

# **State of Texas**

## **Public Drinking Water Program**

### **2020 Annual Compliance Report**



Pennybacker Bridge, Austin, TX

**Texas Commission on Environmental Quality (TCEQ)**

**Office of Water**

**Water Supply Division**

**July 01, 2021**

# Contents

Introduction .....	3
Definitions and Terms .....	3
PWSs in Texas .....	5
Drinking Water Sources .....	5
PWS Size .....	7
2020 Compliance Results .....	8
Health-Based Standards .....	8
Health-Based Standards Results .....	9
Significant Monitoring and Reporting Regulations .....	10
Violations by Rule and Type .....	11
MCL/MRDL, Treatment Technique, and Monitoring/Reporting Violations .....	13
Synthetic Organic Compounds .....	14
Volatile Organic Compounds .....	14
Inorganic Compounds - Individual Violations .....	15
Inorganic Compounds -- Group Violations .....	15
Radionuclides .....	16
Revised Total Coliform Rule .....	16
Surface Water Treatment Rules .....	16
Disinfectants and Disinfection By-Products Rule (DBP1 & DBP2) .....	17
Lead and Copper Rule .....	17
Groundwater Rule .....	18
Consumer Confidence Reports .....	18
Public Notification Rule .....	18
Appendix A. Return to Compliance by Rule .....	18
Obtaining a Copy of the 2020 Public Drinking Water Annual Compliance Report .....	20

# Introduction

The Texas Commission on Environmental Quality (TCEQ) administers the Public Drinking Water Program in Texas under primacy authority from the United States Environmental Protection Agency (EPA). Section 1414(c)(3) of the Safe Drinking Water Act (SDWA) requires that each state that has been granted primacy prepare an annual report on violations of national primary drinking water regulations within the state, make the report readily available to the public, and submit it to the EPA. The TCEQ 2020 Annual Compliance Report fulfills this responsibility for Texas, and includes health-based, reporting, and consumer notification violations.

Each quarter, primacy States submit data to the Federal Safe Drinking Water Information System (SDWIS/FED), an automated database maintained by EPA. This report is based on data retrieved from the Texas installation of SDWIS/STATE. This report contains data from the following time periods:

1. The beginning date of a given violation compliance period on or before December 31, 2020.
2. The ending date of a given violation compliance period on or after January 1, 2020.

By using these criteria, some violations which began prior to calendar year 2020 are included in this report.

## Definitions and Terms

The following are definitions and terms used in this report.

**Consumer Notification** - Every Community PWS is required to deliver to its customers a brief annual water quality report, referred to as the Consumer Confidence Report (CCR). This report shall include educational material, information on the source of the water, the levels of any detected contaminants, and compliance with drinking water regulations.

**Maximum Contaminant Level** - Under the SDWA, EPA sets national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs).

**Maximum Residual Disinfectant Level** - EPA sets national limits on residual disinfection levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed when PWSs add chemical disinfection for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels (MRDLs).

**Monitoring** - A PWS is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCL. If a PWS fails to have its water tested as required or fails to report test results correctly to the primacy agent, a monitoring/reporting violation (M/R) occurs.

**Public Notification** - Public Notification is intended to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately

alert consumers if there is a serious problem with their drinking water that may pose a risk to public health. They also notify customers if their water does not meet drinking water standards, the water system fails to test its water, or if the system has been granted a variance (use of less costly technology) or an exemption (more time to comply with a new regulation).

**Public Water System** - A Public Water System (PWS), as defined by the State of Texas, is a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves at least 25 people for at least 60 days each year. There are three types of PWSs:

- **Community PWSs** such as towns or other communities where people live.
- **Non-Transient Non-Community PWSs** such as schools or factories where people work but do not live.
- **Transient Non-Community PWSs** -- such as rest stops, parks, and restaurants --where people frequently come and go.

For this report, the acronym PWS means systems of all types unless specified in greater detail.

**Return to Compliance** - A violation is “Returned to Compliance” when the PWS has met all requirements to remedy the violation as determined by federal and state Drinking Water regulations.

**Sampling** - TCEQ collects chemical compliance samples for PWSs using a third-party contractor. The samples collected include inorganic and organic chemicals, disinfection by-products and radionuclides. These samples are collected either at the entry point or in the distribution system. Using a third party to collect samples ensures greater quality assurance, unbiased sample results and a very high collection rate. In 2020, 99.9% of samples scheduled were collected, or the sample sites were accounted for as inactive or unavailable for sampling. The PWSs comply with the chemical compliance sampling requirement by paying the lab analysis expense.

PWSs are required to collect additional compliance samples. All PWSs are responsible for the routine collection of bacteriological samples and disinfection residual data from their distribution system. Most water systems must perform sampling for compliance for the Lead and Copper Rule. Systems that use a groundwater source must monitor their raw well water when applicable. Systems that use surface water or groundwater under the influence of surface water must monitor routinely for turbidity and are also required to perform source water monitoring for *Cryptosporidium*. Also, systems that use specific treatments (such as chlorine dioxide or ozone) in their drinking water production are required to perform specialized monitoring.

**Significant Consumer Notification Violations** - For this report, a significant public notification violation occurred if a community PWS completely failed to provide its customers the required annual water quality report. This type of violation is designated as “CCR Failure to Report” in SDWIS/STATE.

**Significant Monitoring Violations** - For this report, significant monitoring violations are defined as any significant monitoring violation that occurred during the calendar year of the report. A significant monitoring violation occurs when no health-based

sample result is reported during a compliance period, or more rarely, when no sample is collected.

**Treatment Techniques** - A treatment technique (TT) is an enforceable procedure or level of technological performance which PWSs must follow to ensure control of a contaminant.

**Variations and Exemptions** - A variance is the use of less costly technology and an exemption provides additional time to comply with new regulation. The State of Texas does not grant variances or exemptions.

## **PWSs in Texas**

As of July 01, 2021, the State of Texas regulates 7,053 PWSs, providing drinking water to 29,580,083 customers.

- Approximately 28,783,446 people receive drinking water from 4,641 Community PWSs.
- Approximately 503,089 people receive drinking water from 881 Non-Transient Non-Community PWSs.
- Approximately 293,548 people receive drinking water from 1,531 Transient Non-Community PWSs.

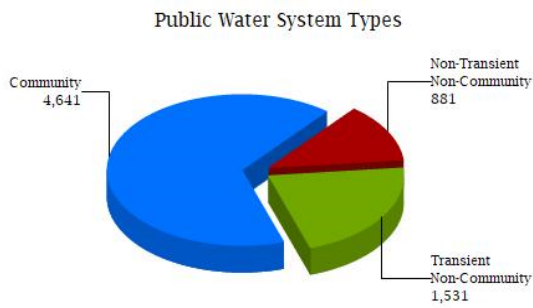
State regulations require all PWSs in Texas to disinfect their drinking water. All systems must properly disinfect water before it is distributed to any customer and must maintain acceptable disinfectant residuals within their distribution system. Systems are required to maintain a disinfectant residual concentration of at least 0.2 milligrams per liter (mg/L) of free chlorine or 0.5 mg/L of chloramine (chlorine + ammonia) in the water entering their distribution system as well as throughout the distribution system.

All PWSs that use surface water or groundwater under the influence of surface water as a drinking water source, must use filtration as a treatment in their potable water production. Filtration is used along with other treatments as applicable.

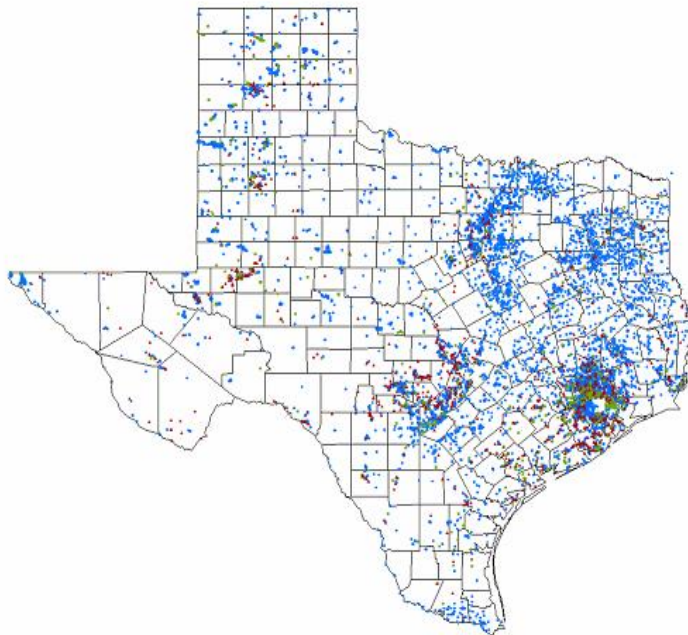
## **Drinking Water Sources**

Sources for drinking water within Texas include both groundwater and surface water originating from numerous aquifers, rivers, and reservoirs throughout the state. An illustration of public drinking water sources in Texas by PWS type is shown below in Figure 1 and 2.

**Figure 1. Active PWS in Texas by PWS Type**



**Figure 2. Distribution of Active PWSs Across the State**



**Table 1. PWS Sources by Type**

Source Type	Active Source
Groundwater*	13,819
Surface water	474

\*Groundwater Under the Influence of Surface Water (GUI) sources are included as groundwater sources.

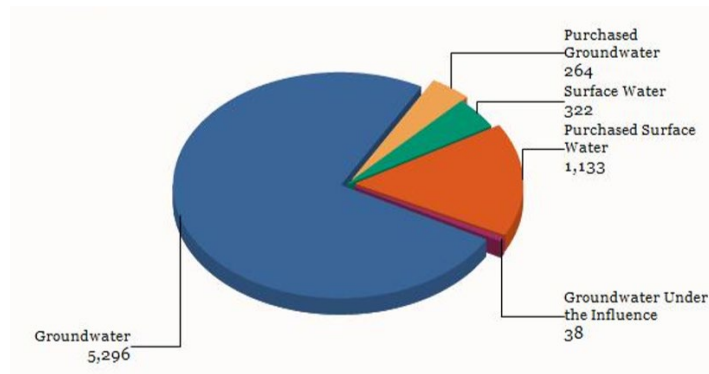
Primary source types for PWSs in Texas include the following

- **Groundwater** - wells that withdraw water from aquifers
- **Purchased Groundwater** - water purchased from another PWS where the source is one or more wells
- **Surface water** - intakes that withdraw water from creeks, rivers, streams, lakes, and reservoirs

- **Purchased surface water** - water is purchased from another PWS where the source is one or more intakes
- **Groundwater Under the Influence of Surface Water** - wells that withdraw water from one or more aquifers where surface water may be present
- **Purchased Groundwater Under the Influence of Surface Water** - water is purchased from another PWS where the source is one or more aquifers where surface water may be present

The number of PWSs by primary source type are included in Figure 3.

**Figure 3. Number of PWS by Source Type**



## PWS Size

The EPA defines water system size based on the following population classifications:

- Very small systems - serve 25 to 500 people
- Small systems - serve 501 to 3,300 people
- Medium systems - serve 3,301 to 10,000 people
- Large systems - serve 10,001 to 100,000 people
- Very Large systems - serve more than 100,000 people

The population served by PWSs in Texas is shown in Table 2 below.

**Table 2. Texas PWS Population by EPA Classification**

Population	EPA Classification	Number PWS	Total Population Served
25 - 500	Very Small	4,213	675,871
501-3,300	Small	1,755	2,577,831
3,301 - 10,000	Medium	720	4,090,801
10,001 - 100,000	Large	323	8,160,566
Over 100,000	Very Large	42	14,075,014
	<b>Total</b>	<b>7,053</b>	<b>29,580,083</b>

# 2020 Compliance Results

Annual compliance information was determined using the SDWIS/STATE, version 3.33.

## Health-Based Standards

In 1974 Congress passed the SDWA. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur. These non-enforceable health goals, based solely on possible health risks and exposure over a lifetime, with an adequate margin of safety, are called MCLG. Contaminants are any physical, chemical, biological or radiological substances or matter in water. EPA sets MCLGs based on the best available science to prevent potential health problems.

For most contaminants, EPA sets an enforceable regulation called an MCL based on the MCLG. MCLs are set as close to the MCLGs as possible, considering cost, benefits and the ability of PWSs to detect and remove contaminants using suitable treatment technologies. When there is no reliable method that is economically and technically feasible to measure a contaminant at particularly low concentrations, a treatment technique is set rather than an MCL. A treatment technique is an enforceable procedure or level of technological performance which PWSs must follow to ensure control of a contaminant. States may set a more stringent MCL or treatment technique level for pathogens and indicators in drinking water than EPA.

Health-based contaminants are those that may pose an acute or long-term risk to human health if they are found in drinking water. These contaminants include: fecal coliform bacteria, *E. coli*, turbidity, nitrate, nitrite, chlorine dioxide, inorganic chemicals, organic chemicals, disinfection byproducts, radionuclides and disinfectants.

Total coliforms and turbidity are indicators that inadequately treated water may contain disease-causing organisms. Pathogens include various types of bacteria, viruses, protozoan parasites and other organisms. Indicators are physical, chemical, or other parameters whose presence at a level outside of specified limits may reflect a problem in the treatment process or in the integrity of the distribution system. These pathogens can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Nitrate and nitrite contamination can occur from several sources: the natural decay of organic materials such as leaves and crop residue, use of commercial fertilizers, contamination by human sewage and wastes from farm animals, and the nitrification of ammonia in the treatment and distribution system. Excessive levels of nitrate and nitrite in drinking water can cause serious illness and sometimes death in infants less than six months of age and may also cause adverse health effects in pregnant women through the risk of miscarriage and in people with specific metabolic diseases.

Chlorine dioxide is a chemical added to drinking water for the purposes of microbial disinfection and oxidation of dissolved organic carbon to reduce formation of disinfection byproducts. Some infants, young children and pregnant women who drink



water containing chlorine dioxide in excess of the MRDL could experience nervous system effects or anemia.

Inorganic contaminants can leach into drinking water after dissolving from naturally-occurring minerals in the ground, or from runoff from industrial sources or landfills. Lead and copper enter drinking water primarily through plumbing materials. Exposure to lead and copper may cause health problems ranging from stomach problems to brain damage. Lead and copper levels are controlled by treatment techniques and regulated by action level.

Organic contaminants come from petroleum solvents, paint removers, degreasers, cleaning fluids, pesticides, gasoline, electrical transformers, manufacturing processes, chemical production, byproducts from disinfection, the production of plastics, agricultural runoff, improper waste disposal, and improper handling and storage techniques. These contaminants may damage organs such as the heart, liver, and kidneys, damage the central nervous and immune systems, and cause cancer.

Disinfection byproducts are organic chemicals that form as a result of adding disinfectant to water containing organic matter. Trihalomethanes, haloacetic acids, chlorite and bromate are byproducts of disinfection. These contaminants may damage organs such as the kidneys and liver, damage the cardiovascular system and central nervous system, and may cause an increased risk of cancer.

Radionuclides include radium and uranium, which occur naturally in some groundwater due to geological formations, particularly in deeper aquifers. Radionuclide contaminants may cause cancer.

Disinfectants are chemicals added to drinking water during treatment to provide disinfection at the treatment plant and in the distribution system. If disinfectants are not dosed and managed appropriately, they may cause health effects from chlorine and chloramines which can include irritating effects to the eyes and nose, stomach discomfort, and (chloramine only) anemia. Chlorine dioxide can cause nervous system effects and anemia.

To find more information [regarding drinking water contaminants](#)<sup>1</sup> regulated by the EPA, and their potential health effects.

## Health-Based Standards Results

For 2020, health-based standards were met by 96% of the 7,053 PWS in the State of Texas. The percentage of total population served by PWS meeting health-based standards was 99%. Figure 4 below shows the percentage of PWSs in compliance with health-based standards.

---

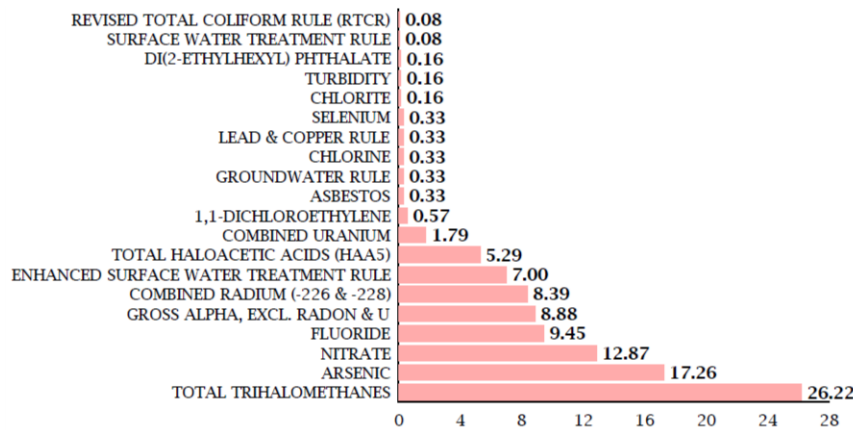
<sup>1</sup> [www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations](http://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations)

**Figure 4. Percent of PWSs in Compliance with Health-Based Standards**



MCL and TT violations, as a percentage of total health-based violations, are shown in Figure 5 below.

**Figure 5. Percent of Health-Based Standard Violations, by Contaminant/Rule**



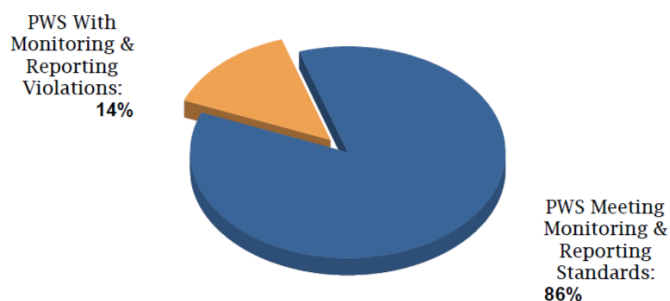
## Significant Monitoring and Reporting Regulations

Monitoring and Reporting (M/R) regulations provide a mechanism to ensure that PWS evaluate contaminants in order to meet health-based standards. When a system does not monitor for contaminants in accordance with associated compliance periods, consumers and primacy agencies do not know whether the water being served is meeting health-based standards.

For 2020, 86% of the 7,053 PWSs in Texas were in compliance with major M/R regulations. The total population served by PWSs meeting M/R regulations is 92%.

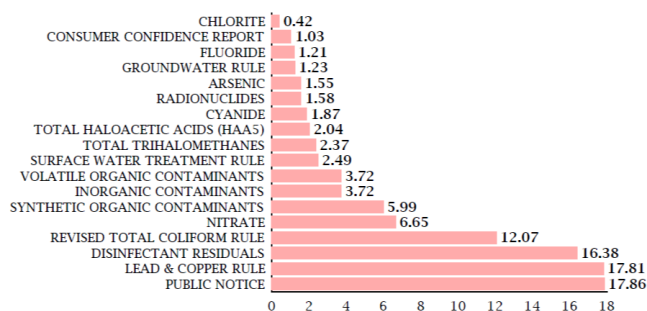
Figure 6 below shows the percent of PWSs in compliance with M/R regulations.

**Figure 6. Percent of PWSs in Compliance with M/R Regulations**



Of the 14% of PWSs with M/R violations, the percent by contaminant and rule are shown in Figure 7 below.

**Figure 7. Percent of M/R Violations by Contaminant or Rule**



## Violations by Rule and Type

A summary of the number of violations by rule and type is shown below in Table 3. Violations included here are only those that did not return to compliance in 2020. See Appendix A for the total number of violations and those violations that returned to compliance.

**Table 3. PWS Violations by Rule and Type**

Rule	Violation Type	Violation Name	Violations Not Returned to Compliance	Number of PWSs in Violation
CONSUMER CONFIDENCE RULE	71	CCR	42	33
DISINFECTION BY-PRODUCTS	35	FAILURE SUBMIT OEL REPORT FOR HAA5	15	4
DISINFECTION BY-PRODUCTS	35	FAILURE SUBMIT OEL REPORT FOR TTHM	28	14
DISINFECTION BY-PRODUCTS	02	MCL, AVERAGE (CHLORITE)	2	1
DISINFECTION BY-PRODUCTS	02	MCL, LRAA	117	40
DISINFECTION BY-PRODUCTS	27	MONITORING, (DBP) (CHLORINE DIOXIDE)	4	2
DISINFECTION BY-PRODUCTS	27	MONITORING, ROUTINE, MAJOR	818	414

<b>Rule</b>	<b>Violation Type</b>	<b>Violation Name</b>	<b>Violations Not Returned to Compliance</b>	<b>Number of PWSs in Violation</b>
DISINFECTION BY-PRODUCTS	11	MRDL (CHLORINE/CHLORAMINE)	4	2
GROUNDWATER RULE	45	FAILURE ADDRESS DEFICIENCY	4	4
GROUNDWATER RULE	34	MONITOR TRIGGERED/ADDITIONAL, MAJOR	43	35
GROUNDWATER RULE	34	MONITOR TRIGGERED/ADDITIONAL, MINOR	7	7
INORGANIC COMPOUNDS GROUP M/R	03	MONITORING, ROUTINE MAJOR	53	26
INORGANIC COMPOUNDS INDIVIDUAL M/R	03	MONITORING, ROUTINE MAJOR	501	246
INORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	337	70
INORGANIC COMPOUNDS MCL	01	MCL, SINGLE SAMPLE	158	55
LEAD AND COPPER RULE	52	FOLLOW-UP OR ROUTINE TAP M/R	541	472
LEAD AND COPPER RULE	56	INITIAL/FOLLOW-UP/ROUTINE SOWT M/R	6	4
LEAD AND COPPER RULE	66	LEAD CONSUMER NOTICE	162	127
LEAD AND COPPER RULE	57	OCCT/SOWT RECOMMENDATION/STUDY	3	1
LEAD AND COPPER RULE	65	PUBLIC EDUCATION	1	1
LEAD AND COPPER RULE	53	WATER QUALITY PARAMETER M/R	417	131
PUBLIC NOTICE	75	PUBLIC NOTICE RULE LINKED TO VIOLATION	725	186
RADIONUCLIDES	02	MCL, AVERAGE	234	36
RADIONUCLIDES	03	MONITORING, ROUTINE MAJOR	65	29
REVISED TOTAL COLIFORM RULE	2A	LEVEL 1 ASSESS, TOTAL COLIFORM POSITIVE ROUTINE NO REPORT	1	1
REVISED TOTAL COLIFORM RULE	3A	MONITORING, ROUTINE, MAJOR	472	159
SURFACE WATER TREATMENT RULES	41	FAILURE MAINTAIN MICROBIAL TREATMENT (LT2)	85	7
SURFACE WATER TREATMENT RULES	42	FAILURE TO FILTER	1	1
SURFACE WATER TREATMENT RULES	38	MONITORING, ROUTINE (IESWTR/LT1), MAJOR	101	11
SURFACE WATER TREATMENT RULES	44	MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	1	1
SURFACE WATER TREATMENT RULES	43	SINGLE COMB FLTR EFFLUENT (IESWTR/LT1)	1	1
SYNTHETIC ORGANIC COMPOUNDS M/R	03	MONITORING, ROUTINE MAJOR	243	90
SYNTHETIC ORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	2	1
VOLATILE ORGANIC COMPOUNDS M/R	03	MONITORING, ROUTINE MAJOR	151	120

Rule	Violation Type	Violation Name	Violations Not Returned to Compliance	Number of PWSs in Violation
VOLATILE ORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	7	2

**Rule Abbreviations:**

CCR - Consumer Confidence Report

CHEM - Chemical (Inorganics and Organics)

DBP - Disinfection Byproducts

GWR - Groundwater Rule

HAA5 - Haloacetic Acids

IESWTR - Interim Enhanced Surface Water Treatment Rule

LCR - Lead and Copper Rule

LT1 - Long Term 1 Enhanced Surface Water Treatment Rule

LT2 - Long Term 2 Enhanced Surface Water Treatment Rule

PN - Public Notice Rule

RAD - Radionuclides

SWTR - Surface Water Treatment Rule

RTCR - Revised Total Coliform Rule

TTHM - Total Trihalomethanes

## **MCL/MRDL, Treatment Technique, and Monitoring/Reporting Violations**

The following pages include summary tables for MCL/MRDL, Treatment Techniques, and M/R. Violations included in these tables are only those that did not return to compliance in 2020.

Units of Measure used on the following pages:

- MG/L - Milligrams per liter
- MFL - Million fibers per liter
- pCi/L - Picocuries per liter
- ug/L - Micrograms per liter

## **Synthetic Organic Compounds**

Contaminant	MCL/MRDL	MCL/ MRDL Violations	MCL/ MRDL PWSS in Violation	Significant M/R Violations	Significant M/R PWSS in Violation
1,2-DIBROMO-3-CHLOROPROPANE	0.0002 MG/L	0	0	43	23
ETHYLENE DIBROMIDE	0.00005 MG/L	0	0	43	23
2,4,5-TP	0.05 MG/L	0	0	49	28
2,4-D	0.07 MG/L	0	0	49	28
DALAPON	0.2 MG/L	0	0	49	28
DINOSEB	0.007 MG/L	0	0	49	28
PICLORAM	0.5 MG/L	0	0	49	28
ALDICARB	0.003 MG/L	0	0	44	23
ALDICARB SULFONE	0.002 MG/L	0	0	44	23
ALDICARB SULFOXIDE	0.004 MG/L	0	0	44	23
CARBOFURAN	0.04 MG/L	0	0	44	23
OXAMYL	0.2 MG/L	0	0	44	23
ALACHLOR	0.002 MG/L	0	0	107	85
ATRAZINE	0.003 MG/L	0	0	107	85
BENZO(A)PYRENE	0.0002 MG/L	0	0	107	85
BHC-GAMMA	0.0002 MG/L	0	0	107	85
CHLORDANE	0.002 MG/L	0	0	107	85
DI(2-ETHYLHEXYL) ADIPATE	0.4 MG/L	0	0	107	85
DI(2-ETHYLHEXYL) PHTHALATE	0.006 MG/L	2	1	107	85
ENDRIN	0.002 MG/L	0	0	107	85
HEPTACHLOR	0.0004 MG/L	0	0	107	85
HEPTACHLOR EPOXIDE	0.0002 MG/L	0	0	107	85
HEXACHLOROBENZENE	0.001 MG/L	0	0	107	85
HEXACHLOROCYCLOPENTADIENE	0.05 MG/L	0	0	107	85
METHOXYCHLOR	0.04 MG/L	0	0	107	85
PENTACHLOROPHENOL	0.001 MG/L	0	0	107	85
SIMAZINE	0.004 MG/L	0	0	107	85
TOXAPHENE	0.003 MG/L	0	0	107	85
<b>Subtotal</b>		<b>2</b>	<b>1</b>	<b>243</b>	<b>90</b>

## **Volatile Organic Compounds**

Contaminant	MCL/MRDL	MCL/ MRDL Violations	MCL/ MRDL PWSS in Violation	Significant M/R Violations	Significant M/R PWSS in Violation
1,1,1-TRICHLOROETHANE	0.2 MG/L	0	0	151	120
1,1,2-TRICHLOROETHANE	0.005 MG/L	0	0	151	120
1,1-DICHLOROETHYLENE	0.007 MG/L	7	2	151	120
1,2,4-TRICHLOROBENZENE	0.07 MG/L	0	0	151	120
1,2-DICHLOROETHANE	0.005 MG/L	0	0	151	120
1,2-DICHLOROPROPANE	0.005 MG/L	0	0	151	120
BENZENE	0.005 MG/L	0	0	151	120
CARBON TETRACHLORIDE	0.005 MG/L	0	0	151	120
CIS-1,2-DICHLOROETHYLENE	0.07 MG/L	0	0	151	120
DICHLOROMETHANE	0.005 MG/L	0	0	151	120
ETHYLBENZENE	0.7 MG/L	0	0	151	120
O-DICHLOROBENZENE	0.6 MG/L	0	0	151	120
STYRENE	0.1 MG/L	0	0	151	120
TETRACHLOROETHYLENE	0.005 MG/L	0	0	151	120
TOLUENE	1 MG/L	0	0	151	120
TRANS-1,2-DICHLOROETHYLENE	0.1 MG/L	0	0	151	120
TRICHLOROETHYLENE	0.005 MG/L	0	0	151	120
VINYL CHLORIDE	0.002 MG/L	0	0	151	120

Contaminant	MCL/MRDL	MCL/ MRDL Violations	MCL/ MRDL PWSs in Violation	Significant M/R Violations	Significant M/R PWSs in Violation
XYLENES, TOTAL	10 MG/L	0	0	151	120
<b>Subtotal</b>		<b>7</b>	<b>2</b>	<b>151</b>	<b>120</b>

### ***Inorganic Compounds - Individual Violations***

Contaminant	MCL/MRDL	MCL/ MRDL Violations	MCL/ MRDL PWSs in Violation	Significant M/R Violations	Significant M/R PWSs in Violation
ALUMINUM	0.2 mg/L	0	0	0	0
ANTIMONY, TOTAL	0.006 MG/L	0	0	0	0
ARSENIC	0.01 MG/L	212	54	35	13
ASBESTOS	7 MFL	4	1	14	11
BARIUM	2 MG/L	0	0	0	0
BERYLLIUM, TOTAL	0.004 MG/L	1	1	1	1
CADMIUM	0.005 MG/L	0	0	0	0
CHROMIUM	0.1 MG/L	0	0	0	0
CYANIDE	0.2 MG/L	0	0	76	70
FLUORIDE	4 MG/L	116	29	24	7
MERCURY	0.002 MG/L	0	0	0	0
NITRATE	10 MG/L	158	55	270	226
NITRITE	1 MG/L	0	0	77	69
SELENIUM	0.05 MG/L	4	1	4	1
SILVER	0.1 MG/L	0	0	0	0
THALLIUM, TOTAL	0.002 MG/L	0	0	0	0
ZINC	5 MG/L	0	0	0	0
<b>Subtotal</b>		<b>495</b>	<b>120</b>	<b>501</b>	<b>246</b>

### ***Inorganic Compounds -- Group Violations***

Contaminant	Significant M/R Violations	Significant M/R PWSs in Violation
<b>Metals</b>		
ALUMINUM	28	23
ANTIMONY, TOTAL	28	23
ARSENIC	28	23
BARIUM	28	23
BERYLLIUM, TOTAL	28	23
CADMIUM	28	23
CHROMIUM	28	23
IRON	28	23
MANGANESE	28	23
MERCURY	28	23
SELENIUM	28	23
SILVER	28	23
THALLIUM, TOTAL	28	23
ZINC	28	23
<b>Minerals</b>		
CHLORIDE	25	20
FLUORIDE	25	20
SULFATE	25	20
TDS	25	20
<b>Subtotal</b>	<b>53</b>	<b>26</b>

## **Radionuclides**

<b>Contaminant</b>	<b>MCL/MRDL</b>	<b>MCL/ MRDL Violations</b>	<b>MCL/ MRDL PWSs in Violation</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
38-STRONTIUM-90	4 millirems per year	0	0	1	1
TRITIUM	4 millirems per year	0	0	1	1
53-IODINE-131	4 millirems per year	0	0	1	1
COMBINED RADIUM (-226 & -228)	15 pCi/L	103	24	64	9
COMBINED URANIUM	30 ug/L	22	7	64	29
GROSS ALPHA, EXCL. RADON & URANIUM	5 pCi/L	109	23	64	29
<b>Subtotal</b>		<b>234</b>	<b>36</b>	<b>65</b>	<b>29</b>

## **Revised Total Coliform Rule**

<b>Violation Type</b>	<b>Treatment Technique Violations</b>	<b>Treatment Technique PWSs in Violation</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
MONITORING, ROUTINE, MAJOR (RTCR)			472	159
LEVEL 1 ASSESSMENT, TC POSITIVE NO REPORT (RTCR)	1	1		
<b>Subtotal</b>	<b>1</b>	<b>1</b>	<b>472</b>	<b>159</b>

## **Surface Water Treatment Rules**

<b>Violation Type</b>	<b>Treatment Technique Violations</b>	<b>Treatment Technique PWSs in Violation</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
MONTHLY COMBINED FILTER EFFLUENT (IESWTR/LT1)	1	1		
MONITORING, ROUTINE (IESWTR/LT1), MAJOR			101	11
FAILURE MAINTAIN MICROBIAL TREATMENT (LT2)	85	7		
SINGLE COMB FILTER EFFLUENT (IESWTR/LT1)	1	1		
FAILURE TO FILTER	1	1		
<b>Subtotal</b>	<b>88</b>	<b>9</b>	<b>101</b>	<b>11</b>



## **Disinfectants and Disinfection By-Products Rule (DBP1 & DBP2)**

Contaminant	MCL/MRDL	MCL/MRDL Violations	MCL/MRDL PWSs in Violation	Significant M/R Violations	Significant M/R PWSs in Violation
BROMATE	0.010 MG/L	0	0	0	0
CARBON, TOTAL	REMOVAL RATIO	0	0	28	2
DISINFECTANT RESIDUAL	CHLORINE (FREE) 0.2 MG/L, CHLORAMINE 0.5 MG/L	4	2	637	373
CHLORINE DIOXIDE	0.8 MG/L	0	0	4	2
CHLORITE	1.0 MG/L	2	1	17	12
TOTAL HALOACETIC ACIDS (HAA5)	0.060 MG/L	18	7	83	57
TRIHALOMETHANES (TTHM)	0.080 MG/L	99	38	96	65
<b>Subtotal</b>	<b>123</b>	<b>123</b>	<b>43</b>	<b>865</b>	<b>424</b>

## **Lead and Copper Rule**

Violation Type	Treatment Technique Violations	Treatment Technique PWSs in Violation	Significant M/R Violations	Significant M/R PWSs in Violation
INITIAL TAP SAMPLING			0	0
INITIAL/FOLLOW-UP/ROUTINE SOWT M/R			6	4
LEAD CONSUMER NOTICE			162	127
WATER QUALITY PARAMETER M/R			417	131
PUBLIC EDUCATION	1	1		
FOLLOW-UP OR ROUTINE TAP M/R			541	472
OCCT/SOWT RECOMMENDATION/STUDY	3	1		
OCCT/SOWT INSTALL DEMONSTRATION	0	0		
<b>Subtotal</b>	<b>4</b>	<b>2</b>	<b>1,126</b>	<b>683</b>

## ***Groundwater Rule***

<b>Violation Type</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
FAILURE ADDRESS DEFICIENCY	4	4
MONITOR TRIGGERED/ADDITIONAL, MAJOR	43	35
MONITOR TRIGGERED/ADDITIONAL, MINOR	7	7
<b>Subtotal</b>	<b>54</b>	<b>45</b>

## ***Consumer Confidence Reports***

<b>Violation Type</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
CONSUMER CONFIDENCE RULE	42	42
<b>Subtotal</b>	<b>42</b>	<b>42</b>

## ***Public Notification Rule***

<b>Violation Type</b>	<b>Significant M/R Violations</b>	<b>Significant M/R PWSs in Violation</b>
PUBLIC NOTICE RULE	725	186
<b>Subtotal</b>	<b>725</b>	<b>186</b>

# **Appendix A. Return to Compliance by Rule**

Data included in Table 3 represent all violations starting prior to the end of 2020 and ending after the beginning of 2020. Violations that returned to compliance in Table 3 are those violations starting prior to the end of 2020 and ending after the beginning of 2020 and returning to compliance in 2020.

<b>Rule</b>	<b>Violation Type Code</b>	<b>Violation Name</b>	<b>All Violations</b>	<b>Resolved Violations</b>
CONSUMER CONFIDENCE RULE	71	CCR REPORT	251	209
DISINFECTION BY-PRODUCTS	35	FAILURE SUBMIT OEL REPORT FOR HAA5	29	14
DISINFECTION BY-PRODUCTS	35	FAILURE SUBMIT OEL REPORT FOR TTHM	118	90
DISINFECTION BY-PRODUCTS	02	MCL, AVERAGE (CHLORITE)	4	2

Rule	Violation Type Code	Violation Name	All Violations	Resolved Violations
DISINFECTION BY-PRODUCTS	02	MCL, LRAA	142	25
DISINFECTION BY-PRODUCTS	27	MONITORING (CHL. DIOXIDE)	4	0
DISINFECTION BY-PRODUCTS	27	MONITORING, ROUTINE, MAJOR	1,138	320
DISINFECTION BY-PRODUCTS	11	MRDL (CHLORINE/CHLORAMINE)	4	0
GROUNDWATER RULE	45	FAILURE ADDRESS DEFICIENCY	6	2
GROUNDWATER RULE	48	FAILURE TO ADDRESS CONTAMINATION	1	1
GROUNDWATER RULE	34	MONITOR TRIGGERED/ADDITIONAL, MAJOR	232	189
GROUNDWATER RULE	34	MONITOR TRIGGERED/ADDITIONAL, MINOR	23	16
INORGANIC COMPOUNDS GROUP M/R	03	MONITORING, ROUTINE MAJOR	53	0
INORGANIC COMPOUNDS INDIVIDUAL M/R	03	MONITORING, ROUTINE MAJOR	529	28
INORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	345	8
INORGANIC COMPOUNDS MCL	01	MCL, SINGLE SAMPLE	168	10
LEAD AND COPPER RULE	52	FOLLOW-UP OR ROUTINE TAP M/R	581	40
LEAD AND COPPER RULE	56	INITIAL/FOLLOW-UP/ROUTINE SOWT M/R	9	3
LEAD AND COPPER RULE	66	LEAD CONSUMER NOTICE	713	551
LEAD AND COPPER RULE	57	OCCT/SOWT RECOMMENDATION/STUDY	25	22
LEAD AND COPPER RULE	65	PUBLIC EDUCATION	8	7
LEAD AND COPPER RULE	53	WATER QUALITY PARAMETER M/R	442	25
PUBLIC NOTICE	75	PUBLIC NOTICE RULE LINKED TO VIOLATION	3,695	2,970
RADIONUCLIDES	02	MCL, AVERAGE	240	6
RADIONUCLIDES	03	MONITORING, ROUTINE MAJOR	66	1
REVISED TOTAL COLIFORM RULE	2C	CORRECTIVE/EXPEDITED ACTIONS	5	5
REVISED TOTAL COLIFORM RULE	2A	LEVEL 1 ASSESS, MULTIPLE TC POS	7	7
REVISED TOTAL COLIFORM RULE	2A	LEVEL 1 ASSESS, TC POS RT NO RPT	14	13
REVISED TOTAL COLIFORM RULE	2B	LEVEL 2 ASSESSMENT, 2ND LEVEL 1	8	8
REVISED TOTAL COLIFORM RULE	1A	MCL, E. COLI, POS E COLI	3	3
REVISED TOTAL COLIFORM RULE	3A	MONITORING, ROUTINE, MAJOR	1,184	712
REVISED TOTAL COLIFORM RULE	2D	STARTUP PROCEDURES TT	2	2
SURFACE WATER TREATMENT RULES	41	FAILURE MAINTAIN MICROBIAL TREATMENT (LT2).	91	6
SURFACE WATER TREATMENT RULES	42	FAILURE TO FILTER	1	0

Rule	Violation Type Code	Violation Name	All Violations	Resolved Violations
SURFACE WATER TREATMENT RULES	CT	LOW CT GREATER THAN 4 HOURS	11	11
SURFACE WATER TREATMENT RULES	38	MONITORING, ROUTINE (IESWTR/LT1), MAJOR	117	16
SURFACE WATER TREATMENT RULES	44	MONTHLY COMB FILTER EFFLUENT (IESWTR/LT1)	18	17
SURFACE WATER TREATMENT RULES	43	SINGLE COMB FILTER EFFLUENT (IESWTR/LT1)	16	15
SYNTHETIC ORGANIC COMPOUNDS M/R	03	MONITORING, ROUTINE MAJOR	277	34
SYNTHETIC ORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	2	0
VOLATILE ORGANIC COMPOUNDS M/R	03	MONITORING, ROUTINE MAJOR	161	10
VOLATILE ORGANIC COMPOUNDS MCL	02	MCL, AVERAGE	7	0

## Obtaining a Copy of the 2020 Public Drinking Water Annual Compliance Report

As required by the Safe Drinking Water Act, the State of Texas has made the 2020 *Public Drinking Water Annual Compliance Report* available to the public. Interested parties can obtain a copy of the 2020 *Annual Public Water Systems Compliance Report* for Texas by accessing the [TCEQ website](#).

For additional information about this report contact:

Texas Commission on Environmental Quality

Water Supply Division

PO Box MC-155

12100 Park 35 Circle, Bldg. F

Austin, TX 78753

Phone: 512/239-4691

Email: [PDWS@tceq.texas.gov](mailto:PDWS@tceq.texas.gov)