µg/L	23.8	4000	HAL-US	Naturally occurring

5 Radioactivity

Sampled and Awaiting Results

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6 Volatile Organic Compounds

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Methyl tert-butyl ether (MTBE)	µg/L	0.23	13 MCL-CA	Gasoline oxygenate and degradate
7 Pesticides and Pesticide Degradates		None Detected		
8 Geochemical and Age-Dating Tracers				
Hydrogen stable isotope ratio of water	per mil	-66.9		Info about recharge source area
Oxygen stable isotope ratio of water	per mil	-10.02		Info about recharge source area
9 Microbiological Constituents		None Detected		
10 Constituents of Special Interest		None Detected		

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