Town of Chino Valley

2017 Annual Consumer Confidence Report

Public Water System Number: AZ04 13-137

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 meeting , please contact Joe Grassi Utilities Operations Specialist at 928-636-6084 for additional information 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-occuring 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)

The Town service area provides drinking water from a groundwater source pumped from the lower volcanic aquifer of the Little Chino Groundwater Sub-basin of the Verde River watershed

Source Water Assessment

Source Water Assessments on file with the Arizona Department of Environmental Quality are available for public review. To obtain a Source Water Assessment, contact the Arizona Source Water Coordinator at (602) 771-4641. 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 can 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 source water protection plan.

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 having undergone organ transplants, people with HIV-AIDS or other immune system disorders, some elderly,

and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care provider.

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.

Definition

Action Level (AL) – the concentration of a contaminant which if exceeded, triggers treatment or other requirments.

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in 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.

Maximum Residual Disinfectant Level (MRDL) – The level of disinfectant added for water treatment that may not be exceeded at the consumers tap.

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

Minimum Reporting Limit (MRL) – The smallest measured concentration of a substance that can be reliably measured by a given analytical method.

Not Applicable (NA) – Sampling was not completed by regulation or was not required.

Not Detected (ND or <) – Not detectable at reporting limit.

Nephelometric Turbidity Unit (NTU) – A measure of water clarity.

ppm – Parts per million or milligram per liter

ppb – Parts per billion or micrograms per liter

ppt – Parts per trillion or nanograms per liter

ppq- Parts per quadrilliom or picograms per liter

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

Drinking Water Contaminants

Microbial Contaminants: Such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural live stock operations and wildlife

Inorganic Contaminants: Such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming

Pesticides and Herbicides: Such as agricultural, 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 the result of oil and gas production and mining activities.

.

Lead Informational Statement: *(Applies to All Water Systems, please do not remove even if your system did not detect any Lead)*

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. The Town of Chino Valley 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	0	0	0	Human and animal fecal waste
Fecal Indicator (From GWR source) (coliphage, enterococci and/or E. coli)	N	0	0	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**
Total Organic Carbon[1] (mg/L)				TT		Naturally Present in the Environment
Turbidity[2] (NTU)				TT		Soil runoff

[1] **Total organic carbon (TOC)** has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

[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	1.78	0.31-3.70	4	0	Daily 2017	Water additive used to control microbes
Chlorine dioxide (ppb) if treated with CLO2				800	0		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	ND	ND	60	N/A	Aug, 2017	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	12	11.5-12.5	80	N/A	Aug, 2017	Byproduct of drinking water disinfection
Bromate (ppb) if treated with Ozone				10	0		Byproduct of drinking water disinfection
Chlorite (ppm) if treated with CLO2				1	0.8		Byproduct of drinking water disinfection
Lead & Copper	**MCL Violation Y or N**	**90th Percentile**	**Number of Samples Exceeds AL**	**AL**	**ALG**	**Sample Month & Year**	**Likely Source of Contamination**
Copper (ppm)	N	0.016	0	1.3	1.3	Aug, 2017	Corrosion of household plumbing systems, erosion of natural deposits
Lead (ppb)	N	ND	0	15	0	Aug 2017	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**
Beta/Photon Emitters (mrem/yr.)				4	0		Decay of natural and man-made deposits
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	N	1.3	1.3-1.3	15	0	Feb, 2016	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	ND	ND	5	0	Feb, 2016	Erosion of natural deposits
Uranium (ug/L)	N	1.2	0-1.2	30	0	Aug, 2015	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**

Carbofuran (ppb)	N	ND	ND	40	40	Feb, 2016	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	N	ND	ND	2	0	Feb, 2016	Residue of banned termiticide
Dalapon (ppb)	N	ND	ND	200	200	Feb, 2016	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	ND	ND	400	400	Feb, 2016	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	ND	ND	6	0	Feb, 2016	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	ND	ND	200	0	Feb, 2016	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	N	ND	ND	7	7	Feb, 2016	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	N	ND	ND	20	20	Feb, 2016	Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)	N	ND	ND	30	0	Feb, 2016	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	N	ND	ND	100	100	Feb, 2016	Runoff from herbicide use
Endrin (ppb)	N	ND	ND	2	2	Feb, 2016	Residue of banned insecticide
Epichlorohydrin				TT	0		Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	ND	ND	50	0	Feb, 2016	Discharge from petroleum refineries
Glyphosate (ppb)	N	ND	ND	700	700	Feb, 2016	Runoff from herbicide use
Heptachlor (ppt)	N	ND	ND	400	0	Feb, 2016	Residue of banned termiticide
Heptachlor epoxide (ppt)	N	ND	ND	200	0	Feb, 2016	Breakdown of heptachlor
Hexachlorobenzene (ppb)	N	ND	ND	1	0	Feb, 2016	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo pentadiene (ppb)	N	ND	ND	50	50	Feb, 2016	Discharge from chemical factories
Lindane (ppt)	N	ND	ND	200	200	Feb, 2016	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	ND	ND	40	40	Feb,2016	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)	N	ND	ND	200	200	Feb, 2016	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)	N	ND	ND	1	0	Feb, 2016	Discharge from wood preserving factories
Picloram (ppb)	N	ND	ND	500	500	Feb, 2016	Herbicide runoff
Simazine (ppb)	N	ND	ND	4	4	Feb, 2016	Herbicide runoff
Toxaphene (ppb)	N	ND	ND	3	0	Feb, 2016	Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Chemicals (VOC)	**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**
Benzene (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	ND	ND	100	100	Feb, 2016	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	ND	ND	600	600	Feb, 2016	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	ND	ND	75	75	Feb, 2016	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	ND	ND	7	7	Feb, 2016	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	ND	ND	70	70	Feb, 2016	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	N	ND	ND	100	100	Feb, 2016	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from pharmaceutical and chemical

		Detected					
Antimony (ppb)	N	ND	ND	6	6	Nov, 2013	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic[1] (ppb)	N	5.9	5.9	10	0	Nov, 2013	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	ND	ND	7	7	Nov, 2013	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	.37	.37	2	2	Nov, 2013	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	ND	ND	4	4	Nov, 2013	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	ND	ND	5	5	Nov, 2013	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	2.7	2.7	100	100	Nov, 2013	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	ND	ND	200	200	Nov, 2013	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	.33	.33	4	4	Nov, 2013	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	ND	ND	2	2	Nov, 2013	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	N	3.35	1.74-3.35	10	10	Aug 2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite[2] (ppm)	N	ND	ND	1	1	Aug2013	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	ND	ND	50	50	Nov, 2013	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	16	16	N/A	N/A	Nov, 2013	Erosion of natural deposits
Thallium (ppb)	N	ND	ND	2	0.5	Nov, 2013	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

[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.

Synthetic Organic Chemicals (SOC)	**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**
2,4-D (ppb)	N	ND	ND	70	70	Feb, 2016	Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)	N	ND	ND	50	50	Feb, 2016	Residue of banned herbicide
Acrylamide	N	ND	ND	TT	0	Feb, 2016	Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	ND	ND	2	0	Feb, 2016	Runoff from herbicide used on row crops
Atrazine (ppb)	N	ND	ND	3	3	Feb, 2016	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	N	ND	ND	200	0	Feb, 2016	Leaching from linings of water storage tanks and distribution lines

							factories
1,2-Dichloropropane (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	ND	ND	700	700	Feb, 2016	Discharge from petroleum refineries
Styrene (ppb)	N	ND	ND	100	100	Feb, 2016	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	N	ND	ND	70	70	Feb, 2016	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	N	ND	ND	200	200	Feb, 2016	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	ND	ND	5	3	Feb, 2016	Discharge from industrial chemical factories
Trichloroethylene (ppb)	N	ND	ND	5	0	Feb, 2016	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	ND	ND	1	1	Feb, 2016	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	ND	ND	2	0	Feb, 2016	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	ND	ND	10	10	Feb, 2016	Discharge from petroleum or chemical factories

Water Quality Table - Unregulated Contaminants

☑ *Check here if this section does not apply to this system*

Metals	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
Germanium (ppt)				300	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications
Manganese (ppt)				400	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Pesticides	**Detected (Y/N)**	**Average**	**Range of All Samples (Low-High)**	**MRL**	**Likely Source of Contamination**
Alpha-hexachlorocyclohexane (ppt)				10	Component of benzene hexachloride (BHC); formerly used as an insecticide
Chlorpyrifos (ppt)				30	Organophosphate; used as an insecticide, acaricide and miticide
Dimethipin (ppt)			W	200	Used as an herbicide and plant growth regulator
Ethoprop (ppt)				30	Used as an insecticide
Oxyfluorfen (ppt)				50	Used as an herbicide
Profenofos (ppt)				300	Used as an insecticide and acaricide
Tebuconazole (ppt)				200	Used as a fungicide
Total permethrin (cis- & trans-) (ppt)				40	Used as an insecticide
Pesticides Manufacturing By-Product	**Detected (Y/N)**	**Average**	**Range of All Samples (Low-High)**	**MRL**	**Likely Source of Contamination**
Tribufos (ppt)				700	Used as an insecticide and cotton defoliant Water additive used to control microbes
Alcohols	**Detected (Y/N)**	**Average**	**Range of All Samples (Low-High)**	**MRL**	**Likely Source of Contamination**
1-butanol (ppb)				2.0	Used as a solvent, food additive and in production of other chemicals
2-methoxyethanol (ppt)				400	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions
2-propen-1-ol (ppt)				500	Used in the production flavorings, perfumes and other chemicals
Semivolatile Chemicals	**Detected (Y/N)**	**Average**	**Range of All Samples (Low-High)**	**MRL**	**Likely Source of Contamination**
Butylated hydroxyanisole (ppt)				30	Used as a food additive (antioxidant)
O-toluidine (ppt)				7	Used in the production of dyes, rubber, pharmaceuticals and pesticides
Quinolone (ppt)				20	Used as a pharmaceutical (anti-malarial) and flavoring agent; produced as a chemical intermediate; component of coal

Summary of Violations

Violation Type	Explanation, Health Effects	Time Period	Corrective Action
Lead Consumer Notice	None, no violation of MCL	11/3/2017 to 5/21/2017	Sent notices out as soon as we realized we needed to.
Report sample results/ fail monitor RTCR	None, samples were collected, tested, results negative. Paperwork incorrectly dated	12/1/2017 to 12/31/2017	Submitted corrected paperwork on to the lab.
Monitoring Routine DBP/ Major	None, samples were collected, delivered to the lab, tested on time. No violation of MCL	01/01/2017 to 12/31/2017	There is a discrepancy between when the lab submitted paperwork and when it was recorded.

The violations we received in 2017 are all paperwork related we had no MCL violations. We had some staff turnover and unfortunately some of the reporting we are responsible for fell through the cracks. The department has since stabilized and is dedicated to producing a CCR in 2018 with no violations. We strive daily to provide our customers with excellent quality water.

Health Effects Information About Arsenic

Arsenic

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. 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.

System Monitoring and Testing

The data presented in the report are from the most recent round of sampling. Not all contaminates are tested each year. Chlorine residual samples are tested daily, microbiological samples are tested monthly. Lead and copper are on a 3 year cycle, VOC's, IOC's, and, SOC's a 9 year cycle.

The 90th percentile for copper is arrived at by taking the highest 4 results adding them together and dividing by 4.

In conclusion

As you can see from the information provided , our system had no MCL violations and measured amounts are well below allowable limits. We are proud that your dsrinking water meets or exceeds all federal and state requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels. The Town of Chino Valley works to provide top quality water to ever tap. We ask that all our customers help us to protect our water sources, which is the heart of our community, and our way of life.Thank you for allowing us to continue to provide your family with clean, quality water this year