

2005

**NEW MEXICO
PUBLIC WATER
SYSTEM
COMPLIANCE
REPORT**

**Drinking Water Bureau
New Mexico Environment Department**

December 14, 2006

TABLE OF CONTENTS

Topic	Page
Introduction	1
Background	2
Annual State Reporting Requirements	3
Public Water System (defined)	3
Maximum Contaminant Level	4
Maximum Residual Disinfectant Level	4
Treatment Techniques	4
Variances and Exemptions	5
Monitoring	5
Significant Monitoring Violations	5
Consumer Notification	6
Significant Consumer Notification	6
How to Obtain a Copy of the 2005 ACR	6
Violations Tables and Number of Systems with Reported Violations	6
Conclusions for 2005	12

APPENDIX A: List of Public Water Systems with Violations

Introduction

Each year the New Mexico Environment Department's (NMED) Drinking Water Bureau (DWB) prepares and submits to the U.S. Environmental Protection Agency (EPA) a "Compliance Report" listing the different types of drinking water violations accrued by public water systems during the previous calendar year. This report is a mandated requirement the DWB is responsible for carrying out as part of the federally funded Public Water System Supervision (PWSS) Program and encompasses drinking water violations during calendar year 2005. The DWB protects drinking water quality by providing technical assistance, water system oversight, enforcement, and source water protection to New Mexico's public water systems.

In 2005, there were approximately 1,264 public water systems that provided drinking water in New Mexico. These public water systems provide drinking water to approximately 1,812,481 people. This is approximately 94% of the population of New Mexico. Of these public water systems, approximately 95% use ground water as the primary source of drinking water.

Number of PWS in New Mexico by Type and Size (as of 08/08/2005)										
(Very Small: <500, Small; 501 - 3300; Medium: 3,301 - 10,000; Large >10,000)										
	Very Small		Small		Medium		Large		TOTAL	
	SYS	POP	SYS	POP	SYS	POP	SYS	POP	SYS	POP
C	455	75,069	127	168,772	36	230,563	25	1,131,181	643	1,622,170
NC	443	43,129	21	30,245	3	21,901	1	88,500	468	150,275
NTNC	132	16,885	20	19,256	1	3,895	0	500	153	40,036
TOTAL	1,030	135,083	168	218,273	40	256,359	26	1,220,181	1,264	1,812,481

Number of PWS in New Mexico by Source and Population (as of 8/08/2005)														
	GU		GUP		GW		GWP		SW		SWP		TOTAL	
	SYS	POP	SYS	POP	SYS	POP	SYS	POP	SYS	POP	SYS	POP	SYS	POP
C	11	3,301	0	0	565	1,362,850	28	18,827	29	221,547	10	15,645	643	1,622,170
NC	1	200	0	0	438	144,131	17	1,584	7	2,340	5	2,020	468	150,275
NTNC	0	0	0	0	146	38,731	2	675	3	280	2	350	153	40,036
TOTAL	12	3,501	0	0	1,149	1,545,712	47	21,086	39	224,167	17	18,015	1,264	1,812,481

The water quality of New Mexico's public water systems is generally very high, as documented by routine sampling and analysis. During calendar year 2005, the EPA Safe Drinking Water Information System (SDWIS/FED) showed that approximately 433 (34%) public water systems received at least one significant violation. Approximately 152 (12%) of the PWS in New

Mexico had health based violations. Of the health based violations, approximately 26 public water systems had chemical, or radionuclide Maximum Contaminant Level (MCL) violations, 116 public water systems had total coliform MCL violations, and 10 public water systems had surface water treatment technique violations. The majority of the violations that occurred during 2005 were associated with non-health based requirements such as failing to monitor properly as required by the Total Coliform Rule and the Lead and Copper Rule.

Background

The EPA established the PWSS Program under the authority of the 1974 *Safe Drinking Water Act (SDWA)*. Under the *SDWA* and the 1986 Amendments, EPA has set national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs) and the Maximum Residual Disinfectant Levels (MRDLs). For some regulations, EPA has established treatment techniques in lieu of an MCL to control unacceptable levels of contaminants in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and when they need to report the monitoring results to the states or EPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements become. In addition, EPA requires Public Water Systems, to monitor for unregulated contaminants to provide data for future regulatory development. Finally, EPA requires Public Water Systems to notify their consumers when they have violated these regulations. The 1996 Amendments to the *SDWA* require consumer notification to include a clear and understandable explanation of the nature of the violation, its potential adverse health effects, steps that the Public Water System is undertaking to correct the violation and the possibility of alternative water supplies during the violation. This report addresses all of the above required information.

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

The *SDWA* allows States and Territories to seek EPA approval to administer their own PWSS Programs. The authority to run a PWSS Program is called primacy. To receive primacy, States

must meet certain requirements laid out in the *SDWA* and the federal regulations, including the adoption of drinking water regulations that are at least as stringent as the federal regulations and a demonstration that they can enforce the program requirements. The State of New Mexico has been a primacy state since 1976. Of the 57 States and Territories, all but Wyoming and the District of Columbia have primacy. The EPA Regional Offices administer the PWSS Programs within these two jurisdictions.

The 1986 *SDWA* Amendments gave Indian Tribes the right to apply for and receive primacy. To receive primacy, a Tribe must meet the same requirements as a State. EPA currently administers PWSS Programs on all Indian lands except the Navajo Nation, which was granted primacy in late 2000.

Annual State Compliance Reporting Requirements

Primacy states submit data to the Safe Drinking Water Information System (SDWIS/FED) on a quarterly basis. The SDWIS/FED database is an automated database that is maintained by EPA. Data submitted includes: Public Water System inventory information, the incidence of MCL, MRDL, monitoring, and treatment technique violations, and information on enforcement activity related to these violations. Section 1414(c)(3) of the Safe Drinking Water Act requires states to provide EPA with an annual report of violations of the primary drinking water standards. This report provides the number of violations in each of six categories: MCLs, MRDLs, treatment techniques, variances and exemptions, significant monitoring violations, and significant consumer notification violations. The EPA Regional Offices report the information for Wyoming, the District of Columbia, and all Indian Lands, but the Navajo Nation. EPA Regional offices also report Federal enforcement actions taken. Data retrieved from SDWIS/FED form the basis of this report. The EPA Region 6 contact person for Indian Lands is Blake Atkins, at (214) 665-2297.

Public Water System

A Public 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 an average of at least 25 people for at least 60 days each year. There are three types of public water systems.

Types of public water systems include: community (such as cities, towns, villages, and mobile home parks), non-transient non-community systems (such as schools or factories) or transient non-community systems (such as highway rest stops, campgrounds).

During calendar year 2005, approximately 1,812,481 consumers were served drinking water by public water systems in New Mexico. The vast majority (1,622,170) of this population was served by community water systems such as the City of Albuquerque and the City of Santa Fe. It is important to understand that the community water systems have many more regulations and rules to follow in comparison to transient non-community water systems. This is important because people who obtain their water at their homes are likely to have an increased exposure to any health risks from the water supply at home in comparison to that of a rest stop along an isolated stretch of highway.

Maximum Contaminant Level

Under the State Drinking Water Regulations and the Safe Drinking Water Act (*SDWA*), EPA set state and national limits on contaminant levels in drinking water to ensure that the water is safe for human consumption and protects public health. These limits are known as Maximum Contaminant Levels (MCLs).

Maximum Residual Disinfectant Level

The EPA sets national limits on residual disinfectant levels in drinking water to reduce the risk of exposure to disinfectant byproducts formed, when the public water systems add chemical disinfectant for either primary or residual treatment. These limits are known as Maximum Residual Disinfectant Levels (MRDLs).

Treatment Techniques

For some regulations, the EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of certain contaminants. For example, treatment techniques have been established for viruses, some bacteria, and turbidity.

Variations and Exemptions

A primacy state can grant a Public Water System a variance from a primary drinking water regulation if the characteristics of the raw water sources reasonably available to the Public Water System do not allow the system to meet the MCL. To obtain a variance, the system must agree to install the best available technology, treatment technique, or other means of limiting drinking water contamination that the EPA Administrator finds are available (taking costs into account), and the state must find that the variance will not result in an unreasonable risk to public health. The variance shall be reviewed not less than every 5 years to determine if the system remains eligible for the variance.

A primacy state can grant an exemption temporarily relieving a Public Water System of its obligation to comply with an MCL. Treatment technique, or both if the system's noncompliance results from compelling factors (which may include economic factors) and the system was in operation on the effective date of the MCL or treatment technique requirement. The state will require the Public Water System to comply with the MCL or treatment technique as expeditiously as practicable, but not later than 3 years after the otherwise applicable compliance date. During the reporting period of this report, New Mexico has not issued any exemptions or variances.

Monitoring

A Public Water System is required to monitor and verify that the levels of contaminants present in the water do not exceed the MCL. If a Public Water System fails to have its water tested as required, then a monitoring violation occurs. A monitoring violation also includes when a system fails to report test results correctly to the primacy agency (NMED).

Significant Monitoring Violations

For this report, significant monitoring violations are defined as any significant monitoring violation that occurred during the calendar year of the report (2005). A significant monitoring violation, with rare exceptions, occurs when no samples were taken or no results were reported during a compliance period.

Consumer Notification

Every community water system is required to deliver to its customers a brief annual water quality report. This report is called a Consumer Confidence Report (CCR). This report is to include some educational material, and will provide information on the source water, the level of any detected contaminants, and compliance with drinking water regulations.

Significant Consumer Notification Violations

For this report, a significant public notification violation occurred if a community water system failed to provide its customers the required annual water quality report (CCR).

Obtaining a Copy of the 2005 Annual Compliance Report

As required by the *SDWA*, New Mexico has made the 2005 Annual Compliance Report available to the public. Interested individuals can obtain a copy of the complete 2005 Annual Compliance Report for New Mexico by contacting Darren Padilla of the NMED Drinking Water Bureau at (505) 476-8631 or toll free at (877) 654-8720, or at the following Web site:

<http://www.nmenv.state.nm.us/dwb/dwbtop.html>

Violations Tables and Systems with Reported Violations

As part of the Annual Compliance reporting requirements, this report contains tables that summarize the significant violations and the number of Public Water Systems with reported violations during calendar year 2005. In addition, a list of Public Water Systems that received MCL or treatment technique violations reported herein and located in Appendix A to this report. Data used in this report was obtained from SDWIS/FED.

The following tables summarize the significant drinking water regulation violations and the number of water systems that incurred those violations during calendar year 2005.

Inorganic Contaminants

Contaminants	MCL (mg/L)	# of Violations	# of Systems with Violations
Fluoride	4.0	36	16
Nitrate	10 (as Nitrogen)	0	0
Nitrate-Nitrite	10 (as Nitrogen)	1	1
Selenium	0.05	0	0
Totals		37 (31)↑	17 (17) =

Numbers in parenthesis are from previous years. Arrows indicate up/down trends.

Public water systems are required to monitor for 15 inorganic compounds such as fluoride, heavy metals and nitrate. The majority of the inorganic MCL contaminant violations are suspected to be associated with naturally occurring sources. Nitrate MCL violations are likely to have originated from anthropogenic sources such as septic disposal systems.

Radionuclide Contaminants

Contaminants	MCL (pCi/L)	# of Violations	# of Systems with Violations
Gross Alpha	15 pCi/L	12	8
Combined Uranium	30 mg/L	32	7
Totals		42 (6)↑	15 (4)↑

Radionuclide contaminants consist of radioactive particles such as radium-226, radium 228, gross alpha, and beta particle/photon radioactivity. The implementation of the new uranium MCL of 30 mg/L has significantly increased the total number of violations associated with radionuclide contaminants. These contaminants can occur naturally, or may result from human activity. It should be noted that the State of New Mexico is rich in naturally occurring radioactive uranium ore deposits such as those found in the San Juan Basin and the Pojoaque Valley.

Coliforms (TCR)

Violation Name	MCL/Monitoring or Reporting	# of Violations	# of Systems with Violations
Coliform MCL, Acute	Present	5	5
Coliform MCL, Monthly	Present	134	111
Totals		139 (125)↑	116 (96)↑
Coliform Monitoring Routine & Repeat Major	Failure to Monitor or Report	202	126
Totals		206 (202)↑	157 (126)↑

The Total Coliform Rule (TCR) requires all public water systems to monitor for coliform bacteria. Although coliform bacteria tends to be found in decaying organic material and the intestinal tract of humans and animals, it is not usually harmful to human health. The presence of coliform bacteria in the distribution systems of public water supplies is used as an indicator that more dangerous microbiological contamination may be present. The total coliform MCL is the most frequently violated health-based standard in both New Mexico and the United States. The large number of monitoring violations can be attributed in part to the complexity of this rule. The DWB recognizes the need to educate the water system operators and has focused on individual and group training sessions through DWB staff and technical assistance providers to reduce these violations. DWB feels these efforts will assist with the reduction of TCR violations in future years.

Surface Water Treatment Rule (SWTR)

Violation Name	SWTR Treatment Technique Violation	# of Violations	# of Systems with Violations
Treatment Technique (SWTR)	Treatment Technique Violation	34	8
Failure to Filter (SWTR)	Treatment Technique Violation	5	3
Treatment Technique	Exceeds Turbidity of 1 NTU	1	1
Treatment Technique	Exceeds Turbidity of 0.3 NTU	3	1
Totals		43 (23) ↑	13 (7) ↑

Violation Name	SWTR Monitoring Violation	# of Violations	# of Systems with Violations
Monitoring, Routine/Repeat (SWTR-Filter)	Failure to Monitor	7	3
Totals		7 (3) ↑	3 (1) ↑

The Surface Water Treatment Rule (SWTR) requires public water systems that are served by either surface water or ground water under the influence of surface water to treat the water by filtration and disinfection in an effort to reduce the potential exposure to microbiological contamination. This rule applies to approximately 70 public water systems in New Mexico.

Disinfection Byproducts Rule (DBP)

Violation Name	MCL Violation	# of Violations	# of Systems with Violations
MCL, Average	DBP MCL	9	9
Totals		9*	9*

Violation Name	Treatment Technique or Monitoring Violation	# of Violations	# of Systems with Violations
Monitoring/Reporting Stage 1	Failure to Monitor	54	28
Treatment Technique No Certified Operator	No Certified Operator	1	1
Totals		55 (14) ↑	29 (7) ↑

* Comparable data not available for 2004

The Disinfection Byproducts Rule (DBP) applies to all Public Water Systems that add a chemical disinfectant, except for transient water systems that add a disinfectant other than chlorine dioxide. This rule requires these water systems to monitor for disinfection byproduct contaminants and disinfectants within the water systems. The DBP is a new and complicated rule that is proving to be difficult for water systems to understand and maintain compliance. The DWB recognizes this hardship and has taken steps to provide additional DBP training to the water systems throughout New Mexico in an effort to assist them in achieving compliance with this new rule.

Lead and Copper Rule (LCR)

Violation Name	Treatment Technique or Monitoring Violation	# of Violations	# of Systems with Violations
Monitoring, Initial Tap Sampling	Failure to Monitor	80	69
Monitoring, Follow up & Routine Tap Sampling	Failure to Monitor	130	92
Public Education	Failure to provide Public Education	1	1
Totals		211(56)↑	162 (52)↑

This rule applies to all community and non-transient non-community water systems and requires them to monitor for lead and copper in an effort to identify and minimize the risk of exposure to

lead and copper in drinking water. If action levels are exceeded, the water system may need to take steps to minimize exposure by installing corrosion control, providing public education, treat the source water or replace lead service lines. All of the violations of the Lead and Copper Rule were for the water system's failure to monitor and provide public education. Throughout the implementation history of this rule, very few water systems in New Mexico have been identified to have significant lead and copper action level exceedences. The vast majority of historical violations associated with this rule pertain to failing to meet the monitoring requirements. A significant increase in the number of violations is attributable to increased efforts by DWB to identify these violations in 2005.

Public Notification Violation (PN)

Violation Name	Treatment Technique or Monitoring Violation	# of Violations	# of Systems with Violations
PN Violation for NPDWR Violation	Failure to provide Public Notification	10	9
Totals		10*	9*

* Comparable data not available for 2004

All water systems are required to notify its customers (1) when the system fails to comply with drinking water regulations, (2) when the system has a variance or exemption from drinking water regulations or (3) when the system is facing some other situation posing a public health risk.

Consumer Notification Violation (CCR)

Violation Name	Treatment Technique or Monitoring Violation	# of Violations	# of Systems with Violations
CCR Complete	Complete Failure to Report	111	68
Totals		111 (737) ↓	68 (394) ↓

All community water systems are required to prepare and provide to their customers an annual Consumer Confidence Report (CCR). The consumer confidence reports summarize the quality of the drinking water and any violations. Significant violations identified in this report are for

the complete failure to prepare and provide an annual CCR. These violations persist each year until each annual compliance report is prepared and provided to the consumers of the Public Water Systems.

Conclusions for 2005:

The following is a brief explanation of the compliance findings for the 2005 reporting period. A comparison of violations that occurred between 2004 and 2005 indicates an increase in the number of health based and monitoring violations. The overall number of water systems with health based and monitoring violations decreased from 466 to 433. The only health based categories that showed a reduction in violations were those contaminants that have acute health effects. Nitrate MCL violations dropped from 3 violations to 1 violation (67%) and Acute Coliform MCL violations dropped from 13 to 5 violations (62%). There was a 92% increase in the number of Surface Water Treatment Rule (SWTR) violations. The substantial increase in the number of SWTR violations during 2005 was likely due to the implementation of the Long-Term 1 Enhanced Surface Water Treatment Rule that impacted PWS with populations < 10,000. During 2005, the overall number of MCL violations (Chemical/Radionuclide, TCR) increased from 162 to 229 (41%) and the number of monitoring and reporting violations increased from 258 to 583 (126%). The increase in the number of violations during 2005 is the result of an increase in the compliance determination capabilities of the Drinking Water Bureau.

Compliance determination has improved through better internal communication, expanded enforcement efforts, supplemental training on compliance and enforcement reporting, and the implementation of the SDWIS/State database. Of the 978 violations identified in 2005, 114 of the violations were returned to compliance (12%). An increase in the identification of drinking water violations as well as better reporting by staff ensures that safer drinking water will be available for New Mexico citizens. During 2005, escalated enforcement actions were used to bring Public Water Systems that had a history of significant violations back into compliance. Of the violations listed in this report, approximately 40 formal enforcement actions were taken by DWB staff to address the violations in 2005. This enforcement for constituents reported resulted in approximately 114 violations returning to compliance. This increase in DWB's enforcement activities reflects a positive enhancement of the NMED's regulatory capabilities for the

constituents identified in this report. Set-aside programs such as the Capacity Development program provided means to allow DWB and contracted assistance providers to identify and provide assistance with increasing technical, financial, and managerial capacity. The implementation of the Expense Reimbursement and Training Program for Water System Operators will likely increase the number of certified operators in New Mexico. It is anticipated that this program will increase public water system compliance with drinking water regulations by offering the incentives of expense reimbursement and additional training opportunities to small water operators throughout rural New Mexico. All these activities combined provide information demonstrating enhanced reporting mechanisms as well as enhanced support of SDWA compliance and oversight.

APPENDIX A

**LIST OF PUBLIC WATER SYSTEMS WITH VIOLATIONS
2005**