

ANNUAL REPORT OF VIOLATIONS OF THE FEDERAL SAFE DRINKING WATER ACT

January 1, 2001 through December 31, 2001



Tennessee Department of Environment and Conservation
Division of Water Supply
July 2002

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 from January 1, 2001 through December 31, 2001. 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 37243-1549
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

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

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

Nashville EAC
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711 R. S. Gass Blvd.
Nashville, TN 37216
1-888-891-8332

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

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

Johnson City EAC
Division of Water Supply
2305 Silverdale Rd.
Johnson City, TN 37601-2162
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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 2001.

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. Included in this year's report are the systems that failed to deliver the Consumer Confidence Report within the required time frame.

The Department of Environment and Conservation, Division of Water Supply, has worked with 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 888-891-8332, or the Nashville central office of the Division of Water Supply at 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 (MCLs). 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 (MCLs) 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 Program. The authority given to a state to operate a Public Water System Supervision Program is called "Primacy". In order to receive primacy, a state must meet certain requirements specified in the Safe Drinking Water Act and those regulations promulgated pursuant to the Act, 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 water for human consumption through pipes or other constructed conveyances, 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 includes:

- (i) Any collection, treatment, storage or distribution facility under control of the operator of such system and used primarily in connection with such system; and
- (ii) Any collection or pretreatment storage facility not under such control which is used primarily in connection with such system.

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 that 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 the "Primacy" agency, 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, the 1996 Amendments of the Federal Safe Drinking Water Act require states with primacy 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. After the submittal of the state reports, EPA evaluates and summarizes the reports in an annual national report, the first of which EPA made available to the public just prior to 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 is absent from the report prepared and 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 1,123 public water systems throughout the state. These public water systems serve an estimated population in excess of 5,328,000 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 requirements vary, failure to meet the monitoring and/or reporting requirements cause violations to be incurred.

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.

“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 and other contaminants so designated 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 a 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 a disinfectant (chlorine) with naturally occurring organic material that 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 tables are offered to reveal those public water systems that have incurred violations during the 2001 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 tables.

By July 1, 2002, each community public water system was required to prepare and distribute a Consumer Confidence Report to customers served by the system. The report was required to 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 during the previous calendar year. This report is to be prepared annually and must be made available to the water customer.

Tennessee Water Systems

Summary Violations Report

January 1, 2001 through December 31, 2001

**State of Tennessee
Volatile Organic Contaminants (VOCs)
Violations Summary Report for 2001**

SDWIS Codes	Volatile 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
2977	1,1-Dichloroethylene	0.007	0	0			8	8
2981	1,1,1-Trichloroethane	0.2	0	0			8	8
2985	1,1,2-Trichloroethane	0.005	0	0			8	8
2980	1,2-Dichloroethane	0.005	0	0			8	8
2983	1,2-Dichloropropane	0.005	0	0			8	8
2378	1,2,4-Trichlorobenzene	0.07	0	0			8	8
2990	Benzene	0.005	0	0			8	8
2982	Carbon tetrachloride	0.005	0	0			8	8
2380	cis-1,2-Dichloroethylene	0.07	0	0			8	8
2964	Dichloromethane	0.005	0	0			8	8
2992	Ethylbenzene	0.7	0	0			8	8
2989	Monochlorobenzene	0.1	0	0			8	8
2968	o-Dichlorobenzene	0.6	0	0			8	8
2969	para-Dichlorobenzene	0.075	0	0			8	8
2996	Styrene	0.1	0	0			8	8
2987	Tetrachloroethylene	0.005	0	0			8	8
2991	Toluene	1	0	0			8	8
2979	trans-1,2-Dichloroethylene	0.1	0	0			8	8
2984	Trichloroethylene	0.005	0	0			8	8
2950	Total Trihalomethanes	0.010	0	0			2	2
2976	Vinyl chloride	0.002	0	0			8	8
2955	Xylenes (total)	10	0	0			8	8
	Total Number of Violations		0				170	
	Number of Individual Systems in Violation			0				10
	Total Number of Individual Systems with a VOC Violation							10

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

**State of Tennessee
Synthetic Organic Contaminants (SOCs)
Violations Summary Report for 2001**

SDWIS Codes	Synthetic 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
2931	1,2-Dibromo-3-chloropropane(DBCP)	0.0002	0	0			0	0
2063	2,3,7,8-TCDD (Dioxin)	3x10 ⁻⁸	0	0			0	0
2110	2,4,5-TP	0.05	0	0			0	0
2105	2,4-D	0.07	0	0			0	0
2265	Acrylamide				0	0		
2051	Alachlor	0.002	0	0			0	0
2050	Atrazine	0.003	0	0			5	5
2306	Benzo[a]pyrene	0.0002	0	0			0	0
2046	Carbofuran	0.04	0	0			1	1
2959	Chlordane	0.002	0	0			0	0
2031	Dalapon	0.2	0	0			0	0
2035	Di(2-ethylhexyl)adipate	0.4	0	0			0	0
2039	Di(2-ethylhexyl)phthalate	0.006	0	0			0	0
2041	Dinoseb	0.007	0	0			0	0
2032	Diquat	0.02	0	0			0	0
2033	Endothall	0.1	0	0			0	0
2005	Endrin	0.002	0	0			0	0
2257	Epichlorohydrin				0	0		
2946	Ethylene dibromide	0.00005	0	0			0	0
2034	Glyphosate	0.7	0	0			1	1
2065	Heptachlor	0.0004	0	0			0	0
2067	Heptachlor epoxide	0.0002	0	0			0	0
2274	Hexachlorobenzene	0.001	0	0			0	0
2042	Hexachlorocyclopentadiene	0.05	0	0			0	0
2010	Lindane	0.0002	0	0			0	0
2015	Methoxychlor	0.04	0	0			0	0

**State of Tennessee
Synthetic Organic Contaminants (SOCs)
Violations Summary Report for 2001**

SDWIS Codes	Synthetic 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
2036	Oxamyl (Vydate)	0.2	0	0			0	0
2326	Pentachlorophenol	0.001	0	0			0	0
2040	Picloram	0.5	0	0			0	0
2383	Polychlorinated biphenyls	0.0005	0	0			0	0
2037	Simazine	0.004		0			0	0
2020	Toxaphene	0.003	0	0			0	0
	Total Number of Violations		0		0		7	
	Number of Individual Systems in Violation			0		0		5

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

**State of Tennessee
Inorganic Contaminants (IOCs)
Violations Summary Report for 2001**

SDWIS Codes	Inorganic 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
1074	Antimony	0.006	0	0			7	6
1005	Arsenic	0.05	0	0			7	6
1094	Asbestos	7 million Fibers/L > 10 microns	0	0			0	0
1010	Barium	2	0	0			6	5
1075	Beryllium	0.004	0	0			7	6
1015	Cadmium	0.005	0	0			7	6
1020	Chromium	0.1	0	0			7	6
1024	Cyanide (as free cyanide)	0.2	0	0			7	6
1025	Fluoride	4.0	0	0			7	6
1035	Mercury	0.002	0	0			6	5
1040	Nitrate	10 (as Nitrogen)	0	0			13	13
1038	Total Nitrate and Nitrite	10 (as Nitrogen)	0	0			0	0
1041	Nitrite	1 (as Nitrogen)	0	0			0	0
1045	Selenium	0.05	0	0			7	6
1085	Thallium	0.002	0	0			7	6
	Total Number of Violations		0				95	
	Number of Individual Systems in Violation			0				19

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

**State of Tennessee
Radionuclides
Violations Summary Report for 2001**

SDWIS Codes	Inorganic Contaminants	MCL	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	1	1			0	0
4010	Radium-226 and radium-228	5 pCi/L	0	0			0	0
4101	Gross beta	4 mrem/yr	0	0			0	0
	Total Number of Violations		1				0	
	Number of Individual Systems in Violation			1				0

**State of Tennessee
Total Coliform Rule (TCR)
Violations Summary Report for 2001**

SDWIS Codes	Total Coliform Rule	MCL	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	MCL, Acute	Presence	5	5				
22	MCL, Non-Acute	Presence	51	43				
23,25	Routine Monitoring and Repeat Major						243	178
	Total Number of Violations		56				243	
	Number of Individual Systems With MCL Violations			47				
	Number of Individual Systems With Significant Monitoring Violations							178
	Total Number of TCR Violations		303					
	Number of Individual Systems With a TCR Violation		200					

**State of Tennessee
Surface Water Treatment Rule (SWTR)
Violations Summary Report for 2001**

SDWIS Codes	Surface Water Treatment Rule	MCL	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						22	14
41	Treatment Technique				16	11		
Unfiltered Systems								
31	Monitoring, routine/repeat						0	0
42	Failure to Filter				162	38		
	Subtotal				178		22	
	Number of Individual Systems With Treatment Technique Violations					49		
	Number of Individual Systems With Significant Monitoring Violations							14
	Total Number of SWTR Violations				215			
	Number of Individual Systems With a SWTR Violation				63			

**State of Tennessee
Lead and Copper Rule
Violations Summary Report for 2001**

SDWIS Codes	Lead & 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						0	0
52	Follow-up or routine lead and copper tap M/R						2	1
	Total Number of Violations						2	
	Number of Individual Systems							1

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

**State of Tennessee
Consumer Confidence Reports (CCR)
Violations Summary Report for 2001**

SDWIS Codes	Consumer Confidence Report	Number of Violations	Number of Systems
71	Failure to Provide CCR	18	18
	Totals	18	18

MICROBIOLOGICAL DATA INTERPRETATION AND GUIDANCE

Microbiological contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect biological contaminants that may be present in drinking water. All community public water systems must conduct monitoring on a monthly basis with the number of samples 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 and 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 that is positive for the presence of coliform bacteria must collect no fewer than three repeat samples for each positive result. All samples positive for the presence of 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.

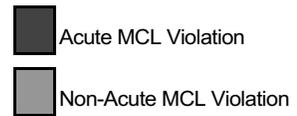
If any repeat sample is fecal coliform-positive, or if any repeat sample is total coliform-positive following a fecal coliform-positive routine sample, an acute violation of the maximum contaminant level for microbiological contaminants is incurred. For systems which collect forty (40) or more samples 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 a total coliform-positive result 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.

The following data reflects the public water systems in Tennessee that 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 tables 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 Tables 1 and 3.

The tables 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 tables 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 Tables 2 and 4.

**Table 1
Bacteriological
Maximum Contaminant Level Violations
Monthly Monitoring
January through December 2001**



<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January	February	March	April	May	June	July	August	September	October	November	December
ACCURATE ARMS	HICKMAN	40					■	■						
BLUE WATER CAMPGROUND & BT DK	RHEA	30								■		■		
COLONIAL HARBOR WATER SYSTEM	BLOUNT	35									■			
CRAZY HORSE PARK	WAYNE	25							■					
CROSS ANCHOR UTILITY DISTRICT	GREENE	6,648											■	
DEWHITE UTILITY DISTRICT	WHITE	5,176											■	
EAST TN EPISCOPAL CHURCH-DORM	ROANE	25									■			
FISH SPRINGS MARINA	CARTER	100								■				
GOOD TIME CHARLIE'S WATER SYS	HUMPHREYS	25										■		
H.B. & T.S. UTILITY DISTRICT	WILLIAMSON	12,214							■					
HARTSVILLE WATER DEPT	TROUSDALE	6,390								■				
INLAND PAPERBOARD & PACKAGING	HUMPHREYS	188					■							
JACKSON COUNTY UD #3	JACKSON	1,668							■					
JONESBOROUGH WATER DEPT	WASHINGTON	20,580								■				
* MANCHESTER D.L. CENTER	COFFEE	25	■											
MONTEREY WATER DEPT	PUTNAM	4,300							■					
NOLENSVILLE-COLLEGE GROVE UD	WILLIAMSON	8,614						■				■		
PAILO MARKET	BLED SOE	25	■											
SARDIS WATER SYSTEM	HENDERSON	905										■		
SODDY-DAISY-FALLING WATER U.D.	HAMILTON	9,625							■					
SOUTH FULTON WATER SYSTEM	OBION	4,491												■
UNION GROVE BAPTIST CHURCH	MCMINN	75						■						
WHITEWATER CANTINA	POLK	50									■	■		
	Total Population	81,254												
	Total Systems	23												
	Total Violations	27												

* Water System Now Inactive

Table 2
Bacteriological
Significant Monitoring Violations
Monthly Monitoring
January through December 2001

■ Significant Monitoring Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January	February	March	April	May	June	July	August	September	October	November	December
ALEXANDRIA WATER SYSTEM	DE KALB	1,755					■							
ANTIOCH WATER COMPANY	HENRY	186				■				■				
AULT'S SNACK BAR	BLED SOE	25									■			
BASS BAY RESORT	BENTON	25										■		
BATTLE CREEK CHEVRON W S	MARION	25					■							
BEAR'S DEN GRILL & GROCERY	POLK	30												■
BEECH CLIFF FREEWILL BAPTIST	CARTER	25	■											
* BEECH SPRINGS BAPTIST CHURCH	POLK	60								■			■	
BLOOMINGDALE UTILITY DISTRICT	SULLIVAN	12,268									■			
** CAMP CHEROKEE-POLK CO	POLK	35						■						
CAMP CLARK WILLIAMSON	MADISON	100										■		
** CAMP CLARK WILLIAMSON LODGE	MADISON	120						■				■		
CAMP FAIRVIEW	MCMINN	50					■							
** CAMP MARYMOUNT	WILLIAMSON	250						■						
CAMP SKY WA MO	SULLIVAN	86										■		
CARROLL LAKE COUNTRY CLUB, INC	CARROLL	100	■											
CEDAR GROVE BAPTIST CHURCH	HUMPHREYS	90			■									
CLINCH SCHOOL	HAWKINS	160					■							
COLONIAL HARBOR WATER SYSTEM	BLOUNT	35	■											
COLONY HOUSE APARTMENTS	RUTHERFORD	522		■				■						
CONASAUGA BAPTIST CHURCH	MCMINN	75		■				■						
CORNERSVILLE WATER DEPARTMENT	MARSHALL	1,146										■		
COUCH'S CAMPGROUND	SULLIVAN	25			■									
COUNTRY ACRES FARM	BLOUNT	110								■				
COUNTRYSIDE RESORT CMPGRD	WILSON	25				■								
* CREEKSIDE RESTAURANT	UNICOI	50	■											■

CROWN INN	JEFFERSON	50
E.I. DUPONT, NEW JOHNSONVILLE	HUMPHREYS	750
EAST TN EPISCOPAL CHURCH-DORM	ROANE	25
EAST TN EPISCOPAL CHURCH-HOUSE	ROANE	25
ELM HILL MARINA	DAVIDSON	100
FAIRVIEW WATER SYSTEM	WILLIAMSON	6,244
FOSTER FALLS UTILITY DISTRICT	MARION	702
FRIENDSHIP DISTRIBUTION SYSTEM	CROCKETT	837
GALLAWAY WATER DEPT	FAYETTE	1,001
GARRETT'S CREEK BAPTIST CHURCH	SUMNER	65
GERMANTOWN WATER DEPT	SHELBY	36,381
GOOD HOPE BAPTIST CHURCH	MEIGS	30
GRANDVIEW UTILITY DISTRICT	RHEA	1,272
GREEN GABLES MOTEL	HAMILTON	25
HAD-A-CALL GROCERY	HENRY	25
HARBOR UTILITY DISTRICT	BENTON	541
* HENRY HORTON PARK SKEET RANGE	MARSHALL	25
HERITAGE ACADEMY	PUTNAM	80
* HIDDEN VALLY MARKET	HICKMAN	25
HONEYMOON HILLS OF GATLINBURG	SEVIER	50
HUCKLEBERRY HILL RESORT	HENRY	25
HUGH E. JOHNS RESTAURANTS, INC	MADISON	75
INDIAN BOUNDARY REC AREA- USFS	MONROE	975
INTERTRADE HOLDINGS, INC.	POLK	35
JARRELL MHP	BEDFORD	36
*** KIDS COUNTRY DAY CARE	GRAINGER	40
KNOXVILLE EAST KOA	SEVIER	200
LAUREL CREEK LODGE	CARTER	70
LAWSON CAMPGROUND	HAWKINS	38
*** LIBERTY GROVE SCHOOL	LAWRENCE	60
LIBERTY HILL CHURCH OF CHRIST	MCMINN	95
* MANCHESTER D.L. CENTER	COFFEE	25
MASON WATER DEPT	TIPTON	2,199
MOORESBURG UTILITY DISTRICT	HAWKINS	810
MT ZION PENTECOSTEL HOLINESS	HUMPHREYS	50
NEW ZION BAPTIST CHURCH	MCMINN	100

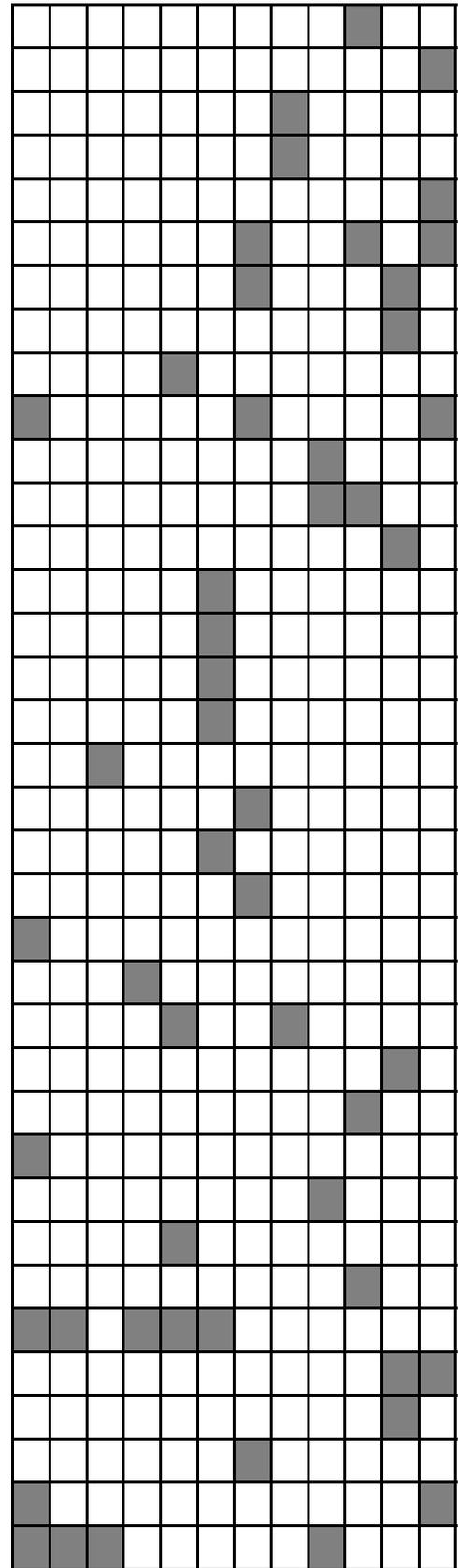
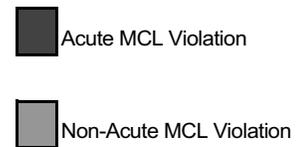


Table 3
Bacteriological
Maximum Contaminant Level Violations
Quarterly Monitoring
January through December 2001



<u>Water System Name</u>	<u>County</u>	<u>Population</u>	January-March	April-June	July-September	October-December
ACCURATE ARMS	HICKMAN	40	Non-Acute			
BETHEL CHURCH OF CHRIST	BLED SOE	125			Non-Acute	Non-Acute
BETHLEHEM BAPTIST CHURCH	MADISON	30				Non-Acute
BIG D COUNTRY STORE	CARTER	50				Non-Acute
CAMP CLARK WILLIAMSON LODGE	MADISON	120			Non-Acute	
CARMACK'S FISH BARN	HENRY	200			Non-Acute	
DEER POINT CAMPGROUND	PERRY	40			Non-Acute	
ELLIS GROVE PRESBYTERIAN CH.	HUMPHREYS	45			Non-Acute	
FLATWOODS METHODIST CHURCH	BENTON	65				Non-Acute
GIRL SCOUT COUN. OF MID SOUTH	HARDEMAN	25				Non-Acute
GREAT SMOKY JELLYSTONE PARK	COCKE	300				Non-Acute
HALL'S GROCERY STORE	POLK	30				Non-Acute
HONEY CREEK SUBDIVISION	GRAINGER	25				Non-Acute
JACK'S BRANCH WATER SYSTEM	LEWIS	30	Non-Acute			
LEGENDS WATER SYSTEM	HARDEMAN	25	Non-Acute			
LIBERTY PENTECOSTAL CHURCH	WEAKLEY	120	Non-Acute			
LIL' PONDEROSA CAMPGROUND	SEVIER	100			Non-Acute	
LITTLE SANDS REST & LOUNGE	WAYNE	30			Non-Acute	
MT VERNON BAPTIST CHURCH	HAMILTON	100				Non-Acute
NEW BETHEL BAPTIST CHURCH	HARDEMAN	75				Non-Acute
NEW HOPE CHURCH OF CHRIST	WILLIAMSON	65				Non-Acute
PALMERSVILLE SCHOOL	WEAKLEY	280			Non-Acute	
PINE HILL CH OF THE NAZARENE	HUMPHREYS	92			Non-Acute	
UNION GROVE BAPTIST CHURCH	MCMINN	75			Non-Acute	
USA RAFT INC.	UNICOI	25			Non-Acute	
WHITEWATER EXPRESS, INC	POLK	100				Non-Acute
Total Population		2,212				
Total Systems		26				
Total Violations		28				

**Table 4
Bacteriological
Significant Monitoring Violations
Quarterly Monitoring
January through December 2001**

 Significant Monitoring Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January-March	April-June	July-September	October-December
ALDER SPRINGS CHURCH	UNION	200				
ANN AND ANDY'S DAY CARE CENTER	CARROLL	40				
BEECH CLIFF FREEWILL BAPTIST	CARTER	25				
BETHEL CHURCH OF CHRIST	BLED SOE	125				
BETHLEHEM BAPTIST CHURCH	MADISON	30				
CAMP CLARK WILLIAMSON	MADISON	100				
CAMP CLARK WILLIAMSON LODGE	MADISON	120				
CAMP DAVY CROCKET	HAWKINS	300				
CAMP FAIRVIEW	MCMINN	50				
CANE CREEK BAPTIST CHURCH	MADISON	25				
* CHEROKEE MARKET & DELI	GRAINGER	25				
CHRIST FELLOWSHIP CHURCH	SULLIVAN	450				
CROWN INN	JEFFERSON	50				
DAN'S CAFE	HENDERSON	25				
DEL RIO SCHOOL	COCKE	184				
EAST CHEROKEE ELEMENTARY SCHL	SULLIVAN	55				
ELLIS GROVE PRESBYTERIAN CH.	HUMPHREYS	45				
FISH SPRINGS RESTAURANT	CARTER	150				
* FIVE POINTS BAPTIST CHURCH	LAWRENCE	50				
FLATWOODS METHODIST CHURCH	BENTON	65				
FOX CAMP BAR AND GRILL	RUTHERFORD	25				
GILMORE'S RESTAURANT	GRAINGER	25				
GIRL SCOUT COUN. OF MID SOUTH	HARDEMAN	25				
GLENWOOD CHURCH OF CHRIST	HUMPHREYS	55				
GRASSY FORK ELEMENTARY SCHOOL	COCKE	115				
HALL'S GROCERY STORE	POLK	30				
HOOFMAN'S BAR-B-QUE	HENRY	50				

KAMP KIWANI GIRL SCOUT CAMP	HARDEMAN	200				
* KIDS COUNTRY DAY CARE	GRAINGER	40				
LAKE COVE RESORT	JEFFERSON	100				
LAKEVIEW DOCK CAMPGROUND	UNION	125				
MT VERNON BAPTIST CHURCH	HAMILTON	100				
NA-CO-ME CAMP	HICKMAN	380				
NEVA GENERAL STORE	JOHNSON	25				
NEW BETHEL BAPTIST CHURCH	HARDEMAN	75				
NEW FRIENDSHIP BAPTIST	BRADLEY	85				
NOLICHUCKY GORGE CAMPGROUND	UNICOI	196				
OUTDOOR RESORTS @ GATLINBURG	SEVIER	700				
OUTDOOR RESORTS @ GATLN-OFFICE	SEVIER	450				
PINE HILL CH OF THE NAZARENE	HUMPHREYS	92				
PINHOOK BEND SUBDIVISION	POLK	50				
PLEASANT VIEW RESORT	HENRY	25				
* RASAR LANDING	MONROE	100				
RED CARPET INN	SULLIVAN	25				
RUILMAN CENTER	WILSON	50				
SPINKS CLAY CO.	HENRY	48				
SPRINGVILLE CHURCH OF CHRIST	HENRY	25				
TEXAS T CAMPGROUND	MARSHALL	25				
THE OAKS FAMILY CONFERENCE CTR	GREENE	100				
USA RAFT INC.	UNICOI	25				
WALNUT GROVE BAPTIST CHURCH	GIBSON	80				
WATAUGA DAM RESERVATION PUA	CARTER	25				
WHITewater EXPRESS, INC	POLK	100				
WHITEWAY GRILL	CARTER	25				
WOFFORD AND YOUNG'S T.P.	HENRY	25				

Total Population	5,735
Total Systems	55
Total Violations	65

* Water System now inactive.

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 that are very difficult to measure. The Surface Water Treatment Rule (SWTR) 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 less than ninety (90) 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 requirement.

The following data shows the public water systems in Tennessee that incurred a treatment technique violation. 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 ninety (90) percent of the required monitoring incurred a significant monitoring violation and are revealed, together with the county of location, in the significant monitoring violation Table 5. Shading during that period represents the compliance period(s) during which the violation was incurred. Water systems that 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 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 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 through December 2001

 Significant Monitoring Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January	February	March	April	May	June	July	August	September	October	November	December
BATTLE CREEK CHEVRON W S	MARION	25												
EBENEZER BAPTIST CHURCH	BLEDSON	50												
FORT BLUFF YOUTH CAMP	RHEA	300												
GREEN GABLES MOTEL	HAMILTON	25												
HARTSVILLE WATER DEPT	TROUSDALE	6,390												
LITTLE OAK REC AREA - USFS	SULLIVAN	400												
NEW JOHNSONVILLE WATER DEPT	HUMPHREYS	2,176												
NEW ZION BAPTIST CHURCH	MCMINN	100												
SANFORD BAPTIST CHURCH	MCMINN	150												
* SHADY SPRINGS BAPTIST CHURCH	POLK	100												
SHENANDOAH RANCH	POLK	36												
TN CUMBERLAND PLATEAU CAMPGRD	BLEDSON	96												
* WALNUT GROVE BAPTIST CHURCH	MEIGS	60												
WHITEWATER CANTINA	POLK	50												
	Total Population	9,958												
	Total Systems	14												
	Total Violations	22												

* Water System now inactive.

Table 6
Surface Water Treatment Rule
Treatment Technique Violations

January through December 2001

 Treatment Technique Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January	February	March	April	May	June	July	August	September	October	November	December
E.I. DUPONT, NEW JOHNSONVILLE	HUMPHREYS	750												
ELIZABETHTON WATER DEPT (Entry Point D)	CARTER	26,464												
JACOBS CREEK JOB CORPS - USFS	SULLIVAN	300												
LINDEN WATER DEPT	PERRY	4,068												
MAYNARDVILLE WATER DEPT	UNION	4,373												
NATCHEZ TRACE YOUTH ACADEMY	HUMPHREYS	45												
PAILO MARKET	BLEDSON	25												
* PASMINGO ZINC WATER SYSTEM	MONTGOMERY	500												
PIKEVILLE WATER SYSTEM	BLEDSON	3,305												
RED BOILING SPRINGS W.S. (Entry Point A)	MACON	3,822												
RED BOILING SPRINGS W.S. (Entry Point C)	MACON	3,822												
SALE CREEK UTILITY DISTRICT	HAMILTON	1,205												
	Total Popul.	48,679												
	Total Systems	11												
	Total Violations	16												

* Water System now inactive.

Table 7
Surface Water Treatment Rule
Failure to Filter Violations

January through December 2001

 Failure to Filter Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	January	February	March	April	May	June	July	August	September	October	November	December		
AULT'S SNACK BAR	BLED SOE	25				Filters Installed										
BATTLE CREEK CHEVRON W S	MARION	25					Filters Installed									
* BRANTLEY'S RESTAURANT	CHEATHAM	40														
CAMP DAVY CROCKET	HAWKINS	300														
CEDAR GROVE BAPTIST CHURCH	HUMPHREYS	90				GUDISW Status Reversed										
CHAPEL HILL U.M.C.	SEQUATCHIE	50				Filters Installed										
CLYDETON BOAT DOCK	HUMPHREYS	100												Filters Installed		
CONASAUGA BAPTIST CHURCH	MCMINN	75									Filters Installed					
COUNTRYSIDE RESORT CMPGRD	WILSON	25								Filters Installed						
CRAZY HORSE PARK	WAYNE	25									Filters Installed					
CURTIS LAKEVIEW CAMPGROUND	SULLIVAN	120														
DECALOGUE STONE COUNTRY WAT SY	STEWART	150	GUDISW Status Reversed													
DORCHESTER #15	CUMBERLAND	25	Filters Installed													
FATE SANDERS BOATDOCK	RUTHERFORD	40					Filters Installed									
FISH SPRINGS MARINA	CARTER	100						Filters Installed								
FOX CAMP BAR AND GRILL	RUTHERFORD	25	Filters Installed													
GARRETTS CREEK BAPTIST CHURCH	SUMNER	65					Filters Installed									
GLOBAL STONE TENN LUTTRELL	UNION	130								Filters Installed						
GRASSHOPPER CREEK P.U.A.-TVA	HAMILTON	100									Filters Installed					
HICKORY STAR MARINA	UNION	113												F.I.		
HIDDEN HOLLOW CAMP	PUTNAM	50														
INDIAN BOUNDARY REC AREA- USFS	MONROE	975					Filters Installed									
KNOXVILLE EAST KOA	SEVIER	200														
MASONS BOAT DOCK	HUMPHREYS	500					Filters Installed									
MT ZION PENTECOSTEL HOLINESS	HUMPHREYS	50								Filters Installed						
NEW ZION BAPTIST CHURCH	MCMINN	100												F.I.		
* PAINT CREEK - USFS	GREENE	105														
PIONEER LANDING	JOHNSON	350														
RIVERSIDE CATFISH HOUSE	MARION	30	Filters Installed													

INORGANIC CONTAMINANTS VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Inorganic contaminant sampling is conducted by all public water systems in Tennessee in an effort to detect inorganic contaminants such as metals, nitrates or asbestos that 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 in Tennessee that incurred an inorganic contaminant monitoring violation. In referencing the data, Table 8 lists all inorganic contaminants that require monitoring with the exception of nitrate. The public water systems that 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.

Tables 9 and 10 reveal nitrate monitoring violations. The data has been categorized in accordance with the type of source water supply utilized for ease of reference. Table 9 reveals those water systems utilizing a surface water supply that incurred a nitrate monitoring violation. Table 10 reveals those systems utilizing a ground water supply that incurred a nitrate, nitrite and/or total nitrate/nitrite monitoring violation.

Table 8

**Inorganic Contaminants
Significant Monitoring Violations
Ground Water Systems
January 1, 1999 through December 31, 2001**

■ Significant Monitoring Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	ANTIMONY TOTAL	ARSENIC	BARIUM	BERYLLIUM TOTAL	CADMIUM	CHROMIUM	CYANIDE	FLUORIDE	MERCURY	NICKEL	SELENIUM	THALLIUM TOTAL	ASBESTOS	<u>Date Returned to Compliance</u>
CLOAR'S TRAILER PARK	OBION	25														
DECALOGUE STONE COUNTRY W.S.	STEWART	150														1/4/2002
LINCOLN MEMORIAL UNIVERSITY	CLAIBORNE	1,870														2/20/2002
MOCKINGBIRD HILL ESTATES	CLAIBORNE	40														3/18/2002
MOUNT PLEASANT WAT SYS #1	MAURY	6,238														2/26/2002
PUMP SPRINGS MHP	CLAIBORNE	100														
WHISPERING PINES TRAILER COURT	MADISON	125														2/20/2002
WILDWOOD ESTATES (Entry Point A)	HUMPHREYS	32														3/18/2002
WILDWOOD ESTATES (Entry Point B)																3/18/2002
	Total Population	8,580														
	Total Systems	8														
	Total Violations	82														

Table 9

**Nitrate
Significant Monitoring Violations
Surface Water Systems
January through December 2001**

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	<u>Violation Period</u>	<u>Date Returned to Compliance</u>
BLOOMINGDALE UTILITY DISTRICT	SULLIVAN	12,201	April 1, 2001 through June 30, 2001	7/19/2001

Table 10

**Nitrate/Nitrite
Ground Water Systems
Significant Monitoring Violations
January through December 2001**

 Significant Monitoring Violation

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	<u>Nitrate</u>	<u>Nitrite</u>	<u>Total Nitrate/Nitrite</u>	<u>Date Returned to Compliance</u>
COUNTY LINE TRAILER PARK	GIBSON	74				1/7/2002
DECALOGUE STONE COUNTRY WAT SY	STEWART	150				1/4/2002
EBENEZER BAPTIST CHURCH	BLED SOE	50				2/26/2002
FOX CAMP BAR AND GRILL	RUTHERFORD	25				1/28/2002
GLENWOOD CHURCH OF CHRIST	HUMPHREYS	55				1/14/2002
LAKEVIEW DOCK CAMPGROUND	UNION	125				2/21/2002
LAUREL CREEK LODGE	CARTER	70				2/26/2002
LIL' PONDEROSA CAMPGROUND	SEVIER	100				4/17/2002
MAPLE SPRINGS BAPTIST CHURCH	MADISON	70				2/27/2002
MAPLE VIEW PUA-TVA	MARION	50				2/28/2002
MOCKINGBIRD HILL ESTATES	CLAIBORNE	40				
PUMP SPRINGS MHP	CLAIBORNE	100				3/19/2002
USA RAFT INC.	UNICOI	25				3/18/2002
	Total Population	934				
	Total Systems	13				
	Total Violations	13				

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 that 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 in Tennessee that incurred an organic contaminant monitoring violation. The data reveals public water systems that had not received a waiver of monitoring requirements and failed to conduct the required monitoring. During the 2001 calendar year, there were no public water systems in Tennessee that 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. Table 11 contains a listing of Synthetic Organic Contaminants (SOCs) while Table 12 details information pertaining to Volatile Organic Contaminants (VOCs). In referencing the tables, the public water systems that have incurred monitoring violations are listed accompanied by the county of location. Organic contaminants that 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, both tables include the compliance monitoring period during which the monitoring violation was incurred and the date the system returned to compliance by sampling.

Table 11

**Synthetic Organic Contaminants
Significant Monitoring Violations
January through December 2001**

■ Significant Monitoring Violation

<u>System Name</u>	<u>County</u>	<u>Popul.</u>	2,4,5-TP SILVEX	2,4-D	1,2 DIBROMO-3-CHLOROPROPANE	ADIPATES	ALACHLOR (LASSO)	ATRAZINE	BENZO(A)PYRENE	CARBOFURAN	CHLORDANE	DALAPON	DINOSEB	DIOXIN	DIQUAT	ENDOTHALL	ENDRIN	ETHYLENE DIBROMIDE (EDB)	GLYPHOSATE	HEPTACHLOR	HEPTACHLOR EPOXIDE	HEXACHLOROBENZENE	HEXACHLOROCYCLOPENTADIENE	LINDANE	METHOXYCHLOR	PENTACHLOROPHENOL	PICLORAM	PHthalATES	POLYCHLORINATED BIPYHENYLS	SIMAZINE	TOXAPHENE	VYDATE		
CHAPEL HILL WATER SYSTEM April through June 2002 (Returned to Compliance 8/4/2001)	MARSHALL	1236						■																										
COWAN BOARD OF PUBLIC UTILITIES April through June 2002 (Returned to Compliance 8/27/2001)	FRANKLIN	2244						■																										
LINCOLN CO BD OF P.U. #1 April through June 2002 (Returned to Compliance 8/28/2001)	LINCOLN	15035						■																										
SPRINGFIELD WATER SYSTEM April through June 2002 (Returned to Compliance 8/16/2001)	ROBERTSON	26381						■		■									■															
TURNEY CENTER April through June 2002 (Returned to Compliance 8/14/2001)	HICKMAN	1380						■																										
	Total Population	46,276																																
	Total Systems	5																																
	Total Violations	7																																

TRICHALOMETHANE (THM) 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 that 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 that may be present in the drinking water. A maximum contaminant level has been established for total trihalomethanes and monitoring determines compliance with the 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 two public community water systems in Tennessee that incurred a total trihalomethanes monitoring violation. No public water system in Tennessee incurred a maximum contaminant level violation regarding total trihalomethanes during the 2001 calendar year. In referencing Table 13 for total trihalomethanes, the public water systems that incurred a significant monitoring violation 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 violation was incurred. Light colored shading indicates that monitoring was not performed and dark colored shading indicates a maximum contaminant level violation during the applicable monitoring periods.

Table 13

**Total Trihalomethane
Significant Monitoring Violations
January through December 2001**



<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	Jan., Feb., March	April, May, June	July, Aug., Sept.	Oct., Nov., Dec.	<u>Date Returned to Compliance</u>
JONESBOROUGH WATER DEPT	WASHINGTON	20,580	□	□	□	■	2/19/2002
ROGERSVILLE WATER SYSTEM	HAWKINS	8,256	□	□	□	■	2/13/2002
Total Population		28,836					
Total Systems		2					
Total Violations		2					

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 one public water system in Tennessee that incurred a lead and copper monitoring violation. Table 14 identifies the water system, county location, and monitoring period for the lead and copper monitoring violations.

Table 14

**Lead Copper Rule
Significant Monitoring Violations
January through December 2001**

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	<u>January - June</u>	<u>July - September</u>
* NATCHEZ TRACE YOUTH ACADEMY	HUMPHREYS	45		
	Total Population	45		
	Total Systems	1		
	Total Violations	2		

* System has returned to compliance.

CONSUMER CONFIDENCE REPORT VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Beginning in 1998 community public water systems were required to furnish a report to its customers with certain information about the water being furnished. Included in this report is the source of water for the local water utility, certain health effects language, information concerning contaminants detected, and information on violations that may have occurred during the previous calendar year. There is also information on the time and location of any board meetings to promote public participation in the decision making process of the water utility.

All systems serving 10,000 or more persons are required to furnish an individual copy of the report to each water user. Systems serving less than 10,000 persons are given the option to notify their customers that the report will be published in a newspaper serving the local area. Even though the report is published in the paper, the water utility is required to furnish an individual copy of the report to any person requesting a copy.

Fourteen water systems incurred a Consumer Confidence Report (CCR) reporting violation on July 1, 2001, by failing to provide a copy of their 2000 Consumer Confidence Report to the state or to their customers by the required due date. Thirteen systems were only a few days late and returned to compliance in a timely manner. Enforcement action was taken against one system for failure to return to compliance in a timely manner.

Four water systems had a violation for failure to include all of the mandatory language or items. These systems were required to reissue the report with the corrected information. All four systems complied and reissued the report.

Table 15**Consumer Confidence Report Violations
January through December 2001**

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	<u>Date Returned to Compliance</u>
AQUA UTILITIES CO, INC	HARDIN	256	7/10/2001
BANGHAM UTILITY DIST	PUTNAM	5,336	10/10/2001
BELL AIR APARTMENTS	KNOX	180	7/24/2001
BRIAR CLUB APARTMENTS	SHELBY	729	7/19/2001
BRIGHTON WATER SYSTEM	TIPTON	2,734	7/7/2001
CLARKSBURG UTILITY DISTRICT	CARROLL	1,313	7/17/2001
COUNTY LINE TRAILER PARK	GIBSON	74	7/17/2001
DOGWOOD CREEK APARTMENTS	SHELBY	740	7/19/2001
GROVE AT DEAN HILL APTS, THE	KNOX	544	7/24/2001
HUNTERS TRACE APARTMENTS	SHELBY	515	7/19/2001
LEXINGTON WATER SYSTEMS	HENDERSON	21,867	7/9/2001
MIDWAY TRAILER COURT	DYER	42	7/27/2001
PINSON UTILITY DISTRICT	MADISON	1,765	7/11/2001
RESERVE OF WESTLAND APTS, THE	KNOX	600	7/24/2001
SAMBURG UTILITY DIST	OBION	789	8/20/2001
SMYRNA WATER SYSTEM	RUTHERFORD	25,119	11/15/2001
TELLICO PLAINS WATER DEPT	MONROE	5,076	11/16/2001
TRENTON WATER SYSTEM	GIBSON	5,483	9/19/2001
	Total Population	73,162	
	Total Systems	18	
	Total Violations	18	

RADIONUCLIDE VIOLATIONS DATA INTERPRETATION AND GUIDANCE

Public water systems are required to monitor for certain naturally occurring and man-made radionuclides to insure the water being provided to their customers meet standards. Radionuclide samples are collected every quarter with the results being the average of all the quarterly samples. Tennessee had one system fail to meet the maximum contaminant level during the current reporting period. All water systems complied with the monitoring regulations. The Division of Water Supply is working with the Heritage Academy on obtaining an alternate source of water.

Table 16

**Radionuclide Violations
January through December 2001**

<u>Water System Name</u>	<u>County</u>	<u>Popul.</u>	<u>Violation Type</u>	<u>Period</u>
HERITAGE ACADEMY	PUTNAM	80	Non-Acute MCL	July 2000 - June 2001

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 notifies a violator of a violation and provides 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. 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 the 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 the water utility or are not addressed in a timely manner, enforcement action in the form of an Administrative Order is customarily recommended and/or initiated. 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 water systems that incurred violations that were not addressed or corrected making an Administrative Order warranted. Consequently, during calendar year 2001, 40 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.