

2018 Annual Drinking Water Quality Report

The Utilities Board of the City of Andalusia

The Utilities Board of the City of Andalusia is very pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. We want you to understand our efforts to maintain and continually improve the water you receive and to protect our water supply.

Our water source is groundwater drawn from nine (9) wells. Three (3) wells draw from the Tuscahoma Sands/Hatchetigbee aquifer, three (3) wells draw from the Nanafalia aquifer and three (3) well draws from the Clayton Limestone aquifer. Each water system must complete a Source Water Assessment Program (SWAP). The SWAP is comprised of four distinct activities: delineation of the source water assessment area, contaminant inventory, susceptibility analysis and public awareness. The Utilities Board has completed each required component of the source water assessment. A copy of the assessment report is available for review in our office. Chlorine is added at each well as a disinfectant.

The Utilities Board is pleased to report that our drinking water is safe and meets federal and state requirements. If you have any questions about this report or concerning your water utility, please contact Water Operations Manager Tim Glisson at 222-1332.

If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Thursday, of each month, at 12:00 p.m. in Room 112 of City Hall. The Utilities Board routinely monitors for contaminants in your drinking water according to Federal and State laws.

This table shows the results of our monitoring for the period of January 1st to December 31st, 2018. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. This table has many abbreviations you might not be familiar with. To help you better understand these abbreviations we've provided the following definitions:

definitions...

- Non-Detects (ND) – laboratory analysis indicates that the constituent is not present.
- Parts per million (ppm) or milligrams per liter (mg/l) – one part per million corresponds to one minute in two years, or a single penny in \$10,000.
- Parts per billion (ppb) or ug/l – micrograms per liter – one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- Picocuries per liter (pCi/l) – picocuries per liter is a measure of radioactivity in water.
- Millirems per years (mrem/yr) – measure of radiation absorbed by the body.
- Nephelometric Turbidity Units (NTU) – a measure of the clarity of water. Turbidity more than 5 NTU is just noticeable to the average person.
- Maximum Contaminant Level – The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water.
- Maximum Contaminant Level Goal – The "Goal" (MCLG) is 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.
- AL – Action Level – the concentrations of a contaminant, which, if exceeded, triggers, treatment or other requirements, which a water system must follow.
- TT – Treatment Technique – A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Table of Detected Contaminants

Contaminant	Violation Yes/No	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Turbidity	No	.17	NTU	n/a	TT	Soil runoff
Radioactive Contaminants						
Alpha emitters	No	1.6+/-1.6	pCi/l	0	15	Erosion of natural deposits
Radium 228	No	0.0+/-0.7	pCi/l	0	5	Erosion of natural deposits
Inorganic Contaminants						
Copper	No	.282	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	.83	ppm	4	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate	No	.20	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Volatile Organic Contaminants						
Carbon tetrachloride	No	1.46	ppb	0	5	Discharge from chemical plants and other industrial activities
(THM) Total trihalomethanes	No	37.3	ppb	0	80	By-product of drinking water chlorination
Haloacetic Acids (HAAs)	No	7.08	ppm	0	60	By-product of drinking water chlorination
Xylenes	No	.74	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories

Table of Primary Contaminants - At high levels some primary contaminants are known to pose a health risk to humans. This table provides a quick glance of any primary contaminant detections.

Contaminant	MCL	Andalusia	Contaminant	MCL	Andalusia
Bacteriological					
Total Coliform Bacteria	<5%	ND	Endrin	2	ND
Turbidity	5	.11	Epichlorohydrin	11	ND
Radiological					
Beta/Photon Emitters	4	ND	Glyphosate	700	ND
Alpha Emitters	15	1.6+/-1.6	Heptachlor	400	ND
Radium 228	5	0.0+/-0.6	Heptachlor epoxide	200	ND
Inorganic					
Antimony	6	ND	Hexachlorobenzene	2	ND
Arsenic	50	ND	Hexachloropentadiene	1	ND
Asbestos	7	ND	Lindane	200	ND
Barium	2	ND	Methoxychlor	40	ND
Beryllium	4	ND	Oxamyl [Vydate]	200	ND
Cadmium	5	ND	PCBs	500	ND
Chromium	100	ND	Pentachlorophenol	1	ND
Copper	AL=1.3	.282	Picloram	500	ND
Cyanide	200	ND	Simazine	4	ND
Fluoride	4	.83	Toxaphene	3	ND
Lead	AL=15	ND	Benzene	5	ND
Mercury	2	ND	Carbon tetrachloride	5	1.46
Nitrate	10	.20	Chlorobenzene	100	ND
Nitrite	1	ND	Dibromochloropropane	200	ND
Selenium	50	ND	O-Dichlorobenzene	600	ND
Thallium	2	ND	p-Dichlorobenzene	75	ND
Organic Chemicals					
2,4-D	70	ND	1,2-Dichloroethane	5	ND
2,4,5-TR (Silvex)	50	ND	1,1-Dichloroethylene	7	ND
Acrylamide	11	ND	Cis-1,2-Dichloroethylene	70	ND
Alachlor	2	ND	trans-1,2-Dichloroethylene	100	ND
Atrazine	3	ND	Dichloromethane	5	ND
Benzo(a)pyrene [PHAs]	200	ND	1,2-Dichloropropane	5	ND
Carbofuran	40	ND	Ethylbenzene	700	ND
Chlordane	2	ND	Ethylene dibromide	50	ND
Dalapon	200	ND	Styrene	100	ND
Di-(2-ethylhexyl)adipate	400	ND	Tetrachloroethylene	5	ND
Di-(2-ethylhexyl)phthalates	6	ND	1,2,4-Trichlorobenzene	70	ND
Dinoseb	7	ND	1,1,1-Trichloroethane	200	ND
Diquat	20	ND	1,1,2-Trichloroethane	5	ND
Dioxin [2,3,7,8-TCDD]	30	ND	Trichloroethylene	5	ND
Endothal	100	ND	THM	80	37.3
			Haloacetic Acids (HAAs)	60	7.08
			Toluene	1	ND
			Vinyl Chloride	2	ND
			Xylenes	100	.74

The tables below list the contaminants that are not regulated by the EPA or ADEM but are tested for in your drinking water. These contaminants pose many of the same health risk as the regulated contaminants but their presence in most drinking water is not frequent enough to warrant regulation. Unregulated contaminants are tested for to provide historical data on components presence in drinking water over time.

Test Results - Unregulated Contaminant Table | Monitoring results in ppm

CONTAMINANT	Low Result	High Result	CONTAMINANT	Low Result	High Result
1,1-Dichloropropene	ND	ND	Chloroform	1.16	1.28
1,1,1,2-Tetrachloroethane	ND	ND	Chloromethane	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	Dibromochloromethane	8.75	9.3
1,1-Dichloroethane	ND	ND	Dibromomethane	ND	ND
1,2,3-Trichlorobenzene	ND	ND	Dicamba	ND	ND
1,2,3-Trichloropropane	ND	ND	Dichlorodifluoromethane	ND	ND
1,2,4-Trimethylbenzene	ND	ND	Dieldrin	ND	ND
1,3-Dichloropropane	ND	ND	Hexachlorobutadiene	ND	ND
1,3-Dichloropropene	ND	ND	Isopropylbenzene	ND	ND
1,3,5-Trimethylbenzene	ND	ND	M-Dichlorobenzene	ND	ND
2,2-Dichloropropane	ND	ND	Methomyl	ND	ND
3-Hydroxycarbofuran	ND	ND	MTBE	ND	ND
Aldicarb	ND	ND	Metolachlor	ND	ND
Aldicarb Sulfone	ND	ND	Metribuzin	ND	ND
Aldicarb Sulfoxide	ND	ND	N-Butylbenzene	ND	ND
Aldrin	ND	ND	Naphthalene	ND	ND
Bromobenzene	ND	ND	N-Propylbenzene	ND	ND
Bromochloromethane	ND	ND	O-Chlorotoluene	ND	ND
Bromodichloromethane	2.71	2.82	P-Chlorotoluene	ND	ND
Bromoform	19.9	24.1	P-Isopropyltoluene	ND	ND
Bromomethane	ND	ND	Propachlor	ND	ND
Butachlor	ND	ND	Sec-Butylbenzene	ND	ND
Carbaryl	ND	ND	Tert-Butylbenzene	ND	ND
Chloroethane	ND	ND	Trichlorofluoromethane	ND	ND

The third Unregulated Contaminant Rule (UCMR3) was initiated by EPA in 2012. UCMR3 requires the monitoring of two viruses and 28 unregulated chemical contaminants. These contaminants pose many of the same health risk as the regulated contaminants but their presence in most drinking water is not frequent enough to warrant regulation. Unregulated contaminants are tested for to provide historical data on components presence in drinking water over time.

Third Unregulated Contaminant Monitoring (UCMR 3) Monitoring results in ppb

CONTAMINANT	DETECTED	CONTAMINANT	DETECTED
1,2,3-trichloropropane	ND	cobalt	ND
1,3-butadiene	ND	strontium	1300
chloromethane (methyl chloride)	ND	chromium ⁵	ND
1,1-dichloroethane	ND	chromium-6 ⁶	0.35
bromomethane	ND	chlorate	ND
chlorodifluoromethane (HCFC-22)	ND	perfluorooctanesulfonic acid (PFOS)	ND
bromochloromethane (Halon 1011)	ND	perfluorooctanoic acid (PFOA)	ND
1,4-dioxane	ND	perfluorononanoic acid (PFNA)	ND
vanadium	0.3	perfluorohexanesulfonic acid (PFHxS)	ND
molybdenum	ND	perfluorobutanesulfonic acid (PFBS)	ND
17-β-estradiol	ND	perfluoroheptanoic acid (PFHpA)	ND
17-α-ethynylestradiol	ND	estrone	ND
estriol	ND	testosterone	ND
equilin	ND	4-androstene-3,17 dione	ND
noroviruses	ND	enteroviruses	ND