

Pine Strawberry Water Improvement District

2022 Annual Drinking Water Quality Report,

PWS AZ04-04-034

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Este informe contiene información muy importante sobre el agua usted bebe. Tradúscaló ó hable con alguien que lo entienda bien.

We are pleased to present to you this water quality report for 2022. Our constant goal is to provide you with a safe and dependable supply of drinking water. Last year we met all EPA and State drinking water health standards.

General Information About Drinking Water

All 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 the 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 of 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. 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. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. 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 livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which 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 stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

Our Water Source

Ground Water is the source of the water we supply. Our wells are located within the Verde River basin, East Verde Canyon sub basin.

Potential sources of contamination in our source water area come from, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, waste water treatment plants, and mining activities. Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the department has given a low risk designation for the degree to which this public water system drinking water source(s) are protected. A low risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection.

The Source Water Assessment Report provides a screening level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. We use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality finished water is delivered to your homes. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Please contact Jim Baldwin, Operator of Record Pine Strawberry Water Improvement District, at 928-202-8136 or by email at jimb@pswid.org or visit the ADEQ's Source Water Assessment and Protection Unit website at www.azdeq.gov/enviro/water/dw/swap.html to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report, to learn more about our system, or to attend scheduled public meetings. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

Terms and Abbreviations

To help you understand the terms and abbreviations used in this report, we have provided the following definitions:

- **Parts per million (ppm) or Milligrams per liter (mg/L)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

- **Parts per billion (ppb) or Micrograms per liter ($\mu\text{g/L}$)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Parts per trillion (ppt) or Nanograms per liter (nanograms/L)** - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.
- **Parts per quadrillion (ppq) or Picograms per liter (picograms/L)** - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Action Level Goal (ALG)** - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health. The ALG allows for a margin of safety.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Contaminant Level Goal (MCLG)** - The “Goal” is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **Maximum Contaminant Level (MCL)** - The “Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- **MFL** - Million fibers per liter.
- **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.
- **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.
- **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.
- **Running Annual Average (RAA)**: An average of monitoring results for the previous 12 calendar months.

Water Conservation

Think you’ve done everything possible to save water but still looking for ways to do more? You might be surprised to learn that there’s even more ways to save water. The Water – Use It Wisely Web site,

www.wateruseitwisely.com, has a listing of ideas and resources that can help you conserve water and ultimately save money.

Health Effects Information About the Tables Below

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 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. Diversified Water Utilities 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.

Vulnerable population:

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. 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.

Violation Summary for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement

PSWID received a violation for failing to collect the 4th Quarter 2022 Combined Radium sample. Subsequent Samples were taken 2/14/23 and found to be under the MCL. The District has been returned to compliance.

PSWID received a violation for failing to collect the 4th Quarter 2022 Volatile Organic Compounds sample. Subsequent Samples were taken 1/10/23 and found to be under the MCL. The District has been returned to compliance.

Water Quality Data

We routinely monitor for contaminants in your drinking water according to Federal and State laws. The State of Arizona requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old.

These tables show the results of our monitoring for the period of January 1 to December 31, 2022, unless otherwise noted.

Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H) Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
Microbiological							
Total Coliform Bacteria (System takes ≤ Monthly Samples)	N	0	Absent	0	0	9 samples per month	Naturally Present in Environment
Fecal coliform and E. Coli (TC Rule)	N	0	Absent	0	0	9 samples per month	Human and Animal fecal waste
Fecal Indicators (GW Rule) (E. Coli, enterococci or coliphage)	N	0	Absent	0	0	9 samples per month	Human and Animal fecal waste
Disinfectants							
Chlorine (PPM)	N	1.68	1.04 to 1.68	MRDL = 4	MRDLG = 4	RAA for 2022	Water additive used to control microbes
Disinfection By-Products							
Haloacetic Acids (ppb)(HAA5)	N	2.47	<1.0 to 2.47	60	n/a	8/2022, 8/2021, 8/2020, 8/2019, 8/2018	By-product of drinking water disinfection
Total Trihalomethanes (ppb)(TTHM)	N	12.1	<1.0 to 12.1	80	n/a	8/2022, 8/2021, 8/2020, 8/2019, 8/2018	By-product of drinking water disinfection
Bromoform (ppm)	N	0.0011	<.0005 to 0.0011	0.1	n/a	8/9/2022	By-product of drinking water disinfection
Bromodichloromethane (ppm)	N	0.0029	0.0014 to 0.0029	0.1	n/a	8/9/2022	By-product of drinking water disinfection
Chloroform (ppm)	N	0.0035	0.0017 to 0.0035	0.1	n/a	8/9/2022	By-product of drinking water disinfection
Dibromochloromethane (ppm)	N	0.0031	0.0008 to 0.0031	0.1	n/a	8/9/2022	By-product of drinking water disinfection
Radionuclides							
Alpha Emitters (pCi/L)	N	1.1	1.1	15	0	2/25/2016	Erosion of Natural Deposits
Combined Radium 226 & 228 (pCi/L)	N	5.8	< .6 - 5.8	5	0	8/2022 6/2022 2/2022 11/2021 8/2021 4/2021 3/2021 10/2020 9/2020 2/2020 10/2019 8/2019 6/2019	Erosion of Natural Deposits

Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H) Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
<i>Inorganic Contaminants (IOCs)</i>							
Antimony (ppb)	N	<1	0	6	6	2/2020 8/2021	Discharge from petroleum refineries; fire retardants; ceramics; electronics and solder
Arsenic (ppb)	N	1.6	<1 - 1.6	10	0	2/2020 8/2021	Erosion of Natural Deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	< 0.2	0	7	7	2/5/2020 2/6/2020	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	0.18	.068 - 0.18	2	2	2/2020 8/2021	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	< 1	0	4	4	2/2020 8/2021	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	< 0.5	0	5	5	2/2020 8/2021	Corrosion of galvanized pipes; Natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	2.2	< 1 - 2.2	100	100	2/5/2020 2/6/2020	Discharge from steel and pulp mills; Erosion of natural deposits

Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H) Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
<i>Inorganic Contaminants (IOCs) cont'd</i>							
Cyanide (ppb)	N	< 25	0	200	200	8/2021 2/2020	Discharge from steel/metal factories, Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	0.12	0.070 to 0.12	4	4	8/2021 2/2020	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Mercury (ppb)	N	<0.2	0	2	2	8/2021 2/2020	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland
Nitrate (ppm)	N	7.99	0.11 to 7.99	10	10	6/2022 8/2021 4/2021 4/2020 2/2020 4/2019 8/2018 7/2018 4/2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)	N	<0.05	0	1	1	8/2021 2/2020 8/2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	<5	0	50	50	2/5/2020 2/6/2020	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	N	<1	0	2	0.5	2/5/2020 2/6/2020	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H) Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
Volatile Organic Contaminants (VOCs)							
Benzene (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from factories; leaching from gas storage tanks and landfills
Carbon Tetrachloride (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	<0.5	0	100	100	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	<0.5	0	600	600	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	<0.5	0	75	75	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
1,2 - Dichloroethane (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
1,1 - Dichloroethylene (ppb)	N	<0.5	0	7	7	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
cis-1,2 - Dichloroethylene (ppb)	N	<0.5	0	70	70	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
trans-1,2 - Dichloroethylene (ppb)	N	<0.5	0	100	100	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from pharmaceutical and chemical factories
1,2 - Dichloropropane (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	<0.5	0	700	700	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from petroleum refineries

Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H) Absent (A) or Present (P)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
<i>Volatile Organic Contaminants (VOCs)</i>							
Styrene (ppb)	N	<0.5	0	100	100	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	3.3	<0.5 - 3.3	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from factories and dry cleaners
1,2,4 - Trichlorobenzene (ppb)	N	<0.5	0	70	70	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from textile-finishing factories
1,1,1 - Trichloroethane (ppb)	N	<0.5	0	200	200	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from factories and dry cleaners
Trichloroethylene (ppb)	N	<0.5	0	5	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	<0.0005	0	1	1	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	<0.3	0	2	0	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	0.00057	<0.0005 - 0.00057	10	10	8/2022 6/2022 4/2021 4/2020 2/2020 4/2019 7/2018 4/2018	Discharge from petroleum or chemical factories

Contaminant (units)	Violation Y / N	90th percentile AND Number of Samples over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month Year	Likely Source of Contamination
<i>Inorganic Contaminants (IOCs) Cont'd</i>							
Copper (ppm)	N	90th Percentile = 0.246	.0318 to .433	1.3	1.3	8/12/2020	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90th Percentile = 2.72	2.27 to 4.2	15	0	8/12/2020	Corrosion of household plumbing systems; erosion of natural deposits
Contaminant (units)	Violation Y / N	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month Year	Likely Source of Contamination
Sodium (ppm)	N	42	4.9 to 42	3000	n/a	4/16/2018 7/17/2018 2/05/2020 2/06/2020	Erosion of natural deposits; leaching

Contaminant Tables for Solitude Trails Water

Improvement District

Because the Pine Strawberry Water Improvement District purchases water from the Solitude Trails Water Improvement District (Public Water System # AZ0404233), we are required include the contaminant tables for their system here as well.

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
E. Coli	N	0	N/A	0	0	Human and animal fecal waste	
Surface Water Treatment Rule	TT Violation Y or N	Highest Level Detected	% Range (Low-High)	TT	Sample Month & Year	Likely Source of Contamination	
Turbidity ² (NTU)	N	0.444	0.323-0.444	TT	11/2022	Soil runoff	
² Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. We monitor it because it is a good indicator of the quality of water. High turbidity can hinder the effectiveness of disinfectants. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.							
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	0.584 ppm	0.08-1.38 ppm	4	0	12/2022	Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Total Trihalomethanes (TTHM) (ppb)	N	0.60 ppb	0.60 ppb	80	N/A	07/2022	Byproduct of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N	2.6 ppb	2.6 ppb	60	N/A	04/2020	Byproduct of drinking water disinfection
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Alpha Emitters (pCi/L)	N	8.3	8.3	15	0	02/2022	Erosion of natural deposits
Lead & Copper	MCL Violation Y or N	90 th Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	0.083 ppm	0	1.3	1.3	08/2021	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	<5.0 ppb	0	15	0	08/2021	Corrosion of household plumbing systems; erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination

		Detected					
Arsenic¹ (ppb)	N	9.90 ppb	1.50-9.90 ppb	10	0	10/2022	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.24 ppm	0.24 ppm	2	2	02/2022	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	N	0.34 ppm	0.34 ppm	4	4	02/2022	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate² (ppm)	N	4.47 ppm	0.54-4.47 ppm	10	10	01/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	N	13 ppm	5.50-13 ppm	N/A	N/A	02/2022	Erosion of natural deposits

¹ **Arsenic** is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. 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, and continues to research the health effects of low levels of arsenic.

² **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.

Potential Health effects of contaminants

Total Coliform Bacteria - Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

Fecal Coliform and E. Coli - Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Chlorine - 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.

Haloacetic Acids (HAA5) - Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Total Trihalomethanes (TTHM) - Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Alpha Emitters - 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.

Combined Radium 226 & 228 - Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Antimony - Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.

Arsenic - Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Asbestos - Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.

Barium - Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Beryllium - Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Cadmium - Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Chromium - Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.

Cyanide - Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.

Fluoride - Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth., and occurs only in developing teeth before they erupt from the gums.

Mercury - Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.

Nitrate - Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Nitrite - Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Selenium - Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Thallium - Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.

Benzene - Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

Carbon Tetrachloride - Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

Chlorobenzene - Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

o-Dichlorobenzene - Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.

p-Dichlorobenzene - Some people who drink water containing pdichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

1,2 Dichloroethane - Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

1,1-Dichloroethylene - Some people who drink water containing 1,1- dichloroethylene in excess of the MCL over many years could experience problems with their liver.

cis-1,2- Dichloroethylene - Some people who drink water containing cis-1,2- dichloroethylene in excess of the MCL over many years could experience problems with their liver.

trans-1,2- Dichloroethylene - Some people who drink water containing trans-1,2- dichloroethylene well in excess of the MCL over many years could experience problems with their liver.

Dichloromethane - Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.

1,2-Dichloropropane - Some people who drink water containing 1,2- dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Ethylbenzene - Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.

Styrene - Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

Tetrachloroethylene - Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

1,2,4- Trichlorobenzene - Some people who drink water containing 1,2,4- trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.

1,1,1-Trichloroethane - Some people who drink water containing 1,1,1- trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.

Trichloroethylene - Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.

Toluene - Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.

Vinyl Chloride - Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

Xylenes - Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

Copper - 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 could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

Lead - Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.