WHITE MESA COMMUNITY
2017 DRINKING WATER QUALITY REPORT
PWS ID # 4990004
(For 2016 Safe Drinking Water Act compliance sample results)

What is a Consumer Confidence Report?
The Environmental Protection Agency (EPA) requires that owners of community drinking water systems prepare a report each year that summarizes the quality of their drinking water. The report must be available for customers of the water system to review.

Where does the drinking water in White Mesa come from?
The water supply for White Mesa comes from two deep wells drilled into an aquifer in the Navajo Sandstone formation between 1,260 and 1,515 feet underground. The wells will produce approximately 70 gallons of water per minute. Water is pumped from the wells to two 100,000-gallon storage tanks on a hill on the north end of the White Mesa community. Water pressure in the distribution system is provided by gravity.

What is the current condition of the drinking water system?
Re-completion of the primary well during the summer of 1997 raised its production rate from 25 to 40 gallons per minute. Reconditioning of the second well was also completed in 1998-99. Other improvements on the primary wells conducted in 1997-199 include the construction of a pump house and installation of 40 horsepower submersible pumps. Three phase power was also installed as part of the work in 1997-1999. In summer of 2011, an electrical surge (due to an auto accident with an electric pole) caused the burn out of the high voltage transformer in the north well pump house and the associated fuses. Upon repairing these damages, it was observed that the pump on the north well had failed. Due to cost and scheduling, the pump has not yet been fixed. **A funding request was been made for water resources funds by the Tribe to the U.S. Department of Agriculture, Rural Development, to pay for the pump replacement project and a water treatment facility. The request was successful and will be built in 2017 and 2018.**

The "cigarette" storage tank was repaired and another tank installed by the Indian Health Service in 2000. Telemetry and alarm systems were installed to better control pressure and supply. The south tank was drained and cleaned in 2010, and a floor leak was repaired. The tank was then disinfected according to industry standards and put back online. In spring of 2012, the tank leaked again and in May it was drained, repaired, disinfected and put back online. The repairs were ineffective, and the tank remained offline for most of 2014. Repairs to line the interior of the leaking tank were completed in 2014.

What is the quality of the White Mesa drinking water?
The Ute Mountain Ute Environmental Programs Department and Public Works Dept. routinely monitor the water in White Mesa for constituents regulated by the Environmental Protection Agency under the Safe Drinking Water Act. **The water supplied to White Mesa residents met all of the Safe Drinking Water standards measured in 2016 with the exception one single lead and copper sample (of 5 collected).** The level of arsenic in the White mesa water supply

is at 96% of the standard and is the subject of ongoing treatment research and efforts by the Tribe to procure funding to install a treatment system. One sample analyzed in 2010 at the north well had a level higher than the MCL of 10 ug/L arsenic, but it is blended with water from the alternative well and this causes the final product to have a level lower than the MCL. South well data in 2016 indicated it was slightly below the MCL.

Those people who are on **sodium restricted diets** should be aware that the drinking water in White Mesa has an average sodium content of **37 mg/l** which is greater than the EPA recommended 20 mg/l for low sodium diets. These individuals should limit the amount of tap water that they consume.

Who do I contact if I have questions about my drinking water?
If you have questions about your drinking water you may call Lee Traubado at the Ute Mountain Ute Tribe's Public Works Dept. at 970-564-5491 or Scott Clow at the Ute Mountain Ute Environmental Programs Department at 970-564-5432 (email:sclow@utemountain.org).

Other Required Information about Health Effects
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800) 426-4791.

The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it can dissolve naturally occurring minerals and, in some cases, radioactive materials. The water can also pick up substances such as:

(1) Microbial contaminants, such as viruses and bacteria, which may come form sewage treatment plants, septic systems, agricultural operations and wildlife.
(2) 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.
(3) Pesticides and herbicides, that may come from agriculture, urban stormwater runoff, and residential uses.
(4) Organic chemical contaminants, which can come from industrial processes, gas stations, urban stormwater runoff and septic systems.
(5) Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency establishes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration establishes limits for contaminants in bottled water.

Vulnerable Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune 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. The Environmental Protection Agency/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants from the Safe Drinking Water Hotline (800) 426-4791.

KEY TO THE WATER QUALITY TABLE

MCLG – Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there are no adverse health effects. MCLGs allow a margin of safety.

MCL – Maximum Contaminant Level: 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.

SMCL – Secondary Maximum Contaminant Level: Secondary standards are established for the aesthetic quality of drinking water such as taste, odor and color. They are not related to human health effects.

AL – Action Level: The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

mg/l – milligrams per liter: Milligrams per liter is equivalent to parts per million.

µg/l – micrograms per liter: Micrograms per liter is equivalent to parts per billion.

pCi/l – Picocuries per liter: A measure of the radioactivity in water. A picocurie is 10^{-12} curies and is the quantity of radioactive material producing 2.22 nuclear transformations per minute.

< - A symbol meaning less than a given value which is usually the detection limit of an analytical method.

See the following pages for water sampling and analysis results from 2016, labeled **"White Mesa 2016-1."**

Narrative Explanation of Results

Bacteria monitoring is conducted monthly. Samples are usually collected at the Administration Building. No bacteria were detected in any monthly sample during 2016.

Nitrate and Nitrite samples were collected at the south well for compliance purposes. No nitrates or nitrites were detected in the water.

Volatile Organic contaminants were sampled and none exceeded the MCL- none were detected. Synthetic organic contaminants were sampled and none exceeded the MCL- none were detected.

Violations

1. One lead and copper sample from the 5 in White Mesa tested over the MCL for lead. Per the protocols under these circumstances, it was resampled and additional samples were collected, and notification was given to the community regarding the MCL exceedance.

   The second sample at the location and other samples were below the MCL, so it seems that it was either a sampling error or a first draw sample on a home where the water had not been used for a very long time. Corrosivity was assessed using the Langelier Saturation Index, and was found to be slightly corrosive (-0.36) based on wellhead data.

White Mesa 2016-01

Contaminant Measured	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS
Microrganisms Total Coliform Bacteria							
Community Ctr Willow Street	**1/28/16**	0	CFU	1	0	NO	occurring in soil, human
Education Mesa View Drive	**2/25/16**	0	CFU	1	0	NO	
360 N. Beaver Lane	**3/29/16**	0	CFU	1	0	NO	
WM Community Center, Willow St.	**4/27/16**	0	CFU	1	0	NO	
Education Mesa View Drive	**5/25/16**	0	CFU	1	0	NO	
360 N. Beaver Lane	**6/30/16**	0	CFU	1	0	NO	
WM Community Center, Willow St.	**7/27/16**	0	CFU	1	0	NO	
Education Mesa View Drive	**8/26/16**	0	CFU	1	0	NO	
360 N. Beaver Lane	**9/27/16**	0	CFU	1	0	NO	
WM Community Center, Willow St.	**10/26/15**	0	CFU	1	0	NO	
Education Mesa View Drive	**11/30/16**	0	CFU	1	0	NO	
360 N. Beaver Lane	**12/27/16**	0	CFU	1	0	NO	
Nitrate and Nitrite							
Nitrite	11/15/2016	<0.02	mg/L	1	1	NO	
Nitrate	11/15/2016	<0.02	mg/L	10	10	NO	naturally ocurring, fertilizers, wastewater, maure

Contaminant Measured (Volatile Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES ON RESULTS	
SOUTH WELL SAMPLE LOCATION:								

Dichlorodifluoromethane	11/15/2016	<0.500	ug/L	na	na	NO	Refrigerant and propellant gas	from a wide array of sources including disinfection by-products of chlorination and bromination of water, industrial solvents, inductrial chemicals, fire retardants, adhesives, petroleum products used processes as fuels and fertilizers, and leachates from plastic
Cholormethane	11/15/2016	<0.500	ug/L	na	na	NO	available, not a regulated parameters under the Safe	
Vinyl Chloride	11/15/2016	<0.500	ug/L	2.0	na	NO	PVC, plastic manufacture	
Bromomethane	11/15/2016	<0.500	ug/L	na	na	NO	available, not a regulated parameters under the Safe	
Trichlorofluoromethane	11/15/2016	<0.500	ug/L	na	na	NO	available, not a regulated parameters under the Safe	
1,1-Dichloroethene	11/15/2016	<0.500	ug/L	7.0	na	NO	**chemical**	
Methylene Chloride	11/15/2016	<0.500	ug/L	5	na	NO	**drug and chemical**	
trans-1,2-Dichloroethene	11/15/2016	<0.500	ug/L	100	na	NO	**chemical**	
1,1-Dichloroethane	11/15/2016	<0.500	ug/L	na	na	NO	available, not a regulated parameters under the Safe	
cis-1,2-Dichloroethene	11/15/2016	<0.500	ug/L	70	na	NO	**chemical**	
2,2-dichloropropane	11/15/2016	<0.500	ug/L	5.0	na	NO		
Bromochloromethane	11/15/2016	<0.500	ug/L	na	na	NO	available, not a regulated parameters under the Safe	
Chloroform	11/15/2016	<0.500	ug/L	80	na	NO	halomethanes regulated as a sum of 4, or any individual must be less than 80 ug/L-	
Carbon Tetrachloride	11/15/2016	<0.500	ug/L	5.0	na	NO	**chemical manufacturing**	

1,1,1-Trichloroethane	11/15/2016	<0.500	ug/L	200	na	NO	metal maufacturing	
1,1-Dichloropropene	11/15/2016	<0.500	ug/L	na	na	NO		
Benzene	11/15/2016	<0.500	ug/L	5.0	na	NO	factories, leaching from landfills,	
1,2-Dichloroethane	11/15/2016	<0.500	ug/L	5.0	na	NO	chemical	
Trichloroethene	11/15/2016	<0.500	ug/L	5.0	na	NO	metal maufacturing and degreasing facilities	
Dibromomethane	11/15/2016	<0.500	ug/L	na	na	NO		
1,2-Dichloropropane	11/15/2016	<0.500	ug/L	5.0	na	NO	chemical manufacturing	
Bromodichloromethane	11/15/2016	<0.500	ug/L	80	0	NO	sample method 524 in additon	
cis-1,3-Dichloropropene	11/15/2016	<0.500	ug/L	340*	na	NO	National Recommended Water Quality Criteria, not	
Toluene	11/15/2016	<0.500	ug/L	1	1	NO		
Tetrachloroethene	11/15/2016	<0.500	ug/L	5	0	NO		
trans-1,3-Dichloropropene	11/15/2016	<0.500	ug/L	340*	na	NO	National Recommended Water Quality Criteria, not	
1,1,2-Trichloroethane	11/15/2016	<0.500	ug/L	5	3	NO	information on the sources of	
Dibromochloromethane	11/15/2016	<0.500	ug/L	80	60	NO	this list, please contact the	
Chlorobenzene	11/15/2016	<0.500	ug/L	100	100	NO	Director at (970) 564-5432 or	
Ethylbenzene	11/15/2016	<0.500	ug/L	700	700	NO		
1,1,1,2-Tetrachloroethane	11/15/2016	<0.500	ug/L	0.17*	(based on1,1,2,2-TCE	NO	National Recommended Water Quality Criteria, not	
m+p - Xylene	11/15/2016	<0.500	ug/L	10,000	(based on total xyler	NO		
o-Xylene	11/15/2016	<0.500	ug/L	10,000	10,000	NO		
Total Xylenes	11/15/2016	<0.500	ug/L	10,000	10,000	NO		
Bromoform	11/15/2016	<0.500	ug/L	80	0	NO		

Styrene	11/15/2016	<0.500	ug/L	100	100	NO		
Isopropylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
Bromobenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
n-Propylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
1,1,2,2-Tetrachloroethane	11/15/2016	<0.500	ug/L	0.17*	na	NO	**National Recommended Water Quality Criteria, not**	
2-Chlorotoluene	11/15/2016	<0.500	ug/L	na	3450****	NO	researched by UMU EPD, not	Chemicals and Carcinogens, 2nd Ed. Sittig, Marshall. Noyes Publications,
1,2,3-Trichloropropane	11/15/2016	<0.500	ug/L	na	na	NO	available regarding	
1,3,5-Trimethylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
4-Chlorotoluene	11/15/2016	<0.500	ug/L	na	na	NO	available	
tert-Butylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
1,2,4-Trimethylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available regarding	
sec-Butylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
p-Isopropyltoluene	11/15/2016	<0.500	ug/L	na	na	NO	available	
1,3-Dichlorobenzene	11/15/2016	<0.500	ug/L	na	400****	NO	researched by UMU EPD, not	Chemicals and Carcinogens, 2nd Ed. Sittig, Marshall. Noyes Publications,
1,4 Dichlorobenzene	11/15/2016	<0.500	ug/L	0.075	0.075	NO	(p-DCB)	
n-Butylbenzene	11/15/2016	<0.500	ug/L	na	na	NO	available	
1,2-Dichlorobenzene	11/15/2016	<0.500	ug/L	0.6	0.6	NO	(o-DCB)	

Contaminant Measured (Volatile Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS	
Hexachlorobutadiene	11/15/2016	<0.500	ug/L	na	0.44*	NO	**National Recommended Water Quality Criteria, not**	
1,2,4-Trichlorobenzene	11/15/2016	<0.500	ug/L	0.07	0.07	NO		
Naphthalene	11/15/2016	<0.500	ug/L	na	na	NO	available regarding	
1,2,3-Trichlorobenzene	11/15/2016	<0.500	ug/L	na	na	NO	available regarding	

Contaminant Measured (Synthetic Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS

South Well Sample Location								
1,2-Dibromo-3-chloropropane (DBCP)	11/15/2016	<0.01	ug/L	0.2	0	NO	ng from soil fumigant used on	
1,2-Dibromoethane (EDB)	11/15/2016	<0.01	ug/L	0.05	0	NO	from petroleum	
Araclor 1016	11/15/2016	<0.08	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1221	11/15/2016	<0.19	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1232	11/15/2016	<0.23	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1242	11/15/2016	<0.26	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1248	11/15/2016	<0.1	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1254	11/15/2016	<0.1	ug/L	0.5	0	NO	landfills; discharge of	
Arachlor 1260	11/15/2016	<0.2	ug/L	0.5	0	NO	landfills; discharge of	
Chlordane	11/15/2016	<0.1	ug/L	2	0	NO	banned	
PCB's Total	11/15/2016	<0.08	ug/L	0.5	0	NO	landfills; discharge of	
Toxaphene	11/15/2016	<1.0	ug/L	3	0	NO	ng from insecticide	
2,4-D	11/15/2016	<0.1	ug/L	70	70	NO	herbicide used on row	
Dalapon	11/15/2016	<1.0	ug/L	200	200	NO	herbicide used on	
Dicamba	11/15/2016	<0.1	ug/L	90****	90	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Dinoseb	11/15/2016	<0.1	ug/L	7	7	NO	herbicide used on	
Pentacholorphenol	11/15/2016	<0.04	ug/L	1	0	NO	from wood preserving	
Picloram	11/15/2016	<0.1	ug/L	500	500	NO	runoff	
2,4,5-TP (Silvex)	11/15/2016	<0.1	ug/L	50	50	NO	banned	
Alachlor	11/15/2016	<0.1	ug/L	2	0	NO	herbicide used on row	

Aldrin	11/15/2016	<0.1	ug/L	0.049****	0	NO	runoff, ***** Criterion based on Nat.	
Atrazine	11/15/2016	<0.1	ug/L	3	3	NO	herbicide used on row	
Benzo(a)pyrene	11/15/2016	<0.02	ug/L	2	0	NO	from linings of water storage tanks	
gamma-BHC (lindane)	11/15/2016	<0.02	ug/L	0.2	0.2	NO	ng from insecticide	
Butachlor	11/15/2016	<0.1	ug/L	70	0	NO	herbicide use	
Dieldrin	11/15/2016	<0.1	ug/L	0.052****	0	NO	banned insecticide, ***** Criterion	
Di(2-ethylhexyl)adipate	11/15/2016	<0.6	ug/L	400	400	NO	from chemical factories	
Di(2-ethylhexyl)phthalate	11/15/2016	<0.6	ug/L	6	0	NO	from rubber and chemical	
Endrin	11/15/2016	<0.01	ug/L	2	2	NO	banned	
Heptachlor	11/15/2016	<0.04	ug/L	0.4	0	NO	banned	
Heptachlor Epoxide	11/15/2016	<0.02	ug/L	0.2	0	NO	heptachlor	

Contaminant Measured (Synthetic Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS	
Hexacholorbenzene	11/15/2016	<0.1	ug/L	1	0	NO	from metal refineries and agricultural	
Hexachlorocyclopentadiene	11/15/2016	<0.1	ug/L	50	50	NO	from chemical factories	
Methoxychlor	11/15/2016	<0.1	ug/L	40	40	NO	ng from insecticide used on	
Metolachlor	11/15/2016	<0.1	ug/L	na	na	NO	runoff	
Metribuzin	11/15/2016	<0.1	ug/L	na	na	NO	health impacts	
Propachlor	11/15/2016	<0.1	ug/L	700	0	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Simazine	11/15/2016	<0.07	ug/L	4	4	NO	runoff	

Aldicarb	11/15/2016	<0.5	ug/L	7	0	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Aldicarb sulfone	11/15/2016	<0.7	ug/L	7	0	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Aldicarb sulfoxide	11/15/2016	<0.5	ug/L	7	0	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Carbaryl	11/15/2016	<0.5	ug/L	574	0	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Carbofuran	11/15/2016	<0.9	ug/L	na****	na	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
3-Hydroxycarbofuran	11/15/2016	<0.5	ug/L	na	na	NO	information	
Methomyl	11/15/2016	<0.5	ug/L	na****	na	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Oxamyl	11/15/2016	<1.0	ug/L	200	200	NO	ng from insecticide used on	
1-Napthol	11/15/2016	<01.0	ug/L	400****	700	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Endothall	11/15/2016	<9.0	ug/L	100	100	NO	herbicide use	
Diquat	11/15/2016	<0.4	ug/L	20	20	NO	herbicide use	

Contaminant Measured (Radiologic Contaminants)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS	
Uranium	11/15/2017	0.01+/-0.00	pci/L	20.1**	0	NO	ocurring or from uranium and other	**SDWA MCL = 30 ug/L, 20.1 pci/L based on estimated alpha activity
Gross Alpha	11/15/2017	3.4 +/- 1.5	pci/L	15	0	NO	Naturally ocurring or from uranium	
Gross Beta	11/15/2017	5.2 +/-2.0	pci/L	50	0	NO	Naturally ocurring or from uranium	
Radium 226	11/15/2017	-0.25 ± 0.4	pci/L	na	0	NO	Naturally ocurring or from uranium	
Radium 228	11/15/2017	0.02 ± 0.43	pci/L	na	0	NO	Naturally ocurring or from uranium	
Combined Radium	11/15/2017	< 0.5	pci/L	5	0	NO	ocurring or from uranium and other	

Contaminant Measured Cyanide and Fluoride	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES ON RESULTS	
Cyanide	11/15/2017	<0.0100	mg/L	0.2	0.2	NO	steel/metal factories; discharge from plastic and	
Fluoride	11/15/2017	0.169	mg/L	4	4		which promotes strong teeth; erosion of	
Contaminant Measured Heavy Metals	**DATE SAMPLED**	**LEVEL DETECTED**	**Units of Measure**	**MCL**	**MCLG**	**VIOLATION (TYPE)**	**SOURCES ON RESULTS**	
Antimony	11/15/2017	<0.001	mg/L	0.006	0.006	NO	refineries, fire retardants, ceramics,	
Arsenic	11/15/2017	0.0093	mg/L	0.01	0	NO	natural deposits, runoff from	
Barium	11/15/2017	0.0809	mg/L	2.0	2	NO	metal refineries,	
Beryllium	11/15/2017	<0.0005	mg/L	0.004	0.004	NO	metal refineries, coal-burning	
Cadmium	11/15/2017	<0.0005	mg/L	0.005	0.005	NO	Corosion of galvanized pipes, natural deposits,	
Chromium (total)	11/15/2017	0.0035	mg/L	0.1	0.1	NO	mills, natural deposits	
Nickel	11/15/2017	0.0012	mg/L	na	0.0134	NO	researched by UMU EPD, not	Hazardous Chemicals and Carcinogens, 2nd Ed. Sittig,
Selenium	11/15/2017	<0.0010	mg/L	0.05	0.05	NO	metal refineries,	
Thallium	11/15/2017	<0.0005	mg/L	0.002	0.0005	NO	Leaching from ore-processing sites, discharge	
Mercury	11/15/2017	<0.0002	mg/L	0.002	0.002	NO	deposits, refineries and factories, runoff from	

Contaminant Measured Heavy Metals - Lead and Copper first draw flush samples	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	SOURCES AND NOTES ON RESULTS	
Lead	9/27/2016	<0.0005	mg/L	0.015 (ACTION LEVEL)	0	NO	household plumbing systems or very old lead	Home # 1 - LD
Copper	9/27/2016	0.0456	mg/L	1.3 (ACTION LEVEL)	0	NO	Corrosion of household plumbing systems ,	Home # 1 - LD
Lead	9/27/2016	<0.0005	mg/L	0.015	0	NO		Home #2 - JCS
Copper	9/27/2016	0.0035	mg/L	1.3	0	NO		Home #2 - JCS
Lead	9/27/2016	**0.0457**	mg/L	0.015	0	YES		**Home #3 - EC - Action Level exceeded**
Copper	9/27/2016	**4.18**	mg/L	1.3	0	YES		**Home #3 - EC - Action Level exceeded**
Lead	9/27/2016	0.0006	mg/L	0.015	0	NO		Home #4 - TW
Copper	9/27/2016	0.0074	mg/L	1.3	0	NO		Home #4 - TW
Lead	9/27/2016	<0.0005	mg/L	0.015	0	NO		Home #5 - BL
Copper	9/27/2016	0.0146	mg/L	1.3	0	NO		Home #5 - BL

Corrective Action Samples for Action Level Exceedance at Home #3- EC

Lead	11/15/2016	<0.0005	mg/L	0.015	0	NO	**Sampling at less than MCL- likely sample error or long-**	Home #3 - EC
Copper	11/15/2016	0.0048	mg/L	1.3	0	NO	**Action level Sampling at less than MCL- likely sample**	Home #3 - EC
Alkalinity, Bicarbonate	11/15/2016	183	mg CaCO3/L					Home #3 - EC
Alkalinity, Carbonate	11/15/2016	<10	mg CaCO3/L					Home #3 - EC
Alkalinity, Hydroxide	11/15/2016	<10	mg CaCO3/L					Home #3 - EC
Alkalinity, Total	11/15/2016	183	mg CaCO3/L					Home #3 - EC
Calcium	11/15/2016	23.4	mg/L					Home #3 - EC

Lead	11/15/2016	<0.0005	mg/L	0.015	0	NO	Action level Sampling at less than MCL-likely sample error or long-term non-use and first draw flush sample	Wellhead Sample ast South Well
Copper	11/15/2016	0.0009	mg/L	1.3	0	NO	Action level Sampling at less than MCL-likely sample error or long-term non-use and first draw flush sample	Wellhead Sample ast South Well
Alkalinity, Bicarbonate	11/15/2016	186	mg CaCO3/L					Wellhead Sample ast South Well
Alkalinity, Carbonate	11/15/2016	<10	mg CaCO3/L					Wellhead Sample ast South Well
Alkalinity, Hydroxide	11/15/2016	<10	mg CaCO3/L					Wellhead Sample ast South Well
Alkalinity, Total	11/15/2016	186	mg CaCO3/L					Wellhead Sample ast South Well
Calcium	11/15/2016	23.4	mg/L					Wellhead Sample ast South Well

Corrosivity Calculation

The Langelier Saturation Index is used to assess corrosivity when an action level is triggered by the exceedance of a lead or copper MCL to figure out if the water itself is corroding the pipes or solder in the plumbing in a home or water supply system. In the case of this exceedance, the home and wellhead were sampled with very similar results, paired with more lead and copper samples. The lead and copper samples from both locations were below the MCL and the corrosivity index (-0.36) indicated that the water is slightly corrosive, but non scale forming. The exceedance seems to be an anomoly, but it is advised that the home owner not drink the first draw flush from their tap if it has set for a while, but let some water run for a few minutes prior to drinkin it under those circumstances. (Field data from USGS SIR 2011-5231 used for pH, EC