The Water We Drink

TOWN OF GREENWOOD
Public Water Supply ID: LA1017014

We are pleased to present to you the Annual Water Quality Report for the year 2018. This report is designed to inform you about the quality of your water and services we deliver to you every day (Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien). Our constant goal is to provide you with a safe and dependable supply of drinking water. 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.
Our water source(s) are listed below:

Source Name	Source Water Type	Source Water Body Name
RAW WATER INTAKE	Surface Water	CADDO LAKE

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 land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and 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 stormwater runoff, 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, urban stormwater runoff, 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 stormwater runoff, and septic systems.

Radioactive Contaminants – which can be naturally-occurring or be the result of oil and gas production and mining activities.

A Source Water Assessment Plan (SWAP) is now available from our office. This plan is an assessment of a delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the Source Water Assessment Plan, our water system had a susceptibility rating of 'HIGH'. If you would like to review the Source Water Assessment Plan, please feel free to contact our office.

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 regulations establish limits for contaminants in bottled water which must provide the same protection for public health. We want our valued customers to be informed about their water utility. If you have any questions about this report, want to attend any scheduled meetings, or simply want to learn more about your drinking water, please contact FRANK STAWASZ, Mayor at 318-938-7261.

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. TOWN OF GREENWOOD WATER SYSTEM 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.

The Louisiana Department of Health and Hospitals - Office of Public Health routinely monitors for constituents in your drinking water according to Federal and State laws. The tables that follow show the results of our monitoring during the period of January 1st to December 31st, 2017. 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 water poses a health risk.

In the tables below, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

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 (ug/L) – 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 the radioactivity in water.

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.

Action level (AL) – the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum contaminant level (MCL) – the "Maximum Allowed" MCL is the highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Maximum contaminant level goal (MCLG) – the "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLG's allow for a margin of safety.

Maximum residual disinfectant level (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.

Maximum residual disinfectant level goal (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.

Level 1 Assessment- A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment- A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

During the period covered by this report we had below noted violations of drinking water regulations.

Compliance Period	Analyte	Type	Type Con't
01/01/2018-01/31/2018			No violations occurred in 2018

Our water system tested a minimum of 6 samples per month monthly sample(s) in accordance with the

Total Coliform Rule for microbiological contaminants. During the monitoring period covered by this report, we had the following noted detections for microbiological contaminants:

Disinfectants	Date	Highest RAA	Unit	Range	MRDL	MRDLG		Typical Source
	2018		Ppm		4	4		Water additive used to control microbes

In the tables below, we have shown the regulated contaminants that were detected. Chemical Sampling of our drinking water may not be required on an annual basis; therefore, information provided in this table refers back to the latest year of chemical sampling results.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
ARSENIC	01/08/2018	0.85	0.85	Ppb	10	0	Erosion of natural deposits; runoff from orchards; Runoff from glass and electronics production wastes
BARIUM	01/08/2018	0.046	0.046	Ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
FLOURIDE	01/08/2018	0.058	0.058	Ppm	4	4	Erosions of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE-NITRITE	01/18/2018	0.18	0.18	Ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
DALAPON	07/23/2018	2.5	2.5	Ppb	200	200	Runoff from herbicide used on rights of way

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
							No detected results were found in the calendar year 2018

Lead and Copper	Date	90TH Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2015 – 2017	.7	0.2-1.8	Ppm	1.3	2	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2015 – 2017	6	1-13	Ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits

DBP Contaminants	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	10746 Devers Rd	2018	44	18-73.3	Ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	9381 Hwy 80 Town Hall	2018	46	13.3 - 79.1	Ppb	60	0	By-product of drinking water disinfection

TTHM	10746 Devers Road	2018	61	31.1 - 87.2	Ppb	80	0	By-product of drinking water chlorination
TTHM	9381 Hwy 80 Town Hall	2018	69	14.7 - 118.7	Ppb	80	0	By-product of drinking water chlorination

Secondary Contaminants	Collection Date	Your Highest Value	Range	Unit	SMCL	
Aluminum	03/23/2015	0.027	0.027	MG/L	0.05	
Chloride	05/02/2016	8.3	8.3	MG/L	250	
Zinc	01/08/2018	0.029	0.029	MG/L	5	
Manganese	01/08/2018	0.01	0.01	MG/L	0.05	
PH	05/02/2016	9.4	9.4	SU	8.5	
Sulfate	05/02/2016	24.8	24.8	MG/L	250	

++++++**Environmental Protection Agency Required Health Effects Language**++++++
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 microbial contaminants are available from the Safe Drinking Water Hotline (800–426–4791).
Additional Required Health Effects Language:
95th Percentile Health Effects Language
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer

Additional Required Health Effects Violation Notices:
There are no additional required health effects violation notices

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Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers.

We at the TOWN OF GREENWOOD WATER SYSTEM work around the clock to provide top quality drinking water to every tap. We ask that all our customers help us protect and conserve our water sources, which are the heart of our community, our way of life, and our children's future. Please call our office if you have questions.

Turbidity Insert (Surface Water Only)

2018 Turbidity Reporting Requirements for Your CCR

Month	Highest Finished/Combined Effluent Turbidity (for the month) –
January	**0.2**
February	**0.28**
March	**0.19**
April	**0.2**
May	**0.19**
June	**0.25**
July	**0.24**
August	**0.25**
September	**0.27**
October	**0.14**
November	**0.15**
December	**0.26**

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
TURBIDITY	2/07/2018	**.28**	0.3 – 2.7	NTU	0.3		**Surface water**

[Note: Turbidity values may be pre-populated under the heading "Regulated Contaminants" in the base CCR as shown below. These values show data from the point of entry and need to be corrected to show the appropriate turbidity limits of the combined effluent.]

ITEM NO. 2 -

For each month of data (see your system's Monthly Operating Reports), take each day's Finished/Combined turbidity sampling results and determine the total number of those samples collected each month (if finished water turbidity samples are collected 6 times a day, everyday of a 31-day month, then you would have a monthly total of 6 x 31 = 186 samples collected). Next count the number of samples that exceeded the turbidity limit each month for your particular Filtration Technology (see Regulations Section **below for turbidity limits). For the example, assume the water system uses Conventional Filtration and serves a population of 9,999 people. Therefore, the turbidity limit is 0.3 NTU 95% of the time (from** Item B **in the** Regulations on Turbidity Limits **section below). After figuring out the number of samples that exceeded the turbidity limit for each month, subtract that number from the total number of samples collected for each month. This will give you the number of samples that were within the Turbidity Limits for each month. Divide this number for each**

month by the total number of samples collected for each month and multiply by 100 to get your Monthly Percentage of Samples Meeting the Turbidity Limits. In the table below, is an example summary of this.

Month	Total # of Samples	Turb. Limit	# of Samples Above Turb. Limit	Monthly % of Samples Meeting the Turb. Limit
January	**186**	**0.08**	**0**	**{(186 - 0)/186} x 100 = 100%**
February	**174**	**0.08**	**0**	**{(174 - 0)/174} x 100 = 100%**
March	**186**	**0.07**	**0**	**{(186 - 0)/186} x 100 = 100%**
April	**180**	**0.11**	**0**	**{(180 - 0)/180} x 100 = 100%**
May	**186**	**0.1**	**1**	**{(186 - 0)/186} x 100 = 100%**
June	**180**	**0.12**	**0**	**{(180 - 0)/180} x 100 = 100%**
July	**186**	**0.12**	**0**	**{(186 - 0)/186} x 100 = 100%**
August	**186**	**0.12**	**1**	**{(186 - 0)/186} x 100 = 100%**
September	**180**	**0.15**	**0**	**{(180 - 0)/180} x 100 = 100%**
October	**186**	**0.1**	**0**	**{(186 - 0)/186} x 100 = 100%**
November	**180**	**0.09**	**0**	**{(180 - 0)/180} x 100 = 100%**
December	**186**	**0.15**	**0**	**{(186 - 0)/186} x 100 = 100%**

For the CCR, you must report the Lowest Monthly Percentage of Samples Meeting the Turbidity Limits. According to the data above, the result for the month of June had the Lowest Percentage of Samples Meeting the Turbidity Limits = 100%. Therefore, you would have to include this result (100%) in the Contaminant Listing Table of your CCR (see CCR Appearance Example**).**

ITEM NO 3 **– Mandatory Turbidity Statements – The first statement listed below is required to be stated in the CCR near your Turbidity Results (see** CCR Appearance Example**):**

> **"Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. The major sources of turbidity include soil runoff."**

The following statement is additionally required, only if you did not meet your turbidity limits (TT values) for the Highest Monthly Finished/Combined Sample and/or the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit (see the Regulations Section **on the last page to determine your systems TT Values):**

> **"Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."**

CCR APPEARANCE EXAMPLE (Contaminant Listing Table)

Below is an example of how the above Calculation Example would appear in the CCR. The Turbidity Results calculated above should appear in your CCRs Contaminant Listing Table, which looks similar to the table below (the Copper result in the table below is just an example of any other contaminant that

could appear in your table). Your results should appear in this format. Please note the informational language at the bottom. The first three sentences of the "NOTE:" are required in all CCRs that must present Turbidity results. The rest of the "NOTE:" is required only if a Treatment Technique (TT) Value was not met. In the Example below, the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit (of 0.3 NTU) was 91.9% during the month of June, which is less than the required 95% of the samples. Thus, the TT Value was not met, which required the extra Turbidity language as shown.

Regulated Contaminants	Collection Date	Lowest Percentage Value	Range	Unit	MCL	MCLG	Typical Source
TURBIDITY		100	100	NTU	0.3		

NOTE: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Its major sources include soil runoff. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

REGULATIONS ON TURBIDITY LIMITS

*****From 40 CFR, Part 141.73 and 141.173 – Turbidity Requirements for Surface Water Systems that Filter by:

A. Conventional Filtration Treatment or Direct Filtration (For all size systems on or after January 14, 2005):

- **The turbidity level of representative samples of a system's filtered water must be less than or equal to 0.3 NTU in at least 95 percent of the measurements taken each month (The Treatment Technique (TT) Value for the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit is** 0.3 NTU in 95% of the samples**).**
- **The turbidity level of representative samples of a system's filtered water must at no time exceed 1 NTU (The TT Value for the Highest Monthly Finished/Combined Sample is** 1 NTU**).**

B. Slow Sand Filtration (For all size systems):

- **The turbidity level of representative samples of a system's filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements taken each month (The TT Value for the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit is** 1 NTU in 95% of the samples**).**
- **The turbidity level of representative samples of a system's filtered water must at no time exceed 5 NTU (The TT Value for the Highest Monthly Finished/Combined Sample is** 5 NTU**).**

C. Diatomaceous Earth Filtration (For all size systems):

- **The turbidity level of representative samples of a system's filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements**

taken each month (<u>The TT Value for the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit</u> is 1 NTU in 95% of the samples**).**

- **The turbidity level of representative samples of a system's filtered water must at no time exceed 5 NTU (<u>The TT Value for the Highest Monthly Finished/Combined Sample</u> is** 5 NTU**).**

D. Other Filtration Technologies (For all size systems):

- **The turbidity level of representative samples of a system's filtered water must be less than or equal to 1 NTU in at least 95 percent of the measurements taken each month (<u>The TT Value for the Lowest Monthly Percentage of Samples Meeting the Turbidity Limit</u> is** 1 NTU in 95% of the samples**).**
- **The turbidity level of representative samples of a system's filtered water must at no time exceed 5 NTU (<u>The TT Value for the Highest Monthly Finished/Combined Sample</u> is** 5 NTU**).**

Contaminants	Date	Results	Unit	Range	MRDL	MRDLG	Typical Source
Chloramines	2018	1.7	ppm	0.08-2.5	4	4	Water Additive used to control microbes