2020 Annual Water Quality Report
(Testing Performed January through December 2019)

POARCH BAND OF CREEK INDIANS UTILITY AUTHORITY

5811 Jack Springs Road
Atmore, AL 36502
Phone 251-446-1617
Fax 251-446-1624

We are pleased to present to you this year's Annual Water Quality Report. This report will tell you where your water comes from, what contaminants have been detected, and how these detection levels compare to Federal and State drinking water standards. This report is designed to inform you about the quality water and services we deliver to you every day. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Water Source	Two groundwater wells producing from the Miocene formation	
	Purchased groundwater from Freemanville Water System	
Water Treatment	Chlorination, fluoridation and pH adjustment	
Storage Capacity	Two storage tanks with a total capacity of 1.2 million gallons	
Number of Customers	Approximately 240	
Board Members	President	Josh Martin
	Vice President	Ron Marshall
	Member	Patrick Strickland
	Member	Shawn Rolin
	Member	Chris McGhee
	Member	Ronald Rolin
	Member	John Kelly
Staff	Utilities Executive Director	Joshua Thomas
	Maintenance Superintendent	James Ramer
	Customer Service Supervisor	Rebecca Black
	Operations Manager	Shaun Livermore
	Maintenance Foreman	Nathaniel Dortch
	Chief Operator	Bill Holmes
	Office Coordinator	Kimberly Weatherford
	Operations Supervisor	Dempsey Rolin
	Field Operations Technician	Trenton McGhee
	Operations Technician	Larry Bailey Jr.
	Maintenance Technician	Bo Slate
	Maintenance Technician	Trent Flowers
	Utilities Assistant	Jerry Walker
	Utilities Assistant	Blake Cunningham

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **Poarch Band of Creek Indians Utility Authority** has developed a Source Water Assessment that will assist in protecting our water sources. This plan provides additional information such as potential sources of contamination. It includes a Susceptibility Analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. The report has been completed and approved by ADEM. A copy of the report is available in our office for review.

Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil.

Questions?

If you have any questions about this report or concerning your water utility, please contact **Josh Thomas.** We want our valued customers to be informed about their water utility. 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 the Utilities Office, 263 Aplin Rd, Atmore, Alabama. More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA’s Safe Drinking Water Hotline at (1-800-426-4791).

General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and it can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Information about Lead

Lead in drinking water is rarely found in source water but is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Use *only* water from the cold-water tap for drinking, cooking, and *especially for making baby formula*. Hot water is more likely to cause leaching of lead from plumbing materials. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. These recommended actions are very important to the health of your family.

Lead levels in your drinking water are likely to be higher if:

- Your home or water system has lead pipes, or
- Your home has faucets or fittings made of brass which contains some lead, or
- Your home has copper pipes with lead solder and you have naturally soft water, and
- Water often sits in the pipes for several hours.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water hotline or at www.epa.gov/safewater/lead.

Monitoring Information

Poarch Band of Creek Indians Utility Authority routinely monitors for contaminants in your drinking water according to Federal laws, using EPA approved methods and a certified laboratory. Environmental regulations allow us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

Constituents Monitored	Poarch Creek	Freemanville
Inorganic Contaminants	2017	2019
Lead/Copper	2018	2017
Microbiological Contaminants	current	current
Nitrates	2019	2019
Radioactive Contaminants	2015	2019
Synthetic Organic Contaminants (including pesticides and herbicides)	2018	2018
Volatile Organic Contaminants	2018	2019
Disinfection By-products	2019	2019

Monitoring Results

As you can see by the following tables, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets federal and state requirements. The following table shows *only* those contaminants that were detected in our water.

Poarch Band of Creek Indians Utility Authority
TABLE OF DETECTED DRINKING WATER CONTAMINANTS

Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Radium-226	NO	0.6 ± 0.5	PCi/l	0	5	Erosion of natural deposits
Combined radium	NO	3.0 ± 0.6	PCi/l	0	5	Erosion of natural deposits
Uranium	NO	0.3 ± 0.3	ppb	0	30	Erosion of natural deposits
Copper	NO	0.118 * 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	ND-0.61	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and chemical factories
Nitrate (as Nitrogen)	NO	0.19-1.31	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	ND-5.30	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	ND-1.20	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	NO	ND-0.54	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Secondary Contaminants						
Chloride	NO	3.40-4.23	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO	2.03-5.83	ppm	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
pH	NO	7.29-7.79	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO	13.9-41.4	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	ND-2.08	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	28.0-136	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

* Figure shown is 90th percentile, and # of sites above (>) Action Level (AL) = 0

Freemanville Water System TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	**Violation Y/N**	**Level Detected**	**Unit Msmt**	**MCLG**	**MCL**	**Likely Source of Contamination**
Barium	NO	0.002	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper	NO	0.282 * 0>AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen)	NO	0.56-1.00	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Secondary Contaminants						
Chloride	NO	4.30-4.50	ppm	none	250	Naturally occurring in the environment or from runoff
Color	NO	5	color units	none	15	Naturally occurring in the environment or as a result of treatment with water additives
Hardness	NO	4.60-5.40	ppm	none	none	Naturally occurring in the environment or from treatment
pH	NO	7.5-7.8	S.U.	none	none	Naturally occurring in the environment or from treatment
Sodium	NO	45.4-48.2	ppm	none	none	Naturally occurring in the environment
Sulfate	NO	0.67-0.68	ppm	none	250	Naturally occurring in the environment; erosion
Total Dissolved Solids	NO	126-144	ppm	none	500	Naturally occurring in the environment or from runoff

* Figure shown is 90th percentile and # of sites above action level (1.3 ppm) = 0

Definitions

Action Level (AL)- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.
Coliform Absent (ca)-Laboratory analysis indicates that the contaminant is not present.
Disinfection byproducts (DBPs)- are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.
Locational Running Annual Average (LRAA)-yearly average of all the DPB results at each specific sampling site in the distribution system. The highest distribution site LRAA is reported in the Table of Detected Contaminants.
Maximum Contaminant Level (MCL)- The MCL is 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.
Maximum Contaminant Level Goa (MCLG)- The 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.
Maximum Residual Disinfectant Level (MRDL)-the highest level of a disinfectant allowed in drinking water
Millirems per year (mrem/yr)-measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU)-a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Non-Detects (ND)- laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.
Not Reported (NR)-laboratory analysis, usually Secondary Contaminants, not reported by water system. EPA recommends secondary standards to water systems but does not require systems to comply.
Parts per billion (ppb) or **Micrograms per liter (µg/l)**-one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
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 quadrillion (ppq) or **Picograms per liter (picograms/l)**-one part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in $10,000,000,000,000.
Parts per trillion (ppt) or **Nanograms per liter (nanograms/l)**-one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
Picocuries per liter (pCi/L)-picocuries per liter is a measure of the radioactivity in water.
RAA–Running annual average
Standard Units (S.U.)-pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas. Water with less than 6.5 could be acidic, soft, and corrosive. A pH greater than 8.5 could indicate that the water is hard.
Treatment Technique (TT)- a required process intended to reduce the level of a contaminant in drinking water.
Variances & Exemptions (V&E)-State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Tips on Becoming Water-Wise

Read Your Water Meter: Use your water meter to check for leaks in your home. Start by turning off all faucets and water-using appliances and make sure no one uses water during the testing period. Take a reading on your water meter, wait for about 30 minutes, and then take a second reading. If the numbers have changed, you have a leak.

Check for Leaky Toilets: The most common source of leaks is the toilet. Check toilets for leaks by placing a few drops of food coloring in the tank. If after 15 minutes the dye shows up in the bowl, the toilet has a leak. Leaky toilets can usually be repaired inexpensively by replacing the flapper.

Check for Leaky Faucets: The next place to check for leaks is your sink and bathroom faucets. Dripping faucets can usually be repaired by replacing the rubber O-ring or washer inside the valve.

Following is a list of *Primary Drinking Water Contaminants* and a list of *Unregulated Contaminants* for which our water system routinely monitors. These contaminants were *not* detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants.*

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	**MCL**	**Unit of Msmt**	**Contaminant**	**MCL**	**Unit of**
Bacteriological Contaminants			trans-1,2-Dichloroethylene	100	ppb
Total Coliform Bacteria	<5%	present or absent	Dichloromethane	5	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloropropane	5	ppb
Fecal Indicators (enterococci or coliphage)	0	present or absent	Di (2-ethylhexyl)adipate	400	ppb
Turbidity	TT	NTU	Di (2-ethylhexyl)phthalate	6	ppb
Cryptosporidium	TT	Calculated organisms/liter	Dinoseb	7	ppb
Radiological Contaminants			Dioxin [2,3,7,8-TCDD]	30	ppq
Beta/photon emitters	4	mrem/yr	Diquat	20	ppb
Alpha emitters	15	pCi/l	Endothall	100	ppb
Combined radium	5	pCi/l	Endrin	2	ppb
Uranium	30	pCi/l	Epichlorohydrin	TT	TT
Inorganic Chemicals			Ethylbenzene	700	ppb
Antimony	6	ppb	Ethylene dibromide	50	ppt
Arsenic	10	ppb	Glyphosate	700	ppb
Asbestos	7	MFL	Heptachlor	400	ppt
Barium	2	ppm	Heptachlor epoxide	200	ppt
Beryllium	4	ppb	Hexachlorobenzene	1	ppb
Cadmium	5	ppb	Hexachlorocyclopentadien	50	ppb
Chromium	100	ppb	Lindane	200	ppt
Copper	AL=1.3	ppm	Methoxychlor	40	ppb
Cyanide	200	ppb	Oxamyl [Vydate]	200	ppb
Fluoride	4	ppm	Polychlorinated biphenyls	0.5	ppb
Lead	AL=15	ppb	Pentachlorophenol	1	ppb
Mercury	2	ppb	Picloram	500	ppb
Nitrate	10	ppm	Simazine	4	ppb
Nitrite	1	ppm	Styrene	100	ppb
Selenium	.05	ppm	Tetrachloroethylene	5	ppb
Thallium	.002	ppm	Toluene	1	ppm
Organic Contaminants			Toxaphene	3	ppb
2,4-D	70	ppb	2,4,5-TP(Silvex)	50	ppb
Acrylamide	TT	TT	1,2,4-Trichlorobenzene	.07	ppm
Alachlor	2	ppb	1,1,1-Trichloroethane	200	ppb
Benzene	5	ppb	1,1,2-Trichloroethane	5	ppb
Benzo(a)pyrene [PAHs]	200	ppt	Trichloroethylene	5	ppb
Carbofuran	40	ppb	Vinyl Chloride	2	ppb
Carbon tetrachloride	5	ppb	Xylenes	10	ppm
Chlordane	2	ppb	**Disinfectants & Disinfection**		
Chlorobenzene	100	ppb	Chlorine	4	ppm
Dalapon	200	ppb	Chlorine Dioxide	800	ppb
Dibromochloropropane	200	ppt	Chloramines	4	ppm
o-Dichlorobenzene	600	ppb	Bromate	10	ppb
p-Dichlorobenzene	75	ppb	Chlorite	1	ppm
1,2-Dichloroethane	5	ppb	HAA5 [Total haloacetic	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total	80	ppb
cis-1,2-Dichloroethylene	70	ppb			

UNREGULATED CONTAMINANTS			
1,1 – Dichloropropene	Aldicarb	Chloroform	Metolachlor
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Chloromethane	Metribuzin
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromochloromethane	N - Butylbenzene
1,1-Dichloroethane	Aldrin	Dibromomethane	Naphthalene
1,2,3 - Trichlorobenzene	Bromobenzene	Dicamba	N-Propylbenzene
1,2,3 - Trichloropropane	Bromochloromethane	Dichlorodifluoromethane	O-Chlorotoluene
1,2,4 - Trimethylbenzene	Bromodichloromethane	Dieldrin	P-Chlorotoluene
1,3 – Dichloropropane	Bromoform	Hexachlorobutadiene	P-Isopropyltoluene
1,3 – Dichloropropene	Bromomethane	Isoprpylbenzene	Propachlor
1,3,5 - Trimethylbenzene	Butachlor	M-Dichlorobenzene	Sec - Butylbenzene
2,2 – Dichloropropane	Carbaryl	Methomyl	Tert - Butylbenzene
3-Hydroxycarbofuran	Chloroethane	MTBE	Trichlorfluoromethane