

WHAT ARE WATER QUALITY STANDARDS?

The quality and safety of drinking water in the United States is regulated by the federal government through the Environmental Protection Agency (EPA).

In California, the EPA standards are supplemented and enforced by the State Water Resources Control Board (SWRCB). Drinking water standards establish limits for substances that may affect health or aesthetic qualities of water.

The drinking water served by San Gabriel County Water District is well within EPA and SWRCB standards. The chart in this report shows the following types of water quality standards:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste and appearance of drinking water.

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

Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

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



What Is a Water Quality Goal?

In addition to mandatory water quality standards, the U.S. EPA and the State of California have set voluntary water quality goals for some contaminants. Webster's Dictionary defines a goal as an end towards which effort is directed. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable, but they nevertheless provide useful guideposts for aiming water management activities. The chart in this report includes three types of water quality goals;

(1) 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 U.S. Environmental Protection Agency.

(2) 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.

(3) Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

What Contaminants May Be Present In Sources Of Drinking Water?

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

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural and livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, that may come from a variety of sources such as agriculture, urban storm water run off, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- **Radioactive contaminants**, That can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The SWRCB regulations also establish limits for contaminants in bottled water that provide the same protection for public health. An approved treatment process of blending is used to bring Nitrate and 1,2,3 TCP levels below the State mandated MCL. Weekly water samples are taken to ensure SGCWD continues to achieve water quality compliance standards.

Water Characteristics

The parameters listed below are unregulated and have no MCLs although the State Water Resources Control Board (SWRCB) does require monitoring.

* Monitoring is required every three years, results are from 2018 - 2020. ** Monitoring is required every three years, results are from 2019. *** Monitoring is required every six/nine years, results are from 2014 - 2020.

Parameter	Units	Range	Average
* PH	0 - 14	7.8 - 8.4	8.0
* Alkalinity	ppm	94 - 180	129.0
* Hardness	ppm	52 - 250	116.8
* Sodium	ppm	28 - 57	40.3
* Calcium	ppm	19 - 64	32.0
* Potassium	ppm	1.0 - 1.6	1.3
* Magnesium	ppm	1.2 - 21	8.7

2020 Water Quality Analysis Results Table

PARAMETER	UNITS	STATE MCL, NL, AL OR MRDL	MCLG, (PHG) OR MRDLG	SGCWD GROUNDWATER		MAJOR SOURCES AND TYPICAL HEALTH EFFECTS OF THE CONTAMINANT
				RANGE	AVERAGE	
PRIMARY STANDARDS: Mandatory Health-Related Standards Established by California Department of Public Health						
MICROBIOLOGICAL CONTAMINANTS						
Total Coliform Bacteria (Total Coliform Rule)	% positive	Greater than 5% positive	0% positive	2 pos. samples out of 994	0.2	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present.
DISINFECTION BYPRODUCTS						
Total Trihalomethanes (TTHMs)	ppb	80	(NA)	ND - 6.2	3.31	Total Trihalomethanes are a by-product of drinking water disinfection. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney or central nervous system problems, and may have an increased risk of getting cancer.
Haloacetic Acids (HAA5)	ppb	60	(NA)	ND	ND	Haloacetic Acids are a by-product of drinking water chlorination. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Chlorine	ppm	4.0 (as Cl ₂)	4 (as Cl ₂)	0.75 - 1.41	1.06	Chlorine is a drinking water disinfectant added for treatment. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
INORGANIC CONTAMINANTS						
Nitrate (as No₃)	mg/L	10	(10)	ND - 7.8	3.54	Nitrate sources include runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits. Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.
*Fluoride	ppm	2.0	(1)	0.71 - 1.8	0.90	Fluoride sources include erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2mg/L may get mottled teeth.
*Arsenic	ppb	10	(0.004)	ND - 5.9	2.62	Arsenic sources are erosion of natural deposits; runoff from orchards; glass and electronics production wastes. Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
**Copper (at the tap, 90th percentile) - 30 sample sites - none exceeding AL	ppm	AL=1.3	(0.3)	90th percentile = 0.18	NA	Copper sources include internal corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
**Lead (at the tap, 90th percentile) - 30 sample sites - none exceeding AL	ppm	AL=15	(0.2)	90th percentile = ND	NA	Lead sources include internal corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight defects in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.
UNREGULATED CONTAMINANTS						
*Hexavalent Chromium	ppb	10	(0.02)	1.7 - 8.0	5.2	Hexavalent Chromium sources include discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.
VOLATILE ORGANIC CONTAMINANTS						
Tetrachloroethylene (PCE)	ppb	5	(0.06)	ND - 3.6	1.46	PCE sources include discharge from factories, dry cleaners, and auto shops (metal degreaser). Some people who use water containing tetrachloroethylene in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.
Trichloroethylene (TCE)	ppb	5	(1.7)	ND - 0.55	0.09	TCE sources include discharges from metal degreasing sites and other factories. Some people who use water containing TCE in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.
RADIOACTIVE CONTAMINANTS						
***Gross Alpha particle activity	PCi/L	15	0	ND - 5.79	1.85	Gross Alpha particle activity sources come from erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
***Uranium	PCi/L	20	(0.43)	ND - 5.2	2.91	Uranium sources come from erosion of natural deposits. Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.

Abbreviations Used In The Tables: AL = Action Level, NL = Notification Level, > = Greater than, < = Less than, mg/L = Milligrams per liter (same as) Parts per million, ppb = Part per billion, ppt = Parts per trillion, pCi/L = PicoCuries per liter, MCL = Maximum Contaminant Level, MCLG = Maximum Contaminant Level Goal (Federal), MFL = Micro fibers per liter, MRDL = Maximum Residual Disinfectant Level, MRDLG = Maximum Residual Disinfectant Level Goal, PHG = Public Health Goal (State), ND = Not Detected (not found above the minimum detectable level for this contaminant), TT = Treatment Technique, uS/cm = Microsiemens per centimeter.

ppm = Parts per million. Parts of contaminant per million parts of water. One part per million (ppm) is equivalent to a single penny in ten thousand dollars. ppm may also be referred to as mg/l or milligrams per liter. ppb = Part per billion. Parts of contaminant per billion parts of water. One part per billion (ppb) is equivalent to a single penny in ten million dollars. ppb may also be referred to as ug/l or micrograms per liter. ppt = Part per trillion. Parts of contaminant per trillion parts of water. One part per trillion (ppt) is equivalent to a single penny in ten billion dollars.

2020 Water Quality Analysis Results Table

PARAMETER	UNITS	STATE MCL, NL, AL OR MRDL	MCLG, (PHG) OR MRDLG	SGCWD GROUNDWATER		MAJOR SOURCES AND TYPICAL HEALTH EFFECTS OF THE CONTAMINANT
				RANGE	AVERAGE	
SECONDARY STANDARDS: Aesthetic Standards Established by the State Water Resources Control Board Division of Drinking Water						
INORGANIC CONTAMINANTS						
*Foaming Agents (MBAS)	ppb	500	none	ND	ND	Foaming Agent sources in groundwater include municipal and industrial waste discharges.
*Turbidity	units	5	none	ND-1.5	0.32	Turbidity in groundwater is a solution of finely divided subsurface clay and silt. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality and high turbidity can hinder the effectiveness of disinfectants. Soil runoff.
*Color	units	15	none	ND	ND	Color sources in groundwater include naturally-occurring organic matter, and minerals.
*Odor-Threshold	units	3	none	1	1	Odor sources in groundwater include naturally-occurring organic materials. Dissolved minerals and gases.
*Chloride	ppm	500	none	8.7-21	13.6	Chloride sources in groundwater include runoff/leaching from natural deposits; seawater influence.
*Sulfate	ppm	500	none	18-42	29.2	Sulfate sources in groundwater include runoff/leaching from natural deposits; industrial wastes.
*Total Dissolved Solids	ppm	1,000	none	190-410	248	TDS in groundwater is a solution of finely divided inorganic material leaching from natural deposits.
*Specific Conductance	uS/cm	1,600	none	310-600	400	Specific Conductance measures substances that form ions when in water; seawater influence.

Are There Any Precautions The Public Should Consider?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

About Nitrate: Federal regulations at 40CFR 141.145(c)(1), require the following statement about nitrate and blue baby syndrome. Please be aware that the nitrate level in your water is below the MCL and there have been no cases of blue baby syndrome reported in the United States where the nitrate concentration was at or below the MCL.

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

the 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 the 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 for advice from your health care provider. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

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. San Gabriel County Water District is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water 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 are concerned about lead in your water, you may wish to have your 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 or at <http://www.epa.gov/lead>.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current



understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Drinking Water Source Assessment Completed

In accordance with the Federal Safe Drinking Water Act, an assessment of the drinking sources for the San Gabriel County Water District was updated in July 2010. The purpose of the drinking water source assessment is to promote source water protection by identifying types of activities in the proximity of the drinking water sources which could pose a threat to the water quality. The assessment concluded that five of the District's six sources are considered vulnerable to the following activities or facilities associated with contaminants detected in the water supply: gas stations, automobile repair shops, dry cleaners, PCA sewer collection systems. A copy of the report is available for review at the District office located at 8366 Grand Ave., Rosemead, California.