Beaver Water District

2013 Annual Water Quality Report

Beaver Water District, P.O. Box 400, Lowell, Arkansas 72745-0400.

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Unregulated Constituents - *Monitored by ADH and BWD **

Physical and Chemical Parameters	Units	BWD
Alkalinity (Phenolphthalein) *	ppm as CaCO3	**ND**
Alkalinity (Total) *	ppm as CaCO3	**55 (avg)**
Calcium *	ppm as Ca	**27 (avg)**
Range of Results	ppm as Ca	**22.4 - 33.6**
Conductivity *	µS/cm	**193 (avg)**
Hardness (Total) *	ppm as CaCO3	**75 (avg)**
Range of Results	ppm as CaCO3	**55 - 99**
Magnesium	ppm as Mg	**2.17**
Nickel	ppm	**ND**
Potassium	ppm	**1.89**
Silica *	ppm as SiO2	**3.3**
Sodium	ppm	**6.59**

PRIMARY STANDARDS - *Health Related and Mandated by U.S. EPA & ADH*

Disinfectant	Units	MRDLG	MRDL	BWD
Total Residual Chlorine* (Average)	ppm	4.0	4.0	**1.55**
Range of Results	ppm			**1.15 - 2.05**
Chlorine Dioxide*	ppm	1.0	1.0	**0.04 (avg)**
Clarity	**Units**	**MCLG**	**MCL**	**BWD**
Turbidity * (Treated Finished Water)			>0.3 NTU in >5% of samples or any 1 sample>1 NTU	
Highest yearly sample result	NTU	n/a		**0.14**
Average NTU	NTU			**0.08**
Lowest % of samples meeting limit	%			**100**
Microbiological	**Units**	**MCLG**	**MCL**	**BWD**
Total Coliform Bacteria	P/A	0	1/month	**0**
Fecal Coliform or *Escherichia coli*	P/A	0	0	**0**
Inorganic Chemicals	**Units**	**MCLG**	**MCL**	**BWD**
Antimony	ppb	6	6	**ND**
Arsenic	ppb	n/a	10	**ND**
Asbestos	MFL	7	7	**Waiver**
Barium	ppm	2	2	**0.027**
Beryllium	ppb	4	4	**ND**
Cadmium	ppb	5	5	**ND**
Chlorite*	ppm	0.8	1.0	**0.12(avg)**
Chromium	ppb	100	100	**ND**
Copper	ppm	1.3	AL=1.3	**ND**
Cyanide	ppb	200	200	**ND**
Fluoride (Average)	ppm	4.0	4.0	**0.57**
Range of Results	ppm			**0 - 0.77**
Lead	ppb	0	AL=15	**ND**
Mercury	ppb	2	2	**ND**
Nitrate + Nitrite (as N)	ppm	10	10	**0.34**
Selenium	ppb	50	50	**ND**
Thallium	ppb	0.5	2	**ND**

Definitions

Maximum Contaminant Level Goal *or* ***MCLG***: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level *or* ***MCL***: 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, BAT.

Maximum Residual Disinfectant Goal *or* ***MRDLG*** The level of a drinking disinfectant below which there is no known or ecpected risk to health.

Maximum Residual Disinfectant Level *or* ***MRDL***: The highest level of a disinfectant allowed in drinking water.

Treatment Techniqu *e or* ***TT***: A required process intended to reduce the level of a contaminant in drinking water.

triggers treatment or other requirements which a water system must follow.

mrem/yr = millirems per year (a unit of absorbed radiation dose)

ND = Non-detected, constituent not present at detection limit

NTU = Nephelometric Turbidity Units

P/A = Presence / Absence or Present / Absent

pCi/L = picocuries per liter (a measure of radioactivity)

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (ug/l)

ppt = parts per trillion, or nanograms per liter (nanograms/l)

RAA = Running Annual Average

uS/cm = microSiemens per centimeter

Waiver = an exemption to perform monitoring issued by the ADH based on system evaluations

There were no EPA Safe Drinking Water Act (SDWA) monitoring or compliance violations in 2013 for Beaver Water District.

* Analyzed and reported by Beaver Water District. All other analyses in this report by ADH.

Radionuclides	Units	MCLG	MCL	BWD
Gross Alpha	pCi/L	0	4 mrem/yr	**ND**
Gross Beta	pCi/L	0	4 mrem/yr	**ND**

SECONDARY STANDARDS - *Aesthetic Standards Recommended by EPA & ADH*

Physical Parameters	Units	MCLG	BWD
Apparent Color	units	15	**3**
pH * (Average)	units	6.5 - 8.5	**8.2**
Inorganic Chemicals	**Units**	**MCLG**	**BWD**
Aluminum	ppm	0.05 - 0.2	**0.08**
Chloride	ppm	250	**7.6**
Corrosivity * (Average) Langelier Saturation Index	SI	Non-corrosive	**-0.06**
Iron	ppm	0.3	**ND**
Manganese	ppm	0.05	**ND**
Silver	ppm	0.1	**ND**
Sulfate	ppm	250	**18.0**
Total Dissolved Solids *	ppm	500	**109 (avg)**
Zinc	ppm	5	**ND**

Volatile Organic Contaminants (VOCs) - Regulated	Units	MCLG	MCL	BWD
Total Trihalomethanes (TTHMs)				
Highest Running 12 Month Average (includes some 2012 results)	ppb	N/A	80	**49**
Range of quarterly samples (2013 results only)				**14.7 - 46.7**
Haloacetic Acids 5 (HAA5)				
Highest Running 12 Month Average (includes some 2012 results)	ppb	N/A	60	**26**
Range of quarterly samples (2013 results only)				**10.4 - 22.1**
Benzene	ppb	0	5	**ND**
Carbon Tetrachloride	ppb	0	5	**ND**
Chlorobenzene	ppb	100	100	**ND**
o-Dichlorobenzene (1,2-Dichlorobenzene)	ppb	600	600	**ND**
p-Dichlorobenzene (1,4-Dichlorobenzene)	ppb	75	75	**ND**
1,2-Dichloroethane	ppb	0	5	**ND**
1,1-Dichloroethene (1,1-Dichloroethylene)	ppb	7	7	**ND**
cis-1,2-Dichloroethene (cis-1,2-Dichloroethylene)	ppb	70	70	**ND**
trans-1,2-Dichloroethene (…-Dichloroethylene)	ppb	100	100	**ND**
Dichloromethane (Methylene Chloride)	ppb	0	5	**ND**
1,2-Dichloropropane	ppb	0	5	**ND**
Ethylbenzene	ppb	700	700	**ND**
Styrene	ppb	100	100	**ND**
Tetrachloroethene (Tetrachloroethylene)	ppb	0	5	**ND**
Toluene	ppm	1	1	**ND**
1,2,4-Trichlorobenzene	ppb	70	70	**ND**
1,1,1-Trichloroethane	ppb	200	200	**ND**
1,1,2-Trichloroethane	ppb	3	5	**ND**
Trichloroethene (Trichloroethylene)	ppb	0	5	**ND**
Vinyl Chloride	ppb	0	2	**ND**
Xylenes, Total	ppm	10	10	**ND**

Disinfection By-Product Precursors - *Monitored by ADH*

Parameter	Removal Ratio Required	BWD
Total Organic Carbon (TOC)	≥1.00	1.19

Volatile Organic Contaminants (VOCs) - Unregulated	Units	BWD
Bromobenzene	ppb	**ND**
Bromochloromethane (Chlorobromomethane)	ppb	**ND**
Bromodichloromethane	ppb	**5.36**
Bromoform	ppb	**ND**
Bromomethane	ppb	**ND**
n-Butylbenzene	ppb	**ND**
sec-Butylbenzene	ppb	**ND**
tert-Butylbenzene	ppb	**ND**
Chloroethane (Ethyl Chloride)	ppb	**ND**
Chloroform	ppb	**10.7**
Chloromethane	ppb	**ND**
2-Chlorotoluene	ppb	**ND**
4-Chlorotoluene	ppb	**ND**
Dibromochloromethane	ppb	**1.58**
1,2-Dibromo-3-chloropropane (DBCP)	ppb	**ND**
1,2-Dibromoethane	ppb	**ND**
Dibromomethane (Methylene Bromide)	ppb	**ND**
1,3-Dichlorobenzene	ppb	**ND**
Dichlorodifluoromethane	ppb	**ND**
1,1-Dichloroethane	ppb	**ND**
1,3-Dichloropropane	ppb	**ND**
2,2-Dichloropropane	ppb	**ND**
1,1-Dichloropropene	ppb	**ND**
cis-1,3-Dichloropropene	ppb	**ND**
trans-1,3-Dichloropropene	ppb	**ND**
Hexachlorobutadiene	ppb	**ND**
Isopropylbenzene	ppb	**ND**
p-Isopropyltoluene	ppb	**ND**
Methyl tertiary butyl ether (MTBE)	ppb	**ND**
Naphthalene	ppb	**ND**
n-Propylbenzene	ppb	**ND**
1,1,1,2-Tetrachloroethane	ppb	**ND**
1,1,2,2-Tetrachloroethane	ppb	**ND**
1,2,3-Trichlorobenzene	ppb	**ND**
Trichlorofluoromethane	ppb	**ND**
1,2,3-Trichloropropane	ppb	**ND**
1,2,4-Trimethylbenzene	ppb	**ND**
1,3,5-Trimethylbenze	ppb	**ND**