



Delaware Health and Social Services



**Public Drinking Water
Annual Compliance Report
And Summary**

2002

Table of Contents

Section	Page #
Section 1	
The Office of Drinking Water: An Overview	i
Section 2	
2002 State Summary	ii
Section 3	
Summary of Violations	1
Section 4	
Enforcement Actions	16
Section 5	
List of Systems in Violation	19

The Office of Drinking Water Program: An Overview

In 1974 Congress adopted the Safe Drinking Water Act (SDWA). The United States Environmental Protection Agency (EPA) established the Public Water System Supervision (PWSS) Program under the authority of the SDWA to regulate the drinking water provided by public water systems. Under the SDWA and the 1986 Amendments, EPA 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 or MCLs. The State of Delaware has adopted these limits for use in State Regulations governing drinking water.

The SDWA allows States to seek EPA approval to administer their own PWSS programs. The authority to run a PWSS program is called primacy. The State of Delaware was granted primacy in 1978. In order for Delaware to receive primacy, it had to meet certain requirements laid out in the SDWA, including the adoption of drinking water regulations that are at least as stringent as the Federal Regulations and a demonstration that it could enforce the program requirements.

The SDWA, EPA regulations and State regulations require that all public water systems (PWSs) monitor the drinking water for contaminants. Generally the larger the population served by the water system, the more frequent the monitoring must occur. In addition, if a PWS violates an MCL, or fails to conduct monitoring the system must notify the public of the violation. This is known as public notification. Due to the small size of Delaware, the Division of Public Health, Office of Drinking Water (ODW) has traditionally conducted almost all the monitoring for PWSs in Delaware. A few of the larger water systems conduct their own monitoring and report the results to ODW. All of the Community water systems (cities, towns, mobile home parks, etc.) and the Non-Transient, Non-Community water systems (schools, day cares, factories, etc.) are required to collect samples for compliance with the Lead and Copper Rule. These samples are to be analyzed by a certified laboratory and the results submitted to ODW. Transient, Non-Community water systems (restaurants, parks, rest stops, etc.) are not required to conduct lead and copper monitoring.

In 1996 the SDWA was amended once more with several changes. One of these changes was the requirement for ODW to prepare an annual compliance report as stated in the SDWA, Section 1414(c)(3)(A)(i) and distribute the report as specified in Section 1414(c)(3)(A)(ii). The purpose of this report is to provide a total annual representation of the number of violations in each of the following categories: MCLs, treatment techniques, variances and exemptions, and significant monitoring violations.

This annual report covers the time period of January 1 - December 31, 2002. It is broken down into five parts: the introduction, a general fact sheet on drinking water for the State of Delaware, a table listing of the number of violations and enforcement actions taken by the Division of Public Health, and a listing of the PWSs that were in violation (including dates and types of contaminants), and a conclusion.

Information on Delaware's public water systems may be found on the internet in EPA's Envirofacts webpage at the following address: www.epa.gov/enviro/html/sdwis/sdwis_query.html.

The Office of Drinking Water also maintains a webpage at: www.deph.org/hsp/odwhome.htm.

Please note that the data stored here may be slightly different than the data on this Annual report. This is due to errors, which the Office of Drinking Water is in the process of correcting.

Public Drinking Water Summary

Delaware 2002

The quality of drinking water in the State of Delaware is a concern for everyone. This document is a brief overview of the State's public drinking water. Included is everything from general information to a breakdown of the number of violations that occurred during 2002. If further information is needed or questions arise concerning how these numbers were obtained, please contact the Division of Public Health, Office of Drinking Water at (302) 739-5410.

General Information

Total land area of Delaware	1,592,960 ¹ acres	Population of Delaware	783,600 ²
Forest	398,000 ¹ acres (25%)	Percent served by individual wells	19%
Agriculture	557,550 ³ acres (35%)	Percent served by public water supplies	81%
Developed	318,600 ³ acres (20%)	Primacy Granted to State by EPA	1978
Wetland/Barren	318,600 ³ acres (20%)		

* * * * *

Delaware's Drinking Water

Public Water Systems

Major Sources of Surface Water

Brandywine River Basin

Christina River Basin

Red Clay/White Clay Creeks

Major Sources of Ground Water

Columbia Aquifer

Cheswold Aquifer

Piney Point Aquifer

Number of gallons of Public Water Used in Delaware each day: 101 mgd⁴

Residents served by public water systems	635,171
Residents served by surface water systems	272,800
Residents served by ground water systems	362,371
Number of public water systems	513
Community systems	229
Non-transient systems	105
Transient systems	179
Number using surface water	3
Number using ground water	510

1 1996 World Almanac.

2 Estimate using 2002 Census.

3 Estimate using 1991 Delaware Geological Survey map.

4 Estimate provided by the Department of Natural Resources and Environmental Control.

Delaware’s Public Drinking Water Program

Many services are provided to the public consumers and the water supply systems. Funding comes from State and Federal monies allotted to the public drinking water program for the State of Delaware. Two components of the Division of Public Health, the Office of Drinking Water and the Division of Public Health Laboratory provide the services for the public drinking water program with these allotted monies.

The Office of Drinking Water (ODW) works to ensure that the drinking water in Delaware meets or exceeds the requirements of the Safe Drinking Water Act (SDWA). This is accomplished through the review and approval of plans for new or improved water treatment systems and/or new or improved distribution systems. ODW also conducts all the monitoring for 98% of the public water systems (ten systems conduct their own monitoring and forward the results to ODW). ODW staff also inspect water systems, provide technical assistance, respond and handle emergencies, review monitoring results to ensure compliance with the SDWA and take enforcement actions when necessary. Additionally, ODW provides training to water system operators and owners regarding system operation and compliance with rules and regulations. The Office of Drinking Water contracts with Delaware Technical and Community College and the Delaware Rural Water Association to provide training to water systems operators.

The State Laboratory performs water analyses for water quality parameters as outlined in the SDWA.

<i>Operations</i>		<i>Budget Information</i>	
Inspections	152	Total Budget	\$ 1,295,636
Plans & Specifications Reviewed	135	Federal Budget	\$ 521,500
Projects requesting DWSRF funding	17	State Budget	\$ 774,136
Infrastructure Investment Money Available	\$10,904,794	Number of Staff Authorized	19

<i>Training Provided</i>	
	Number
Certified Operators	475
Training classes offered	98
Operators Trained	828

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Organic Contaminants							
1,1,1-Trichloroethane	0.2	0	0			0	0
1,1,2-Trichloroethane	.005	0	0			0	0
1,1-Dichloroethylene	0.007	0	0			0	0
1,2,4-Trichlorobenzene	.07	0	0			0	0
1,2-Dibromo-3- chloropropane (DBCP)	0.0002	0	0			0	0
1,2-Dichloroethane	0.005	0	0			0	0
1,2-Dichloropropane	0.005	0	0			0	0
2,3,7,8-TCDD (Dioxin)	3x10 ⁻⁸	0	0			0	0
2,4,5-TP	0.05	0	0			0	0
2,4-D	0.07	0	0			0	0
Acrylamide				0	0		
Alachlor	0.002	0	0			0	0
Atrazine	0.003	0	0			0	0
Benzene	0.005	0	0			0	0
Benzo[a]pyrene	0.0002	0	0			0	0
Carbofuran	0.04	0	0			0	0

¹ Values are in milligrams per liter (mg/l), unless otherwise specified.

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Carbon tetrachloride	0.005	0	0			0	0
Chlordane	0.002	0	0			0	0
cis-1,2- Dichloroethylene	0.07	0	0			0	0
Dalapon	0.2	0	0			0	0
Di(2-ethylhexyl)adipate	0.4	0	0			0	0
Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
Dichloromethane	0.005	0	0			0	0
Dinoseb	0.007	0	0			0	0
Diquat	0.02	0	0			0	0
Endothall	0.1	0	0			0	0
Endrin	0.002	0	0			0	0
Epichlorohydrin				0	0		
Ethylbenzene	0.7	0	0			0	0
Ethylene dibromide	0.00005	0	0			0	0
Glyphosate	0.7	0	0			0	0
Heptachlor	0.0004	0	0			0	0
Heptachlor epoxide	0.0002	0	0			0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Hexachlorobenzene	0.001	0	0			0	0
Hexachlorocyclopentadiene	0.05	0	0			0	0
Lindane	0.0002	0	0			0	0
Methoxychlor	0.04	0	0			0	0
Monochlorobenzene	0.1	0	0			0	0
o-Dichlorobenzene	0.6	0	0			0	0
Oxamyl (Vydate)	0.2	0	0			0	0
para-Dichlorobenzene	0.075	0	0			0	0
Pentachlorophenol	0.001	0	0			0	0
Picloram	0.5	0	0			0	0
Simazine	0.004	0	0			0	0
Styrene	0.1	0	0			0	0
Tetrachloroethylene	0.005	0	0			0	0
Toluene	1	0	0			0	0
Total polychlorinated biphenyls	0.0005	0	0			0	0
Toxaphene	0.003	0	0			0	0
trans-1,2-Dichloroethylene	0.1	0	0			0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Trichloroethylene	0.005	0	0			0	0
Vinyl chloride	0.002	0	0			0	0
Xylenes (total)	10	0	0			0	0
Total trihalomethanes	0.10	0	0			0	0
Subtotal		0	0			0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Inorganic Contaminants							
Antimony	0.006	0	0			0	0
Arsenic	0.05	0	0			0	0
Asbestos	7 million fibers/l ≤ 10 μm long	0	0			0	0
Barium	2	0	0			0	0
Beryllium	0.004	0	0			0	0
Cadmium	0.005	0	0			0	0
Chromium	0.1	0	0			0	0
Cyanide (as free cyanide)	0.2	0	0			0	0
Fluoride	4.0	0	0			0	0
Mercury	0.002	0	0			0	0
Nitrate	10 (as Nitrogen)	14	12			0	0
Nitrite	1 (as Nitrogen)	0	0			0	0
Selenium	0.05	0	0			0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Thallium	0.002	0	0			0	0
Total nitrate and nitrite	10 (as Nitrogen)	0	0			0	0
Subtotal		14	12	0	0	0	0

Radionuclide MCLs							
Gross alpha	15 pCi/l	0	0			0	0
Radium-226 and radium-228	5 pCi/l	0	0			0	0
Gross beta	4 mrem/yr	0	0			0	0
Subtotal		0	0			0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Total Coliform Rule							
Acute MCL violation	Presence	5	5				
Non-acute MCL violation	Presence	46	37				
Major routine and follow up monitoring							
Sanitary survey²						0	0
Subtotal		51	42			0	0

² Number of major monitoring violations for sanitary survey under the Total Coliform Rule.

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Surface Water Treatment Rule							
Filtered systems							
Monitoring, routine/repeat						0	0
Treatment techniques				0	0		
Unfiltered systems							
Monitoring, routine/repeat						0	0
Failure to filter				0	0		
Subtotal				0	0	0	0

State:	Delaware
Reporting Interval:	Jan-Dec 2002

	MCL (mg/l) ¹	MCLs		Treatment Techniques		Significant Monitoring/Reporting	
		Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations	Number of Violations	Number of Systems With Violations
Lead and Copper Rule							
Initial lead and copper tap M/R						29	24
Follow-up or routine lead and copper tap M/R						0	0
Treatment installation				0	0		
Public education				0	0		
Subtotal				0	0	29	24

Definitions for Summary of Violations Table

The following definitions apply to the Summary of Violations table.

Filtered Systems: Water systems that have installed filtration treatment [40 CFR 141, Subpart H].

Inorganic Contaminants: Non-carbon-based compounds such as metals, nitrates, and asbestos. These contaminants are naturally-occurring in some water, but can get into water through farming, chemical manufacturing, and other human activities. EPA has established MCLs for 15 inorganic contaminants [40 CFR 141.62].

Lead and Copper Rule: This rule established national limits on lead and copper in drinking water [40 CFR 141.80-91]. Lead and copper corrosion pose various health risks when ingested at any level, and can enter drinking water from household pipes and plumbing fixtures. States report violations of the Lead and Copper Rule in the following six categories:

Initial lead and copper tap M/R: A violation where a system did not meet initial lead and copper testing requirements, or failed to report the results of those tests to the State.

Follow-up or routine lead and copper tap M/R: A violation where a system did not meet follow-up or routine lead and copper tap testing requirements, or failed to report the results.

Treatment installation: Violations for a failure to install optimal corrosion control treatment system or source water treatment system that would reduce lead and copper levels in water at the tap. [One number is to be reported for the sum of violations in both categories].

Lead service line replacement: A violation for a system's failure to replace lead service lines on the schedule required by the regulation.

Public education: A violation where a system did not provide required public education about reducing or avoiding lead intake from water.

Maximum Contaminant Level (MCL): The highest amount of a contaminant that EPA allows in drinking water. MCLs ensure that drinking water does not pose either a short-term or long-term health risk. MCLs are defined in milligrams per liter (parts per million) unless otherwise specified.

Monitoring: EPA specifies which water testing methods the water systems must use, and sets schedules for the frequency of testing. A water system that does not follow EPA's schedule or methodology is in violation [40 CFR 141].

States must report monitoring violations that are significant as determined by the EPA Administrator and in consultation with the States. For purposes of this report, significant monitoring violations are major violations and they occur when no samples are taken or no results are reported during a compliance period. A major monitoring violation for the surface water treatment rule occurs when at least 90% of the required samples are not taken or results are not reported during the compliance period.

Organic Contaminants: Carbon-based compounds, such as industrial solvents and pesticides. These contaminants generally get into water through runoff from cropland or discharge from factories. EPA has set legal limits on 54 organic contaminants that are to be reported [40 CFR 141.61].

Radionuclides: Radioactive particles which can occur naturally in water or result from human activity. EPA has set legal limits on four types of radionuclides: radium-226, radium-228, gross alpha, and beta particle/photon radioactivity [40 CFR 141]. Violations for these contaminants are to be reported using the following three categories:

Gross alpha: A violation for alpha radiation above MCL of 15 picocuries/liter. Gross alpha includes radium-226 but excludes radon and uranium.

Combined radium-226 and radium-228: A violation for combined radiation from these two isotopes above MCL of 5 pCi/L.

Gross beta: A violation for beta particle and photon radioactivity from man-made radionuclides above 4 millirem/year.

Reporting Interval: The reporting interval for violations to be included in this PWS Annual Compliance Report, which is to be submitted to EPA by July 1, 2002, is from January 1, 2002 through December 31, 2002.

Surface Water Treatment Rule: The Surface Water Treatment Rule establishes criteria under which water systems supplied by surface water sources, or ground water sources under the direct influence of surface water, must filter and disinfect their water [40 CFR 141, Subpart H]. Violations of the “Surface Water Treatment Rule” are to be reported for the following four categories:

Monitoring, routine/repeat (for filtered systems): A violation for a system’s failure to carry out required tests, or to report the results of those tests.

Treatment techniques (for filtered systems): A violation for a system’s failure to properly treat its water.

Monitoring, routine/repeat (for unfiltered systems): A violation for a system’s failure to carry out required water tests, or to report the results of those tests.

Failure to filter (for unfiltered systems): A violation for a system’s failure to properly treat its water. Data for this violation code will be supplied to the States by EPA.

Total Coliform Rule (TCR): The Total Coliform Rule establishes regulations for microbiological contaminants in drinking water. These contaminants can cause short-term health problems. If no samples are collected during the one-month compliance period, a significant monitoring violation occurs. States are to report four categories of violations:

Acute MCL violation: A violation where the system found fecal coliform or E. coli, potentially harmful bacteria, in its water, thereby violating the rule.

Non-acute MCL violation: A violation where the system found total coliform in samples of its water at a frequency or at a level that violates the rule. For systems collecting fewer than 40 samples per month, more than one positive sample for total coliform is a violation. For systems collecting 40 or more samples per month, more than 5% of the samples positive for total coliform is a violation.

Major routine and follow-up monitoring: A violation where a system did not perform any monitoring. [One number is to be reported for the sum of violations in these two categories.]

Sanitary Survey: A major monitoring violation if a system fails to collect 5 routine monthly samples if sanitary survey is not performed.

Treatment Techniques: A water disinfection process that EPA requires instead of an MCL for contaminants that laboratories cannot adequately measure. Failure to meet other operational and system requirements under the Surface Water Treatment and the Lead and Copper Rules have also been included in this category of violation for purposes of this report.

Unfiltered Systems: Water systems that do not need to filter their water before disinfecting it because the source is very clean [40 CFR, Subpart H].

Violation: A failure to meet any state or federal drinking water regulation.

Enforcement Actions

Enforcement actions are taken when a public water system violates a maximum contaminant level (MCL) as specified in regulations or fails to conduct proper monitoring and/or reporting (MR) for a particular contaminant. A Notice of Violation (NOV) is the first action taken. This notifies the owner/operator of a public water system that there has been a violation. The next action taken is the issuance of a Public Notice (PN) that the owner/operator is required to hand-deliver or post in a conspicuous place. This notifies the consumers of the water that there was a violation, what the violation was, possible related health effects and preventative measures the consumer can take until the violation is corrected. A Boil Water Notice is issued when a water system violates the bacteria standard and the presence of *E. coli* or fecal coliform is detected. This requires immediate notice to all consumers informing them on how to make their water safe for consumption.

The two remaining enforcement actions, an Administrative Order (AO) and a Bi-Lateral Compliance Agreement (BCA) are used when a water system repeatedly violates an MCL or when a history of violations is present. The AO can mandate the installation of continuous chlorination or the abandonment of a well with persistent violations, for example. An AO is time sensitive, usually with 30 days in which the owner/operator must submit plans. A BCA is a written contract between the system and ODW in which the violations are outlined and the steps the system is going to take to correct the violation are outlined. The BCA is also time sensitive, but generally more time is granted for the system to correct the violation. Examples of a BCA include the installation of new wells or the re-piping of a water system in order to correct a violation.

<i>Enforcement Actions</i>	
Notice of Violations	73 MCL / 5 MR
Public Notices	73 MCL / 5 MR
Administrative Orders	6
Boil Water Orders	8
Bi-Lateral Compliance Agreements	1

Data Management

The Office of Drinking Water uses a d-Base based system to inventory water supplies, record sampling results and track compliance with monitoring and MCL requirements. The database includes information about: water supply facilities, water sources, treatment used, and sampling results. MCL compliance for the Phase II and V and Lead and Copper data is tracked on a Microsoft® Excel program. The Office of Drinking Water will be switching to a new data management system in 2002.

Compliance Highlights

	Number of Samples Collected in 2002	Systems Given Waivers in 2002	Systems In Compliance in 2002	% of State Served by Compliant Systems ¹	Number of Systems not in Compliance during 2002
Bacteriological	8,239	N/A	476	96.1% (92.5%)	37
Surface Water Treat. Rule²	0	N/A	3	100% (100%)	0
Nitrates	1253	N/A	501	99.8% (97.6%)	12
Routine Chemicals	812	N/A	513	100% (100%)	0
Inorganic	80	0	513	100% (100%)	0
Volatile Organic Chemicals (VOC)	254	0	513 ⁸	100% (100%)	0
Synthetic Organic Chemicals (SOC)	462	0	336	100% (100%)	0
Lead and Copper^{7,8}			489	95.9% (95.3%)	24

EPA Program Goals and Measures

	# of Water Systems	Population Served
Required to install corrosion control treatment	0	

1 First percentage based on population served, second percentage based on total number of public water systems.

2 Systems performed own sampling.

Violation Resolution

Contaminant Type	Health Level Violations Occurring In 2002	Violations Reconciled By the End of 2002	State Investment	People Benefited
Bacteriological	46	42	N/A	33,850
Surface Water Treatment Rule	0	N/A	N/A	N/A
Nitrates	14	9	N/A	1,701
Inorganic	0	N/A	N/A	N/A
Volatile Organic Chemicals (VOC)	0	0	N/A	N/A
Synthetic Organic Chemicals (SOC)	0	N/A	N/A	N/A
Lead and Copper	0	N/A	N/A	N/A
System Viability	N/A	N/A	N/A	N/A

List of Systems in Violation

The following list is the names, population served and dates of violations for all the systems that were in violation during the calendar year 2002. This list is broken down into the various types of violations and is in alphabetical order for your convenience.

Bacteria Violations		
System Name	Population Served	Date Violation Occurred
Aquatic Resource Center	25	3/19/2002
Avalon Woods	306	11/7/2002
Baltimore Air Coil	200	7/30/2002
Baltimore Air Coil	200	3/22/2002
Beach Babies Day Care	130	2/5/2002
Beach Babies Day Care	130	8/2/2002
Blantons Mobil Home Park	36	11/13/2002
Bombay Hook Refuge	150	4/18/2002
Bombay Hook Refuge	150	5/21/2002
Bombay Hook Refuge	150	11/21/2002
Camden-Wyoming Sewer and Water	3500	8/30/2002
Central Delaware Christian Academy	25	12/18/2002
Colonial Estates MHP	165	12/4/2002
Colonial Estates MHP	165	2/22/2002
Delaware State Fair	1200	10/7/2002
Delaware State Police Troop 5	40	9/6/2002
Dover Indoor Tennis Club	80	10/16/2002
Dover Skating Center	500	6/17/2002
E.I. Dupont	2500	11/14/2002
English's Family Restaurant	450	5/28/2002
English's Family Restaurant	450	12/4/2002
Felton Water Department	1591	6/26/2002
Fenwick Center II	150	6/20/2002
Flying Dutchman MHP Sys II	30	3/8/2002
Frederica Water Dept.	870	12/27/2002
Granada Mobile Home Court	138	6/5/2002
Gumboro General Store	250	6/27/2002
Hilltop Trailer Park	135	11/25/2002
Inn at Montchanin	80	1/11/2002
J & J Mobile Home Park	84	7/9/2002
J & J Mobile Home Park	84	12/4/2002
Kimothys Place	50	12/2/2002

Bacteria Violations (continued)		
System Name	Population Served	Date Violation Occurred
Laws Mobile Home Park	105	12/4/2002
Moore's Lake Plaza	230	7/9/2002
Mt Pleasant Trailer Park	117	12/17/2002
Natl. Vulcanized Fiber Sys III	25	4/23/2002
Natl. Vulcanized Fiber Sys III	25	6/7/2002
Panda Early Education Center	82	7/25/2002
Papen Farms Labor Camp	55	10/4/2002
Redfin Seafood	200	5/22/2002
Redfin Seafood	200	7/18/2002
Rehoboth District	18,619	6/3/2002
Shining Time Day Care Center	30	2/1/2002
Shoppes of Mt Pleasant	200	10/25/2002
Tuckahoe Acres II	738	5/21/2002
United Parcel Service	100	10/8/2002
Victorian Village	90	1/11/2002
Water Still, The	30	6/13/2002
Wawa #830	1000	11/1/2002
Willies Game and Tap Room	74	11/7/2002
Windsong Farms	129	8/20/2002

Total # of Violations: 51
 # of Systems Affected: 40
 # of Repeat Violators (Systems): 8
 Total Population At Risk: 34,509

Bacteria Monitoring Violations		
Systems which failed to collect the required number of samples during any monitoring period in 2002		
System Name	Population Served	Date Violation Occurred

Total # of Violations: 0
 # of Systems Affected: 0
 # of Repeat Violators (Systems): 0
 Total Population At Risk: 0

Nitrate Violations (maximum contaminant level of 10 mg/l)

System Name	Population Served	Date Violation Occurred	Nitrate Level (mg/l)
Briarwood Manor	296	01/24/2002	13.0
Bridgeville Commercial Park	30	8/6/2002	11.0
Central Delaware Christian Academy	140	8/29/2002	11.0
Immanuel Kings Kids Academy	85	5/24/2002	27.0
Pit, The	25	3/19/2002	11.0
Pit, The	25	9/26/2002	11.0
Rainbow Inn	100	8/21/2002	11.0
Savannah Place	81	6/17/2002	11.0
Shells Child Care Center II	35	1/7/2002	11.0
Tastee Freeze	100	1/3/2002	13.0
Tastee Freeze	100	4/18/2002	11.0
Tuckahoe Acres I	897	5/21/2002	13.0
Villas of Grandview	107	2/20/2002	12.0
Willies Game and Tap Room	74	12/27/2002	11.0

Total # of Violations: 14
 # of Systems Affected: 12
 # of Repeat Violators (Systems): 2
 Total Population At Risk: 1970

Lead and Copper Rule		
Systems Which Have Failed to Conduct Monitoring		
System Name	Population Served	Date Violation Occurred
Aquatic Resource Education Center	25	4/3/2002
Aquatic Resource Education Center	25	9/10/2002
Au Claire School	40	4/19/2002
Bridgeville District	1350	6/18/2002
Camden District	4584	6/18/2002
Carpenters Row	60	4/3/2002
Carpenters Row	60	9/10/2002
Central Christian School	100	4/16/2002
Central Christian School	100	9/10/2002
Chimney Hill	354	6/18/2002
Delaware State University	3500	4/3/2002
Delaware State University	3500	9/10/2002
East NCC District	1107	3/11/2002
Emergency Operations Center	60	4/3/2002
Forest Grove	339	6/18/2002
Green Acres Day Care	200	9/10/2002
Hartly Elementary School	450	12/11/2002
Hillside Acres	201	6/18/2002
Love Creek	210	6/18/2002
McNicol Place	276	6/18/2002
Middletown Water Department	9900	11/12/2002
Mt Pleasant Trailer Park	117	4/3/2002
Playtex Family Products	700	12/24/2002
Victorian Village	60	4/3/2002
Victorian Village	60	9/10/2002
Walkers Mill	1038	6/18/2002
Webbs Landing	60	6/18/2002
Whispering Pines	885	6/19/2002
Wild Quail	621	6/18/2002

Total # of Violations: 29
 # of Systems Affected: 24
 # of Repeat Violators (Systems): 5
 Total Population At Risk: 26237

Trace Metal Violations

Trace Metal Violations					
System Name	Population Served	Date Violation Occurred	Contaminant	MCL ¹ In mg/l ²	Level Found In mg/l

¹MCL means Maximum Contaminant Level

²mg/l means milligrams per liter

Total # of Violations:

of Systems Affected:

of Repeat Violators (Systems):

Total Population At Risk:

Volatile Organic Compound (VOC) Violations

Volatile Organic Compound (VOC) Violations					
System Name	Population Served	Date Violation Occurred	Contaminant	MCL ¹ In mg/l ²	Level Found In mg/l

¹MCL means
Maximum
Contaminant Level
²mg/l means
milligrams per liter

Total # of Violations:
of Systems Affected:
of Repeat Violators (Systems):
Total Population At Risk:

Conclusion

In the preceding pages several numbers and statistics were presented, but what does it mean? Is my water safe to drink? During calendar year 2002, out of a population of over 783,600 persons who consumed public drinking water in the State of Delaware, only 46,813 persons (6%) were exposed to harmful (health related) contaminants¹. This means that 94% of the population was provided drinking water that met or exceeded the standards as set by the Safe Drinking Water Act, Federal and State Regulations. Out of 611 public water systems, 79, or 12.9%, had a violation and only 5 systems (<1%) were repeat violators. Given these numbers it would be safe to say that the overall status of Delaware's public drinking water is very good.

The Office of Drinking Water, in cooperation with the Environmental Protection Agency and other State Agencies, is working with Delaware's public drinking water systems to ensure that violations have been corrected or are in the process of being corrected. The end result of this cooperative action is ensuring that all residents of and visitors to the State of Delaware receive a safe and potable source of drinking water.

Any questions or comments concerning this report and summary can be directed to the Division of Public Health, Office of Drinking Water at (302) 739-5410.

¹ Includes public water systems which did not perform Lead and Copper Rule monitoring and systems which are required to install corrosion control treatment in accordance with the Lead and Copper Rule

Office of Drinking Water
Division of Public Health
Blue Hen Corporate Center
655 Bay Road, Suite 203
Dover, Delaware 19903
(302) 739-5410