

ANNUAL
COMPLIANCE
REPORT

2013

State Water Resources Control Board
Division of Drinking Water

TABLE OF CONTENTS

	Page
Executive Summary	
Section 1 - Introduction	1
Section 2 - Violation Category Summary.....	4
Section 3 - Review and Evaluation of 2013 Violation Data.....	4
Section 4 - Discussion of Violation Types and Contaminants	8
Section 5 - Enforcement Activity	15
Section 6 - Conclusion	15

Tables

Table 1 - Number of water systems by system classification	2
Table 2 - Number of Community Water Systems by size of system	2
Table 3 - Number of violations by category for both Maximum Contaminant Levels/Treatment Techniques and Monitoring/Reporting requirements	5
Table 4 - Number and population of water systems with violations of Maximum Contaminant Level, Maximum Residual Disinfection Level and Treatment Technique	6
Table 5 - Number and Population of Water Systems with Violations of Monitoring and Reporting Requirements (M/R)	7
Table 6 - Numbers of Violations – Total Coliform Rule / Acute MCL Violations / Non-Acute MCL Violations	11

Appendices

- Appendix A** - Definitions
- Appendix B** - Summary of Violations by Violation Rule Family (Category)
- Appendix C** - Summary of Violations for Arsenic
- Appendix D** - Summary of Violations for Nitrate and Nitrite

STATE WATER RESOURCES CONTROL BOARD DRINKING WATER PROGRAM ANNUAL COMPLIANCE REPORT OF PUBLIC WATER SYSTEMS

CALENDAR YEAR 2013

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, 2013 through December 31, 2013. 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 2013 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 2013 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 2013.

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 2012 and 2013

Part A: Violations with potential direct public health impacts						
MCL and TT Violation Category	Year 2012		Year 2013		Change between 2012 and 2013	
	MCL & TT Violations	Impacted Population	MCL & TT Violations	Impacted Population	MCL & TT Violations	Impacted Population
Inorganic Contaminants	926	410,474	965	443,777	39	33,303
Synthetic Organic contaminants	7	12,647	9	12,913	2	266
Volatile Organic Contaminants	0	0	2	475	2	475
Radionuclide Contaminants	91	12,351	71	21,357	-20	9,006
Total Coliform Rule (acute and non-acute)	443	507,169	495	301,387	52	-205,782
Disinfectants/Disinfection Byproducts Rule	115	69,147	216	411,026	101	341,879
Surface Water Treatment Rules	103	247,152	143	18,886	40	-228,266
Lead and Copper Rule	5	6,943	5	4,000	0	-2,943
Totals	1,690	1,265,883	1,906	1,213,821	216	-52,062
Part B: Violations related to keeping the public informed						
M/R Violation Category	Year 2012		Year 2013		Change between 2012 and 2013	
	M/R Violations	Number of PWS	M/R Violations	Number of PWS	M/R Violations	Number of PWS
Public Notification Rule	19	11	26	22	7	11
Consumer Confidence Notification	140	107	93	93	-47	-14
Exemptions and Variances	0	0	0	0	0	0

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 2013. 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 (database of record), 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, by size of the system (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 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) could incur a violation of Monitoring and Reporting Requirements for each of the individual chemicals within this group.

SECTION 2: VIOLATION CATEGORY SUMMARY

The 2013 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 rules,
8. Lead and copper rule,
9. Public notification requirements,
10. Consumer confidence report notification requirements,
11. Variances and exemptions.

SECTION 3: REVIEW OF 2013 VIOLATION DATA

Summary Data Tables for Calendar Years 2011, 2012 and 2013

There are four tables in the report that summarize the violation data for the 2013 calendar year as well as for calendar years 2011 and 2012. 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 - Number of Violations – Total Coliform Rule – Acute MCL Violations / Non-Acute MCL Violations

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)**

	Category	Number of Violations					
		2011		2012		2013	
		MCL/TT	M/R	MCL/TT	M/R	MCL/TT	M/R
1	Inorganic contaminants	936	178	926	256	965	256
2	Synthetic organic contaminants	14	38	7	9	9	1
3	Volatile organic contaminants	0	2	0	9	2	5
4	Radionuclide contaminants	55	8	91	6	71	3
5	Total coliform rule (TCR)	569	644	443	513	495	634
6	Disinfectant and disinfection byproducts rule (DBPR)	162	35	115	27	216	39
7	Surface water treatment rules (SWTR, IESWTR, LT1SWTR, LT2SWTR and FBR)	128	4	103	4	143	5
8	Lead and copper rule (LCR)	5	0	5	119	5	55
9	Public notification requirements	NA	22	NA	19	NA	26

		Number of Violations					
		2011		2012		2013	
	Category	MCL/TT	M/R	MCL/TT	M/R	MCL/TT	M/R
10	Consumer confidence report notification requirements	NA	129	NA	140	NA	97
11	Variances and exemptions	NA	0	NA	0	NA	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)

		2011		2012		2013	
		No. of Water Systems	Population	No. of Water Systems	Population	No. of Water Systems	Population
1	Inorganic contaminants	315	538,691	324	410,474	298	443,777
2	Synthetic organic contaminants	4	1,309	4	12,647	3	12,913
3	Volatile organic contaminants	0	0	0	0	2	475
4	Radionuclide contaminants	24	18,335	33	12,351	22	21,357
5	Total coliform rule (TCR)	423	338,029	344	507,169	370	301,387
6	Disinfectant and disinfection byproducts rule (DBPR), MRDL	63	94,161	58	69,147	73	411,026
7	Surface water treatment rules (SWTR, IESWTR, LT1SWTR, LT2SWTR and FBR)	42	21,416	43	247,152	31	18,886
8	Lead and copper rule (LCR)	4	7,243	4	6,943	5	4,000

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

		2011		2012		2013	
		No. of Water Systems	Population	No. of Water Systems	Population	No. of Water Systems	Population
1	Inorganic contaminants	162	178,888	216	109,151	209	313,904
2	Synthetic organic contaminants	4	189	2	470	1	36
3	Volatile organic contaminants	2	113	6	1,040	3	400
4	Radionuclide contaminants	7	452	5	852	3	600
5	Total coliform rule (TCR)	445	271,805	405	79,760	471	443,241
6	Disinfectant and disinfection byproducts rule (DBPR)	34	202,827	27	239,629	22	703,407
7	Surface water treatment rules (SWTR, IESWTR, LT1ESWTR, LT2ESWTR and FBR)	4	976	5	230,352	5	169,616
8	Lead and copper rule (LCR)	0	0	97	200,523	51	118,981
9	Public notification requirement	11	5,427	11	31,372	22	33,661
10	Consumer confidence report notification requirements	72	16,991	107	23,684	93	74,426
11	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.

□ Inorganic Contaminants

Water systems were required to meet primary drinking water standards and monitoring and reporting requirements for 18 inorganic contaminants. MCL violations totaling 965 were reported for arsenic, nitrate, nitrite, fluoride, and mercury as summarized below:

Contaminant Category	Contaminant	Violation Category	# of Violations	# PWS in Violation
IOC	Arsenic	MCL, Average	567	173
IOC	Fluoride	MCL, Average	23	8
IOC	Mercury	MCL, Average	3	1
IOC	Nitrate	MCL, Average	372	140

Arsenic accounted for 567 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 372 violations of 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 (measure 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 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 three (3) violations of 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.

Synthetic Organic Contaminants

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

Di-bromo-chloropropane (DBCP) accounted for all nine (9) of the 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.

☐ **Volatile Organic Contaminants**

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for 27 volatile organic contaminants (VOC). Only one (1) violation of trichloroethylene was reported in 2013 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	# of Violations	# PWS in Violation
Volatile Organics	1,1-Dichloroethylene	MCL, Average	1	1
Volatile Organics	Trichloroethylene	MCL, Average	1	1

☐ **Radionuclide Contaminants**

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for six radionuclide contaminants. 71 MCL violations were incurred for radionuclide contaminants.

Combined Radium (-226 and -228) accounted for one (1) of the 71 violations of the MCL for radionuclides. Radiation may exist in drinking water from nuclides dissolved in the water from natural sources in the earth or occasionally from releases from laboratories or nuclear power plants. Some people who drink water containing radium-226 or radium-228 in excess of the MCL over many years may have an increased risk of getting cancer.

Uranium accounted for 70 violations of 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.

☐ **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 2011, 2012, and 2013.

Table 6
Numbers of Violations – Total Coliform Rule
Acute MCL Violations / Non-Acute MCL Violations

	2011	2012	2013
Acute ¹ MCL violations	38	38	33
Non-acute MCL violations	531	405	462

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:

(1) 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 (2) 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 (3) Any repeat sample is fecal coliform-positive or *E. coli*-positive; or (4) 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, 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).

□ **Disinfectants and Disinfection Byproducts Rule (DDBR)**

The following is the summary of violations for 2013:

Contaminant	Violation Category	# of Violations	# PWS in Violation
Total Haloacetic Acids (HAA5)	MCL, Average	48	19
Total Trihalomethanes	MCL, Average	156	54

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.

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 DBBR, 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 one (1) MRDL violation in 2013.

□ **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, 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	# of Violations	# PWS in Violation
SWTR	Failure to Filter (SWTR)	39	11
SWTR	Treatment Technique (SWTR and GWR)	102	21
IESWTR	Monthly Turbidity Exceedance (Enhanced SWTR)	2	1
IESWTR	Monitoring, Turbidity (Enhanced SWTR)	1	1
SWTR	Monitoring of Treatment (SWTR-Filter)	3	3
SWTR	Monitoring of Treatment (SWTR-Unfilt/GWR)	4	3

Treatment techniques and performance standards are used to establish water quality objectives instead of 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 39 violations of filtration requirements by 11 water systems. There were 102 violations of surface water treatment techniques by a total of 21 water systems. Of these two groups of water systems, 29 of the 32 serve fewer than 1,000 people.

There were no violations of the turbidity performance standards of the SWTR, however 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.

□ **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 2013:

Contaminant Category	Contaminant	Violation Category	# of Violations	# PWS in Violation
Lead and Copper Rule	Lead	Maximum Permissible Level violations	1	1
Lead and Copper Rule	Lead and Copper Rule	Follow-up Or Routine LCR Tap Monitoring	55	51
Lead and Copper Rule	Lead and Copper Rule	Initial Sampling for Lead and Copper	4	4

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:

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 nine (9) violations for failure to provide the required notice to the public in 2013.

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. There were 93 violations for failure to issue a CCR.

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 2013.

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. 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	# of Violations	# PWS in Violation
CCR	Consumer Confidence Rule	CCR Complete Failure to Report	94	90
CCR	Consumer Confidence Rule	CCR Inadequate Reporting	3	3
GWR	Groundwater Rule	Failure to Notify Other PWS	1	1
GWR	Groundwater Rule	Monitoring of Treatment (SWTR-Unfilt/GWR)	3	2
Inorganics	Arsenic	MCL, Average	526	158
Inorganics	Arsenic	MCL, Single Sample	41	15
Inorganics	Arsenic	Monitoring, Regular	38	28
Inorganics	Barium	Monitoring, Regular	1	1
Inorganics	Cadmium	Monitoring, Regular	2	2
Inorganics	Cadmium	Notification, State	1	1
Inorganics	Fluoride	MCL, Average	23	8
Inorganics	Fluoride	Monitoring, Regular	5	2
Inorganics	Mercury	MCL, Average	3	1
Inorganics	Nitrate	MCL, Average	192	72
Inorganics	Nitrate	MCL, Single Sample	165	64
Inorganics	Nitrate	Monitoring, Check/Repeat/Confirmation	3	2
Inorganics	Nitrate	Monitoring, Regular	179	159
Inorganics	Nitrate	Notification, State	7	4
Inorganics	Nitrate-Nitrite	MCL, Average	8	2
Inorganics	Nitrate-Nitrite	MCL, Single Sample	7	2
Inorganics	Nitrate-Nitrite	Monitoring, Regular	6	6
Inorganics	Nitrite	Monitoring, Regular	22	22
LCR	Lead	MPL Non-Compliance	1	1
LCR	Lead and Copper Rule	Follow-up Or Routine LCR Tap M/R	55	51
LCR	Lead and Copper Rule	Initial Tap Sampling for Pb and Cu	4	4
Public Notification	Public Notice	PN Violation for NPDWR Violation	6	5
Public Notification	Public Notice	PN Violation without NPDWR Violation	12	12
Radiological	Combined Radium (-226 and -228)	MCL, Average	1	1
Radiological	Combined Uranium	MCL, Average	69	20
Radiological	Combined Uranium	MCL, Single Sample	1	1
Radiological	Combined Uranium	Monitoring, Regular	3	3
SOC	1,2-DIBROMO-3-CHLOROPROPANE	MCL, Average	9	3
SOC	1,2-DIBROMO-3-	Monitoring, Regular	1	1

Rule Family	Contaminant or Rule	Violation Category	# of Violations	# PWS in Violation
	CHLOROPROPANE			
DBPs	Bromate	Monitoring and Reporting (DBP)	2	2
DBPs	CARBON, TOTAL	Treatment Technique Precursor Removal	6	3
DBPs	Chloramine	Monitoring and Reporting (DBP)	1	1
DBPs	Chlorine	Non-Acute MRDL	1	1
DBPs	DBP Stage 1	Treatment Technique No Certif. Operator	5	5
DBPs	Total Haloacetic Acids (HAA5)	MCL, Average	48	19
DBPs	Total Haloacetic Acids (HAA5)	Monitoring and Reporting (DBP)	8	8
DBPs	Total Haloacetic Acids (HAA5)	Monitoring, Routine (IDSE)	8	8
DBPs	TTHM	MCL, Average	156	54
DBPs	TTHM	Monitoring and Reporting (DBP)	11	11
DBPs	TTHM	Monitoring, Routine (IDSE)	8	8
DBPs	DBP STAGE 2	Monitoring, Routine (IDSE)	1	1
DBPs	Total Haloacetic Acids (HAA5)	MCL, Average	48	19
DBPs	Total Haloacetic Acids (HAA5)	Monitoring and Reporting (DBP)	8	8
DBPs	Total Haloacetic Acids (HAA5)	Monitoring, Routine (IDSE)	8	8
DBPs	TTHM	MCL, Average	156	54
DBPs	TTHM	Monitoring and Reporting (DBP)	11	11
DBPs	TTHM	Monitoring, Routine (IDSE)	8	8
SWTR	IESWTR	Monitoring, Turbidity (Enhanced SWTR)	1	1
SWTR	IESWTR	Monthly Turbidity Exceed (Enhanced SWTR)	2	1
SWTR	SWTR	Failure to Filter (SWTR)	39	11
SWTR	SWTR	Monitoring of Treatment (SWTR-Filter)	3	3
SWTR	SWTR	Monitoring of Treatment (SWTR-Unfilt/GWR)	1	1
SWTR	SWTR	Treatment Technique (SWTR and GWR)	102	21
TCR	Coliform (TCR)	MCL, Acute (TCR)	33	32
TCR	Coliform (TCR)	MCL, Monthly (TCR)	462	341
TCR	Coliform (TCR)	Monitoring, Repeat Major (TCR)	39	35
TCR	Coliform (TCR)	Monitoring, Repeat Minor (TCR)	34	32
TCR	Coliform (TCR)	Monitoring, Routine Major (TCR)	499	378
TCR	Coliform (TCR)	Monitoring, Routine Minor (TCR)	62	55
VOC	1,1-Dichloroethylene	MCL, Average	1	1
VOC	Tetrachloroethylene	Monitoring, Regular	2	1

Rule Family	Contaminant or Rule	Violation Category	# of Violations	# PWS in Violation
VOC	Trichloroethylene	MCL, Average	1	1
VOC	Trichloroethylene	Monitoring, Regular	2	2

APPENDIX C: Summary of Violations by Individual Contaminant

Contaminant	Rule Family	Violation Category	# of Violations	# PWS in Violation
1,1-Dichloroethylene	VOC	MCL, Average	1	1
1,2-DIBROMO-3-CHLOROPROPANE	SOC	MCL, Average	9	3
1,2-DIBROMO-3-CHLOROPROPANE	SOC	Monitoring, Regular	1	1
Arsenic	IOC	MCL, Average	526	158
Arsenic	IOC	MCL, Single Sample	41	15
Arsenic	IOC	Monitoring, Regular	38	28
Barium	IOC	Monitoring, Regular	1	1
Bromate	St1 DBP	Monitoring and Reporting (DBP)	2	2
Cadmium	IOC	Monitoring, Regular	2	2
Cadmium	IOC	Notification, State	1	1
CARBON, TOTAL	St1 DBP	Treatment Technique Precursor Removal	6	3
Chloramine	St1 DBP	Monitoring and Reporting (DBP)	1	1
Chlorine	St1 DBP	Non-Acute MRDL	1	1
cis-1,2-Dichloroethylene	VOC	Monitoring, Regular	1	1
Coliform (TCR)	TCR	MCL, Acute (TCR)	33	32
Coliform (TCR)	TCR	MCL, Monthly (TCR)	462	341
Coliform (TCR)	TCR	Monitoring, Repeat Major (TCR)	39	35
Coliform (TCR)	TCR	Monitoring, Repeat Minor (TCR)	34	32
Coliform (TCR)	TCR	Monitoring, Routine Major (TCR)	499	378
Coliform (TCR)	TCR	Monitoring, Routine Minor (TCR)	62	55
Combined Radium (-226 and -228)	Rads	MCL, Average	1	1
Combined Uranium	Rads	MCL, Average	69	20
Combined Uranium	Rads	MCL, Single Sample	1	1
Combined Uranium	Rads	Monitoring, Regular	3	3
Consumer Confidence Rule	CCR	CCR Complete Failure to Report	94	90
Consumer Confidence Rule	CCR	CCR Inadequate Reporting	3	3
DBP Stage 1	St1 DBP	Treatment Technique No Certif. Operator	5	5
DBP STAGE 2	St2 DBP	Monitoring, Routine (IDSE)	1	1
Fluoride	IOC	MCL, Average	23	8
Fluoride	IOC	Monitoring, Regular	5	2
GROUNDWATER RULE	GWR	Failure to Notify Other PWS	1	1
GROUNDWATER RULE	GWR	Monitoring of Treatment (SWTR-Unfilt/GWR)	3	2
IESWTR	SWTRules	Monitoring, Turbidity (Enhanced SWTR)	1	1
IESWTR	SWTRules	Monthly Turbidity Exceed	2	1

Contaminant	Rule Family	Violation Category	# of Violations	# PWS in Violation
		(Enhanced SWTR)		
Lead	LCR	MPL Non-Compliance	1	1
Lead and Copper Rule	LCR	Follow-up Or Routine LCR Tap M/R	55	51
Lead and Copper Rule	LCR	Initial Tap Sampling for Pb and Cu	4	4
Mercury	IOC	MCL, Average	3	1
Nitrate	IOC	MCL, Average	192	72
Nitrate	IOC	MCL, Single Sample	165	64
Nitrate	IOC	Monitoring, Check/Repeat/Confirmation	3	2
Nitrate	IOC	Monitoring, Regular	179	159
Nitrate	IOC	Notification, State	7	4
Nitrate-Nitrite	IOC	MCL, Average	8	2
Nitrate-Nitrite	IOC	MCL, Single Sample	7	2
Nitrate-Nitrite	IOC	Monitoring, Regular	6	6
Nitrite	IOC	Monitoring, Regular	22	22
Public Notice	PN Rule	PN Violation for NPDWR Violation	6	5
Public Notice	PN Rule	PN Violation without NPDWR Violation	12	12
Surface Water Treatment	SWTRules	Failure to Filter (SWTR)	39	11
Surface Water Treatment	SWTRules	Monitoring of Treatment (SWTR-Filter)	3	3
Surface Water Treatment	SWTRules	Monitoring of Treatment (SWTR-Unfilt/GWR)	1	1
Surface Water Treatment	SWTRules	Treatment Technique (SWTR and GWR)	102	21
Tetrachloroethylene	VOC	Monitoring, Regular	2	1
Total Haloacetic Acids (HAA5)	St2 DBP	MCL, Average	96	19
Total Haloacetic Acids (HAA5)	St2 DBP	Monitoring and Reporting (DBP)	16	8
Total Haloacetic Acids (HAA5)	St2 DBP	Monitoring, Routine (IDSE)	16	8
Trichloroethylene	VOC	MCL, Average	1	1
Trichloroethylene	VOC	Monitoring, Regular	2	2
TTHM	St2 DBP	MCL, Average	312	54
TTHM	St2 DBP	Monitoring and Reporting (DBP)	22	11
TTHM	St2 DBP	Monitoring, Routine (IDSE)	16	8

APPENDIX D: Summary of MCL Violations for Arsenic by County by Water System (MCL = 10 µg/L)

County	PWS ID	PWS Name	Pop Served	# Violations
FRESNO	CA1000238	CAMDEN TRAILER PARK	75	4
FRESNO	CA1000580	CAMPOS BROS. FARMS (WALNUT)	150	4
FRESNO	CA1010039	CARUTHERS COMM SERV DIST	2497	4
FRESNO	CA1000042	FCWWD #40/SHAVER SPRINGS	160	1
FRESNO	CA1000053	LANARE COMMUNITY SERVICES DIST	660	4
FRESNO	CA1009091	OLAM SPICES AND VEGETABLES, INC.	125	5
FRESNO	CA1000472	PG&E HELMS SUPPORT FACILITY	40	4
FRESNO	CA1010028	RIVERDALE PUBLIC UTILITY DISTRICT	2416	4
FRESNO	CA1000072	SHAVER LAKE POINT #2	210	1
FRESNO	CA1010030	TRANQUILLITY IRRIGATION DIST	800	4
FRESNO	CA1000584	TRUE ORGANIC PRODUCTS	40	3
FRESNO	CA1000369	ZONNEVELD DAIRY	139	4
IMPERIAL	CA1300556	MULBERRY UNION SCHOOL	85	1
INYO	CA1400037	FOOTHILL LONE PINE MOBILE HOME PARK	100	4
INYO	CA1400036	KEELER COMMUNITY SERVICE DISTRICT	180	4
KERN	CA1500405	AERIAL ACRES WATER SYSTEM	148	4
KERN	CA1500485	ANTELOPE VALLEY MOBILE ESTATES	49	1
KERN	CA1510001	ARVIN COMMUNITY SERVICES DIST	18000	4
KERN	CA1510002	BORON CSD	2500	3
KERN	CA1500521	BOULDER CANYON WATER ASSOCIATION	28	4
KERN	CA1510027	DESERT LAKE COMM SERV DIST	700	2
KERN	CA1500493	EL ADOBE POA, INC.	200	4
KERN	CA1502569	FIRST MUTUAL WATER SYSTEM	35	4
KERN	CA1500461	FOUNTAIN TRAILER PARK WATER	68	3
KERN	CA1500449	FOURTH STREET WATER SYSTEM	56	4
KERN	CA1510024	GREENFIELD COUNTY WD	8500	4
KERN	CA1500436	HUNGRY GULCH WATER SYSTEM	33	4
KERN	CA1502771	KERN OIL AND REFINING COMPANY	150	1
KERN	CA1500364	KRVWC - KERVALE MUTUAL WATER CO	26	3
KERN	CA1502154	LAKESIDE SCHOOL	800	4
KERN	CA1500525	LAKEVIEW RANCHOS MUTUAL WATER COMPANY	120	4
KERN	CA1510012	LAMONT PUBLIC UTILITY DIST	15120	4
KERN	CA1500424	LANDS OF PROMISE MUTUAL WATER ASSOCIATIO	190	4
KERN	CA1500571	LUCKY 18 ON ROSAMOND, LLC	73	4
KERN	CA1500378	MAHER MUTUAL WATER COMPANY	150	4

County	PWS ID	PWS Name	Pop Served	# Violations
KERN	CA1510013	MCFARLAND, CITY OF	12333	1
KERN	CA1510014	MOJAVE PUD	4000	4
KERN	CA1502595	NATIONAL CEMENT CO.-LEBEC PLANT	120	2
KERN	CA1502383	NORD ROAD WATER ASSOCIATION	32	4
KERN	CA1510052	NORTH EDWARDS WD	600	3
KERN	CA1500585	OASIS PROPERTY OWNERS ASSOCIATION	100	4
KERN	CA1500540	PINON VALLEY WATER COMPANY	80	3
KERN	CA1502724	QUAIL VALLEY WATER DIST-EASTSIDE SYSTEM	60	4
KERN	CA1500458	R.S. MUTUAL WATER COMPANY	67	3
KERN	CA1510016	RAND COMMUNITIES WATER DISTRICT	450	4
KERN	CA1502231	ROSAMOND SCHOOL WATER SYSTEM	900	4
KERN	CA1502244	SEMI TROPIC SCHOOL WATER SYSTEM	320	4
KERN	CA1500442	SUNSET APARTMENTS WATER SYSTEM	37	3
KERN	CA1500455	WILLIAM FISHER MEMORIAL WATER COMPANY	53	4
KINGS	CA1600050	CENTRAL VALLEY MEAT CO INC	280	4
KINGS	CA1600004	FOUR SEASONS MOBILE HOME PARK	350	4
KINGS	CA1600017	ISLAND UNION SCHOOL	300	4
KINGS	CA1610009	KETTLEMAN CITY CSD	1499	4
KINGS	CA1600048	KETTLEMAN CITY ELEMENTARY	350	3
KINGS	CA1600014	KIT CARSON ELEM SCHOOL	510	4
KINGS	CA1600601	KWRA MRF	53	4
KINGS	CA1600010	LACEY COURTS MHP	66	4
LOS ANGELES	CA1910246	LAND PROJECT MUTUAL WATER CO.	1500	4
MADERA	CA2000866	AGRILAND FARMING CO INC	60	3
MADERA	CA2000538	CEDAR VALLEY MUTUAL WATER CO	137	3
MADERA	CA2010012	HILLVIEW WATER CO-RAYMOND	290	4
MADERA	CA2010007	HILLVIEW WC-OAKHURST/SIERRA LAKES	3383	4
MADERA	CA2000534	LEISURE ACRES MUTUAL WATER COMPANY	45	4
MADERA	CA2000550	MD#06 LAKE SHORE PARK	130	2
MADERA	CA2000551	MD#07 MARINA VIEW HEIGHTS	200	1
MADERA	CA2000561	MD#08 NORTH FORK WATER SYSTEM	264	3
MADERA	CA2000293	MD#46 AHWAHNEE RESORTS	300	3
MADERA	CA2000612	NORTH FORK UNION SCHOOL	350	4
MADERA	CA2010801	VALLEY STATE PRISON	4000	4
MADERA	CA2000785	VALLEY TEEN RANCH	50	2
MADERA	CA2000527	YOSEMITE FORKS EST MUTUAL	110	4
MARIPOSA	CA2210900	CEDAR LODGE RESORT	25	1
MARIPOSA	CA2210937	MARIPOSA COUNTY PUBLIC WORKS DEPARTMENT	135	1

County	PWS ID	PWS Name	Pop Served	# Violations
MERCED	CA2410004	CITY OF LIVINGSTON	14894	2
MONO	CA2610003	BRIDGEPORT PUD	850	4
MONTEREY	CA2702050	CHURCH OF THE GOOD SHEPHERD WS	50	4
MONTEREY	CA2702030	CYPRESS COMMUNITY CHURCH WS	200	4
MONTEREY	CA2700552	ECHO VALLEY SCHOOL WS	503	4
MONTEREY	CA2702550	GRANGE HALL WS	25	2
MONTEREY	CA2702009	LAGUNA SECA RECREATION WS	500	2
MONTEREY	CA2700612	LAGUNA SECA WC	162	3
MONTEREY	CA2701670	LANGLEY/VALLE PACIFICO WS	81	4
MONTEREY	CA2701503	MESA DEL TORO MWC	90	4
MONTEREY	CA2701926	MORO RD WS #09	210	4
MONTEREY	CA2700702	PRUNEDALE MWC	252	3
MONTEREY	CA2701959	TIERRA VISTA MWC	57	1
MONTEREY	CA2700799	VISTA DEL TORO WS	87	4
MONTEREY	CA2701221	WASHINGTON SCHOOL WS	250	4
MONTEREY	CA2702439	WOODLAND HEIGHTS MWC	57	4
PLACER	CA3100033	TAHOMA MEADOWS MUTUAL WATER COMPANY	120	4
PLUMAS	CA3210003	CITY OF PORTOLA	2500	2
PLUMAS	CA3210011	PLUMAS EUREKA CSD	325	4
RIVERSIDE	CA3310802	CHUCKAWALLA VALLEY/IRONWOOD STATE PRISON	6151	1
RIVERSIDE	CA3303112	COACHELLA VALLEY FACILITY	80	4
RIVERSIDE	CA3303092	MECCA ARCO TRAVEL CENTER	47	2
RIVERSIDE	CA3301482	ORTEGA OAKS RV PARK&CAMPGROUND	25	3
RIVERSIDE	CA3301380	SAINT ANTHONY TRAILER PARK	300	4
SACRAMENTO	CA3400433	EDGEWATER MOBILE HOME PARK	40	4
SACRAMENTO	CA3400364	JEAN HARVIE SCHOOL [SWS]	30	4
SACRAMENTO	CA3400138	LOCKE WATER WORKS CO [SWS]	80	4
SACRAMENTO	CA3400332	OXBOW MARINA (SWS)	200	4
SACRAMENTO	CA3400149	RANCHO MARINA	250	4
SACRAMENTO	CA3400164	VIEIRA'S RESORT, INC	150	4
SAN BENITO	CA3500570	B & R FARMS	25	3
SAN BERNARDINO	CA3600025	BAR-LEN MWC	124	3
SAN BERNARDINO	CA3600036	CALICO GHOST TOWN	1000	4
SAN BERNARDINO	CA3600062	CALLIER WATER SYSTEM	1000	4
SAN BERNARDINO	CA3600196	CSA 70 W-4 PIONEERTOWN	625	4
SAN BERNARDINO	CA3601013	DARR WATER CO	1000	3
SAN BERNARDINO	CA3601015	IRONWOOD CAMP	1000	3

County	PWS ID	PWS Name	Pop Served	# Violations
SAN BERNARDINO	CA3600504	KNOLL ENTERPRISES	500	2
SAN BERNARDINO	CA3610854	SEARLES VALLEY MINERALS OPERATIONS INC	2000	2
SAN BERNARDINO	CA3610705	US ARMY FORT IRWIN	16000	4
SAN DIEGO	CA3701010	WARNER UNIFIED SCHOOL DISTRICT	250	2
SAN JOAQUIN	CA3901213	AVALOS, SILVIA	30	4
SAN JOAQUIN	CA3901334	BJJ COMPANY LLC	40	4
SAN JOAQUIN	CA3900579	CENTURY MOBILE HOME PARK	50	4
SAN JOAQUIN	CA3910015	CITY OF LATHROP	12427	4
SAN JOAQUIN	CA3900815	DELICATO VINEYARDS	25	4
SAN JOAQUIN	CA3901392	ENVIROPLEX, INC	25	4
SAN JOAQUIN	CA3901290	FISHER NURSERY	50	4
SAN JOAQUIN	CA3901390	FRANK C ALEGRE TRUCKING INC WS	25	4
SAN JOAQUIN	CA3910005	MANTECA, CITY OF	66451	3
SAN JOAQUIN	CA3901169	MUSD-NILE GARDEN SCHOOL	804	4
SAN JOAQUIN	CA3900732	V & P TRAILER COURT WATER SYSTEM	35	4
SANTA BARBARA	CA4210009	CUYAMA COMMUNITY SERVICES DISTRICT	820	4
SIERRA	CA4600019	SIERRA CO. W.W.D #1 CALPINE	225	4
SONOMA	CA4900716	CINNABAR ELEMENTARY SCHOOL	228	3
SONOMA	CA4900575	LOCH HAVEN MUTUAL WATER COMPANY	50	4
SONOMA	CA4901195	MOORLAND AVENUE APARTMENTS	64	3
SONOMA	CA4900643	MOUNT WESKE ESTATES MUTUAL WATER COMPANY	62	4
SONOMA	CA4900815	PALMS INN	300	4
SONOMA	CA4900897	RODNEY STRONG VINEYARDS	100	4
SONOMA	CA4900878	SANTA ROSA GOLF & COUNTRY CLUB	50	3
SONOMA	CA4900676	SEQUOIA GARDENS MOBILE HOME PARK	300	3
STANISLAUS	CA5000297	BUEHNER HOUSES	25	4
STANISLAUS	CA5000077	CERES WEST MHP	161	4
STANISLAUS	CA5000033	COBLES CORNER	50	4
STANISLAUS	CA5000218	COUNTRY VILLA APTS	30	4
STANISLAUS	CA5000080	COUNTRY WESTERN MOBILE HOME PARK	120	4
STANISLAUS	CA5000086	COUNTRYSIDE MOBILEHOME ESTATES - ADULT P	60	4
STANISLAUS	CA5000465	DUARTE NURSERY INC WATER SYSTEM	75	4
STANISLAUS	CA5000273	GRATTON SCHOOL	110	4
STANISLAUS	CA5000085	GREEN RUN MOBILE ESTATES	100	4
STANISLAUS	CA5010008	HUGHSON, CITY OF	6082	4
STANISLAUS	CA5010009	KEYES COMMUNITY SERVICES DIST.	4891	4

County	PWS ID	PWS Name	Pop Served	# Violations
STANISLAUS	CA5000051	MOBILE PLAZA PARK	125	4
STANISLAUS	CA5000389	MONTEREY PARK TRACT COMMUNITY SERVICE DI	186	4
STANISLAUS	CA5000555	PIRANHA PRODUCE	26	3
STANISLAUS	CA5000195	SWANSON FARMS	25	4
STANISLAUS	CA5000484	UNITED PALLET SERVICES INC WATER SYSTEM	45	4
SUTTER	CA5100149	BARRY ELEMENTARY SCHOOL	650	4
SUTTER	CA5100172	ENCINAL ELEMENTARY SCHOOL	60	3
SUTTER	CA5100139	FRANKLIN ELEMENTARY SCHOOL	545	4
SUTTER	CA5100180	GRACE BAPTIST CHURCH	200	4
SUTTER	CA5100107	SUTTER CO. WWD#1 (ROBBINS)	350	2
SUTTER	CA5100109	WILDEWOOD MUTUAL WATER CO., INC.	255	4
SUTTER	CA5100145	WINSHIP ELEMENTARY SCHOOL	38	1
TEHAMA	CA5210003	LOS MOLINOS COMM. SERVICES DIST.	1500	3
TEHAMA	CA5201137	MILLSTREAM MOBILE HOME PARK	80	3
TEHAMA	CA5200550	NEW ORCHARD MOBILE HOME PARK LLC	125	4
TRINITY	CA5301002	LEWISTON COMMUNITY SERVICES DISTRICT	250	4
TULARE	CA5400544	ALLENSWORTH C S D	400	3
TULARE	CA5410050	ALPAUGH COMMUNITY SERVICES DISTRICT	1026	4
TULARE	CA5400713	OAK VALLEY SCHOOL	300	4
TULARE	CA5403054	PFFJ, LLC	87	4
TULARE	CA5410009	PIXLEY PUBLIC UTIL DIST	3310	4
TULARE	CA5410033	PRATT MUTUAL WATER CO	1500	3
TULARE	CA5400754	SO KAWEAH MUTUAL WATER CO	300	2
YOLO	CA5700778	YOLO CO CENTRAL LANDFILL - WATER	40	1

APPENDIX E: Summary of MCL Violations for Nitrate-Nitrite by County by Water System

County	PWS ID	PWS Name	Pop Served	# Violations
FRESNO	CA1000547	CAL PRODUCE SALES CORP	80	4
FRESNO	CA1000461	CARGILL MEAT SOLUTIONS CORPORATION	1100	1
FRESNO	CA1000112	FAIRMONT SCHOOL	640	4
FRESNO	CA1000479	FRANZIA WINERY-SANGER	37	1
FRESNO	CA1000160	FRESNO RIFLE & PISTOL CLUB	50	1
FRESNO	CA1000459	JOHNNY QUIK FOOD STORE #127	300	5
FRESNO	CA1000207	PERSHING HIGH SCHOOL	56	4
FRESNO	CA1000505	RAY & LARRY MOLES (HENDERSON RD)	56	3
FRESNO	CA1000452	RAY MOLES FARMS (MARKS AVE)	90	4
FRESNO	CA1000485	TESSENDERLO KERLEY INC	86	4
FRESNO	CA1000369	ZONNEVELD DAIRY	139	1
KERN	CA1503576	ANTHONY VINEYARDS WATER SYSTEM	60	1
KERN	CA1502413	BRADY S MINI MART	250	3
KERN	CA1502699	EAST WILSON ROAD WATER COMPANY	35	4
KERN	CA1502398	FARMER JOHN EGG RANCH #2	30	4
KERN	CA1502820	FLYING J TRAVEL PLAZA	1100	2
KERN	CA1502033	GOLDEN STATE VINTNERS-FRANZIA MCFARLAND	50	2
KERN	CA1502012	HECK CELLARS WATER SYSTEM	47	4
KERN	CA1502556	I & I FARMS INC.	50	3
KERN	CA1500464	LAKE ISABELLA KOA CAMPGROUND	280	4
KERN	CA1500458	R.S. MUTUAL WATER COMPANY	67	1
KERN	CA1500393	RAINBIRD VALLEY MUTUAL WATER COMPANY	188	2
KERN	CA1500575	SAN JOAQUIN ESTATES MUTUAL WATER COMPANY	165	3
KERN	CA1500373	SEVENTH STANDARD MUTUAL	66	3
KERN	CA1503558	SHEPHERD OF THE MOUNTAINS LUTHERAN CHURC	70	2
KERN	CA1502194	SIERRA VISTA RESTAURANT	50	4
KERN	CA1500588	SON SHINE PROPERTIES	438	4
KERN	CA1503515	SUN PACIFIC SHIPPERS-MARICOPA WATER SYS.	100	4
KERN	CA1502273	SUN WORLD INTERNATIONAL, INC.-COM CENTER	80	3
KERN	CA1500569	VALLEY VIEW ESTATES MUTUAL WATER CO	69	2
KERN	CA1502017	WHEELER FARMS HEADQUARTERS	25	4
KERN	CA1500494	WILSON ROAD WATER COMMUNITY	72	4
MADERA	CA2000944	BONITA MINI MART (KATY'S MARKET - WATER	50	4

County	PWS ID	PWS Name	Pop Served	# Violations
MADERA	CA2010012	HILLVIEW WATER CO-RAYMOND	290	4
MONTEREY	CA2702616	ALTMAN PLANTS WS #02	25	4
MONTEREY	CA2701036	APPLE AVE WS #03	60	2
MONTEREY	CA2702409	EL CAMINO WC INC	90	3
MONTEREY	CA2701241	ENCINAL RD WS #01	41	4
MONTEREY	CA2701542	GONZALES GAS STATION WS	200	4
MONTEREY	CA2702549	HARRISON RD WS #09	25	2
MONTEREY	CA2701068	IVERSON & JACKS APTS WS	150	4
MONTEREY	CA2702621	IVERSON RD WS #03	40	4
MONTEREY	CA2700665	OAK HEIGHTS W & R CO INC	105	4
MONTEREY	CA2700558	PENTECOSTAL WS	25	2
MONTEREY	CA2701676	SAN LUCAS WD	500	4
MONTEREY	CA2700738	SAN MIGUEL WS #01	100	4
MONTEREY	CA2701912	SPRECKELS LN WS #03	25	4
MONTEREY	CA2700771	SPRINGFIELD WATER COMPANY	200	3
PLUMAS	CA3200085	LAST CHANCE SALOON	25	3
RIVERSIDE	CA3302093	COUNTY WATER OF RIVERSIDE	420	2
RIVERSIDE	CA3301330	INDIAN OAKS TRAILER PARK	96	3
RIVERSIDE	CA3301570	MCCALL PARK - RIV.COUNTY PARKS	25	2
RIVERSIDE	CA3301529	RAMONA WATER COMPANY	250	3
SAN BERNARDINO	CA3601117	ARTESIA SAWDUST PRODUCTS	50	1
SAN BERNARDINO	CA3600455	BEST EIGHT PARTNERSHIP	25	2
SAN BERNARDINO	CA3601094	FUJI NATURAL FOOD	75	3
SAN BERNARDINO	CA3600768	INSTITUTE OF MENTAL PHYSICS	100	3
SAN BERNARDINO	CA3601137	LIZZE ENTERPRISES	25	3
SAN DIEGO	CA3701341	BUTTERFIELD OAKS MOBILE HOME PARK	120	4
SAN DIEGO	CA3701380	CAMERON CORNERS	50	1
SAN DIEGO	CA3700923	LAKE MORENA OAK SHORES MW CO.	700	4
SAN DIEGO	CA3701760	LAKE MORENA TRAILER RESORT	60	4
SAN JOAQUIN	CA3900702	CORRAL HOLLOW PWS	98	2
SAN JOAQUIN	CA3901182	FINLEYS	25	4
SAN JOAQUIN	CA3900649	GLENWOOD MOBILE HOME PARK	100	4
SAN JOAQUIN	CA3901164	JIMCO TRUCK PLAZA WATER SYSTEM	150	4
SAN JOAQUIN	CA3902136	LINDEN USD-CHARTVILLE SCHOOL	40	2
SAN JOAQUIN	CA3901466	PARK GREEN HOUSES WATER SYSTEM	25	1
SAN JOAQUIN	CA3901479	PG&E: MANTECA SERVICE CENTER	25	3
SAN JOAQUIN	CA3901387	STOCKTON BAPTIST CHURCH	25	2
SAN LUIS OBISPO	CA4010040	RURAL WATER COMPANY	2010	1

County	PWS ID	PWS Name	Pop Served	# Violations
SHASTA	CA4500084	MCARTHUR MOBILEHOME PARK	99	1
SONOMA	CA4900568	VALLEY FORD WATER ASSOCIATION	40	4
STANISLAUS	CA5000217	FAITH HOME TEEN RANCH	50	4
STANISLAUS	CA5000530	FRAZIER NUT FARMS, INC.	40	4
STANISLAUS	CA5000426	LIBERTY BAPTIST CHURCH	65	3
STANISLAUS	CA5010010	MODESTO, CITY OF	212000	1
STANISLAUS	CA5000389	MONTEREY PARK TRACT COMMUNITY SERVICE DI	186	4
STANISLAUS	CA5000499	RATTO BROS	100	4
SUTTER	CA5100176	CALVARY CHRISTIAN CENTER	245	2
SUTTER	CA5100102	EL MARGARITA MUTUAL WATER CO.	246	4
SUTTER	CA5103335	LIVE OAK CHILD CARE CENTER	50	4
SUTTER	CA5100109	WILDEWOOD MUTUAL WATER CO., INC.	255	1
TEHAMA	CA5200655	LOUISIANA PACIFIC CORP	55	3
TULARE	CA5401053	ACID	50	3
TULARE	CA5400810	AKAL TRAVEL PLAZA	200	4
TULARE	CA5403022	APTCO LLC	150	3
TULARE	CA5400651	BEVERLY GRAND MUTUAL WATER	108	4
TULARE	CA5400919	BUENA VISTA SCHOOL	365	4
TULARE	CA5400555	CITRUS SOUTH TULE SCHOOL	50	4
TULARE	CA5402048	DEL ORO RIVER ISLAND SERV TERR #2	99	1
TULARE	CA5403030	DRY CREEK DELI	50	4
TULARE	CA5401003	EAST OROSI CSD	700	1
TULARE	CA5400523	EL MONTE VILLAGE MHP	100	1
TULARE	CA5400987	FOUNTAIN SPRINGS EL TAPATIO	25	3
TULARE	CA5402046	GNI WATERMAN LLC	225	3
TULARE	CA5400548	KINGS INN MOTEL	130	4
TULARE	CA5402024	KINGS RIVER MARKET	25	2
TULARE	CA5400660	LAKE SUCCESS MOBILE LODGE	40	1
TULARE	CA5402025	LAKESIDE MINNIT MART	25	3
TULARE	CA5400616	LEMON COVE WATER CO	200	4
TULARE	CA5400628	LEMON COVE-SEQUOIA CAMP	100	3
TULARE	CA5403106	LO BUE BROS - EARLIBEST	99	3
TULARE	CA5410007	LSID - TONYVILLE	500	1
TULARE	CA5403140	MONARCH NUT CO	25	4
TULARE	CA5402043	MONSON MARKET	25	4
TULARE	CA5403053	NS MINI MART	140	1
TULARE	CA5400541	PARAMOUNT CITRUS	100	4
TULARE	CA5402041	PENNY WISE MOTEL	25	4
TULARE	CA5402056	PEOPLES GROCERY	25	4
TULARE	CA5400682	PLAINVIEW MWC - CENTRAL WATER	170	4
TULARE	CA5403013	PRINCE MART	25	2

County	PWS ID	PWS Name	Pop Served	# Violations
TULARE	CA5400735	RODRIGUEZ LABOR CAMP	110	4
TULARE	CA5400558	SAUCELITO ELEM SCHOOL	75	4
TULARE	CA5400709	SEQUOIA UNION SCHOOL	400	4
TULARE	CA5403110	SIERRA MUTUAL WATER CO	39	4
TULARE	CA5400805	SOULTS MUTUAL WATER CO	120	4
TULARE	CA5402013	SUN PACIFIC SHIPPERS LP - EXETER	200	4
TULARE	CA5401063	THARP REAL PROPERTIES	35	2
TULARE	CA5400670	TRIPLE R MUTUAL WATER CO	400	4
TULARE	CA5401006	UC DAVIS-SCHOOL OF VET. MED.	70	2
TULARE	CA5400507	VISALIA - FRESNO SOUTH KOA	150	4
TULARE	CA5403010	VISALIA CITRUS PACKERS-WOODLAKE	150	3
TULARE	CA5403046	VISALIA CITRUS PACKING-ORANGE COVE	70	3
TULARE	CA5400795	WAUKENA ELEMENTARY SCHOOL	230	4
TULARE	CA5402030	WAUKENA MARKET	140	2
TULARE	CA5400957	WEST GOSHEN MUTUAL WATER CO	400	2