State of Texas Public Drinking Water Program 2014 Annual Compliance Report

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Texas Commission on Environmental Quality (TCEQ)

Office of Water

Water Supply Division July 1, 2015

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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 2014 Annual Compliance Report fulfills this responsibility for Texas, and includes violations of maximum contaminant levels (MCLs), maximum residual disinfectant levels (MRDLs), treatment technique requirements, variances and exceptions, significant monitoring 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 version of SDWIS/STATE. Texas initially implemented SDWIS/STATE in 2006 and continues to implement additional and/or new compliance programs within SDWIS/STATE. This report contains data from the following time periods:

- The beginning date of a given violation compliance period on or before December 31, 2014.

- The ending date of a given violation compliance period on or after January 1, 2014.

By using these criteria, some violations which began prior to calendar year 2014 are included in this report.

Definitions and Terms

The following are definitions and terms used in this report.

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 systems -- 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.

Maximum Contaminant Level - Under the Safe Drinking Water Act (SDWA), the 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 Disinfection Level- The EPA sets national limits on residual disinfection levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed when public water systems add chemical disinfection for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels (MRDLs).

Treatment Techniques - For some regulations, the EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, some bacteria, and turbidity.

Variances and Exemptions - The State of Texas does not to grant variances or exemptions.

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 occurs.

Sampling - The TCEQ collects and pays for chemical compliance samples for public water systems; by a third party contractor. The current contractor is Antea USA. 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 2014, 99.7% of samples scheduled were collected, or the sample sites were accounted for as inactive orunavailable for sampling. The public water systems comply with the chemical compliance sampling requirement by paying the lab analysis expense. Public water systems are required to collect additional compliance samples. All public water systems are responsible for the routine collection of bacteriological samples disinfection residual data from their distribution system. Most water systems have to perform sampling for compliance for the Lead and Copper Rule. Systems that utilize a ground water source must monitor their raw well water when applicable. Systems that utilize surface water or ground water 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 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, with rare exceptions, occurs when no samples were taken or no results were reported during a compliance period.

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

Significant Consumer Notification Violations - For this report, a significant public notification violation occurred if a community water system 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 and has a violation code of 71.

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 Systems in Texas

As of July 1st, the State of Texas regulates 6,936 public water systems, providing drinking water to 27,003,831 customers. Of these customers:

- Approximately 26,208,720 people receive drinking water from 4,630 Community water systems;

- Approximately 517,200 people receive drinking water from 904 Non-Transient Non-Community water systems; and

- Approximately 277,911 people receive drinking water from 1,402 Transient Non-Community water systems.

State regulations require all public water systems in Texas to disinfect their drinking water. All systems shall properly disinfect water before it is distributed to any customer and shall maintain acceptable disinfectant residuals with 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 public water systems that utilize surface water or ground water 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 is shown below in Figure 1.

Figure 1. Active PWS Sources in Texas
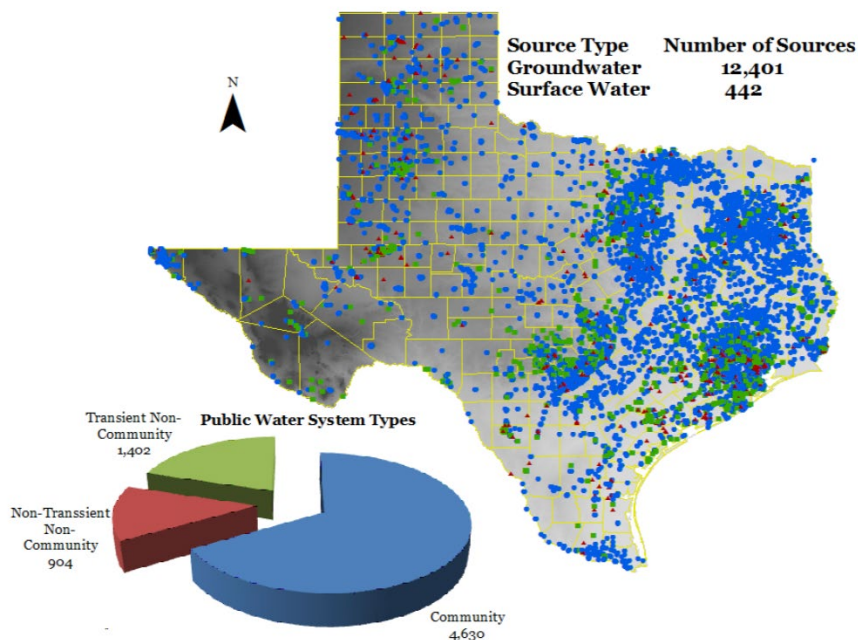
Primary source types for PWSs in Texas include the following:

- Groundwater - wells which withdraw water from aquifers;
- Purchased Groundwater - water purchased from another PWS where the source is one or more wells;
- Surface water – intakes which 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 which withdraw water from aquifers where surface water may be present; and

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- 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 as follows:

- Groundwater 5,253
- Purchased Groundwater 259
- Surface Water 325
- Purchased Surface Water 1,069
- Groundwater Under the Influence of Surface Water 29
- Purchased Groundwater Under the Influence of Surface Water 1

Figure 2. Number of PWSs by Source Type
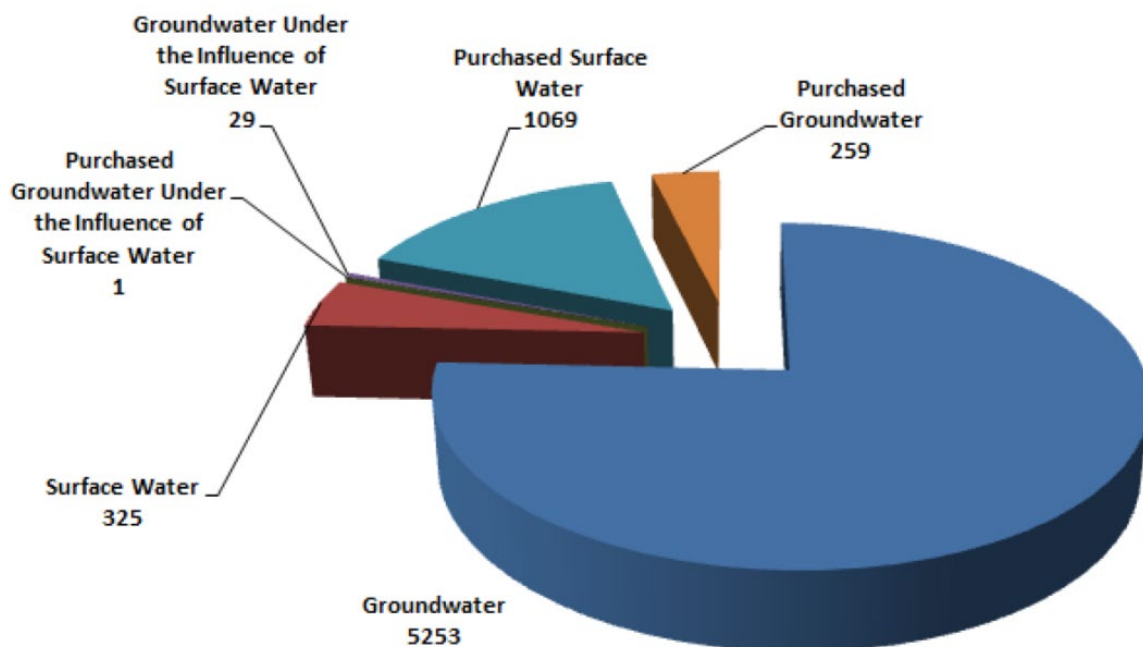
Public Water System Size

The EPA defines water system size based on the following 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 public water systems in Texas is shown in Table 1 below:

Alternative Sources of Water

Due to ongoing drought conditions and water shortages, many water systems in Texas have looked to alternative water sources.

One of the upcoming sources that communities are evaluating is reuse. The main types of reuse are non-potable reclaimed water and potable reuse. The regulation of non- potable reclaimed water is well established. The potable reuse projects are very new to the United States and the US Environmental Protection Agency (EPA) has not provided regulations or guidance regarding potable reuse. Texas is the first state to have a direct potable reuse project. The TCEQ has approved Colorado River Municipal Water District Raw Water Production Facility in April 2013 and the City of Wichita Falls was conditionally approved for direct potable reuse in July 2014.

Another source that communities are evaluating and requesting approval for is desalination. The use of reverse osmosis membranes and other desalination technologies for water treatment has been in use for decades. As of December 31, 2014 the TCEQ has approved approximately 55 desalination projects. With the growing interest in brackish groundwater and seawater, the TCEQ has taken action to facilitate streamlined approval for these facilities. In 2013, TCEQ implemented a new process that allows the use of computer modeling as an alternative to on-site pilot studies for the approval of groundwater desalination systems. This process was developed following a series of stakeholder meetings and documented in guidance. To date, TCEQ has approved 5 projects using this guidance. The TCEQ initiated rulemaking to amend agency rules to streamline the public water system treatment plan construction approval process for brackish desalination. The adopted rules will be effective July 30, 2015.

2014 Compliance Results

Annual compliance information was determined using the State of Texas Safe Drinking Water Information System (SDWIS) State, version 3.21.

Health-Based Standards

In 1974, Congress passed the Safe Drinking Water Act. 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 maximum contaminant level goals (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 a maximum contaminant level (MCL) based on the MCLG. MCLs are set as close to the MCLGs as possible, considering cost, benefits and the ability of public water systems 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 public water systems 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, or chlorine dioxide, inorganic chemicals, organic chemicals, radionuclides and disinfectants.

Total coliforms, fecal coliforms, E. coli and turbidity are indicators that inadequately treated water may contain disease-causing organisms. Pathogens include various types for 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 Maximum Residual Disinfection Level could experience nervous system effects.

Inorganic contaminants can leach into drinking water after dissolving from naturally- occurring minerals in the ground, or from runoff from industrial sources or landfills. 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 are sometimes associated with high blood pressure and cancer.

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. 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.

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

Disinfectants are chemicals added to the drinking water during treatment to provide disinfection at the treatment plant and in the distribution system. If disinfectants are not dosed and managed appropriately, health effects for chlorine and chloramines 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 regulated by the EPA, and their potential health effects, go to the following website: <http://water.epa.gov/drink/contaminants/>

For 2014, health-based standards were met by 93% of the 6,936 PWS in the State of Texas. The percentage of total population served by PWS meeting health-based standards was 95%. Figure 3 below shows the percentage of PWSs which are in compliance with health-based standards.

Figure 3. The percent of public water systems in compliance with health based standards.
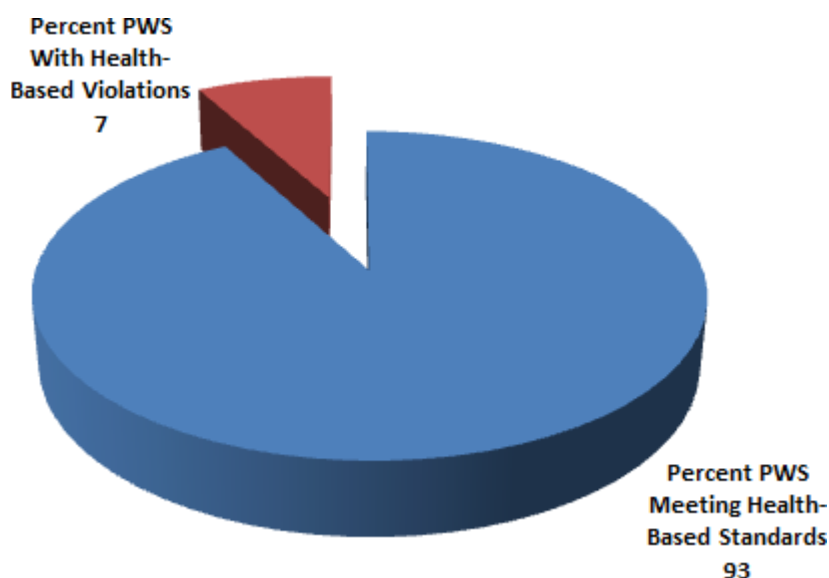
Maximum Contaminant Level and Treatment Technique Rule violations, as a percentage of total health-based violations, are shown in Figure 4 below.

Figure 4. Percent of Health-Based Standard Violations, by Contaminant

Contaminant	Percent
SWTR	0.1
MERCURY	0.1
NITRITE	0.2
1,1-DICHLOROETHYLENE	0.2
TURBIDITY	0.3
LT2ESWTR	1.0
SELENIUM	0.9
LEAD & COPPER	1.6
COMBINED URANIUM	3.1
TOTAL HALOACETIC ACIDS (HAA5)	3.7
COLIFORM (TCR)	5.4
GROSS ALPHA	9.2
COMBINED RADIUM (-226 & -228)	9.4
FLUORIDE	10.5
NITRATE	11.8
ARSENIC	18.8
TOTAL TRIHALOMETHANES	23.9
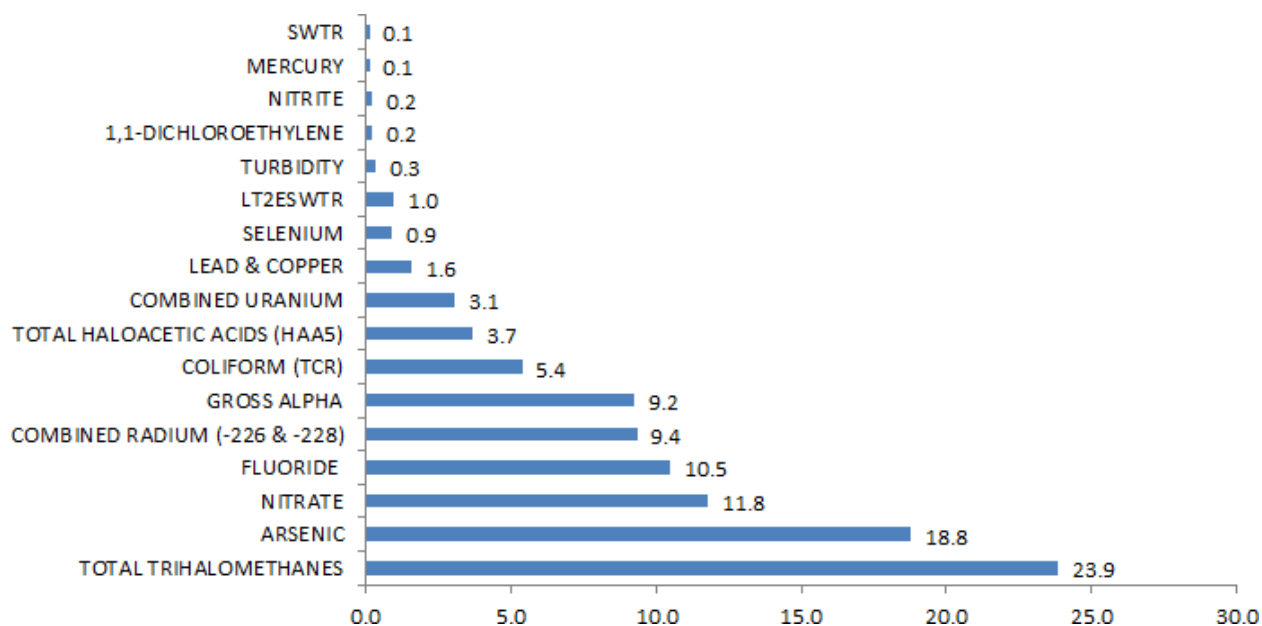
Major Monitoring and Reporting Regulations

For 2014, 77% of the 6,936 PWSs in Texas were in compliance with major monitoring and reporting regulations. The total population served by PWSs meeting monitoring and reporting regulations is 89%.

Figure 5 below shows the percent of PWSs which are in compliance with monitoring and reporting regulations.

Figure 5. Percent of PWSs in Compliance ith Monitoring and Reporting Regulations
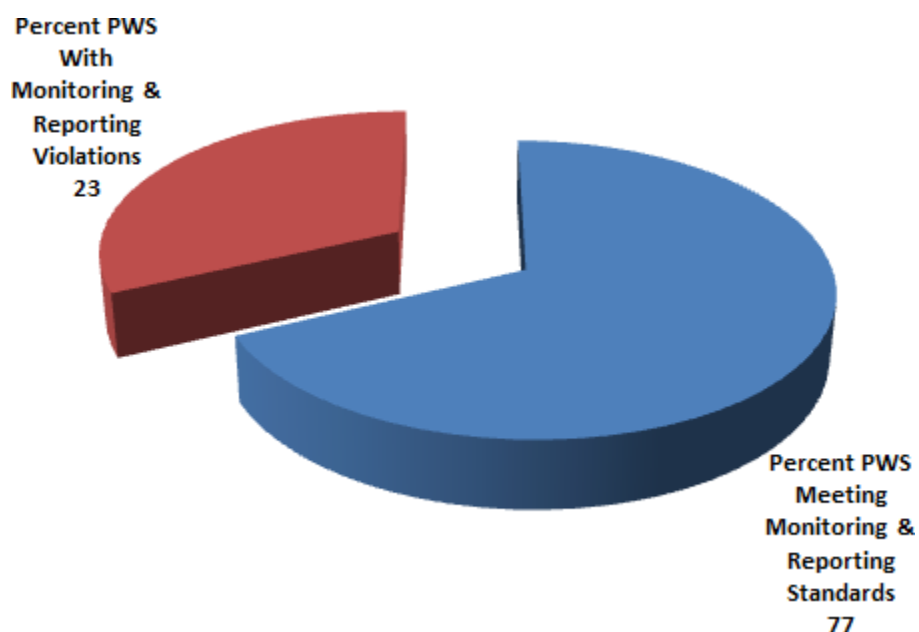
Of the 23% of PWSs with monitoring and reporting violations, the percent by contaminant and rule are shown in Figure 6 below:

Figure 6. Percent of Monitoring and Reporting Violations by Contaminant and Rule
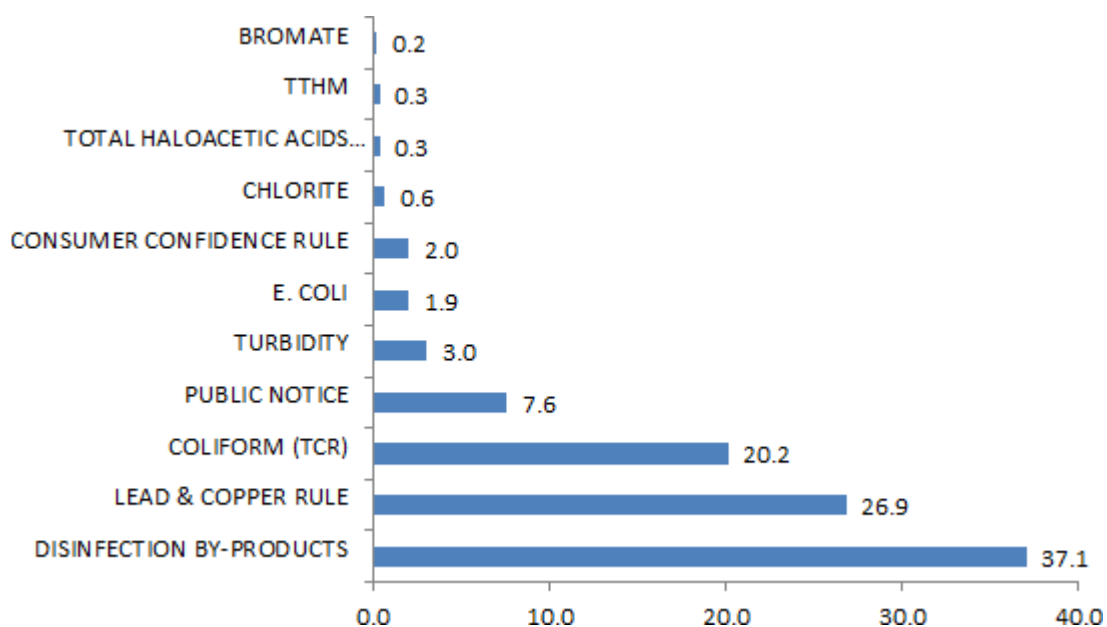
Violations by Rule and Type

A summary of the number of violations by rule and type is shown below in Table 2:

Table 2. PWS Violations by Rule & Type

Rule	Violation Type Code	Violation Name	Violation	Numbers of PWS in violation
CCR	71	CCR REPORT	77	34
Chem	02	MCL, AVERAGE	548	105
Chem	01	MCL, SINGLE SAMPLE	209	67
Chem	03	MONITORING, ROUTINE MAJOR	116	25
DBP	02	MCL, LRAA	492	159
DBP	27	MONITORING, ROUTINE (DBP), MAJOR	1336	739
GWR	34	MONITOR GWR TRIGGERED/ADDITIONAL, MAJOR	58	54
GWR	34	MONITOR GWR TRIGGERED/ADDITIONAL, MINOR	12	12
LCR	52	FOLLOW-UP OR ROUTINE TAP M/R (LCR)	77	38
LCR	51	INITIAL TAP SAMPLING (LCR)	282	68
LCR	56	INITIAL/FOLLOW-UP/ROUTINE SOWT M/R (LCR)	2	2
LCR	66	LEAD CONSUMER NOTICE (LCR)	582	548
LCR	57	OCCT/SOWT RECOMMENDATION/STUDY (LCR)	3	2
LCR	65	PUBLIC EDUCATION (LCR)	25	18
LCR	53	WATER QUALITY PARAMETER M/R (LCR)	25	11
PN	75	PUBLIC NOTICE RULE LINKED TO VIOLATION	272	139
Rad	02	MCL, AVERAGE	387	68
Rad	03	MONITORING, ROUTINE MAJOR	75	9
SWTR	41	FAILURE MAINTAIN MICROBIAL TREAT.(LT2)	12	1
SWTR	42	FAILURE TO FILTER (SWTR)	2	1
SWTR	42	FAILURE TO PROVIDE LT2 TREATMENT	3	1
SWTR	CT	LOW CT GREATER THAN 4 HOURS	2	2
SWTR	38	MONITORING, ROUTINE (IESWTR/LT1), MAJOR	108	27
SWTR	44	MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	5	4
SWTR	43	SINGLE COMB FLTR EFFLUENT (IESWTR/LT1)	1	1
TCR	21	MCL (TCR), ACUTE	5	5
TCR	22	MCL (TCR), MONTHLY	91	85
TCR	25	MONITORING (TCR), REPEAT MAJOR	38	36
TCR	23	MONITORING (TCR), ROUTINE MAJOR	688	289

Abbreviations:

CCR   Consumer Confidence Report
CHEM Chemical (Inorganics and Organics)
DBP   Disinfection By-Products
GWR   Groundwater Rule
HAA5 Haloacetic Acids
LCR   Lead and Copper Rule
PN   Public Notice Rule
RAD   Radionuclides
SWTR Surface Water Treatment Rules
TCR   Total Coliform Rule
TTHM Total Trihalomethanes

MCL/MRDL & Treatment Technique Violations

The following pages include summary tables for MCL/MRDL, Treatment Techniques, and Monitoring/Reporting.

Synthetic Organic Contaminants

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDL Number of Violations	MCLs/MRDL Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
2,3,7,8-TCCD (Dioxin)	$3\text{x}10^{-8}$	0	0	0	0
2,4,5-TP; Silvex	0.05	0	0	1	1
2,4-D	0.07	0	0	1	1
Alachlor; Lasso	0.002	0	0	1	1
Atrazine	0.003	0	0	1	1
Benzo[a]pyrene	0.0002	0	0	1	1
Carbofuran	0.04	0	0	1	1
Chlordane	0.002	0	0	1	1
Dalapon	0.2	0	0	1	1
Di(2-ethylhexyl)adipate	0.4	0	0	1	1
Di(2-ethylhexyl)phthalate	0.006	0	0	1	1
Dinoseb	0.007	0	0	1	1
Diquat	0.02	0	0	0	0
Endothall	0.1	0	0	0	0
Endrin	0.002	0	0	1	1
Ethylene dibromide (EDB)	0.00005	0	0	0	0
Glyphosate	0.7	0	0	0	0
Heptachlor	0.0004	0	0	1	1
Heptachlor epoxide	0.0002	0	0	1	1
Hexachlorobenzene HCB	0.001	0	0	1	1
Hexachlorocyclopentadiene	0.05	0	0	1	1
Gamma-BHC; Lidane	0.0002	0	0	0	0
Methoxychlor	0.04	0	0	1	1
Oxamyl (Vydate)	0.2	0	0	1	1
Pentachlorophenol	0.001	0	0	1	1
Picloram	0.5	0	0	0	0
Simazine	0.004	0	0	1	1
Total polychlorinated biphenyls (PCB)	0.0005	0	0	0	0
Toxaphene	0.003	0	0	1	1
Subtotal		0	0	21	2

Volatile Organic Contaminants

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDL Number of Violations	MCLs/MRDL Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
1,1,1-Trichloroethane	0.2	0	0	2	2
1,1,2-Trichloroethane	0.005	0	0	2	2
1,1-Dichloroethylene	0.007	4	1	2	2
1,2,4-Trichlorobenzene	0.07	0	0	2	2
1,2-Dichloroethane	0.005	0	0	2	2
1,2-Dichloropropane	0.005	0	0	2	2
Benzene	0.005	0	0	2	2
Carbon tetrachloride	0.002	0	0	2	2
cis-1,2-Dichloroethylene	0.07	0	0	2	2
Dichloromethane	0.005	0	0	2	2
Ethylbenzene	0.7	0	0	2	2
Monochlorobenzene	0.1	0	0	0	0
o-Dichlorobenzene	0.6	0	0	2	2
Para-Dichlorobenzene	0.075	0	0	0	0
Styrene	0.1	0	0	2	2
Tetrachloroethylene	0.005	0	0	2	2
Toluene	1	0	0	2	2
trans-1,2-Dichloroethylene	0.1	0	0	2	2
Trichloroethylene	0.005	0	0	2	2
Vinyl chloride	0.002	0	0	2	2
Xylenes (total)	10	0	0	2	2
Subtotal		4	1	38	2

Inorganic Contaminants

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Antimony	0.006	0	0	0	0
Arsenic	0.05	335	84	7	4
Asbestos	7 million fibers/l longer than 10 um	0	0	0	0
Barium	2	0	0	0	0
Beryllium	0.004	0	0	0	0
Cadmium	0.005	0	0	0	0

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Chromium	0.1	0	0	0	0
Cyanide (as free cyanide)	0.2	0	0	4	4
Fluoride	4	187	44	7	2
Mercury	0.002	2	1	0	0
Nitrate	10 (as nitrogen)	209	67	35	15
Nitrite	1 (as nitrogen)	4	3	4	4
Nitrate-Nitrite	10 (as nitrogen)	0	0	0	0
Selenium	0.05	16	3	0	0
Thallium	0.002	0	0	0	0
Subtotal		753	161	57	21

Radionuclides

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Gross Alpha, excluding Radon & Uranium	15pCi/L	165	50	25	9
Combined Uranium	30ug/L	55	17	25	9
Combined Radium (-226 & Radium 228)	5pCi/L	167	44	25	9
Subtotal		387	68	75	9

Total Coliform Rule

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Acute MCL violations	Presence	5	5		
Monthly MCL violations	Presence	91	85		
Monitoring, Routine Major (TCR)				688	289
Monitoring, Repeat Major (TCR)				38	36
Subtotal		96	90	726	316

Surface Water Treatment Rules

Contaminant	TT Number of Violations	TT Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Monitoring, routine/repeat			108	27
Record keeping for Ind. Filter			0	0
Failure to Maintain Microbial Treatment (LT2)	12	1		
Single combined filter effluent	1	1		
Monthly combined filter effluent	5	4		
Failure to Filter/Failure to Provide LT2 Treatment	5	1		
Low CT Greater Than 4 Hours	2	2	0	0
Subtotal	25	9	108	27

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

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Total Haloacetic Acids (HAA5)*	0.06	66	20	12	9
Trihalomethanes (TTHM)*	0.08	426	152	12	9
Bromate	0.01	0	0	6	3

Contaminant	MCL/MRDL (mg/l)	MCLs/MRDLs Number of Violations	MCLs/MRDLs Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Disinfectant Residual	Chlorine (Free) 0.2, Chloramine 0.5, Both 0.5	0	0	1285	716
Chlorite	1	0	0	21	13
Subtotal		492	159	1336	739

Lead and Copper Rule

Contaminant	TT Number of Violations	TT Number of Systems with Violations	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Initial Tap Sampling for Lead and Copper			282	68
Initial /Follow-Up/Routine SOWT			2	2
Follow-up or routine lead and copper tap M/R			77	38
Lead Consumer Notification			582	548
Initial Water Quality Parameters			25	11
OCCT/SOWT Recommendation/Study	3	2		
Public Education	25	18		
Subtotal	28	19	968	646

Groundwater Rule

Contaminant	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Monitoring GWR Triggered/Additional, Major	58	54
Monitoring GWR Triggered/Additional, Minor	12	12
Failure to Notify Other PWS	0	0
Public Notice Rule Not Linked to Violation	0	0
Subtotal	70	66

Consumer Confidence Reports

Contaminant	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
CCR Report Violations	77	34
Subtotal	77	34

Public Notification Rule

Contaminant	Significant M/R Number of Violations	Significant M/R Number of Systems with Violations
Public Notification Violations	272	139
Subtotal	272	139

Appendix A: Additional Information on the TCEQ Public Water Supply Supervision (PWSS) Program

TCEQ Public Water Supply Supervision (PWSS) Program

Prior to and immediately after federal promulgation of the SDWA, PWSS Program responsibility resided with the Texas Department of Health. In 1990, the program was transferred to the Texas Water Commission, which was reorganized into the Texas Natural Resource Conservation Commission (TNRCC) in 1992. In 2003, the TNRCC was renamed the TCEQ.

TCEQ currently implements a successful PWSS program through capacity development strategies; such as: financial, managerial, and technical assistance, preventive efforts, customer service, as well as through regulatory and enforcement actions. Preventive efforts are aimed at notifying and educating an operator about requirements, and can result in avoiding critical problems. TCEQ also conducts outreach and education activities to promote understanding of and compliance with their regulations.

<https://www.tceq.texas.gov/drinkingwater/pwss.html>

Enforcement Program

Under the EPA's Enforcement Response Policy and using EPA's ETT formula (i.e., score greater than or equal to 11), the TCEQ's Water Supply Division (WSD) identifies PWSs weekly that are considered priority systems for an enforcement response with the goal of returning those systems to compliance as quickly as possible. TCEQ created and continues to use its own ETT algorithm to identify and evaluate these systems on a weekly basis, based on the ETT formula provided in EPA's guidance.

Texas produces its own ETT list daily based on current Texas SDWIS/STATE data. In addition to creating its own ETT, the TCEQ's Public Drinking Water Section has reorganized to 1) increase efficiencies to 2) ensure timely compliance monitoring and compliance determination for chemical and microbiological standards, and 3) formal enforcement action for public water systems that exceed compliance trigger levels agreed upon by TCEQ and EPA for 6,936 public water systems that provide drinking water to 27,003,831 Texas citizens. Once the ETT report has been generated, the report is assigned to TCEQ compliance officers to analyze each system's compliance and inventory data to ensure the system meets the 11 points or greater criteria weekly. If a PWS meets the criteria for formal enforcement action as outlined in EPA's ERP, the TCEQ's Office of Water (OW) Public Drinking Water Program refers the system to the TCEQ's Office of Compliance and Enforcement (OCE) on a weekly basis for formal enforcement.

1996 SDWA Amendments Initiatives

Source Water Protection (SWP)

Source water is untreated water from streams, rivers, lakes or underground aquifers that is used to provide drinking water. Some water treatment is usually necessary, so public utilities treat most of the drinking water before it enters the distribution system and is subsequently provided to customers. However, the cost of this treatment, as well as the risks to public health, can be reduced by protecting source water from contamination.

EPA, other federal agencies, states, local communities, businesses and citizens all play a role in ensuring that drinking water is protected.

The Texas SWP Program is a voluntary program that helps public water systems to protect their drinking water sources from potential sources of contamination. SWP activities include inventorying protection areas around water wells and surface water intakes for potential sources of contamination, assisting water systems with best management practices and providing education/outreach events.

Capacity Development

The Capacity Development and Drinking Water State Revolving Fund (DWSRF) programs, created by the 1996 Safe Drinking Water Act (SDWA) Amendments, empower states to help water systems improve their abilities to comply with the SDWA and protect public health. State DWSRFs provide low-interest loans and other loan subsidies to eligible water systems for infrastructure improvements. State DWSRFs may also set aside resources to encourage enhanced water system management and performance. Under the TCEQ Capacity Development Program, assistance is provided to mitigate water shortage related issues; such as, drought. In addition assistance is provided to promote optimized operating systems. The Capacity Development Program coordinates with the Texas Water Infrastructure Coordination Committee (TWICC) and facilitates drought workshops and technical assistance.

TCEQ provided the Capacity Development program status by submitting the Texas FY 2014 Annual Report to EPA: Public Water System Capacity Development Program, submitted December 23, 2014. The annual report provided information that addresses the SDWA capacity development withholding provisions. EPA Region 6 determined that the report's content demonstrates that TCEQ is implementing a strategy to assist public water systems in acquiring and maintaining technical, managerial, and financial capacity. Also in FY 2014, TCEQ provided the required associated Governor's report on the state's capacity development program in September as required on a triennial basis.

Section 1420(a) of the SDWA requires States to develop legal authority or other means to ensure that new CWSs and new NTNC PWSs have financial, managerial, and technical (FMT) capacity with respect to each National Primary Drinking Water Regulation. Section 1452(a)(1)(G)(i) requires EPA to withhold 20% of a State's DWSRF capitalization grant unless the State meets the capacity authority requirements under Section 1420(a).

Texas Area-Wide Optimization Program (AWOP)

The Texas Optimization Program (TOP) AWOP goal is to improve the performance of existing surface water treatment plants and distribution systems without major capital improvements. To produce the safest water possible, TOP Team members evaluate performance and identify the factors that might be limiting plant performance. The evaluation technique used most often at public water systems is the Comprehensive Performance Evaluation (CPE). The evaluation includes an assessment of:

- Plant design
- Operational procedures
- Maintenance practices
- Administrative policies

In addition to performing evaluations, the TOP provides technical assistance to PWS through Targeted Performance Improvement (TPI). This technical assistance may be provided for surface water treatment plants, ground water plants, distribution systems, and cross-connection control programs.

The TOP develops and provides instruction on surface water treatment and disinfection in the form of directed assistance modules (DAM). New rule and drinking water concept training are provided by the TOP to OCE inspectors, water operators and water managers. The TOP also trains OCE and OW staff on Special Performance Evaluations. The TOP helps surface water treatment plants do the best job they can of removing potential pathogens (disease-causing microorganisms) from the lake or river water that they use to produce drinking water. A system that meets the TOP Recognition criteria ensures this increased public health protection and the TCEQ recognizes them for this significant achievement. Currently 15 water treatment plants are participating in the TOP Recognition Program out of approximately 430 surface water treatment plants in Texas. Six of these water treatment plants have met the extremely stringent recognition criteria continuously for more than five years.

Obtaining a Copy of the 2014 Public Drinking Water Annual Compliance Report

As required by the Safe Drinking Water Act, the State of Texas has made the 2014 Public Drinking Water Annual Compliance Report available to the public. Interested parties can obtain a copy of the 2014 Annual Public Water Systems Compliance Report for Texas by accessing the TCEQ website at <https://www.tceq.texas.gov>.

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