903R92013

ANNUAL COMPLIANCE/ENFORCEMENT REPORT
PUBLIC WATER SYSTEM SUPERVISION PROGRAM
EPA REGION III

FY 1992

ENFORCEMENT AND PROGRAM SUPPORT SECTION
DRINKING WATER/GROUND WATER
PROTECTION BRANCH

U.S. EPA Region III
Regional Center for Environmental
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I OVERVIEW/HIGHLIGHTS AND TRENDS

The 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 Amendments, EPA sets national limits known as Maximum Contaminant Levels (MCLs) to ensure that drinking water is safe for human consumption. The Agency also regulates how often public water systems (PWS)are required to monitor for these contaminants and report the 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 requirements.

The SDWA allows States to seek primacy or EPA approval to administer their own PWSS Programs. To receive primacy, States must adopt drinking water regulations that are at least as stringent as the Federal regulations and demonstrate that they can enforce the program requirements. All of Region III states have primacy. This office administers the PWSS Program for the District of Columbia.

Primacy States report quarterly to EPA on their PWS inventory statistics, the incidence of MCL and M/R violations, and the enforcement actions taken against violators. Region III reports Federal enforcement actions taken. EPA stores this data in an automated database called the Federal Reporting Data System (FRDS). This report is based largely on data retrieved from FRDS.

PWSS COMPLIANCE AND ENFORCEMENT PROGRAM DIRECTION

FY 1992

In FY 1992, EPA and the States took several actions to strengthen their enforcement programs. These initiatives included:

- Increased emphasis on data quality and timeliness of reporting to FRDS.
- Continued implementation of a new data verification protocol to identify problems in compliance determination and reporting data to FRDS - data verifications were conducted in 3 States in FY 1992.
- Increased use of NOV letters to States regarding systems in violation.
- Development of a strategy for enforcing requirements of Surface Water Treatment and Lead and Copper Rules.
- Development of an Enforcement Management System (EMS) checklist for reviewing State enforcement program elements.

FY 1993 and Beyond

EPA and the States will continue to work on strengthening their program in FY 1993 and beyond. Expected initiatives include:

- Additional analysis of State enforcement programs and development of State-specific plans for improvement
- Continued work to improve the accuracy and completeness of FRDS data, including follow-up on data verifications conducted in FY 1991 and FY 1992.
- Initiatives to enforce new regulations, especially the Surface Water Treatment and Lead and Copper Rules
- Increased use of EPA's Section 1431 authorities in accordance with guidance issued in FY 1992.
- Implementation of the Enforcement Management System.

- Issuance of guidance on the use of EPA's emergency authorities under Section 1431 of the SDWA.

DRINKING WATER STANDARDS

During FY 1992, regulations for 59 individual contaminants in five contaminant groups were in effect. The five groups were:

- Microbiological standards (5)
- Turbidity (1)
- Inorganic chemicals (12)
- Organic chemicals (37)
  - 18 pesticides/PCBs
  - 18 volatile organic chemicals (VOC) 1 total trihalomethanes (TTHM), a by-product of chemical disinfection of drinking water
- Radionuclides (4)

During FY 1992, two major regulations became effective; the Phase ll Rule and the Lead and Copper Rule. The Phase ll Rule set MCLs for 28 new contaminants, revised the MCLs for 10 previously regulated contaminants, and deleted the MCL for 1 contaminant (i.e., silver). This rule also established the Standardized Monitoring Framework. Under this framework, monitoring and reporting on the Phase ll contaminants began in January 1993.

The Lead and Copper Rule, promulgated June 1991, established treatment techniques for minimizing lead and copper in drinking water in lieu of an MCL. The M/R requirements for the Lead and Copper Rule became effective during January 1992 for PWSs serving > 50,000 people and during July 1992 for PWSs serving between 3,301 and 50,000 people. The entire rule became effective in December 1992.

In addition, the Phase V Rule was promulgated in July 1992. This rule established MCLs for 23 new contaminants and revised the MCL for 1 contaminant. The M/R requirements for this rule began January 1993 for systems with ~ 150 service connections and the MCLs will become effective in January 1994. M/R requirements for the smaller PWSs will begin in January 1996.

The M/R requirements which are established in regulations generally set requirements based on the PWS's source (i.e., surface or ground water), the number of people it serves, and its type.

II PUBLIC WATER SYSTEM INVENTORY

PUBLIC WATER SYSTEM SUPERVISION PROGRAM

REGION III - FY 1992

TYPES OF PUBLIC WATER SYSTEMS AND POPULATION SERVED

Community Water System

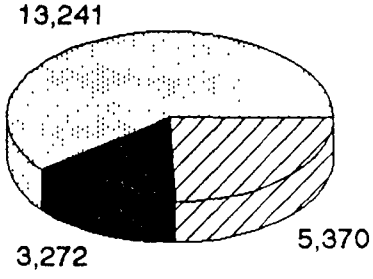
Is a PWS that provides water to the same population year-round.

Non-Transient Non-Community Water System

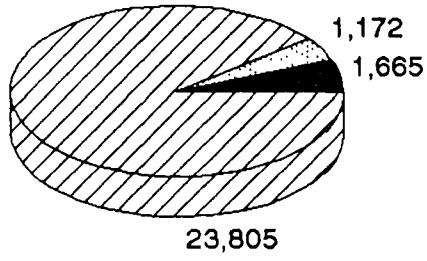
Is a PWS that regularly serves at least 25 of the same people at least six months of the year, such as schools, factories and hospitals.

Transient Non-Community Water System

Is a PWS that serves primarily non-residential customers, in facilities such as restaurants, camgrounds, motels and gas stations.



PWSs
Total 21,883



POPULATION (X000)
SERVED
Total 26,642

FRDS 07 JAN 15, 1993

PUBLIC WATER SYSTEM SUPERVISION PROGRAM

REGION III - FY 1992

NUMBER OF PUBLIC WATER SYSTEMS BY STATE

	CWS	POPULATION (000)
DC	2	1,595
DE	244	653
MD	513	4,048
PA	2,346	10,768
VA	1,587	5,297
WV	678	1,445
TOTAL	5,370	23,805

	TNCWS	POPULATION (000)
DC	0	0
DE	283	71
MD	3,048	117
PA	6,963	945
VA	1,909	451
WV	1,038	81
TOTAL	13,241	1,665

	NTNCWS	POPULATION (000)
DC	0	0
DE	124	86
MD	506	87
PA	1,582	523
VA	811	415
WV	249	61
TOTAL	3,272	1,172

	TOTAL PWS	TOTAL POP
DC >	2	1,595
DE >	651	810
MD >	4,067	4,252
PA >	10,891	12,236
VA >	4,307	6,163
WV >	1,965	1,587
TOTAL >	21,883	26,642

FRDS 07 JAN 15, 1993

PUBLIC WATER SYSTEM SUPERVISION PROGRAM

REGION III - FY 1992

DISTRIBUTION OF PUBLIC WATER SYSTEMS BY SOURCE

Public Water System Inventory

	CWSs		NTNCWSs		TNCWSs		All PWSs	
Source	# of Systems	Population Served (000)	# of Systems	Population Served (000)	# of Systems	Population Served (000)	# of Systems	Population Served (000)
Surface	1,177	20,226	62	33	61	115	1,300	20,374
Ground	4.190	3,574	13,179	1,631	3,211	1,057	20,580	6,262
Ground UDI	3	5	0	0	0	0	3	5
Total	5,370	23,805	13,241	1,664	3,272	1,172	21,883	26,641

In FY 92, 21,883 water systems in Region III were classified as PWS. The table above presents the distribution of Community, Non-Transient Non-Community, Transient Non-Community and Ground Water Under Direct Influence of Surface Water Systems by Source.

FRDS 07 JAN 15, 1993

* Purchased surface and ground sources are included.

III PUBLIC WATER SYSTEM COMPLIANCE

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
- Decay products of radon, radium, and uranium

During Treatment

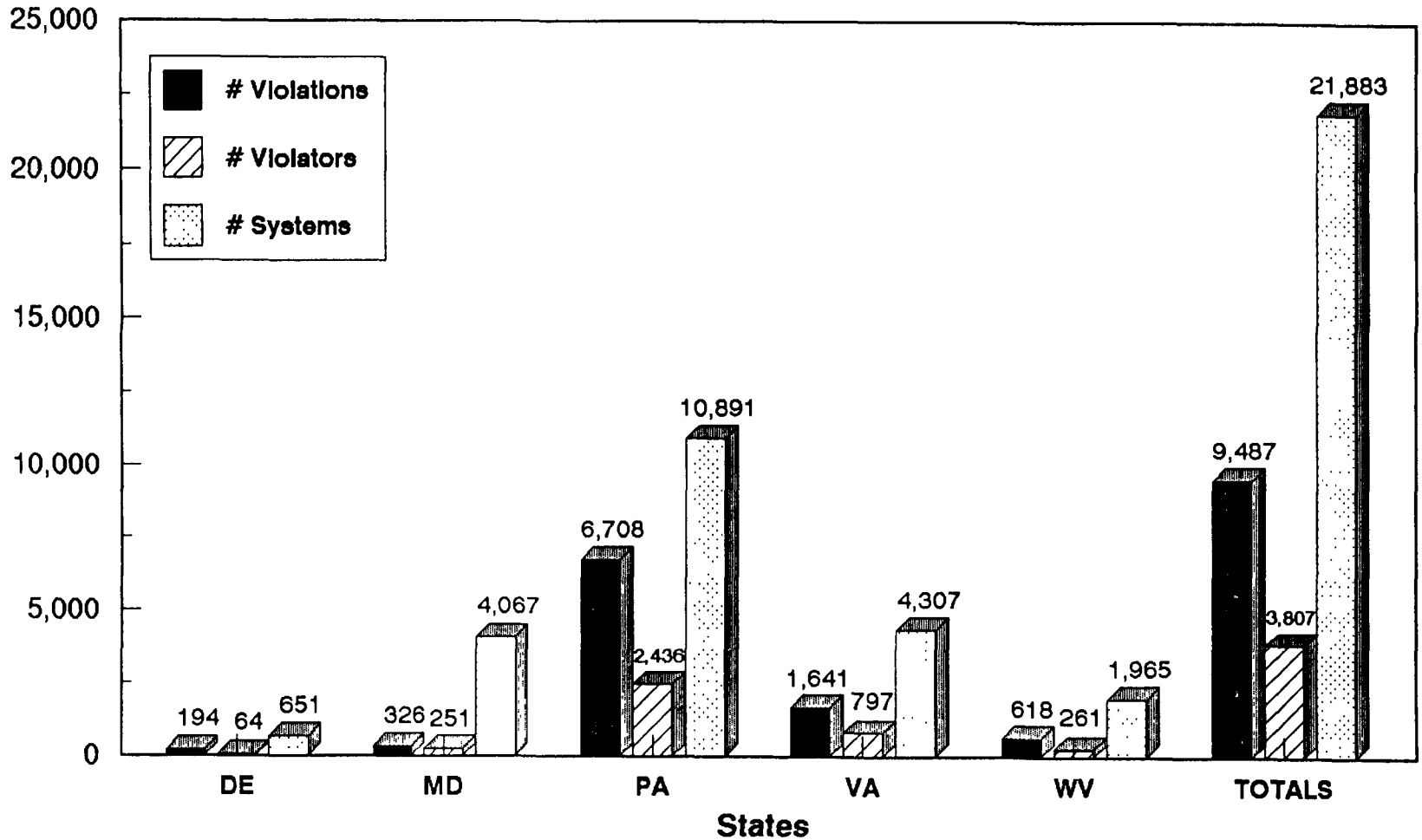
- By-products of disinfectants such as trihalomethanes

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

REGIONAL VIOLATION SUMMARY

FY 1992

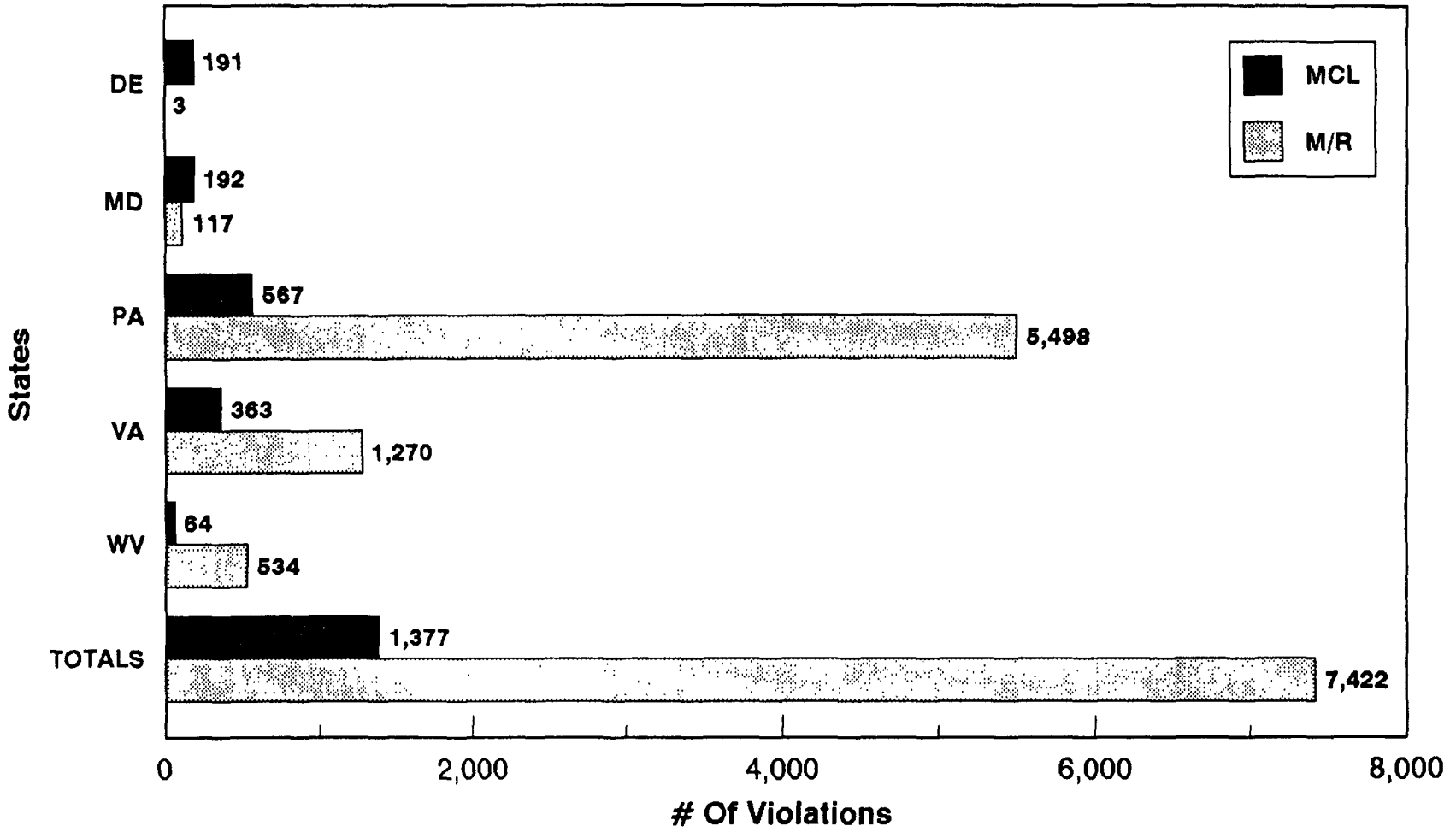


FRDS 20 7/23/93

Number of systems are total number of all systems in each state.

MCL vs. M/R VIOLATIONS

FY 1992

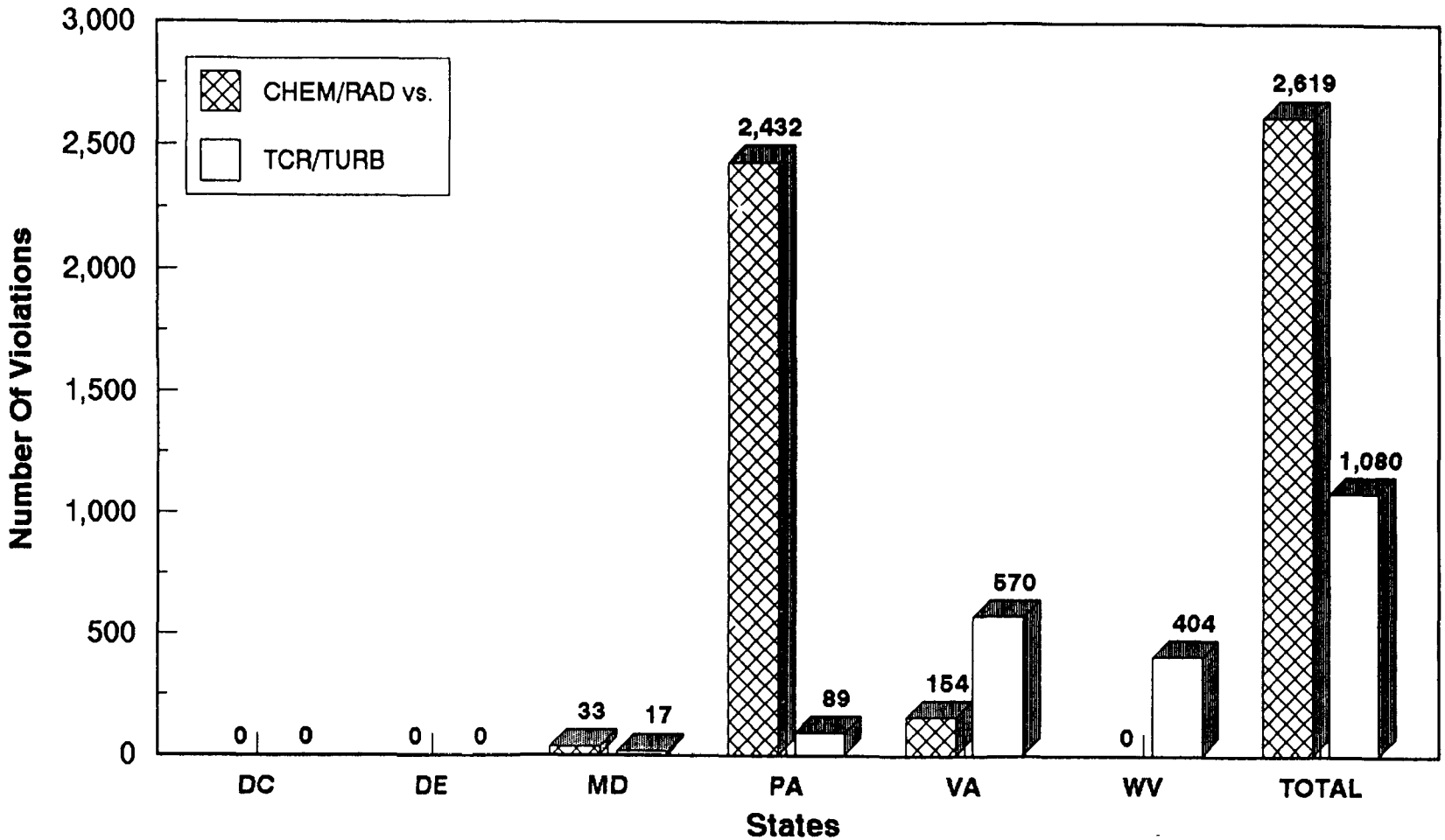


FRDS 20 7/23/93
MCL - Maximum Contaminant Level
M/R - Monitoring/Reporting

COMMUNITY WATER SYSTEM

BREAKDOWN OF MONITORING/REPORTING (M/R)

FY 1992



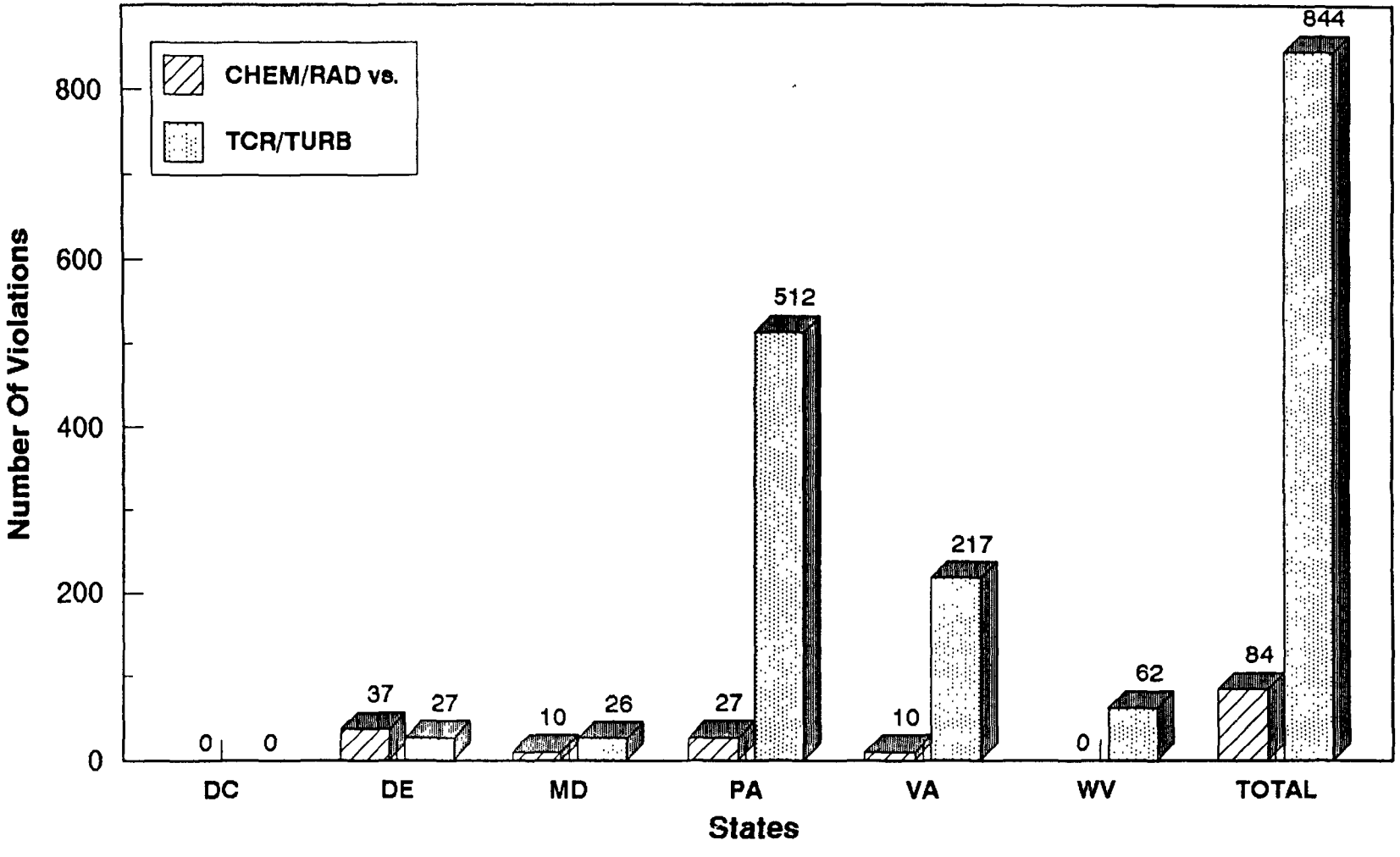
FRDS 20 7/23/93

TCR & COLIFORM ARE COMBINED

COMMUNITY WATER SYSTEM

BREAKDOWN OF MAXIMUM CONTAMINANT LEVELS (MCL)

FY 1992

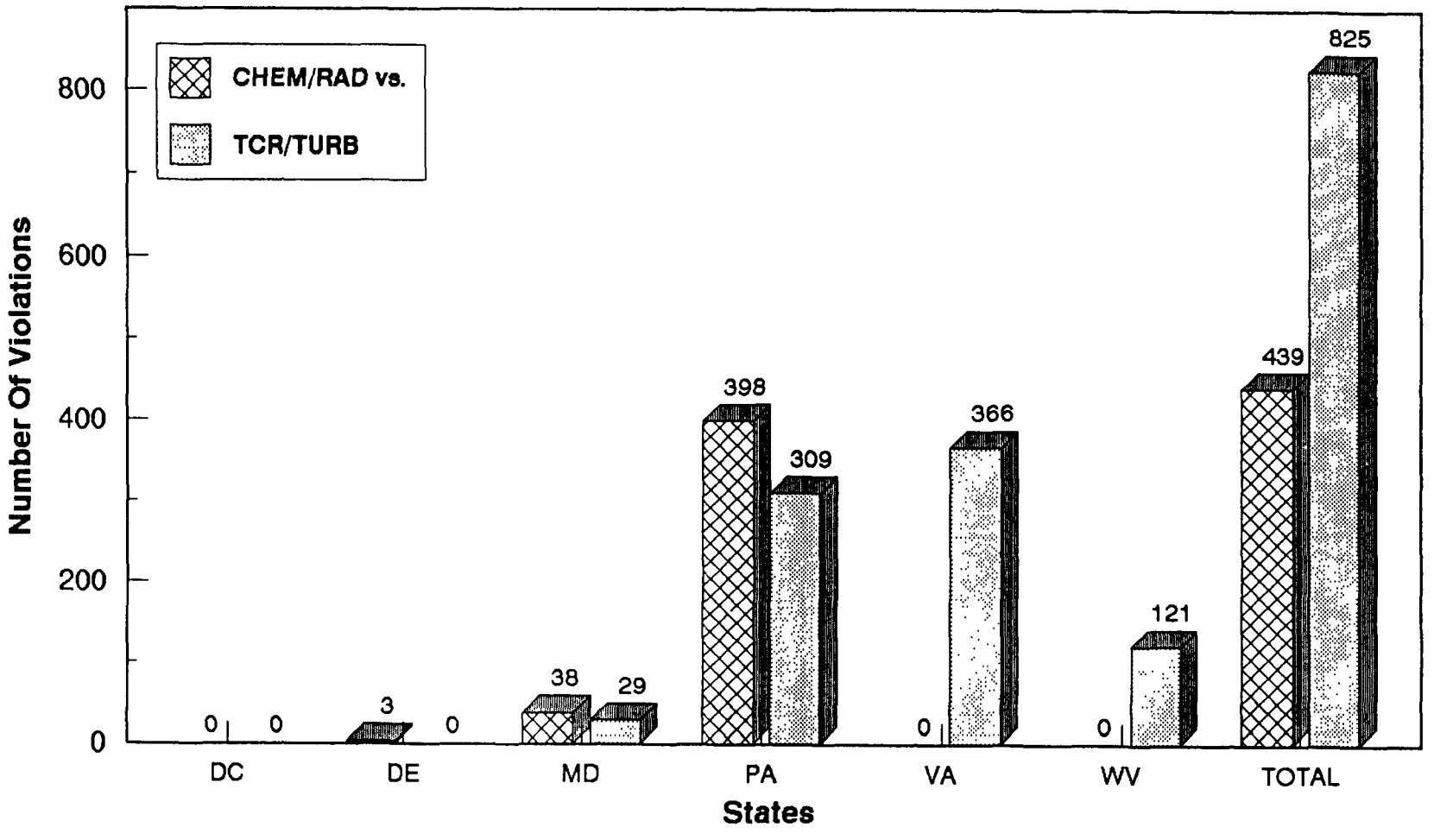


FRDS 20 7/23/93

NON-TRANSIENT NON-COMMUNITY WATER SYSTEM

BREAKDOWN OF MONITORING/REPORTING (M/R)

FY 1992



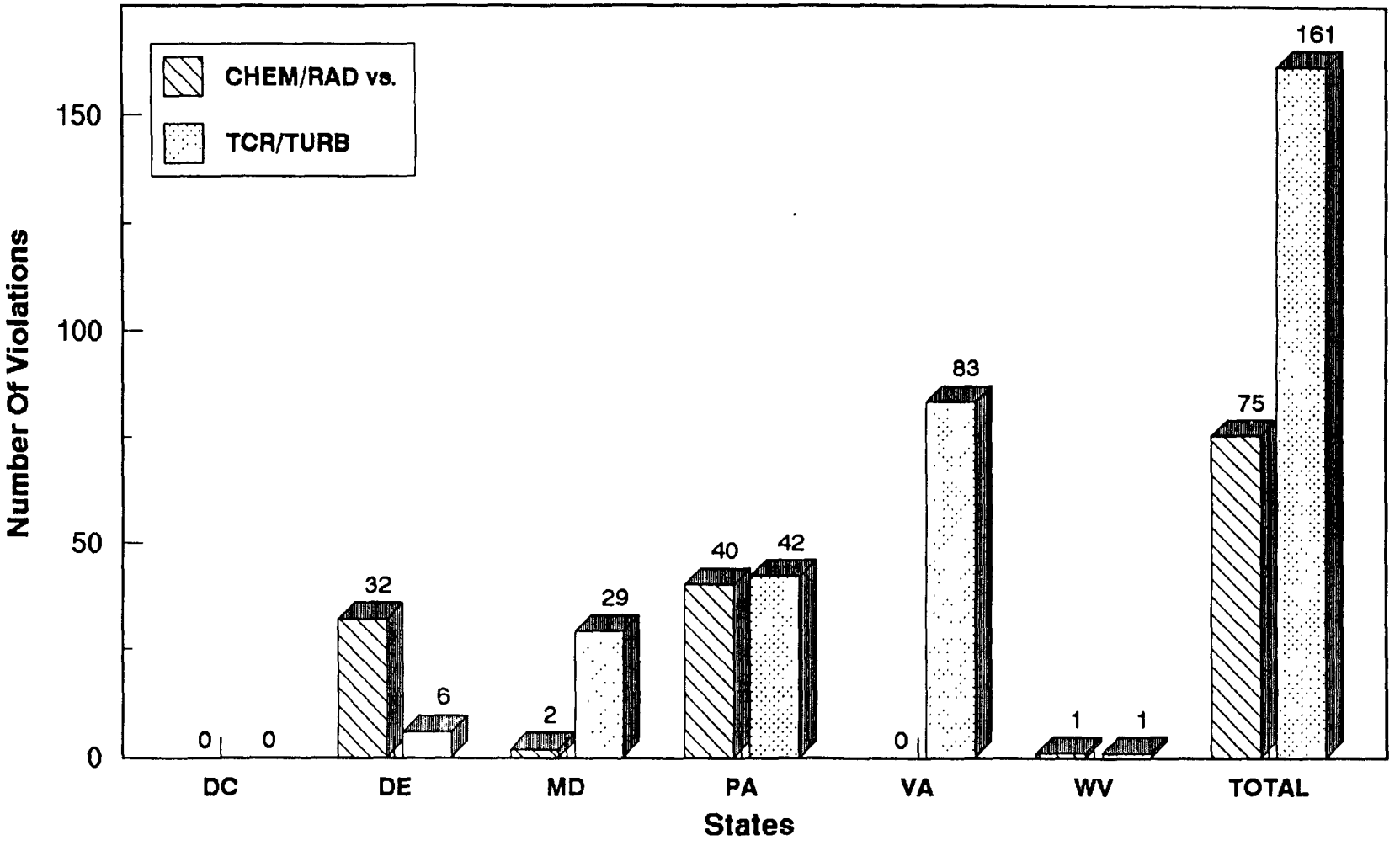
FRDS 20 7/23/93

TCR & COLIFORM ARE COMBINED

NON-TRANSIENT NON-COMMUNITY WATER SYSTEM

BREAKDOWN OF MAXIMUM CONTAMINANT LEVELS (MCL)

FY 1992

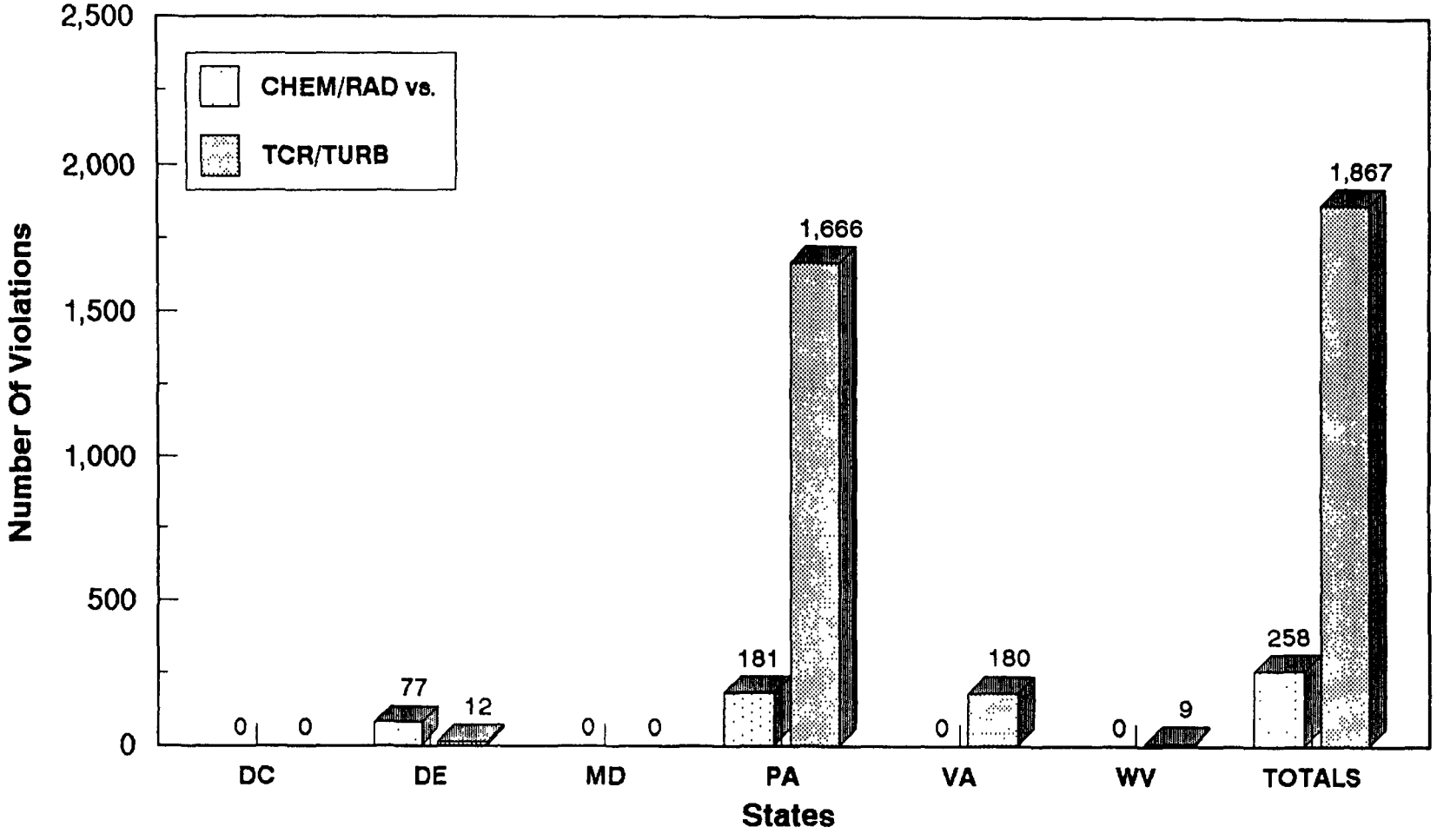


FRDS 20 7/23/93

TRANSIENT NON-COMMUNITY WATER SYSTEM

BREAKDOWN OF MONITORING/REPORTING (M/R)

FY 1992



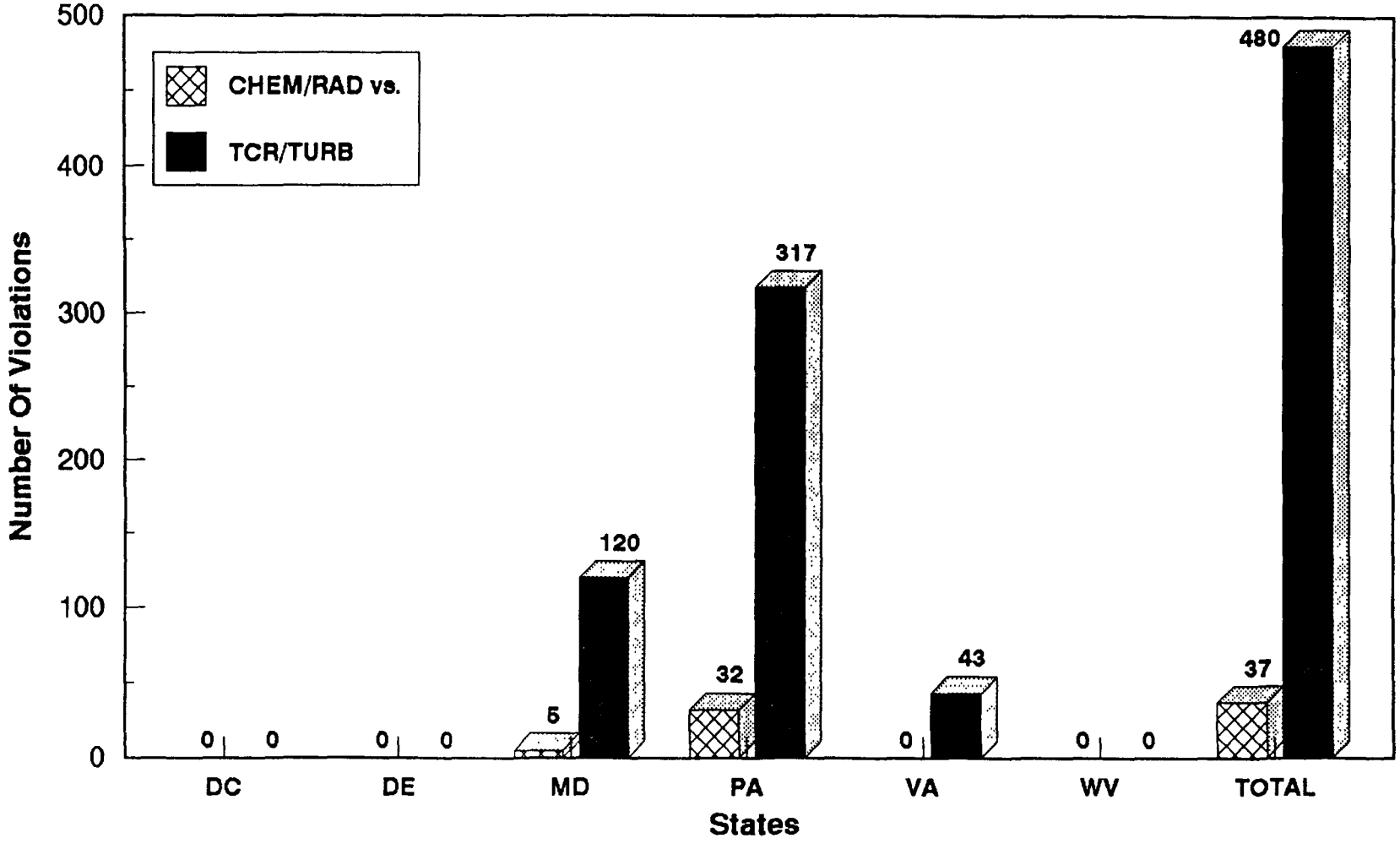
FRDS 20 7/23/93

TCR & COLIFORM ARE COMBINED

TRANSIENT NON-COMMUNITY WATER SYSTEM

BREAKDOWN OF MAXIMUM CONTAMINANT LEVELS (MCL)

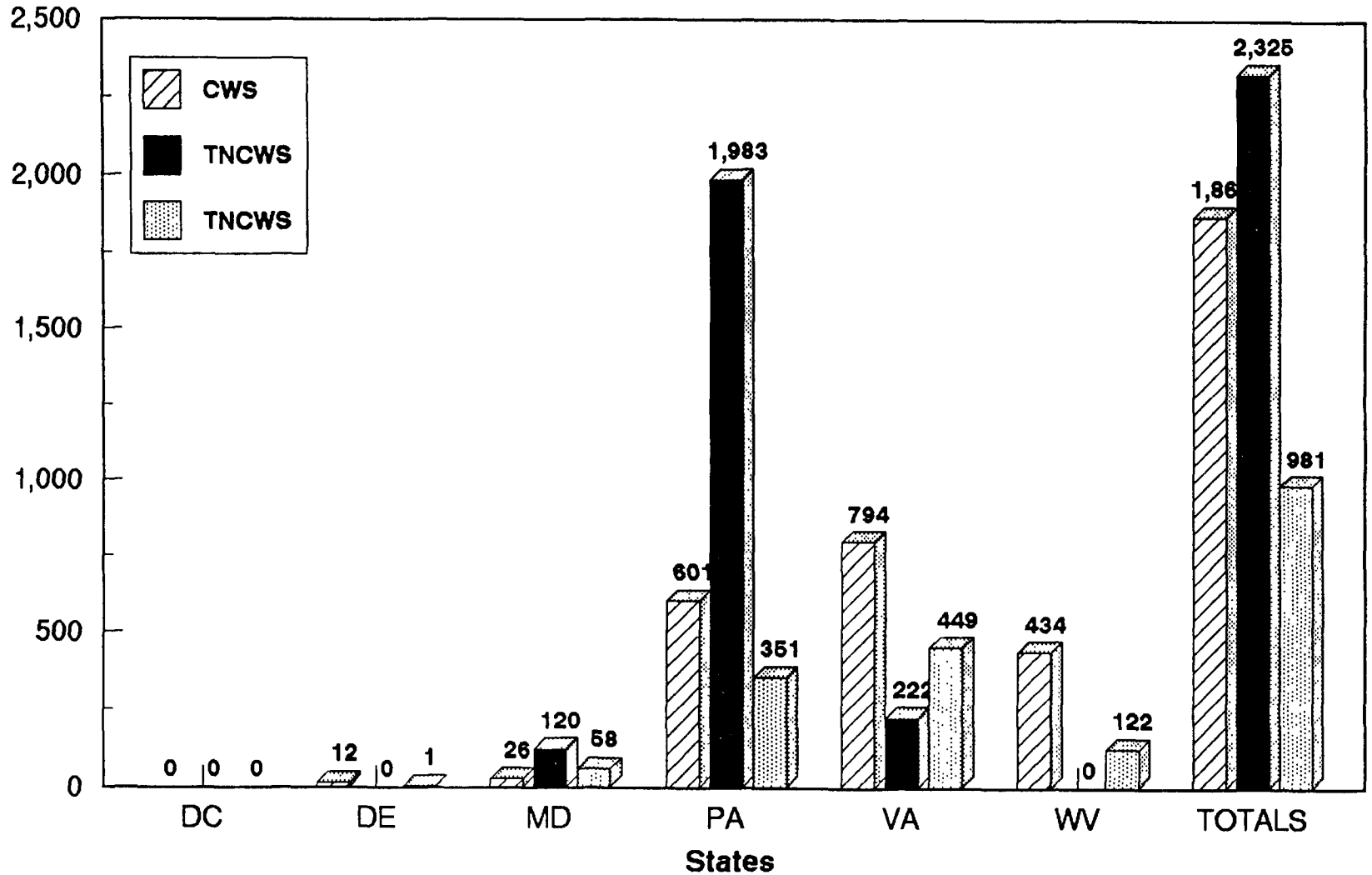
FY 1992



FRDS 20 7/23/93

TOTAL COLIFORM (TCR) VIOLATIONS PER PLANT TYPE

FY 1992



FRDS 20 7/23/93

IV SIGNIFICANT NON-COMPLIANCE

SIGNIFICANT NONCOMPLIERS (SNCs)

FY 1992 Regional Profile

Significant noncompliers (SNCs) are CWSs, NTNCWSs and TNCWSs (those serving $\geq$500 persons) that have more serious, frequent, or persistent violations. SNCs are divided into microbiological/turbidity SNCs and chemical/radiological SNCs. The criteria which designate a system as an SNC vary by contaminant.

In order to be more protective of public health, the SNC definitions for microbiological/turbidity and chemical/radiological parameters were made more stringent. These new SNC definitions became effective at the start of FY 1991.

Beginning on January 1, 1991, monitoring requirements under the new Total Coliform Rule (TCR) became effective; that is, TCR violations were beginning to be incurred and reported to FRDS. The first TCR SNCs were determined at the end of June 1991

Note: The number of SNCs discussed in this text represent the number of systems that met the definition of SNC, based on violation data in FRDS. These numbers include SNCs that have been addressed by State or Federal enforcement actions, have returned to compliance, or were deactivated.

Significant Noncompliance (cont.) - SNC Definitions

Total Coliform Rule (TCR) MCL

MONTHLY MONITORING: ≥ 4 acute/monthly MCL violations in any 12 consecutive months.

QUARTERLY MONITORING: ≥ 3 acute/monthly MCL violations in any 4 consecutive quarters.

ANNUAL MONITORING: ≥ 2 acute/monthly MCL violations in any 2 consecutive periods.

Total Coliform Rule (TCR) M/R

MONTHLY MONITORING: In any 12 consecutive months, meeting one of the following criteria:
- ≥ 4 major repeat M/R violations
- ≥ 4 combined major repeat M/R and MCL violations
- ≥ 6 combined major repeat M/R, major routine M/R, and/or MCL violations
- ≥ 10 combined major/minor routine/repeat M/R and/or MCL violations

QUARTERLY MONITORING: In any 4 consecutive quarters, meeting one the following criteria:
- ≥ 3 major repeat M/R violations
- ≥ 3 major repeat M/R, major routine M/R and/or MCL violations

ANNUAL MONITORING: In any 2 consecutive one-year periods, meeting one of the following criteria:
- ≥ 2 major repeat M/R violations
- ≥ 2 combined major repeat M/R, major routine M/R, and/or MCL violations

Turbidity MCL

MONTHLY MONITORING: ≥ 4 MCL violations in any 12 consecutive months.

QUARTERLY MONITORING: ≥ 2 MCL violations in any 4 consecutive quarters.

Turbidity M/R and Combined M/R and MCL

Monthly MONITORING: In any 12 consecutive months, having either of the following:
- ≥ 6 major M/R and/or MCL violations, or
- ≥ 10 major/minor M/R and/or MCL violations

QUARTERLY MONITORING: ≥ 3 major M/R and/or MCL violations in any 4 consecutive quarters.

ANNUAL MONITORING: ≥ 2 major M/R and/or MCL violations in any 2 consecutive one-year periods.

Chemical/Radiological MCL (excluding Nitrate)

Exceeds the short term acceptable risk to health level.

Nitrate MCL

> 10 mg/l.

Chemical/Radiological M/R

Fails to monitor for, or report the results of any regulated contaminant for ≥ 2 consecutive compliance periods.

Public Notification

Failure to provide public notification of the violation which caused the system to become a SNC.

Significant Noncompliance (cont.) - SNC Definitions

Surface Water Treatment Rule (SWTR)

UNFILTERED SYSTEMS

A system that has 3 or more major M/R violations in any 12 consecutive months.

FILTERED SYSTEMS

The M/R and treatment technique SNC definitions for filtered systems will become effective in FY 1993.

Lead and Copper Rule (Pb/Cu)

Effective beginning in FY 1993.

Notes

(1) A "major" M/R violation (except for SWTR) occurs when no samples are taken or no results are reported during a compliance period. For SWTR, a major M/R violation occurs when at least 90% of the required samples are not taken or results reported during a reporting period.

(2) A "minor" M/R violation (except for SWTR) occurs when an insufficient number of samples are taken or incomplete results are reported during a compliance period. For SWTR, a minor violation occurs when less than 100% but more than 90% of the required samples are not taken or results reported during a reporting period.

(3) SNC definition is modified, if needed, to cover new regulations as they are promulgated.

(4) For details on the SNC definition, please see the following memorandum:

(a) "Revised Definition of Significant Noncomplier (SNC) and the Model for Escalating Responses to Violations in the PWSS Program." May 22, 1990. [Water Supply Guidance #70]

(b) "Final SNC Definition for the TCR and proposed SNC Definition for the SWTR." December 19, 1990. [Water Supply Guidance #80]

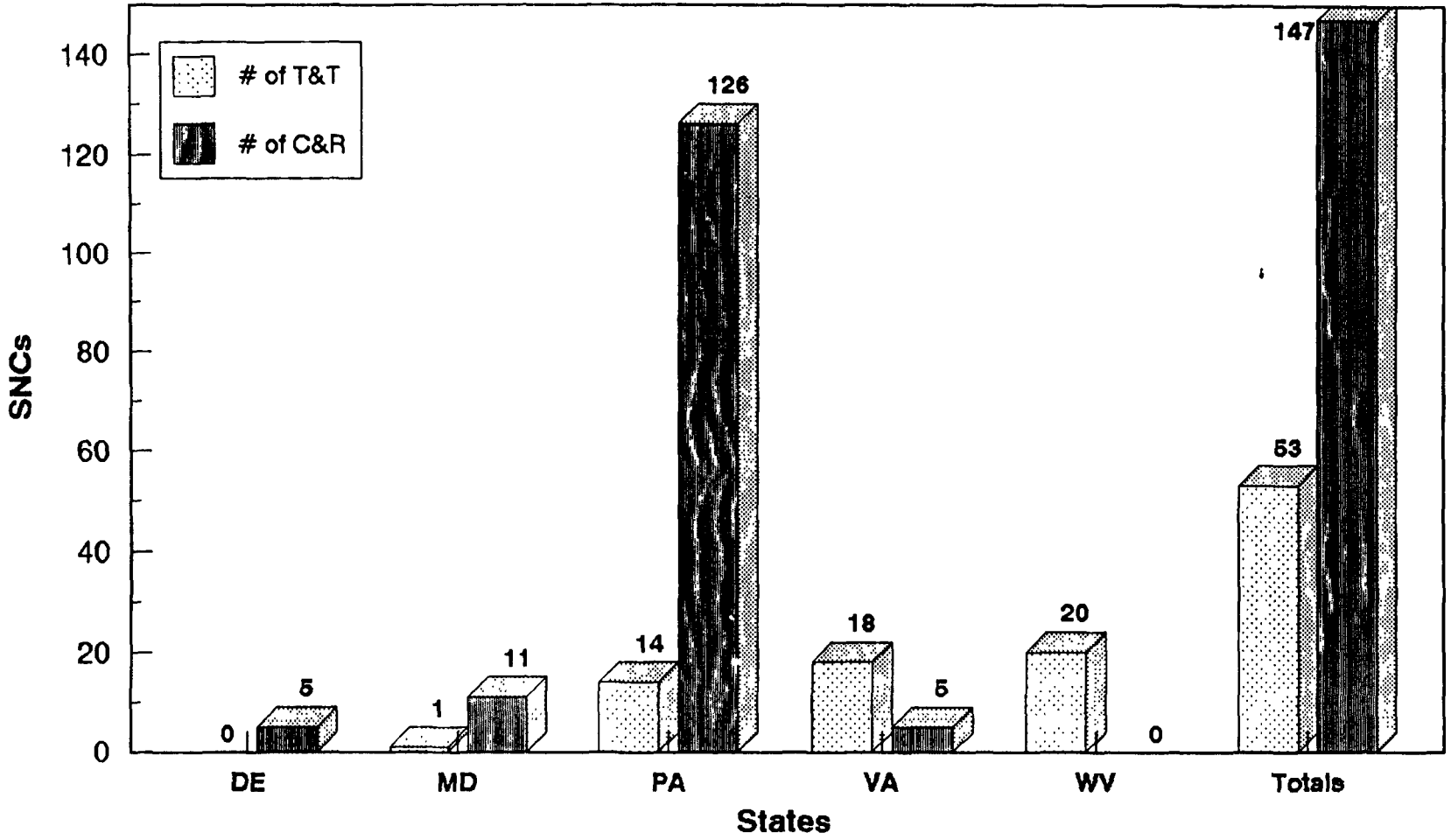
(c) "Final SNC Definition for the SWTR." February 28, 1991. [Water Supply Guidance #82]

(d) "Final Guidance for the Lead and Copper - Definitions and Federal Reporting for Milestones, Violations, and SNCs." May, 1992.

SIGNIFICANT NON-COMPLIERS

COMMUNITY PUBLIC WATER SYSTEMS

FY - 1992

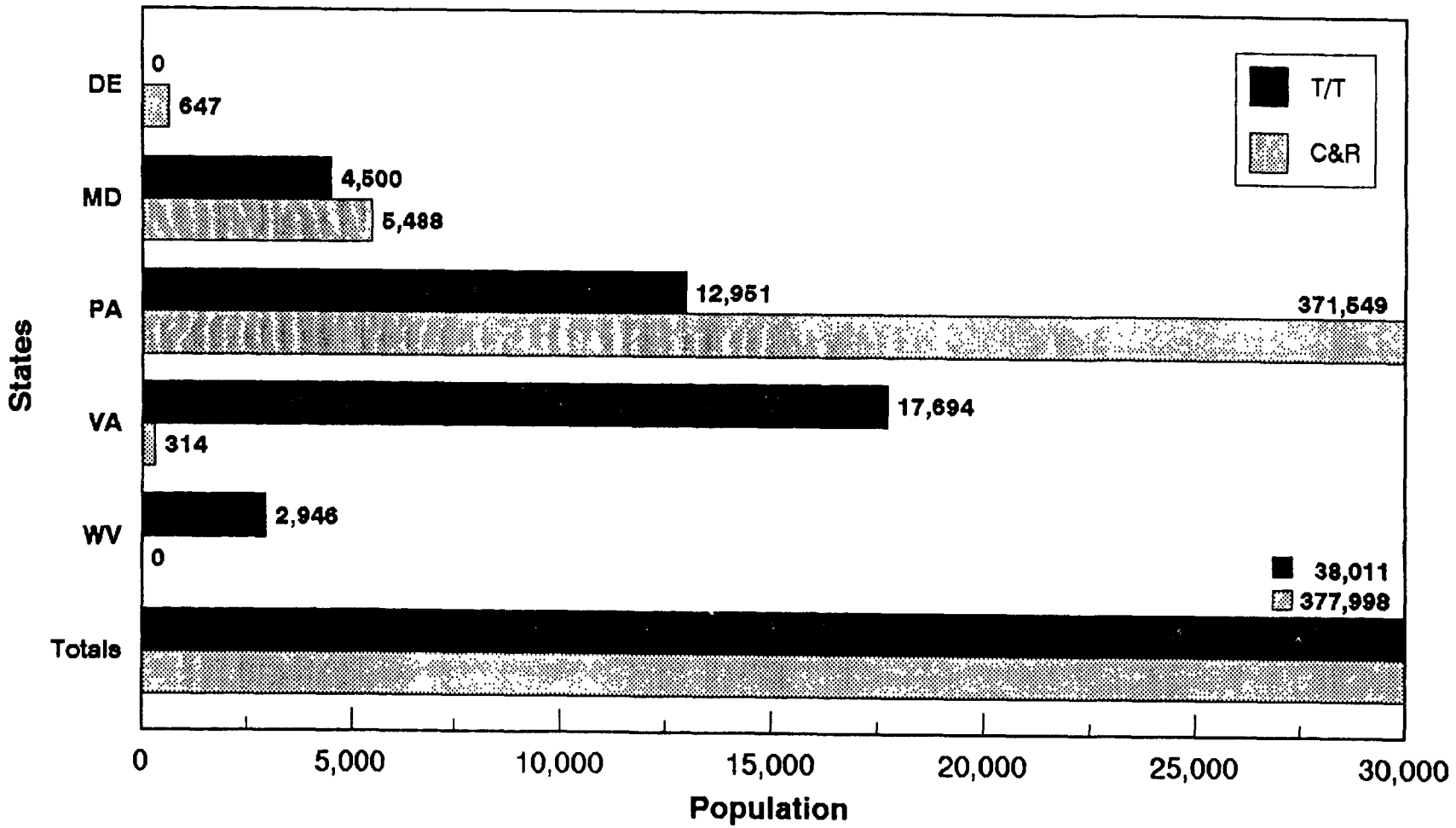


T/T = Total Coliform/Turbidity
C/R = Chemicasl/Radiological

POPULATION SERVED BY SIGNIFICANT NON-COMPLIERS

COMMUNITY PUBLIC WATER SYSTEMS

FY - 1992

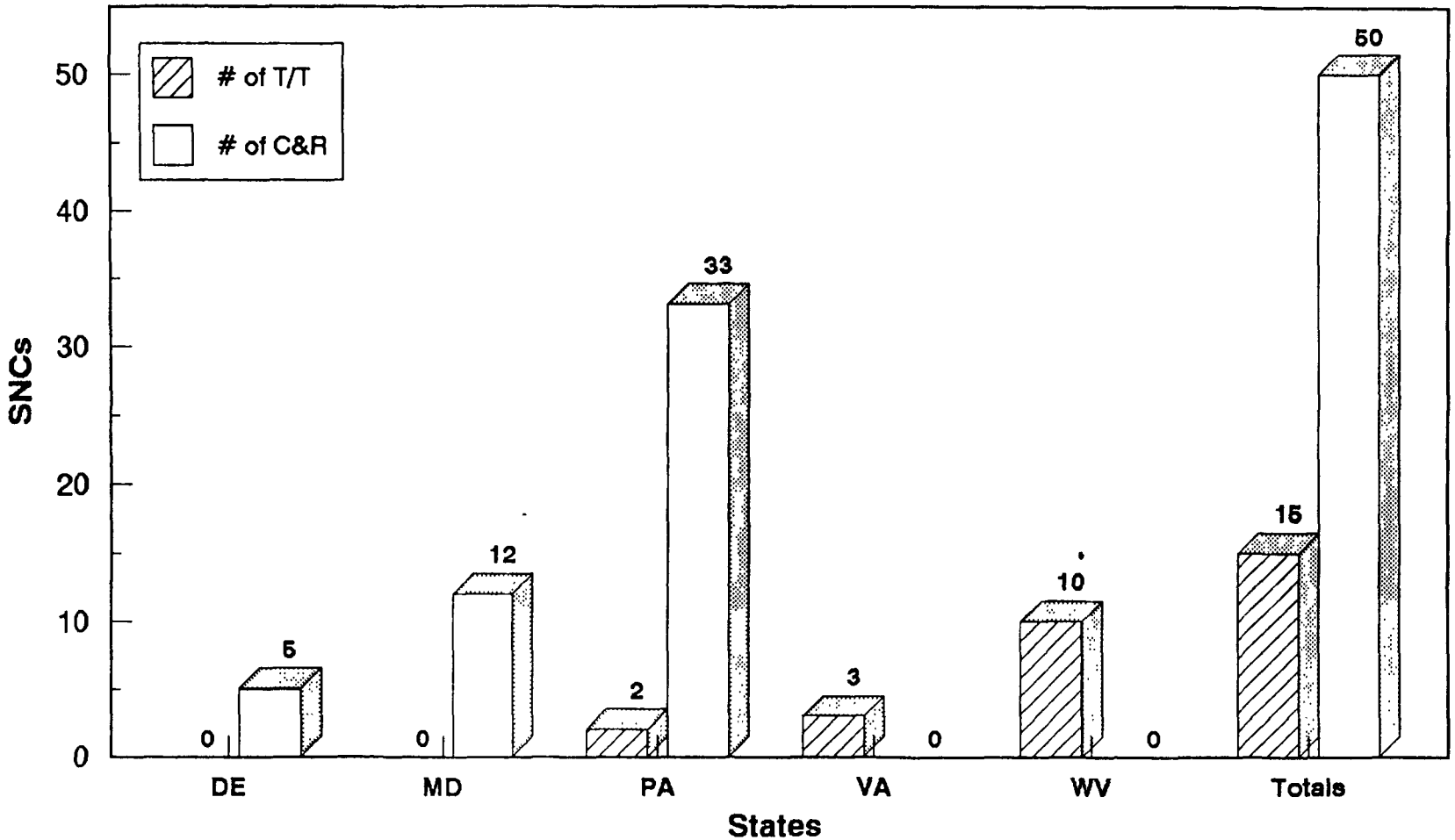


T/T = Total Coliform/Turbidity
C/R = Chemicals/Radiological

SIGNIFICANT NON-COMPLIERS

NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS

FY - 1992

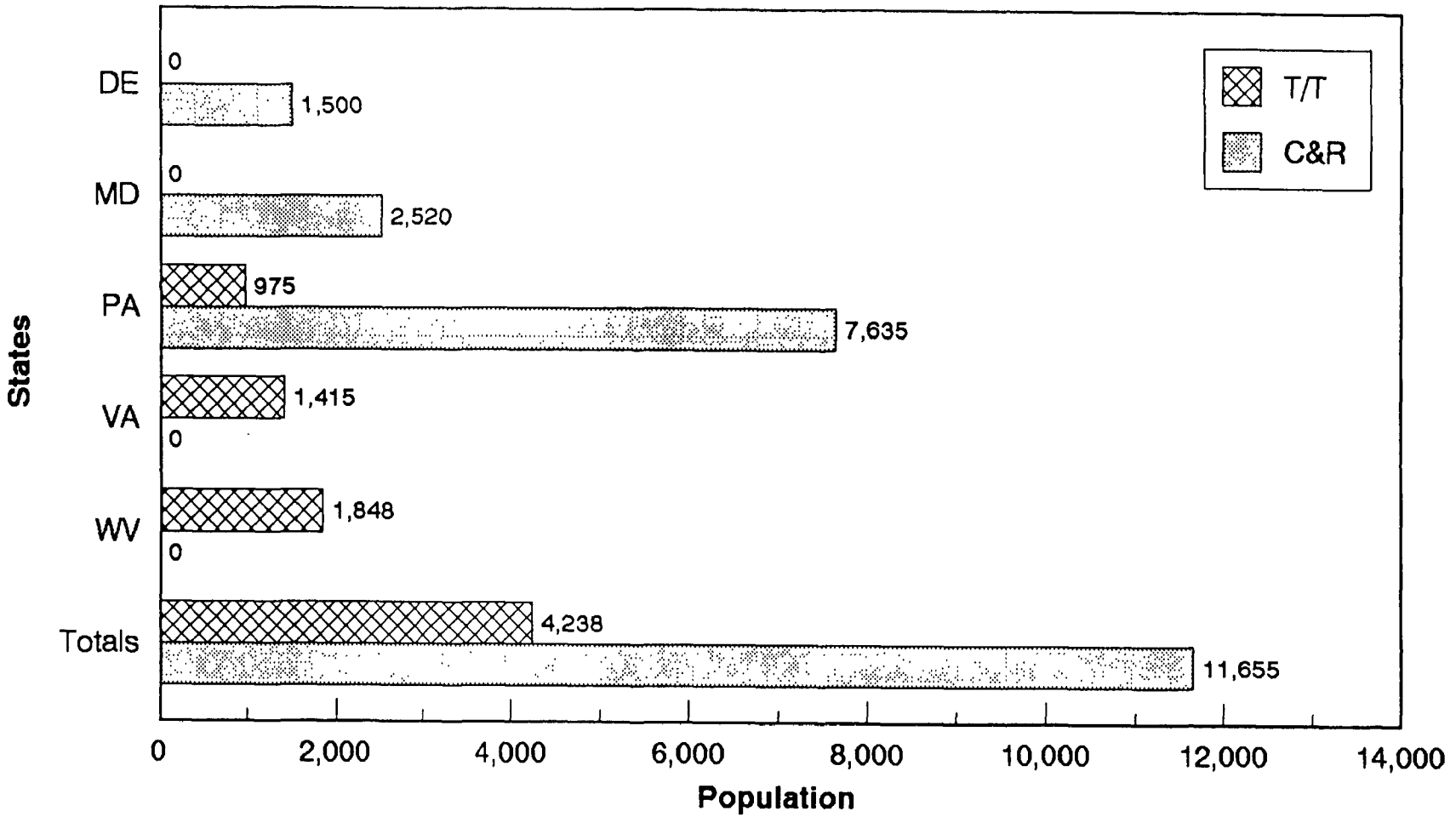


T/T = Total Coliform/Turbidity
C/R = Chemicals/Radiological

POPULATION SERVED BY SIGNIFICANT NON-COMPLIERS

NON-TRANSIENT NON-COMMUNITY PUBLIC WATER SYSTEMS

FY - 1992

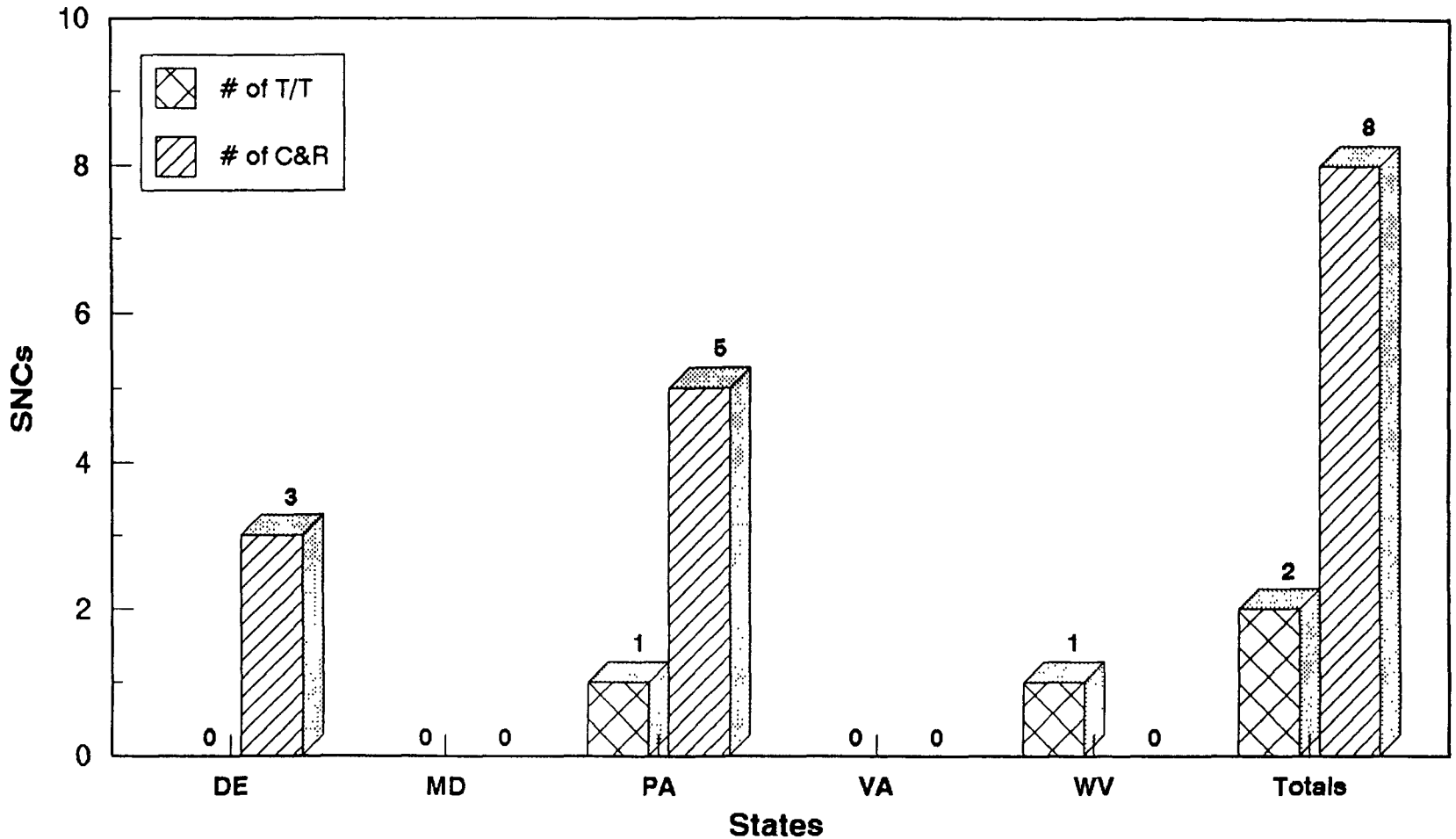


T/T = Total Coliform/Turbidity
C/R = Chemicals/Radiological

SIGNIFICANT NON-COMPLIERS

TRANSIENT NON-COMMUNITY WATER SYSTEMS

FY - 1992

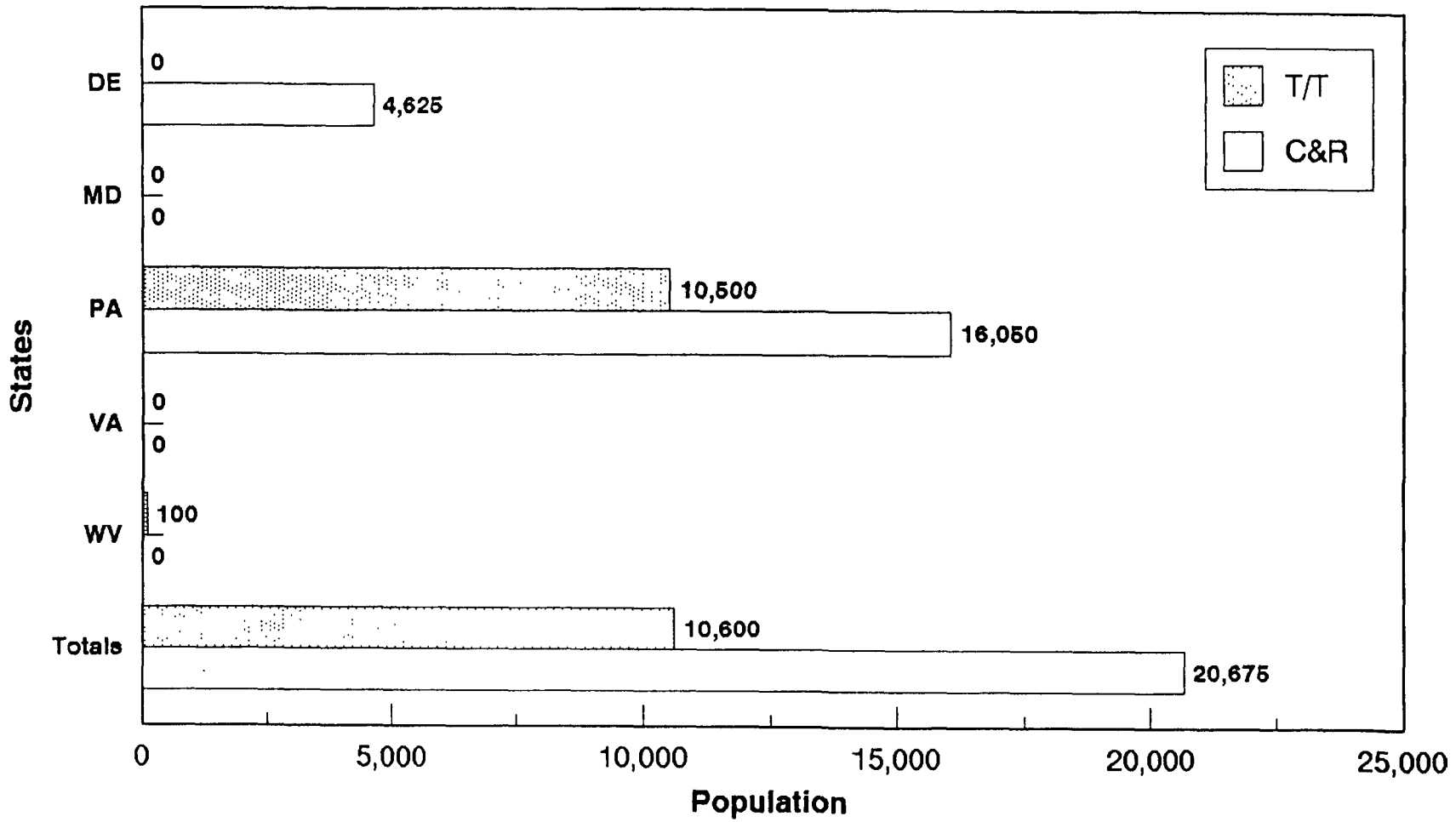


T/T = Total Coliform/Turbidity
C/R = Chemicals/Radiological

POPULATION SERVED BY SIGNIFICANT NON-COMPLIERS

TRANSIENT NON-COMMUNITY WATER SYSTEMS

FY - 1992

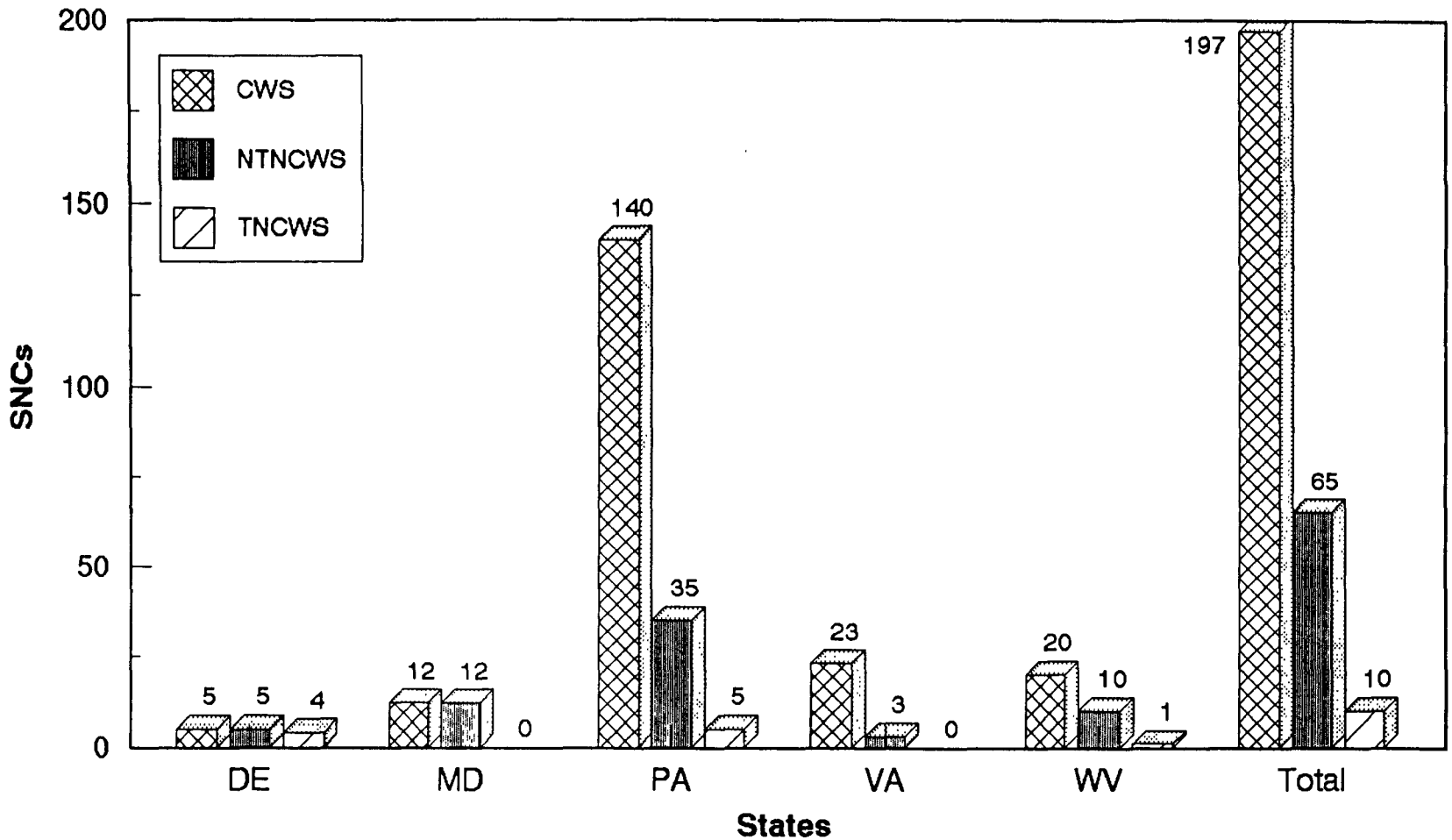


T/T = Total Coliform/Turbidity
C/R = Chemicals RAdiological

SIGNIFICANT NON-COMPLIERS

PARAMETERS/ALL TYPES COMBINED

FY - 1992

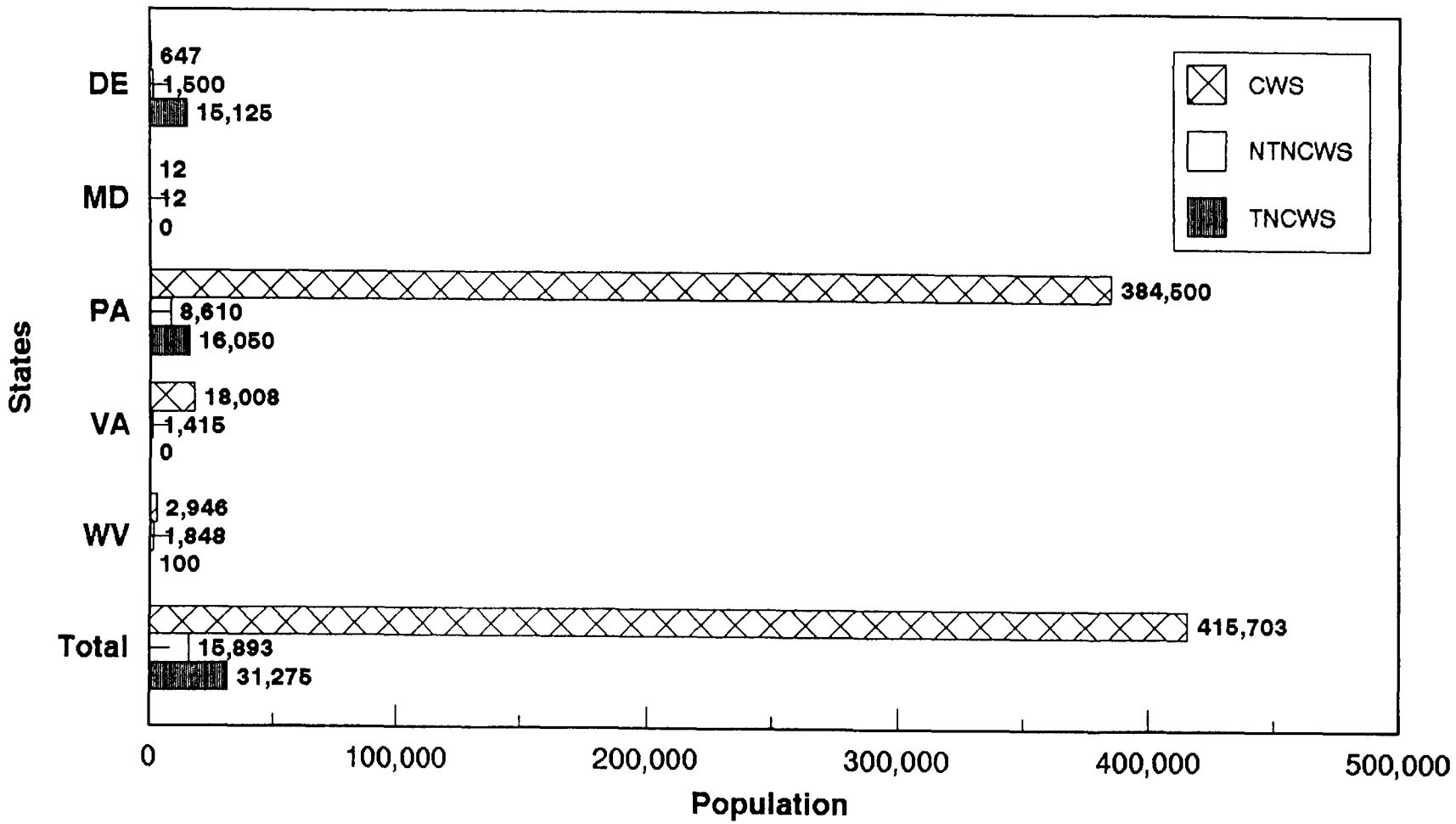


T/T = Total Coliform/Turbidity
C/R = Chemicals/Radiological

POPULATION SERVED BY SIGNIFICANT NON-COMPLIERS

COMBINED PARAMETERS/ALL TYPES

FY - 1992



Combined = T/T and C/R

Plant Types = CWS, NTNCWS, TNCWS

V STATE & FEDERAL ENFORCEMENT ACTIONS

ENFORCEMENT

These tables show the distribution of State and Federal enforcement actions taken in FY 1992 against all violators of the SDWA. The data on State actions were derived from the number of unique enforcement actions that were reported to the Federal Reporting Data System (FRDS).

Prior to FY 1992, numbers of State actions were manually reported to EPA Headquarters as part of the quarterly reports to the Strategic Targeted Activities for Results System (STARS). STARS is an automated reporting system for the Agency's program management office. However, in an effort to improve the quality of the information that is reported to the national data system (FRDS), and encourage comprehensive reporting to FRDS of all required data, the numbers of FY 1992 State enforcement actions are based on numbers of actions that have been reported to FRDS.

The majority of State enforcement actions taken in FY 1992 were administrative orders. Bilateral compliance agreements (BCAs) made up a small percent of the State enforcement actions taken in FY 1992. Civil referrals to State Attorneys General comprised of an even smaller percent of State actions. The number of notices of violation (NOVs) issued in FY 1992 was lower than in FY 1991 because this Region issued a large number of NOVs as part of the FY 1991 special enforcement initiatives.

During FY 1992, the number of proposed administrative orders (PAOs), final administrative orders (FAOs), complaints for penalty (CFPs) and active cases rose by 21 percent from FY 1991. In addition, EPA increased its use of Section 1431 emergency orders by 50 percent.

The majority of Federal enforcement actions taken in FY 1992 were NOVs. PAOs and FAOs of the Federal enforcement actions taken were next. CFPs and civil or criminal litigation of the Federal actions and the Section 1431 orders accounted for the remainder of the Federal actions.

FY 92 STATE ENFORCEMENT ACTIONS

ENFORCEMENT ACTIONS	DE	MD	PA	VA	WV	TOTALS
SIA-Viol/Rem Notice		260	722	1126	728	2836
SIB-Comp Mtg Conduct			182	5		187
SIC-Tech Assist Visit		5	96	12		113
SID-Site Visit		66	105	6		177
SIE-Public Notif. Req		141	353	1596	734	2824
SIF-Public Notif. Rec		116	316	695	93	1220
SFG-Public Notif. Iss.	108			76		184
SFH-Boil Water Order	9	1	116	52		178
SFJ-Formal NOV Issued		175	1556	392		2123
SFK-BCA signed	3	1	39	1		44
SFL-AO(w/o penl)issued	2	1	21	4		28
SFM-Adminstrative Pen			47	1		48
SFN-Show-cause hearing			8			8
SFO-AO(w/penalty)issued				1		1
SFP-Civil Case Dev.			35			35
SFQ-Civil Case Filed			2			2
SFT-Injunction			4			4
SFV-Criminal Case Filed			1			1
SF3-Case Appealed			8			8

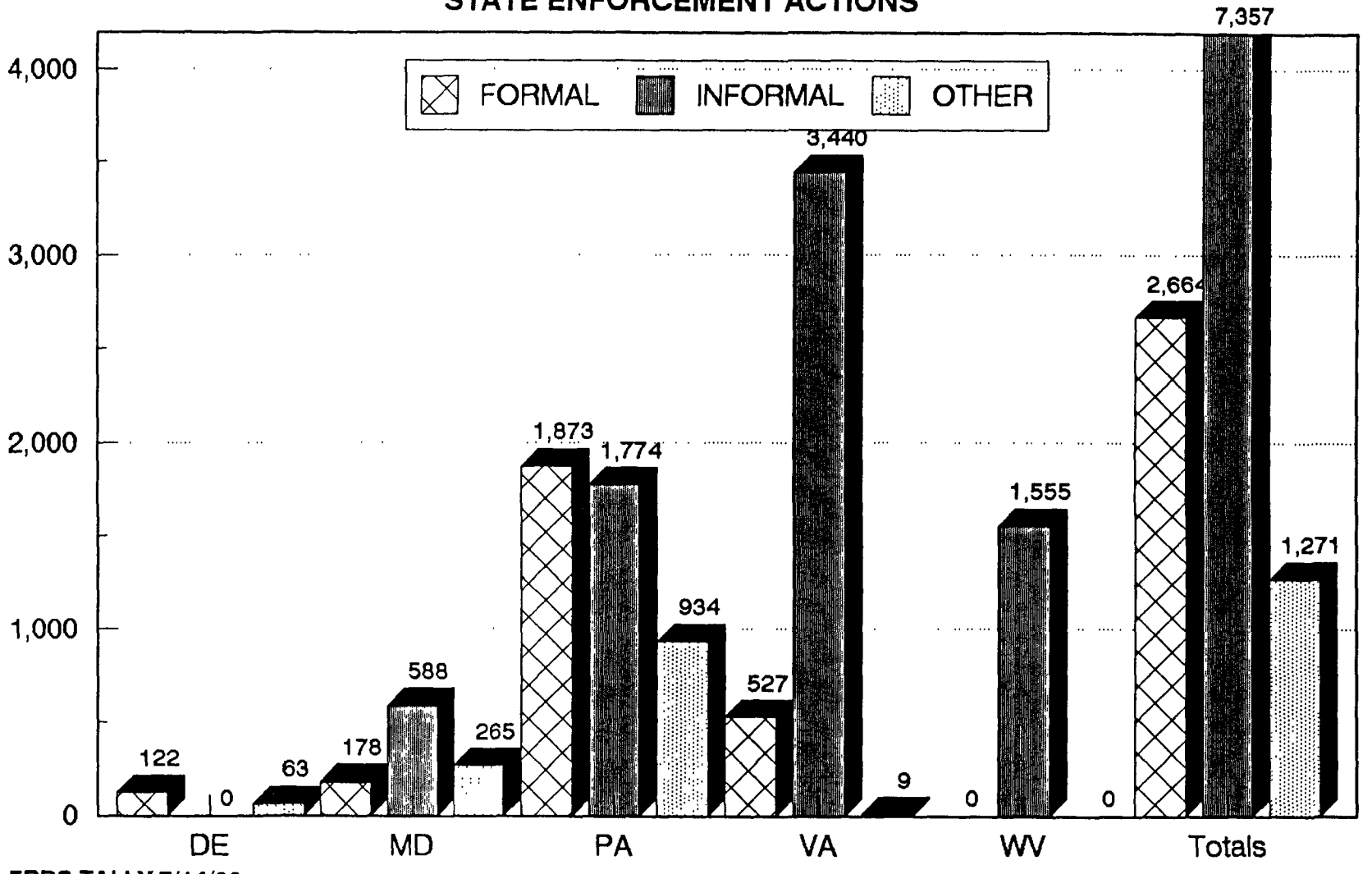
SOX-Compliance Achieved	62	259	913			1234
SOY-Var/Exemp Issued		2	14			16
SO6-Intent'l No Action				6		6
SO8-Other	1	4	7	2		14
TOTALS	185	1031	4545	3976	1555	11292

FRDS Tally - 7/14/93

2664 Formal - 7357 Informal - 1270 Other

FY 92

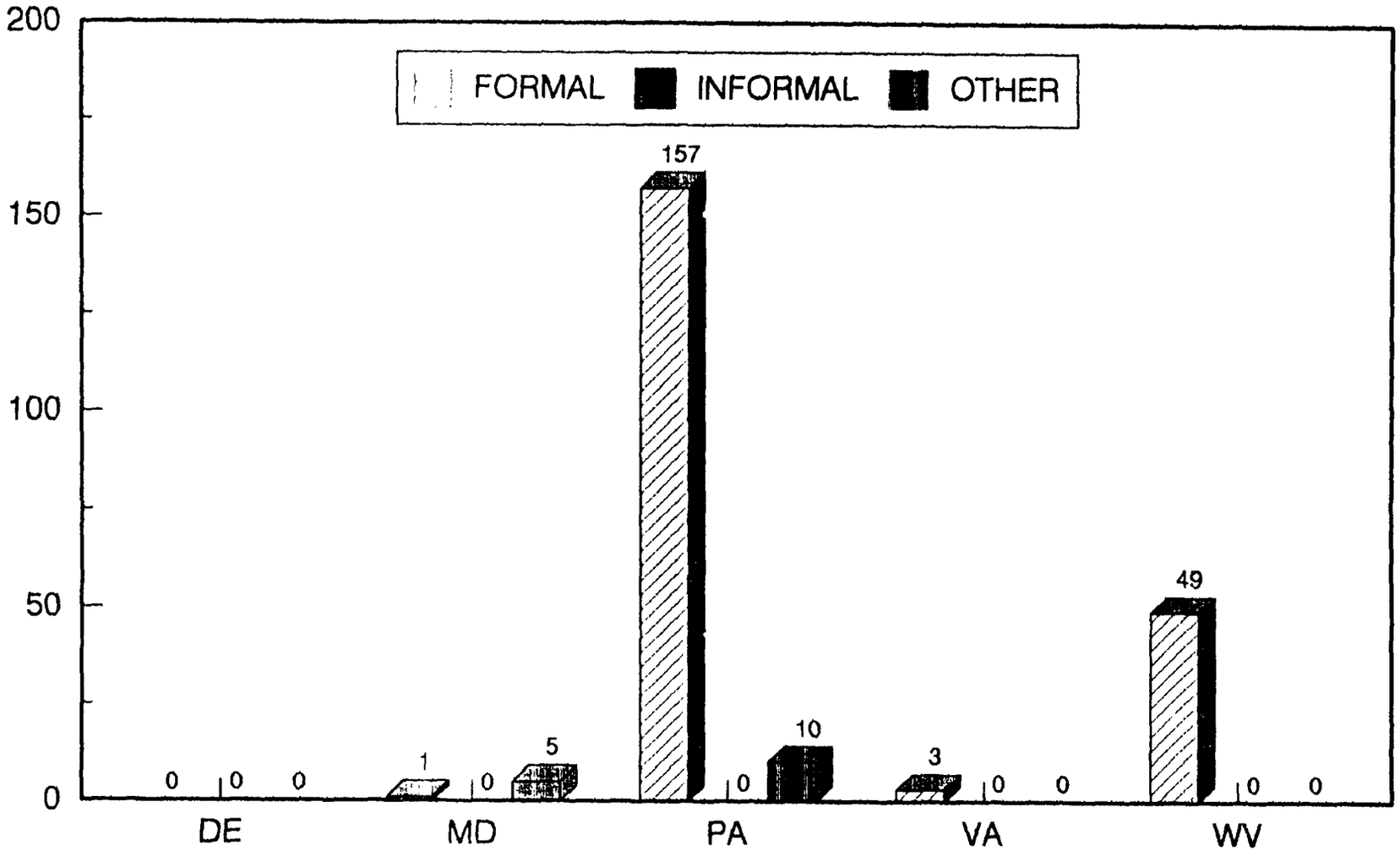
STATE ENFORCEMENT ACTIONS



FRDS TALLY 7/14/93
TOTAL ALL STATE ENFORCMENT = 11,292

FY 92

FEDERAL ENFORCEMENT ACTIONS



FRDS 17 7/23/93
ALL PUBLIC WATER SYSTEMS