ANNUAL COMPLIANCE REPORT 2009

California Department of Public Health
Division of Drinking Water and Environmental Management

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CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
DRINKING WATER PROGRAM
ANNUAL COMPLIANCE REPORT
OF
PUBLIC WATER SYSTEMS

CALENDAR YEAR 2009

EXECUTIVE SUMMARY

Each quarter, the California Department of Public Health (CDPH) submits data to the Safe Drinking Water Information System (SDWIS/FED), an automated database maintained by the U.S. Environmental Protection Agency (EPA). The data submitted includes: public water system inventory information; incidents of violations for maximum contaminant levels (MCLs), maximum residual disinfectant levels (MRDLs), monitoring, reporting, and treatment techniques; violations concerning public and consumer notification; and information on enforcement activity related to these violations. In addition, CDPH provides EPA with this Annual Compliance Report of violations of the primary drinking water standards, which includes the data for the violations listed above.

Violation information included in this Annual Compliance Report is derived from the data available from CDPH's independent drinking water program database system for the period of January 1, 2009 through December 31, 2009.

A copy of this 2009 Annual Compliance Report will be available to the public by contacting the CDPH's Division of Drinking Water and Environmental Management Drinking Water Program at (916) 449-5600, or through CDPH's website at: http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Publications.aspx.

The 2009 Annual Compliance Report discusses violations by categories listed in the table below. The appendices to the report lists the violations in three tables: by 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 2009 and compares these numbers to the 2008 reported values. Total violations increased by 469 for 2009, in comparison with 2008. Overall, public water systems in California delivered drinking water that generally met all of the established state and federal drinking water standards.

Comparision of Data between 2008 and 2009

	Year 2008		Year 2009		Change between 2008 and 2009	
MCL and TT Violation Category	**MCL & TT Violations**	**Impacted Population**	**MCL & TT Violations**	**Impacted Population**	**MCL &TT Violations**	**Impacted Population**
Inorganic Contaminants	598	676,484	737	685,410	+139	+8,926
Synthetic Organic contaminants	6	1,100	13	466,509	+7	+465,409
Volatile Organic Contaminants	3	200	4	3,004	+1	+2,804
Radionuclide Contaminants	38	7,790	45	78,918	+7	+71,128
Total Coliform Rule (acute and nonacute))	550	445,235	656	629,434	+106	+184,199
Disinfectants/Disinfection Byproducts Rule	112	104,440	219	102,529	+107	-1,911
Surface Water Treatment Rules	0	0	72	64,890	+72	+64,890
Filter Backwash Recycling Rule	0	0	0	0	0	0
Lead and Copper Rule	0	0	1	5,223	+1	+5,223
MRR Violation Category	**MRR Violations**	**Impacted Population**	**MRR Violations**	**Impacted Population**	**MRR Violations**	**Impacted Population**
Public Notification Rule	0	0	9	911	+9	+911
Consumer Confidence Notification	57	8,747	77	53,231	+20	+44,484
Exemptions and Variances	0	0	0	0	0	0

SECTION 1: INTRODUCTION

This report provides information from the State of California's Department of Public Health (CDPH) records on public drinking water system violation data for calendar year 2009. This report is provided to the U.S. Environmental Protection Agency (EPA) and to the public as required by statute.

The Federal Safe Drinking Water Act (SDWA) requires states to report events or lack of activity that constituted a violation of a primary drinking water standard at some point during the year covered by the report. This includes, but is not limited to those categories of violations specifically enumerated in Section 1414(c)(3)(A)(i).

California had an inventory of 7,815 public water systems at the end of 2009. Although private wells exist in California, in general, water quality testing of these private wells and sources is not required by State regulations. Public water systems are regulated and monitored through the Drinking Water Program.

THE DRINKING WATER PROGRAM OVERVIEW

Under the 1974 SDWA and subsequent amendments in 1986 and 1996, EPA sets national limits on contaminant levels in drinking water for human consumption to provide public safety.

These limits are known as maximum contaminant levels (MCLs) and maximum residual disinfectant levels (MRDLs). For some regulations, treatment techniques (TT) were established in lieu of an MCL to control unacceptable levels of contaminants in drinking water. To assist in providing data for future regulatory development, water systems are also required to monitor for unregulated contaminants. Water systems are also regulated as to the frequency of monitoring and reporting of results to the states or EPA.

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
- Steps that the water system is undertaking to correct the violation
- The possible use of alternative water supplies available during the violation.

EPA designated the CDPH as the primacy agency responsible for the administration and enforcement of the SDWA requirements in California. CDPH must adopt statutes and regulations to implement the requirements of the SDWA.

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

CDPH has delegated the drinking water program regulatory authority for small public water systems serving less than 200 service connections to 34 counties in California. The delegated counties (local primacy agencies) are responsible for regulating approximately 4,600 small public water systems statewide. CDPH retains the regulatory authority over the remaining public water systems statewide with 200 or more service connections and the small public water systems in the remaining 24 counties.

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

- Water system inventory information
- Incidents of violations for MCLs, MRDLs, MRs, and TTs;
- Violations concerning public and consumer notification;
- Information on enforcement activity related to these violations.

In addition, CDPH provides EPA with an Annual Compliance Report of violations of the primary drinking water standards. This report provides the numbers of violations in each of eight areas:

1. Maximum contaminant level (MCL) violations
2. Maximum residual disinfectant level (MRDL) violations
3. Treatment technique (TT) requirement violations
4. Significant monitoring and reporting (MR) requirements violations
5. Variances and exemptions violations
6. Record keeping violations
7. Significant public notification requirements violations
8. Significant consumer notification requirements violations.

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

- **Violation of a Maximum Contaminant Level:** Primary drinking water standards have been adopted by CDPH 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 Monitoring and Reporting Requirement:** 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. 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 2009 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 and enhanced surface water treatment rule
8. Filter backwash recycle rule
9. Lead and copper rule
10. Public notification requirements
11. Consumer confidence report notification requirements
12. Variances and exemptions

SECTION 3: REVIEW OF 2009 VIOLATION DATA

Summary Data Tables for Calendar Years 2007, 2008 and 2009

There are four tables in the report that summarize the violation data for the 2009 calendar year as well as for calendar years 2007 and 2008. These four tables include:

Table 1 - Number of violations by category for maximum contaminant levels/ treatment techniques and monitoring/reporting requirements

Table 2 - Number and population of water systems with violations of maximum contaminant level and treatment technique

Table 3 - Number and population of water systems with violations of monitoring and reporting requirements

Table 4 - Numbers of violations of total coliform rule by type

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.

Table 1
Number of Violations by Category
For Maximum Contaminant Levels / Treatment Techniques (MCL/TT)
and Monitoring / Reporting Requirements M & R

		Number of Violations					
		2007		2008		2009	
	Category	MCL/ TT	M & R	MCL /TT	M & R	MCL/ TT	M & R
1	Inorganic contaminants	273	334	598	387	737	232
2	Synthetic organic contaminants	3	10	6	89	13	67
3	Volatile organic contaminants	2	8	3	88	4	112
4	Radionuclide contaminants	10	22	38	64	45	25
5	Total coliform rule (TCR)	456	689	550	940	656	818
6	Disinfectant and disinfection byproducts rule (DBPR)	31	113	112	44	219	75
7	Surface water treatment rule and enhanced surface water treatment rule	26	23	0	44	72	21
8	Filter backwash recycle rule	0	0	0	0	0	0
9	Lead and copper rule (LCR)	4	22	0	12	1	26
10	Public notification requirements	NA	0	NA	0	NA	9
11	Consumer confidence report notification requirements	NA	106	NA	57	NA	77
12	Variances and exemptions	NA	0	NA	0	NA	0

Table 2
Number and Population of Water Systems with Violations of Maximum Contaminant Level (MCL) and Treatment Technique (TT)

		2007		2008		2009	
		No. of Water Systems	Population	No. of Water Systems	Population	No. of Water Systems	Population
1	Inorganic contaminants	153	713,251	239	676,484	253	685,410
2	Synthetic organic contaminants	3	6,415	3	1,100	8	466,509
3	Volatile organic contaminants	2	2,648	1	200	1	3,004
4	Radionuclide contaminants	9	1,619	15	7,790	23	78,918
5	Total coliform rule (TCR)	358	447,927	395	445,235	466	629,434
6	Disinfectant and disinfection byproducts rule (DBPR)	22	38,230	44	104,440	66	102,529
7	Surface water treatment rule and enhanced surface water treatment rule	19	20,343	0	0	39	64,890
8	Filter backwash recycle rule	0	0	0	0	0	0
9	Lead and copper rule (LCR)	4	6,462	0	0	1	5,223
10	Public notification requirements	Not applicable – Not an MCL or TT					
11	Consumer confidence report notification requirements	Not applicable – Not an MCL or TT					
12	Variances and exemptions	Not applicable – Not an MCL or TT					

Table 3

Number and Population of Water Systems with Violations of Monitoring and Reporting Requirements

		2007		2008		2009	
		No. of Water Systems	Population	No. of Water Systems	Population	No. of Water Systems	Population
1	Inorganic contaminants	243	543,205	295	609,459	176	356,735
2	Synthetic organic contaminants	11	7,479	6	436	3	149
3	Volatile organic contaminants	7	159,835	9	97,126	8	1400
4	Radionuclide contaminants	14	9,813	46	7,734	9	908
5	Total coliform rule (TCR)	531	194,760	628	332,575	594	513,785
6	Disinfectant and disinfection byproducts rule (DBPR)	59	415,538	23	289,452	40	157390
7	Surface water treatment rule and enhanced surface water treatment rule	15	108,770	29	66,772	12	8915
8	Filter backwash recycle rule	0	0	0	0	0	0
9	Lead and copper rule (LCR)	22	87,551	12	28,791	25	61,217
10	Public notification requirement	0	0	0	0	8	911
11	Consumer confidence report notification requirements	106	23,896	57	8,747	76	53231
12	Variances and exemptions	0	0	0	0	0	0

SECTION 4: DISCUSSION OF VIOLATION TYPES AND CONTAMINANTS

Inorganic Contaminants

Water systems were required to meet primary drinking water standards and monitoring and reporting requirements for 18 inorganic contaminants. MCL violations were reported for arsenic, nitrate, fluoride, nitrate + nitrite, aluminum, perchlorate and antimony.

Arsenic accounted for 610 of the 737 violations of MCLs 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 of getting cancer. In California, the drinking water standard for arsenic was lowered to 0.010 mg/l as of November 28, 2008.

Nitrate accounted for 108 of the 737 violations of MCLs for inorganic chemicals. Nitrate and nitrite are used in fertilizer and are found in sewage and wastes from human and/or animals and generally gets into drinking water from those activities. Excessive levels of nitrate and nitrite in drinking water have caused serious illness and sometimes death in infants less than six months of age. The serious illness in infants is caused because nitrate is converted to nitrite in the body. Nitrite interferes with the oxygen carrying capacity of the child's blood. This is an acute disease in that symptoms can develop rapidly in infants.

In most cases, health deteriorates over a period of days. Symptoms include shortness of breath and 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 you suspect 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. CDPH has set the drinking water standard at 45 milligrams per liter (mg/l) nitrate (as nitrate) and 1 mg/l for nitrite (as nitrogen) to protect against the risk of these adverse effects. Drinking water that meets the CDPH standards is associated with little to no risk and is considered safe with respect to nitrate and nitrite.

Fluoride accounted for nine of the 737 violations of MCLs for inorganic chemicals. Major sources of fluoride in drinking water are from erosion of natural deposits, water additive that promotes strong teeth, and discharges from fertilizer and aluminum factories. 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, the state has set the MCL at 2 mg/l.

Synthetic Organic Contaminants

Water systems are required to meet primary drinking water standards and monitoring and reporting requirements for 33 synthetic organic contaminants (SOCs). In 2009, there was as a substantial increase in the population potentially impacted by violations of the MCL for SOCs. The impacted population increased from 1,100 in 2008 to 466,509 in 2009. This increase was almost entirely the result of an MCL violation for DBCP by a very large public water system, the City of Fresno. That violation was for exceeding the MCL for DBCP in a single well, serving an area of the city. The use of that well was discontinued once that violation occurred. The City of Fresno has over 200 wells as sources of drinking water.

Dibromochloropropane (DBCP) accounted for all 13 of the violations of MCLs for SOCs. DBCP may get into drinking water by runoff or leaching from soil fumigant used on soybeans, cotton, and orchards. Some people who drink water containing DBCP in excess of the MCL for many years could experience reproductive difficulties and may have an increased risk of getting cancer. CDPH 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 28 volatile organic contaminants (VOCs).

Radionuclide Contaminants

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

Gross alpha accounted for 16 of the 45 violations of MCLs for radionuclides. The major source of gross alpha activity or alpha emitting radiation in drinking water is from erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as gross alpha activity. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. CDPH has set the drinking water standard for gross alpha activity at 15 pCi/L to reduce these risks.

Uranium accounted for 29 of the 45 violations of MCLs 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. CDPH has set the drinking water standard for uranium at 20 picoCuries per liter (pCi/L) to protect against the risk of these adverse health effects. EPA 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. An acute violation indicates a public water system detected fecal coliform or *E. coli* bacteria in the drinking water supply. A non-acute violation indicates a public water system detected total coliform bacteria in more than five percent of the water samples for larger water systems that collect at least 40 samples in a month or more than one sample for smaller water systems that collect fewer than 40 samples in a month from the drinking water distribution system.

Table 4 summarizes the TCR MCL violations for calendar years 2007, 2008 and 2009.

Table 4

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

	Number of Violations		
	2007	**2008**	**2009**
Acute MCL violations	37	44	37
Non-acute MCL violations	419	506	619

Total coliforms are common in the environment and are generally not harmful themselves. 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 any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than the drinking water.

CDPH has set a drinking water standard for total coliforms to reduce the risk of these adverse health effects. Under this standard, no more than 5.0 percent of the samples collected during a month can contain these bacteria. For water systems collecting fewer than 40 samples per month the standard is exceeded if more than one monthly sample contains these bacteria.

The presence of fecal coliforms and *E. coli* is serious because they usually are associated with 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. These symptoms, however, are not

just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than the drinking water.

CDPH has set an enforceable drinking water standard for fecal coliforms and *E. coli* to reduce the risk of these adverse health effects. Under this standard, a violation occurs when a positive total coliform sample is followed by a repeat sample that is positive for fecal coliform or *E. coli*. A violation also occurs when a positive fecal coliform or E. coli sample is followed by a repeat sample that is positive for total coliform.

Disinfectants and Disinfection Byproducts Rule

Water systems are required to meet 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.

There were 28 violations of the MCL for halocetic acids (HAAs) and 182 violations of the MCL for total trihalomethanes (THMS). CDPH sets drinking water standards and in many cases requires the disinfection of drinking water. However, when used in the treatment of drinking water, disinfectants react with naturally-occurring organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). CDPH has determined that a number of DBPs are a health concern at certain levels of exposure. Certain DBPs, including some trihalomethanes (THMs) and some haloacetic acids (HAAs), have been shown to cause cancer in laboratory animals. Other DBPs 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. CDPH has set standards to limit exposure to THMs, HAAs, and other DBPs.

Surface Water Treatment Rule (SWTR), Enhanced Surface Water Treatment Rule (ESWTR)

The surface water treatment rule (SWTR) and enhanced surface water treatment rule (ESWTR) 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. For purposes of this report, the ESWTR includes the interim enhanced SWTR for water systems serving 10,000 or more people, and the Long Term Phase 1 ESWTR (LT1-ESWTR), which is essentially the same regulation for water systems serving less than 10,000 people.

There were 48 violations of treatment technique violations of the SWTR and 2 violations of the filtration requirements of the SWTR. 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 filtration technology approved by CDPH. Water systems may receive permit approval by CDPH to use surface water without providing filtration under certain conditions and requirements.

There were 22 violations of the turbidity performance standards of the SWTR. Treatment technique and performance standard violations under the SWTR and the ESWTR typically occur due to elevated turbidity levels in the water or a failure to maintain the required level of disinfection. Turbidity itself has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Filter Backwash Recycling Rule (FBR)

The filter backwash recycling rule (FBR) established requirements governing the way certain backwash streams are handled at water systems' filtration water treatment systems and established reporting and recordkeeping requirements for 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, water systems are required to meet primary drinking water standards and monitoring and reporting requirements for lead and copper, based on monitoring from the customers' water taps.

There was one treatment technique violation of the lead and copper rule and 26 violations of the lead and copper monitoring requirements. The major source 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.

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:
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.

Public Notification

Water suppliers are required to notify CDPH 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 notification. A violation occurs when there is a failure to provide the required report to the public by the required date. There were nine violations for failure to provide the required report to the public.

Consumer Confidence Report Violations

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. This report, the 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. There were 77 violations for failure to issue a CCR.

Variances and Exemptions Violations

CDPH is authorized under the Federal SDWA to issue variances and exemptions from meeting drinking water standards to public water systems under special circumstances.

SECTION 5: ENFORCEMENT ACTIVITIES

Enforcement action is an essential element of the CDPH 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.

CDPH'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, CDPH 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.
- Conduct additional water quality monitoring to identify the cause and extent of the contamination and take appropriate corrective action.
- 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.
- Provide water treatment.

Additional enforcement actions available to CDPH 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 CDPH overall regulatory strategy to bring all public water systems into full compliance with all of the drinking water standards and regulations to ensure all Californians receive safe drinking water.

SECTION 6: CONCLUSION

Water systems in California have a high rate of compliance with drinking water standards. Any violation of drinking water standards represents an increased public health risk. As the primacy agency responsible for the administration and enforcement of the SDWA requirements in California, CDPH will continue to implement the requirements of the SDWA. This will include the following activities: issuing operating permits, conducting inspections, monitoring for compliance with regulations, and taking enforcement action to compel compliance when violations are identified.

A copy of this report will be available to the public by contacting the CDPH Division of Drinking Water and Environmental Management at (916) 449-5600 or via the CDPH website at: www.cdph.ca.gov/certlic/drinkingwater/Pages/Publications.aspx

APPENDIX A: DEFINITIONS

Public Water System

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 (such as cities, towns, mobile home parks),
- Nontransient noncommunity (such as schools or factories)
- Transient noncommunity systems (such as restaurants and parks).

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

Maximum Contaminant Level

Primary drinking water standards have been adopted by CDPH 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.

Further, all water quality analyses must be conducted by laboratories that are certified by CDPH and the analytical results must be transmitted electronically to CDPH. The water quality analytical results are reviewed and evaluated by CDPH to determine compliance with drinking water standards. CDPH identifies and reports violations when water systems submit water quality analytical results that exceed the established drinking water standards.

Maximum Residual Disinfectant Level

Limits have also 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

For some regulations, 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 viruses, bacteria, and some coagulants.

Variances and Exemptions

CDPH 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 CDPH 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

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 CDPH, water suppliers are required to notify CDPH 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 Notification

All community water systems are required to deliver to their customers a brief annual water quality report. 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 water system completely failed to provide its customers the required annual consumer confidence report.