

Water Quality In Guadalupe

The City of Guadalupe is working to produce the highest quality drinking water for our customers.

The City receives water from two sources – ground water wells (from underground aquifers), and State surface water (through membership with Central Coast Water Authority). Both sources are monitored and assessed in accordance with government standards and monitoring requirements. Checking water quality and identifying potential problems is one of our primary goals. **We are proud to say that the water delivered to your home in 2015 complied with all State and Federal drinking water regulations.**

The City prepares an annual report to inform customers of the quality of water being delivered. This report may contain data from January 1, 2015 to December 31, 2015, though representative it may also contain results from sample data prior to 2015. **Results show that the water delivered to your home complied with regulatory standards and is reliable for domestic use.**

For more information about this report or for questions about any topic related to water and water quality, please contact Jaime Vidales, City of Guadalupe Water Department Supervisor, at (805) 356-3890.

Este informe contiene información importante sobre su agua de beber y como cumple con los estándares estatales y federales. Tradúzcalo o hable con alguien que lo entienda bien. Si no encuentra la manera de entender este reporte, por favor contacte a Jaime Vidales del departamento de agua de la Ciudad de Guadalupe al (805) 356-3890.



City of Guadalupe Obispo Boosting Station

The City of Guadalupe water system consists of two pumping stations, active and standby wells, three water storage tanks, and various water mains. Safe treatment and distribution of water is our daily goal, maintaining pumping stations, tanks, and water mains is vital to achieving that goal. The City also has security measures in place to ensure that our water supply is delivered to our residents safely and efficiently. Alarms, gates and locks are constantly monitored.



City of Guadalupe Elevated Water Tank

City of Guadalupe 2015 WATER QUALITY REPORT



This report provides information regarding the quality of drinking water for the City of Guadalupe during 2015. Included are details about where your water comes from, what it contains, and how it compares to established drinking water standards.



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CITY OF GUADALUPE
ACTIVE SOURCE DETECTIONS FROM CITY WATER WELLS

TABLE 1 – SAMPLING RESULTS FOR MICROBIOLOGICAL CONTAMINATION

Microbial Contaminant	Highest No. of Detections in a month	No. of Months in Violation	MCL	PHG (MCLG)	Major Sources of Bacteria
Total Coliform Bacteria	1	0	5% of Monthly Samples Positive	(0)	Naturally Present in the Environment
Fecal Coliform or E.coli	0	0	A routine sample and repeat sample detecting positive coliform, and either sample detects	(0)	Human and animal fecal waste

TABLE 2- SAMPLING RESULTS OF LEAD AND COPPER

Lead and Copper	*Date	No. of Samples Collected	90 th Percentile level detected	No. of Sites Exceeding AL	AL	PHG (MCLG)	Typical Source of Contaminant
Lead (ppb)	6/2014	20	ND	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppb)	6/2014	20	89	0	1300	300	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	*Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2/4/14	44	44	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2/4/14	440	440	None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – SAMPLING RESULTS OF CONTAMINANTS WITH PRIMARY DRINKING WATER STANDARD

Chemical or constituent (and reporting units)	*Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Major Sources in Drinking Water
Fluoride (ppm)	2/4/14	0.21	0.21	2.0	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Hexavalent Chromium (6) (ppb)	12/23/14	1.35	1.0 – 1.7	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate as N (ppm)	2/24/15	5.45	2.0 – 8.9	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion from natural deposits
Nitrite as N (ppb)	2/4/14	570	570	1000	1000	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion from natural deposits
Total Chlorine Residual (ppm)	Daily-Year: 2015	1.27 (RAA)	0.74 – 1.68	MRDL = 4.0	MRDLG = 4.0	Drinking water disinfectant added for potable water treatment
Uranium (pCi/L)	1/6/15, 4/7/15, 7/14/15, 10/20/15	2.95	2.0 – 3.7	20	0.43	Erosion of natural deposits
Gross Alpha (pCi/L)	1/6/15, 4/7/15, 7/14/15, 10/20/15	7.78	4.2 – 11.0	15	(0)	Erosion of natural deposits
Radium 228 (pCi/L)	5/13/14, 8/12/14	< 1	< 1	5	.019	Erosion of natural deposits

TABLE 5 – SAMPLING RESULTS OF CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARD

Chemical or constituent (and reporting units)	*Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Major Sources in Drinking Water
Chloride (ppm)	2/4/14	17	17	500	N/A	Runoff/leaching from natural deposits; seawater influence
Odor Threshold (TON)	8/26/14	1	1	3	N/A	Naturally-occurring organic materials
Specific Conductance (µmho/cm)	2/4/14	920	920	1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2/4/14	280	280	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (ppm)	2/4/14, 5/13/14	615	540 - 690	1000	N/A	Runoff/leaching from natural deposits
Total Suspended Solids (TSS) (ppm)	5-13-14	12	12	NA	NA	Runoff/leaching from natural deposits and soil runoff
Turbidity (NTU)	8/26/14	0.11	0.11	5	N/A	Soil runoff

TABLE 6 – SAMPLING RESULTS OF UNREGULATED CONTAMINANTS

Chemical or constituent (and reporting units)	*Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Major Sources in Drinking Water
Alkalinity (ppm)	2/4/14	210	210	N/A	N/A	Runoff/leaching from natural deposits; seawater influence
Bicarbonate (ppm)	2/4/14	250	250	N/A	N/A	--
Calcium (ppm)	2/4/14	99	99	N/A	N/A	Runoff/leaching from natural deposits; seawater influence
Corrosivity (SI)	Non-Corrosive	Non-Corrosive	Non-Corrosive	N/A	N/A	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Magnesium (ppm)	2/4/14	47	47	N/A	N/A	Runoff/leaching from natural deposits; seawater influence
pH (units)	2/4/14	7.5	7.5	N/A	N/A	Runoff/leaching from natural deposits; seawater influence
Potassium (ppm)	2/4/14	2.5	2.5	N/A	N/A	Runoff/leaching from natural deposits; seawater influence

TABLE 7 – SAMPLING RESULTS OF UNREGULATED CONTAMINANTS WITH NOTIFICATION LEVELS

Chemical or constituent (and reporting units)	*Sample Date	Average Level Detected	Range of Detections	NL	PHG (MCLG)	Possible Health Effects
Boron (ppb)	2/4/14	130	130	1000	N/A	Babies of some pregnant women who drink water, containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Vanadium (ppb)	2/4/14	4.5	4.5	50	N/A	Babies of some pregnant women who drink water, containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

* The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If a contaminant is not in this report, the contaminant is either ND or below the DLR for 2015.

NOTE: All results represent raw water from our active water wells, except microbiological, Lead and Copper, Trihalomethanes and Haloacetic Acids, and Chlorine Residuals, which were taken at various distribution points within the city.

**PURCHASED SURFACE WATER
CENTRAL COAST WATER AUTHORITY**

Parameter	Units	State MCL	PHG (MCLG)	State DLR	TREATED		SOURCE	Major Sources in Drinking Water
					Range Average	CCWA PPWTP	STATE WATER	

PRIMARY STANDARDS—Mandatory Health-Related Standards

Clarity (a)								
Combined Filter Effluent Turbidity	NTU	TT=<1 NTU every 4 hours TT=95% of samples <0.3 NTU			Range	0.04 – 0.11	NA	Soil runoff
					%	100%	NA	

INORGANIC CHEMICALS

Aluminum	ppm	1 (b)	0.6	0.05	Range	ND – 0.11	ND	Residue from water Treatment process; Erosion of natural deposits
					Average	0.073	ND	
Arsenic, Total	ppb	10	0.004	2	Range	ND	2.4	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
					Average	ND	2.4	
Nitrate as Nitrogen	ppm	10 (h)	10	0.4	Range	0.43	0.43	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion from natural deposits
					Average	0.43	0.43	

RADIONUCLIDES

Gross Beta Particle	pCi/L	50	(0)	4	Range	ND	4.5	Decay of natural and man-made deposits
					Average	ND	4.5	

DISTRIBUTION SYSTEM MONITORING

Total Chlorine Residual	ppm	MRDL = 4.0	MRDLG = 4.0	NA	Range	1.1 – 3.5	NA	Measurement of the disinfectant used in the production of drinking water
					Average	2.3	NA	
Total Trihalomethanes (d)	ppb	80	NA	NA	Range	53 - 68	NA	By-product of drinking water chlorination
					Average	61	NA	
					Highest LRAA	61.8	NA	
Haloacetic Acids (d)	ppb	60	NA	(e)	Range	8.2 - 18	NA	By-product of drinking water chlorination
					Average	12.4	NA	
					Highest LRAA	13	NA	

SECONDARY STANDARDS—Aesthetic Standards

Chloride	ppm	500	NA	NA	Range	80 – 205	77 – 184	Runoff/leaching from natural deposits; seawater influence
					Average	122	117	
Color	ACU	15	NA	NA	Range	ND	20	Naturally-occurring organic materials
					Average	ND	20	
Corrosivity (Aggressive Index)	None	None Corrosive	NA	NA	Range	Non Corrosive	Non Corrosive	Balance of hydrogen, carbon, & oxygen in water, affected by temperature & other factors
					Average	Non Corrosive	Non Corrosive	
Odor Threshold	TON	3	NA	1	Range	ND - 1	ND – 8	Naturally-occurring organic materials
					Average	ND	1.3	
Specific Conductance	uS/cm	1600	NA	NA	Range	654 – 1160	566 – 1063	Substances that form ions when in water; seawater influence
					Average	781	710	
Sulfate	ppm	500	NA	0.5	Range	97	85	Runoff/leaching from natural deposits; industrial wastes
					Average	97	85	
Total Dissolved Solids (TDS)	ppm	1000	NA	NA	Range	349 – 708	300 – 648	Runoff/leaching from natural deposits
					Average	437	398	
Turbidity (Monthly)	NTU	5	NA	NA	Range	0.04 – 0.14	0.06 – 7.1	Soil runoff
					Average	0.07	1.2	

ADDITIONAL PARAMETERS (Unregulated)

Alkalinity (Total) as CaCO ₃ equivalents	ppm	NA	NA	NA	Range	66 - 92	32 – 92	Runoff/leaching from natural deposits; seawater influence
					Average	79	69	
Calcium	ppm	NA	NA	NA	Range	58 – 96	58 – 92	Runoff/leaching from natural deposits; seawater influence
					Average	69	69	
DCPA (total Mono & Diacid Degredates)	ppb	NA	NA	NA	Range	0.13	0.12	
					Average	0.13	0.12	
Geosmin	ng/L	NA	NA	NA	Range	ND – 4	ND – 13	
					Average	2	5	
Hardness (Total) as CaCO ₃	ppm	NA	NA	NA	Range	128 – 206	124 – 212	Leaching from natural deposits
					Average	146	146	
Heterotrophic Plate Count (f)	CFU/mL	TT	NA	NA	Range	0 – 6	NA	Naturally present in the environment
					Average	0.5	NA	
Magnesium	ppm	NA	NA	NA	Range	18	18	Runoff/leaching from natural deposits; seawater influence
					Average	18	18	
Manganese, Total	ppb	NA	NA	NA	Range	ND	10	Runoff/leaching from natural deposits; seawater influence
					Average	ND	10	
2-Methylisoborneal	ng/L	NA	NA	NA	Range	ND – 1003	ND – 303	
					Average	111	42	
pH	pH Units	NA	NA	NA	Range	7.6 – 8.8	7.7 – 9.3	Runoff/leaching from natural deposits; seawater influence
					Average	8.2	8.7	
Potassium	ppm	NA	NA	NA	Range	3.4	3.5	Runoff/leaching from natural deposits; seawater influence
					Average	3.4	3.5	
Sodium	ppm	NA	NA	NA	Range	84	80	Runoff/leaching from natural deposits; seawater influence
					Average	84	80	
Total Organic Carbon (TOC) (g)	ppm	TT	NA	0.30	Range	1.9 – 3.1	3.4 – 6.3	Various natural and manmade sources
					Average	2.5	4.8	

Footnotes: Abbreviations and Notes

(a) Turbidity (NTU) is a measure of the cloudiness of the water and it is a good indicator of the effectiveness of our filtration system. Monthly turbidity values are listed in the Secondary Standards section.
 (b) Aluminum has a Secondary MCL of 0.2 ppm.
 (c) Total coliform MCLs: Systems that collect >40 sample/month no more than 5.0% of the monthly samples may be Total Coliform positive. Systems that collect >40 per month no more than 1 positive sample per month may be Total Coliform positive. Fecal coliform/E. coli MCL's: The occurrence of 2 consecutive Total Coliform positive samples, one of

which contains fecal coliform/E.coli, constitutes an acute MCL violation.
 (d) Compliance based on the running quarterly annual average of distribution system samples.
 (e) Monochloroacetic Acid (MCAA) has a DLR of 2.0 ug/L while the other four Haloacetic Acids have DLR's of 1.0 ug/L.
 (f) Pour plate technique
 (g) TOCs are taken at the treatment plant's combined filter effluent.
 (h) State MCL is 45 mg/L as nitrate, which equals 10 mg/L as N.
 AL = Regulatory Action Level

ACU = Apparent Color Units
 CCWA= Central Coast Water Authority
 CFU/ml = Colony Forming Units per milliliter
 DLR = Detection Level for purposes of Reporting
 MCL = Maximum Contaminant Level
 MCLG = Maximum Contaminant Level Goal
 MRDL = Maximum
 MRDLG = Maximum Residual Disinfectant Goal
 NA = Not Applicable
 NL=Notification Level
 ND = None Detected
 NTU = Nephelometric Turbidity Units
 pCi/L = PicoCuries per liter
 PHG = Public Health Goal

ppb = parts per billion, or micrograms per liter (ug/L)
 ppm = parts per million, or milligrams per liter (mg/L)
 SI = Saturation Index
 RAA = Running Annual Average
 LRAA = Locational Running Annual Average
 TT = Treatment Technique
 µmho/cm = micromhos per centimeter (unit of specific conductance of water).

WHERE DOES YOUR WATER COME FROM?

The sources of safe drinking water (both tap water and bottled water) include rivers, streams, reservoirs, springs, and wells. As water travels over the surface of the earth or through the ground, it dissolves naturally occurring minerals and in some cases hazardous materials. It can also pick up substances resulting from human activity or the presence of animals.

In 2015, the City of Guadalupe drew 100% well water from our active wells within our city, and 0% surface water from the State water project (Central Coast Water Authority). Water from our wells is treated at our distribution center then mixed in our reservoirs for distribution. Water from the State project is treated at the Polonio Pass Water Treatment Plant, and delivered directly to our tank. For more details on the treatment process of the State water project, please call the City of Guadalupe Water Department Supervisor at (805) 356-3890.

Contaminants that may be present in source water include:

- ☞ **Microbial Contaminants**, such as viruses and bacteria that may come from septic systems, sewage treatment plants, agricultural livestock, and wildlife.
- ☞ **Inorganic contaminants**, such as salts and metals that can be naturally-occurring or result from storm water runoff, industrial or domestic wastewater discharge, oil and gas production, mining, or farming.
- ☞ **Pesticides and herbicides**, which may come from a variety of sources such as agricultural and urban storm water runoff as well as residential use.
- ☞ **Organic chemical contaminants**, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff, agricultural applications, and septic systems.
- ☞ **Radioactive contaminants** which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board, (SWRCB) prescribe regulations that limit the amount of certain contaminants in drinking water provided by public systems. USEPA and SWRCB regulations also establish limits for contaminants in bottled water.

Definitions

- ☞ **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to public health goals as economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- ☞ **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.
- ☞ **Public Health Goal (PHG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

☞ **Maximum Residual Disinfectant Level (MRDL)**: The highest level of a disinfectant allowed in drinking water. The addition of a disinfectant is necessary for control of microbial contaminants.

☞ **Maximum Residual Disinfectant Level Goal (MRDLG)**: The level of a drinking water disinfectant below which there is no known or expected risk to health.

☞ **Primary Drinking Water Standards (PDWS)**: MCLs or MRDLs for contaminants that affect health along with their monitoring, reporting, and water treatment requirements.

☞ **Secondary Drinking Water Standards (SDWS)**: MCLs for contaminants that affect taste, odor, and appearance of drinking water.

☞ **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.

☞ **Regulatory Action Level (AL)**: The concentration of a contaminant that a water system must not exceed.

Additional Information on Drinking Water

Drinking water, both tap water and bottled water, may reasonably contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a risk to health. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at the number below. Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as cancer patients undergoing chemotherapy, persons who have undergone organ transplants, who have HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium or microbial contaminants are available from the Safe Drinking Water Hotline at 800-426-4791 or at www.epa.gov/safewater/resource.

City of Guadalupe-Chemicals Used for Disinfection

The City of Guadalupe uses both chlorine and chloramines as primary forms of disinfection. Chlorine and Chloramines are both state and federally approved forms of disinfection, but unlike chlorine, chloramines minimize disinfection byproduct formation. Another benefit of chloramines is improved taste of the drinking water as compared to chlorine. Chloramines are used by many water utilities. Chloramines have the same effect as chlorine for typical water use with the exception that chloramines must be removed from water used in kidney dialysis and for fish tanks and aquariums. Treatments to remove chloramines from water are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life. You may also call 800-111-2222 for additional chloramine information.

City of Guadalupe Water Assessment

An assessment of the drinking water sources for the City of Guadalupe found that they are most vulnerable to the following activities associated with potential contaminants in the water supply – runoff and leaching from fertilizer use plus the erosion of natural mineral deposits.

Detection of Contaminants Summary

Nitrate: Due to high concentrations of Nitrates found in the water from one of our wells in the last few years, including 2015, the City does not regularly use this source and will only use this source in an emergency. Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such Nitrate levels in drinking water can interfere with the capacity of an infant's blood to carry oxygen, resulting in serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant or you are pregnant, you should ask advice from your health care provider.

Lead: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Guadalupe is responsible for providing quality drinking water, but the City cannot control the variety of materials used in plumbing components. If the water in your home has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. If you are concerned about lead in your water, you may want to have your home water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800-426-4791 or at <http://www.epa.gov/safewater/lead>

Trihalomethanes (THMs) and Haloacetic Acids (HAA5s): The City has been monitoring these contaminants with direction of state regulatory agencies, resulting in a detection of these contaminants in your water. THMs and HAA5s are disinfection byproducts that are produced when a disinfectant like chlorine, or chloramines, are added to the drinking water where organic matter is present. As a result of the two mixing together, they form byproducts. Some people who drink water containing THMs and HAA5s in excess of the MCL over many years may experience liver, kidney or central nervous problems and may have an increased risk of cancer. For more information on disinfection byproducts please call the Safe Drinking Water Hotline at 800-426-4791 or visit <http://water.epa.gov/drink/contaminants/basicinformation/disinfectionbyproducts.cfm>

About Water Blending: The City combines well water with State surface water to offset any contaminants that may be present in either source and to ensure that the water delivered to your home meets all State and Federal drinking water standards.

For questions: Please call Jaime Vidales at the City of Guadalupe Water Department, (805) 356-3890.

Public Participation Opportunities: The Guadalupe City Council meets every 2nd and 4th Tuesday of the month at 6pm at the Council Chambers located at 918 Obispo St. Guadalupe, CA.