Annual Drinking Water Quality Report
Peterson Water System, Inc.
January – December 2020

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. The Peterson Water System, Inc. has completed a Source Water Assessment Plan which is available at our offices for review. These reports provide information about potential sources of contamination and are set up to help protect our sources. I'm pleased to report that our drinking water is safe and meets federal and state requirements. 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. The Peterson Water System purchases water from the City of Tuscaloosa. Raw water for treatment is from Lake Tuscaloosa. Lake Nicol and Lake Harris are alternate sources. The raw water is mixed with aluminum sulfate and lime or poly aluminum chloride to aid coagulation, potassium permanganate to aid in the removal of iron and manganese for taste and odor control. The water is then flocculated and settled. Next it is filtered through filters or membranes, lime is added for pH, chlorine is added for disinfection, and fluoride is added for the prevention of tooth decay.

We want our valued customers to be informed about their water system. If you want to learn more, please attend our regularly scheduled meetings held on the 2nd Monday of each month at the Peterson water office located at 12926 Deacon Street.

Board of Directors:

Dennis Sellers Ed Cook Paul Cook

The Peterson Water System, Inc. 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, 2020**.** All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

PLAIN LANGUAGE DEFINITION

- *Non-Detects (**ND**)* - laboratory analysis indicates that the contaminant is not present.
- *Not Required* (**NR**) – Laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.
- *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 Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
- *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.
- *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 one penny in $10,000,000,000,000.
- *Picocuries per liter (**pCi/L**)* - picocuries per liter is a measure of the radioactivity in water.
- *Millirems per year (**mrem/yr**)* - measure of radiation absorbed by the body.
- *Nephelometric Turbidity Unit (**NTU**)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- *Variances & Exemptions (**V&E**)* - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- *Action Level – (AL)* the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- *Treatment Technique (**TT**)* - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- Threshold Odor Number (T.O.N.)- The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.
- *Maximum Contaminant Level* - (mandatory language) The "Maximum Allowed" (**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 Goal* - (mandatory language) 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.
- Maximum Residual Disinfectant Level Goal or MRDLG - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level or MRDL - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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 run-off, and septic systems.
- *Radioactive contaminants,* which can be naturally occurring or be the result of oil and gas production and mining activities.

Table of Primary Contaminants

At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	Tuscaloosa	Peterson	CONTAMINANT	MCL	Tuscaloosa	Peterson	CONTAMINANT	MCL	Tuscaloosa	Peterson
Bacteriological				Selenium(ppb)	50	ND	NR	Epichlorohydrin	TT	ND	NR
Total Coliform Bacteria	< 5%	1.00%	1.00	Thallium(ppb)	2	ND	NR	Ethylbenzene(ppb)	700	ND	NR
Turbidity	TT	0.856	NR	**Organic Chemicals**				Ethylene dibromide(ppt)	50	ND	NR
Fecal Coliform & E. coli	0	ND	ND	Acrylamide	TT	ND	NR	Glyphosate(ppb)	700	ND	NR
Radiological				Alachlor(ppb)	2	ND	NR	Haloacetic Acids(ppb)	60	41.8	44.00
Beta/photon emitters (mrem/yr)	4	ND	NR	Atrazine(ppb)	3	ND	NR	Heptachlor(ppt)	400	ND	NR
Alpha emitters (pci/l)	15	1.1	NR	Benzene(ppb)	5	ND	NR	Heptachlor epoxide(ppt)	200	ND	NR
Combined radium (pci/l)	5	ND	NR	Benzo(a)pyrene[PHAs](ppt)	200	ND	NR	Hexachlorobenzene(ppb)	1	ND	NR
Uranium(pci/l)	30	ND	NR	Carbofuran(ppb)	40	ND	NR	Hexachlorocyclopentadiene(ppb)	50	ND	NR
Inorganic				Carbon Tetrachloride(ppb)	5	ND	NR	Lindane(ppt)	200	ND	NR
Antimony (ppb)	6	ND	NR	Chlordane(ppb)	2	ND	NR	Methoxychlor(ppb)	40	ND	NR
Arsenic (ppb)	10	ND	NR	Chlorobenzene(ppb)	100	ND	NR	Oxamyl [Vydate](ppb)	200	ND	NR
Asbestos (MFL)	7	ND	NR	2,4-D	70	ND	NR	Pentachlorophenol(ppb)	1	ND	NR
Barium (ppm)	2	ND	NR	Dalapon(ppb)	200	ND	NR	Picloram(ppb)	500	ND	NR
Beryllium (ppb)	4	ND	NR	Dibromochloropropane(ppt)	200	ND	NR	PCBs(ppt)	500	ND	NR
Bromate(ppb)	10	ND	NR	0-Dichlorobenzene(ppb)	600	ND	NR	Simazine(ppb)	4	ND	NR
Cadmium (ppb)	5	ND	NR	p-Dichlorobenzene(ppb)	75	ND	NR	Styrene(ppb)	100	ND	NR
Chloramines(ppm)	4	ND	NR	1,2-Dichloroethane(ppb)	5	ND	NR	Tetrachloroethylene(ppb)	5	ND	NR
Chlorine(ppm)	4	2.4	1.20	1,1-Dichloroethylene(ppb)	7	ND	NR	Toluene(ppm)	1	ND	NR
Chlorine dioxide(ppm)	0.8	0.69	NR	Cis-1,2-Dichloroethylene(ppb)	70	ND	NR	TOC	TT	1.7	NR
Chlorite(ppm)	1	0.77	NR	trans-1,2-Dichloroethylene(ppb)	100	ND	NR	TTHM(ppb)	80	44.7	30.00
Chromium (ppb)	100	ND	NR	Dichloromethane(ppb)	5	ND	NR	Toxaphene(ppb)	3	ND	NR
Copper (ppm)	AL=1.3	1.2	0.04	1,2-Dichloropropane(ppb)	5	ND	NR	2,4,5-TP (Silvex)(ppb)	50	ND	NR
Cyanide (ppb)	200	ND	NR	Di-(2-ethylhexyl)adipate(ppb)	400	ND	NR	1,2,4-Trichlorobenzene(ppb)	70	ND	NR
Fluoride (ppm)	4	0.86	NR	Di(2-ethylhexyl)phthlates(ppb)	6	ND	NR	1,1,1-Trichloroethane(ppb)	200	ND	NR
Lead (ppb)	AL=15	0.0021	0.00	Dinoseb(ppb)	7	ND	NR	1,1,2-Trichloroethane(ppb)	5	ND	NR
Mercury (ppb)	2	ND	NR	Dioxin[2,3,7,8-TCDD](ppq)	30	ND	NR	Trichloroethylene(ppb)	5	ND	NR
Nitrate (ppm)	10	0.27	NR	Diquat(ppb)	20	ND	NR	Vinyl Chloride(ppb)	2	ND	NR
Nitrite (ppm)	1	ND	NR	Endothall(ppb)	100	ND	NR	Xylenes(ppm)	10	ND	NR
Total Nitrate & Nitrite	10	0.27	NR	Endrin(ppb)	2	ND	NR				

Table of Secondary and Unregulated Contaminants

Secondary Drinking Water Standards are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water systems required to monitor for the various components. **Unregulated contaminants** are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurance of unregulated contaminants in drinking water and whether future regulation is warranted.

CONTAMINANT	MCL	Tuscaloosa	Peterson	CONTAMINANT	MCL	Tuscaloosa	Peterson	CONTAMINANT	MCL	Tuscaloosa	Peterson
Secondary											
Aluminum	0.2	ND	NR	Foaming Agents	0.5	ND	NR	Silver	7	ND	NR
Chloride	250	ND	NR	Iron	0.3	ND	NR	Sulfate	250	34.9	NR
Color (PCU)	15	ND	NR	Magnesium	75	ND	NR	Total Dissolved Solids	500	ND	NR
Copper	1	ND	NR	Odor (T.O.N.)	5	ND	NR	Zinc	5	ND	NR
Special											
Calcium	N/A	ND	NR	pH (SU)	N/A	ND	NR	Temperature (*C)	N/A	ND	NR
Carbon Dioxide	N/A	ND	NR	Sodium	N/A	ND	NR	Total Alkalinity	N/A	ND	NR
Manganese	0.05	ND	NR	Specific Conductance (umhos)	<500	ND	NR	Total Hardness (as CaCO3)	N/A	ND	NR
Unregulated											
1,1 - Dichloropropene	N/A	ND	NR	Bromobenzene	N/A	ND	NR	Hexachlorobutadiene	N/A	ND	NR
1,1,2,2-Tetrachloroethane	N/A	ND	NR	Bromochloromethane	N/A	ND	NR	Isoprpylbenzene	N/A	ND	NR
1,1-Dichloroethane	N/A	ND	NR	Bromodichloromethane	N/A	2.7	NR	M-Dichlorobenzene	N/A	ND	NR
1,2,3 - Trichlorobenzene	N/A	ND	NR	Bromoform	N/A	ND	NR	Methomyl	N/A	ND	NR
1,2,3 - Trichloropropane	N/A	ND	NR	Bromomethane	N/A	ND	NR	Metolachlor	N/A	ND	NR
1,2,4 - Trimethylbenzene	N/A	ND	NR	Butachlor	N/A	ND	NR	Metribuzin	N/A	ND	NR
1,2,4-Trichlorobenzene	N/A	ND	NR	Carbaryl	N/A	ND	NR	MTBE	N/A	ND	NR
1,3 - Dichloropropane	N/A	ND	NR	Chloroethane	N/A	ND	NR	N - Butylbenzene	N/A	ND	NR
1,3 - Dichloropropene	N/A	ND	NR	Chlorodibromomethane	N/A	ND	NR	Naphthalene	N/A	ND	NR
1,3,5 - Trimethylbenzene	N/A	ND	NR	Chloroform	N/A	8.9	NR	N-Propylbenzene	N/A	ND	NR
2,2 - Dichloropropane	N/A	ND	NR	Chloromethane	N/A	ND	NR	O-Chlorotoluene	N/A	ND	NR
3-Hydroxycarbofuran	N/A	ND	NR	Dibromochloromethane	N/A	ND	NR	P-Chlorotoluene	N/A	ND	NR
Aldicarb	N/A	ND	NR	Dibromomethane	N/A	ND	NR	P-Isopropyltoluene	N/A	ND	NR
Aldicarb Sulfone	N/A	ND	NR	Dichlorodifluoromethane	N/A	ND	NR	Propachlor	N/A	ND	NR
Aldicarb Sulfoxide	N/A	ND	NR	Dieldrin	N/A	ND	NR	Sec - Butylbenzene	N/A	ND	NR
Aldrin	N/A	ND	NR	Fluorotrichloromethan	N/A	ND	NR	Tert - Butylbenzene	N/A	ND	NR

PFAS Compounds								
CONTAMINANT	**RESULTS**	**UNITS**	**CONTAMINANT**	**RESULTS**	**UNITS**	**CONTAMINANT**	**RESULTS**	**UNITS**
11Cl-PF3OUdS	ND	ug/L	Perfluorodecanoic Acid	ND	ug/L	Perfluorooctanoic Acid	ND	ug/L
9Cl-PF3ONS	ND	ug/L	Perfluorohexanoic Acid	ND	ug/L	Perfluorotetradecanoic Acid	ND	ug/L
ADONA	ND	ug/L	Perfluorododecanoic Acid	ND	ug/L	Perfluorotridecanoic Acid	ND	ug/L
HFPO-DA	ND	ug/L	Perfluoroheptanoic Acid	ND	ug/L	Perfluoroundecanoic Acid	ND	ug/L
NEIFOSAA	ND	ug/L	Perfluorohexanesulfonic Acid	ND	ug/L	Total PFAs	ND	ug/L
NMeFOSAA	ND	ug/L	Perfluorononanoic Acid	ND	ug/L			ug/L
Perfluorobutanesulfonic Acid	ND	ug/L	Perfluorooctanesulfonic Acid	ND	ug/L			ug/L

Table of Detected Drinking Water Contaminants

CONTAMINANT	MCLG	MCL	Range			Peterson	Tuscaloosa	Amount Detected	Likely Source of Contamination
Bacteriological Contaminants									
Total Coliform Bacteria	0	< 5%				1.00	1.00%	Present or Absent	Naturally present in the environment
Turbidity	0	TT				NR	85.60%	NTU	Soil runoff
Radiological Contaminants									
Beta particle and photon	0	4				NR	0	mrem/yr	Decay of natural and man-made deposits
Combined Radium 226 & 228	0	5				NR	0.9	pCi/L	Erosion of natural deposits
Inorganic Contaminants									
Chlorine	MRDLG 4	MRDL 4	0.80	-	1.20	1.20	2.4	ppm	Water additive used to control microbes
Chlorine Dioxide	MRDLG 800	MRDL 800	NR	-	NR	NR	0.69	ppb	Water additive used to control microbes
Chlorite	0.8	1	NR	-	NR	NR	0.77	ppm	By-product of drinking water chlorination
Copper	1.3	10 Sites AL=1.3	No. of Sites above action level 0			0.04	1.2	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	4	4	NR	-	NR	NR	0.86	ppm	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	0	10 Sites AL=15	No. of Sites above action level 0			0.00	ND	ppb	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as N)	10	10	NR	-	NR	NR	0.27	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Nitrate & Nitrite	10	10	NR	-	NR	NR	0.27	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Organic Contaminants									
Haloacetic Acids (HAA5)	0	60	22.00	-	0.58	44.00	41.80	ppb	By-product of drinking water chlorination
Total Organic Carbon (TOC)	N/A	TT	NR	-	NR	NR	1.70	TT	Naturally present in the environment
Total trihalomethanes (TTHM)	0	80	1.00	-	46.00	30.00	44.70	ppb	By-product of drinking water chlorination
Secondary Contaminants									
Sulfate	N/A	250	NR	-	NR	NR	34.9	ppm	Naturally occurring in the environment
Unregulated Contaminants									
Bromodichloromethane	N/A	N/A	NR	-	NR	NR	2.70	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Chloroform	N/A	N/A	NR	-	NR	NR	8.90	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Dibromochloromethane	N/A	N/A	NR	-	NR	NR	ND	ppm	Naturally occurring in the environment

General Information

Notice of Violation – Peterson Water System has incurred a Public Notification Violation (PN) for the June 2019 Revised Total Coliform Rule (RTCR) monitoring non-compliance by failing to provide the required PN to the Department by the July 10, 2020 deadline.

We are proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected. The EPA has determined that your water IS SAFE at these levels.

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the 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 at 1-800-426-4791.

MCL's 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.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. **The Peterson Water System, Inc**. is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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. 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 http://www.epa.gov/safewater/lead.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system 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. 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).

The City of Tuscaloosa test your water for pathogens, such as *Cryptosporidium and Giardia*. These pathogens can enter the water from animals or human waste. All test results were well within state and federal standards. For people who may be immuno-compromised, a guidance document developed jointly by the Environmental Protection Agency and the Center for Disease Control is available online at www.epa.gov/safewater/crypto.html or from the Safe Drinking Water Hotline at 800-426-4791. This language does not indicate the presence of cryptosporidium in our drinking water.

Based on a study conducted by ADEM, with the approval of the EPA, a statewide waiver for monitoring of Asbestos and Dioxin was issued. Thus, monitoring for these contaminants was not required.

We at the **Peterson Water System, Inc**. work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.