

STATE OF HAWAII
ANNUAL PUBLIC WATER SYSTEM
COMPLIANCE REPORT
CALENDAR YEAR 2015

July 1, 2016

Prepared by:

**Hawaii Department of Health
Safe Drinking Water Branch
Environmental Management Division
919 Ala Moana Blvd., Room 308
Honolulu, Hawaii 96814-4920**

phone: (808) 586-4258

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 late 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:

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

1. The RTCR became effective on April 1, 2016 which is still outside the period covered by this report.

In addition, EPA as a result of substantial lead in drinking water findings this year in Flint, Michigan, is revising the Lead and Copper Rule, is re-evaluating its current standards (MCLs) and is 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.

Significant Monitoring Violations. For this report, significant monitoring violations are generally 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. 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.

Variations 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, there are no variances 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 2015 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, 2015.

Violations. A summary of the 2015 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 and inorganic contaminants, radionuclides, total coliform rule, surface water treatment rule, disinfectant/disinfection by-products rule and lead and copper rule. A summary of the violations, listed by water system, is provided in Appendix B.

The state issued violation letters to all systems which incurred violations in 2015. 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 violations of the new **Disinfectant/Disinfection By-Products Rule (DBPR)**. 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 two sampling points in the system. In addition, there were two significant monitoring violations by the Kunia Village (service population 650) and Poamoho Estates (service population 50) for missing sampling in the second quarter of 2015. These systems have subsequently returned to compliance.

There were no MCL violations for **Radiological** contaminants in 2015 and no significant monitoring or reporting violations since the monitoring period for a majority of community water systems for Radionuclides ends December 31, 2016..

There were three acute and six non-acute violations of the **Total Coliform Rule (TCR)** in calendar year 2015. The three acute violations occurred in two community water systems which included one violation at the Poamoho Estates system and two acute violations at the Moloaa Irrigation Cooperative system which serve: 50 and 47 persons respectively. The six non-acute violations occurred in four water systems when water systems have greater than five percent of their samples result in a total coliform positive in a monthly monitoring period. The Pearl Harbor (1 violation), Poamoho Estates (1 violation), Moloaa Irrigation Cooperative (3 violations), and Queen's Medical Center (1 violation) water systems, serve 60,000, 50, 47, and 3,400 persons daily. All six water systems have returned to compliance with TCR standards.

In 2015, there were no treatment technique violations of the **Surface Water Treatment Rule** incurred during calendar year.

There were no violations in 2015 of the **Lead and Copper Rule**.

In 2015, all community water systems complied with the **Consumer Confidence Rule (CCR)** to deliver an annual water quality or consumer confidence report.

In 2015, no new **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.

In 2015, there were no violations of the Groundwater Rule triggered source water monitoring or treatment technique requirements.

Summary.

For 2015, the Hawaii Safe Drinking Water Branch identified three acute and six non-acute MCL violations of the TCR, one MCL violation of the Disinfectant-Disinfection by-products rule and a total of two significant monitoring or reporting violations for disinfection-by-products. All systems have subsequently returned to compliance, either by further testing to determine the

system levels have been reduced or eliminated their contaminant presence, or taken the required samples to fulfill monitoring requirements.

Obtaining a Copy of the 2015 Annual Public Water System Compliance Report.

As required by the Safe Drinking Water Act, Hawaii has made the 2015 Annual Public Water System Compliance Report available to the public. Interested individuals can obtain a copy of the 2015 Annual Public Water System Compliance Report for Hawaii by accessing:

DOH/SDWB Website:

<http://health.hawaii.gov/aboutDOH/LinkstoProgramInfo/EnvironmentalHealthAdministration/EnvironmentalManagementDivision/SafeDrinkingWater>

(Click on 2015 Annual Public Water System Compliance Report)

Telephone: (808) 586-4258

Fax Number: (808) 586-4351

E-Mail: sdwb@doh.hawaii.gov

Address of Responsible
State Department:

Dept. of Health, Environmental Management Division
Safe Drinking Water Branch
919 Ala Moana Blvd, Room 308
Honolulu, HI 96814-4920

Contact Name:

Joanna L. Seto, P.E., Engineering Program Manager
Safe Drinking Water Branch

Table A: Hawaii Annual PWSSP Compliance Report for Calendar Year 2015

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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
o-Dichlorobenzene	0.6	0	0			0	0
Oxamyl (Vydate)	0.2	0	0			0	0

* State MCL

Table A: Hawaii Annual PWSSP Compliance Report for Calendar Year 2015

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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
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
Tetrachloroethylene	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

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			2	2
Total Trihalomethanes	0.080	1	1			2	2

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

Table A: Hawaii Annual PWSSP Compliance Report for Calendar Year 2015

Total Coliform 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
Acute MCL Violation	Presence	3	2				
Non-Acute MCL Violation	Presence	6	4				
Major routine and follow-up monitoring						0	0
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						0	0
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.

Table A: Hawaii Annual PWSSP Compliance Report for Calendar Year 2015

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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 CY 2015 Violations

Yr-Mo	pws	Qtr	SYSNAME	Viotype	Comments
2015	303	1512	Kunia Village	DBP M/R	did not collect DBPs in 5/2015
2015	371	1512	Poamoho Estates	DBP M/R	did not collect DBPs in 5/2015
2015-07	371	15Q3	Poamoho Estates	TCR Acute	TC+ followed by EC+
2015-07	371	15Q3	Poamoho Estates	TCR MCL	7 positives
2015-09	231	15Q3	Maunaloa-Kaluakoi	DBP MCL	LRAA exceeded 80 ug/L at 2 points
2015-09	312	15Q3	The Queen's Medical Center	TCR MCL	4 positives
2015-10	437	15Q4	Moloaa Irrigation Cooperative	TCR MCL	5 positives
2015-11	360	15q4	Pearl Harbor	TCR MCL	6 positives
2015-11	437	15Q4	Moloaa Irrigation Cooperative	TCR MCL	7 positives
2015-11	437	15Q4	Moloaa Irrigation Cooperative	TCR Acute	EC+ followed by a TC+
2015-12	437	15Q4	Moloaa Irrigation Cooperative	TCR MCL	8 positives
2015-12	437	15Q4	Moloaa Irrigation Cooperative	TCR Acute	EC+ followed by a TC+