CITY OF MANY WATER SYSTEM
Public Water Supply ID: LA1085016

Consumer Confidence Report

2018 CCR

Additional Information and Electronic Copies can be found at www.ldh.la.gov/ccr

What you need to do:

Step 1: Review base report (numbered pages) for errors. If you are a surface water system, you must insert the turbidity data.

UCMR 3: If you have received data pertaining to the UCMR 4 list, that data must be included in the CCR Report. Additional information can be found at: www.ldh.la.gov/ccr

Step 2: Distribute completed report to your customers as outlined on the CCR Certification of Distribution Form no later than June 30, 2019.

Step 3: A completed CCR Certification of Distribution Form including a copy of the final CCR report shall be submitted to the State at the address provided on the form no later than September 30, 2019.

Notes:
This page is not part of your CCR; it is only the instruction page. The pages that are numbered in the upper right hand corner are the report pages.

The Water We Drink

CITY OF MANY WATER SYSTEM
Public Water Supply ID: LA1085016

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
WELL #4 - 1208 ANDRIES ST	Ground Water	
TOLEDO BEND INTAKE	Surface Water	TOLEDO BEND
WELL #2, PATRICK PLACE (NORTH)	Ground Water	
WELL #3, HWY 6 EAST	Ground Water	
WELL #1, PATRICK PLACE (SOUTH)	Ground Water	

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 'MEDIUM'. 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 KENNETH FREEMAN at 318-256-3651.

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. CITY OF MANY 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, 2018. 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.

Treatment Technique (TT) – an enforceable procedure or level of technological performance which public water systems must follow to ensure control of a contaminant.

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
No Violations Occurred in the Calendar Year of 2018		

Our water system tested a minimum of 5 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. With the microbiological samples collected, the water system collects disinfectant residuals to ensure control of microbial growth.

Disinfectant	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
BARIUM	7/9/2018	0.39	0.026 - 0.39	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
DALAPON	8/6/2018	2.8	2.8	ppb	200	200	Runoff from herbicide used on rights of way
FLUORIDE	7/9/2018	0.66	0.068 - 0.66	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
NITRATE-NITRITE	2/20/2018	0.17	0.17	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
COMBINED RADIUM (-226 & -228)	7/9/2018	2.61	2.58 - 2.61	pCi/l	5	0	Erosion of natural deposits
GROSS ALPHA, INCL. RADON & U	11/9/2015	3.47	3.47	PCI/L			
GROSS BETA PARTICLE ACTIVITY	2/20/2018	5.32	3.4 - 5.32	pCi/l	50	0	Decay of natural and man-made deposits. Note: The gross beta particle activity MCL is 4 millirems/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

Lead and Copper	Date	90TH Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2015 - 2017	0.3	0.1 - 0.8	ppm	1.3	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
LEAD	2015 - 2017	1	1 - 14	ppb	15	0	Corrosion of household plumbing systems; Erosion of natural deposits

Disinfection Byproducts	Sample Point	Period	Highest LRAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL HALOACETIC ACIDS (HAA5)	9070 TEXAS HWY (HWY 6)	2018	66	49.9 - 82	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	FISHER ROAD	2018	45	12.2 - 76.6	ppb	60	0	By-product of drinking water disinfection
TOTAL HALOACETIC ACIDS (HAA5)	POE LAB TREAT PLANT	2018	41	59 - 59	ppb	60	0	By-product of drinking water disinfection
TTHM	9070 TEXAS HWY (HWY 6)	2018	79	46.1 - 79.1	ppb	80	0	By-product of drinking water chlorination
TTHM	FISHER ROAD	2018	42	18 - 63.9	ppb	80	0	By-product of drinking water chlorination
TTHM	POE LAB TREAT PLANT	2018	54	52.3 - 52.3	ppb	80	0	By-product of drinking water chlorination

Secondary Contaminants	Collection Date	Your Highest Value	Range	Unit	SMCL
CHLORIDE	4/11/2016	23.1	23.1	MG/L	250
IRON	7/9/2018	0.16	0.12 - 0.16	MG/L	0.3
MANGANESE	7/9/2018	0.049	0.0038 - 0.049	MG/L	0.05
PH	4/11/2016	7	7	SU	8.5
SULFATE	4/11/2016	99.8	99.8	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:

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

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 CITY OF MANY 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.

R7

2018 CCR CERTIFICATION OF DISTRIBUTION FORM

PWS ID: LA1085016 **NAME: CITY OF MANY WATER SYSTEM**

The Consumer Confidence Report (CCR) must be delivered to your consumers by 06/30/2019 and certification must be submitted to the State no later than 09/30/2019.

The CCR must be distributed with a "good-faith effort" based on the population served by the Community Water System (CWS) as shown:

Population	Delivery Method
4575	Must mail or otherwise directly deliver one copy of the report to every customer or publish the report in one or more local newspapers serving the area (if publishing in newspaper, the CWS must mail a notice to the customers indicating the report will not be mailed and how to obtain a paper copy)

As an alternative to mailing the CCR, the CWS has the option of choosing an **electronic delivery method**. On the reverse side of this page, you will find options for electronic delivery that meet the "mail or otherwise directly deliver" requirement of the CCR Rule. If choosing to distribute the report electronically, you must check the option(s) used on the reverse side of this page and complete all required elements. You may also use a combination of the above delivery method and electronic delivery to reach all consumers.

The below noted community public water system confirms that its 2018 Consumer Confidence Report has been prepared and delivered to its consumers in accordance with the appropriate delivery method based on population served. Furthermore, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency as well as fulfilling all CCR requirements of CFR Title 40, Part 141.

Certified by: Signature: Kenneth A Freeman

Printed Name/Job Title: Kenneth A. Freeman Mayor

Date of CCR Report Delivery: 6/27/2019 **Type of Delivery:** Mail out

☐ **(I have attached a copy of the report and notification provided to consumers)**

Direct URL (Electronic delivery only): _____

If the CCR is delivered by posting, mail out, or by hand, a copy of the pamphlet or mail out, even if no changes were made, must be attached to the returned certification form. Copies of the report must be kept for three years and made available to the public or the State upon request. Any questions or requests can be addressed to Sirui Wen-Harman (sirui.wen-harman@la.gov/225-342-2475) or Sean Nolan (sean.nolan@la.gov/225-342-7495).

Electronic copies of the reports can be found in the Consumer Confidence Reports section at http://ldh.la.gov/ccr.

Mail signed and completed form and final copy of report to:

Attn: Sirui Wen-Harman, CCR Compliance
LDH/OPH Engineering Services
P.O. Box 4489
Baton Rouge, LA 70821-4489

This page is for certification to the State only and is not part of the report.

2018 CCR CERTIFICATION OF DISTRIBUTION FORM

Electronic delivery of the CCR for bill-paying consumers

You may use a combination of electronic delivery and paper delivery methods to best ensure delivery to all consumers served by the water system. (check all that apply to your delivery method)

☐Option 1: Mail Notice[1] – notification that the CCR is on a publically available website[2] via a direct URL

CWS mails to each bill-paying consumer a notification that the CCR is available and provides a **direct** URL to the CCR on a publically available site[1] on the internet where it can be viewed. A URL that navigates to a webpage that requires a consumer to search for the CCR or enter other information **does not** meet the "directly deliver" requirement. The mail method for the notification may be, but is not limited to, a water bill insert, statement on the water bill or community newsletter. Notices should be repeated to ensure awareness by consumers.

☐Option 2: Email Notice[1] – notification that the CCR is on a publically available website[2] via a direct URL

CWS emails to each bill paying consumer a notification that the CCR is available and provides a direct URL to the CCR on a publically available site[1] on the internet. A URL that navigates to a webpage that requires a consumer to search for the CCR or enter other information **does not** meet the "directly deliver" requirement.

☐Option 3: Email – CCR sent as an attachment to the email

CWS emails the CCR as an electronic file email attachment (*e.g.* portable document format (PDF), word document, *etc.*)

☐Option 4: Email – CCR sent as an embedded image in an email

CWS delivers CCR text and tables inserted into the body of an email

[1]The following must be included in the paper/email notice

1. The direct URL to the CCR
2. A short description indicating what the CCR report provides. (see memo for an example on EPA website URL given at the bottom of this page)
3. A means in providing consumers the ability to request a paper copy of the report (*e.g.* return mailer, phone number, *etc.*)

[2]The water system must have control of the publically available website where the CCR is located to ensure continuous display and the ability to make changes as needed. The current CCR must be posted continuously until an updated CCR becomes available.

Additional Requirements:

Option 2-4: If a consumer does not have an e-mail or an email is returned as undeliverable, the water system must send a paper copy of the CCR to the consumer.

Additional information and examples of are available for review at
http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/regulations.cfm
http://water.epa.gov/lawsregs/rulesregs/sdwa/ccr/upload/ccrdeliveryoptionsmemo.pdf

Addition to Consumer Confidence Report (CCR) - Water We Drink

Please read before distributing your annual CCR "Water We Drink" Report

Inside the report you will find the following table where certain columns have been left blank. It is the responsibility of the water system to populate the table with the correct information in order to meet the content requirements of the annual CCR.

The residual levels used in this calculation must be taken from the bacteriological result reports sent to the water system. These reports should be in your records. There is an online calculator spreadsheet at www.ldh.la.gov/ccr for your use to assist in the completion of the table.

Disinfectant	Date	Highest RAA	Unit	Range	MRDL	MRDLG	Typical Source
(1)	2018	(2)	ppm	(3)	4	4	Water additive used to control microbes

The water system is responsible for adding the following information.

(1)	Type of Disinfectant	Insert the type of disinfectant (chlorine, chloramines, etc.) used by the water system. If a secondary disinfectant (chlorine dioxide, etc.) is used, the water system will need to add additional rows to supply the additional information
(2)	Highest RAA - Quarterly Average of Monthly averages	The 1Q2018 Average is the 12 month average of April 2017 to March 2018 The 2Q2018 Average is the 12 month average of July 2017 to June 2018 The 3Q2018 Average is the 12 month average of October 2017 to September 2018 The 4Q2018 Average is the 12 month average of January 2018 to December 2018 Insert the highest calculated value only.
(3)	Range - Lowest to Highest residual for 2018	The lowest residual to the highest residual measured in 2018. Note: You will need data from 2017 to calculate the average, however, the range only includes residuals from 2018

Example: (THIS IS NOT REAL DATA. THIS DATA IS FOR THE EXAMPLE ONLY)

• System size: 25-1,000 people Samples: 1 per month

Previous quarterly averages from 2017	2nd Quarter	3rd Quarter	4th Quarter
	0.6	0.9	1.1

Example table (**The below data is for example only and is not real data for the water system**)

2018 Data	1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Monthly Sample (ppm)	1.6	0.7	0.9	0.9	1.0	1.2	1.7	1.2	0.9	0.9	1.0	1.1
Monthly Avg.	1.6	0.7	0.9	0.9	1.0	1.2	1.3	0.8	0.6	0.9	1.0	1.1
Quarterly Avg.	1.07			1.03			1.27			1.0		
Quarterly RAA*	0.92*			1.03*			1.12*			1.09		

***Reported RAA for 1st – 3rd quarters are based on results from previous quarters**

Information to report in CCR
Highest Quarterly RAA Value for the year = 1.12 ppm
Range of individual values (0.7-1.7)

1Q2018 Avg = (0.6+0.9+1.1+1.07)/4 = 0.92
2Q2018 Avg = (0.9+1.1+1.07+1.03)/4 = 1.03
3Q2018 Avg = (1.1+1.07+1.03+1.27)/4 = 1.12
4Q2018 Avg = (1.07+1.03+1.27+1.0)/4 = 1.09

Example disinfectant table (**Not real data, the water system must calculate its own data to complete table in CCR**):

Disinfectant	Date	Highest RAA	Unit	Range	MRDL	MRDLG	Typical Source
Chlorine	2018	1.12	ppm	0.7-1.7	4	4	Water additive used to control microbes

Addition to Consumer Confidence Report (CCR) - Water We Drink

Insert: Disinfectants - Maximum Residual Disinfectant Level (MRDL) and Disinfection By-products - Maximum Contaminant Level (MCL)

Instructions: For all systems which use either Chlorine or Chloramines, as a disinfectant: You must report the annual average disinfectant residual level result and range of individual results in a Table in your CCR as shown in the following examples. You must also add the appropriate health effects language to the report in the Health Effects Language Section if the MRDL for either disinfectant was exceeded.

For all systems which use Chlorine Dioxide as a disinfectant: You must report the highest daily chlorine dioxide disinfectant residual level result and range of results and you must report the highest arithmetic average of monthly sample sets (3 samples in distribution system) and range in a Table in your CCR as shown in the following examples. You must also add the appropriate health effects language to the report in the Health Effects Language Section if the Chlorine Dioxide MRDL or the Chlorite MCL was exceeded.

For all systems which use Ozone as a disinfectant: You must report the annual average bromate level result and range of individual results in a Table in your CCR as shown in the following examples. You must also add the appropriate health effects language to the report in the Health Effects Language Section if the bromate MCL was exceeded.

Example Table (The below data is for example only and is not real data for the water system)

Disinfectant/By-product	Date	Result	Unit	Range	MRDL or MCL	MRDLG or MCLG	Typical Source
Chlorine	2018		ppm		4	4	Water additive used to control microbes
Chloramines	2018		ppm		4	4	Water additive used to control microbes
Chlorine Dioxide	2018		ppb		800	800	Water additive used to control microbes
Chlorite	2018		ppm		1	0.8	By-product of drinking water disinfection
Bromate	2018		ppb		10	0	By-product of drinking water disinfection

Disinfectant/By-product	Result value	Health Effects Language if exceeded
Chlorine MRDL	Highest running annual arithmetic average, computed quarterly, of monthly samples	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chloramines MRDL	Highest running annual arithmetic average, computed quarterly, of monthly samples	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine Dioxide MRDL	Highest daily value	Some infants and young children who drink water chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
Chlorite MCL	Highest arithmetic average of monthly sample sets (3 samples in distribution system	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Bromate MCL	Highest running annual arithmetic average, computed quarterly, of monthly samples	Some people who drink water of containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

Cryptosporidium Data

If the system has performed any monitoring for *Cryptosporidium,* including monitoring performed to satisfy the requirements of the LT2ESWTR, which indicates that *Cryptosporidium* may be present in the source water or the finished water, the report must include:

- A summary of the results of the monitoring; and
- An explanation of the significance of the results.

Please change the highlighted information to match the water systems true data

Results Example:

Ideal Water System conducted monthly source water monitoring for Cryptosporidium (Crypto) from January 2018 to December 2018. Of the 24 samples, Crypto was detected in four samples. The detected Crypto levels ranged from 0.1 to 0.19 Oocysts per liter.

Suggested texts:

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most common filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease.

Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

2018 CCR Insert for LT2 ESWTR and Turbidity Data

Addendum to Consumer Confidence Report (CCR) - Water We Drink

Turbidity Insert (Surface Water Only)

2018 Turbidity Reporting Requirements for Your CCR

*For Turbidity, which is a Treatment Technique (TT) for **Surface Water Systems** that filter and use turbidity as an indicator of filtration performance, the CCR must report the highest single monthly measurement (**see Item No. 1 of the Calculations Examples below**) for the year the CCR covers. Additionally, the CCR must report the lowest monthly percentage of samples meeting the turbidity limits specified for the relevant Filtration Technology used (**see Item No. 2 of the Calculations Examples below**). The CCR must also provide an explanation of the reason for measuring turbidity (**see Item No. 3 of the Calculations Examples below**) and possibly some health effects language. Provided below are the **Calculations Examples** and a **CCR Appearance Example**. Below that are the established **Regulations on Turbidity Limits** for each of the different Filtration Technologies.*

CALCULATIONS EXAMPLES

ITEM NO. 1 - Your system should have the following data available from its Monthly Operating Reports (MORs):

Month	**Highest Finished/Combined Effluent Turbidity (for the month)** – *This is example data. Your system's data should be pulled from the MORs.*
January	0.21
February	0.07
March	**0.50**
April	0.09
May	0.097
June	0.06
July	0.05
August	0.02
September	0.045
October	0.11
November	0.085
December	0.075

In this example, the Highest Single Monthly Finished/Combined Turbidity Measurement occurred in March with a reading of 0.50 NTU. Therefore, you would have to include this result (0.50 NTU) in the Contaminant Listing Table of your CCR.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
TURBIDITY	**3/7/2018**	**0.50**	**0.07 - 0.50**	**NTU**	**0.3**		**Soil runoff**

Addendum to Consumer Confidence Report (CCR) - Water We Drink

[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	0.3	6	{(186 - 6)/186} x 100 = 96.8%
February	186	0.3	3	{(186 - 3)/186} x 100 = 98.4%
March	186	0.3	0	{(186 - 0)/186} x 100 = 100%
April	186	0.3	10	{(186 -10)/186} x 100 = 94.6%
May	186	0.3	6	{(186 - 6)/186} x 100 = 96.8%
June	186	0.3	15	{(186 - 15)/186} x 100 = **91.9%**
July	186	0.3	4	{(186 - 4)/186} x 100 = 97.8%
August	186	0.3	5	{(186 - 5)/186} x 100 = 97.3%
September	186	0.3	5	{(186 - 5)/186} x 100 = 97.3%
October	186	0.3	1	{(186 - 1)/186} x 100 = 99.5%
November	186	0.3	2	{(186 - 2)/186} x 100 = 98.9%
December	186	0.3	3	{(186 - 3)/186} x 100 = 98.4%

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 = 91.9%. Therefore, you would have to include this result (91.9%) 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.

EXAMPLE:

Regulated Contaminants	Collection Date	Lowest Percentage Value	Range	Unit	MCL	MCL G	Typical Source
TURBIDITY	**6/2018**	**91.9**	**91.9 - 100**	**NTU**	**0.3**		**Soil runoff**

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 (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**).

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 (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**).

NEED HELP? FEEL FREE TO CONTACT THE LDHH/OPH CCR PROGRAM MANAGER @ 225-342- 7495 FOR ASSISTANCE WITH YOUR TURBIDITY CALCULATIONS.