



water poses a health risk. 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. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

## VI. Source Water Assessment

## VII. Definitions

**AL = Action Level** - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

**MCL = Maximum Contaminant Level** - The highest level of a contaminant that is allowed in drinking water.

**MCLG = Maximum Contaminant Level Goal** - The level of a contaminant in drinking water below which there is no known or expected risk to health.

**MFL = Million fibers per liter.**

**MRDL = Maximum Residual Disinfectant Level.** The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**MRDLG = Maximum Residual Disinfectant Level Goal.** The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.

**MREM = Millirems per year** - a measure of radiation absorbed by the body.

**NA = Not Applicable,** sampling was not completed by regulation or was not required.

**NTU = Nephelometric Turbidity Units,** a measure of water clarity.

**PCI/L = Picocuries per liter** - picocuries per liter is a measure of the radioactivity in water.

**PPM = Parts per million** or Milligrams per liter (mg/L).

**PPB = Parts per billion** or Micrograms per liter (µg/L).

**PPT = Parts per trillion** or Nanograms per liter.

**PPQ = Parts per quadrillion** or Picograms per liter.

**TT = Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

## VIII. Health Effects Language

**Nitrate** in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. "High nitrate levels in drinking water can cause blue baby syndrome." Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA 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.

**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. **GHR WATER** 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

**IX. Water Quality Data**

Microbiological	Violation Y or N	Number of Samples Present OR Highest Level Detected	Absent (A) or Present (P) OR Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
<b>Total Coliform Bacteria</b> (System takes ≥ 40 monthly samples) 5% of monthly samples are positive; (System takes ≤ 40 monthly samples) 1 positive monthly sample	N	0	A	0	0	1-17 To12-17	Naturally Present in Environment
<b>Fecal coliform and E. Coli</b> (TC Rule)				0	0		Human and animal fecal waste
<b>Fecal Indicators</b> (E. coli, enterococci or coliphage) (GW Rule)				TT	n/a		Human and animal fecal waste
<b>Total Organic Carbon</b> (ppm)				TT	n/a		Naturally present in the environment
<b>Turbidity (NTU), surface water only</b>				TT	n/a		Soil Runoff
Disinfectants	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
<b>Chloramines (ppm)</b>				MRDL = 4	MRDLG = 4		Water additive used to control microbes
<b>Chlorine (ppm)</b>				MRDL = 4	MRDLG = 4		Water additive used to control microbes
<b>Chloride dioxide (ppb)</b>				MRDL = 800	MRDLG = 800		Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
<b>Haloacetic Acids (ppb) (HAA5)</b>				60	n/a		Byproduct of drinking water disinfection
<b>Total Trihalomethanes (ppb) (TTHM)</b>				80	n/a		Byproduct of drinking water disinfection
<b>Bromate (ppb)</b>				10	0		Byproduct of drinking water disinfection
<b>Chlorite (ppm)</b>				1	0.8		Byproduct of drinking water disinfection
Lead & Copper	Violation Y or N	90 <sup>th</sup> Percentile AND Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month & Year	Likely Source of Contamination
<b>Copper (ppm)</b>	N	90 <sup>th</sup> Percentile = .2	.0 to .024	AL = 1.3	ALG = 1.3	9/2014	Corrosion of household plumbing systems; erosion of natural deposits
<b>Lead (ppb)</b>	N	90 <sup>th</sup> Percentile = 0	0	AL = 15	0	9/2014	Corrosion of household plumbing systems; erosion of natural deposits

Radionuclides	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Beta / photon emitters (mrem/yr.)				4	0		Decay of natural and man-made deposits
Alpha emitters (pCi/L) (this is Gross Alpha 4002)				15	0		Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)				5	0		Erosion of natural deposits
Uranium (ug/L)				30	0		Erosion of natural deposits
Inorganic Chemicals (IOC)	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Antimony (ppb)				6	6		Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic (ppb)				10	0		Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)				7	7		Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)				2	2		Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)				4	4		Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)				5	5		Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)				100	100		Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)				200	200		Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)				4	4		Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)				2	2		Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	N	4.0ppm	4.0ppm	10	10	2/2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)				1	1		Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Selenium (ppb)				50	50		Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	59ppm		N/A	N/A	8-2017	N/A
Thallium (ppb)				2	0.5		Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Synthetic Organic Chemicals (SOC)	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
2,4-D (ppb)				70	70		Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)				50	50		Residue of banned herbicide
Acrylamide				TT	0		Added to water during sewage / wastewater treatment
Alachlor (ppb)				2	0		Runoff from herbicide used on row crops
Atrazine (ppb)				3	3		Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)				200	0		Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)				40	40		Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)				2	0		Residue of banned termiticide
Dalapon (ppb)				200	200		Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)				400	400		Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)				6	0		Discharge from rubber and chemical factories
Dibromochloropropane (ppt)				200	0		Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)				7	7		Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)				20	20		Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)				30	0		Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)				100	100		Runoff from herbicide use
Endrin (ppb)				2	2		Residue of banned insecticide
Epichlorohydrin				TT	0		Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)				50	0		Discharge from petroleum refineries
Glyphosate (ppb)				700	700		Runoff from herbicide

							use
Heptachlor (ppt)				400	0		Residue of banned termiticide
Heptachlor epoxide (ppt)				200	0		Breakdown of heptachlor
Hexachlorobenzene (ppb)				1	0		Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)				50	50		Discharge from chemical factories
Lindane (ppt)				200	200		Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)				40	40		Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)				200	200		Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)				500	0		Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)				1	0		Discharge from wood preserving factories
Picloram (ppb)				500	500		Herbicide runoff
Simazine (ppb)				4	4		Herbicide runoff
Toxaphene (ppb)				3	0		Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Chemicals (VOC)	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Benzene (ppb)				5	0		Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)				5	0		Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)				100	100		Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)				600	600		Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)				75	75		Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)				5	0		Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)				7	7		Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)				70	70		Discharge from industrial chemical factories

trans-1,2-Dichloroethylene (ppb)				100	100		Discharge from industrial chemical factories
Dichloromethane (ppb)				5	0		Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)				5	0		Discharge from industrial chemical factories
Ethylbenzene (ppb)				700	700		Discharge from petroleum refineries
Styrene (ppb)				100	100		Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)				5	0		Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)				70	70		Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)				200	200		Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)				5	3		Discharge from industrial chemical factories
Trichloroethylene (ppb)				5	0		Discharge from metal degreasing sites and other factories
Toluene (ppm)				1	1		Discharge from petroleum factories
Vinyl Chloride (ppb)				2	0		Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)				10	10		Discharge from petroleum or chemical factories

**X. *Cryptosporidium* Monitoring (Applies to Surface water systems only)**

**XI. Violations**

Type / Description	Compliance Period	Corrective Actions taken by PWS
Stage 2 DBP	1-1-17to12-31-17	Samples to be done in 2018
Chlorine Residual Report	10-1to12-31-17	Report Done

An explanation of the violation(s) in the above table, the steps taken to resolve the violation(s) and any required health effects information are required to be included with this report. (Attach copy of Public Notice if available.)