

**STATE OF HAWAII**  
**ANNUAL PUBLIC WATER SYSTEM**  
**COMPLIANCE REPORT**  
**CALENDAR YEAR 2016**

**July 1, 2017**

**Prepared by:**

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## **I. The National Drinking Water Program**

Overview. The EPA established the Public Water System Supervision (PWSS) Program under the authority of the 1974 Safe Drinking Water Act (SDWA). Under the SDWA and the 1986 and 1996 Amendments, 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) and Maximum Residual Disinfectant Levels (MRDLs). For some contaminants, EPA establishes treatment techniques in lieu of an MCL to control unacceptable levels in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the states or EPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires PWSs to notify their consumers when they have violated these regulations. The 1996 Amendments to the SDWA require consumer notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the PWS is undertaking to correct the violation and the possibility of alternative water supplies during the violation.

The SDWA applies to the 50 states, the District of Columbia, Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands.

The SDWA allows states and territories to seek EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primary enforcement authority or primacy. For a state to receive primacy, EPA must determine that the state meets certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements. EPA can also set other requirements for states to meet in order to qualify and maintain primacy. Once a state receives primacy, it has the responsibility to administer all applicable terms of the National Primary Drinking Water Regulations with EPA oversight. In addition, EPA can provide federal funding to states that have been given primacy.

The 1986 SDWA Amendments gave Indian Tribes the right to apply for and receive primacy. EPA currently administers PWSS Programs on all Indian lands except the Navaho Nation, which was granted primacy in 2000.

Under the authority given to it by Congress through the Safe Drinking Water Act and its amendments, EPA promulgates National Primary Drinking Water Regulations (NPDWR) to assure the safety of drinking water at the national level. The NPDWR is made up of a series of individual regulations which address specific concerns in drinking water. As new concerns are developed, new regulations can be added to the NPDWR. Most new regulations address specific contaminants or drinking water issues and contain its own set of monitoring and reporting requirements, MCLs and treatment techniques. Other regulations set forth requirements for informing the public about drinking water quality. States must adopt each new rule along with a set of primacy requirements in order to attain primary enforcement authority for that rule. EPA is also required to reassess its existing MCLs periodically as well as continually assess new contaminants for regulation.

The table below lists the rules which EPA currently enforces and their effective dates:

	<b>RULE</b>	<b>PROMULGATION DATE</b>	<b>EFFECTIVE DATE</b>
1	Phase I Volatile Organic Chemical Rule	7/8/1987	1/9/1989
2	Total Coliform Rule	6/29/1989	12/31/1990
3	Surface Water Treatment Rule	6/29/1989	12/31/1990
4	Lead and Copper Rule	6/7/1991	12/7/1992
5	Phase II Synthetic Organic/Inorganic Chemical Rule	1/30/1991	1/1/1993
6	Phase V Synthetic Organic/Inorganic Chemical Rule	7/17/1992	1/1/1993
7	Stage 1 Disinfectant/Disinfection By-Products Rule	1/16/1998	2/16/1999
8	Consumer Confidence Reports Rule	8/19/1998	10/19/1999
9	Lead and Copper Rule Minor Revisions	9/20/1999	4/11/2000
10	Public Notification Rule	5/4/2000	6/5/2000
11	Unregulated Contaminant Monitoring Rule	9/17/1999	1/1/2001
12	Interim Enhanced Surface Water Treatment Rule	12/16/1998	1/1/2002
13	Long Term 1 Enhanced Surface Water Treatment Rule	1/14/2002	2/13/2002
14	Revised Radionuclides Rule	12/7/2000	12/8/2003
15	Filter Backwash Rule	6/8/2001	6/8/2004
16	Arsenic and Clarifications to Compliance and New Source Monitoring Rule	1/22/2001	1/23/2006
17	Long Term 2 Enhanced Surface Water Treatment Rule	1/5/2006	3/6/2006
18	Stage 2 Disinfectant/Disinfection By-Products Rule	1/5/2006	3/6/2006
19	Groundwater Rule	10/11/2006	12/1/2009
20	Revised Total Coliform Rule	2/13/2013	4/1/2016

In addition, EPA, as a result of substantial lead in drinking water findings in Flint, Michigan, is:

- revising the Lead and Copper Rule;
- re-evaluating its current standards (MCLs); and
- studying new contaminant candidates for potential regulation.

**Definitions.** For the purpose of better understanding this report, the following terms are defined:

Annual State PWS Report. Each quarter, primacy states submit data to the Safe Drinking Water Information System (SDWIS/FED), an automated database maintained by EPA. The data submitted include, but are not limited to, PWS inventory information, the incidence of Maximum Contaminant Level, Maximum Residual Disinfectant Level, monitoring, and treatment technique violations; and information on enforcement activity related to these violations. Section 1414(c)(3) of the Safe Drinking Water Act requires states to provide EPA with an annual report of violations of the primary drinking water standards. This report provides the numbers of violations in each of five categories: MCLs, treatment techniques, variances and exemptions, significant monitoring violations, and significant consumer notification violations and will be made part of the national compliance report.

Public Water System. A Public Water System (PWS) is defined as a system that provides water via piping or other constructed conveyances for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. There are three types of PWSs. PWSs can be community (such as towns), non-transient non-community (such as schools or factories), or transient non-community systems (such as rest stops or parks). For this report when the acronym “PWS” is used, it 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 for specific contaminants in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). States may also set MCLs for contaminants of particular concern. In Hawaii, we have two MCLs for federally regulated contaminants that are lower than the federal MCL (more stringent) for 1,2-Dibromo-3-chloropropane (DBCP) and ethylene dibromide (EDB), and one MCL which EPA does not regulate for 1,2,3-Trichloropropane (TCP).

Maximum Residual Disinfectant Level. The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed, when public water systems add chemical disinfectant 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.

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 violation occurs. 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. 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. A **significant public notification violation** occurred if a community water system completely failed to provide its customers the required annual water quality report.

Variances and Exemptions. A primacy state can grant a PWS a *variance* from a primary drinking water regulation if the characteristics of the raw water sources reasonably available to the PWS do not allow the system to meet the MCL. To obtain a variance, the system must agree to install the best available technology, treatment techniques, or other means of limiting drinking water contamination that the Administrator finds are available (taking costs into account), and the state must find that the variance will not result in an unreasonable risk to public health. The variance shall be reviewed not less than every five years to determine if the system remains eligible for the variance. In Hawaii, no variances are currently in effect.

A primacy state can grant an *exemption* temporarily relieving a PWS of its obligation to comply with an MCL, treatment technique, or both if the system's noncompliance results from compelling factors (which may include economic factors) and the system was in operation on the effective date of the MCL or treatment technique requirement. The state will require the PWS to comply with the MCL or treatment technique as expeditiously as practicable, but not later than three years after the otherwise applicable compliance date. In Hawaii, no exemptions are currently in effect.

## II. Hawaii 2016 Drinking Water Compliance

Hawaii's annual compliance report is based on state records. 135 public water systems were regulated in Hawaii as of December 31, 2016.

Violations. A summary of the 2016 drinking water MCL, treatment technique, and significant monitoring/reporting violations is shown in Appendix A. The table in the appendix is organized by contaminant type: Organic Contaminants, Disinfectant/Disinfection By-Products (DBP) Rule, Radionuclides, Revised Total Coliform Rule, Surface Water Treatment Rule, Inorganic chemicals, Lead and Copper Rule and Groundwater Rule. A summary of the violations, listed in the same rule order, and with the water system names, is provided in Appendix B.

The state issued violation letters to all systems which incurred violations in 2016. The purveyors subsequently issued public notices to inform the public of the violations.

There were no MCL, treatment technique or major monitoring violations for any of the 69 regulated under the **Phase I Volatile Organic Chemical, or Phases II and V Synthetic Organic/Inorganic Chemical Rules.**

There was one MCL violation of the new **DBP Rule.** The Maunaloa-Kaluakoi water system (service population 1,000) on Molokai exceeded the locational running annual average for trihalomethanes (THMs) of 80 micrograms per liter at one sampling point in the system. The Hoolehua system (population 2400) incurred two significant monitoring violations for missing DBP sampling in the first quarter. These systems have subsequently returned to compliance.

There were no MCL violations for **Radiological** contaminants and no significant monitoring or reporting violations. The monitoring period for a majority of community water systems for Radionuclides ended on December 31, 2016.

There was one monitoring violation for the **Revised Total Coliform Rule.** The Hawaiian Ocean View Estates water system (population 1000) did not collect one monthly sample.

There was one monitoring violation of the **Surface Water Treatment Rule** incurred during the calendar year.

There were no violations of the **Lead and Copper Rule**, and no violations of the **Groundwater Rule** triggered source water monitoring or treatment technique requirements.

All community water systems complied with the **Consumer Confidence Rule** (CCR) to deliver an annual water quality or consumer confidence report.

No **variances or exemptions** were granted by the State of Hawaii, and no variances and exemptions were already in existence. Therefore, there were no violations of variances or exemptions.

Summary. For 2016, the Hawaii Safe Drinking Water Branch identified one MCL violation of the DBP Rule and two significant monitoring or reporting violations for DBPs. In addition, there was one significant monitoring violation for the Revised Total Coliform Rule, and one significant monitoring violation for the Surface Water Treatment Rule. All the systems have subsequently returned to compliance. The system with the MCL violation has completed further testing to determine that the level of THMs has been reduced. The three other systems with monitoring violations have taken the required samples to fulfill the monitoring requirements.

### **III. Obtaining a Copy of the 2016 Annual Public Water System Compliance Report**

As required by the Safe Drinking Water Act, Hawaii has made the 2016 Annual Public Water System Compliance Report available to the public. Interested individuals can obtain a copy of the 2016 Annual Public Water System Compliance Report for Hawaii by accessing the DOH/SDWB Website: <http://health.hawaii.gov/sdwb/newsletters/>. Click on the 2016 Annual Public Water System Compliance Report link.

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Appendix A: MCL, Treatment Technique, and Significant Monitoring/Reporting Violations, Calendar Year 2016

Synthetic Organic Contaminant	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
1,2-Dibromo-3-chloropropane	0.00004*	0	0			0	0
1,2-Dichloroethane	0.005	0	0			0	0
1,1-Dichloroethylene	0.007	0	0			0	0
1,2-Dichloropropane	0.005	0	0			0	0
1,1,1-Trichloroethane	0.2	0	0			0	0
1,2,3-Trichloropropane	0.0006*	0	0			0	0
1,2,4-Trichlorobenzene	0.07	0	0			0	0
1,1,2-Trichloroethane	0.005	0	0			0	0
2,4-D	0.07	0	0			0	0
2,4,5-TP (Silvex)	0.05	0	0			0	0
Acrylamide				0	0		
Alachlor	0.002	0	0			0	0
Atrazine	0.003	0	0			0	0
Benzene	0.005	0	0			0	0
Benzo(a)pyrene	0.0002	0	0			0	0
Carbofuran	0.04	0	0			0	0
Carbon Tetrachloride	0.005	0	0			0	0
Chlordane	0.002	0	0			0	0
Cis-1,2-Dichloroethylene	0.07	0	0			0	0
Dalapon	0.2	0	0			0	0
Di(2-ethylhexyl)adipate	0.4	0	0			0	0
Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
Dichloromethane	0.005	0	0			0	0
Dinoseb	0.007	0	0			0	0
2,3,7,8-TCDD (Dioxin)	0.00000003	0	0			0	0
Diquat	0.02	0	0			0	0
Endothall	0.1	0	0			0	0
Endrin	0.002	0	0			0	0
Epichlorohydrin				0	0		
Ethylbenzene	0.7	0	0			0	0
Ethylene dibromide	0.00004*	0	0			0	0
Glyphosate	0.7	0	0			0	0
Heptachlor	0.0004	0	0			0	0
Heptachlor epoxide	0.0002	0	0			0	0
Hexachlorobenzene	0.001	0	0			0	0
Hexachlorocyclopentadiene	0.05	0	0			0	0
Lindane	0.0002	0	0			0	0
Methoxychlor	0.04	0	0			0	0
Monochlorobenzene	0.1	0	0			0	0

Appendix A: MCL, Treatment Technique, and Significant Monitoring/Reporting Violations, Calendar Year 2016

Synthetic Organic Contaminant	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
o-Dichlorobenzene	0.6	0	0			0	0
Oxamyl (Vydate)	0.2	0	0			0	0
Para-Dichlorobenzene	0.075	0	0			0	0
Pentachlorophenol	0.001	0	0			0	0
Picloram	0.5	0	0			0	0
Simazine	0.004	0	0			0	0
Styrene	0.1	0	0			0	0
Tetrachoroethylene	0.005	0	0			0	0
Toluene	1	0	0			0	0
Total PCBs	0.0005	0	0			0	0
Toxaphene	0.002	0	0			0	0
Trans-1,2-Dichloroethylene	0.1	0	0			0	0
Trichloroethylene	0.005	0	0			0	0
Vinyl chloride	0.002	0	0			0	0
Xylenes (total)	10	0	0			0	0

\* State MCL

Disinfection By-Products	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Haloacetic Acids (HAA5)	0.060	0	0			1	1
Total Trihalomethanes	0.080	1	1			1	1

Radionuclides	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Gross Alpha	15 pCi/L	0	0			0	0
Radium 226 and Radium 228	5 pCi/L	0	0			0	0
Gross Beta	4 mrem/yr	0	0			0	0
Uranium	30 µg/L	0	0			0	0

pCi/L means pico-Curies per liter, mrem/yr means millirems per year, µg/L means micrograms per liter or parts per billion



Appendix A: MCL, Treatment Technique, and Significant Monitoring/Reporting Violations, Calendar Year 2016

Total Coliform Rule (TCR)/Revised TCR	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Acute MCL Violation	Presence	0	0				
Non-Acute MCL Violation	Presence	0	0				
Major routine and follow-up monitoring						1	1
Sanitary survey Violation A failure to meet any state or federal drinking water regulation						0	0

Surface Water Treatment Rule	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Filtered Systems							
Monitoring routine/repeat						1	1
Treatment techniques				0	0		
Unfiltered systems							
Monitoring routine/repeat						0	0
Failure to filter				0	0		

Inorganic Chemicals	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Antimony	0.005	0	0			0	0
Arsenic	0.01	0	0			0	0
Asbestos	7 MFL*	0	0			0	0
Barium	2	0	0			0	0
Beryllium	0.004	0	0			0	0
Cadmium	0.005	0	0			0	0
Chromium	0.1	0	0			0	0
Cyanide (as free cyanide)	0.2	0	0			0	0
Fluoride	4.0	0	0			0	0
Mercury	0.002	0	0			0	0
Nitrate (as Nitrogen)	10	0	0			0	0
Nitrite (as Nitrogen)	1	0	0			0	0
Selenium	0.05	0	0			0	0
Thallium	0.002	0	0			0	0
Total nitrate and nitrite (as Nitrogen)	10	0	0			0	0

\* MFL stands for million fibers per liter.

Appendix A: MCL, Treatment Technique, and Significant Monitoring/Reporting Violations, Calendar Year 2016

Lead and Copper Rule	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Initial lead and Copper tap M/R						0	0
Follow-up or routine lead and copper tap M/R						0	0
Treatment Installation				0	0		
Public Education				0	0		

Groundwater Rule	MCL (mg/l) Unless specified	MCLs		Treatment Technique		Significant Mon/Rep	
		No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations	No. of Violations	No. of Systems w/violations
Assessment Monitoring	Fecal Presence	0	0			0	0
Compliance Monitoring						0	0
Triggered Source Water Monitoring	Fecal Presence	0	0			0	0
Failure to Meet 4-Log Removal				0	0		
Failure to correct significant deficiencies identified by sanitary survey				0	0		

Appendix B: Hawaii Calendar Year 2016 Violations

YrMo	Qtr	PWS	SYSNAME	Viotype	Comments
<b>DBPs</b>					
2016-03	16Q1	231	Maunaloa-Kaluakoi	THM MCL	LRAA at 1 point exceeded 80.0 ug/L
2016-12	16Q4	230	Hoolehua	DBP M/R	did not collect samples in February
<b>RTCR</b>					
2016-09	2016Q3	169	Hawaiian Ocean View Estates	RTCR M/R	no sample collected 9/2016
<b>SWTR</b>					
2016-11	16Q4	214	Lahaina	SWTR LT2 M/R	no valid sample for turb., E. coli, crypto