



Consumer Confidence Report for Calendar Year 2018

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

Public Water System ID Number		Public Water System Name	
AZ04-04-012		Asarco LLC Hayden Concentrator	
Contact Name and Title		Phone Number	E-mail Address
Amy Veek – Environmental Manager		(520) 356-3296	aveek@asarco.com
We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact _____ at _____ for additional opportunity and meeting dates and times.			

Drinking Water Sources

The sources of drinking water (both tap 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 pickup 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.

Our water source(s): Ground Water, Hayden Well Field

Drinking Water Contaminants

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 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: Such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources

Organic Chemical Contaminants: Such as synthetic and volatile organic chemicals, which are by-products 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.

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.

Source Water Assessment

- Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system

drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination.

Further source water assessment documentation can be obtained by contacting ADEQ.

Definitions

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water	Minimum Reporting Limit (MRL): The smallest measured concentration of a substance that can be reliably measured by a given analytical method
Level 1 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present	Millirems per year (MREM): A measure of radiation absorbed by the body
Level 2 Assessment: A very detailed study of the water system to identify potential problems and determine (if possible) why an <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria was present	Not Applicable (NA): Sampling was not completed by regulation or was not required
Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements	Not Detected (ND or <): Not detectable at reporting limit
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water	Nephelometric Turbidity Units (NTU): A measure of water clarity
Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health	Million fibers per liter (MFL)
Maximum Residual Disinfectant Level (MRDL): The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap	Picocuries per liter (pCi/L): Measure of the radioactivity in water
Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur	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 (ng/L) ppm x 1000 = ppb
	ppq: Parts per quadrillion or Picograms per liter (pg/L) ppb x 1000 = ppt
	ppt x 1000 = ppq

Lead Informational Statement:

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. **Asarco LLC, Hayden Concentrator** 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. 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.

Water Quality Data – Regulated Contaminants

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	NA	0	0	Human and animal fecal waste	
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	0.77	0.44 – 1.25	4	0	Monthly 2018	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
Haloacetic Acids (HAA5) (ppb)	N	4.1	<2 – 4.1	60	N/A	July & Aug 2018	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	30	<4.8 – 30	80	N/A	July & Aug 2018	Byproduct of drinking water disinfection

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	0.567	0	1.3	1.3	Aug 2016	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	<2.0	0	15	0	Aug 2016	Corrosion of household plumbing systems; erosion of natural deposits
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	6.1 ± 0.5	6.1	15	0	Nov 2016	Erosion of natural deposits
Inorganic Chemicals (IOC)	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
Arsenic ¹ (ppb)	N	6.1	5 - 6.1	10	0	Nov 2016	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.0047	0.0043 – 0.0047	2	2	Nov 2016	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	2.3	<1 – 2.3	100	100	Nov 2016	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	1.7	1.6 – 1.7	4	4	Nov 2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	1.4	1.1 – 2.0	10	10	Dec 2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	12	5.7 - 12	50	50	Nov 2016	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	140	140	N/A	N/A	Dec 2018	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.

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

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
TTHM/HAA5 Reporting Deficiency	Although the samples were collected in accordance with the Compliance Monitoring Plan, the lab did not send ADEQ the DWAR 32 form with the results on-time.	Results are to be reported within 10 days after the monitoring period.	The lab sent the DWAR 32 form to ADEQ, and ADEQ subsequently returned the deficiency back to compliance.
Chlorine July Aug Sept	Although the samples were collected in accordance with the Compliance Monitoring Plan, the lab did not send ADEQ the DWAR 32 form with the results on-time.	Results are to be reported within 10 days after the monitoring period.	The lab sent the DWAR 32 form to ADEQ, and ADEQ subsequently returned the deficiency back to compliance.