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ANNUAL
COMPLIANCE
REPORT

2014

State Water Resources Control Board
Division of Drinking Water

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**STATE WATER RESOURCES CONTROL BOARD
DRINKING WATER PROGRAM
ANNUAL COMPLIANCE REPORT OF PUBLIC WATER SYSTEMS
CALENDAR YEAR 2014**

EXECUTIVE SUMMARY

The State of California Drinking Water Program (DWP), including designation by the EPA as the primacy agency, transferred in its entirety from the California Department of Public Health to the State Water Resources Control Board (SWRCB) on July 1, 2014.

Each quarter, the State's DWP submits data to the Safe Drinking Water Information System (SDWIS/FED), which is a database maintained by the U.S. Environmental Protection Agency (USEPA). The data submitted includes: public water system inventory information; incidents of violations for maximum contaminant levels (MCLs), maximum residual disinfectant levels (MRDLs), monitoring and reporting (M/R), treatment techniques (TT); violations concerning public and consumer notification; and information on enforcement activity related to these violations. In addition, SWRCB provides USEPA with this Annual Compliance Report, which includes a portion of the violation data listed above, that USEPA has identified for inclusion in this report.

Violation information included in this Annual Compliance Report is derived from the data available from USEPA's Safe Drinking Water Information System Reporting Services for the Annual Compliance Report for the period of January 1, 2014 through December 31, 2014. Please note that the data tables used in this report are available at the website listed below. These data tables can be used to search for specific water systems or to sort violations by the name of the county.

A copy of this 2014 Annual Compliance Report (and associated data tables) will be available to the public by contacting the SWRCB's Division of Drinking Water at (916) 449-5600, or through the SWRCB website at:

http://www.waterboards.ca.gov/drinking_water/programs/index.shtml.

The 2014 Annual Compliance Report discusses violations by categories such as: contaminant category, by individual contaminant, and by the violations in each county. The table below lists the number of violations and estimated populations impacted by the categories of MCL or treatment technique violations plus specific monitoring and reporting violations for 2014.

The violation data is used by DWP in establishing priorities and focusing resources to resolve compliance problems. The data for this report and appendices is available at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Publications.shtml

Comparison of Data between 2013 and 2014

Part A: Violations with potential direct public health impacts						
MCL and TT Violation Category	Year 2013		Year 2014		Change between 2013 and 2014	
	MCL & TT Violations	Impacted Population	MCL & TT Violations	Impacted Population	MCL & TT Violations	Impacted Population
Inorganic Contaminants	965	443,777	798	206,654	-167	-237,123
Synthetic Organic contaminants	9	12,913	11	15,602	2	2,689
Volatile Organic Contaminants	2	475	3	250	1	-225
Radionuclide Contaminants	71	21,357	73	23,865	2	2,508
Total Coliform Rule (acute and non-acute)	495	301,387	617	620,245	122	318,858
Disinfectants/ Disinfection Byproducts Rule	216	411,026	164	214,665	-52	-196,361
Surface Water Treatment Rules	143	18,886	86	20,766	-57	1,880
Groundwater Treatment Rules	0	0	2	27,360	2	27,360
Lead and Copper Rule	5	4,000	1	3,441	-4	-559
Totals	1,906	1,213,821	1,755	1,132,848	-151	-80,973
Part B: Violations related to keeping the public informed						
M/R Violation Category	Year 2013		Year 2014		Change between 2013 and 2014	
	M/R Violations	Number of PWS	M/R Violations	Number of PWS	M/R Violations	Number of PWS
Public Notification Rule	26	22	3	2	-23	-20
Consumer Confidence Notification	97	93	80	69	-17	-24
Exemptions and Variances	0	0	0	0	0	0
Totals	123	115	83	71	-40	-44

SECTION 1: INTRODUCTION

This report provides information from the State of California's Water Resources Control Board (SWRCB) records on public drinking water system violation data for calendar year 2014. This report is provided to the U.S. Environmental Protection Agency (EPA) and to the public as required by the Federal Safe Drinking Water Act, sections 1414(c)(3)(A)(i) – (ii).

The Federal Safe Drinking Water Act (SDWA) requires states to report violations of primary drinking water standards via the electronic data system of record as well as this report for each calendar year. This report does not contain information on domestic water supplies such as private wells, which do not meet the definition of a public water system.

The State's Drinking Water Program (DWP), including designation by the EPA as the primacy agency, transferred in its entirety from the California Department of Public Health to the SWRCB on July 1, 2014. Since this transition, the DWP has switched from the PICME Data System to the State Drinking Water Information System (SDWIS) for tracking of violation and compliance data.

THE DRINKING WATER PROGRAM OVERVIEW

Public water systems are regulated and monitored by the Division of Drinking Water of the SWRCB, commonly referred to as the Drinking Water Program (DWP). Currently, the DWP, including county-based Local Primacy Agencies (LPAs), regulate a total of 7,789 public water systems (PWS) in California. A PWS is defined as a water system serving 15 or more service connections, or 25 or more users for 60-plus days per year. PWSs are divided into three principle classifications: community water systems (CWS), non-transient non-community water systems (NTNC), and transient, non-community water systems (TNC).

CWSs serve cities, towns and other residential areas used by year-round users. Examples include water districts, cities, mutual water companies and even some small housing complexes served by their own well. NTNC systems are systems that provide water to the same non-residential users daily for at least 180 days out of the year but are not classified as CWS. Examples include schools, places of employment and institutions, etc. TNC systems are systems that provide water for a population that is transient. Examples include campgrounds, parks, ski resorts, roadside rest areas, gas stations and motels. As extracted from the SDWIS/State, Table 1 provides a count of the number and type of PWSs in California:

Table 1: Number of Water Systems by System Classification (As of April 2015)

Type of Water System	Count
Community Water Systems (CWS)	3,031
Non-Transient, Non-Community (NTNC)	1,510
Transient, Non-Community (TNC)	3,248
Total number of water systems statewide	7,789

Table 2: Number of Community Water Systems Statewide (As of April 2015)

Number of Service Connections	Typical Population Served	Number of Systems
3,300 or more	10,000 or more	407
1,000 to 3,300	3,000 to 10,000	276
500 to 999	1,500 to 3,000	151
100 to 499	300 to 1,500	602
25 to 99	75 to 300	997
Fewer than 25	25 to 75	598
Total number of systems		3,031

Under the 1974 SDWA and subsequent reauthorizations in 1986 and 1996, USEPA sets national limits on contaminant levels in drinking water for human consumption to protect the health of users. These limits are known as maximum contaminant levels (MCL) and maximum residual disinfectant levels (MRDL). For some regulations, treatment techniques (TT) have been established in lieu of an MCL as a means to control levels of specific contaminants in drinking water. Water systems are also regulated as to the frequency of monitoring and the reporting (M/R) of water quality or rule compliance. Systems can incur a violation for failure to collect required samples during a monitoring period (*monitoring violations*) or failure to report sample results or rule compliance in the required manner (*reporting violations*).

Water systems must notify their consumers when they have violated drinking water standards. This notification is required to include:

- A clear and understandable explanation of the nature of the violation
- The potential adverse health effects from the violation
- The steps that the water system is undertaking to correct the violation;
- The possible use of alternative water supplies available during the violation.

USEPA has designated the SWRCB as the primacy agency responsible for the administration and enforcement of the SDWA requirements in California. SWRCB has adopted mandated statutes and regulations to implement the requirements of the SDWA.

SWRCB has regulatory responsibility over water systems including tasks such as issuance of operating permits, conducting inspections, monitoring for compliance with regulations, and taking enforcement actions to compel compliance when violations are identified.

In 30 counties, the SWRCB has delegated the drinking water program regulatory authority (known as 'Primacy') for most of the small public water systems serving less than 200 service connections in each county. The delegated counties (Local Primacy

Agencies or LPAs) are responsible for the regulation of approximately 3,700 small public water systems statewide. The SWRCB retains direct regulatory authority over water systems serving 200 or more service connections and any small public water systems not delegated to an LPA.

Each quarter, SWRCB submits data to the Safe Drinking Water Information System (SDWIS/FED), a database maintained by USEPA. The data submitted includes:

- Water system inventory information;
- Incidents of violations for an MCL, MRDL, M/R, and TT;
- Violations concerning public and consumer notification;
- Information on enforcement activity related to these violations.

There are three basic types of violations that a water system can incur:

- **Violation of a Maximum Contaminant Level:** Primary drinking water standards have been adopted by SWRCB for contaminants that may be found in drinking water supplies in California and are necessary to protect the public from acute and chronic health risks associated with consuming water. These limits are known as MCLs.
- **Violation of a treatment technique:** Treatment techniques and performance standards have been adopted as a means to provide safe drinking water in instances where adoption of a specific MCL may be impractical or impossible. Treatment technique violations are a proven means to reduce the risk from various contaminants by closely controlling the treatment processes
- **Violation of a Monitoring and Reporting Requirement:** A water system is required to monitor and verify that the levels of contaminants present in the drinking water supplies do not exceed an MCL. A monitoring violation occurs when a water system fails to have its water tested as required within a compliance period. A reporting violation occurs when a water system fails to report test results in a timely fashion to the regulatory agency. A water system that fails to perform required monitoring for a group of chemicals (such as synthetic organic chemicals or volatile organic chemicals) would incur a violation of Monitoring and Reporting Requirements for each of the individual chemicals within this group.

SECTION 2: VIOLATION CATEGORY SUMMARY

The 2014 Annual Compliance Report lists violations by the following categories:

1. Inorganic contaminants
2. Synthetic organic contaminants
3. Volatile organic contaminants
4. Radionuclide contaminants
5. Total coliform rule
6. Disinfectant and disinfection byproduct rule
7. Surface water treatment rule

8. Groundwater treatment rule
9. Lead and copper rule
10. Public notification requirements
11. Consumer confidence report notification requirements
12. Variances and exemptions

SECTION 3: REVIEW OF 2014 VIOLATION DATA

Summary Data Tables for Calendar Years 2012, 2013, and 2014

There are four tables in the report that summarize the violation data for the 2014 calendar year as well as for calendar years 2012 and 2013. These tables include:

Table 3 - Number of violations by category for maximum contaminant levels/treatment techniques and monitoring/reporting requirements

Table 4 - Number and population of water systems with violations of maximum contaminant levels, maximum residual disinfectant levels and treatment techniques

Table 5 - Number and population of water systems with violations of monitoring and reporting requirements

Table 6 - Total Coliform Rule MCL Violations for Calendar Years 2012, 2013, 2014

Violation Information in the Appendix

Appendix A provides definitions of terminology used in this report

Appendix B summarizes violations by grouping by contaminant category

Appendix C summarizes violations by individual contaminant. It provides water system name, population and number of violations by contaminant. It sums up the population affected by each violation type.

Appendix D lists individual violations by county sorted by water system number. The table also sums up the population affected by these violations in each county.

Appendices E & F list systems with violations of priority contaminants (arsenic & nitrate/nitrite) where SWRCB is directing enhanced compliance actions, technical assistance, and SWRCB funding for infrastructure improvements.

Table 3: Number of Violations by Category for Maximum Contaminant Levels / Treatment Techniques (MCL/TT) and Monitoring / Reporting Requirements (M/R)

No	Category	2012		2013		2014	
		MCL/TT	M/R	MCL/TT	M/R	MCL/TT	M/R
1	Inorganic contaminants	926	256	965	256	798	172
2	Synthetic organic contaminants	7	9	9	1	11	0
3	Volatile organic contaminants	0	9	2	5	3	2
4	Radionuclide contaminants	91	6	71	3	73	7
5	Total coliform rule (TCR)	443	513	495	634	617	710
6	Disinfectant and disinfection byproducts rule (DBPR)	115	27	216	39	164	47
7	Surface water treatment rules (SWTR, IESWTR, LT2SWTR)	103	4	143	5	86	4
8	Groundwater treatment rule	0	0	0	0	2	25
9	Lead and copper rule (LCR)	5	119	5	55	1	93
10	Public notification requirements	N/A	19	N/A	26	N/A	3
11	Consumer confidence report notification requirements	N/A	140	N/A	97	N/A	80
12	Variances and exemptions	N/A	0	N/A	0	N/A	0

Table 4: Number and Population of Water Systems with Violations of Maximum Contaminant Level (MCL), Maximum Residual Disinfection Level (MRDL), and Treatment Technique (TT)

No	Category	2012		2013		2014	
		No. of Water Systems	Pop.	No. of Water Systems	Pop.	No. of Water Systems	Pop.
1	Inorganic contaminants	324	410,474	298	443,777	296	206,654
2	Synthetic organic contaminants	4	12,647	3	12,913	6	15,602
3	Volatile organic contaminants	0	0	2	475	2	250
4	Radionuclide contaminants	33	12,351	22	21,357	28	23,865
5	Total coliform rule (TCR)	344	507,169	370	301,387	442	620,245
6	Disinfectant and disinfection byproducts rule (DBPR), MRDL	58	69,147	73	411,026	62	214,665
7	Surface water treatment rules (SWTR, IESWTR, LT2SWTR)	43	247,152	31	18,886	31	20,766
8	Groundwater treatment rule	0	0	0	0	2	27,360
9	Lead and copper rule (LCR)	4	6,943	5	4,000	1	3,441

Table 5: Number and Population of Water Systems with Violations of Monitoring and Reporting Requirements (M/R)

No	Category	2012		2013		2014	
		No. of Water Systems	Pop.	No. of Water Systems	Pop.	No. of Water Systems	Pop.
1	Inorganic contaminants	216	109,151	209	313,904	153	131,814
2	Synthetic organic contaminants	2	470	1	36	0	0
3	Volatile organic contaminants	6	1,040	3	400	1	225
4	Radionuclide contaminants	5	852	3	600	3	616
5	Total coliform rule (TCR)	405	79,760	471	443,241	508	1,169,357
6	Disinfectant and disinfection byproducts rule (DBPR)	27	239,629	22	703,407	23	290,764
7	Surface water treatment rules (SWTR, IESWTR, LT2ESWTR)	5	230,352	5	169,616	2	600
8	Groundwater Treatment Rule	0	0	0	0	24	670,578
9	Lead and copper rule (LCR)	97	200,523	51	118,981	91	139,394
10	Public notification requirement	11	31,372	22	33,661	2	1,206
11	Consumer confidence report notification requirements	107	23,684	93	74,426	69	75,935
12	Variances and exemptions	0	0	0	0	0	0

SECTION 4: DISCUSSION OF VIOLATION TYPES AND CONTAMINANTS

This section contains summary information on violations entered into SWRCB's data system. More specific information on the water provided by a drinking water supplier can be obtained by requesting a copy of the Consumer Confidence Report (CCR) that all CWS and NTNC water systems are required to issue to their customers annually. To obtain a copy of a CCR, customers may contact public water system serving the area. Many public water systems also post their CCR to the internet. A link to identify contacts for a CWS is located at <https://sdwis.waterboards.ca.gov/PDWWW/>. When a system has violated a standard, the system is required to issue a public notice to their consumers, copies of which should also be available from the public water system upon request.

4.1 Inorganic Contaminants

Water systems were required to meet primary drinking water standards and monitoring and reporting requirements for 18 inorganic contaminants. MCL violations totaling 798 were as summarized below:

Contaminant Category	Contaminant	Violation Category	No. of Violations	No. of Water Systems
IOC	Arsenic	MCL	495	167
IOC	Asbestos	MCL	0	0
IOC	Cadmium	MCL	0	0
IOC	Fluoride	MCL	23	11
IOC	Mercury	MCL	4	1
IOC	Nitrate	MCL	264	123
IOC	Nitrate-Nitrite	MCL	12	4
IOC	Nitrite	MCL	0	0

Arsenic accounted for 495 violations of MCL for inorganic chemicals. The major sources of arsenic in drinking water are from erosion of natural deposits. Other sources of arsenic may include runoff from orchards, and wastes from glass and electronics production. Some people who drink water containing arsenic in excess of the MCL for many years could experience skin damage or problems with their circulatory system, and may have an increased risk for cancer. In California, the drinking water standard for arsenic was lowered to 0.010 mg/l as of November 28, 2008.

Nitrate (including Nitrites, and Nitrate + Nitrite combined) accounted for 276 violations of the MCL for inorganic chemicals. Nitrate and nitrite are commonly found in fertilizers used in farming and gardening. Nitrates are found in sewage and wastes from humans, animals, and some industrial processes. Contamination from nitrates and nitrites is usually the result of these human activities. There are few mineral deposits containing naturally occurring nitrate or nitrite in California.

Excessive levels of nitrate and nitrite in drinking water can cause serious illness and, in rare cases, even death in infants less than six months of age. This is a result of interference with the oxygen carrying capacity of the infant's blood. This is an acute disease in that symptoms can develop rapidly. As infants mature, changes in the digestive system naturally occur that prevent the conversion of nitrates to nitrites.

The health of infants can deteriorate over a period of days, if exposed to high levels of nitrates through drinking water or water used for infant formula. Symptoms of nitrate exposure in infants include shortness of breath and a marked blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women. Expert medical advice and an alternate source of drinking water are recommended if one suspects nitrate levels may be a cause for concern. Local and state health authorities are the best sources for information concerning alternate sources of drinking water for infants. SWRCB has set the drinking water standard at 45 milligrams per liter (mg/l) nitrate (measured as NO_3) and 1 mg/l for nitrite (measured as N) to protect against the risk of these adverse effects. Drinking water that meets the SWRCB standards is associated with little to no risk for nitrite/nitrate toxicity and is considered safe with respect to compounds.

Fluoride accounted for 23 violations of the MCL for inorganic chemicals. Major sources of naturally occurring fluoride in drinking water are from erosion of natural deposits. Sources of fluoride associated with human activities include discharges from fertilizer and aluminum processing facilities. Some people who drink water containing fluoride in excess of the Federal MCL of 4 mg/l over many years may get bone disease, including pain and tenderness of the bones. To protect people from the adverse effects of dental fluorosis (a brownish staining of the teeth), the state has set the MCL at 2 mg/l. Because fluoride also has a beneficial effect in preventing dental caries (tooth decay), some communities may add fluoride to their drinking water (fluoridation). Where fluoridation is practiced, levels are maintained at the optimal level for reduction of dental caries which is well below the state MCL.

Mercury accounted for 4 violations of the MCL for inorganic chemicals. In the U.S., mercury compounds are manufactured in small amounts for specialty uses, such as chemical and pharmaceutical applications. Mercury exposure at high levels can harm the brain, heart, kidneys, lungs, and immune system of people of all ages. Research shows that most people's fish consumption does not cause a health concern. However, it has been demonstrated that high levels of methyl-mercury in the bloodstream of unborn babies and young children may harm the developing nervous system, making the child less able to think and learn.

4.2 Synthetic Organic Contaminants

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for 33 synthetic organic contaminants (SOC).

Contaminant	Violation Category	No. of Violations	No. of Water Systems
1,2-Dibromo-3-chloropropane	MCL, Average	10	5
Ethylene dibromide	MCL, Average	1	1

Di-bromo-chloropropane (DBCP) accounted for 10 violations of MCL for SOCs. DBCP was banned from use in 1978, but is still found in some groundwater sources as a result of prior use of DBCP use as a soil fumigant in soybeans, cotton, and orchard crops. Some people who drink water containing DBCP in excess of the MCL for many years could experience reproductive difficulties and may have an increased cancer risk. SWRCB has set the drinking water standard for DBCP at 0.0002 milligrams per liter (mg/l) to reduce these risks. One violation of ethylene dibromide was reported in 2014 exceeding the MCL of 0.00005 mg/L. Ethylene dibromide is mainly used as a scavenger for lead in anti-knock gasoline mixtures, particularly in aviation fuel. Other uses include solvent for resins, gums, and waxes; in waterproofing preparations; as a chemical intermediate in the synthesis of dyes and pharmaceuticals; and as a fumigant, insecticide, nematicide for grains and fruit. A lifetime exposure to ethylene dibromide at levels above the MCL has the potential to damage the respiratory system, nervous system, liver, heart, and kidneys.

4.3 Volatile Organic Contaminants

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for 27 volatile organic contaminants (VOC). Two violations of trichloroethylene were reported in 2014 exceeding the MCL of 0.005 milligrams per liter (mg/l). One violation of tetrachloroethylene was reported in 2014 exceeding the MCL of 0.005 milligrams per liter (mg/L).

The following is the summary of violations for Volatile Organic Chemicals:

Contaminant Category	Contaminant	Violation Category	No. of Violations	No. of Water Systems
VOC	Trichloroethylene	MCL	2	1
VOC	Tetrachloroethylene	MCL	1	1

4.4 Radionuclide Contaminants

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for six radionuclide contaminants. 73 MCL violations were incurred for radionuclide contaminants.

Uranium accounted for all 73 violations of the MCL for radionuclides. The major source of uranium in drinking water is from erosion of natural deposits. Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer. The SWRCB has set the drinking

water standard for uranium at 20 pCi/L to protect against the risk of these adverse health effects. USEPA has set a Federal water standard for uranium at 30 pCi/L.

Contaminant Category	Contaminant	Violation Category	No. of Violations	No. of Water Systems
Radionuclide	Combined Uranium	MCL	73	28

4.5 Total Coliform Rule (TCR)

The total coliform rule violations identify the presence of coliform bacteria contamination at a level above the MCL in the drinking water distribution systems or a failure of a water system to conduct the required water quality monitoring for coliform bacteria in the water distribution systems. Table 6 summarizes the TCR MCL violations for calendar years 2012, 2013, and 2014.

Table 6: TCR MCL Violations for Calendar Years 2012, 2013, 2014

Type of MCL Violations	2012	2013	2014
Acute ¹ MCL violations	38	33	44
Non-acute MCL violations	405	462	573

Under the Total Coliform Rule (TCR), results are reported on a presence absence basis. CWS are required to routinely sample between one sample per month and 120 samples per week, depending on the size of the system. NTNC and TNC systems are generally on a monthly or quarterly sampling frequency. A public water system is in violation of the total coliform MCL when any of the following occurs:

- For a public water system which collects at least 40 samples per month, more than 5.0 percent of the samples collected during any month are total coliform-positive; or
- For a public water system which collects fewer than 40 samples per month, more than one sample collected during any month is total coliform-positive; or
- Any repeat sample is fecal coliform-positive or *E. coli*-positive; or
- Any repeat sample following a fecal coliform-positive or *E. coli*-positive routine sample is total coliform-positive.

The presence of fecal coliforms and *E. coli* are considered serious because they usually are associated with direct contamination by sewage or animal wastes. The presence of these bacteria in drinking water indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps,

¹ Under the Total Coliform Rule, an MCL is considered to be acute when sample results indicate the presence of fecal coliform organism, i.e.: since fecal coliforms originate in the gut of most warm-blooded animals, the presence of fecal coliforms is considered to be an indicator of possible sewage contamination; which requires an escalated response to protect public health.

nausea, and possibly jaundice, and associated headaches and fatigue. Because many of these symptoms can be mild or are flu-like, you should consult with your physician to determine if they are the result of a water-borne disease or other more common diseases (e.g. cold, flu or other bacterial or viral illnesses that are not water-borne).

4.6 Disinfectants and Disinfection Byproducts Rule (DBPR)

The following is the summary of violations for 2014:

Contaminant	Violation Category	No. of Violations	No. of Water Systems
Total Haloacetic Acids (HAA5)	MCL	32	17
Total Trihalomethanes	MCL	127	57
Total Organic Carbon	Treatment Technique Precursor Removal	4	1
Chlorine	Non-Acute MRDL	0	0
DBP Stage 1	Treatment Technique No Certified Operator	1	1

SWRCB has set primary drinking water standards and monitoring requirements for three disinfectants, and four disinfection byproduct contaminants which can form when chemical disinfectants are added to drinking water. To protect users from the acute health risk from microbial pathogens, SWRCB often requires public water systems to install disinfection facilities. However, disinfectants can also react with naturally-occurring organic matter present in water, or other chemicals, to form disinfection byproducts (DBPs).

SWRCB has determined that a number of DBPs are a health concern with long-term exposure and has adopted MCLs for trihalomethanes (THMs), haloacetic acids (HAAs), chlorite and bromate. THMs and HAAs have been shown to cause cancer in laboratory animals and have been shown to affect the liver and the nervous system, and cause reproductive or developmental effects in laboratory animals. Exposure to certain DBPs may produce similar effects in people. Chlorite, in excess of the MCL, can affect the nervous system in some infants and young children. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. In addition, some people exposed to chlorite may experience anemia.

Under the DBPR, enforceable standards, called Maximum Residual Disinfectant Levels (MRDL), have also been set for three common disinfectants. These include standards for chlorine, chloramine and chlorine dioxide disinfectant residuals in the distributions system. There was no MRDL violation in 2014.

Total organic carbon (TOC) is a precursor to DBP formation. Adding additional amounts of coagulant or lime to coagulation or softening treatment trains, respectively, can increase the amount of TOC removed and thereby lower DBP levels in finished water. The rule includes this treatment technique for systems using surface water or

groundwater under the direct influence of surface water that use conventional treatment. The PWS subject to the rule are required to remove a percentage of TOC from the raw water. There were four (4) violations related to total organic carbon in 2014.

As a requirement of the DBPR, California is required to maintain operator certification program for systems using a surface water source or a groundwater source under the direct influence of surface water. There was one violation related to operator certification rule in 2014.

4.7 Surface Water Treatment Rules

The surface water treatment rules include the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long-term 1 Surface Water Treatment Rule, Long-term 2 Surface Water Treatment Rule (LT2ESWTR), and Filter Backwash Rule. These rules establish monitoring and reporting requirements, treatment techniques, performance standards, and turbidity standards to be met by water systems using surface water as a drinking water source. The following is the summary of these violations:

Rule Violated	Violation Category	No. of Violations	No. of Water Systems
SWTR	Failure to Filter (SWTR)	36	10
SWTR	Treatment Technique (SWTR and GWR)	44	21
LT2ESWTR	Treatment Technique (SWTR and GWR)	3	1
IESWTR	Monthly Turbidity Exceedance (Enhanced SWTR)	3	2
IESWTR	Monitoring, Turbidity (Enhanced SWTR)	2	2
SWTR	Monitoring of Treatment (SWTR-Unfilt/GWR)	2	2

Treatment techniques and performance standards are used to establish water quality objectives instead of the MCLs for microbiological contaminants that may be found in surface waters, including *Giardia lamblia*, *Cryptosporidium parvum*, *Legionella*, heterotrophic plate count bacteria, and viruses. Water systems that use surface water are required to provide multi-barrier treatment to protect against adverse health effects from microbiological contaminants. All multi-barrier treatment systems must include the use of a SWRCB approved filtration technology as a first barrier, and a reliable disinfection system, as a second barrier. Some systems can avoid filtration by meeting special requirements including rigorous standards on their source waters. However, these systems must still disinfect their water.

There were a total of 32 systems that had violations of the surface water treatment rule performance or treatment technique requirements. There were 36 violations of filtration requirements by 10 water systems. There were 44 violations of surface water treatment techniques by a total of 21 water systems.

There were three (3) violations were found in the Interim Enhanced SWTR. The Interim Enhanced SWTR imposed a stricter turbidity monitoring and performance requirement and improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water that serve 10,000 or more persons.

There were no violations of the filter backwash recycling rule. The recycling of filter backwash water for reprocessing at the headwork's of the plant is a practice for water conservation. The filter backwash rule established requirements governing the way certain backwash streams are handled at water systems' filtration plants and established reporting and recordkeeping requirements for filter back-wash recycling practices to allow better evaluations and impacts of recycling practices on overall treatment plant performance.

4.8 Groundwater Rule

Groundwater Rule (GWR) establishes a risk-targeted approach to identify groundwater systems susceptible to fecal contamination and requires corrective action to correct significant deficiencies and source water fecal contamination in all public groundwater systems. The GWR applies to all PWS that use groundwater, including consecutive systems.

The purpose of the rule is to reduce disease incidence associated with disease-causing microorganisms in drinking water. The rule establishes a risk-based approach to target ground water systems that are vulnerable to fecal contamination. Ground water systems that are identified as being at risk of fecal contamination must take corrective action to reduce potential illness from exposure to microbial pathogens. The rule applies to all systems that use ground water as a source of drinking water. Special monitoring of the source water must be completed in response to total coliform contamination in the distribution system. A summary of violations for 2014 is below:

Rule Violated	Violation Category	No. of Violations	No. of Water Systems
Indicator Organism	Monitoring, Source Water	24	23
Groundwater Rule	Failure to Notify Other PWS	1	1
Groundwater Rule	Monitoring of Treatment (SWTR-Unfilt/GWR)	1	1
Groundwater Rule	Treatment Technique (SWTR and GWR)	1	1

4.9 Lead and Copper Rule

Under the lead and copper rule, public water systems collect first draw samples at representative customer taps and test them for lead and copper. Public water systems

are required to meet specific action levels for these contaminants, based on sample results, and take specified steps to lower exposure if an action level is exceeded. The following is the summary of violations for 2014:

Contaminant Category	Contaminant	Violation Category	No. of Violations	No. of Water Systems
Lead and Copper Rule	Lead	Maximum Permissible Level Non-Compliance	1	1
Lead and Copper Rule	Lead and Copper Rule	Follow-up Or Routine LCR Tap Monitoring	86	85
Lead and Copper Rule	Lead and Copper Rule	Initial Sampling for Lead and Copper	5	5
Lead and Copper Rule	Lead and Copper Rule	Initial, Follow-up, or Routine Source Water Monitoring	2	2

The major sources of copper in drinking water are from internal corrosion of household plumbing systems, erosion of natural deposits, and leaching from wood preservatives. The major source of lead in drinking water is from internal corrosion of certain household plumbing systems or components. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson’s disease should consult their personal doctor.

Lead can cause a variety of adverse health effects when people are exposed to it at levels above the action level for relatively short periods of time. These effects may include interference with red blood cell chemistry, delays in normal physical and mental development in babies and young children, slight deficits in the attention span, hearing, and learning abilities of children, and slight increases in the blood pressure of some adults. Lead has the potential to cause stroke, kidney disease and cancer based on a lifetime exposure at levels above the action level:

4.10 Public Notification

Water suppliers are required to notify SWRCB regulatory staff and the persons served by the water system whenever any of the following occurs: the water supplied to the consumers exceeds the MCLs for coliform bacteria, inorganic chemicals, turbidity, trihalomethanes, radioactivity, organic chemicals; or the water supplier fails to comply with a prescribed treatment technique established in lieu of an MCL; or the water supplier violates any schedule prescribed pursuant to a variance or exemption. A violation occurs when there is a failure to provide the required report to the public by the required date. There were three (3) violations for failure to provide the required notice to the public in 2014.

Rule Violated	Violation Category	No. of Violations	No. of Water Systems
Public Notice	PN Violation for National Primary Drinking Water Regulations (NPDWRs or primary standards) violation	3	2

4.11 Consumer Confidence Report Violations

All CWS and NTNC water systems are required to provide to their customers a report each year of the quality of the water being served by their water system. Each year's consumer confidence report (CCR), also includes information on the source of drinking water, the levels of any detected contaminants, and compliance with drinking water regulations by including a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the water system is undertaking to correct the violation and the possibility of alternative water supplies available during the violation. Systems are considered to be in continuing violation until a CCR is issued or the data for a missed year is included in a subsequent year's CCR.

Rule Violated	Violation Category	No. of Violations	No. of Water Systems
CCR	CCR Complete Failure to Report	77	66
CCR	CCR Inadequate Reporting	3	3

4.12 Variances and Exemptions Violations

SWRCB is authorized under the Federal SDWA to issue variances and exemptions from meeting drinking water standards to public water systems under special circumstances. There were no violations associated with variances or exemptions in 2014.

SECTION 5: ENFORCEMENT ACTIVITIES

Enforcement action is an essential element of the SWRCB regulatory program to bring all public water systems into full compliance with drinking water standards and regulations to ensure that the public receive safe drinking water.

SWRCB's enforcement actions against a public water system that violates a primary drinking water standard vary according to the type of contaminant and the health risk. Typically, SWRCB will require a public water system to develop a plan of compliance which may include some of the following actions:

- Provide an alternate source of safe drinking water.
- Shutdown or abandon the contaminated drinking water source, if this is possible.
- Conduct additional water quality monitoring to identify the cause and extent of the contamination and take appropriate corrective action.

- Install new water treatment facilities or modify the water treatment processes to eliminate the contamination.
- Issue a “Boil Water Notice” or “Do Not Drink Notice”, depending on the type of contaminant.

Additional enforcement actions available to SWRCB include revoking or suspending a water system’s operating permit, assessing civil penalties up to \$25,000 per day for each day a drinking water standard violation occurs, or placing a water system into receivership. Aggressive enforcement action is a key element of the SWRCB overall regulatory strategy to bring all public water systems into full compliance with drinking water standards and regulations.

SECTION 6: CONCLUSION

Overall, water systems in California have a high rate of compliance with drinking water standards. However, there are many communities that have to deal with serious water quality problems and ongoing violations. Any violation of drinking water standards represents an increased public health risk. The State Water Resources Control Board (SWRCB) is the primacy agency responsible for the administration and enforcement of the SDWA requirements in California. The implementation of the program includes a range of activities and authorities including issuing operating permits, conducting inspections, monitoring for compliance with regulations, and taking enforcement action to compel compliance when violations are identified.

As of July 1, 2014, a copy of each enforcement action issued by SWRCB is available at:

http://www.waterboards.ca.gov/drinking_water/programs/index.shtml

All enforcement actions issued by LPAs will be included in this page by the June 30, 2016. Enforcement actions are grouped by county.

The following documents provide additional information on the SWRCB’s overall drinking water regulatory program:

- The Safe Drinking Water Plan for California which is available at:
http://www.waterboards.ca.gov/drinking_water/safedinkingwaterplan/index.shtml
- The SWRCB is carrying out a Small Water System Program Plan aimed at reducing violations of drinking water standards especially in smaller water systems. Information on the SWS Program Plan is available via the Small Water Systems Support page:
http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Smallwatersystems.shtml

A copy of this report will be available to the public by contacting the SWRCB Division of Drinking Water at (916) 449-5600 or via the following page of SWRCB website:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Publications.shtml

APPENDIX A: DEFINITIONS

☐ Public Water System (PWS)

A public water system (water system) 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 at least 25 people for at least 60 days each year. There are three types of water systems:

- Community water systems (CWS) is a water system serving facilities such as cities, towns, mobile home parks),
- Non-transient non-community (NTNC) is a water system serving facilities such as schools, factories or other facilities that serve the same group of non-resident users at least 180 days out of the year,
- Transient non-community (TNC) is a water system serving facilities such as restaurants, parks, rest stops, campgrounds and other facilities that serve a transient population for at least 60 days out of the year.

For purposes in this report, the term 'water system' refers to a public water system of any of the three types unless otherwise specified.

☐ Primary Drinking Water Standards

Primary Drinking Water Standards are laws and regulations that apply to public water systems and are intended to:

- 1) Set maximum levels for specific contaminants that in the judgment of the SWRCB may have an adverse effect on the health of persons drinking the water.
- 2) Establish treatment techniques that are adopted by the SWRCB in lieu of a maximum contaminant level.
- 3) Establish monitoring and reporting requirements as specified by the SWRCB that pertain to either maximum contaminant levels, treatment techniques, or other aspects of operating a public water system.

☐ Maximum Contaminant Level (MCL)

Maximum Contaminant Levels are health protective drinking water standards to be met by public water systems. The MCLs take into account not only chemicals' health risks but also factors such as their detectability and treatability, as well as costs of treatment. Health & Safety Code §116365(a) requires SWRCB to establish a contaminant's MCL at a level as close to its PHG as is technologically and economically feasible, placing primary emphasis on the protection of public health

☐ **Maximum Residual Disinfectant Level (MRDL)**

Limits have been set for residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectants formed, when a water system adds chemical disinfectant for either primary or residual treatment. These limits are known as MRDLs.

☐ **Treatment Techniques (TT)**

For some contaminants, treatment techniques have been established in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for the treatment of surface waters in order to control the levels of viruses, bacteria, and other pathogens. Other treatment technique regulations are intended to establish operating parameters for other types of water treatment, where direct measurement of a contaminant is neither practical, nor cost effective.

☐ **Variances and Exemptions**

SWRCB is authorized under the Federal SDWA to issue variances and exemptions from meeting drinking water standards to water systems under special circumstances. A variance is allowed in situations where the characteristics of a raw water source make it not feasible or too costly for a water system to meet the MCL with the installation of the best available technology, treatment techniques, or other approved method. The approval of any variance must ensure adequate protection of human health. Additionally, the variance is reviewed by SWRCB not less than every five years to determine whether continuation of the variance is appropriate and necessary.

An exemption from an MCL and/or treatment technique is allowed in situations where a water system is in noncompliance as the result of compelling factors and the exemption will not result in an unreasonable risk to public health. Any water system that receives an exemption must achieve compliance with the MCL or treatment technique as expeditiously as practicable, but not later than three years after the applicable compliance date.

☐ **Monitoring and Reporting (M/R)**

A water system is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCL. A monitoring violation occurs when a water system fails to have its water tested as required or fails to report test results correctly to the regulatory agency.

☐ **Significant Monitoring or Reporting Violations**

For this report, significant monitoring or reporting violations are defined as when no samples were taken or no results, were reported.

☐ **Significant Public Notification Violations**

Unless otherwise directed by SWRCB, water suppliers are required to notify SWRCB and the persons served by the water system whenever any of the following occurs: the water supplied to the consumers exceeds the MCLs for coliform bacteria, inorganic chemicals, turbidity, trihalomethanes, radioactivity, organic chemicals; or the water supplier fails to comply with a prescribed treatment technique established in lieu of an MCL; or the water supplier violates any schedule prescribed pursuant to a variance or exemption. A significant public notification violation occurs when there is a failure to provide the required notification.

☐ **Consumer Confidence Report (CCR) Notification**

All community water systems and non-transient non-community water systems are required to deliver to their customers an annual CCR, summarizing water quality data collected during the year. The report is to include educational material, provide information on the source water(s), levels of any detected contaminants, and any compliance issues with the drinking water regulations.

☐ **Significant Consumer Notification Violations**

For this report, a significant consumer notification violation is incurred if a community or non-transient non-community water system completely fails to provide its customers the required annual consumer confidence report.

APPENDIX B: SUMMARY OF VIOLATIONS BY RULE FAMILY

Rule Family	Contaminant or Rule	Violation Category	No. of Violations	No. of Water Systems
CCR	Consumer Confidence Rule	CCR Complete Failure to Report	77	66
CCR	Consumer Confidence Rule	CCR Inadequate Reporting	3	3
DBPs	Carbon, Total	Treatment Technique Precursor Removal	4	1
DBPs	Chlorine	Non-Acute MRDL	0	0
DBPs	DBP Stage 1	Treatment Technique No Certif. Operator	1	1
DBPs	DBP STAGE 2	Monitoring, Routine (IDSE)	1	1
DBPs	Total Haloacetic Acids (HAA5)	MCL, Average	32	17
DBPs	Total Haloacetic Acids (HAA5)	Monitoring and Reporting (DBP)	5	5
DBPs	Total Haloacetic Acids (HAA5)	Monitoring, Routine (IDSE)	16	13
DBPs	TTHM	MCL, Average	127	57
DBPs	TTHM	Monitoring and Reporting (DBP)	5	5
DBPs	TTHM	Monitoring, Routine (IDSE)	20	17
Groundwater Rule	E. Coli	Monitoring, Source Water (GWR)	22	21
Groundwater Rule	Enterococci	Monitoring, Source Water (GWR)	2	2
Groundwater Rule	Groundwater Rule	Failure to Notify Other PWS	1	1
Groundwater Rule	Groundwater Rule	Monitoring of Treatment (SWTR-Unfilt/GWR)	1	1
Groundwater Rule	Groundwater Rule	Treatment Technique (SWTR and GWR)	1	1
Inorganics	Arsenic	MCL, Average	477	160
Inorganics	Arsenic	MCL, Single Sample	18	13
Inorganics	Arsenic	Monitoring, Regular	29	22
Inorganics	Asbestos	Monitoring, Regular	1	1
Inorganics	Cadmium	Monitoring, Regular	1	1
Inorganics	Fluoride	MCL, Average	23	11
Inorganics	Fluoride	Monitoring, Regular	1	1
Inorganics	Mercury	MCL, Average	4	1
Inorganics	Nitrate	MCL, Average	87	58
Inorganics	Nitrate	MCL, Single Sample	177	70

Rule Family	Contaminant or Rule	Violation Category	No. of Violations	No. of Water Systems
Inorganics	Nitrate	Monitoring, Check/Repeat/Confirmation	1	1
Inorganics	Nitrate	Monitoring, Regular	134	127
Inorganics	Nitrate	Notification, State	1	1
Inorganics	Nitrate-Nitrite	MCL, Average	1	1
Inorganics	Nitrate-Nitrite	MCL, Single Sample	11	4
Inorganics	Nitrate-Nitrite	Monitoring, Regular	1	1
Inorganics	Nitrite	Monitoring, Regular	3	3
LCR	Lead	MPL Non-Compliance	1	1
LCR	Lead and Copper Rule	Follow-up Or Routine LCR Tap M/R	86	85
LCR	Lead and Copper Rule	Initial Tap Sampling for Pb and Cu	5	5
LCR	Lead and Copper Rule	Initial, Follow-up, or Routine Source Water M/R	2	2
Public Notification	Public Notice	PN Violation for NPDWR Violation	3	2
Radiological	Combined Uranium	MCL, Average	73	28
Radiological	Combined Uranium	Monitoring, Regular	7	3
SOC	1,2-Dibromo-3-Chloropropane	MCL, Average	10	5
SOC	Ethylene Dibromide	MCL, Average	1	1
SWTR	IESWTR	Monitoring, Turbidity (Enhanced SWTR)	2	2
SWTR	IESWTR	Monthly Turbidity Exceed (Enhanced SWTR)	3	2
SWTR	LT2ESWTR	Treatment Technique (SWTR and GWR)	3	1
SWTR	SWTR	Failure to Filter (SWTR)	36	10
SWTR	SWTR	Monitoring of Treatment (SWTR-Unfilt/GWR)	2	2
SWTR	SWTR	Treatment Technique (SWTR and GWR)	44	21
TCR	Coliform (TCR)	MCL, Acute (TCR)	44	42
TCR	Coliform (TCR)	MCL, Monthly (TCR)	573	408
TCR	Coliform (TCR)	Monitoring, Repeat Major (TCR)	63	55
TCR	Coliform (TCR)	Monitoring, Repeat Minor (TCR)	52	46
TCR	Coliform (TCR)	Monitoring, Routine Major (TCR)	519	388
TCR	Coliform (TCR)	Monitoring, Routine Minor (TCR)	74	66
TCR	Coliform (TCR)	Notification, State	2	2

Rule Family	Contaminant or Rule	Violation Category	No. of Violations	No. of Water Systems
VOC	cis-1,2-Dichloroethylene	Monitoring, Regular	1	1
VOC	Tetrachloroethylene	MCL, Single Sample	1	1
VOC	Trichloroethylene	MCL, Average	2	1
VOC	Trichloroethylene	Monitoring, Regular	1	1

APPENDIX C: SUMMARY OF VIOLATIONS BY INDIVIDUAL CONTAMINANT

Contaminant	Rule Family	Violation Category	No. of Violations	No. of Water Systems
1,2-Dibromo-3-Chloropropane	SOC	MCL, Average	10	5
Arsenic	Inorganics	MCL, Average	477	160
Arsenic	Inorganics	MCL, Single Sample	18	13
Arsenic	Inorganics	Monitoring, Regular	29	22
Asbestos	Inorganics	Monitoring, Regular	1	1
Cadmium	Inorganics	Monitoring, Regular	1	1
Carbon, Total	DBPs	Treatment Technique Precursor Removal	4	1
Chlorine	DBPs	Non-Acute MRDL	0	0
cis-1,2-Dichloroethylene	VOC	Monitoring, Regular	1	1
Coliform (TCR)	TCR	MCL, Acute (TCR)	44	42
Coliform (TCR)	TCR	MCL, Monthly (TCR)	573	408
Coliform (TCR)	TCR	Monitoring, Repeat Major (TCR)	63	55
Coliform (TCR)	TCR	Monitoring, Repeat Minor (TCR)	52	46
Coliform (TCR)	TCR	Monitoring, Routine Major (TCR)	519	388
Coliform (TCR)	TCR	Monitoring, Routine Minor (TCR)	74	66
Coliform (TCR)	TCR	Notification, State	2	2
Combined Uranium	Radiological	MCL, Average	73	28
Combined Uranium	Radiological	Monitoring, Regular	7	3
Consumer Confidence Rule	CCR	CCR Complete Failure to Report	77	66
Consumer Confidence Rule	CCR	CCR Inadequate Reporting	3	3
DBP Stage 1	DBPs	Treatment Technique No Certif. Operator	1	1
DBP STAGE 2	DBPs	Monitoring, Routine (IDSE)	1	1
E. Coli	Groundwater Rule	Monitoring, Source Water (GWR)	22	21
Enterococci	Groundwater Rule	Monitoring, Source Water (GWR)	2	2
Ethylene Dibromide	SOC	MCL, Average	1	1
Fluoride	Inorganics	MCL, Average	23	11
Fluoride	Inorganics	Monitoring, Regular	1	1
Groundwater Rule	Groundwater Rule	Failure to Notify Other PWS	1	1

Contaminant	Rule Family	Violation Category	No. of Violations	No. of Water Systems
Groundwater Rule	Groundwater Rule	Monitoring of Treatment (SWTR-Unfilt/GWR)	1	1
Groundwater Rule	Groundwater Rule	Treatment Technique (SWTR and GWR)	1	1
IESWTR	SWTR	Monitoring, Turbidity (Enhanced SWTR)	2	2
IESWTR	SWTR	Monthly Turbidity Exceed (Enhanced SWTR)	3	2
Lead	LCR	MPL Non-Compliance	1	1
Lead and Copper Rule	LCR	Follow-up Or Routine LCR Tap M/R	86	85
Lead and Copper Rule	LCR	Initial Tap Sampling for Pb and Cu	5	5
Lead and Copper Rule	LCR	Initial, Follow-up, or Routine Source Water M/R	2	2
LT2ESWTR	SWTR	Treatment Technique (SWTR and GWR)	3	1
Mercury	Inorganics	MCL, Average	4	1
Nitrate	Inorganics	MCL, Average	87	58
Nitrate	Inorganics	MCL, Single Sample	177	70
Nitrate	Inorganics	Monitoring, Check/Repeat/Confirmation	1	1
Nitrate	Inorganics	Monitoring, Regular	134	127
Nitrate	Inorganics	Notification, State	1	1
Nitrate-Nitrite	Inorganics	MCL, Average	1	1
Nitrate-Nitrite	Inorganics	MCL, Single Sample	11	4
Nitrate-Nitrite	Inorganics	Monitoring, Regular	1	1
Nitrite	Inorganics	Monitoring, Regular	3	3
Public Notice	Public Notice	PN Violation for NPDWR Violation	3	2
SWTR	SWTR	Failure to Filter (SWTR)	36	10
SWTR	SWTR	Monitoring of Treatment (SWTR-Unfilt/GWR)	2	2
SWTR	SWTR	Treatment Technique (SWTR and GWR)	44	21
Tetrachloroethylene	VOC	MCL, Single Sample	1	1
Total Haloacetic Acids (HAA5)	DBPs	MCL, Average	32	17
Total Haloacetic Acids (HAA5)	DBPs	Monitoring and Reporting (DBP)	5	5
Total Haloacetic Acids (HAA5)	DBPs	Monitoring, Routine (IDSE)	16	13

Contaminant	Rule Family	Violation Category	No. of Violations	No. of Water Systems
Trichloroethylene	VOC	MCL, Average	2	1
Trichloroethylene	VOC	Monitoring, Regular	1	1
TTHM	DBPs	MCL, Average	127	57
TTHM	DBPs	Monitoring and Reporting (DBP)	5	5
TTHM	DBPs	Monitoring and Reporting (DBP)	20	17

**APPENDIX D: SUMMARY OF MCL VIOLATIONS FOR ARSENIC BY COUNTY
(MCL = 10 µg/l)**

County	PWS ID	PWS Name	Pop Served	No. of Violations	
COLUSA	CA0600008	COLUSA CO. W.D. #1 - GRIMES	500	3	
CONTRA COSTA	CA0706028	KNIGHTSEN ELEMENTARY SCHOOL	600	1	
	CA0707602	BEACON WEST	45	1	
	CA0707615	DOUBLETREE RANCH WATER SYSTEM	49	1	
FRESNO	CA1000053	LANARE COMMUNITY SERVICES DIST	660	4	
	CA1000071	LAKEVIEW IMPROVEMENT ASSOCIATION #1	160	2	
	CA1000072	SHAVER LAKE POINT #2	210	4	
	CA1000238	CAMDEN TRAILER PARK	75	4	
	CA1000369	ZONNEVELD DAIRY	139	4	
	CA1000472	PG&E HELMS SUPPORT FACILITY	40	2	
	CA1000580	CAMPOS BROS. FARMS	150	3	
	CA1000584	TRUE ORGANIC PRODUCTS	40	3	
	CA1000602	BAKER COMMODITIES INC.	60	4	
	CA1009051	CANTUA CREEK VINEYARDS, IV, LLC.	50	2	
	CA1009091	OLAM SPICES AND VEGETABLES, INC.	125	4	
	CA1010028	RIVERDALE PUBLIC UTILITY DISTRICT	2,416	2	
	CA1010030	TRANQUILLITY IRRIGATION DIST	800	2	
	CA1010039	CARUTHERS COMM SERV DIST	2,497	4	
	INYO	CA1400036	KEELER COMMUNITY SERVICE DISTRICT	50	4
		CA1400037	FOOTHILL MOBILE HOME PARK	60	4
	KERN	CA1500378	MAHER MUTUAL WATER COMPANY	150	3
CA1500405		AERIAL ACRES WATER SYSTEM	148	4	
CA1500424		LANDS OF PROMISE MUTUAL WATER ASSOCIATIO	190	4	
CA1500436		HUNGRY GULCH WATER SYSTEM	33	4	
CA1500442		SUNSET APARTMENTS WATER SYSTEM	37	3	
CA1500449		FOURTH STREET WATER SYSTEM	56	4	
CA1500455		WILLIAM FISHER MEMORIAL WATER COMPANY	53	4	
CA1500458		R.S. MUTUAL WATER COMPANY	67	2	
CA1500461		FOUNTAIN TRAILER PARK WATER	68	4	
CA1500493		EL ADOBE POA, INC.	200	4	
CA1500521		BOULDER CANYON WATER ASSOCIATION	28	4	
CA1500525	LAKEVIEW RANCHOS MUTUAL WATER COMPANY	120	4		
CA1500540	PINON VALLEY WATER COMPANY	80	3		

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA1500571	LUCKY 18 ON ROSAMOND, LLC	73	4
	CA1500585	OASIS PROPERTY OWNERS ASSOCIATION	100	2
	CA1502154	LAKESIDE SCHOOL	800	2
	CA1502231	ROSAMOND SCHOOL WATER SYSTEM	900	3
	CA1502383	NORD ROAD WATER ASSOCIATION	32	3
	CA1502569	FIRST MUTUAL WATER SYSTEM	35	4
	CA1502620	POND MUTUAL WATER COMPANY	48	3
	CA1502724	QUAIL VALLEY WATER DIST-EASTSIDE SYSTEM	60	3
	CA1510001	ARVIN COMMUNITY SERVICES DIST	18,000	3
	CA1510002	BORON CSD	2,500	4
	CA1510012	LAMONT PUBLIC UTILITY DIST	18,290	2
	CA1510014	MOJAVE PUD	4,000	3
	CA1510016	RAND COMMUNITIES WATER DISTRICT	450	4
	CA1510024	GREENFIELD COUNTY WD	8,500	3
	CA1510052	NORTH EDWARDS WD	600	3
	CA1510054	PINON PINES MWC	725	3
KINGS	CA1600004	FOUR SEASONS MOBILE HOME PARK	350	4
	CA1600008	CENTRAL UNION ELEMENTARY	320	4
	CA1600010	LACEY COURTS MHP	66	4
	CA1600014	KIT CARSON ELEM SCHOOL	510	3
	CA1600017	ISLAND UNION SCHOOL	300	5
	CA1600048	KETTLEMAN CITY ELEMENTARY	350	4
	CA1600050	CENTRAL VALLEY MEAT CO INC	280	3
	CA1600296	OLAM SPICES AND VEGETABLES INC	75	4
	CA1600601	KWRA MRF	53	4
	CA1600605	BAKER COMMODITIES INC.	47	3
	CA1610009	KETTLEMAN CITY CSD	1,450	3
LOS ANGELES	CA1900038	LANCASTER PARK MOBILE HOME PARK	53	3
	CA1900100	METTLER VALLEY MUTUAL	100	3
	CA1900520	THE VILLAGE MOBILE HOME PARK	70	1
	CA1900785	MITCHELL'S AVENUE E MOBILE HOME PARK	26	3
	CA1900961	WINTERHAVEN MOBILE ESTATES	40	3
	CA1910246	LAND PROJECT MUTUAL WATER CO.	1,500	4
MADERA	CA2000293	MD#46 AHWAHNEE RESORTS	300	3
	CA2000506	SIERRA LINDA MUTUAL WATER CO	180	1
	CA2000512	EAST ACRES MUTUAL WATER COMPANY	250	1
	CA2000527	YOSEMITE FORKS EST MUTUAL	110	4
	CA2000534	LEISURE ACRES MUTUAL WATER COMPANY	45	2

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA2000538	CEDAR VALLEY MUTUAL WATER CO	137	4
	CA2000550	MD#06 LAKE SHORE PARK	130	1
	CA2000551	MD#07 MARINA VIEW HEIGHTS	200	4
	CA2000561	MD#08 NORTH FORK WATER SYSTEM	264	2
	CA2000612	NORTH FORK UNION SCHOOL	350	4
	CA2000619	COLD SPRING GRANITE CO RAYMOND	43	1
	CA2000785	VALLEY TEEN RANCH	50	2
	CA2000866	AGRILAND FARMING CO INC	60	4
	CA2010007	HILLVIEW WC-OAKHURST/SIERRA LAKES	3,383	4
	CA2010012	HILLVIEW WATER CO-RAYMOND	290	4
	CA2010801	VALLEY STATE PRISON	4,000	4
MARIPOSA	CA2210937	MARIPOSA COUNTY PUBLIC WORKS DEPARTMENT	135	4
MERCED	CA2410004	CITY OF LIVINGSTON	14,894	4
MONO	CA2610003	BRIDGEPORT PUD	850	4
MONTEREY	CA2700612	LAGUNA SECA WC	162	1
	CA2700702	PRUNEDALE MWC	252	1
	CA2700799	VISTA DEL TORO WS	87	3
	CA2701221	WASHINGTON SCHOOL WS	250	2
	CA2701503	MESA DEL TORO MWC	90	2
	CA2701670	LANGLEY/VALLE PACIFICO WS	81	1
	CA2701926	MORO RD WS #09	210	2
	CA2701959	TIERRA VISTA MWC	57	1
	CA2702009	LAGUNA SECA RECREATION WS	500	3
	CA2702030	CYPRESS COMMUNITY CHURCH WS	200	1
	CA2702050	CHURCH OF THE GOOD SHEPHERD WS	50	2
	CA2702370	SPCA WS	50	1
	CA2702550	GRANGE HALL WS	25	1
PLUMAS	CA3210011	PLUMAS EUREKA CSD	325	4
RIVERSIDE	CA3301380	SAINT ANTHONY TRAILER PARK	300	3
	CA3301482	ORTEGA OAKS RV PARK&CAMPGROUND	25	4
	CA3303092	MECCA ARCO TRAVEL CENTER	47	4
	CA3303112	COACHELLA VALLEY FACILITY	245	4
SACRAMENTO	CA3400130	GREGG WATER CO	40	2
	CA3400138	LOCKE WATER WORKS CO [SWS]	80	3
	CA3400149	RANCHO MARINA	250	3
	CA3400164	VIEIRA'S RESORT, INC	150	3
	CA3400332	OXBOW MARINA (SWS)	200	3
	CA3400364	JEAN HARVIE SCHOOL [SWS]	30	3

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA3400433	EDGEWATER MOBILE HOME PARK	40	4
SAN BENITO	CA3500570	B & R FARMS	25	1
SAN BERNARDINO	CA3600025	BAR-LEN MWC	124	1
	CA3600062	CALLIER WATER SYSTEM	1,000	1
	CA3600196	CSA 70 W-4 PIONEERTOWN	625	2
	CA3601013	DARR WATER CO	1,000	1
	CA3601015	IRONWOOD CAMP	1,000	1
	CA3610705	US ARMY FORT IRWIN	16,000	3
SAN DIEGO	CA3701010	WARNER UNIFIED SCHOOL DISTRICT	250	3
SAN JOAQUIN	CA3900579	CENTURY MOBILE HOME PARK	50	4
	CA3900732	V & P TRAILER COURT WATER SYSTEM	35	1
	CA3900815	DELICATO VINEYARDS	25	1
	CA3901169	MUSD-NILE GARDEN SCHOOL	804	4
	CA3901213	AVALOS, SILVIA	30	4
	CA3901290	FISHER NURSERY	50	4
	CA3901334	BJJ COMPANY LLC	40	4
	CA3901392	ENVIROPLEX, INC	25	4
	CA3910015	CITY OF LATHROP	12,427	2
SANTA BARBARA	CA4210009	CUYAMA COMMUNITY SERVICES DISTRICT	820	1
SIERRA	CA4600019	SIERRA CO. W.W.D #1 CALPINE	225	4
SONOMA	CA4900575	LOCH HAVEN MUTUAL WATER COMPANY	50	4
	CA4900643	MOUNT WESKE ESTATES MUTUAL WATER COMPANY	62	2
	CA4900676	SEQUOIA GARDENS MOBILE HOME PARK	300	3
	CA4900815	PALMS INN	300	4
	CA4900878	SANTA ROSA GOLF & COUNTRY CLUB	50	4
	CA4900897	RODNEY STRONG VINEYARDS	100	2
	CA4901195	MOORLAND AVENUE APARTMENTS	64	4
STANISLAUS	CA5000033	COBLES CORNER	50	2
	CA5000051	MOBILE PLAZA PARK	125	4
	CA5000077	CERES WEST MHP	161	4
	CA5000080	COUNTRY WESTERN MOBILE HOME PARK	90	4
	CA5000085	GREEN RUN MOBILE ESTATES	100	4
	CA5000086	COUNTRYSIDE MHP	60	4
	CA5000218	COUNTRY VILLA APTS	30	4
	CA5000273	GRATTON SCHOOL	110	4
	CA5000389	MONTEREY PARK TRACT CSD	186	4
	CA5000465	DUARTE NURSERY INC WATER SYSTEM	75	1

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA5000484	UNITED PALLET SERVICES INC WATER SYSTEM	45	4
	CA5000555	PIRANHA PRODUCE	26	3
	CA5010008	HUGHSON, CITY OF	6,082	4
	CA5010009	KEYES COMMUNITY SERVICES DIST.	4,891	4
SUTTER	CA5100107	SUTTER CO. WWD#1 (ROBBINS)	350	3
	CA5100109	WILDEWOOD MUTUAL WATER CO., INC.	255	4
	CA5100145	WINSHIP ELEMENTARY SCHOOL	38	2
	CA5100149	BARRY ELEMENTARY SCHOOL	650	3
	CA5100180	GRACE BAPTIST CHURCH	200	3
TEHAMA	CA5200550	NEW ORCHARD MOBILE HOME PARK LLC	125	2
	CA5201137	MILLSTREAM MOBILE HOME PARK	80	2
	CA5210003	LOS MOLINOS COMM. SERVICES DIST.	1,500	4
TRINITY	CA5301002	LEWISTON COMMUNITY SERVICES DISTRICT	250	4
TULARE	CA5400544	ALLENSWORTH CSD	400	1
	CA5400713	OAK VALLEY SCHOOL	300	2
	CA5400754	SO KAWEAH MUTUAL WATER CO	300	1
	CA5403054	PFFJ, LLC	32	2
	CA5410009	PIXLEY PUBLIC UTIL DIST	3,310	3
	CA5410033	PRATT MUTUAL WATER CO	1,500	3
	CA5410050	ALPAUGH COMMUNITY SERVICES DISTRICT	1,026	4
YOLO	CA5700652	YOLO FLIERS CLUB	410	2
	CA5700778	YOLO CO CENTRAL LANDFILL - WATER	40	1

APPENDIX E: SUMMARY OF MCL VIOLATIONS FOR NITRATE-NITRITE BY COUNTY

County	PWS ID	PWS Name	Pop Served	No. of Violations
FRESNO	CA1000112	FAIRMONT SCHOOL	640	4
	CA1000160	FRESNO RIFLE & PISTOL CLUB	50	1
	CA1000207	CENTRAL WEST ARTS CENTER	56	4
	CA1000369	ZONNEVELD DAIRY	139	2
	CA1000452	RAY MOLES FARMS (MARKS AVE)	90	4
	CA1000459	JOHNNY QUIK FOOD STORE #127	300	2
	CA1000465	BATTH DEHYDRATOR	200	2
	CA1000469	LION RAISINS EMPLOYEE LABOR CAMP	35	1
	CA1000479	FRANZIA WINERY-SANGER	37	1
	CA1000505	RAY & LARRY MOLES (HENDERSON RD)	56	4
	CA1000515	MICHELSEN PACKAGING	25	1
	CA1009020	FIVE POINTS RANCH	100	1
KERN	CA1500393	RAINBIRD VALLEY MUTUAL WATER COMPANY	188	3
	CA1500458	R.S. MUTUAL WATER COMPANY	67	1
	CA1500464	LAKE ISABELLA KOA CAMPGROUND	280	4
	CA1500494	WILSON ROAD WATER COMMUNITY	72	4
	CA1500569	VALLEY VIEW ESTATES MUTUAL WATER CO	69	3
	CA1500575	SAN JOAQUIN ESTATES MUTUAL WATER COMPANY	165	4
	CA1500584	GOOSELAKE WATER COMPANY	105	1
	CA1500588	SON SHINE PROPERTIES	438	4
	CA1502012	HECK CELLARS WATER SYSTEM	47	4
	CA1502017	WHEELER FARMS HEADQUARTERS	25	4
	CA1502033	GOLDEN STATE VINTNERS-FRANZIA MCFARLAND	50	3
	CA1502194	SIERRA VISTA RESTAURANT	50	4
	CA1502273	SUN WORLD INTERNATIONAL, INC.-COM CENTER	80	4
	CA1502398	FARMER JOHN EGG RANCH #2	30	4
	CA1502413	BRADY S MINI MART	250	4
	CA1502556	I & I FARMS INC.	50	3
	CA1502699	EAST WILSON ROAD WATER COMPANY	35	4
	CA1503182	SUN PACIFIC SHIPPERS-KERN DIVISION	175	1
	CA1503515	SUN PACIFIC SHIPPERS-MARICOPA WATER SYS.	100	4
	CA1503576	ANTHONY VINEYARDS WATER SYSTEM	60	1

County	PWS ID	PWS Name	Pop Served	No. of Violations
LOS ANGELES	CA1900041	PROPERTY OWNERS WATER SYSTEM	96	2
	CA1900894	ACTON FOUR SQUARE CHURCH	50	1
MADERA	CA2000944	BONITA MINI MART (KATY'S MARKET - WATER	50	2
	CA2010012	HILLVIEW WATER CO-RAYMOND	290	3
MERCED	CA2400134	BUHACH PRESCHOOL (KINDER CARE)	110	1
	CA2400166	FOSTER FARMS CHICKEN LIVEHAUL (SYCAMORE	100	4
	CA2400249	LIVINGSTON PROPERTIES	60	3
MONTEREY	CA2700665	OAK HEIGHTS W & R CO INC	105	3
	CA2700738	SAN MIGUEL WS #01	100	3
	CA2700771	SPRINGFIELD WATER COMPANY	200	3
	CA2701036	APPLE AVE WS #03	60	2
	CA2701068	IVERSON & JACKS APTS WS	150	3
	CA2701153	GROWERS TRANSPLANTING WS	50	2
	CA2701241	ENCINAL RD WS #01	41	3
	CA2701542	GONZALES GAS STATION WS	200	3
	CA2701676	SAN LUCAS WD	500	2
	CA2701912	SPRECKELS LN WS #03	25	3
	CA2702409	EL CAMINO WC INC	90	2
	CA2702549	HARRISON RD WS #09	25	1
	CA2702616	ALTMAN PLANTS WS #02	25	2
	CA2702621	IVERSON RD WS #03	40	3
PLUMAS	CA3200085	LAST CHANCE SALOON	25	1
RIVERSIDE	CA3301330	INDIAN OAKS TRAILER PARK	96	4
	CA3301529	RAMONA WATER COMPANY	250	3
	CA3301570	MCCALL PARK - RIV.COUNTY PARKS	25	3
	CA3310016	HEMET, CITY OF	20,212	1
SAN BENITO	CA3510002	SAN JUAN BAUTISTA, CITY OF	1,720	1
SAN BERNARDINO	CA3600768	INSTITUTE OF MENTAL PHYSICS	100	2
	CA3601094	FUJI NATURAL FOOD	75	1
	CA3601137	LIZZE ENTERPRISES	25	1
SAN DIEGO	CA3700923	LAKE MORENA OAK SHORES MW CO.	700	4
	CA3701341	QUIET OAKS MOBILE HOME PARK	120	7
	CA3701760	LAKE MORENA TRAILER RESORT	60	6
	CA3701995	WILLOWSIDE TERRACE WATER ASSOCIATION	100	6
SAN JOAQUIN	CA3900649	GLENWOOD MOBILE HOME PARK	100	4
	CA3901164	JIMCO TRUCK PLAZA WATER SYSTEM	150	4

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA3901182	FINLEYS	25	4
	CA3901387	STOCKTON BAPTIST CHURCH	25	4
	CA3901466	PARK GREEN HOUSES WATER SYSTEM	25	2
	CA3901479	PG&E: MANTECA SERVICE CENTER	25	3
	CA3902136	LINDEN USD-CHARTVILLE SCHOOL	40	2
SHASTA	CA4500084	MCARTHUR MOBILEHOME PARK	99	1
SOLANO	CA4800732	DIXON 76	150	1
SONOMA	CA4900568	VALLEY FORD WATER ASSOCIATION	40	4
	CA4901074	VALLEY FORD HOTEL	50	1
STANISLAUS	CA5000389	MONTEREY PARK TRACT CSD	186	3
	CA5000426	LIBERTY BAPTIST CHURCH	65	3
	CA5000499	RATTO BROS	100	2
	CA5000514	NEW LIFE CHRISTIAN CENTER	400	1
	CA5000530	FRAZIER NUT FARMS, INC.	40	4
SUTTER	CA5100176	CALVARY CHRISTIAN CENTER	245	2
	CA5103335	LIVE OAK CHILD CARE CENTER	50	3
TEHAMA	CA5200655	LOUISIANA-PACIFIC CORPORATION	55	1
TULARE	CA5400507	VISALIA - FRESNO SOUTH KOA	150	1
	CA5400523	EL MONTE VILLAGE MHP	100	1
	CA5400541	PORTERVILLE CITRUS INC	100	1
	CA5400548	KINGS INN MOTEL	130	1
	CA5400555	CITRUS SOUTH TULE SCHOOL	50	1
	CA5400558	SAUCELITO ELEM SCHOOL	75	1
	CA5400616	LEMON COVE WATER CO	200	1
	CA5400651	BEVERLY GRAND MUTUAL WATER	108	1
	CA5400670	TRIPLE R MUTUAL WATER CO	400	1
	CA5400682	PLAINVIEW MWC - CENTRAL WATER	170	3
	CA5400709	SEQUOIA UNION SCHOOL	400	1
	CA5400735	RODRIGUEZ LABOR CAMP	110	1
	CA5400795	WAUKENA ELEMENTARY SCHOOL	230	1
	CA5400805	SOULTS MUTUAL WATER CO	120	1
	CA5400810	AKAL TRAVEL PLAZA	200	1
	CA5400918	OPEN COUNTRY SWAP MEET	300	1
	CA5400919	BUENA VISTA SCHOOL	365	1
	CA5400987	FOUNTAIN SPRINGS EL TAPATIO	25	1
	CA5401006	UC DAVIS-SCHOOL OF VET. MED.	70	3
	CA5401053	ACID	50	1
	CA5401063	THARP REAL PROPERTIES	35	1
	CA5402013	SUN PACIFIC SHIPPERS LP - EXETER	200	1

County	PWS ID	PWS Name	Pop Served	No. of Violations
	CA5402041	PENNY WISE MOTEL	25	1
	CA5402043	MONSON MARKET	25	1
	CA5402046	WATERMAN INDUSTRIES LLC	225	1
	CA5402048	DEL ORO RIVER ISLAND SERV TERR #2	99	1
	CA5402056	PEOPLES GROCERY	25	1
	CA5403010	VISALIA CITRUS PACKERS-WOODLAKE	150	1
	CA5403013	PRINCE MART	25	1
	CA5403022	APTCO LLC	150	1
	CA5403030	DRY CREEK DELI	50	1
	CA5403046	VISALIA CITRUS PACKING-ORANGE COVE	70	1
	CA5403053	NS MINI MART	140	1
	CA5403106	LO BUE BROS, INC. - EXETER	99	1
	CA5403110	SIERRA MUTUAL WATER CO	39	1
	CA5403140	MONARCH NUT CO	25	1
	CA5410007	LSID - TONYVILLE	500	3
YOLO	CA5700757	GRASSLAND PARK HOST WELL (OLD YOLO BOWME	50	1
	CA5700817	JEHOVAH'S WITNESSES - KINGDOM HALL	245	1