

## CONSUMER CONFIDENCE REPORT

Report Covers Calendar Year: January 1 – December 31, 2011\_\_\_\_\_

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

<b>PWS Name:</b>		Hydro Resources Tusayan			
<b>PWS ID #</b>		AZ04- 03-312			
<b>Owner / Operator Name:</b>		John Rueter			
<b>Telephone #</b>	928-310-435 0	<b>Fax #</b>	928-638-333 6	<b>E-mail</b>	rueter.jw@g mail.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 <u>John Rueter</u> at <u>928-638-8205</u> for additional opportunity and meetings dates and times.					

### 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 pickup substances resulting from the presence of animals or from human activity.

**Our water source(s):** Groundwater, from two deep wells in Tusayan

### III. Consecutive Connection Sources

A public water system that receives some or all of its finished water from one or more wholesale systems by means of a direct connection or through the distribution system of one or more consecutive systems. Systems that purchase water from another system report regulated contaminants detected from the source water supply in a separate table. Hydro Resources Tusayan did not receive any water from other sources or systems in 2011.

### 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 byproducts 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 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.

### VI. Source Water Assessment

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 "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water.  
MCLG = Maximum Contaminant Level Goal - The "Goal" is 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.  
MRDLG = Maximum Residual Disinfectant Level Goal.  
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 x 1000 = ppb  
 ppb x 1000 = ppt  
 ppt x 1000 = ppq  
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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

**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.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

**IX. Water Quality Data <=below detection point or non-detect**

**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	Total Coliform Bacteria	
(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	Jan-Dec 2012 Naturally Present in Environment
Fecal coliform and E. Coli (TC Rule)	n/a	0	0	0	0	n/a Human and animal fecal waste
Fecal Indicators (E. coli, enterococci or coliphage) (GW Rule)	n/a	0	0	TT	n/a	n/a Human and animal fecal waste
Total Organic Carbon (ppm)	n/a	0	0	TT	n/a	n/a Naturally present in the environment

Turbidity (NTU), surface water only	n/a	0	0	TT	n/a	n/a	Soil Runoff
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**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/a MRDL = 4 MRDLG = 4 n/a Water additive used to control microbes Chlorine (ppm) N0.0170.1-0.33 MRDL = 4 MRDLG = 42011 Water additive used to control microbes Chloride dioxide (ppb) n/a/n/a/a MRDL = 800 MRDLG = 800 n/a 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 Haloacetic Acids (ppb) (HAA5)

N	<.001	<.001	60	n/a	8-2011	Byproduct of drinking water disinfection	
Total Trihalomethanes (ppb) (TTHM)	N	<.001	<.001	80	n/a	8-2011	Byproduct of drinking water disinfection
Bromate (ppb)	n/a	0	0	10	0	n/a	Byproduct of drinking water disinfection

Chlorite (ppm) n/a 0010.8 n/a 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 Copper (ppm)

N	90 <sup>th</sup> Percentile = .33	.03-.57	AL = 1.3	ALG = 1.3	10-2011	Corrosion of household plumbing systems; erosion of natural deposits
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Lead (ppb) N 90<sup>th</sup> Percentile = .005 .001-.159 AL = 150 10-2011 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	n/a	n/a	4	0	n/a	Decay of natural and man-made deposits	
Alpha emitters (pCi/L)	N	4.1	4.1	15	0	12-2010	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N	0.4	0.4	5	0	12-2010	Erosion of natural deposits

Uranium (pCi/L) N n/a/a 300 n/a

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/a	0	0	6	6	Will sample in 2013	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder	
Arsenic (ppb)	N	<3	<3	10	0	11-2007	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes

Asbestos (MFL)	N	<0.2	<0.2	7	7	5-2004	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	0.274	0.251-0.297	2	2	11-2007	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	0.5	0.5	4	4	11-2007	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	2	2	5	5	11-2007	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	<5	<5	100	100	11-2007	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	<10	<10	200	200	11-2007	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	<0.50	<0.50	4	4	11-2007	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	<0.2	<0.2	2	2	11-2007	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	N	0.531	0.62-1.0	10	10	10-2011	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Nitrite (ppm)	N	<0.20	<0.20	1	1	11-2007	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	4.7	4.1-5.3	50	50	11-2007	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (ppb)	N	<0.5	<0.5	2	0.5	11-2007	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**

N	<0.2	<0.2	50	50	5-2004	Residue of banned herbicide	
Acrylamide	n/a	-	-	TT	0	-	Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	<0.05	<0.05	2	0	7-2004	Runoff from herbicide used on row crops
Atrazine (ppb)	N	<0.05	<0.05	3	3	5-2004	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	N	<2	<2	200	0	5-2004	Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	N	<0.0009	<0.0009	40	40	5-2004	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	n/a	<0.1	<0.1	2	0	7-2004	Residue of banned termiticide

Dalapon (ppb)	N	<1	<1	200	200	5-2004	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	<0.6	<0.6	400	400	5--2004	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	<0.6	<0.6	6	0	5-2004	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	<10	<10	200	0	6-2012	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	N	<0.2	<0.2	7	7	5-2004	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	N	<0.4	<0.4	20	20	5-2004	Runoff from herbicide use
Dioxin [2,3,7,8-TCDD] (ppq)	N	<5	<5	30	0	11-2006	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	N	<5	<5	100	100	5-2004	Runoff from herbicide use
Endrin (ppb)	N	<10	<10	2	2	7-2004	Residue of banned insecticide
Epichlorohydrin	n/a	-	-	TT	0	-	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	<10	<10	50	0	6-2012	Discharge from petroleum refineries
Glyphosate (ppb)	N	<6	<6	700	700	9-1998	Runoff from herbicide use
Heptachlor (ppt)	N	<10	<10	400	0	7-2004	Residue of banned temiticide
Heptachlor epoxide (ppt)	N	<1	<1	200	0	7-2004	Breakdown of heptachlor

Hexachlorobenzene (ppb)	N	<0.05	<0.05	1	0	5-2004	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (ppb)	N	<0.05	<0.05	50	50	5-2004	Discharge from chemical factories
Lindane (ppt)	N	<10	<10	200	200	7-2004	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	<0.5	<0.5	40	40	7-2004	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (ppb)	N	<0.5	<0.5	200	200	5-2004	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	N	<10	<0.10	500	0	9-1998	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	N	<0.04	<0.04	1	0	5-2004	Discharge from wood preserving factories
Picloram (ppb)	N	<1	<1	500	500	5-2004	Herbicide runoff
Simazine (ppb)	N	<0.05	<0.05	4	4	5-2004	Herbicide runoff
Toxaphene (ppb)	N	<0.01	<0.01	3	0	9-1998	Runoff/leaching from insecticide used on cotton and cattle

**Volatile Organic Chemicals (VOC) Violation**

**Y or N** Running Annual Average (RAA) **QR** Highest Level Detected **Range of All Samples (L-H)** **MCL** **MCLG** **Sample Month & Year** **Likely Source of Contamination**  
Benzene (ppb) N <0.50 <0.50 501-2011 Discharge from factories; leaching from gas storage tanks and landfills  
Carbon tetrachloride (ppb)

N	<0.50	<0.50	5	0	1-2011	Discharge from chemical plants and other industrial activities
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Chlorobenzene (ppb)	N	<0.50	<0.50	100	100	1-2011	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	<0.50	<0.50	600	600	1-2011	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	<0.50	<0.50	75	75	1-2011	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	<0.50	<0.50	5	0	1-2011	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	<0.50	<0.50	7	7	1-2011	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	<0.50	<0.50	70	70	1-2011	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	N	<0.50	<0.50	100	100	1-2011	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	<0.50	<0.50	5	0	1-2011	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	N	<0.50	<0.50	5	0	1-2011	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	<0.50	<0.50	700	700	1-2011	Discharge from petroleum refineries
Styrene (ppb)	N	<0.50	<0.50	100	100	1-2011	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	<0.50	<0.50	5	0	1-2011	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	N	<0.50	<0.50	70	70	1-2011	Discharge from textile-finishing factories

1,1,1-Trichloroethane (ppb)	N	<0.50	<0.50	200	200	1-2011	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	<0.50	<0.50	5	3	1-2011	Discharge from industrial chemical factories
Trichloroethylene (ppb)	N	<0.50	<0.50	5	0	1-2011	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	<0.50	<0.50	1	1	1-2011	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	<.0.30	<0.30	2	0	1-2011	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	<0.0010	<0.0010	10	10	1-2011	Discharge from petroleum or chemical factories

**X. Cryptosporidium Monitoring** (surface water systems only) n/a . We are not required to sample for cryptosporidium because we are a groundwater only system.

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. Stage 2 Disinfectants and Disinfection By-Products Rule**

Stage 2 DBP Rule required some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBP Rule compliance. The following table summarizes the individual sample results for the IDSE standard monitoring performed in <year>

Contaminant	Number of Analyses	Minimum Level Detected	Highest Level Detected
Haloacetic Acids (HAA5) (ppb)	4	<0.001	<0.001
Total Trihalomethanes (TTHM) (ppb)	4	<0.001	<0.001

**XII. Violations**

Type / Description	Compliance Period	Corrective Actions taken by PWS
No violations 2011		

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.)

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