

WHITE MESA COMMUNITY
2011 DRINKING WATER QUALITY REPORT
PWS ID # 4990004
(For 2010 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 "cigarette" storage tank on a hill north of White Mesa. 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 70 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.

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.

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 2010.** 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 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.

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 Aldo Hammond 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:sclo@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 from 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 form 2010, labeled “**White Mesa 2010-1,**” “**White Mesa 2010-1, p.2,**” “**White Mesa 2010-2,**” “**White Mesa 2010-2, p.2,**” “**White Mesa 2010-3,**” “**White Mesa 2010-3, p.2,**” “**White Mesa 2010-4,**” “**White Mesa 2010-4, p.2**”.

1st Table: Total Coliform Rule bacteria monitoring and inorganic contaminant monitoring

2nd Table: Volatile Organics, south well

3rd Table: Volatile Organics, north well

4th Table: Synthetic Organics

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 2010.

Nitrate samples were collected at each well that supplies water to the community. Arsenic and Sodium samples were also collected at each well that supplies the community. Synthetic organic and volatile organic contaminant samples were also collected at each well that supplies the community. Lead and Copper samples were collected at 5 homes in the community. These are collected in homes because the source of lead and copper contaminants is usually in the copper pipes with lead solder in older homes and must be measured legally as a "first draw - flush" sample- the first water that comes out of a faucet after leaving it dormant for several hours- usually first thing in the morning. The samples are meant to mimic the first glass of water that someone may drink in the morning (or after several dormant hours) under these conditions. The names of the home owners have been removed from this public report to protect their privacy; they are referred to as "home 1," "home 2," etc.

Administrative Violations

An administrative notice of violation was issued for failure to report nitrate data on April 27, 2011. This will likely be rescinded as the samples were collected but not properly reported.

No MCL's were exceeded that would pose a risk to water consumers.

White Water 2010-11, P.C.

Contaminant Measured	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
Sodium- South Well	12/21/2010	44.1	mg/L	NA, not regulated**	NO		**20 mg/L for individuals on a 600 mg/day restricted sodium diet.
Sodium- North Well	12/21/2010	29.8	mg/L	NA, not regulated**	NO		
Copper- Home 1	9/9/2010	0.0110	mg/L	1.3	1.3	NO	Corrosion of household plumbing systems; erosion of natural deposits - FOR BOTH LEAD AND COPPER
Lead - Home 1	9/9/2010	0.0002	mg/L	0.015	0	NO	
Copper- Home 2	9/9/2010	0.0082	mg/L	1.3	1.3	NO	
Lead - Home 2	9/9/2010	0.0014	mg/L	0.015	0	NO	
Copper- Home 3	9/9/2010	0.0035	mg/L	1.3	1.3	NO	
Lead - Home 3	9/9/2010	<0.0001	mg/L	0.015	0	NO	
Copper- Home 4	9/9/2010	0.0054	mg/L	1.3	1.3	NO	
Lead - Home 4	9/9/2010	0.0005	mg/L	0.015	0	NO	
Copper- Home 5	9/9/2010	0.0738	mg/L	1.3	1.3	NO	
Lead - Home 5	9/9/2010	0.0008	mg/L	0.015	0	NO	

White Mesa 2010-2

Contaminant Measured (Volatile Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
SOUTH WELL SAMPLE LOCATION:							
Bromodichloromethane	12/21/2010	<1.00	ug/L	80	0	NO	Volatile organic contaminants come from a wide array of sources including disinfection by-products of chlorination and bromination of water, industrial solvents, industrial processes chemicals, fire retardants, adhesives, petroleum products used as fuels and fertilizers, and leachates from plastic products. For more information on the sources of specific contaminants in this list, please contact the Environmental Programs Director at (970) 564-5432 or sdow@utemountain.org
o-1,3-Dichloropropene	12/21/2010	<1.00	ug/L	340*	na	NO	
Toluene	12/21/2010	<1.00	ug/L	1	1	NO	
Tetrachloroethene	12/21/2010	<1.00	ug/L	5	0	NO	
trans-1,3-Dichloropropene	12/21/2010	<1.00	ug/L	340*	na	NO	
1,1,2-Trichloroethane	12/21/2010	<1.00	ug/L	5	3	NO	
Dibromochloroethane	12/21/2010	<1.00	ug/L	80	60	NO	
Chlorobenzene	12/21/2010	<1.00	ug/L	100	100	NO	
Ethylbenzene	12/21/2010	<1.00	ug/L	700	700	NO	
1,1,1,2-tetrahydroethane	12/21/2010	<1.00	ug/L	0.17*	(based on 1,2,2 TCEs based on new spread)	NO	
m,p-Xylene	12/21/2010	<1.00	ug/L	10,000	10,000	NO	*MCL from National Recommended Water Quality Criteria, not Safe Drinking Water Act Regulated Contaminant
o-Xylene	12/21/2010	<1.00	ug/L	10,000	10,000	NO	
Total Xylenes	12/21/2010	<1.00	ug/L	10,000	10,000	NO	no information available
Bromodiform	12/21/2010	<1.00	ug/L	80	0	NO	
Styrene	12/21/2010	<1.00	ug/L	100	100	NO	no information available
Isopropylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	
Bromobenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
m-Propylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	
1,1,2,2-Tetrachloroethane	12/21/2010	<1.00	ug/L	0.17*	na	NO	**** researched by UMU EPD, not EPA MCL
2-Chloroethane	12/21/2010	<1.00	ug/L	na	3450****	NO	
1,2,3-Trichloropropane	12/21/2010	<1.00	ug/L	na	na	NO	no information available regarding toxicity in water
1,3,5-Trimehylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	
4-Chlorobutane	12/21/2010	<1.00	ug/L	na	na	NO	no information available
tert-Butylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	
1,2,4-Trimethylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available regarding toxicity in water
sec-Butylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	
p-Isopropyltoluene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,3-Dichlorobenzene	12/21/2010	<1.00	ug/L	na	400****	NO	
m-Butylbenzene	12/21/2010	<1.00	ug/L	0.075	0.075	NO	****Handbook of Toxic and Hazardous Chemicals and Carcinogens
1,2-Dichlorobenzene	12/21/2010	<1.00	ug/L	na	na	NO	
1,2,4-Dichlorobenzene	12/21/2010	<1.00	ug/L	0.6	0.6	NO	no information available
1,2,4-Dichlorobenzene	12/21/2010	<1.00	ug/L	na	na	NO	

White Mesa 2010-6, p.2

Contaminant Measured (Volatile Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
Hexachlorobutadiene	12/21/2010	<1.00	ug/l	na	0.44*	NO	*MCL from National Recommended Water Quality Criteria, not safe Drinking water Act Regulated Contaminant
1,2,4-Trichlorobenzene	12/21/2010	<1.00	ug/l	na	0.07	NO	no information available regarding toxicity in water
Naphthalene	12/21/2010	<1.00	ug/l	na	na	NO	no information available regarding toxicity in water
1,2,3-Trichlorobenzene	12/21/2010	<1.00	ug/l	na	na	NO	no information available regarding toxicity in water

White Mesa 2010-3

Contaminant Measured (Volatiles Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
NORTH WELL SAMPLE LOCATION:							
Bromodichloromethane*	12/21/2010	<1.00	ug/L	80	0	NO	
1,3-Dichloropropane	12/21/2010	<1.00	ug/L	340*	na	NO	Volatile organic contaminants come from a wide array of sources including disinfection by products of chlorination and bromination of water, industrial solvents, industrial processes, chemicals, fire retardants, adhesives, petroleum products used as fuels and fertilizers, and leachates from plastic products. For more information on the sources of specific contaminants in this list, please contact the Environmental Programs Director at (970) 564-5432 or scrow@wtm.com in our org
Toluene	12/21/2010	<1.00	ug/L	1	1	NO	
Tetrachloroethane	12/21/2010	<1.00	ug/L	5	0	NO	
trans-1,3-Dichloropropene	12/21/2010	<1.00	ug/L	340*	na	NO	
1,1,1-Trichloroethane	12/21/2010	<1.00	ug/L	5	3	NO	
Dibromochloromethane	12/21/2010	<1.00	ug/L	80	60	NO	
Chlorobenzene	12/21/2010	<1.00	ug/L	100	100	NO	
Ethylbenzene	12/21/2010	<1.00	ug/L	700	700	NO	
1,1,2-Tetrachloroethane	12/21/2010	<1.00	ug/L	0.17*	na	NO	MCL from National Recommended Water Quality Criteria, not Safe Drinking Water Act Regulated Contaminant
m,p-Xylene	12/21/2010	<1.00	ug/L	10,000	na	NO	
o-Xylene	12/21/2010	<1.00	ug/L	10,000	10,000	NO	
Total Xylenes	12/21/2010	<1.00	ug/L	10,000	10,000	NO	
Bromoforn	12/21/2010	<1.00	ug/L	80	0	NO	
Dyrene	12/21/2010	<1.00	ug/L	100	100	NO	
1,2-Dichloroethane	12/21/2010	<1.00	ug/L	na	na	NO	no information available
Bromobenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
n-Propylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,1,2-Tetrachloroethane	12/21/2010	<1.00	ug/L	0.17*	na	NO	
1,2-Dichloroethane	12/21/2010	<1.00	ug/L	na	3450****	NO	**** researched by UMU EPD, not EPA MCL
1,2,3-Trichloropropane	12/21/2010	<1.00	ug/L	na	na	NO	no information available regarding toxicity in water
1,3,5-Triethylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
4-Chlorobenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,2-Dichloroethane	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,2,4-Trimethylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,2,4-Trimethylbenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,3-Dichlorobenzene	12/21/2010	<1.00	ug/L	na	400****	NO	**** researched by UMU EPD, not EPA MCL
1,4-Dichlorobenzene	12/21/2010	<1.00	ug/L	0.075	0.075	NO	
m-Dichlorobenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available
1,2-Dichlorobenzene	12/21/2010	<1.00	ug/L	0.6	0.6	NO	

****Handbook of Toxic and Hazardous Chemicals and Carcinogens (p-DCB)

White Mesa 2010 -> p. 2

Contaminant Measured (Synthetic Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
Hexachlorobenzene	12/21/2010	<1.00	ug/L	na	0.44*	NO	*MCL from National Recommended Water Quality Criteria, not Safe Drinking water Act Regulated Contaminant
1,2,4-Trichlorobenzene	12/21/2010	<1.00	ug/L	na	0.07	NO	
Naphthalene	12/21/2010	<1.00	ug/L	na	na	NO	no information available regarding toxicity in water
1,2,3-Trichlorobenzene	12/21/2010	<1.00	ug/L	na	na	NO	no information available regarding toxicity in water

White Mesa 2010-4

Contaminant Measured (Synthetic Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
South Well Sample Location							
1,2-Dibromo-3-chloroethane (DBCE)	12/21/2010	<0.01	ug/L	0.2		0 NO	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
1,2-Dichloroethane (DCE)	12/21/2010	<0.01	ug/L	0.05		0 NO	Discharge from petroleum refineries
Arochlor 1016	12/21/2010	<0.08	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1221	12/21/2010	<0.19	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1232	12/21/2010	<0.23	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1242	12/21/2010	<0.26	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1248	12/21/2010	<0.1	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1254	12/21/2010	<0.1	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Arochlor 1260	12/21/2010	<0.2	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Chlordane	12/21/2010	<0.1	ug/L	2		0 NO	Residue of banned termiticide
PCB's Total	12/21/2010	<0.08	ug/L	0.5		0 NO	Runoff from landfills; discharge of waste chemicals
Toxaphene	12/21/2010	<1.0	ug/L	3		0 NO	Runoff/leaching from insecticide used on cotton and cattle
2,4-D	12/21/2010	<0.1	ug/L	70		70 NO	Runoff from herbicide used on row crops
Dalapon	12/21/2010	<1.0	ug/L	200		200 NO	Runoff from herbicide used on rights of way
Dicamba	12/21/2010	<0.1	ug/L	90****		90 NO	**** researched by UMW EPO, not EPA MCL; herbicide runoff
Dinoseb	12/21/2010	<0.1	ug/L	7		7 NO	Runoff from herbicide used on soybeans and vegetables
Pentachlorophenol	12/21/2010	<0.04	ug/L	1		0 NO	Discharge from wood preserving factories
Picloram	12/21/2010	<0.1	ug/L	500		500 NO	Herbicide runoff
2,4,5-TP (Silvex)	12/21/2010	<0.1	ug/L	50		50 NO	Residue of banned herbicide
Alachlor	12/21/2010	<0.1	ug/L	2		0 NO	Runoff from herbicide used on row crops
Azinphos	12/21/2010	<0.1	ug/L	0.049****		0 NO	Pesticide runoff, **** Criterion based on Nat. Recommended Water
Atrazine	12/21/2010	<0.1	ug/L	3		3 NO	Runoff from herbicide used on row crops; especially corn
Benz(a)pyrene	12/21/2010	<0.02	ug/L	2		0 NO	Leaching from linings of water storage tanks and distribution lines
gamma-BHC (lindane)	12/21/2010	<0.02	ug/L	0.2		0.2 NO	Runoff/leaching from insecticide used on cattle, lumber, gardens
beta-BHC	12/21/2010	<0.1	ug/L	70		0 NO	Runoff from herbicide use
Endrin	12/21/2010	<0.1	ug/L	0.052****		0 NO	Residue of banned insecticide, **** Criterion based on Nat. Reccd
DDE (1,1-dichloro-2,2-bis(4-chlorophenyl)ethane)	12/21/2010	<0.6	ug/L	400		400 NO	Discharge from chemical factories
DDE (1,1-dichloro-2,2-bis(4-chlorophenyl)ethane)	12/21/2010	<0.6	ug/L	6		0 NO	Discharge from rubber and chemical factories
Endrin	12/21/2010	<0.01	ug/L	2		2 NO	Residue of banned insecticide
Heptachlor	12/21/2010	<0.04	ug/L	0.4		0 NO	Residue of banned termiticide
Heptachlor Epoxide	12/21/2010	<0.02	ug/L	0.2		0 NO	Breakdown of heptachlor

**** Handbook of Toxic and Hazardous Chemi

White Mesa 2010-4, p.2

Contaminant Measured (Synthetic Organics)	DATE SAMPLED	LEVEL DETECTED	Units of Measure	MCL	MCLG	VIOLATION (TYPE)	MAJOR SOURCES AND NOTES ON RESULTS
Hexachlorobenzene	12/21/2010	<0.1	ug/L	1	0	NO	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	12/21/2010	<0.1	ug/L	50	50	NO	Discharge from chemical factories
Methoxychlor	12/21/2010	<0.1	ug/L	40	40	NO	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Methoxychlor	12/21/2010	<0.1	ug/L	na	na	NO	Pesticide runoff
Methoxychlor	12/21/2010	<0.1	ug/L	na	na	NO	no human health impacts detected
Propachlor	12/21/2010	<0.1	ug/L	700	0	NO	*** researched by UMU EPD, not EPA MCL, herbicide runoff
Simazine	12/21/2010	<0.07	ug/L	4	4	NO	Herbicide runoff
Aldicarb	12/21/2010	<0.5	ug/L	7	0	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
Aldicarb sulfone	12/21/2010	<0.7	ug/L	7	0	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
Aldicarb sulfonide	12/21/2010	<0.5	ug/L	7	0	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
Carbaryl	12/21/2010	<0.5	ug/L	574	0	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
Carbofuran	12/21/2010	<0.9	ug/L	na	na	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
3-Hydroxycarbofuran	12/21/2010	<0.5	ug/L	na	na	NO	no information available
Methomyl	12/21/2010	<0.5	ug/L	na	na	NO	*** researched by UMU EPD, not EPA MCL, pesticide runoff
Oxamyl	12/21/2010	<1.0	ug/L	200	200	NO	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes
Allyphosphilite	12/21/2010	<6.0	ug/L	700	700	NO	Runoff from herbicide use
Endosulf	12/21/2010	<9.0	ug/L	100	100	NO	Runoff from herbicide use
Diquat	12/21/2010	<0.4	ug/L	20	20	NO	Runoff from herbicide use