ANNUAL REPORT OF VIOLATIONS OF THE FEDERAL SAFE DRINKING WATER ACT

January 1, 1999 through December 31, 1999 Period

Tennessee Department of Environment and Conservation
Division of Water Supply
July, 2000

This report was prepared in accordance with the requirements of Section 1414.(c)(3)(A) of the Federal Safe Drinking Water Act and covers violations that occurred during the period from January 1, 1999 through December 31, 1999. Copies of this report are located and available for review in each of the following locations:

Division of Water Supply - Central Office
401 Church Street
6th Floor, L&C Tower
Nashville, TN 6150532-0191
615-532-0191

Regional Environmental Assistance Centers (EAC)- Division of Water Supply
1-888-891-8332

Chattanooga EAC
Division of Water Supply
Suite 550 - State Office Bldg.
540 McCallie Avenue
Chattanooga, TN 37402-2013
1-888-891-8332

Columbia EAC
Division of Water Supply
2484 Park Plus Dr.
Columbia, TN 38401
1-888-891-8332

Cookeville EAC
Division of Water Supply
121 South Willow
Cookeville, TN 38502
1-888-891-8332

Johnson City EAC
Division of Water Supply
2305 Silverdale Rd.
Johnson City, TN 37601-2162
1-888-891-8332

Knoxville EAC
Division of Water Supply
Suite 220 - State Plaza
2700 Middlebrook Pike
Knoxville, TN 37219
1-888-891-8332

Nashville EAC
Division of Water Supply
537 Brick Church Park Dr.
Nashville, TN 37243-1550
1-888-891-8332

Jackson EAC
Division of Water Supply
362 Carriage House Dr.
Jackson, TN 38305-2222
1-888-891-8332

Copies of the report are also located in most public libraries in the state and on the Department's Web site at:
http://www.state.tn.us/environment/dws/index.html

SUMMARY

This report is provided in compliance with the requirements of the 1996 Amendments of the Federal Safe Drinking Water Act. Included in this report is both a summary of drinking water violations and detailed information on systems with a violation during 1999.

The majority of the water systems and operators in Tennessee are very conscientious about the quality of water provided to their customers. Many of the violations were monitoring violations caused by an oversight on the part of the water utility.

The Department of Environment and Conservation, Division of Water Supply, has worked with the water utility managers/owners and operators to address each of the violations included in this report. Enforcement action and compliance schedules were used to achieve compliance with the regulations when the water utility did not or could not return to compliance in a timely manner. The majority of the violations in this report were committed by small water systems for failure to meet the microbiological monitoring requirements or for failure to meet the microbiological maximum contaminant level for total coliform. The second largest group of violations was caused by those systems that failed to meet the nitrate monitoring requirement. With technical assistance and training, most of the systems were able to return to compliance.

The Division of Water Supply will continue to work with water utility managers/owners and operators to ensure compliance with the drinking water requirements. If you have questions concerning the information contained in this report, please contact your local water utility, the nearest Division of Water Supply Office in the Regional Environmental Assistance Center at 1-888-891-8332, or the central office of the Division of Water Supply at 1-615-532-0191.

STATE OF TENNESSEE
ANNUAL REPORT
PUBLIC WATER SYSTEM VIOLATIONS

The Federal Safe Drinking Water Act (SDWA) was enacted in 1974 in order to assure that the public is provided with safe drinking water. Pursuant to the Safe Drinking Water Act and Amendments to the Act, national limits or standards were established on contaminant levels in drinking water to ensure that the drinking water is safe for human consumption. Such standards are known and denoted as Maximum Contaminant Levels. Further, the Environmental Protection Agency (EPA) also establishes treatment techniques for certain contaminants that are difficult for laboratories to measure in lieu of maximum contaminant levels to control unacceptable levels of contaminants in water. For example, treatment techniques have been established for viruses, bacteria and turbidity. In addition, the EPA regulates how frequently public water systems must monitor their water for contaminants and report the monitoring results to the States or EPA. A public water system is required to monitor and verify that the levels of contaminants present in the water do not exceed the maximum contaminant level for that contaminant. If a public water system fails to monitor as required or fails to report monitoring results correctly, then a monitoring or reporting violation occurs. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting requirements. Additionally, the EPA requires public water systems to notify the public when they have violated these regulations. The 1996 Amendments to the Safe Drinking Water Act require public 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.

The Safe Drinking Water Act applies to each of the fifty (50) States and allows States and Territories to seek EPA approval to administer their own Public Water System Supervision Programs. The authority to operate a Public Water System Supervision Program is called “Primacy”. In order to receive primacy, States must meet certain requirements specified in the Safe Drinking Water Act and the 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 program requirements. The State of Tennessee received primacy in 1977 and assumes primary enforcement responsibility for public water systems operating under the Tennessee Safe Drinking Water Act. The Safe Drinking Water Act and the Tennessee Safe Drinking Water Act define a public water system as follows:

> “Public water system” means a system for the provision of piped water for human consumption if such system serves fifteen (15) or more service connections or which regularly serves twenty-five (25) or more individuals daily at least sixty (60) days out of the year.

A “Public Water System”, as defined above, is either a “community water system” or a “non-community water system”. Community and non-community water systems are defined as follows:

> “Community Water System” means a public water system which serves at least fifteen (15) service connections used by year-round residents. Examples are municipalities and utility districts.
>
> “Non-Community Water System” means a public water system that is not a community water system. Examples include churches, industries and restaurants.

As previously stated, all public water systems must monitor their water for contaminants and report the monitoring results to the State or EPA. Due to Tennessee securing primacy from the EPA, all public water systems in Tennessee must monitor for contaminants and report monitoring results to the State of Tennessee. Primacy States, such as Tennessee, then submit data to the EPA Safe Drinking Water Information System (SDWIS) on a quarterly basis. Data submissions include public water system inventory statistics, the incidence of Maximum Contaminant Level, Major Monitoring, and Treatment Technique violations, and the enforcement actions initiated against violators.

In addition to the above quarterly data submittal to the EPA, Amendments of the Federal Safe Drinking Water Act, made in 1996, require States with primacy, such as Tennessee, to prepare and submit an annual report to EPA regarding public water system violations within the State in accordance with Section 1414(c)(3)(A)(i). Further, pursuant to 1414(c)(3)(A)(ii), States with primacy are required to publish and distribute summaries of their reports and advise citizens of locations where the full report is available for review. Upon receipt of reports, EPA will evaluate and summarize the States' reports in an annual national report, the first of which EPA will make available to the public by July 1, 1998. Informational reports submitted to the public and EPA by Tennessee are required to encompass violations pertaining to (1) maximum contaminant levels, (2) treatment requirements, (3) variances and exemptions, and (4) monitoring requirements determined to be significant by the EPA after consultation with the State. However, the State of Tennessee does not utilize variances and/or exemptions with respect to primary drinking water regulations; therefore, such information will be absent from reporting submitted by the State of Tennessee.

The State of Tennessee, Department of Environment and Conservation, Division of Water Supply, currently possesses regulatory responsibility for approximately one thousand one hundred ninety-two (1,192) public water systems throughout the state. These public water systems serve an estimated population in excess of five million one hundred forty thousand (5,140,000) individuals. All public water systems must accomplish certain monitoring and reporting requirements; however, the frequency of such requirements are dependent upon, and established considering, factors indicative of each water system including: population size served by the system; population type served by the system; and, source water supply. Although monitoring and reporting frequencies vary, failure to achieve monitoring and/or reporting requirements cause violations to be incurred regardless of monitoring frequency.

To aid in the interpretation and understanding of reported data, the following definitions are offered in order to clarify the nature of violations which may be incurred and/or the contaminants being monitored:

"Ground water under the direct influence of surface water" means any water beneath the surface of the ground with (1) significant occurrence of insects or other macroorganisms, algae, or other large-diameter pathogens such as Giardia lamblia, or (2) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence must be determined for individual sources in accordance with established criteria.

"Maximum Contaminant Level (MCL)" means the maximum permissible level of a contaminant in water which is delivered at the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry into the distribution system. Contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition.

Organic Contaminants: Carbon based compounds, such as industrial solvents and pesticides. These contaminants generally gain access to water through runoff from cropland or discharge from factories.

Inorganic Contaminants: Non-carbon based compounds such as metals, nitrates, and asbestos. These contaminants are naturally occurring in some water but can gain access through farming practices, chemical manufacturing, and other human activities.

Treatment Technique: A water disinfection process or procedure that is required instead of an maximum contaminant level for contaminants which laboratories cannot adequately measure.

Surface Water Treatment Rule: Establishes criteria under which water systems supplied by surface water or ground water under the direct influence of surface water must provide filtration as a treatment technique.

Trihalomethanes: Disinfection by-products produced as a result of the interaction of disinfectant (chlorine) with naturally occurring organic material which may be present in the water.

Waiver: Permission or consent of the Division of Water Supply conveyed to a water supply system upon satisfactory completion of criteria established and necessary to obtain such waiver.

A summary report has been included which reveals a compilation of violations regarding each contaminant. In addition, narrative explanations and accompanying data tables are offered to reveal those public water systems which have incurred violations during the 1999 calendar year. The narrative explanations convey specific information regarding the contaminants monitored and/or violations incurred as well as guidance regarding the use and interpretation of the data tables.

On July 1, 2000, each community public water system is required to prepare and distribute a Consumer Confidence Report to customers served by the system. The report must contain information including the system's source of water, contaminants detected in the water, potential health effects information, mechanisms for customers to influence decisions made by the water system and any violations of drinking water standards that may have occurred. The report must be prepared annually and must be made available to the water customer.

Tennessee Water Systems

Summary Violations Report

January 1, 1999 through December 31, 1999

State of Tennessee
Organic Contaminant Violations 1999
Summary Report

SDWIS Codes	Organic Contaminants	MCL (MG/L)[1]	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2981	1,1,1-Trichloroethane	0.2					11	5
2977	1,1-Dichloroethylene	0.007					11	5
2985	1,1,2-Trichloroethane	.005					11	5
2378	1,2,4-Trichlorobenzene	.07					11	5
2931	1,2-Dibromo-3-chloropropane (DBCP)	0.0002						
2980	1,2-Dichloroethane	0.005					11	5
2983	1,2-Dichloropropane	0.005					11	5
2063	2,3,7,8-TCDD (Dioxin)	$3x10^{-8}$						
2110	2,4,5-TP	0.05						
2105	2,4-D	0.07						
2265	Acrylamide							
2051	Alachlor	0.002					4	4
2050	Atrazine	0.003					6	6
2990	Benzene	0.005					11	5
2306	Benzo[a]pyrene	0.0002						
2046	Carbofuran	0.04					3	3
2982	Carbon tetrachloride	0.005					11	5
2959	Chlordane	0.002						
2380	cis-1,2-Dichloroethylene	0.07					11	5
2031	Dalapon	0.2						
2035	Di(2-ethylhexyl)adipate	0.4						

SDWIS Codes	Organic Contaminants (Cont'd)	MCL (MG/L)[1]	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2039	Di(2-ethylhexyl)phthalate	0.006						
2964	Dichloromethane	0.005					11	5
2041	Dinoseb	0.007						
2032	Diquat	0.02						
2033	Endothall	0.1						
2005	Endrin	0.002						
2257	Epichlorohydrin							
2992	Ethylbenzene	0.7					11	5
2946	Ethylene dibromide	0.00005						
2034	Glyphosate	0.7						
2065	Heptachlor	0.0004						
2067	Heptachlor epoxide	0.0002						
2274	Hexachlorobenzene	0.001						
2042	Hexachlorocyclopentadiene	0.05						
2010	Lindane	0.0002						
2015	Methoxychlor	0.04						
2989	Monochlorobenzene	0.1					11	5
2968	o-Dichlorobenzene	0.6					11	5
2969	para-Dichlorobenzene	0.075					11	5
2383	Total polychlorinated biphenyls	0.0005						
2326	Pentachlorophenol	0.001						
2987	Tetrachloroethylene	0.005					11	5

SDWIS Codes	Organic Contaminants (Cont'd)	MCL (MG/L)[1]	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2984	Trichloroethylene	0.005					11	5
2996	Styrene	0.1					11	5
2991	Toluene	1					11	5
2979	trans-1,2-Dichloroethylene	0.1					11	5
2955	Xylenes (total)	10					11	5
2020	Toxaphene	0.003						
2036	Oxamyl (Vydate)	0.2						
2040	Picloram	0.5						
2037	Simazine	0.004					2	2
2976	Vinyl chloride	0.002					11	5
	Total Number of Violations						246	
	Number of Individual Systems in Violation							9
	Total Population of Systems in Violation							50,968

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

State of Tennessee
Total Trihalomethane Violations 1999
Summary Report

SDWIS Codes	Total Trihalomethanes	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
2950	Total Trihalomethanes	.010					3	3
	Total Number of Violations						3	
	Number of Individual Systems in Violation							3
	Total Population of Systems in Violation							33,564

State of Tennessee
Inorganic Violations 1999
Summary Report

SDWIS Codes	Inorganics	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
1074	Antimony	0.006					8	8
1005	Arsenic	0.05					8	8
1094	Asbestos	7 million Fibers/L > 10 microns long						
1010	Barium	2					8	8
1075	Beryllium	0.004					8	8
1015	Cadmium	0.005					8	8
1020	Chromium	0.1					8	8
1024	Cyanide (as free cyanide)	0.2					8	8
1025	Fluoride	4.0					5	5
1035	Mercury	0.002					8	8
1040	Nitrate	10 (as Nitrogen)					37	37
1041	Nitrite	1 (as Nitrogen)					7	7
1045	Selenium	0.05					8	8
1085	Thallium	0.002					8	8
1038	Total Nitrate and Nitrite	10 (as Nitrogen)					7	7
	Total Number of Violations						147	
	Number of Individual Systems in Violation							43
	Total Population of Systems in Violation							11,707

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

State of Tennessee
Radionuclide Violations 1999
Summary Report

SDWIS Codes	Radionuclides	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
4000	Gross alpha	15 pCi/L						
4010	Radium-226 and radium-228	5 pCi/L						
4101	Gross beta	4 mrem/yr						
	Total Number of Violations		0				0	
	Number of Individual Systems in Violation			0				0
	Total Population of Systems in Violation			0				0

State of Tennessee
Total Coliform Rule Violations 1999
Summary Report

SDWIS Codes	Total Coliform Rule	MCL (MG/L)[1]	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
21	Acute MCL violation	Presence	0	0				
22	Non-acute MCL violation	Presence	72	65				
23,25	Major routine and follow up Monitoring						287	194
28	Sanitary Survey[2]							
	Total Number of Violations		72				287	
	Number of Individual Systems with MCL Violations			65				
	Number of Individual Systems with Significant Monitoring Violations							194
	Number of Individual Systems with TCR Violations		229					
	Total Population of Systems in Violation		253,315					

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.
2. NUMBER OF SIGNIFICANT MONITORING VIOLATIONS FOR SANITARY SURVEY UNDER THE TOTAL COLIFORM RULE.

State of Tennessee
Surface Water Treatment Rule Violations 1999
Summary Report

SDWIS Codes	Surface Water Treatment Rule	MCL (mg/L)	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
Filtered systems								
36	Monitoring, routine/repeat						15	4
41	Treatment techniques				19	6		
Unfiltered systems								
31	Monitoring, routine/repeat						0	0
42	Failure to filter				41	4		
	Subtotal				60			
	Number of Individual Systems with Treatment Technique Violations					10		
	Number of Individual Systems with Significant Monitoring Violations							4
	Number of Individual Systems with SWTR Violations		12					
	Total Population of Systems in Violation		86,402					

State of Tennessee
Lead and Copper Rule Violations 1999
Summary Report

SDWIS Codes	Lead and Copper Rule	MCL (MG/L)[1]	MCL Violations		Treatment Technique Violations		Significant Monitoring Violations	
			Number of Violations	Number of Systems	Number of Violations	Number of Systems	Number of Violations	Number of Systems
51	Initial lead and copper tap M/R						1	1
52	Follow-up or routine lead and copper tap M/R						2	2
58,62	Treatment Installation							
65	Public education							
	Total Number of Violations						3	
	Number of Individual Systems with Treatment Technique Violation							
	Number of Individual Systems with Significant Monitoring Violation							3
	Number of Individual Systems with Lead & Copper Rule Violation		3					
	Total Population of Systems in Violation		707					

1. VALUES ARE IN MILLIGRAMS PER LITER (MG/L), UNLESS OTHERWISE SPECIFIED.

MICROBIOLOGICAL DATA INTERPRETATION AND GUIDANCE

Microbiological contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect any biological contaminants which may be present in the drinking water. All community public water systems must conduct monitoring on a monthly basis with the number of samples being based on the population served. At a minimum, non-community water systems must monitor each calendar quarter. Non-community systems that serve more than one thousand (1,000) persons, utilize a ground water source under the direct influence of surface water or utilize surface water in total or in part must monitor on a monthly basis. A system collecting a sample which has a positive result for coliform bacteria must collect no fewer than three repeat samples for each positive result. All samples with a positive result for total coliforms must be analyzed for the presence of fecal coliforms. The results of all routine and repeat samples are included in determining compliance with the maximum contaminant level for total coliforms. The maximum contaminant level is based on the presence or absence of total coliforms in a sample.

If any repeat sample is fecal coliform-positive, or if any repeat sample is total coliform-positive following a fecal coliform-positive routine sample, an acute violation of the maximum contaminant level for microbiological contaminants is incurred. For systems which collect forty (40) or more samples per month, if greater than five (5) percent of samples collected yield total coliform-positive results a non-acute violation of the maximum contaminant level for microbiological contaminants is incurred. Further, for systems collecting fewer than forty (40) samples per month, if more than one (1) sample collected yields total coliform-positive results then a non-acute violation for microbiological contaminants is incurred.

Failure by a public water system to perform routine monitoring for microbiological contaminants constitutes a significant monitoring violation. Failure by a public water system to perform repeat monitoring following a positive coliform sample also constitutes a significant monitoring violation for microbiological contaminants.

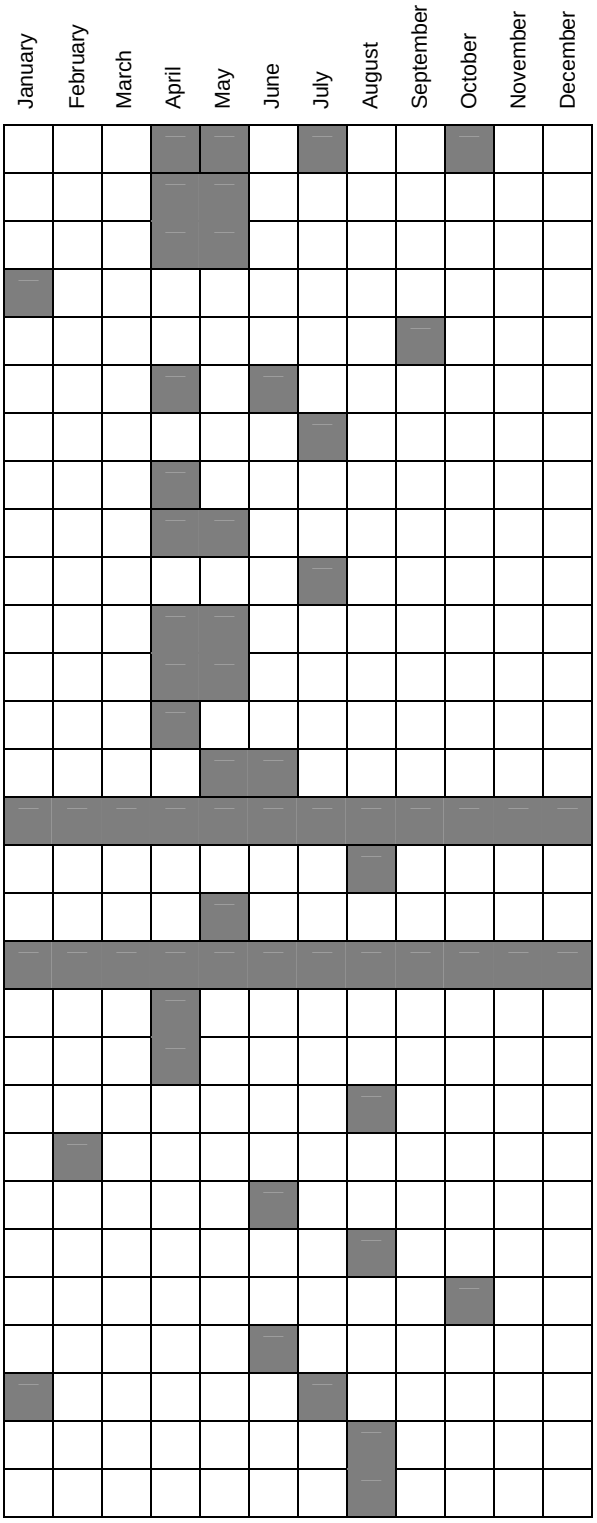
With consideration of the above information, the following data reveals a number of public water systems in the State of Tennessee which have incurred a violation pertaining to microbiological contaminants. The data has been categorized in accordance with the type of violation incurred; Microbiological Maximum Contaminant Level violations or Significant monitoring violations. The data is further subdivided dependent upon the monitoring frequency of the water systems. In referencing the data regarding microbiological maximum contaminant level violations, the public water systems which incurred such violations are listed according to sampling frequency and are accompanied by the county in which the system is located. The data charts reveal the monitoring period during which the violation occurred and whether the violation constituted an acute or non-acute violation of the maximum contaminant level. Acute violations of the maximum contaminant level are represented with dark shading while non-acute violations of the maximum contaminant level are represented utilizing light shading. See data tables 2 and 4.

The data charts documenting significant monitoring violations list public water systems according to sampling frequency and are also accompanied by the county in which the system is located. The data charts include shaded areas corresponding to the monitoring periods during which a monitoring violation was incurred. The failure to conduct routine monitoring or repeat monitoring is not differentiated as each constitutes a major monitoring failure and violation. See data tables 1 and 3

Table 1

Monthly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

	System Name	County	Population
	ACORN VILLAGE MHP	HUMPHREYS	38
	ARBORS AT BRENTWOOD APTS	DAVIDSON	816
	ARBORS OF HICKORY HOLLOW APTS	DAVIDSON	793
	BAXTER WATER DEPT	PUTNAM	4,153
	BETHEL CHURCH OF CHRIST	BLEDSOE	30
	BITSY FALLS TROUT FARM	STEWART	25
	BLUFF CITY WATER DEPARTMENT	SULLIVAN	2,214
	BRENTWOOD DOWNS APARTMENTS	DAVIDSON	675
	BRIXWORTH APARTMENTS	DAVIDSON	510
	BUCHANAN RESORT #1	HENRY	200
	CAMBRIDGE OF HICKORY HOLLOW	DAVIDSON	850
	CANTOR CHASE APARTMENTS	DAVIDSON	555
**	CAPITAL TOWERS APARTMENTS	DAVIDSON	97
	CARDERVIEW UTILITY DISTRICT	JOHNSON	549
	CEDAR CREEK WATER COMPANY	GREENE	98
	CHEROKEE LANDING RESORT	HARDEMAN	25
	CITGO RESTAURANT	HUMPHREYS	25
	COLD SPRINGS II WATER SYSTEM	JOHNSON	60
	COLONNADE APARTMENTS, THE	DAVIDSON	680
	COPPERFIELD TERRACE APARTMENTS	DAVIDSON	160
	COPPERHILL WATER DEPT.	POLK	745
	CUMBERLAND GAP WATER SERVICES	CLAIBORNE	276
	DEWHITE UTILITY DISTRICT	WHITE	4,665
**	DONELSON HILLS APARTMENTS	DAVIDSON	118
	DOUBLE SPRINGS UTILITY DISTRIC	PUTNAM	4,092
	EDDLEMON'S RESTAURANT	WEAKLEY	75
	ELIJAH GOSPEL MISSION	STEWART	101
	FISH SPRINGS RESTAURANT	CARTER	150
	FUTURE'S GOLF CLUB	HENRY	500



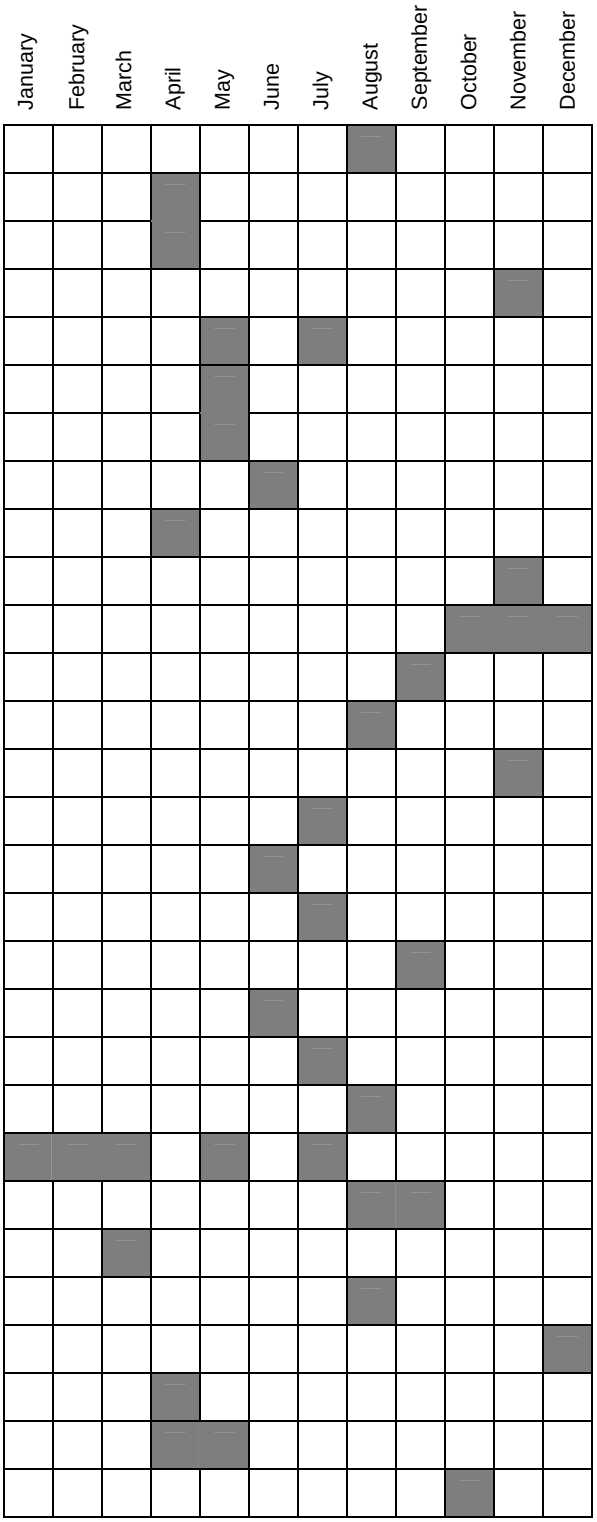
** Inactive Water System

TN DWS (April 2000)

Table 1

Monthly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

	System Name	County	Population
	GOOD HOPE BAPTIST CHURCH	MEIGS	30
	GROVE RICHLAND APARTMENTS	DAVIDSON	689
**	GROVE WHITWORTH APARTMENTS	DAVIDSON	710
	HARPETH UTILITY DISTRICT	DICKSON	2,876
	HIWASSEE OUTFITTERS	POLK	50
	JEFFERSON AT COOL SPRINGS APTS	WILLIAMSON	1,112
	JEFFERSON FARMS APARTMENTS	WILLIAMSON	1,365
	JOY O TRAVEL PARK	MADISON	25
	KEITH SPRINGS MARKET	FRANKLIN	30
	LENOXGATE APARTMENTS	DAVIDSON	623
	LEWIS TRAILER PARK	MADISON	110
	LOON BAY PROPERTY OWNERS ASS.	STEWART	129
	MIDWAY DRIVE INN THEATRE	MCMINN	100
	MIDWAY TRAILER COURT	DYER	40
	MILLINGTON WATER DEPT	SHELBY	6,585
	MONTHAVEN PARK APARTMENTS	SUMNER	598
	MOSCOW WATER DEPT	FAYETTE	630
	NATCHEZ TRACE WILDERNESS PRES.	LEWIS	226
	NEW BETHEL BAPTIST CHURCH	HARDEMAN	75
	NEW HARMONY BAPTIST CHURCH	HENRY	25
	NEWPORT RESORT WATER SYSTEM	RHEA	126
	NORTH ELIZABETHTON WATER CO-OP	CARTER	1,170
	OCOEE ADVENTURE CENTER	POLK	25
	OCOEE UTILITY DISTRICT	BRADLEY	10,876
	PAILO MARKET	BLEDSOE	25
**	PARKSIDE MANOR APARTMENTS	HAMILTON	100
	PINNACLE HEIGHTS APARTMENTS	DAVIDSON	562
	PREAKNESS APARTMENTS	DAVIDSON	613
	PRIMM SPRINGS MARKET	HICKMAN	25



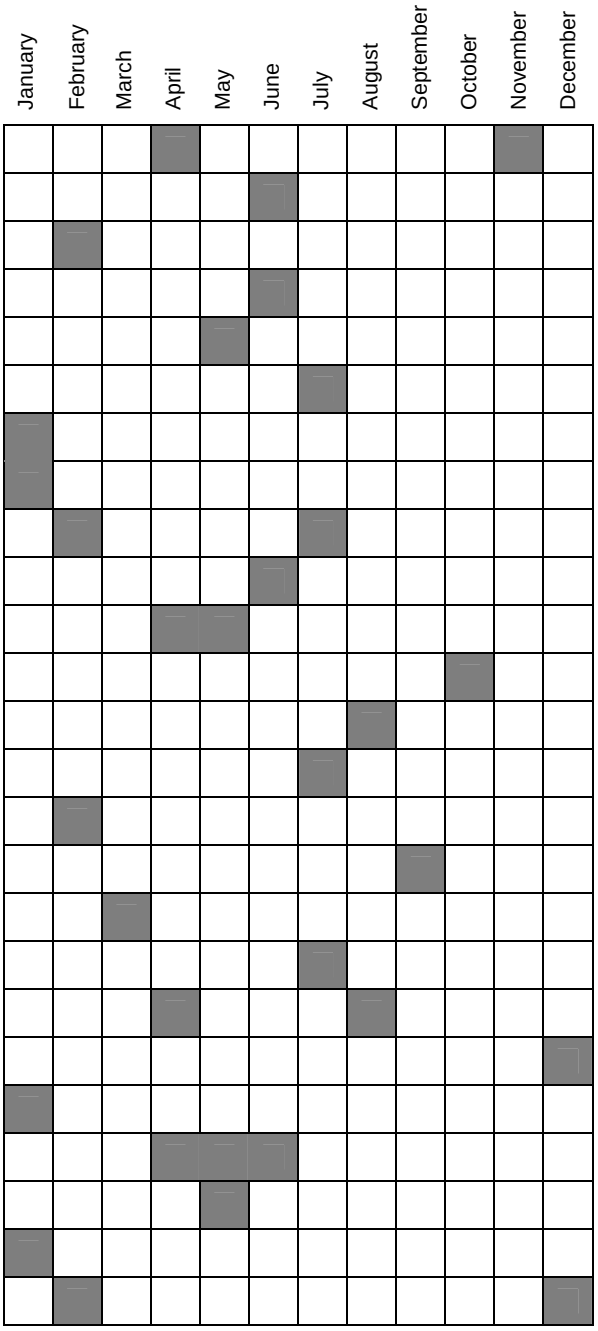
** Inactive Water System

TN DWS (April 2000)

Table 1

Monthly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

	System Name	County	Population
	PUMP SPRINGS MHP	CLAIBORNE	100
	QUIGLEY'S ASSOC. FOODS	WAYNE	25
	RED BOILING SPRINGS WATER SYST	MACON	3,855
	REELFOOT WATER ASSOCIATION	OBION	696
	RIDGELY WATER SYSTEM	LAKE	2,250
	ROAN MOUNTAIN UTILITY DISTRICT	CARTER	795
	RUTHERFORD WATER SYSTEM	GIBSON	1,495
	SCEPTER INGOT CASTING, INC.	HUMPHREYS	90
**	SEVEN HAWK'S WILDERNESS PRG	HUMPHREYS	70
**	SHADY VALLEY TRADING CO.	JOHNSON	30
	SPINNAKER COVE APARTMENTS	DAVIDSON	656
	SPRING CITY WATER SYSTEM	RHEA	2,490
	SUCK CREEK BAPTIST CHURCH	HAMILTON	30
**	TERRACE VIEW RESORTS, INC.	RHEA	32
	THE FARM WATER SYSTEM	LEWIS	186
	THREE OAKS RESTAURANT	HENRY	25
	TRIMBLE WATER SYSTEM	DYER	806
	UNION COUNTY BOAT DOCK	UNION	35
	USA RAFT INC.	UNICOI	25
	VANLEER WATER SYSTEM	DICKSON	2,343
	WEST OVERTON UTILITY DISTRICT	OVERTON	4,470
	WEST POINT U.D.	LAWRENCE	301
	WEST VALLEY WATER ASSOCIATION	MARION	2,496
	WHITEVILLE WATER DEPT	HARDEMAN	1,573
	WILLISTON WATER SYSTEM	FAYETTE	725



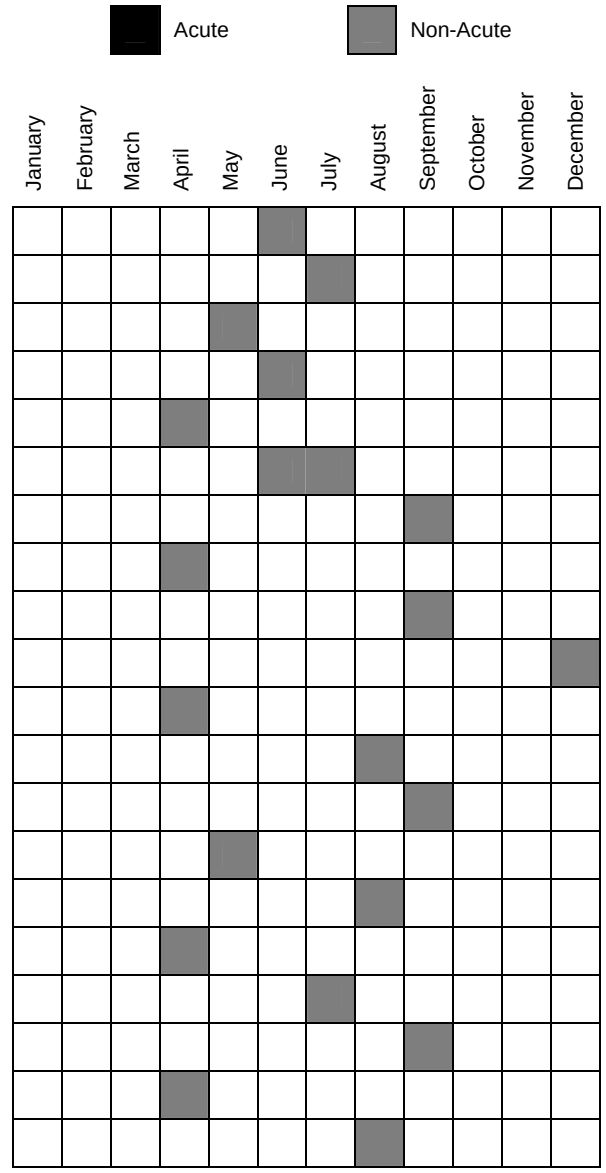
Total Population	78,424
Total Violations	131
Total Systems	81

** Inactive Water System

TN DWS (April 2000)

Table 2

Monthly Bacteriological
Maximum Contaminant Level Violations
January 1, 1999 - December 31, 1999



System Name	County	Population
ACORN VILLAGE MHP	HUMPHREYS	38
ALAMO WATER DEPT	CROCKETT	3,036
BELLS PUBLIC UTILITY DISTRICT	CROCKETT	2,459
BELVIDERE RURAL UTILITY DISTRI	FRANKLIN	1,183
CHINQUAPIN GROVE UTILITY DIST	SULLIVAN	1,907
ELIJAH GOSPEL MISSION	STEWART	101
GATES WATER DEPT	LAUDERDALE	841
GIBSON CO MUN WATER DIST #1	GIBSON	2,790
I-40 REST AREA MADISON	MADISON	5,000
MUNFORD WATER DEPT	TIPTON	6,272
NORTH OVERTON UTILITY DISTRICT	OVERTON	2,937
POPLAR GROVE UTILITY DISTRICT	TIPTON	12,804
REELFOOT WATER ASSOCIATION	OBION	696
RIVERSIDE CAMPGROUND	SEVIER	84
SAULSBURY UTILITY DISTRICT	HARDEMAN	565
SCOTTS HILL WATER SYSTEM	HENDERSON	3,586
SHADY HILLS MOBILE HOME PARK	DAVIDSON	472
SOUTH CUMBERLAND U.D.	CUMBERLAND	7,563
SOUTHGATE TERRACE APARTMENTS	WAYNE	25
WILSHIRE HILLS APARTMENTS	CUMBERLAND	515

Total Population	52,874
Total Violations	21
Total Systems	20

** Inactive Water System

TN DWS (April 2000)

Table 3

Quarterly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	January, February, March	April, May, June	July, August, September	October, November, December
ARMSTRONG FERRY PUA	MEIGS	50				
BETHEL BAPTIST CHURCH	OBION	50				
BETHEL CHURCH OF CHRIST	BLEDSOE	30				
BETHLEHEM BAPTIST CHURCH	MADISON	30				
BLUE WATER CAMPGROUND & BT DK	RHEA	30				
CAMP AHISTADI	JOHNSON	70				
CAMP FAIRVIEW	MCMINN	50				
CAMP MARYMOUNT	WILLIAMSON	250				
CARD'NAL COVE RESTAURANT	GRAINGER	25				
CARR'S COUNTY LINE GROCERY	BLEDSOE	25				
CHEROKEE MARKET & DELI	GRAINGER	25				
CLINCH SCHOOL	HAWKINS	172				
CONASAUGA BAPTIST CHURCH	MCMINN	75				
CROOKED CREEK SPORTS MARINA	PERRY	25				
CUBA LANDING MARINA	HUMPHREYS	25				
DALE'S MARKET	WAYNE	25				
DENMARK SCHOOL-MADISON CO. BOE	MADISON	450				
EBENEZER BAPTIST CHURCH	BLEDSOE	50				
ELK MILLS RESTAURANT	CARTER	25				
FISH SPRINGS	CARTER	100				
FISH SPRINGS RESTAURANT	CARTER	150				
FUTURE'S GOLF CLUB	HENRY	500				
GILES FLEA MARKET	CLAIBORNE	25				
GOOD HOPE BAPTIST CHURCH	MEIGS	30				
HIDDEN HOLLOW CAMP	PUTNAM	50				
HIDDEN VALLEY LAKES #1	HICKMAN	50				
HIDDEN VALLEY LAKES #2	HICKMAN	30				
HIDDEN VALLEY LAKES #3	HICKMAN	35				
HIDDEN VALLEY LAKES #4	HICKMAN	33				

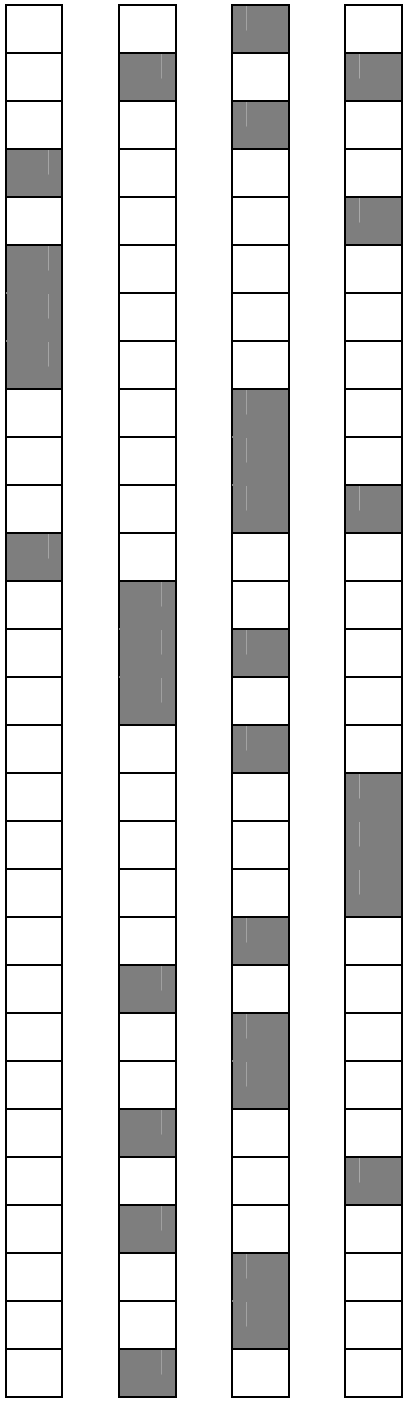
** Inactive Water System

TN DWS (April 2000)

Table 3

Quarterly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

	System Name	County	Population	January, February, March	April, May, June	July, August, September	October, November, December
	HIDDEN VALLEY LAKES #5	HICKMAN	50				
	HIWASSEE OUTFITTERS	POLK	50				
	HOLSTON ARMY AMMUNITION PLANT	HAWKINS	25				
	KEITH SPRINGS MARKET	FRANKLIN	30				
	KELLOGG'S CONVENIENCE FOODS	FAYETTE	200				
**	KELSEY'S MARKET	PERRY	25				
	KIDS COUNTRY DAY CARE	GRAINGER	45				
	KYLES FORD SCHOOL	HANCOCK	55				
	LAKESIDE CAMPGROUND	HAWKINS	35				
	LIBERTY HILL CHURCH OF CHRIST	MCMINN	95				
	LIL' PONDEROSA CAMPGROUND	SEVIER	100				
	LT'S MARKET	RUTHERFORD	25				
	MAPLE VIEW PUA-TVA	MARION	50				
**	MONA'S GROCERY STORE	POLK	30				
	MT CARMEL BAPTIST CHURCH	BRADLEY	175				
	MUDDY CREEK MARKET	JEFFERSON	50				
	NATCHEZ TRACE MOTEL	WAYNE	30				
	NEW HOPEWELL BAPTIST CHURCH	MCMINN	50				
	PAILO MARKET	BLEDSOE	25				
	PAINT CREEK-US FOREST SERVICE	GREENE	105				
**	PAT'S BAR AND GRILL	COCKE	25				
	PATE'S FORD MARINA	DE KALB	30				
	PONCHO'S PLACE	HUMPHREYS	25				
	PRIMM SPRINGS MARKET	HICKMAN	25				
	ROCK CREEK CAMP-US FOREST SERV	UNICOI	190				
	ROSE'S RESTAURANT	POLK	25				
	S & S GENERAL STORE	JOHNSON	30				
	SHORT CREEK BAPTIST CHURCH	MCMINN	150				
	SHORT MOUNTAIN BIBLE CAMP	CANNON	130				



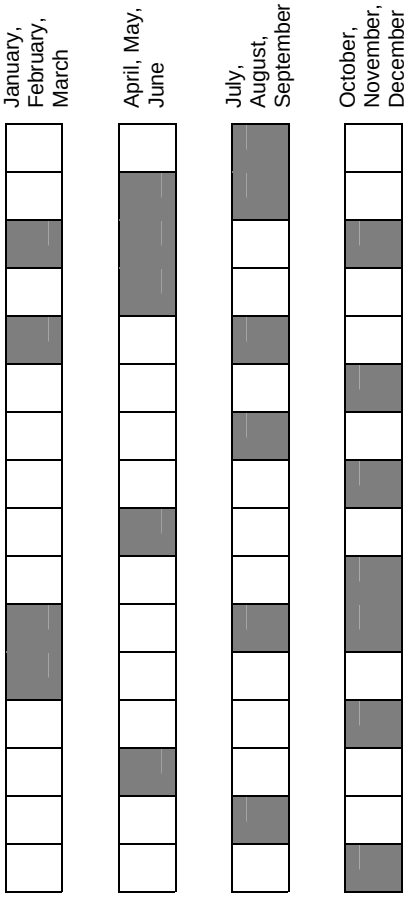
** Inactive Water System

TN DWS (April 2000)

Table 3

Quarterly Bacteriological
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

	System Name	County	Population
	TENNESSEE HILLS CAMP GROUND	COFFEE	70
**	TERRACE VIEW RESORTS, INC.	RHEA	32
	THE OAKS FAMILY CONFERENCE CTR	GREENE	100
	THREE OAKS FAMILY CAMPGROUND	JEFFERSON	25
	TN CUMBERLAND PLATEAU CAMPGRD	BLEDSOE	96
	TREASURE ISLAND FAMILY RESTAUR	SULLIVAN	50
	TURKEY CREEK MARINA AND RESORT	HUMPHREYS	25
	TURNERS DAIRY	TIPTON	125
	UNION COUNTY BOAT DOCK	UNION	35
	UNITY BAPTIST CHURCH	CHESTER	77
	USA RAFT INC.	UNICOI	25
	WALNUT GROVE BAPTIST CHURCH	MEIGS	60
	WARDS GROVE BAPTIST CHURCH	MADISON	30
	WEST MIDDLE SCHOOL	MADISON	300
	WHIPPOORWILL FARM DAY CAMP	WILLIAMSON	150
	WOODLAND COVE CAMPGROUND	SULLIVAN	100



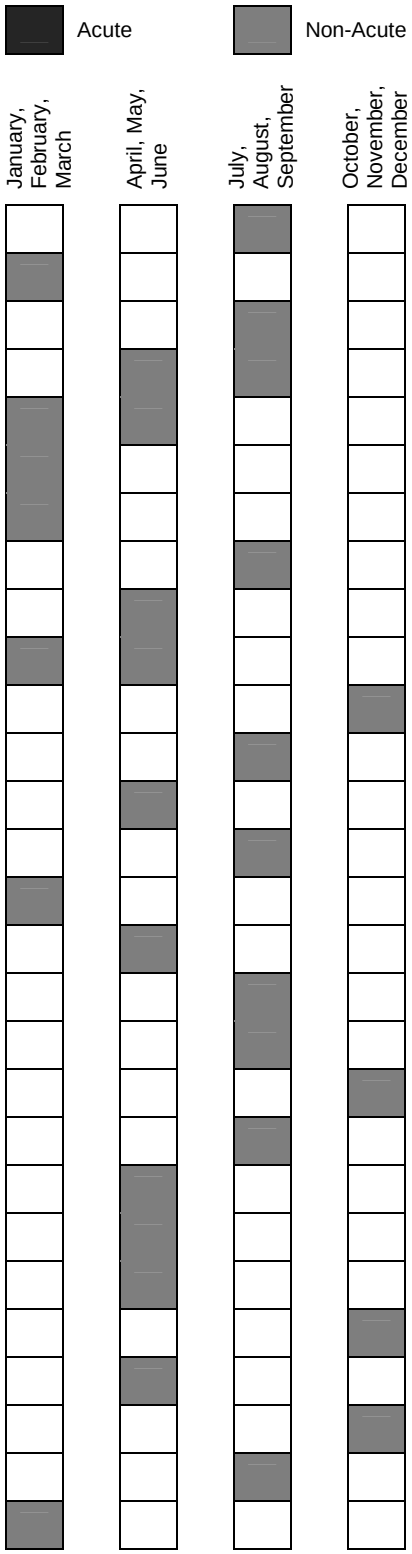
Total Population	5,665
Total Violations	89
Total Systems	74

** Inactive Water System

TN DWS (April 2000)

Table 4

Quarterly Bacteriological
Maximum Contaminant Level Violations
January 1, 1999 - December 31, 1999



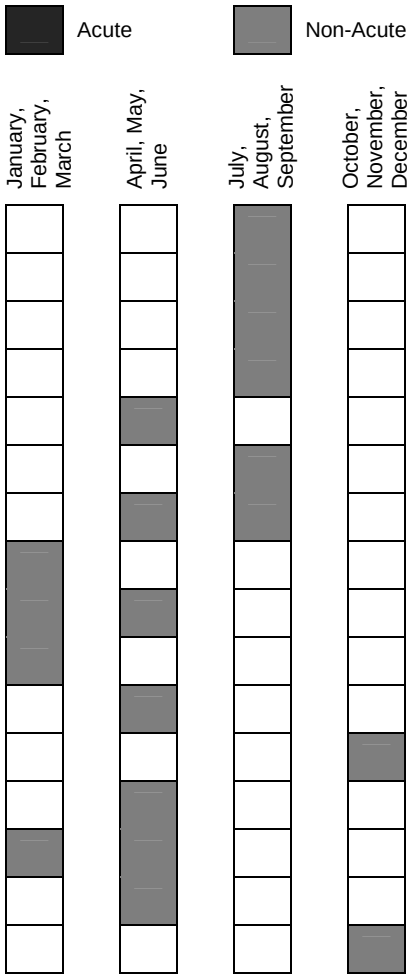
System Name	County	Population
ARARAT BAPTIST CHURCH	MADISON	175
BASS BAY RESORT	BENTON	25
BETHEL CHURCH OF CHRIST	BLEDSOE	30
BITSY FALLS TROUT FARM	STEWART	25
BLUE WATER CAMPGROUND & BT DK	RHEA	30
BUMPERS BAR & GRILL	WAYNE	25
CARR'S COUNTY LINE GROCERY	BLEDSOE	25
CEDAR FORK BAPTIST CHURCH	ROANE	90
CITGO RESTAURANT	HUMPHREYS	25
CONASAUGA BAPTIST CHURCH	MCMINN	75
CUBA LANDING MARINA	HUMPHREYS	25
DAN'S CAFE	HENDERSON	25
FANCHER'S WILLOW BRANCH CAMP	JEFFERSON	500
FISH SPRINGS RESTAURANT	CARTER	150
FRIENDSHIP BAPTIST ST CHURCH	MADISON	245
FUEL MART # 628	HAYWOOD	300
FUTURE'S GOLF CLUB	HENRY	500
GOOD HOPE BAPTIST CHURCH	MEIGS	30
GREASY CREEK BAPTIST CHURCH	POLK	75
HARMONS CREEK BOAT DOCK	BENTON	25
HARTFORD EXXON	COCKE	50
HIWASSEE OUTFITTERS	POLK	50
HOOPERS I-40 EXXON	HAYWOOD	125
INDIAN CAMP CREEK CAMPGROUND	COCKE	60
JOY O TRAVEL PARK	MADISON	25
KELLOGG'S CONVENIENCE FOODS	FAYETTE	200
LONE MOUNTAIN BOAT DOCK	CLAIBORNE	50
MAPLE SPRINGS BAPTIST CHURCH	MADISON	70

** Inactive Water System

TN DWS (April 2000)

Table 4

Quarterly Bacteriological
Maximum Contaminant Level Violations
January 1, 1999 - December 31, 1999



	System Name	County	Population
	MCFALL COUNTRY MARKET & DELI	WAYNE	25
	MIDWAY DRIVE INN THEATRE	MCMINN	100
**	MONA'S GROCERY STORE	POLK	30
	MT CARMEL BAPTIST CHURCH	BRADLEY	175
	NORTH RIVER CAMPGROUND USFS	MONROE	25
	OCOEE ADVENTURE CENTER	POLK	25
	PAILO MARKET	BLEDSOE	25
	PALMERSVILLE HIGH SCHOOL	WEAKLEY	280
	PRIMM SPRINGS MARKET	HICKMAN	25
	RIVER'S WAY CAMPGROUND	SULLIVAN	35
**	SHADY VALLEY TRADING CO.	JOHNSON	30
	SMILEY'S HILLTOP MARKET	CHEATHAM	25
	SPRINGS DOCK	CAMPBELL	45
	SPRUCE PINE GROVE BAPTIST CH	HAWKINS	150
**	TERRACE VIEW RESORTS, INC.	RHEA	32
	UNIMIN CORPORATION	WEAKLEY	51

Total Population	4108
Total Violations	50
Total Systems	44

** Inactive Water System

TN DWS (April 2000)

TREATMENT TECHNIQUE VIOLATIONS
DATA INTERPRETATION AND GUIDANCE

Treatment techniques are water treatment processes employed for the treatment and/or removal of contaminants in lieu of establishing a Maximum Contaminant Level for contaminants which laboratories cannot adequately measure. The Surface Water Treatment Rule utilizes and establishes treatment techniques in lieu of maximum contaminant levels for Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, and turbidity. In accordance with such requirements, water systems supplied by surface water, or ground water sources under the direct influence of surface water, must utilize water treatment processes (filtration and disinfection) which will achieve removal and/or inactivation of Giardia lamblia cysts and viruses. Water systems must perform analyses of the water in order to ensure the proper operation and effectiveness of the filtration and disinfection treatment.

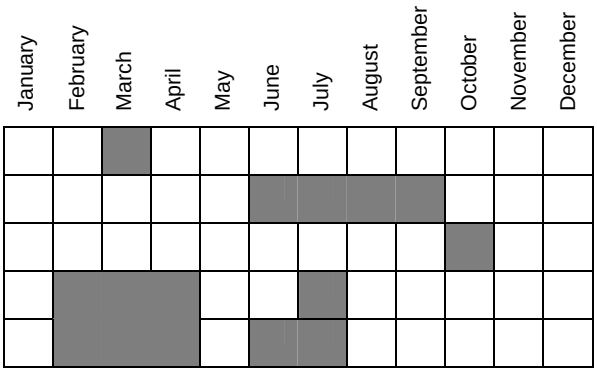
In accordance with the Surface Water Treatment Rule, water systems must monitor the water for turbidity (cloudiness of the water) and disinfectant residual. If a water system fails to conduct required monitoring, or fails to monitor and report ten (10) percent of the required samples, as determined by population served and duration of water plant operation, then a significant monitoring violation is incurred. If a water system conducts required monitoring and reporting and the results reveal that less than ninety-five (95) percent of samples collected met the turbidity standard or disinfectant residual standard, then a treatment technique violation is incurred. Additionally, if a water system utilizing surface water or ground water under the direct influence of surface water fails to meet all criteria to avoid filtration treatment and does not install the necessary filtration treatment within the allowable eighteen (18) month deadline then a violation is incurred regarding the failure to filter.

The following data reveals public water systems within the State of Tennessee which have incurred treatment technique violations as described above. The data has been categorized according to the type of violation incurred. Water systems which failed to conduct required monitoring or reporting or conducted less than ten (10) percent of the required monitoring incurred a significant monitoring violation and are revealed, together with the county of location, in the significant monitoring violation Data Table 5. Shading during that period represents the compliance period(s) during which the violation was incurred. Water systems which performed the required monitoring but failed to achieve compliance with the standard for turbidity or disinfectant residual incurred a treatment technique violation and are revealed on the corresponding Data Table 6. Shading during that period represents the compliance period(s) during which the violation was incurred. Water systems which failed to install filtration treatment within the allowable eighteen (18) months for installation incurred a violation regarding failure to filter and are revealed on the corresponding Data Table 7. Shading during that period represents the compliance period(s) during which the violation was incurred.

Table 5

Surface Water Treatment Rule
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

System Name	County	Population
BANEBERRY U. D. (Entry Point A)	JEFFERSON	464
CARDERVIEW UTILITY DISTRICT (Entry Point A)	JOHNSON	549
MONTEREY WATER DEPT (Entry Point A)	PUTNAM	4,006
RED BOILING SPRINGS W. S. (Entry Point A)	MACON	3,855
RED BOILING SPRINGS W. S. (Entry Point C)	MACON	



Total Population	8,874
Total Violations	15
Total Systems	4

** Inactive Water System

TN DWS (April 2000)

Table 6

Surface Water Treatment Rule
Treatment Technique Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	January	February	March	April	May	June	July	August	September	October	November	December
BLUFF CITY WATER DEPARTMENT (Entry Point A)	SULLIVAN	2,214												
CARDERVIEW UTILITY DISTRICT (Entry Point A)	JOHNSON	549												
E.I. DUPONT, NEW JOHNSONVILLE (Entry Point A)	HUMPHREYS	750												
LYNCHBURG WATER DEPARTMENT (Entry Point A)	MOORE	2,638												
RED BOILING SPRINGS W. S. (Entry Point A)	MACON	3,855												
RED BOILING SPRINGS W. S. (Entry Point C)														
WHITE HOUSE UTILITY DISTRICT (Entry Point A)	SUMNER	57,137			1.									

Total Population	67,143
Total Violations	19
Total Systems	6

Notes

1. System repaired Continuous Disinfection Monitoring Equipment by February 28, 1999 and is in compliance with the Surface Water Treatment Rule

** Inactive Water System

TN DWS (April 2000)

Table 7

Surface Water Treatment Rule
Failure to Filter Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	January	February	March	April	May	June	July	August	September	October	November	December
COLLINWOOD WATER DEPT (Entry Point A)	WAYNE	2,109												
ESTILL SPRINGS WATER DEPT. (Entry Point A)	FRANKLIN	3,366												
HICKORY STAR MARINA (Entry Point A)	UNION	135												
MOUNTAIN CITY WATER DEPT. (Entry Point B)	JOHNSON	9,179						1.						

Total Population	14,789
Total Violations	41
Total Systems	4

Notes

1. System installed filtration by May 31, 1999 and is in compliance with the Surface Water Treatment Rule

** Inactive Water System

TN DWS (April 2000)

INORGANIC CONTAMINANTS VIOLATIONS
DATA INTERPRETATION AND GUIDANCE

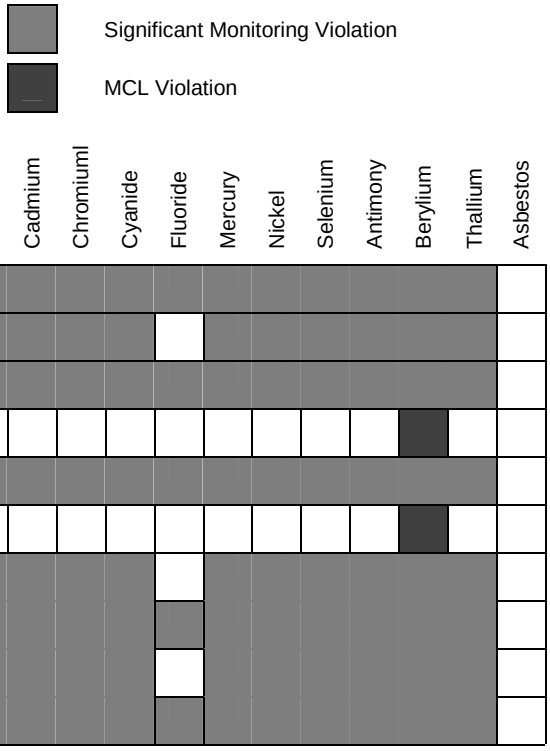
Inorganic contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect any inorganic contaminants such as metals, nitrates or asbestos which may be present in the drinking water. Maximum contaminant levels have been established for inorganic contaminants and monitoring determines compliance with such standards. Monitoring intervals for inorganic contaminants are determined considering the type of source water utilized by the public water system with the exceptions of nitrate and asbestos. Monitoring to determine compliance with the maximum contaminant level for nitrate may be conducted no less frequently than annually. Monitoring to determine compliance with the maximum contaminant level for asbestos is conducted with consideration to population served and the vulnerability of the system to asbestos contamination (asbestos-cement piping, etc.).

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to inorganic contaminants. The data reveals water systems which failed to conduct required monitoring. Two (2) Tennessee systems incurred a maximum contaminant level violation regarding inorganic chemicals. Questions have been raised concerning the validity of the laboratory results. Follow-up sampling results did not confirm a problem with beryllium. In referencing the data, Data Table 8 lists all inorganic contaminants which require monitoring with the exception of Nitrate. The public water systems which have incurred monitoring violations are listed accompanied by the county of location. Box shading under the corresponding contaminant for which a violation was incurred represents violations.

Data Tables 9 and 10 reveal inorganic contaminant nitrate monitoring violations. The data has been categorized in accordance with the type of source water supply utilized for ease of reference. Data Table 9 reveals those water systems, utilizing a surface water supply, which have incurred a monitoring violation regarding nitrate. Data Table 10 reveals those systems, utilizing a ground water supply, which have incurred a monitoring violation regarding nitrate.

Table 8

Inorganic Contaminant Violations
January 1, 1999 - December 31, 1999



System Name	County	Population
CEDAR CREEK WATER COMPANY	GREENE	98
CEDAR HALL SCHOOL [1]	RUTHERFORD	40
COLD SPRINGS II WATER SYSTEM	JOHNSON	60
COORS BREWING COMPANY	SHELBY	476
COUNTRY VALLEY ESTATES	MADISON	50
JIMMY DEAN FOODS	DYER	500
KYLES FORD SCHOOL [2]	HANCOCK	55
LEWIS TRAILER PARK	MADISON	110
MULBERRY GAP SCHOOL [3]	HANCOCK	84
NORTHWEST CLAY COUNTY UTILITY [4]	CLAY	2,861
	Total Population	4,334
	Total Violations	95
	Total Systems	10

Notes:

(1) System returned to compliance on 2/9/2000.

(2) System returned to compliance on 3/7/2000.

(3) System returned to compliance on 3/7/2000.

(4) System returned to compliance on 1/10/2000.

** Inactive Water System

TN DWS (April 2000)

Table 9

Nitrate
Significant Monitoring Violations
Surface Water Systems
January 1, 1999 - December 31, 1999

System Name	County	Population	Monitoring Period
Sneedville Utility District [1]	Hancock	3.853	January - March
	Total Population	3,853	
	Total Violations	1	
	Total Systems	1	

Notes:

(1) System returned to compliance on 4/19/1999.

** Inactive Water System

TN DWS (April 2000)

Table 10
Nitrate/Nitrite
Significant Monitoring Violations
Ground Water Systems
January 1, 1999 - December 31, 1999

	System Name	County	Population	Nitrate	Nitrite	Total Nitrate/Nitrite	Date System Returned to Compliance
	ARDMORE WATER SYSTEM (Entry Point C)	GILES	1,264				
	BANEBERRY U. D.	JEFFERSON	464				03/14/2000
	BEECH SPRINGS BAPTIST CHURCH	POLK	60				02/07/2000
	BETHLEHEM BAPTIST CHURCH	MADISON	30				01/05/2000
**	BIG RIDGE SCHOOL	UNION	210				
	BITSY FALLS TROUT FARM	STEWART	25				
	BRIDGEMONT MINISTRIES, INC.	SEVIER	65				02/01/2000
	CAMP CHILHOWEE	BLOUNT	50				02/24/2000
	CEDAR CREEK WATER COMPANY	GREENE	98				
	CEDAR HALL SCHOOL	RUTHERFORD	40				02/09/2000
	COLD SPRINGS II WATER SYSTEM	JOHNSON	60				
	CONASAUGA BAPTIST CHURCH	MCMINN	75				
	COUNTRY VALLEY ESTATES	MADISON	50				
	FAT DADDY'S MARINA (Entry Point B)	STEWART	25				02/07/2000
	GILES FLEA MARKET	CLAIBORNE	25				01/06/2000
	GOOD HOPE BAPTIST CHURCH	MEIGS	30				01/09/2000
	GOOD TIME CHARLIE'S WATER SYS.	HUMPHREYS	25				02/16/2000
	HIDDEN VALLEY LAKES #1	HICKMAN	50				05/02/2000
	HIDDEN VALLEY LAKES #2	HICKMAN	30				05/02/2000
	HIDDEN VALLEY LAKES #3	HICKMAN	35				05/02/2000
	HIDDEN VALLEY LAKES #4	HICKMAN	33				05/02/2000
	HIDDEN VALLEY LAKES #5	HICKMAN	50				05/02/2000
	LEWIS TRAILER PARK	MADISON	110				
	LIL' PONDEROSA CAMPGROUND	SEVIER	100				
	LONG'S STORE	COFFEE	25				01/19/2000
	LONGTOWN BP & RESTAURANT	FAYETTE	300				02/08/2000
	LOON BAY PROPERTY OWNERS (Entry Point C)	STEWART	129				01/24/2000
	MAPLE VIEW PUA-TVA	MARION	50				02/01/2000
	MIDWAY TRAILER COURT	DYER	40				04/05/2000

** Inactive Water System

TN DWS (April 2000)

Table 10
Nitrate/Nitrite
Significant Monitoring Violations
Ground Water Systems
January 1, 1999 - December 31, 1999

	System Name	County	Population	Nitrate	Nitrite	Total Nitrate/Nitrite	Date System Returned to Compliance
	MUDDY CREEK MARKET	JEFFERSON	50	■			01/18/2000
	NANNY'S RESTAURANT	UNICOI	50	■	■	■	04/25/2000
	NEW ZION BAPTIST CHURCH	MCMINN	100	■			01/30/2000
	PAILO MARKET	BLEDSOE	25	■			05/12/2000
**	PAT'S BAR AND GRILL	COCKE	25	■			
	PATE'S FORD MARINA	DE KALB	30	■			02/07/2000
	THE BOAT DOCK	HARDEMAN	25	■			02/07/2000
	USA RAFT INC.	UNICOI	25	■			03/14/2000

Total Population	3,878
Total Violations	51
Total Systems	37

** Inactive Water System

TN DWS (April 2000)

ORGANIC CONTAMINANTS VIOLATIONS
DATA INTERPRETATION AND GUIDANCE

Organic contaminant sampling is conducted by all community, and certain non-community, public water systems in Tennessee, which have not received a waiver of the monitoring requirements, in an effort to detect any organic contaminants such as solvents or pesticides which may be present in the drinking water. Maximum contaminant levels have been established for organic contaminants and monitoring determines compliance with such standards. Monitoring intervals for organic contaminants are determined considering the type of source water utilized and the type of population served by the public water system. Water systems which conduct monitoring for organic contaminants and do not detect a contaminant may reduce the sampling frequency regarding organic contaminants or request a waiver from the State regarding sampling requirements.

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to organic contaminants monitoring. The data reveals public water systems which had not received a waiver of monitoring requirements and failed to conduct the required monitoring. No Tennessee system incurred a maximum contaminant level violation regarding organic contaminants. To facilitate ease of use, the data has been categorized according to type of organic contaminant. Data Table 11 contains a listing of Synthetic Organic Contaminants while Data Table 12 details information pertaining to Volatile Organic Contaminants. In referencing the data tables, the public water systems which have incurred monitoring violations are listed accompanied by the county of location. Organic contaminants which required monitoring are listed with violations being represented by box shading under the corresponding contaminant for which a monitoring violation was incurred. In addition to the above information, Data Table 12 reveals the compliance monitoring period during which the monitoring violation was incurred.

Table 12

Volatile Organic Contaminants
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	Violation Period	1,2,4-TRICHLOROBENZENE	CIS-1,2-DICHLOROETHYLENE	Xylenes (total)	DICHLOROMETHANE	O-DICHLOROBENZENE	P-DICHLOROBENZENE	VINYL CHLORIDE	1,1-DICHLOROETHYLENE	TRANS-1,2-DICHLOROETHYLENE	1,2-DICHLOROETHANE	1,1,1-TRICHLOROETHANE	CARBON TETRACHLORIDE	1,2-DICHLOROPROPANE	TRICHLOROETHYLENE	1,1,2-TRICHLOROETHANE	TETRACHLOROETHYLENE	CHLOROBENZENE	BENZENE	TOLUENE	ETHYLBENZENE	STYRENE	Date Returned to Compliance
CEDAR CREEK WATER COMPANY	GREENE	98	01/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			04/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			07/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			10/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
COLD SPRINGS II WATER SYSTEM	JOHNSON	60	01/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			04/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			07/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
			10/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
FRANKLIN WATER DEPT	WILLIAMSON	38,673	01/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	3/14/2000
LYNCHBURG WATER DEPARTMENT	MOORE	2,638	01/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	2/21/2000
NEVA ELEMENTARY SCHOOL	JOHNSON	130	01/01/1999	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	4/28/1999

Total Population	41,441
Total Violations	231
Total Systems	5

** Inactive Water System

TN DWS (April 2000)

TRIHALOMETHANE VIOLATIONS
DATA INTERPRETATION AND GUIDANCE

Trihalomethane sampling is conducted by all community public water systems in Tennessee which serve a population of 10,000 or more individuals and add a disinfectant to the water. Trihalomethanes are disinfection by-products which are produced as the disinfectant (chlorine) reacts with naturally occurring organic matter, such as leaf litter, which may be present in the water. Monitoring is conducted in an effort to detect any trihalomethanes which may be present in the drinking water. A maximum contaminant level has been established for total trihalomethanes and monitoring determines compliance with such standard. Monitoring is conducted for total trihalomethanes on a quarterly basis and on each water treatment plant used by a system.

The accompanying data reveals those public community water systems within the State of Tennessee which have incurred a violation pertaining to total trihalomethanes monitoring. No Tennessee system incurred a maximum contaminant level violation regarding total trihalomethanes. In referencing Data Table 13 for total trihalomethanes, the public water systems which have incurred monitoring violations are listed accompanied by the county of location. The data is segregated according to quarterly compliance monitoring periods with violations being represented by box shading under the corresponding compliance period during which a monitoring violation was incurred. Box shading indicates that monitoring was not performed during the applicable monitoring period.

Table 13

Total Trihalomethane
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	January, February, March	April, May, June	July, August, September	October, November, December
ELIZABETHTON WATER DEPT [1]	CARTER	25,528				
JAMESTOWN WATER DEPT [2]	FENTRESS	3,355				
TELLICO AREA SERVICES SYSTEM [3]	MONROE	4,681				
	Total Population	33,564				
	Total Violations	3				
	Total Systems	3				

Notes:

(1) System returned to compliance by sampling 2/28/2000.

(2) System returned to compliance by sampling 2/14/2000.

(3) System returned to compliance by sampling 2/15/2000.

** Inactive Water System

TN DWS (April 2000)

LEAD AND COPPER VIOLATIONS
DATA INTERPRETATION AND GUIDANCE

Lead and Copper sampling is conducted by all community and certain non-community public water systems in Tennessee in an effort to detect excessive levels of lead and/or copper in drinking water. The maximum allowable concentrations of lead and/or copper in drinking water are denoted as action levels. Treatment techniques have been established that include requirements for corrosion control treatment, source water treatment, lead service line replacement and public education for systems which exceed the action levels for lead and/or copper. Tap water monitoring determines compliance with such standards. Initial tap water monitoring is conducted for lead and copper on six (6) month monitoring intervals. If a water system meets the action levels for lead and copper during each of two (2) consecutive six (6) month monitoring periods, or maintains optimal corrosion control, the system may request to reduce monitoring to an annual basis.

The accompanying data reveals those public water systems within the State of Tennessee which have incurred a violation pertaining to lead and copper monitoring. In referencing Data Table 14 for lead and copper monitoring, the public water systems which have incurred monitoring violations are listed accompanied by the county of location. The data is segregated according to six (6) month compliance monitoring periods with violations being represented by box shading under the corresponding compliance period during which a monitoring violation was incurred. Box shading indicates that monitoring was not performed during the applicable monitoring period.

Table 14

Lead and Copper Rule
Significant Monitoring Violations
January 1, 1999 - December 31, 1999

System Name	County	Population	January - June	July - December	Date Returned to Compliance
CARDERVIEW UTILITY DISTRICT [1]	JOHNSON	549	Followup		10/26/1999
CEDAR CREEK WATER COMPANY [2]	GREENE	98	Initial		
COLD SPRINGS II WATER SYSTEM [3]	JOHNSON	60	Continuing		

Total Population	707
Total Violations	3
Total Systems	3

Notes:

(1) System failed to perform followup sampling during the first monitoring period of 2000.

(2) System failed to perform initial monitoring during the first monitoring period of 2000.

(3) System failed to monitor during the July - December 1998 monitoring period and remains in violation.

** Inactive Water System

TN DWS (April 2000)

DIVISION OF WATER SUPPLY
ENFORCEMENT ACTION
SUMMARY

In order to address non-compliance issues the Division of Water Supply utilizes a number of enforcement mechanisms which include: issuance of Notices of Violation and/or Notices of Non-Compliance which officially notify a violator of a violation and provide guidance to facilitate actions to return a violator to compliance; technical assistance and training; conducting Compliance Review and/or Show Cause meetings during which compliance status is discussed and imperative actions to achieve compliance are reviewed; and issuance of administrative orders and assessments which contain monetary civil penalties for violations incurred. The Department of Environment and Conservation and the Division of Water Supply are granted authority by the Tennessee Safe Drinking Water Act, through the Department's Commissioner, to initiate enforcement action and issue such administrative orders regarding violations of the Tennessee Safe Drinking Water Act, T.C.A. э 68-221-701 *et seq.*

The Division of Water Supply initially attempts to assist violators with compliance through a system of official notifications, technical assistance and training, on-site inspections and compliance review meetings. Under certain circumstances, water systems are provided the opportunity to execute a Letter of Agreement indicating an understanding of non-compliance issues and conveying an agreement to undertake necessary actions to prevent a recurrence of non-compliance. In situations where the Division has issued notifications, conducted technical assistance and/or on-site inspections or conducted compliance assessment meetings and violations are not addressed by a water utility or are not addressed in a timely manner, the Division customarily recommends and/or initiates enforcement action in the form of an Administrative Order. Such Administrative Orders contain monetary civil penalties assessed for violations and mandate that compliance be achieved.

The majority of violations incurred by water utilities are addressed and corrected prior to the necessity for issuance of an Administrative Order. With technical assistance and training by the Division, most systems are able to return to compliance. However, there are situations in which violations are not addressed or corrected and an Administrative Order is warranted. Consequently, during calendar year 1999, forty-four (44) Administrative Orders were issued to public water systems and/or certified operators in Tennessee. The Administrative Orders encompassed a variety of violations including those contained in this Annual Report of Violations.