

## BUTLER COUNTY WATER & SEWER DEPARTMENT'S WATER QUALITY DATA

Results listed are mg/l (ppm) unless otherwise noted.

### Parameters monitored under the Primary Drinking Water Regulations

These have legally enforceable standards that apply to protect public health.

	BCWS Water	MCL**or other regulatory limit	Potential sources
<b>Disinfectants and disinfection by products</b>			
Chlorine Dioxide	0.56	0.8	water additive to control microbes
Chlorine, Total (avg)	0.80	4	water additive to control microbes
Chlorite	0.58	1.0	byproduct of drinking water disinfection
Haloacetic Acids (HAA5) (Highest locational running annual avg.)	0.010	0.060	byproduct of drinking water disinfection
Total Trihalomethanes (TTHMs) (Highest locational running annual avg.)	0.035	0.080	byproduct of drinking water disinfection
<b>Inorganic Chemicals</b>			
Antimony	<0.003	0.006	discharge from petroleum refineries, fire retardants, ceramics, electronics, solder
Arsenic	0.001	0.010	erosion of natural deposits, runoff from orchards, glass & electronics production wastes
Asbestos (fibers>10 micrometers)	<0.2	7million fibers/L	decay of asbestos cement, erosion of natural deposits
Barium	0.054	2	drilling wastes, metal refineries, erosion of natural deposits
Beryllium	<0.0005	0.004	metal refineries, coal burning, electrical, aerospace and defense industries
Cadmium	<0.0005	0.005	corrosion of galvanized pipes, erosion of natural deposits, metal refineries, runoff from waste batteries and paints
Chromium	<0.010	0.1	steel and pulp mills, erosion of natural deposits
Copper (90th percentile)	0.0279	1.3	corrosion of household plumbing, erosion of natural deposits
Cyanide (as free Cn)	<0.005	0.2	steel, metal, plastic and fertilizer factories
Fluoride	0.94	4	water additive for teeth, erosion of natural deposits, fertilizer and aluminum factories
Lead (90th percentile)	0.002938	0.015	corrosion of household plumbing, erosion of natural deposits
Mercury (inorganic)	<0.0002	0.002	erosion of natural deposits, runoff from landfills & croplands, discharge from refineries and factories
Nickel	<0.005	0.1	erosion of natural deposits; discharge from electroplating, stainless steel, and alloy products; Mining and refining operations.
Nitrogen / Nitrate	1.51	10	fertilizer runoff, septic tank leaching, sewage, erosion of natural deposits
Nitrogen / Nitrite	<0.10	1	fertilizer runoff, septic tank leaching, sewage, erosion of natural deposits
Selenium	<0.003	0.05	petroleum refineries, mines, erosion of natural deposits
Thallium	<0.001	0.002	ore processing, electronics, glass and drug factories
Turbidity (NTU)	0.12	5	soil runoff
<b>Organic Chemicals</b>			
Alachlor	<0.0005	0.002	runoff from herbicides
Atrazine	<0.0005	0.003	runoff from herbicides
Benzene	<0.0005	0.005	factory discharge, leaching from gas storage tanks and landfills
Benzo(a)pyrene (PAHs)	<0.00002	0.0002	leaching from water tank and distribution system linings
Carbofuran	<0.004	0.04	leaching of soil fumigant used on rice and alfalfa
Carbon tetrachloride	<0.0005	0.005	discharge from chemical plants and other industrial activities
Chlordane	<0.0002	0.002	residue of banned termiticide
Chlorobenzene (monochlorobenzene)	<0.0005	0.1	chemical and agricultural chemical factories discharge
2,4-D	<0.007	0.07	runoff from herbicides used on row crops
Dalapon	<0.02	0.2	runoff from herbicide used on rights of way
Dibromochloropropane (DBCP)	<0.00002	0.0002	Runoff/ leaching from soil fumigant used on soybeans, cotton, pineapples and orchards
1,2-Dichlorobenzene (o-Dichlorobenzene)	<0.0005	0.6	discharge from industrial chemical factories
1,4-Dichlorobenzene (p-Dichlorobenzene)	<0.0005	0.075	discharge from industrial chemical factories
1,2-Dichloroethane	<0.0005	0.005	discharge from industrial chemical factories
1-1-Dichloroethylene (1,1-Dichloroethene)	<0.0005	0.007	discharge from industrial chemical factories
cis-1, 2-Dichloroethylene (cis-1,2-Dichloroethene)	<0.0005	0.07	discharge from industrial chemical factories
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)	<0.0005	0.1	discharge from industrial chemical factories
Dichloromethane	<0.0005	0.005	discharge from drug and chemical factories
1-2-Dichloropropane	<0.0005	0.005	discharge from industrial chemical factories
Di(2-ethylhexyl)adipate	<0.04	0.4	discharge from chemical factories
Di(2-ethylhexyl)phthalate	<0.0006	0.006	discharge from rubber and chemical factories
Dinoseb	<0.0007	0.007	runoff from herbicide used on soybeans and vegetables
Diquat	<0.002	0.02	runoff from herbicide use
Endothall	<0.010	0.1	runoff from herbicide use
Endrin	<0.0002	0.002	residue of banned insecticide
Ethylbenzene	<0.0005	0.7	discharge from petroleum refineries
Ethylene dibromide (EDB)	<0.00002	0.00005	discharge from petroleum refineries
Glyphosate	<0.07	0.7	runoff from herbicide use

	BCWS Water	MCL**or other regulatory limit	Potential sources
Heptachlor	<0.00004	0.0004	residue of banned termiticide
Heptachlor epoxide	<0.00002	0.0002	breakdown of heptachlor
Hexachlorobenzene	<0.0001	0.001	metal refinery & agricultural chemical factory discharge
Hexachlorocyclopentadiene	<0.005	0.05	discharge from chemical factories
Lindane	<0.0001	0.0002	runoff/ leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	<0.004	0.04	runoff/ leaching from insecticide used on fruits, vegetabels, alfalfa, livestock
Oxamyl (Vydate)	<0.02	0.2	runoff/ leaching from insecticide used on apples, potatoes and tomatoes
Polychlorinated biphenyls, total (PCBs)	<0.0001	0.0005	runoff from landfills, discharge of waste chemicals
Pentachlorophenol	<0.0001	0.001	discharge from wood preserving factories
Picloram	<0.05	0.5	herbicide runoff
Simazine	<0.00005	0.004	herbicide runoff
Styrene	<0.0005	0.1	discharge from rubber & plastic factories, leaching from landfills
2378-TCDD (Dioxin)	<1x10 <sup>-8</sup>	3x10 <sup>-8</sup>	Emissions from waste incineration and other combustion; Discharge from chemical factories
Tetrachloroethylene (Tetrachloroethene)	<0.0005	0.005	discharge from factories and dry cleaners
Toluene	<0.0005	1	discharge from petroleum factories
Toxaphene	<0.005	0.003	runoff/ leaching from insecticide used on cotton & cattle
2,4,5-TP (Silvex)	<0.005	0.05	residue of banned herbicide
1,2,4-Trichlorobenzene	<0.0005	0.07	discharge from textile finishing factories
1,1,1-Trichloroethane	<0.0005	0.2	discharge from metal degreasing sites & other factories
1,1,2-Trichloroethane	<0.0005	0.005	discharge from industrial chemical factories
Trichloroethylene (Trichloroethene)	<0.0005	0.005	discharge from metal degreasing sites & other factories
Vinyl Chloride	<0.0005	0.002	leaching form PVC pipes, discharge from plastic factories
Xylenes (total)	<0.0015	10	discharge from petroleum & chemical factories
<b>Radionuclides</b>			
Alpha (pCi/L)	<3	15	erosion of natural deposits
Gross Beta (pCi/L)	<4	50	decay of natural and man made deposits
Gross alpha particle activity (pCi/L)	<3	15	erosion of natural deposits
Radium 226 and Radium 228 (combined)(pCi/L)	<1	5	erosion of natural deposits
Strontium-90 (pCi/L)	<1	8	
Tritium (pCi/L)	<300	20,000	
<b>Microorganisms</b>			
Cryptosporidium (count/100L)	0	99% removal	human and animal fecal waste
Giardia (count/100L)	0	99.9% removal	human and animal fecal waste
Total Coliform (% TC routine positive/month)	0.98	TT****	naturally present in the environment, human and animal fecal waste
E. coli	0	TT****	naturally present in the environment, human and animal fecal waste
Total Organic Carbon (TOC)	2.05	TT*****	naturally present in the environment

#### Parameters monitored under the Secondary Drinking Water Regulations

These have non-enforceable guidelines regulating contaminants that may cause cosmetic or nuisance effects.

	BCWS Water	SMCL ***
Aluminum	0.044	<0.2
Chloride	31	250
Color (color units)	<1	15
Fluoride	0.94	2
Foaming Agents	<0.0002	0.5
Iron	0.04	0.3
Manganese	<0.001	0.05
Odor (Threshold odor number)	1	3
pH Standard Units (avg)	9.0	7.0 - 10.5
Silver	<0.001	0.1
Sulfate	92	250
Dissolved solids, total	244	500
Zinc	<0.001	5

### Other Parameters that were monitored

These have have no regulatory limit but were monitored.

	BCWS Water
Aldicarb	<0.0005
Aldicarb Sulfone	<0.0008
Aldicarb Sulfoxide	<0.0005
Aldrin	<0.00001
4-androstene-3,17-dione	<0.0000003
Alkalinity, Total (avg)	68
Bromacil	<0.002
Bromobenzene	<0.0005
Bromochloromethane (halon1011)	<0.0005
Bromodichloromethane	0.0067
Bromoform	0.01163
Bromomethane (methyl bromide)	<0.0005
Butachlor	<0.002
1,3 Butadiene	<0.0001
n-Butylbenzene	<0.0005
sec-Butylbenzene	<0.0005
tert-Butylbenzene	<0.0005
Calcium	26
Carbaryl	<0.01
Chlorate	0.077
Chlorine, Free (avg)	0.7
Chloroethane	<0.0005
Chlorodifluoromethane (HCFC-22)	0.00004
Chloroform	0.00302
Chloromethane (methyl chloride)	<0.0005
o-Chlorotoluene (2- Chlorotoluene)	<0.0005
p-Chlorotoluene (4- Chlorotoluene)	<0.0005
Chromium	0.0002
Chromium, hexavalent	0.00027
Cobalt	<0.001
Conductivity umhos/cm (avg)	372
Dibromoacetic acid	0.005486
Dibromochloromethane	0.01341
Dibromomethane	<0.0005
Dicamba	<0.01
Dichloroacetic acid	0.001276
1,3-Dichlorobenzene (m-Dichlorobenzene)	<0.0005
Dichlorodifluoromethane	<0.0005
1,1-Dichloroethane	<0.0005
1,1-Dichloropropene	<0.0005
1,3-Dichloropropane	<0.0005
1,3-Dichloropropene	<0.0005
2,2-Dichloropropane	<0.0005
Dieldrin	<0.00002
1,4 Dioxane	0.00022
equilin	<0.000004
17-β -estradiol	<0.0000004
estrone	<0.000002
17-α-ethynylestradiol (ethinyl estradiol)	<0.0000009
Fluorotrichloromethane (Trichlorofluoromethane)	<0.0005
Hardness, Total	145
Hexachlorobutadiene	<0.0005
16-α-hydroxyestradiol (estriol)	<0.0000008
3-Hydroxycarbofuran	<0.002
Isopropylbenzene	<0.0005
4-Isopropyltoluene (p-Isopropyltoluene)	<0.0005
Magnesium	27
Manganese	0.43
Methomyl	<0.05
Methyl-tert-butyl-ether (MTBE)	<0.0005
Metolachlor	<0.002
Metribuzin	<0.002
Molybdenum	0.002
Monobromoacetic acid	<0.00100
Monochloroacetic acid	<0.002
Napthalene	<0.0005
n-Propylbenzene	<0.0005
Perchlorate	<0.0005
perfluorobutanesulfonic acid (PFBS)	<0.00009
perfluorohepatanoic acid (PFHpA)	<0.00001

perfluorohexanesulfonic acid (PFHxS)	<0.00003
perfluorononanoic acid (PFNA)	<0.00002
perfluorooctanesulfonic acid (PFOS)	<0.00004
perfluorooctanoic acid (PFOA)	<0.00002
Phosphate (as PO4-P)	0.125
Propachlor	<0.01
Radon (pCi/L)	<1
Sodium	27
Strontium	0.135
Testosterone	<0.0000001
1,1,1,2-Tetrachloroethane	<0.0005
1,1,2,2,-Tetrachloroethane	<0.0005
Trichloroacetic acid	<0.001
1,2,3-Trichlorobenzene	<0.0005
1,2,3-Trichloropropane	<0.0005
1,2,4-Trimethylbenzene	<0.0005
1,3,5-Trimethylbenzene	<0.0005
Vanadium	0.0035

\*\* Maximum Contaminant Level- The highest level allowed in drinking water.

\*\*\* Secondary Maximum Contaminant Level

\*\*\*\*TT- Treatment Technique- If threshold is exceeded, an assessment is triggered.

\*\*\*\*\*TT- Treatment Technique- A value greater than one indicates the system is in compliance with TOC removal requirements.

Most recent data is shown. Testing schedule varies by parameter.

last updated 11/07/17