



Consumer Confidence Report For Calendar Year **2013**

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

I. Public Water System (PWS) Information

PWS ID Number	PWS Name		
AZ04 -03-312	Hydro Resources Tusayan		
Contact Person and Title		Phone Number	E-Mail Address
John Rueter		928-310-4350	rueter.jw@gmail.com

II. 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 pick up substances resulting from the presence of animals or from human activity.

The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water. This explanation may include the language of paragraph 40 CFR 141.153 (h)(1)(iii) shown below, or the system may use their own comparable language:

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):	Groundwater: from two wells located in Tusayan.
-----------------------------	---

III. Consecutive Connection Sources

NA- We produce all of our water and receive none from other systems.
--

IV. 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, 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 by-products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

V. 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.

VI. Source Water Assessment

INSTRUCTIONS: If the public water system received a Source Water Assessment (SWA), include a brief summary of the susceptibility as summarized in the SWA report.

Further source water assessment documentation can be obtained by contacting ADEQ, 602-771-4641.

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.

ND=Non Detect or below detectable levels of testing

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. **Hydro Resources Tusayan** 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.

IX. Water Quality Data

Microbiological	Violation Y or N	Number of Samples Present <u>OR</u> Highest Level Detected	Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Total Coliform Bacteria (System takes ≥ 40 monthly samples) 5% of monthly samples are positive; (System takes ≤ 40 monthly samples) 1 positive monthly sample	N	n/a	A	0	0	Jan thru Dec , monthly 2013	Naturally Present in Environment
Fecal coliform and E. Coli (TC Rule)	n/a	n/a	n/a	0	0	n/a	Human and animal fecal waste
Fecal Indicators (E. coli, enterococci or coliphage) (GW Rule)	n/a	n/a	n/a	TT	n/a	n/a	Human and animal fecal waste
Total Organic Carbon (ppm)	N	<1.00	<1.00	TT	n/a	Sept 2013	Naturally present in the environment
Turbidity (NTU), surface water only	n/a	n/a	n/a	TT	n/a	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
Chloramines (ppm)	n/a	n/a	n/a	MRDL = 4	MRDLG = 4	n/a	Water additive used to control microbes
Chlorine (ppm)	N	0.22	0.2-0.44	MRDL = 4	MRDLG = 4	Jan-Dec 2013	Water additive used to control microbes
Chloride dioxide (ppb)	n/a	n/a	n/a	MRDL = 800	MRDLG = 800	n/a	Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (ppb) (HAA5)	N	<2.0	<2.0	60	n/a	n/a	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	N	3.7	2.6-3.7	80	n/a	Sept, Oct 2013	Byproduct of drinking water disinfection
Bromate (ppb)	n/a	n/a	n/a	10	0	n/a	Byproduct of drinking water disinfection
Chlorite (ppm)	n/a	n/a	n/a	1	0.8	n/a	Byproduct of drinking water disinfection
Lead & Copper	Violation Y or N	90 th Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	90 th Percentile = .21, NO AL	.02-.21	AL = 1.3	ALG = 1.3	June, Sept 2013	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90 th Percentile = 3.5 and 1 sample over AL	<1.0-22.8	AL = 15	0	June, Sept 2013	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.)	n/a	n/a	n/a	4	0		Decay of natural and man-made deposits
Alpha emitters (pCi/L) <i>(this is Gross Alpha 4002)</i>	N	4.1	3.5-4.1	15	0	Dec 2010	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N	0.7	0.4-0.7	5	0	Dec 2010	Erosion of natural deposits
Uranium (ug/L)	n/a	n/a	n/a	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)	N	ND	ND	6	6	Dec 2013	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic (ppb)	N	1.8	1.4-1.8	10	0	Dec 2013	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	ND	ND	7	7	Dec 2013	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	.43	.28-.43	2	2	Dec 2013	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	ND	ND	4	4	Dec 2013	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	ND	ND	5	5	Dec 2013	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	1.1	ND-1.1	100	100	Dec 2013	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	ND	ND	200	200	Dec 2013	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	0.12	.091- 0.12	4	4	Dec 2013	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	ND	ND	2	2	Dec 2013	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	N	2.9	.96-2.9	10	10	Dec 2013	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)	N	ND	ND	1	1	Dec 2013	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Selenium (ppb)	N	ND	ND	50	50	Dec 2013	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	18	6.7-18	N/A	N/A	Dec 2013	N/A
Thallium (ppb)	N	ND	ND	2	0.5	Dec 2013	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)	N	ND	ND	70	70	Dec 2013	Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)	N	ND	ND	50	50	Dec 2013	Residue of banned herbicide
Acrylamide	N	ND	ND	TT	0	Dec 2013	Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	ND	ND	2	0	Dec 2013	Runoff from herbicide used on row crops
Atrazine (ppb)	N	ND	ND	3	3	Dec 2013	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	N	ND	ND	200	0	Dec 2013	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	N	ND	ND	40	40	Dec 2013	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	N	ND	ND	2	0	Dec 2013	Residue of banned termiticide
Dalapon (ppb)	N	ND	ND	200	200	Dec 2013	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	ND	ND	400	400	Dec 2013	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	ND	ND	6	0	Dec 2013	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	ND	ND	200	0	Dec 2013	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	N	ND	ND	7	7	Dec 2013	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	N	ND	ND	20	20	Dec 2013	Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)	N	ND	ND	30	0	Dec 2013	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	N	ND	ND	100	100	Dec 2013	Runoff from herbicide use
Endrin (ppb)	N	ND	ND	2	2	Dec 2013	Residue of banned insecticide
Epichlorohydrin	n/a	n/a	n/a	TT	0	n/a	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	ND	ND	50	0	Dec 2013	Discharge from petroleum refineries
Glyphosate (ppb)	N	ND	ND	700	700	Dec	Runoff from herbicide

						2013	use
Heptachlor (ppt)	N	ND	ND	400	0	Dec 2013	Residue of banned termiticide
Heptachlor epoxide (ppt)	N	ND	ND	200	0	Dec 2013	Breakdown of heptachlor
Hexachlorobenzene (ppb)	N	ND	ND	1	0	Dec 2013	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	N	ND	ND	50	50	Dec 2013	Discharge from chemical factories
Lindane (ppt)	N	ND	ND	200	200	Dec 2013	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	ND	ND	40	40	Dec 2013	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)	N	ND	ND	200	200	Dec 2013	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	N	ND	ND	500	0	Dec 2013	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)				1	0		Discharge from wood preserving factories
Picloram (ppb)	N	ND	ND	500	500	Dec 2013	Herbicide runoff
Simazine (ppb)	N	ND	ND	4	4	Dec 2013	Herbicide runoff
Toxaphene (ppb)	N	ND	ND	3	0	Dec 2013	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)	N	ND	ND	5	0	Dec 2010	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	ND	ND	100	100	Dec 2010	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	ND	ND	600	600	Dec 2010	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	ND	ND	75	75	Dec 2010	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	ND	ND	7	7	Dec 2010	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	ND	ND	70	70	Dec 2010	Discharge from industrial chemical

							factories
trans-1,2-Dichloroethylene (ppb)	N	ND	ND	100	100	Dec 2010	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	ND	ND	700	700	Dec 2010	Discharge from petroleum refineries
Styrene (ppb)	N	ND	ND	100	100	Dec 2010	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	N	ND	ND	70	70	Dec 2010	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	N	ND	ND	200	200	Dec 2010	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	ND	ND	5	3	Dec 2010	Discharge from industrial chemical factories
Trichloroethylene (ppb)	N	ND	ND	5	0	Dec 2010	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	ND	ND	1	1	Dec 2010	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	ND	ND	2	0	Dec 2010	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	ND	ND	10	10	Dec 2010	Discharge from petroleum or chemical factories

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

We detected *Cryptosporidium* in the finished water or source water. We detected *Cryptosporidium* in _____ of our _____ samples tested.

We have to provide additional treatment if *Cryptosporidium* is found at greater than 0.075 oocyst per liter.

We believe it is important for you to know that *Cryptosporidium* may cause serious illness in 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. These people should seek advice from their health care providers.

XI. Violations

Type / Description	Compliance Period	Corrective Actions taken by PWS
None		

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.)