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The National Public Water System Supervision Program: FY96 Compliance Report

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The National Drinking Water Program: An Overview

The National Drinking Water Program: An Overview

EPA established the Public Water System Supervision (PWSS) Program under the authority of the 1974 Safe Drinking Water Act (SDWA). Under the SDWA and the 1986 and 1996 Amendments, EPA sets national limits for contaminant levels in drinking water to ensure that the water is safe for human consumption. These limits are known as Maximum Contaminant Levels (MCLs). For some regulations, EPA establishes treatment techniques (TTs) in lieu of an MCL to control unacceptable levels of contaminants in water. The Agency also regulates how often public water systems (PWSs) monitor their water for contaminants and report the monitoring results to the states or EPA. Generally, the larger the population served by a water system, the more frequent the monitoring and reporting (M/R) requirements. In addition, EPA requires PWSs to monitor for unregulated contaminants to provide data on occurrences for future regulatory development. Finally, EPA requires PWSs to notify the public when they have violated any of the regulations.

The SDWA applies to the 50 States, the District of Columbia, Indian Lands, Puerto Rico, the Virgin Islands, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau. The SDWA allows states and territories to seek EPA approval to administer their own PWSS programs. The 1986 amendments to the SDWA extended this right to Indian Tribes as well. The authority to run a PWSS Program is called primacy. To receive primacy, states must meet certain requirements laid out in the SDWA and EPA regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements. All jurisdictions but Wyoming, the District of Columbia, and the Indian Tribes currently have primacy. EPA Regional Offices directly implement the PWSS Programs within these jurisdictions.

The 1996 SDWA Amendment [Section 1414(c)(3)] requires states with primacy to prepare and submit to EPA an annual report on public water system violations. Congress also mandates that EPA will summarize and evaluate the reports submitted by the states in an annual national report.

Primacy states report quarterly to EPA on their PWS inventory statistics, the incidence of MCL, M/R, and TT violations, and the enforcement actions taken against violators. EPA Regional Offices report this information for Wyoming, the District of Columbia, and all Indian lands. Regional Offices also report Federal enforcement actions taken. EPA stores its data in a national database called the Safe Drinking Water Information System (SDWIS/FED).

In FY 1996, regulations for 81 individual contaminants were in effect [72 have MCLs and 9 are regulated by treatment techniques (TTs)]. The list of 81 is comprised of 6 microbiological contaminants, 4 radionuclides, 17 inorganic chemicals, and 54 organic chemicals. A list of these contaminants by regulation appears on page 6.

Sources of Drinking Water Contamination

Contaminants may enter drinking water before, during, or after treatment by a water system. The majority of PWSs treat their water, as necessary, to ensure that their customers receive water which is safe to drink. Some of the sources of drinking water contaminants are as follows:

Before Treatment

- Bacteria from human or animal sources
- Turbidity in water caused by suspended matter such as clay, silt, and microscopic organisms
- Overflowing storm sewers
- Defective storage tanks
- Leaking hazardous landfills, ponds, and pits
- Saltwater intruding on depleted aquifers near seashores
- Pesticides, fertilizers, and other agricultural run-off
- Run-off from oil-slicked or salt-treated highways
- Underground injection of hazardous wastes
- Naturally-occurring fluoride and metals such as arsenic and cadmium
- Decay products of radon, radium, and uranium
- Industrial chemicals, such as solvents

During Treatment

- By-products of disinfectants such as trihalomethanes

After Treatment

- Lead, copper, asbestos, and other materials from corroding pipes
- Bacteria and dirt entering through leaking pipes
- Improper connections with other systems that allow contaminants to enter drinking water pipes
- Permeation of contaminants through certain pipe materials

Contaminants for which Regulations are in Effect

Individually Regulated Contaminants

Arsenic
Copper*
Fluoride
Lead*
Total Coliforms
Total Trihalomethanes (TTHM)

Phase I Contaminants (VOC Rule)

Benzene
Carbon Tetrachloride
1,2-Dichloroethane
1,1-Dichloroethylene
p-Dichlorobenzene
1,1,1-Trichloroethane
Trichloroethylene
Vinyl Chloride

Surface Water Treatment

*Giardia lamblia**
*Legionella**
Heterotrophic Plate Count*
Turbidity*
Viruses*

Phase II Contaminants

Acrylamide*
Alachlor (Lasso)
Asbestos
Atrazine
Barium
Carbofuran
Cadmium
Chlordane
Chromium
Dibromochloropropane (DBCP)
o-Dichlorobenzene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
1,2-Dichloropropane
2,4-D
2,4,5-TP (Silvex)
Ethylbenzene
Ethylene Dibromide (EDB)
Epichlorohydrin*
Heptachlor
Heptachlor Epoxide
Lindane (BHC-gamma)
Mercury
Methoxychlor
Monochlorobenzene
Nitrate
Nitrite
PCBs
Pentachlorophenol
Selenium
Styrene
Tetrachloroethylene
Toluene
Toxaphene
Xylenes (total)

Phase V Contaminants

Antimony
Beryllium
Cyanide
Dalapon
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate
Dichloromethane
Dinoseb
Dioxin (2,3,7,8-TCDD)
Diquat
Endothall
Endrin
Glyphosate
Hexachlorobenzene (HCB)
Hexachlorocyclopentadiene
Nickel
Oxamyl (Vydate)
PAHs (Benzo(a)pyrene)
Picloram
Simazine
Thallium
1,2,4-Trichlorobenzene
1,1,2-Trichloroethane

Radionuclides

Beta Particle and Photon Radioactivity
Gross Alpha Particle Activity
Radium-226
Radium-228

*Denotes contaminants which are regulated by TTs instead of an MCL.

Public Water System Inventory

Public Water System Inventory

Definitions

A **Public Water System (PWS)** provides piped water for human consumption to at least 15 service connections or serves an average of at least 25 people for at least 60 days each year. PWSs can be community, nontransient noncommunity, or transient noncommunity systems. Each type of PWS is defined as follows.

A **Community Water System (CWS)** is a PWS that provides water to the same population year-round.

A **Nontransient Noncommunity Water System (NTNCWS)** is a PWS that regularly serves at least 25 of the same people at least six months of the year. Examples of these systems include schools, factories, and hospitals that have their own water supplies.

A **Transient Noncommunity Water System (TNCWS)** caters to transitory customers in non-residential areas such as campgrounds, motels, and gas stations.

All PWSs are required to monitor, report and comply with the MCLs for total coliform bacteria and nitrate. In addition, CWSs are subject to M/R requirements for other microbiological contaminants, chemicals and radiological contaminants (refer back to page 6 for list), and to adhere to MCL and TT requirements. Because NTNCWSs can contribute significantly to an individual's daily water intake, M/R and MCL requirements under new regulations [beginning with the Phase I (VOCs) Rule promulgated on July 8, 1987] and TT requirements apply to NTNCWSs as well as CWSs.

All information in this report was generated from SDWIS/FED (Safe Drinking Water Information System) in June 1997.

Public Water System Inventory (cont.)

Distribution of Public Water Systems by Source

In FY 1996, 172,248 water systems in the 57 states and territories were classified as PWSs. The table below shows the distribution of CWSs, NTNCWSs, and TNCWSs by water source.

Approximately 92 percent (158,552) of all PWSs obtain their water from a ground water source. More specifically, about 81 percent (44,627) of CWSs, 96 percent (19,516) of NTNCWSs, and 98 percent (94,409) of TNCWSs were served by ground water sources in FY 1996. The remaining systems were served by surface sources such as lakes and rivers.

CWSs, which provide drinking water primarily to residential areas, account for 32 percent of all PWSs. NTNCWSs, such as schools and factories, make up approximately 12 percent of the PWSs. The remaining 56 percent of PWSs are TNCWSs.

Public Water System Inventory

	CWSs		NTNCWSs		TNCWSs		All PWSs[1]
Source*	Number of Systems (%)	Population Served (%)	Number of Systems (%)	Population Served (%)	Number of Systems (%)	Population Served (%)	Number of Systems (%)
Surface1	10,800 (19%)	157,758,000 (64%)	720 (4%)	634,000 (10%)	2,175 (2%)	3,967,000 (22%)	13,696 (8%)
Ground	44,627 (81%)	88,866,000 (36%)	19,516 (96%)	5,495,000 (90%)	94,409 (98%)	14,350,000 (78%)	158,552 (92%)
Total	55,427 (100%)	246,624,000 (100%)	20,236 (100%)	6,129,000 (100%)	96,584 (100%)	18,317,000 (100%)	172,248 (100%)

Source: Table A1 - A7 of The PWS Inventory and Compliance Statistics (FY 1992 - FY 1996).
* Note: Includes systems that obtain their water from other PWSs.
[1] Since an individual can be served by more than one category of PWS, the total population served by all PWSs is not cumulative and therefore cannot be determined.

Public Water System Inventory (cont.)

Distribution of Public Water Systems by Source (cont.)

CWSs serve approximately 247 million people. The remainder of the population receives its residential drinking water from private wells and other non-Federally regulated systems (i.e., those serving fewer than 15 service connections or 25 people). Virtually everyone in the 57 states and territories, and on Indian Lands, however, drinks water from one or more types of PWSs at some time during the year because, as previously explained, PWSs include schools, factories, restaurants, motels, churches, campgrounds, highway rest stops, and the like.

Definition of Public Water Systems Size Categories

EPA frequently analyzes PWS compliance trends based on five size categories. (Refer to the table on the right.) These five size categories will be used throughout the remainder of this report.

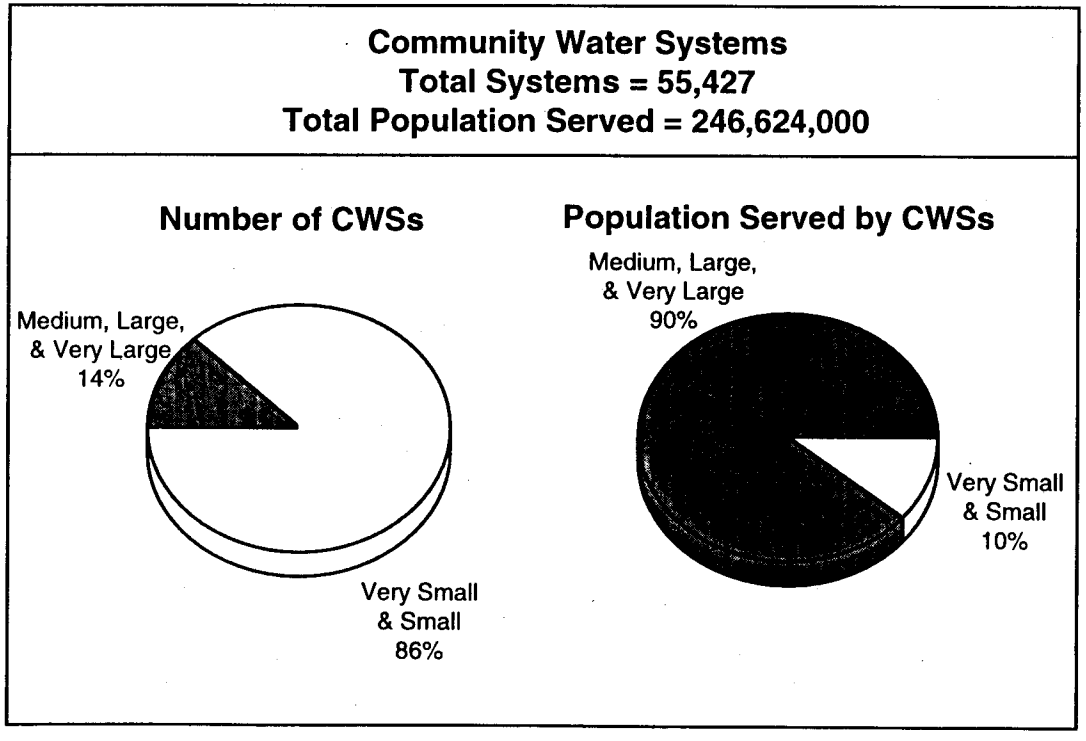
PWS Size Categories

System Size	Population Served
Very Small	25-500
Small	501-3,300
Medium	3,301-10,000
Large	10,001-100,000
Very Large	More than 100,000

Public Water System Inventory (cont.)

Distribution of Community Water Systems by Size (cont.)

Eighty-six (86) percent of CWSs are classified as very small or small, that is, they regularly serve 3,300 or fewer people. Although there are 48,921 very small and small systems, these CWSs serve fewer than 26 million of the approximately 247 million customers of CWSs in the country. Conversely, the 332 very large systems, which comprise less than one percent of the CWS universe, serve 44 percent of the customers supplied by CWSs.

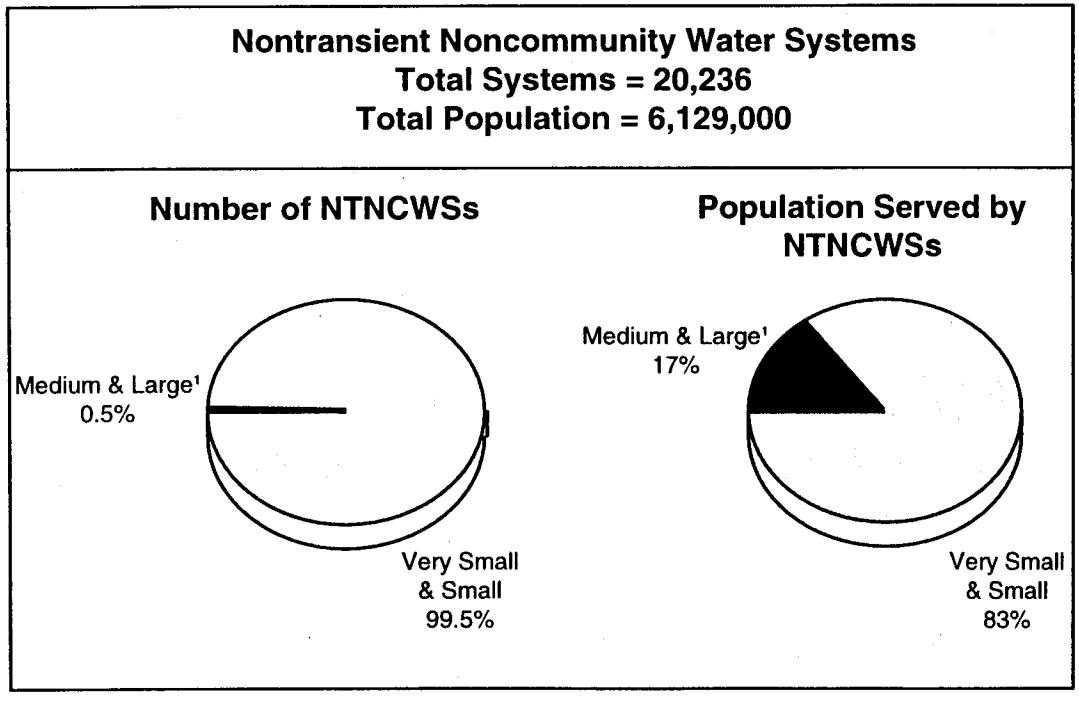


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables A3.

Public Water System Inventory (cont.)

Distribution of Nontransient Noncommunity Water Systems by Size (cont.)

Like CWSs, most NTNCWSs regularly serve 3,300 or fewer people. Ninety-nine (99.5) percent of NTNCWSs are classified as very small or small. However, unlike smaller CWSs which provide water to only 10% of the population served by CWSs, very small and small NTNCWSs serve the majority (83 percent) of the population served by NTNCWSs.

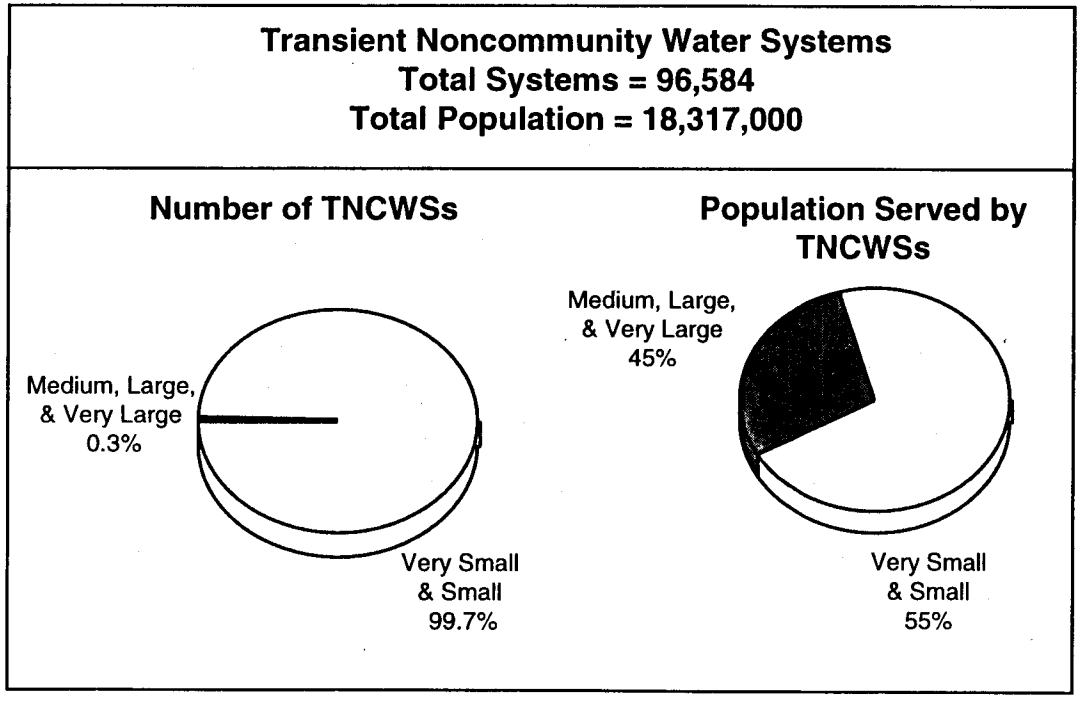


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables A4 & A5.
¹None of the NTNCWSs are very large systems (i.e., none serve more than 100,000 people).

Public Water System Inventory (cont.)

Distribution of Transient Noncommunity Water Systems by Size (cont.)

Like CWSs and NTNCWSs, most TNCWSs regularly serve 3,300 or fewer people. As shown below, 99.7 percent of TNCWSs are classified as very small or small, and provide drinking water to the majority (55 percent) of the population served by TNCWSs.



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables A1 & A7.

Compliance with Federal Regulations

COMMUNITY WATER SYSTEMS

Compliance With Federal Regulations (cont.)

National Compliance Trends (cont.)

Public Water System (PWS) violations are devided into four types: Maximum Contaminant Level (MCL) violations, Treatment Technique (TT) violations, Monitoring and Reporting (M/R) violations, and other violation types (Other).

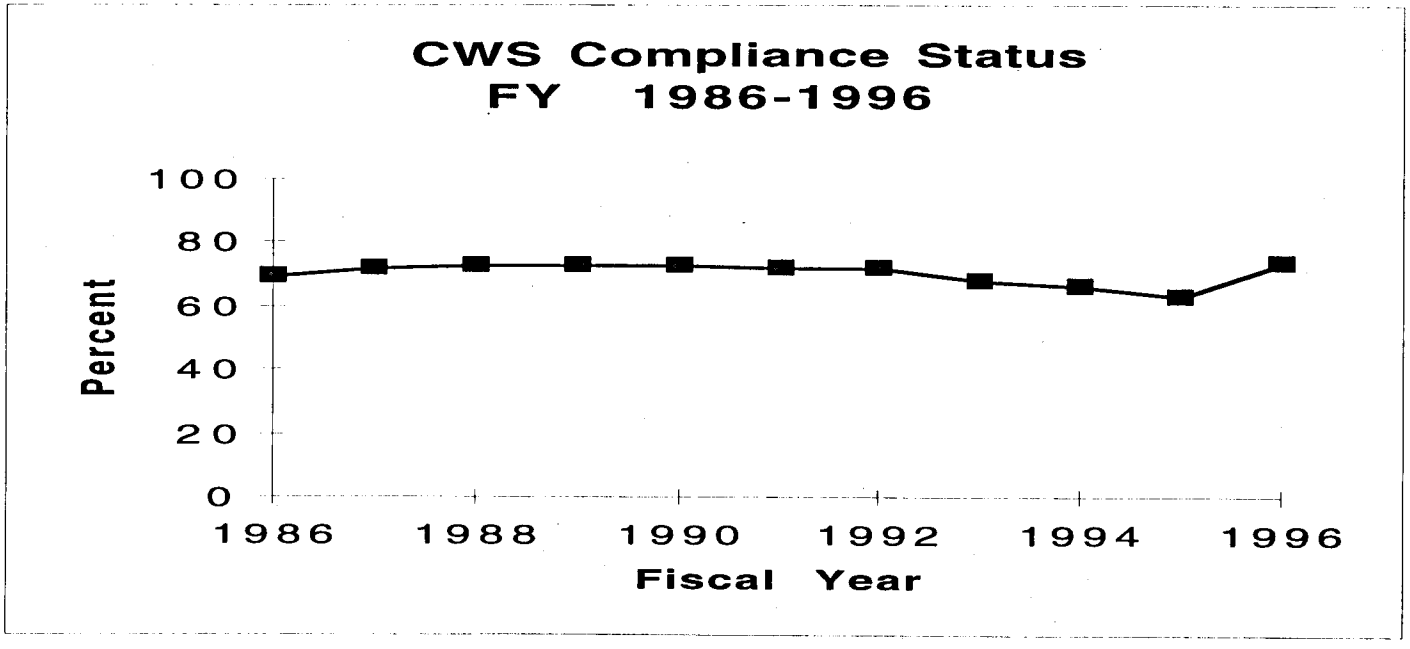
The other violation types may include reported violations of the public notification requirements, the conditions set under a variance or exemption, and miscellanious violations.

The charts on the next page have eleven year trends for both MCL and M/R violations and have four year trends for TT violations. Except for the FY 1993 data, the count of violations and systems in violation exclude unfiltered public water systems in violation of the Treatment Technique requirements of the Surface Water Treatment Rule (SWTR).

Compliance With Federal Regulations - National Compliance Trends

CWS Compliance Status

In FY 1996, the compliance rate for CWSs increased from 63% for FY 1995 to 74% - the highest value since FY 1986. This means that in FY 1996, no violations were reported to EPA for 74% of the CWSs. The compliance rate for CWSs has remained between 63% and 74% from FY 1986 to FY 1996.

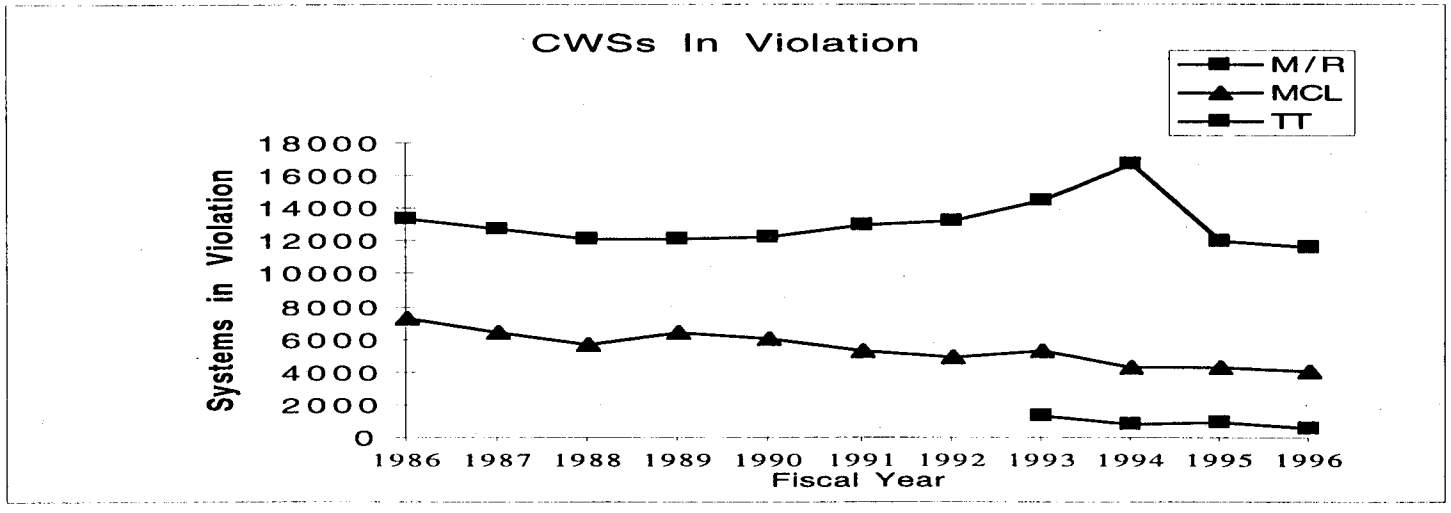


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables A1& C1.

Community Water Systems Compliance Trends
FY 1986-1996

In FY 1994, the overall number of systems in violation increased due to an increased number of systems with M/R violations. However, the number of CWSs with MCL violations and CWSs with TT violations decreased.

In FY 1996, the overall number of violations and systems in violation decreased from FY 1995. The graph indicates that the number of systems in violation for failure to monitor or report is more than double the number of systems with MCL violations. Approximately seven percent of CWSs violated MCL standards while 21 percent of CWSs violated the M/R requirements and only one percent violated TT requirements.

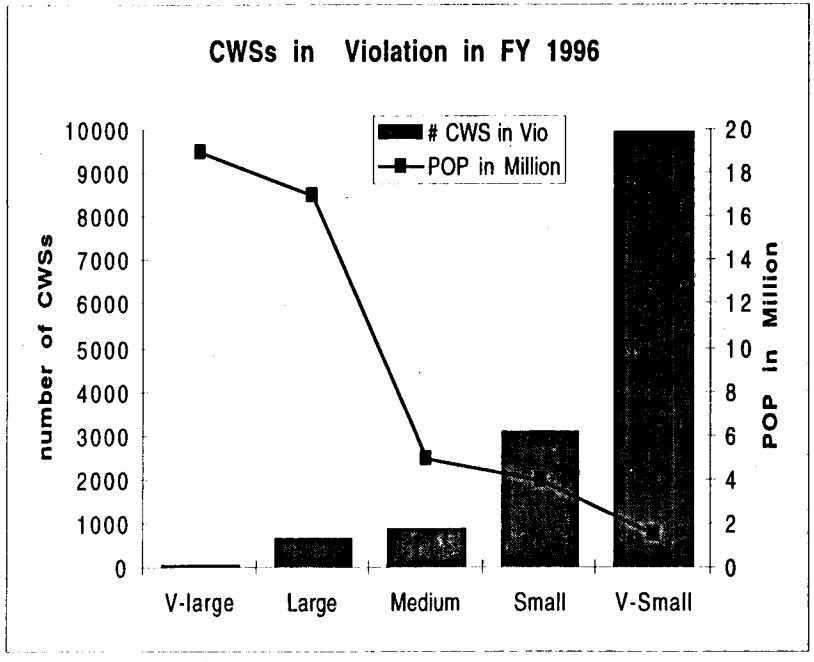


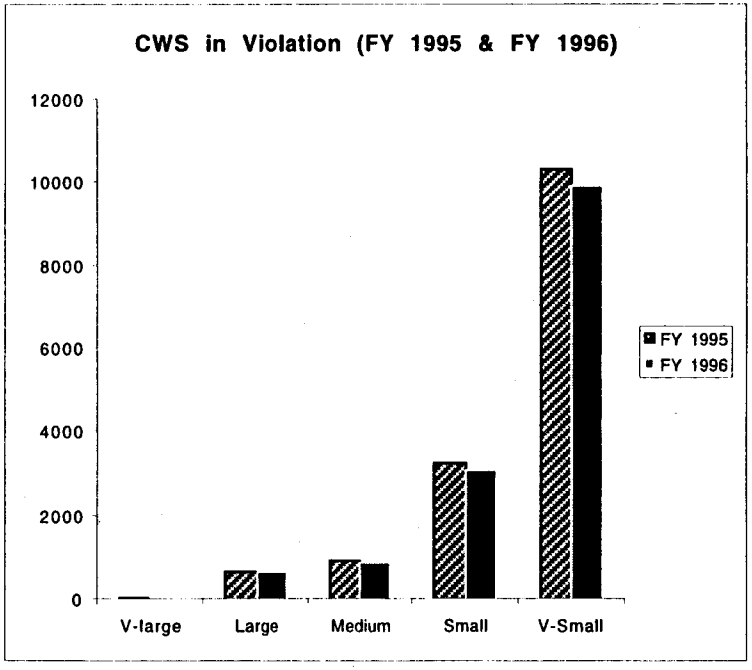
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables B1& C1.

FY 1996 National Community Water System (CWS) Compliance Profile

The first chart shows the system size distribution of all CWSs that violated the MCL, M/R, TT and/or other requirements during FY 1996. The small number of very large and large systems with violations affects a large percentage of the population.

The second chart shows the total number of CWSs in violation for FY 1996 decreased from 15,247 in FY 1995 to 14,620 in FY 1996. All size categories show decreases in violations.



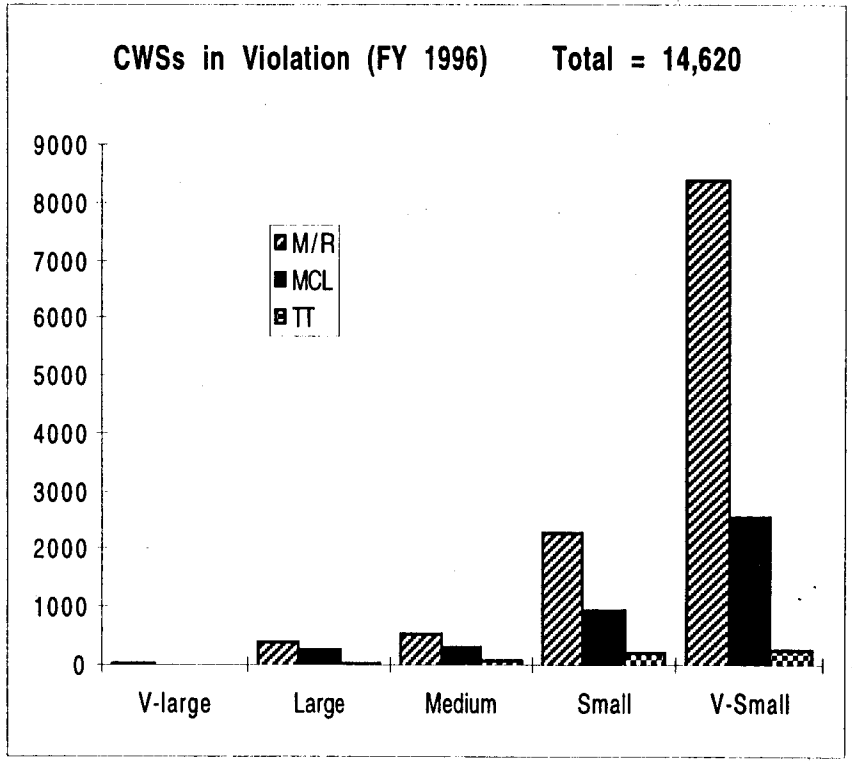


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D4.

FY 1996 National Community Water System (CWS) Compliance Profile

This chart shows the MCL, M/R and TT distribution by system size for all CWSs that had violation(s) in FY 1996. The "other category" violations (671) were not included in the graph. In FY 1996, 21 percent of the CWSs had M/R violations, seven percent had MCL violations and one percent had TT violations.

The number of CWSs with M/R violations (11,709), plus the number of CWSs with MCL violations (4,151), plus the number of CWSs with TT violations (681), plus the number of CWS with the other type of violations (671) in FY 1996 exceeds 14,620 (17,212) because some systems had a combination of MCL, M/R, TT and/or the other violation types.

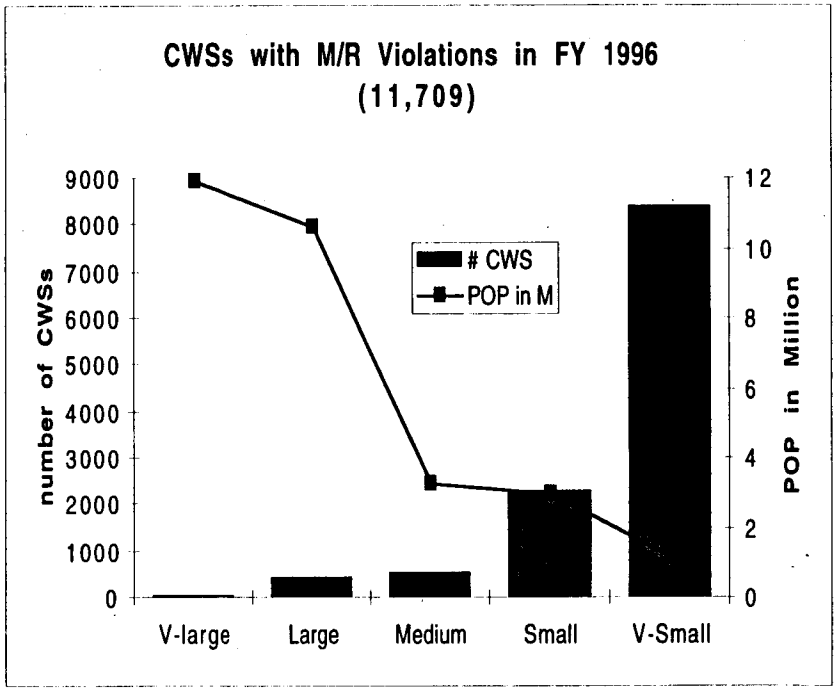


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D4.

FY 1996 National CWS M/R Compliance Profile

The chart shows the majority of systems in violation were very small and small CWSs, but a larger population is affected by larger size CWSs in violation.

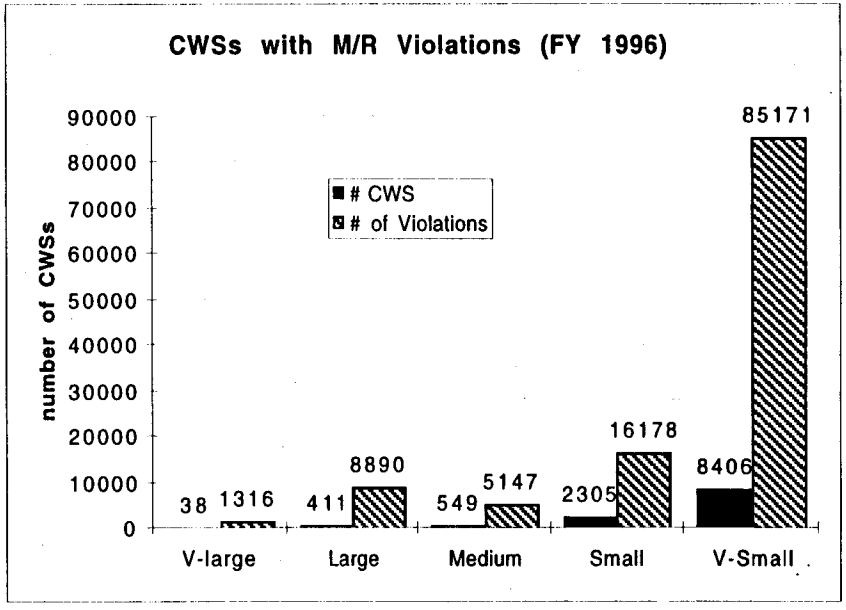
This is the second year of decreases in the number of M/R violations in CWSs. In FY 1996, there were 11,709 CWSs with M/R violations and in FY 1995 there were 12,055 CWSs with M/R violations.



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D4.

FY 1996 National CWS M/R Compliance Profile

In FY 1996, each CWS with M/R violations had an average of 10 violations, however, the large and very large systems had an average of 21.6 and 34.6 violations per CWS with violations, respectively; while the small systems had only 7 violations per CWS. Multiple violatations can be used as a tool for targeting enforcement activity for the PWSS program.



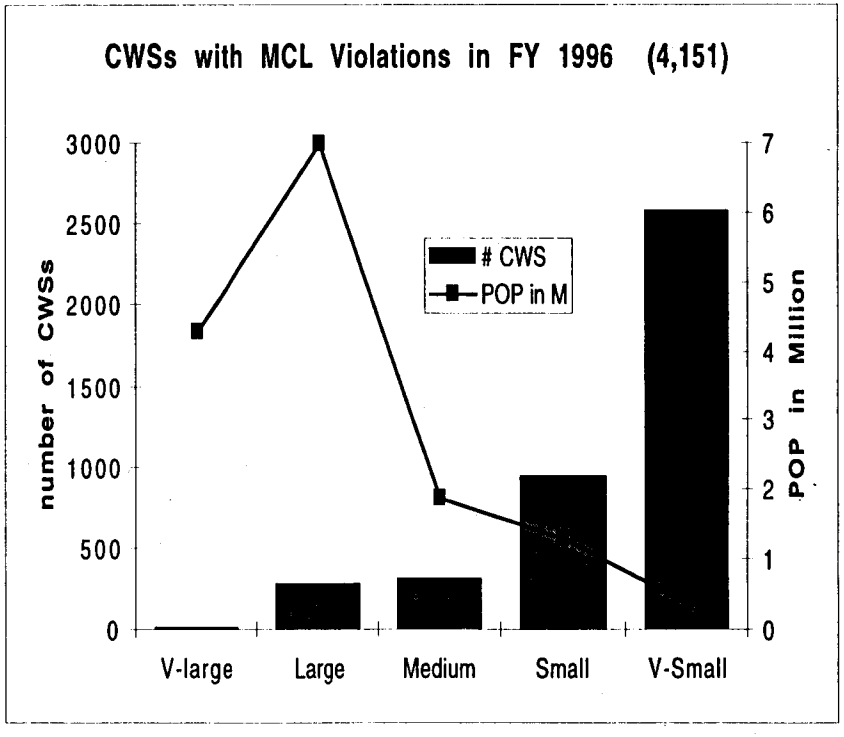
CWSs in M/R Violation in FY 1996

	V-large	Large	Medium	Small	V-Small	Total
# CWS	38	411	549	2305	8406	11709
# of Violations	1316	8890	5147	16178	85171	116702
# of Vios/CWSs	34.6	21.6	9.4	7.0	10.1	10.0

Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table B3 & D4.

FY 1996 National CWS MCL Compliance Profile

MCL violations decreased from 4,352 to 4,151 from FY 1995 to FY 1996. This chart shows the majority of systems in violation are very small and small CWSs, but more people are affected by the violations from the large and very large CWSs.

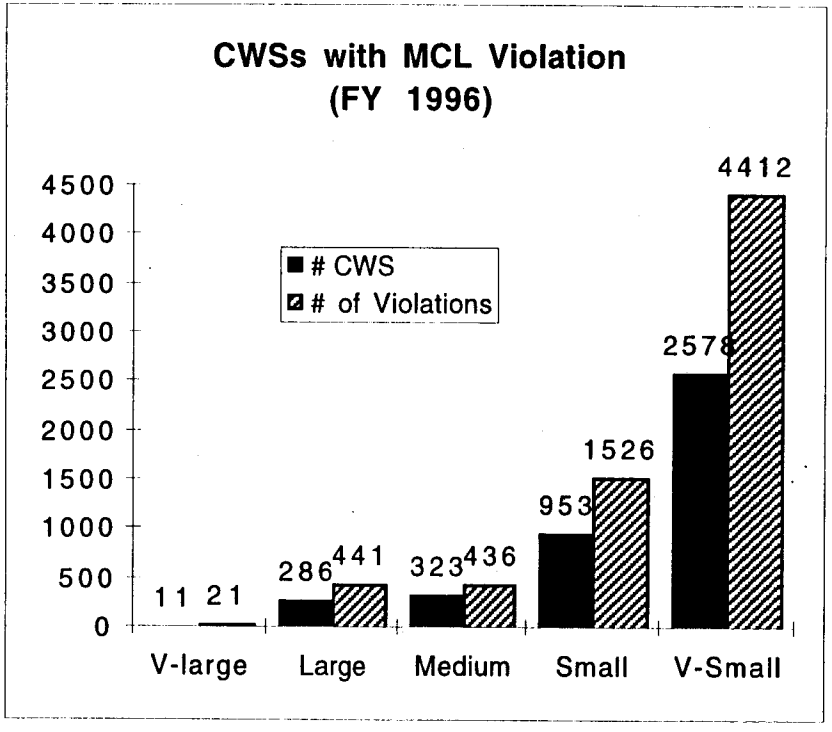


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D4.

FY 1996 National CWS MCL Compliance Profile

On average, there were 1.6 violations for each CWS with MCL violations in FY 1996. There is no significant difference in the average number of violations per CWS among size categories.

CWSs with M CL Violation in FY 1996						
	V-large	Large	Medium	Small	V-Small	Total
# CWS	11	286	323	953	2578	4151
# of Violations	21	441	436	1526	4412	6836
# of Vios/CWSs	1.9	1.5	1.3	1.6	1.7	1.6



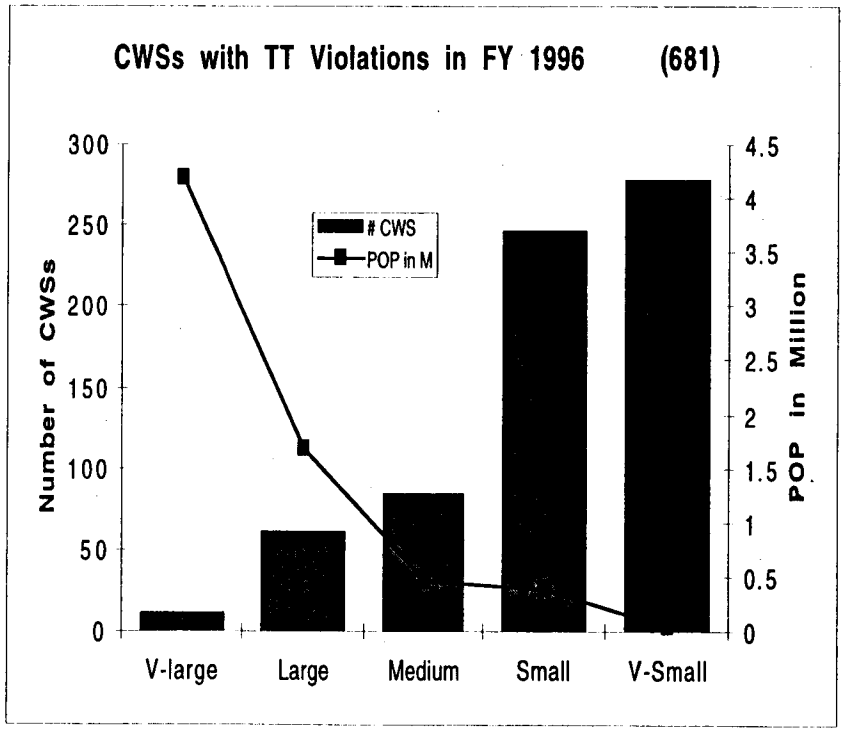
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table B3 & D4.

FY 1996 National CWS TT Compliance Profile

The TT violations discussed in this report exclude unfiltered public water systems in violation of the Treatment Technique requirements of the Surface Water Treatment Rule (SWTR). These unfiltered systems failed to comply with the state (or EPA) requirement to install filtration treatment within 18 months of the state order.

There was a decrease in the treatment technique (TT) violations in FY 1996 from the previous year. In FY 1995 there were 946 CWSs with TT violations; there were 681 CWSs with TT violations in FY 1996.

This chart shows the majority of systems in violation were very small and small CWSs, but the larger populations were affected by the large and very large systems with TT violations.



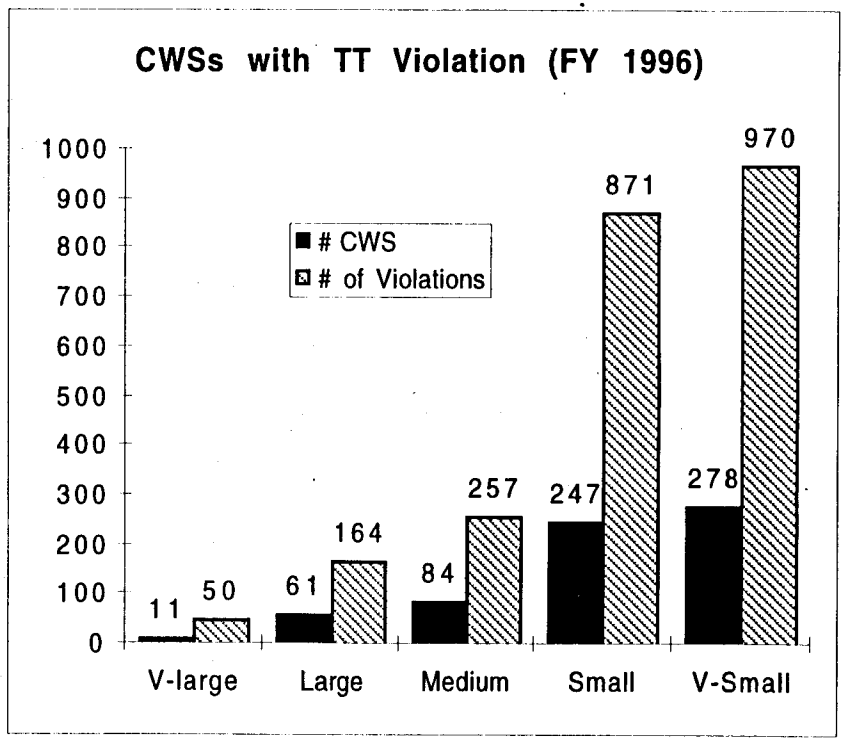
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D4.

FY 1996 National CWS TT Compliance Profile

In FY 1996, each CWS with TT violations had an average of 3.4 violations per CWS. For this type of violation, very large systems had the highest numbers of violations per CWS at 4.5 violations per system.

CWSs with TT Violation in FY 1996

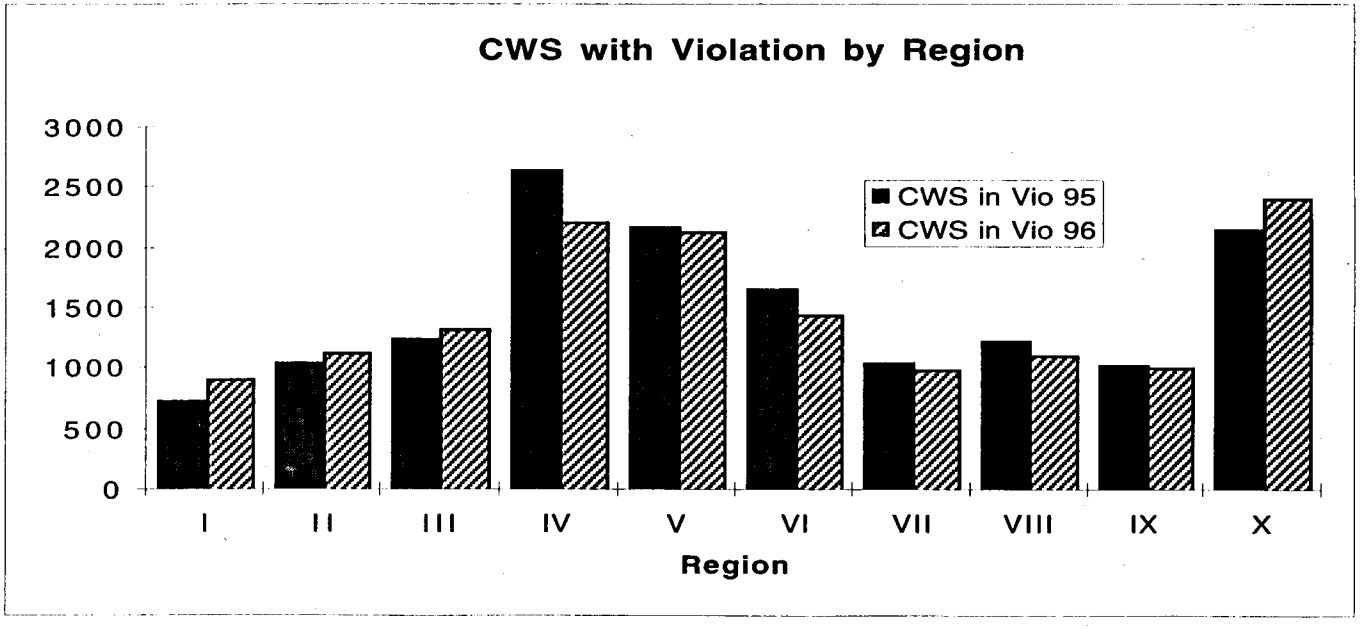
	V-large	Large	Medium	Small	V-Small	Total
# CWS	11	61	84	247	278	681
# of Violations	50	164	257	871	970	2312
# of Vios/CWSs	4.5	2.7	3.1	3.5	3.5	3.4



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table B3 &D4.

FY 1996 Regional Community Water Systems (CWSs) Compliance Profile

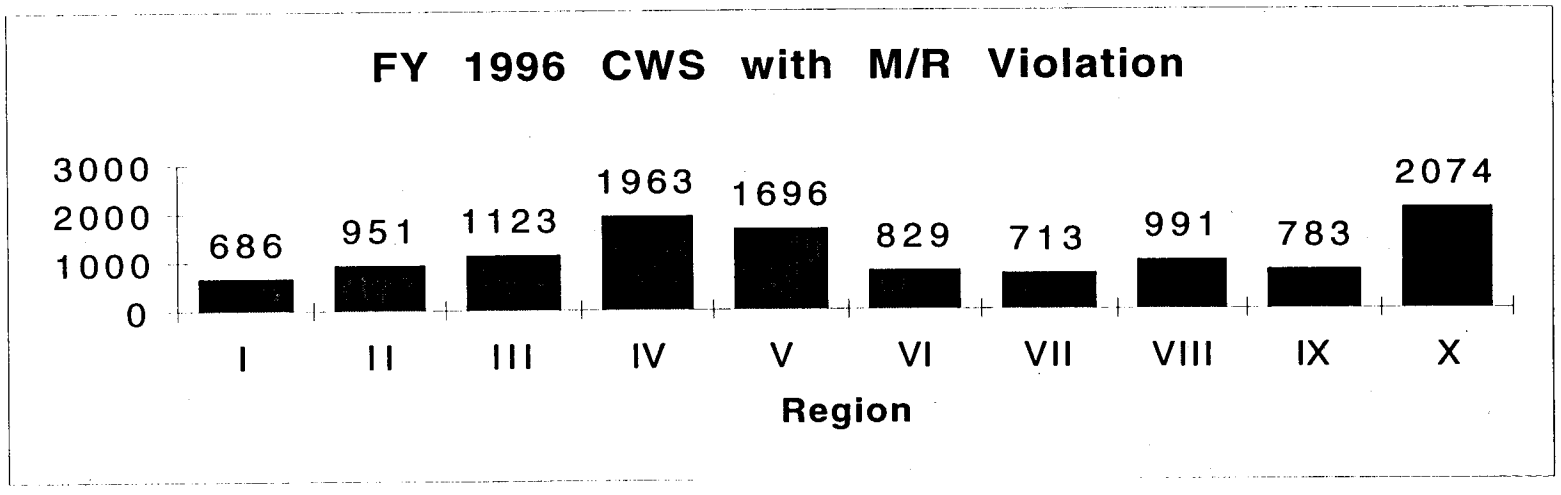
This chart shows the EPA Regional distribution of all CWSs that violated MCL, M/R, TT and/or other requirements and the total number of violations reported by EPA Regions in FY 1995 and FY 1996. Regions IV and VI show significant decreases in total violations while Regions II and X show increases in violations in FY 1996 compared to FY 1995.



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D5.

FY 1996 Regional CWS M/R Compliance Profile

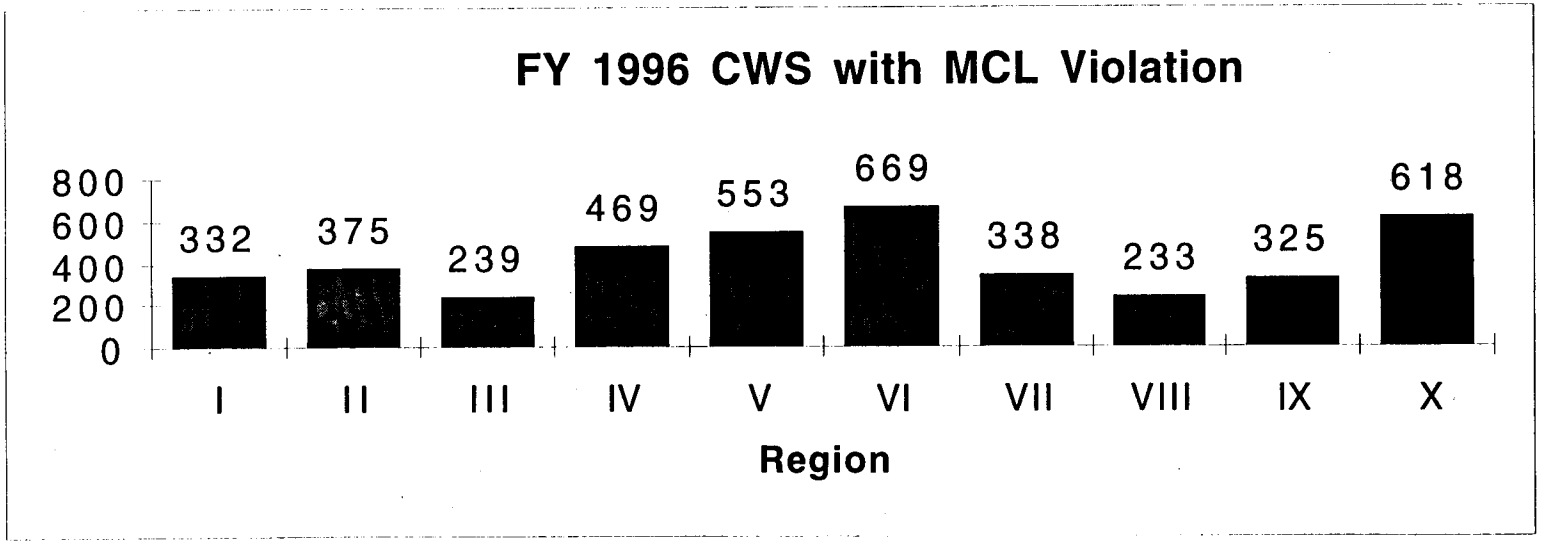
There are 11,709 CWSs with M/R violations in FY 1996. The following chart shows the distribution of the M/R violations of CWSs by Regions in FY 1996. The chart also shows that Regions IV and X have the highest number of CWSs with M/R Violations while Region I has the lowest number of CWSs with M/R violations.



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D5 .

FY 1996 Regional CWS MCL Compliance Profile

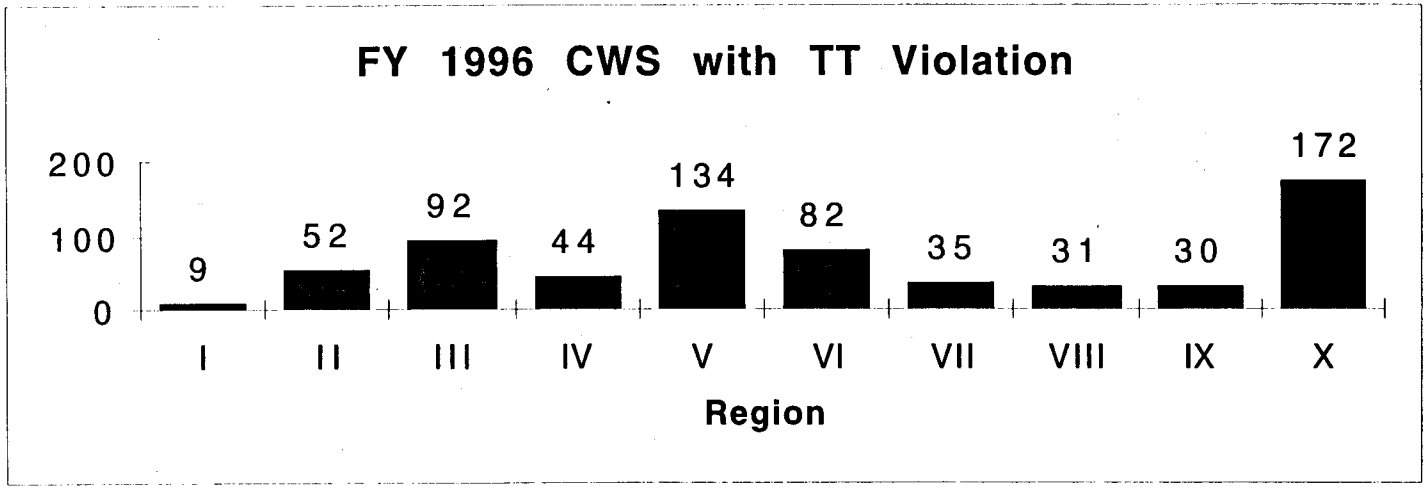
There were 4,151 CWSs with MCL violations in FY 1996. The following chart shows the distribution of the MCL violations of CWSs by Regions in FY 1996. Region VI has the highest number of MCL violations while both Regions III and VIII have low MCL violations in FY 1996.



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D5 .

FY 1996 Regional CWS TT Compliance Profile

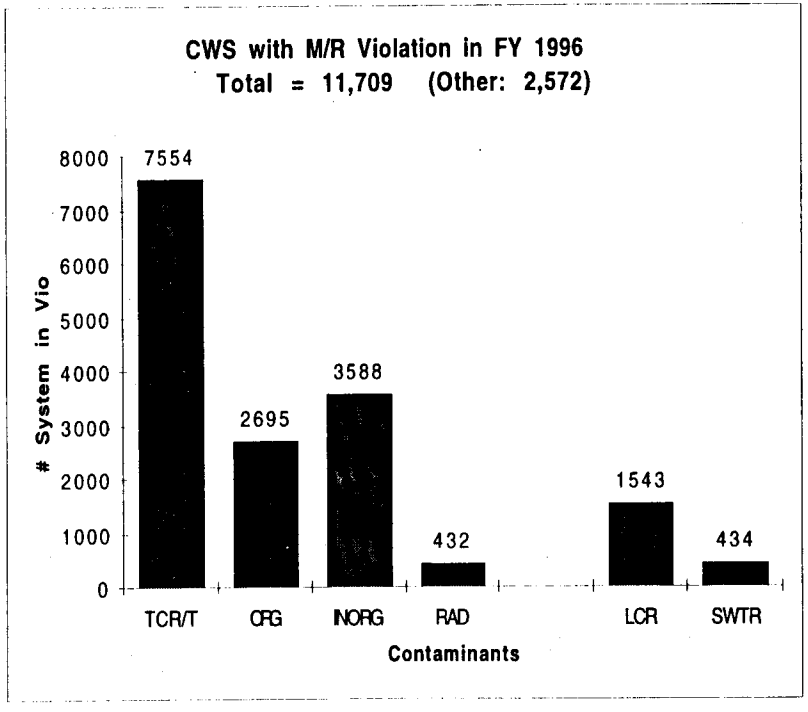
In FY 1996, 681 CWSs reported TT violations; representing one percent of the CWSs nationwide. The following charts show that Region X has the highest number of CWSs (170) with violations and Region I has only nine TT violations in FY 1996.

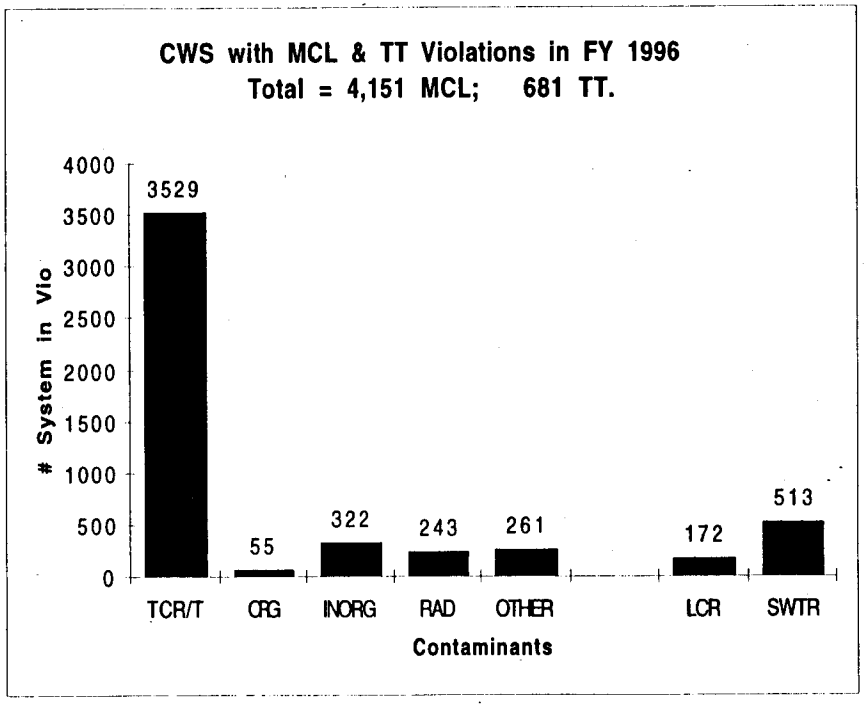


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D5 .

FY 1996 Community Water Systems (CWSs) Compliance Profile by Contaminant Groups

The following chart shows the distribution of CWSs in violation by contaminant group. The most common violations among CWSs were M/R and MCL violations of the Total Coliform Rule and Turbidity (TCR/T). For M/R requirements, inorganic chemicals violations were the second most common violation.





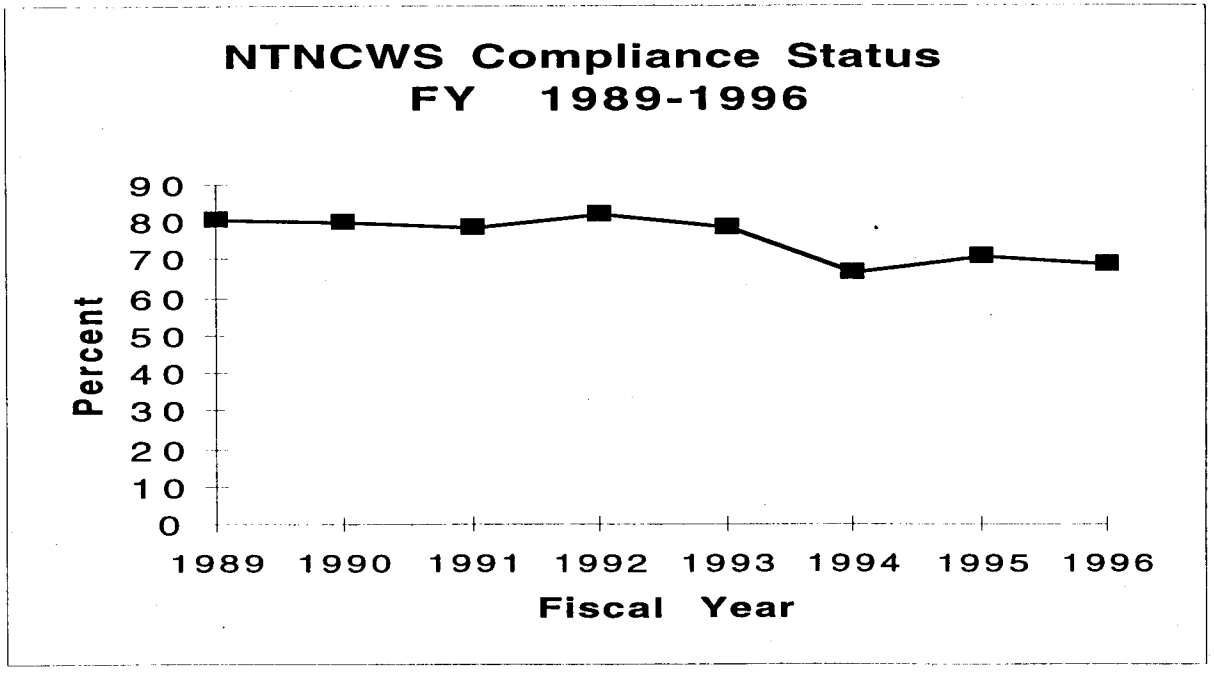
Note: The sum of the CWSs in violation for each the contaminant groups could exceed the total number of CWS with violations. Since some CWSs have violations in more than one contaminant group.
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table D3.

Compliance with Federal Regulations

NONTRANSIENT NONCOMMUNITY WATER SYSTEMS

FY 1996 National Nontransient Noncommunity Water Systems (NTNCWSs) Compliance Profile

The NTNCWS compliance rate remained between 67% and 82% from FY 1989 to FY 1996. In FY 1996, it has decreased to 69% from 71% (FY 1995). In the past, NTNCWSs were subject to M/R and MCL requirements for fewer contaminants. However, with the promulgation of each new or revised rule, NTNCWSs are subject to the same requirements as CWSs.



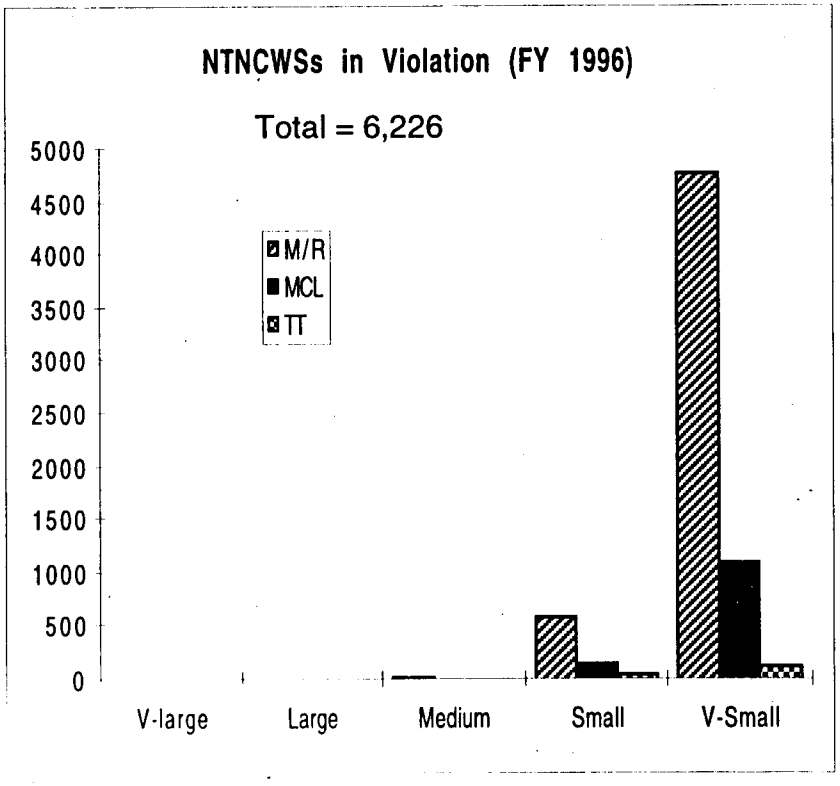
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table A1 & C1 .

FY 1996 National Nontransient Noncommunity Water Systems (NTNCWSs) Compliance Profile

In FY 1996, approximately six percent of all NTNCWSs violated the MCL standards and 27 percent violated the M/R requirements. Less than one percent of all NTNCWSs violated the TT standards.

FY 1996 Nontransient Noncommunity Water System in Violation

Size Category	M/R	MCL	TT
V-large	0	0	0
Large	2	2	0
Medium	14	9	1
Small	579	143	44
V-Small	4770	1091	118
Total	**5365**	**1245**	**163**

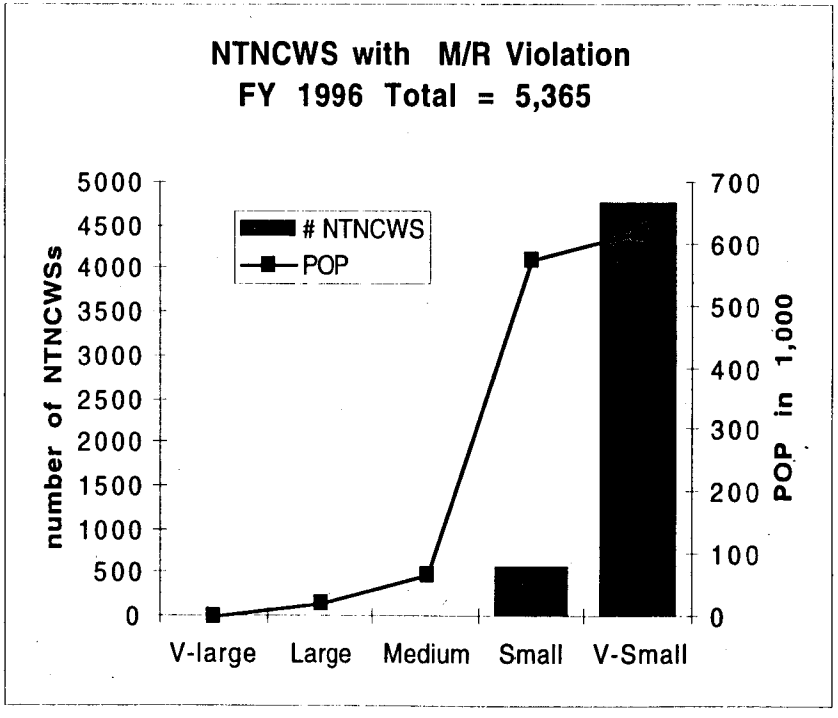


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table E4.
Note: Total may be less than the sum of the individual violation types because a water system may have had violations in more than one category (e.g., MCL and M/R violations reported in same year)..

FY 1996 National NTNCWS M/R Compliance Profile

There was an approximate ten percent increase in the number of NTNCWS with M/R violations from FY 1995 to FY 1996. In FY 1995 there were 4,885 NTNCWS with M/R violations and in FY 1996 there were 5,365 NTNCWS with M/R violations.

The majority of NTNCWSs in violation are very small and small NTNCWSs. A larger population was affected by the very small and small NTNCWSs in violation, differing from the previous study of CWSs on page 22.

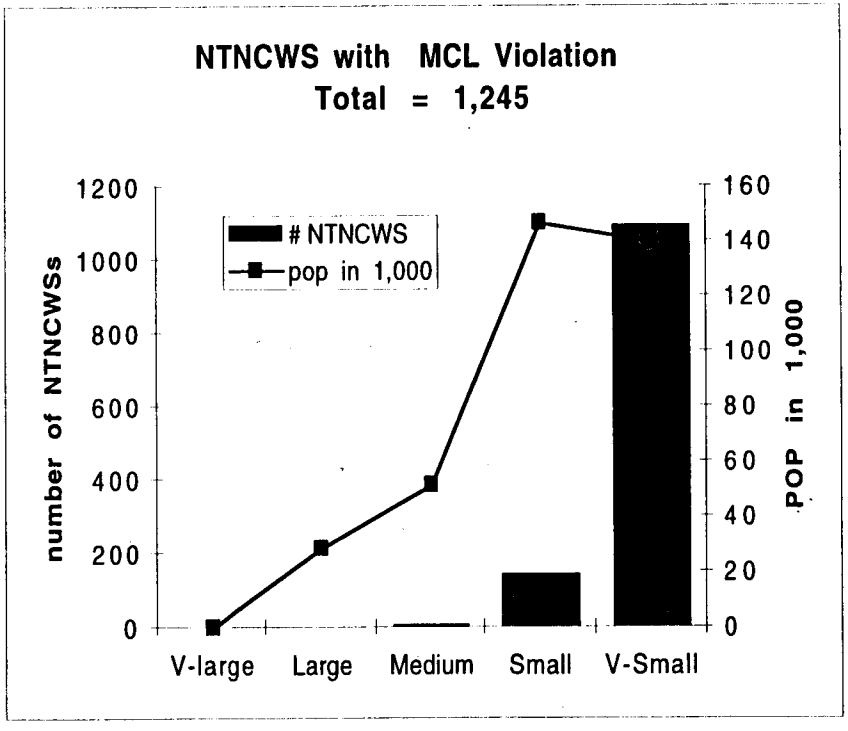


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table E4.

FY 1996 National NTNCWS MCL Compliance Profile

There was a slight increase in number of NTNCWSs with MCL violations from FY 1995 to FY 1996. In FY 1995 there were 1,162 NTNCWSs with MCL violations and in FY 1996 there were 1,245 NTNCWSs with MCL violations.

This chart shows the majority of systems in violation are very small NTNCWSs, but the largest proportion of the population affected is served by the small NTNCWSs.



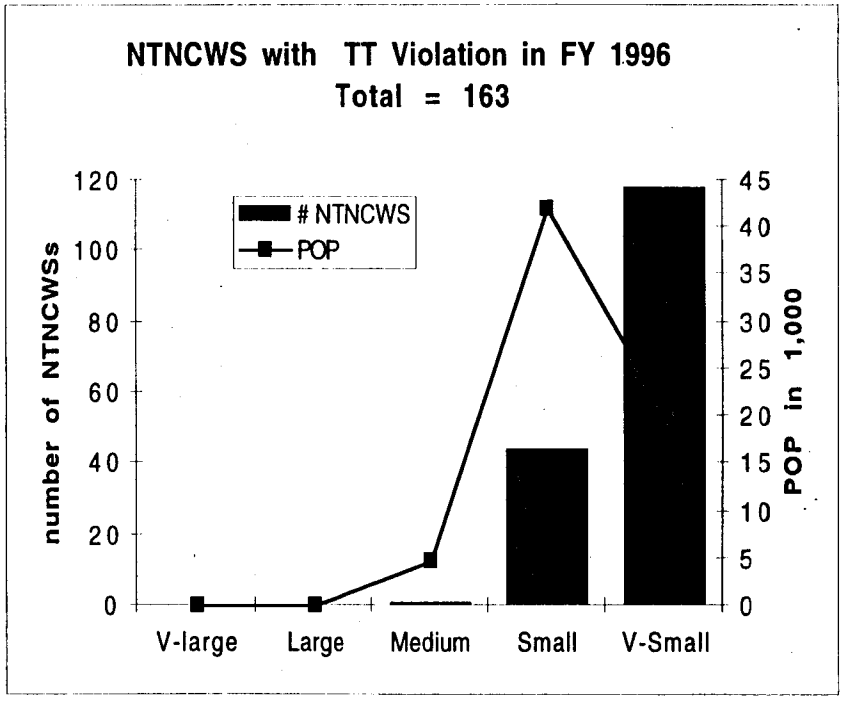
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table E4.

FY 1995 National NTNCWS TT Compliance Profile

There was a 20% decrease in the number of NTNCWSs with TT violations from FY 1995 to FY 1996. In FY 1995 there were 197 NTNCWSs with TT violations and in FY 1996 there were 163 NTNCWSs with TT violations.

This chart shows the majority of systems in violation are the very small NTNCWSs, but the largest proportion of the population were affected due to violations in small NTNCWSs.

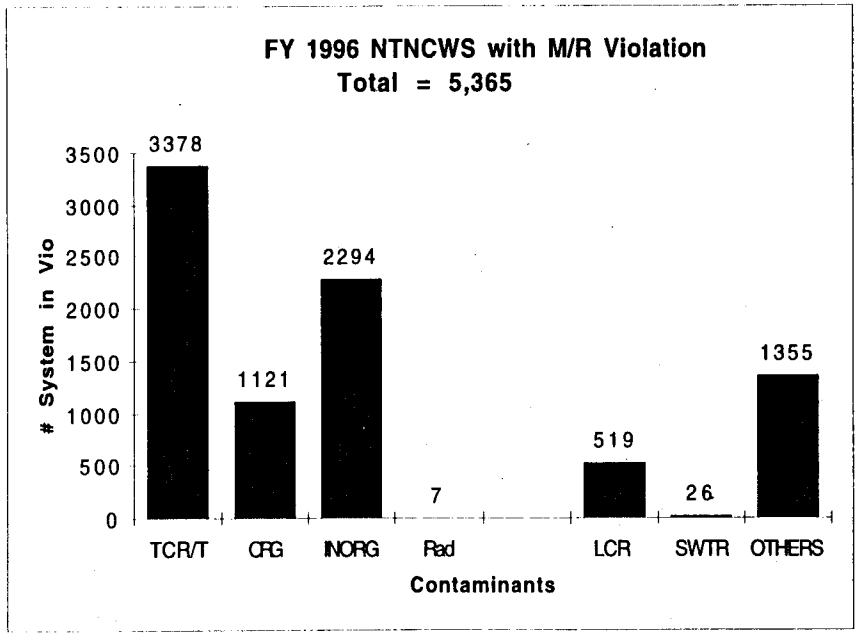
Due to the inavailability of the data in SDWIS, the TT violations discussed in this report exclude unfiltered public water systems in violation of the Treatment Technique requirements of the Surface Water Treatment Rule (SWTR). These unfiltered systems failed to comply with the state (or EPA) requirement to install filtration treatment within 18 months of the state order.

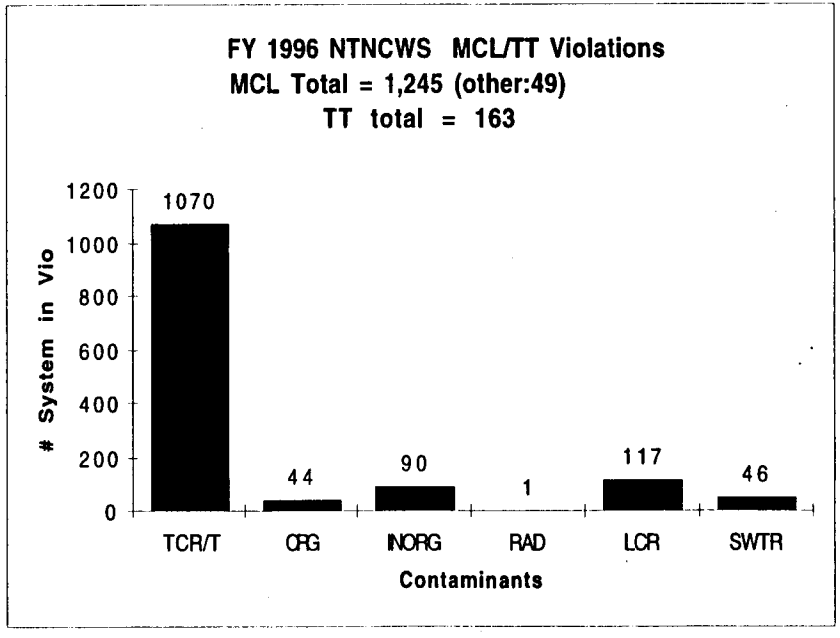


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table E4.

FY 1996 National NTNCWS Compliance Profile by Contaminant Groups

The following chart shows the distribution of NTNCWSs in violation by contaminant group during FY 1996. The distribution is very similar to the CWS profile on page 32. As with the CWSs, the most common violations among the NTNCWS were the Total Coliform Rule and Turbidity (TCR/T) for both M/R and MCL violations. Inorganic chemical M/R violations were the second most common violations for M/R violation. There were 1,355 M/R violations for other contaminant codes.





Note: The sum of the NTNCWSs in violation for each the contaminant groups could exceed the total number of NTNCWSs with violations. Since some NTNCWSs have violations in more than one contaminant group.
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables E1,E2 & E3.

Compliance with Federal Regulations

TRANSIENT NONCOMMUNITY WATER SYSTEMS

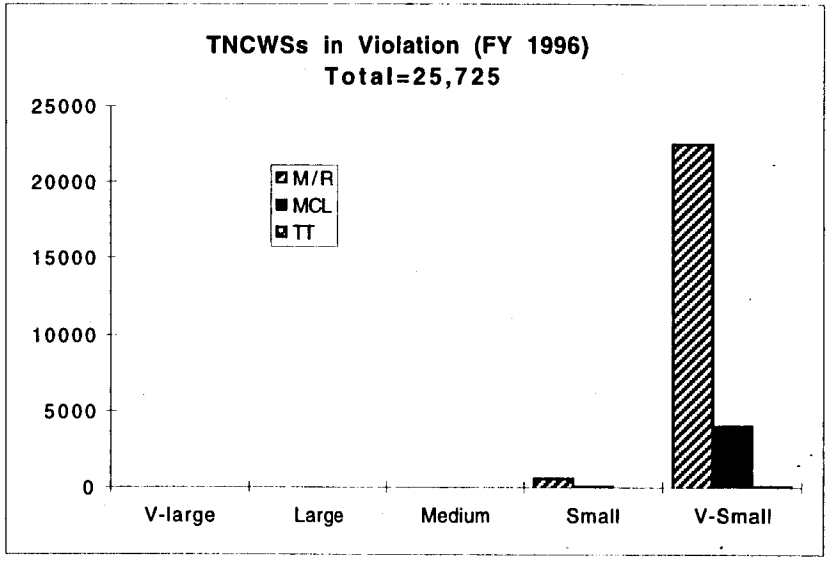
FY 1996 National Transient Noncommunity Water Systems (TNCWSs) Compliance Profile

In FY 1996, there was a significant increase (30%) in TNCWS in violation (25,725) when compared with FY 1995 (19,644).

Approximately four percent of all TNCWSs violated the MCL standards and 24 percent violated the M/R requirements. Only one-tenth of one percent of all TNCWSs violated the TT standards.

FY 1996 Transient Noncommunity Water System in Violation

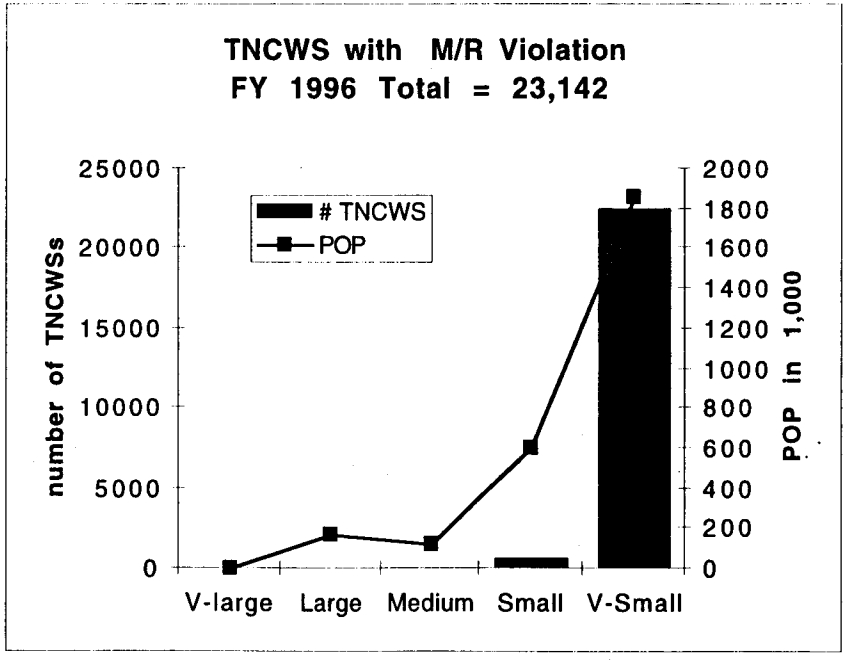
Size Category	M/R	MCL	TT
V-large	0	0	0
Large	6	1	0
Medium	22	8	4
Small	585	138	7
V-Small	22529	4057	129
Total	**23142**	**4204**	**140**



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table F4.
Note: Total may be less than the sum of the individual violation types because a water system may have had violations in more than one category (e.g., MCL and M/R violations reported in same year).

FY 1996 National TNCWS M/R Compliance Profile

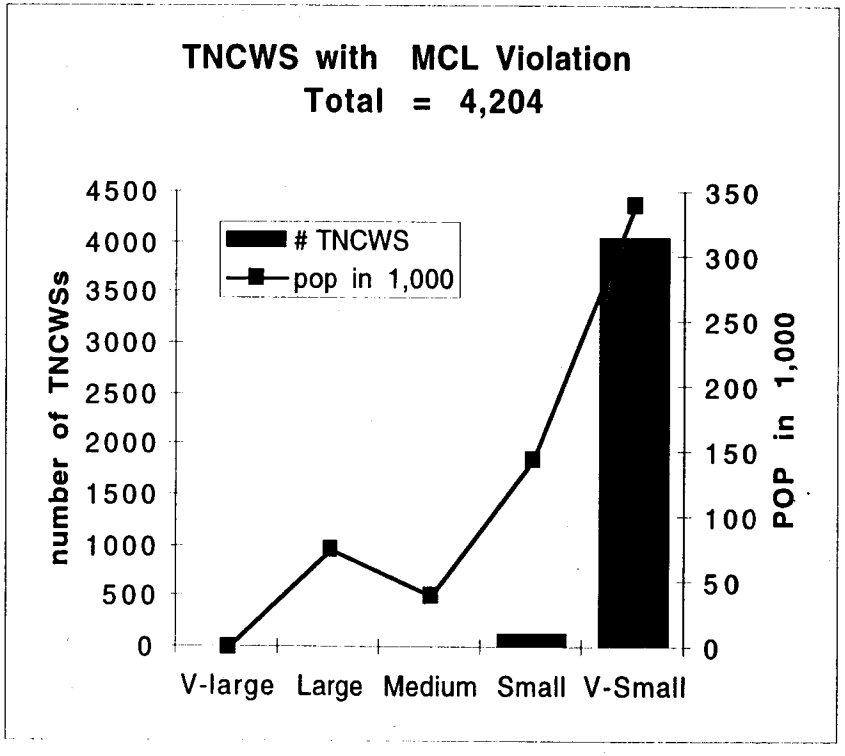
Twenty-four percent (23,142) of TNCWSs had M/R violations in FY 1996. The majority of TNCWSs in violation are very small systems but they affected large populations unlike the previous study of CWSs which showed the large populations were affected by a small number of large size CWSs in violation (see page 20).



Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table F4.

FY 1996 National TNCWS MCL Compliance Profile

Only four percent (4,204) of TNCWSs had MCL violations in FY 1996. The majority of TNCWSs in violation were very small systems but they affected large populations unlike the previous study of CWSs which showed large populations were affected by a small number of large size CWSs in violation (see page 22).

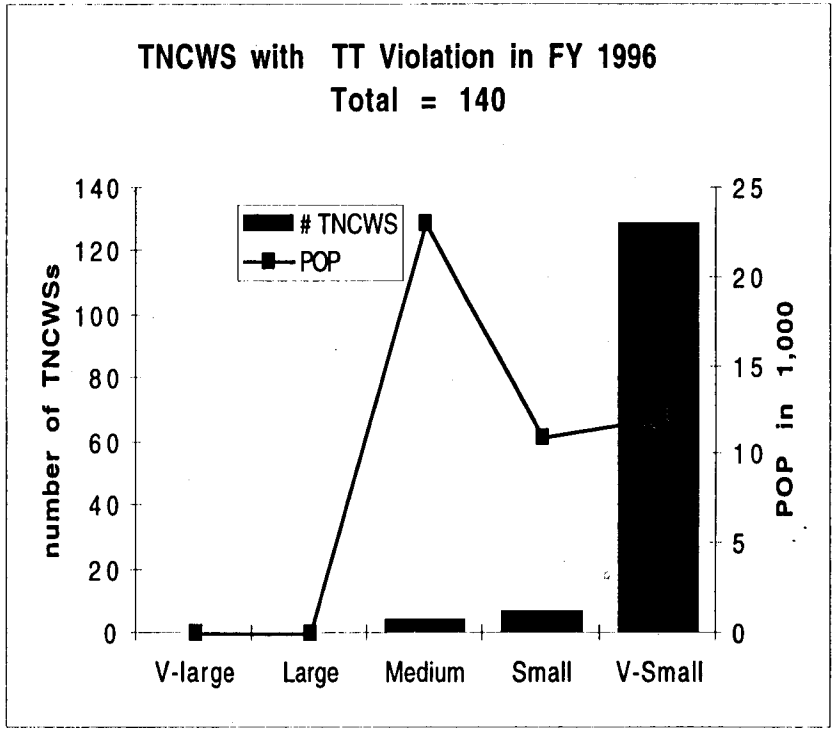


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table F4.

FY 1996 National TNCWS TT Compliance Profile

Only one percent of all TNCWSs had TT violations in FY 1996. The majority of systems in violation are the very small systems, but the larger populations are affected by the medium size systems with violation.

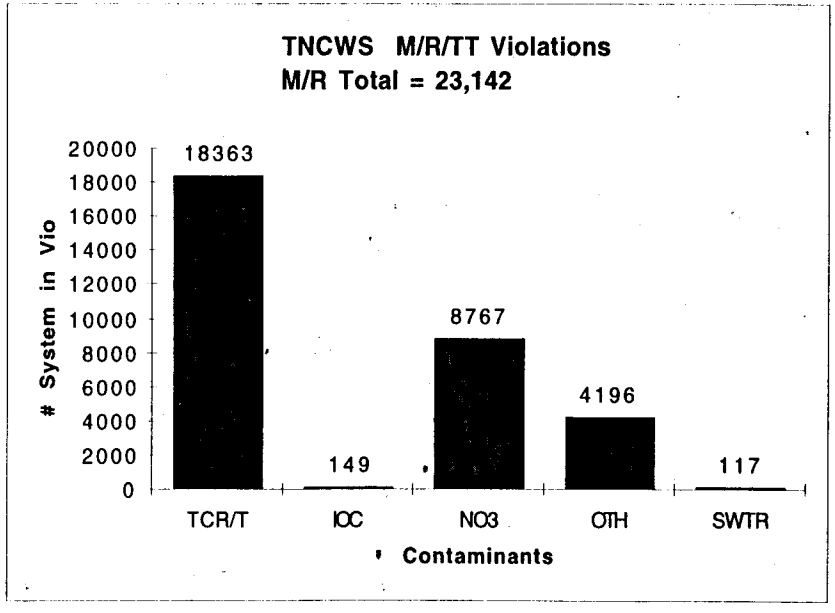
The TT violations discussed in this report exclude unfiltered public water systems in violation of the Treatment Technique requirements of the Surface Water Treatment Rule (SWTR). These unfiltered systems failed to comply with the state (or EPA) requirement to install filtration treatment within 18 months of the state order.

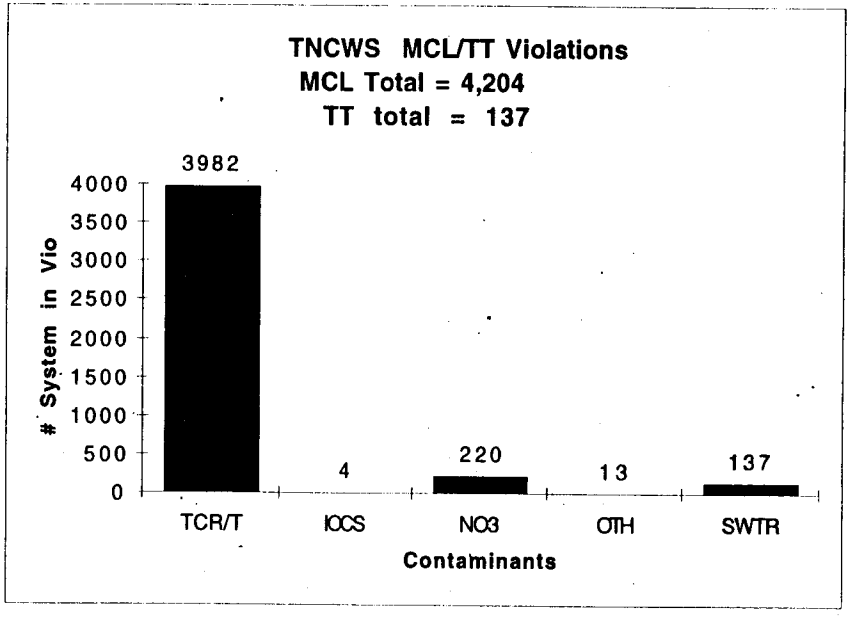


Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Table F4.

FY 1996 National TNCWS Compliance Profile by Contaminant Groups

The following chart shows the distribution of TNCWSs in violation by contaminant group during FY 1996. The most common violations among the TNCWSs were the Total Coliform Rule and Turbidity (TCR/T) for both M/R and MCL violations. Nitrate M/R violations were the second most common. There were 4,196 M/R violations for other contaminant codes.





Note: The sum of the TNCWSs in violation for each the contaminant groups could exceed the total number of TNCWSs with violations, since some TNCWSs have violations in more than one contaminant group.
Source: The PWS Inventory and Compliance Statistics: FY 1992 - FY 1996, Tables F1, F2 & F3.