

The Report to the Governor on the Efficacy of Georgia's Capacity Development Program



Georgia Environmental Protection Division
Watershed Protection Branch
Drinking Water Program
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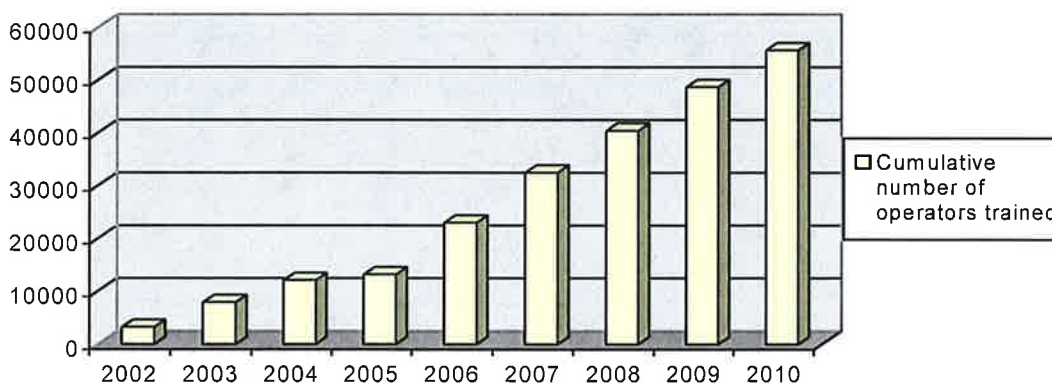
EXECUTIVE SUMMARY

This report is prepared to outline the progress that is being made in the implementation of Georgia's capacity development program. Georgia's Environmental Protection Division (EPD) has an established program that provides a solid foundation for present and future activities to help insure all Georgians are provided safe and reliable drinking water on a continuous basis. Overall, the quality of drinking water served to the citizens of Georgia is very good. Compliance with the health-related drinking water standards remains high.

Currently, Georgia has approximately 2,484 active public water systems serving a population of approximately 8.4 million people. This means approximately 87% of the more than 9.7 million citizens get their drinking water from one of the regulated public water systems in the State. The rest obtain water from their privately owned water sources, such as wells and springs located on their properties.

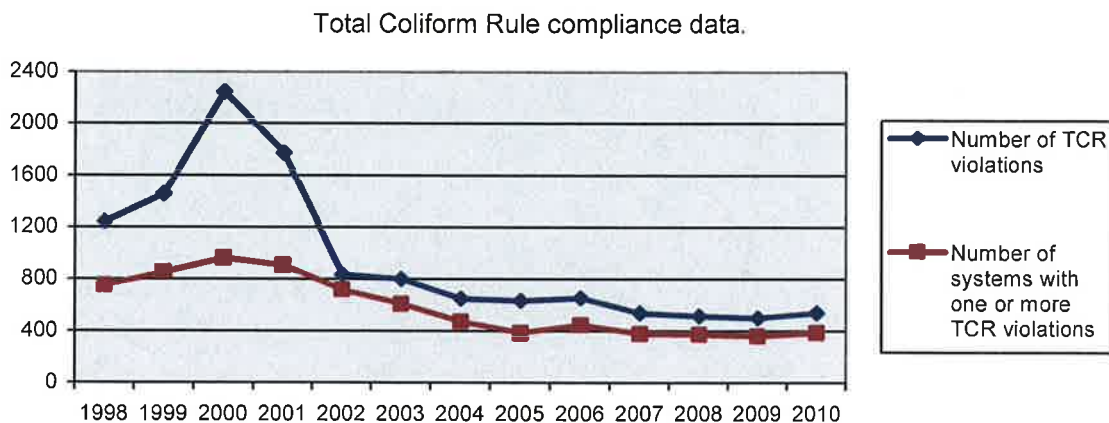
Approximately, 66% of all public water systems in the State are privately owned and operated. Federal, State, and local governments own the rest. Unfortunately, the smaller privately owned and operated water supply systems do not have the resources available to the larger systems. These small privately owned water systems face many challenges and often struggle to comply with the safe drinking water rules and regulations. In Georgia, as well as other parts of the country, these small private water systems continue to have greater frequency and occurrence of compliance violations. In order to improve their status, continuous efforts are being made towards the education, training and certification of the owners and operators of these smaller water systems (refer to chart below). The Georgia Rural Water Association, Georgia Association of Water Professionals, and Georgia Environmental Finance Authority partner with EPD in this widespread effort and play very significant roles. We are getting good results.

Cumulative number of operators trained by reporting year.



The U.S. Environmental Protection Agency (USEPA) approved Georgia's capacity development strategy program on September 21, 2000. Since then, significant progress has been made towards improving the technical, managerial, and financial capacity of the public water systems in Georgia. New public water systems are being designed and constructed to meet more stringent standards for quality and reliability, and new owners are required to demonstrate adequate managerial and financial capacity through submission of business plans prior to commencing operation of a public water system.

Recently, Georgia has seen an overall decrease in the number of new public water systems becoming significant non-compliers (SNCs) with the federal drinking water rules and regulation. According to our records, none of the new water systems approved or permitted during the last year was classified as a SNC by USEPA (refer to Attachment A). For the three-year reporting period from July 1, 2007 to June 30, 2010, 17 of the total 104 new CWS and NTNCWS were classified as SNCs by USEPA at some point during the last three years (refer to Attachment A). These new public water systems became SNCs mainly due to failure to comply with the consumer confidence report (CCR) requirements and lead and copper initial tap monitoring. The available data suggests that the capacity development authority program is having a positive affect.



Since 2000, there has been significant improvement in the overall microbial quality of the drinking water being provided to the public. Available data indicate that the total number of Total Coliform Rule (TCR) violations have decreased over time and remained fairly constant since 2004 (refer to figure above). We attribute this success to improved water system operation and management as a result of increased efforts towards training water utility managers and personnel in drinking water regulations, monitoring and reporting requirements, and etc.

Improving the TMF capacity of water systems is a gradual, long-term process. Over the next several years, as a result of capacity development efforts, we expect the success to continue. As detailed in the report, under the various capacity development strategy efforts, all public water systems in Georgia are being offered or provided assistance to help them acquire and maintain technical, managerial, and financial capacity. The assistance includes, but is not limited to, technical engineering review of all water system projects, direct on-site technical assistance, in depth sanitary surveys and more frequent inspections, proactive compliance and enforcement initiatives, inexpensive and convenient training opportunities, low interest financing to correct system deficiencies, affordable monitoring and testing services, and other local government initiatives. Whenever possible, deficient or poorly run public water systems are being encouraged, through various compliance and enforcement mechanisms, to consolidate or merge with nearby governmentally owned and operated water systems or water authorities.

The Georgia Environmental Finance Authority is the primary State agency for assisting local governments in financing the construction, extension, rehabilitation, repair and replacement of environmental facilities, as well as other security improvements. Georgia utilizes a large portion of the grant to provide low interest loans to eligible public water systems needing infrastructure

improvements to achieve or maintain compliance with the SDWA requirements or to protect public health. From July 1, 1997 to June 30, 2010, more than \$253 million in project assistance has been awarded to 133 water systems for various improvement projects, benefiting approximately 2.9 million citizens in Georgia.

While EPD has the lead role and regulatory authority for the capacity development program, this agency cannot be able to fully achieve the goals of the program without the active ongoing involvement of our various stakeholder and partner organizations. These organizations, as mentioned throughout the report, have played a major role in the capacity development program and contributed immeasurably to the success that has been achieved so far. In the future, EPD will continue to evaluate the success of the capacity development program, maximize the use of all available resources to help the systems most in need, and maintain effective working relationships with other State and local agencies and organizations.

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LIST OF ABBREVIATIONS

GA SDWA	Georgia Safe Drinking Water Act of 1977
Minimum Standards	Minimum Standards for Public Water Systems, May 2000
O & M Plan	Operations & Maintenance Plan
Rules	Rules for Safe Drinking Water, Chapter 391-3-5
The Campaign	The Georgia Water Management Campaign

LIST OF ACRONYMS

ACCG	Association County Commissioners of Georgia
ARC	Atlanta Regional Commission
CCR	Consumer Confidence Report
CWS	Community Water System
DNR	Georgia Department of Natural Resources
DWP	Drinking Water Program (of the Department of Natural Resources, Environmental Protection Division)
DWPEP	Drinking Water Permitting & Engineering Program (of the Department of Natural Resources, Environmental Protection Division)
DWSRF	Drinking Water State Revolving Fund
EPD	Georgia Environmental Protection Division (of the Georgia Department of Natural Resources)
GEFA	Georgia Environmental Finance Authority
GMA	Georgia Municipal Association
GWAP	Georgia Association of Water Professionals (previously known as GWPCA)
GWPCA	Georgia Water & Pollution Control Association
GRWA	Georgia Rural Water Association
GWWI	Georgia Water & Wastewater Institute
MCL	Maximum Contaminant Level
NOV	Notice of Violation
NPDWR	National Primary Drinking Water Regulation
NTNCWS	Non-Transient Non-Community Water System
PPG	Performance Partnership Grant
PWS	Public Water System
RDC	Regional Development Center
SDWA	Safe Drinking Water Act
SDWIS	Safe Drinking Water Information System
SMP	Scheduled Maintenance Plan
SNC	Significant Non-Compliance
SOP	Standard Operating Procedure
SWAP	Source Water Assessment Program
TMF	Technical, Managerial and Financial
TNCWS	Transient Non-Community Water System
USEPA	U.S. Environmental Protection Agency
WSID	Water System Identification Number

INTRODUCTION

The 1996 Safe Drinking Water Act (SDWA) Amendments emphasized prevention and assistance to resolve significant problems small public water systems were having providing safe and reliable drinking water to their customers. The legislation included incentives, in the form of Drinking Water State Revolving Fund (DWSRF) withholdings, for States to develop:

- (1) A capacity development authority program to ensure that all new community water systems (CWS) and non-transient non-community water systems (NTNCWS) commencing operation after October 1, 1999, demonstrate adequate technical, managerial, and financial (TMF) capacity to comply with all National Primary Drinking Water Regulations (NPDWRs); and
- (2) A capacity development strategy to assist all existing public water systems in acquiring and maintaining TMF capacity.

The Environmental Protection Division (EPD) has established a capacity development strategy program for Georgia. USEPA approved Georgia's program on September 21, 2000. Since then, EPD has fully and successfully implemented the strategy, which provides targeted, voluntary, and mandatory assistance to public water systems in need of acquiring and maintaining adequate TMF capacity.

Since January 1, 1998 several new rules became effective relative to the permitting of new privately owned public water systems. These include, but are not limited to, requirements for the following: development of a "business plan"; execution of a trust indenture; development of a back-up water source; connection to an existing local government owned system when feasible; and, concurrence from the nearest governmental entity for the development of the privately owned CWS in that jurisdiction. The main objective of these requirements is to assure that new CWS and NTNCWS have adequate TMF capacity to comply with all current and future drinking water regulations and provide safe, reliable service to their customers.

The information provided in this report shows that a substantial amount of activity and workload has been associated with both the capacity development authority program (new water systems) and capacity development strategy program (existing water systems). Measurements of success of the strategy and the improvement in the TMF capacity of public water systems include, but are not limited to, the following: SNC lists, TCR compliance data, the number of business plans developed by public water systems, the attendance at operator training sessions and certification examinations, the number of "circuit-rider" type technical assistance visits, the consolidation of private public water systems with local governmental entities, and etc. This report clearly demonstrates that the Georgia EPD is making significant progress towards improving the TMF capacity of public water systems throughout the State.

THIS REPORT

The Governor's Report on the Efficacy of Georgia's Capacity Development Program follows the reporting criterion that has been recommended by the USEPA. The report addresses both the "New Systems Program" and the "Existing Systems Strategy" and covers a period of several years. Emphasis was placed on the current reporting period from July 1, 2007 to June 30, 2010; however, historical data was included, where appropriate, to establish baselines from which to measure success of the capacity development program and to highlight improvements to the technical, managerial, and financial capacity of public water systems in the State.

GENERAL INFORMATION

The Safe Drinking Water Act (SDWA), as amended in 1996, brings significant improvements to the national drinking water program. Capacity development is an important component of the Act's focus on preventing problems in drinking water. The capacity development provisions offer a framework within which States and water systems work together to ensure that systems acquire and maintain the TMF capacity needed to achieve the public health protection objectives of the SDWA.

What is water system capacity? Water system capacity is the ability to plan for, achieve, and maintain compliance with applicable drinking water standards. Capacity has three components: technical, managerial, and financial. Adequate capability in all three areas is necessary for a system to have "capacity."

What is water system capacity development? Capacity development is the process of water systems acquiring and maintaining adequate technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water. The Safe Drinking Water Act's capacity development provisions provide a framework for the States and the water systems to work together to ensure that public water systems acquire and maintain the technical, managerial, and financial capacity needed to meet the Act's public health protection objectives.

What is public water system (PWS)? A public water system is a "system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year." Currently, there are about 2,484 PWSs in Georgia that serve approximately 8.4 million people. This category includes CWSs, NTNCWSs, and TNCWSs. Some of these PWSs are very small. Approximately 76% of the PWSs in Georgia serve populations less than 500 people.

What is a community water system (CWS)? A community water system is a "public water system" which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents." Currently, there are about 1,778 CWSs in Georgia that serve more than 8.3 million people.

What is a non-transient non-community water system (NTNCWS)? A non-transient non-community water system is "a public water system that is not a community water system" and that regularly serves at least 25 of the same persons over 6 months per year." NTNCWSs are generally commercial or institutional establishments having their own water supply, which serves 25 or more of the same people on a regular basis. Examples include schools, factories, office and industrial parks, and major shopping centers. In Georgia, there are 209 NTNCWSs that serve a total population of 65,784 people.

What is a transient, non-community water system (TNCWS)? A transient, non-community water system is a "non-community water system" that does not regularly serve at least 25 of the same persons over six months per year." TNCWSs are generally commercial or not-for-profit establishments having their own water supply, which serves 25 or more people per day, but not the same people on a regular basis. Examples include restaurants, roadside stops, campgrounds, and hotels. In Georgia, there are approximately 497 TNCWSs serving a total population of 81,886 people. Almost all of them are groundwater systems and most of them are privately owned and operated.

What is technical capacity? Technical capacity is the physical and operational ability of a water system to meet Safe Drinking Water Act requirements. Technical capacity refers to the physical infrastructure of the water system, including the quality and quantity of the source water and the adequacy of treatment, storage, and distribution infrastructure. It also refers to the ability of system personnel to adequately operate and maintain the system and to otherwise implement requisite technical knowledge.

What is managerial capacity? Managerial capacity is the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with Safe Drinking Water Act requirements. Managerial capacity refers to the system's institutional and administrative capabilities. Managerial capacity can be assessed through key issues and questions, including:

What is financial capacity? Financial capacity is a water system's ability to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with Safe Drinking Water Act requirements.

How are technical, managerial, and financial capacity related? Many aspects of water system operations involve more than one kind of capacity. Infrastructure replacement or improvement, for example, requires technical knowledge, management planning and oversight, and financial resources. A deficiency in any one area could disrupt the entire effort.

BACKGROUND

For the reporting period ending June 30, 2010, the State of Georgia had approximately 2,484 active PWS serving a population over 8.4 million people. Based on the latest census figures, this means approximately 87% of the citizens get their drinking water from one of the regulated public water systems in the State. The remainder obtain water from privately owned water sources.

Specifically, there are 109 water production systems that use surface water or Groundwater Under the Direct Influence (GWUDI) of surface water as their sources of water supply. After these systems treat the water, they distribute it directly to their own customers and also sell it to an additional 123 other communities for distribution. Together, these 232 systems that depend upon surface water or GWUDI supplies provide drinking water to approximately 6.7 million of the State's population. The other 2,252 water systems mainly use groundwater sources (wells and springs) as their water supplies to serve approximately 1.7 million citizens.

Community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water Under Influence	3	97129
Purchased Ground Water Under Influence	1	13260
Ground Water	1547	1622901
Purchased Ground Water	7	6754
Surface Water	105	4970354
Purchased Surface Water	115	1574176
TOTAL	1778	8284574

Approximately 72% (1,778 out of the total 2,484 public water systems) provide water to residential customers. These systems are referred to as CWSs and serve at least 15 service connections used by year-round residents or regularly serve at least 25 year-round residents daily at least 60 days out of the year. Approximately 13% (224 out of the total 1,778 community water systems) are supplied by surface water sources and the remaining 87% (1,554 CWSs) are served by groundwater sources.

Non-transient non-community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water Under Influence	1	75
Ground Water	492	81063
Purchased Surface Water	4	748
TOTAL	497	81886

In addition, there are 209 NTNCWSs that regularly serves at least 25 of the same persons over 6 months per year. Examples of these systems are hospitals, day care centers, major shopping centers, children's homes, institutions, factories, office and industrial parks, schools, and etc. Furthermore, there are 497 TNCWSs that do not regularly serve at least 25 of the same persons

over six months per year, such as restaurants, highway rest areas, campgrounds, roadside stops, and hotels. With the exception of 5 NTNCWS and 5 TNCWS that use surface water supplies, all of the NTNCWSs and the TNCWSs use primarily groundwater sources for their drinking water needs.

Transient non-community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water	204	63628
Surface Water	2	826
Purchased Surface Water	3	1330
TOTAL	209	65784

CAPACITY DEVELOPMENT AUTHORITY

Georgia's capacity development authority program to ensure that all new CWSs and NTNCWSs demonstrate adequate TMF capacity for compliance with the NPDWRs began on October 1, 1999. There are two major control points included in the authority program: (1) technical review and approval of proposed public water systems prior to construction; and, (2) issuance of a Permit to Operate a Public Water System. An important part of the capacity development authority program is the requirement that the owner submit a multi-year "business plan", which adequately demonstrates the water system's managerial and financial capacity to comply with all drinking water regulations in effect, or likely to be in effect.

Since adoption in the 1970s, the Georgia Rules for Safe Drinking Water, Chapter 391-3-5, have required privately owned CWSs to provide a mechanism to assure the continuity of service, such as a third party trustee. In some cases, CWS owners have entered into trust agreements with the local government in which the system is located. In other cases, the owners have used non-government trustees.

Since January 1, 1998 several new rules became effective relative to the permitting of new privately owned public water systems. These include, but are not limited to, requirements for the following: development of a "business plan"; execution of a trust indenture; development of a back-up water source; connection to an existing local government owned system when feasible; and, concurrence from the nearest governmental entity for the development of the privately owned CWS within the jurisdiction. The main objective of these requirements is to assure that new CWS and NTNCWS have adequate TMF capacity to comply with all current and future drinking water regulations and provide safe, reliable service to their customers.

CONTROL POINTS: As stated above, EPD has two control points in ensuring that new CWSs and NTNCWSs demonstrate adequate TMF prior to commencing operation. The first control point is the requirement for any person to obtain EPD's approval before constructing a public water system [Section 391-3-5-.04 (1) of the Rules for Safe Drinking Water]. EPD's Drinking Water Permitting & Engineering Program (DWPEP) is responsible for the review and approval of proposed surface public water supply systems. This includes all required engineering documentation such as engineering reports, plans and specifications, drinking water source quantity and quality data, business plans, local government concurrence and all pertinent data required for issuance of a permit to operate a public water system. The information that a person must submit to EPD for review and approval and for issuance of a permit to operate is discussed in the EPD's "Minimum Standards for Public Water Systems" (Minimum Standards). The requirements also include submittal of a multi-year "business plans".

Any person who desires to develop a public water system is required to first evaluate connecting to an existing governmentally owned public water system if one is available within one mile or less of the proposed system. If connection to a governmentally owned system is demonstrated to not be available or feasible, then the requirements outlined in the Minimum Standards must be satisfied. Failure to submit all of the required information for obtaining EPD's approval to construct a public water system will result in EPD stopping its review and returning the project to the owner unapproved. In order for the project to be reconsidered for approval, the owner must resubmit the project with all required supporting information.

The second control point is the requirement for any person who owns or operates a public water system or desires to commence operation of a public water system to obtain a permit from the Director of EPD. The Drinking Water Permitting & Engineering Program will not prepare the operating permit for issuance by the Director of EPD until the owner/operator has satisfied all

requirements outlined in the Rules and Minimum Standards necessary to demonstrate adequate TMF capacity. Should an applicant for a permit refuse to provide the required documentation, the Director will deny the Permit to Operate a Public Water System.

Under Georgia’s capacity development authority program, local governments have been delegated the responsibility of deciding how water and wastewater services will be provided in each service area. Before any person may initiate construction of a new privately owned and operated water system, that person must receive concurrence for the project from the local government within its jurisdiction. In addition, the person must first evaluate connecting to an existing governmentally owned public water system if one is available within one mile or less. Next, plans and specifications, prepared by a professional engineer licensed to practice in the State of Georgia, must be submitted to EPD for review and approval. The design and construction must conform to the minimum acceptable design criteria published in Georgia EPD’s “Minimum Standards for Public Water Systems.”

An important part of the capacity development authority program is the requirement that the owner submit a multi-year business plan to demonstrate adequate managerial and financial capacity to comply with the existing and future National Primary Drinking Water Regulations. This document should be submitted along with the plans and specifications. EPD has successfully implemented this aspect of the new systems program as detailed by the following:

- During the reporting period from July 1, 2007 to June 30, 2010, a total of 130 business plans were received from 115 new and 15 existing public water systems.
- As of June 30, 2010, a total of 694 business plans have been received from new and existing public water systems.
- As of June 30, 2010, 58 surface water or GWUDI systems have submitted detailed O&M Plans. Only four of these O&M Plans were submitted during this reporting period.

The table below displays similar information for the period from July 1, 2003 to June 30, 2010.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
New Water Systems	56	24	59	64	26	50	37	28
Business Plans Submitted	107	63	99	55	53	48	40	42
Cumulative Business Plans	294	357	456	511	564	612	652	694

Prior to issuance of a permit, the owner of a privately owned community water system must also provide an executed “trust indenture” or other legal document to assure the continuity of operation and maintenance of the water system. All proposed public water systems must also demonstrate that a “certified operator” is available to operate and maintain the water system. The Director will issue no permit until the new water system owner/operator has satisfied all of the requirements in the Rules for Safe Drinking Water and “Minimum Standards for Public Water Systems.”

The State of Georgia’s legal authority to implement the new systems program has not changed within this reporting period. Furthermore, there have not been any changes, revisions or modifications to the State’s control points (review and approval of proposed public water systems prior to construction and the issuance of an Permit to Operate a Public Water System).

No water systems that have adequately demonstrated technical, managerial and financial capacity have been denied approval and an operating permit by EPD.

EPD's decision to place engineering positions in the District Offices has enabled the technical staff to visit and inspect the new water systems while they are under construction, prior to permitting, or soon after commencing operation in an effort to minimize early violations and other compliance problems. Currently, EPD has engineering positions in the Albany, Athens, Augusta, Brunswick, Macon, and Cartersville Mountain District Offices. These engineers continue to review plans and specifications, provide and offer technical assistance, perform sanitary surveys, conduct inspections, and approve business plans and O & M Manuals, all in an effort to help ensure small groundwater public water systems acquire and maintain adequate technical, managerial and financial capacity.

Fiscal Year	Number of SNCs	SNCs due to MCL	SNCs due to M/R
2001	139	9	130
2002	63	10	53
2003	128	3	125
2004	269	4	265
2005	62	6	56
2006	57	10	47
2007	128	8	120
2008	121	9	112
2009	83	17	66
2010	180	13	167

During the period from July 1, 2007 to June 30, 2010 approximately 6,961 water system projects for new and expanding public water systems were reviewed and approved under EPD's regulatory authority, which includes the delegation of authority program. The projects included, but were not limited to, the design and construction of new water source facilities (intakes, wells, and purchased water connections), water treatment plants (surface water and ground water facilities), finished water storage tanks, pumping facilities, water plant sludge/waste handling and disposal facilities, and water main additions and extensions to existing water distribution systems.

SYSTEMS WITH A HISTORY OF SIGNIFICANT NON-COMPLIANCE (SNC): In regards to capacity development, a water system with a history of Significant Non-Compliance (SNC) is defined as a community water system or a non-transient non-community water system which has been a SNC in at least three quarters during the last three years.

As seen in the table below, the majority of SNCs are due to monitoring and reporting violations. Very few of the SNCs are a result of Maximum Contaminant Level (MCL) violations, which pose an immediate threat to public health.

During this reporting period, a total of 384 systems have been identified as SNCs. Only 39 (10%) of the SNCs were due to MCL violations. The other 345 SNCs were mainly due to monitoring and reporting and CCR violations. As is the case nationally, very small public water systems accounted for a disproportionate number of the SNCs.

Each year, SNCs account for approximately 5% of the total inventory of public water systems. EPD's diligent efforts to assist public water systems in developing and maintaining technical, managerial and financial capacity is helping to minimize the number of SNCs.

In its capacity development strategy, Georgia utilizes compliance rates to establish a baseline and measure improvement in the technical, managerial and financial capacity of water systems. In addition to the data on historical SNCs, EPD tracks the total number of Total Coliform Rule (TCR) violations and the number of systems with these violations. TCR violations are often a

result of a failure to monitor or report, collect and have analyzed the correct number of samples, or perform the required repeat testing. These types of violations can be minimized through capacity development efforts that improve operations and management, such as education, operator training, technical assistance, and compliance and enforcement initiatives. By tracking violations of the TCR only, the compliance data will not be affected by new regulations and should be more indicative of improvements made towards helping water systems comply with the National Primary Drinking Water Regulations.

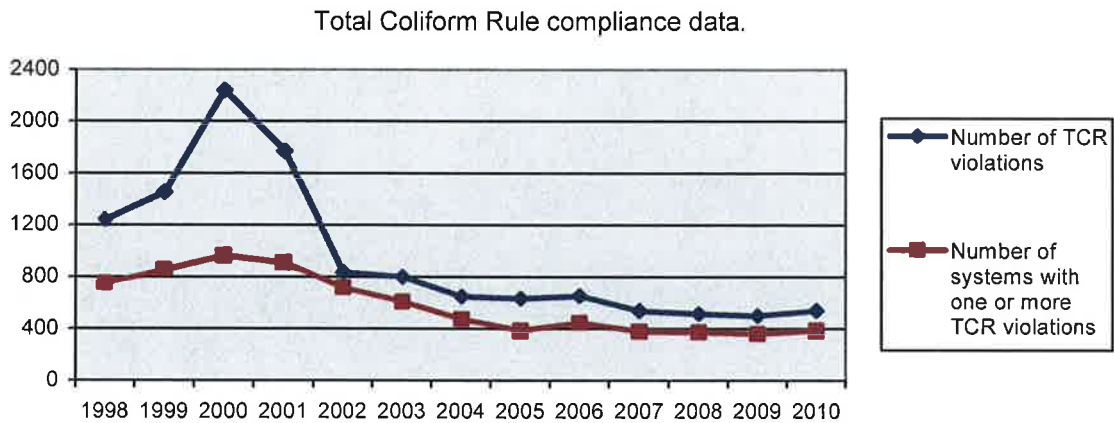
For the TCR, an MCL is exceeded if any of the following apply: more than one sample tests positive for total coliform (for systems collecting less than 40 routine samples per month); more than 5% of the samples test positive for total coliform (for systems collecting 40 or more routine samples per month); any repeat sample is positive for fecal coliform or *E. Coli*; or a routine sample which is positive for fecal coliform or *E. Coli* is followed by a positive total coliform sample. It is important to note that any system with a positive for fecal coliform or *E. Coli* must notify EPD immediately and appropriate measures must be taken to protect public health, such as issuing Boil Water Advisories. The MCL violations, although very serious, are generally brief in duration and quickly resolved by EPD and the water system.

The table below displays the compliance data for the TCR and indicates that, in any given year, an average of 588 water systems incurred an average of 955 TCR violations during the period from FY 1998 through FY 2010. The data is shown graphically on the next page. An average of 98 systems had an MCL exceedance.

Fiscal Year	Number of TCR violations			Number of Systems with One or More TCR Violations		
	Total	MCL	Non-MCL	Total	MCL	Non-MCL
1998	1247	228	1019	753	160	593
1999	1461	151	1310	858	111	747
2000	2242	197	2045	968	117	851
2001	1775	155	1620	913	121	792
2002	839	135	704	722	108	514
2003	803	135	668	610	112	498
2004	651	98	553	476	80	396
2005	637	99	538	390	83	334
2006	657	129	528	448	102	371
2007	542	92	450	381	72	326
2008	520	83	437	376	68	327
2009	503	79	424	363	59	333
2010	545	82	463	392	76	327
Average	955	128	828	588	98	493

The data show that significant achievement has been made in compliance with the Total Coliform Rule. The total number of systems with TCR violations has steadily decreased from a peak of 968 in FY2000 to 392 for FY2010. Likewise, the total number of violations due to MCL exceedances has also decreased from 197 to 82 during the same time period. This decrease can be attributed to the EPD's continued efforts in the capacity development and operator certification programs.

During the most recent year from July 1, 2009 to June 30, 2010, the data in the above table further indicates that 392 of the total 2,484 public water systems (15.8%) have one or more TCR violation(s). Only 76 water systems (3.1%) had a TCR violation resulting from an MCL exceedance. Most violations are non-MCL related violations.



EVALUATING PROGRAM SUCCESS: EPD will continue to evaluate program success by comparing the Safe Drinking Water Act compliance record of new public water systems with the compliance record of systems constructed before the new regulatory requirements and procedures went into effect.

CAPACITY DEVELOPMENT STRATEGY

USEPA approved Georgia's capacity development strategy program on September 21, 2000. EPD has fully implemented the strategy, which provides targeted, voluntary, and mandatory assistance to public water systems in need of acquiring and maintaining adequate technical, managerial and financial capacity.

Under Georgia's capacity development strategy, all public water systems in Georgia are being offered or provided assistance to help them acquire and maintain technical, managerial, and financial capacity. The assistance includes, but is not limited to, technical engineering review of all water system projects, direct on-site technical assistance, in depth sanitary surveys and inspections, proactive compliance and enforcement initiatives, inexpensive and convenient training opportunities, low interest financing alternatives to correct system deficiencies, affordable monitoring and testing services, and other local government initiatives. EPD has fully implemented the strategy, which provides targeted, voluntary, and mandatory assistance to public water systems. Targeted assistance is directed at systems most in need of acquiring adequate technical, managerial and financial capacity. Systems are identified and prioritized based upon the knowledge gained by EPD staff through compliance records, sanitary surveys/inspections, complaints, and the potential impact of new regulations.

Targeted assistance is directed at systems most in need of acquiring adequate technical, managerial and financial capacity. Systems are identified and prioritized based upon the knowledge gained by EPD staff through compliance records, sanitary surveys/inspections, complaints, and the potential impact of new regulations. Examples of targeted assistance include, but are not limited to, on-site technical assistance, guidance and support for new rules and regulations, compliance initiatives to reduce the number of monitoring and reporting and violations, and formal enforcement actions aimed at improving the technical, managerial and financial capacity of deficient or poorly run water systems. To date, the targeted assistance has proven to be most challenging, due to the lack of a strong automated information systems capability, coordination between EPD District Offices, programs and the other organizations participating in the capacity development effort and the lack of a formal ranking scheme for the identification and prioritization of systems most in need of assistance. EPD will continue to work with the District Offices, stakeholders and other organizations to improve in this area.

Voluntary assistance is available to all public water systems in Georgia to help them to acquire and maintain technical, managerial and financial capacity. Public water systems that voluntarily choose to improve their technical, managerial and financial capacity will be able to more consistently comply with all regulatory requirements. Although the assistance is voluntary, compliance with the federal and State rules and regulations is mandatory, and failure to comply may lead to enforcement action, including penalties. Examples of this type of assistance include, but are not limited to, on-site technical assistance by the Georgia Rural Water Association (GRWA) and the Peer Review Program, compliance monitoring and testing at a reasonable cost through EPD's drinking water fee system, Consumer Confidence Report (CCR) assistance, and operator training conducted by the Georgia Rural Water Association (GRWA) and the Georgia Water & Wastewater Institute (GWWI).

Mandatory assistance is provided by EPD under the authority of the "Georgia Safe Drinking Water Act of 1977" (GA SDWA) and the Rules promulgated thereunder. This type of assistance is provided as part of the normal duties of EPD regulatory staff. The assistance is provided to existing systems on a scheduled or triggered basis or to existing systems undergoing changes that may affect the technical, managerial and financial capacity of the system. For example, EPD conducts sanitary surveys on a scheduled basis to identify and correct deficiencies that

pose a potential threat to public health or that may lead to future compliance problems. EPD also reviews plans and specifications for systems experiencing growth/expansion in order to assure technical adequacy of the additions, extension, or modifications. In addition, a new owner is required to submit a business plan to adequately demonstrate managerial and financial capacity prior to transfer of an existing operating permit.

Notices of Violations (NOVs) are beneficial enforcement and compliance mechanism used by EPD to assist public water systems in acquiring and maintaining adequate technical, managerial and financial capacity. The NOVs provide the water system personnel with official, written documentation of violations of the Safe Drinking Water Act and/or the Permit to Operate a Public Water System and offer the system an opportunity to return to compliance (in order to avoid further enforcement, including possible civil penalties).

In recent past, EPD has taken additional measures to reduce the number of monitoring and reporting violations. To improve in this area, the Drinking Water Program began utilizing the Safe Drinking Water Information System (SDWIS) to identify systems that fail to submit quarterly microbiological samples or annual nitrate/nitrite samples before the end of the monitoring period. Reminder notices are then sent to these water systems in advance of the possible violations in order to allow them to perform the required testing and remain in compliance. In addition, multiple violation reports, which list systems with a pattern of repetitive violations, are sent to the EPD District Offices on a regular basis to help them identify systems that may need additional attention. Finally, monitoring schedules have been made available to any water systems that request them. All these additional efforts have contributed to the reduction in the number of federal monitoring and reporting violations, and the number of systems classified as SNCs.

EPD's capacity development strategy is dynamic and will change with the priorities established by EPD. In its efforts, EPD continues to utilize a large portion of the available Drinking Water State Revolving Fund set-asides to fund activities necessary to assist public water systems in acquiring and maintaining adequate technical, managerial and financial capacities. The following sections highlight a few of the on-going activities throughout the State of Georgia.

PLAN REVIEW/APPROVAL & "MINIMUM STANDARDS FOR PUBLIC WATER SYSTEMS":

Georgia has had a plan review requirement for public water systems since the State legislature enacted the Georgia Safe Drinking Water Act (GA SDWA). This requirement helps ensure that new and existing public water systems have the technical capacity to provide safe drinking water to their customers.

The Rules for Safe Drinking Water (Rules) promulgated under the GA SDWA established the policies, procedures, requirements, and standards to implement the GA SDWA. The Rules require that a person obtain EPD's approval before erecting, constructing, or operating a public water system or making substantial enlargements, extensions, additions, modifications, renovations or repairs. Furthermore, the Rules specify the requirements for the preparation and submission of engineering reports/plans and specifications for new or existing public water systems. A professional engineer, licensed to practice in the State of Georgia, must complete the engineering report/plans and specifications.

In January 1998, EPD's Minimum Standards for Public Water Systems" (Minimum Standards) became effective and provided the minimum acceptable design criteria for public water systems in Georgia. The Rules require that beginning January 1, 1998, all new public water systems and additions or extensions to existing systems must be designed in accordance with the latest edition of EPD's Minimum Standards.

During the period from July 1, 2007 to June 30, 2010 approximately 6,961 water system projects for new and expanding public water systems were reviewed and approved under EPD's regulatory authority, which includes the delegated authority. The approved projects included, but were not limited to, the design and construction of new water source facilities (intakes, wells, and purchased water connections), water treatment plants (surface water and ground water facilities), finished water storage tanks, pumping facilities, water plant sludge/waste handling and disposal facilities, and water main additions and extensions to existing water distribution systems. EPD environmental engineers also conducted inspections of public water systems, including those under construction, to help ensure these systems have adequate technical capacity.

BUSINESS PLAN AND OPERATIONS & MAINTENANCE PLAN: In May 2000, the Minimum Standards were revised to include technical guidance for the development of a business plan and Operations & Maintenance Plan (O & M Plan). EPD currently requires completion of a business plan and O & M Plan for new systems (prior to issuance of Permit to Operate a Public Water System) and for existing systems changing ownership. Systems constructing or expanding surface water treatment plants are also required to submit O & M Plans prior to start-up and permitting of the facilities. In a few instances, business plans and O& M Plans have been required as part of formal enforcement actions in an effort to improve the managerial and financial capacity of these water systems.

Subparagraph 391-3-5-.04(7)(c) of the Rules requires a new owner to submit a multi-year "Business Plan", which adequately demonstrates the water system's managerial and financial capacity to comply with all drinking water regulations in effect, or likely to be in effect. The business plan must be prepared in accordance with the latest edition of the Division's Minimum Standards. The business plan is required be updated at intervals determined by the Director.

Paragraph 391-3-5-.17(8) of the Rules also state that a permit may be transferred due to a change in ownership. The succeeding owner shall, upon the request of the Director, provide

such additional information as is necessary to enable the Director to transfer the permit including, but not limited to, proof of ownership and a business plan.

As of June 30 2010, a total of 694 business plans have been received from new and existing public water systems. During the current three-year reporting period from July 1, 2007 to June 30, 2010, a total of 130 business plans were received from 115 new and 15 existing public water systems. A business plan may be submitted by the owner of an existing water system for three reasons: 1) the owner recently acquired ownership of the water system and was required to submit the business plan, as per Section 391-3-5-.17 of the Rules for Safe Drinking Water; 2) the owner acquired ownership of another water system and submitted a business plan covering all systems under his/her ownership; or 3) formal enforcement action required the owner to submit the business plan.

Under Georgia's capacity development strategy, new and existing systems constructing or expanding surface water or GWUDI treatment plants are required to develop and submit an O & M Plan prior to start-up and permitting of the facilities. As of June 30, 2010, a total of 58 surface water or GWUDI systems have submitted detailed O & M Plan.

SANITARY SURVEYS AND INSPECTIONS: EPD regularly conducts scheduled sanitary surveys of all public water systems in Georgia. The principal purpose of the sanitary surveys is to identify and resolve problems that may pose a threat to public health. EPD also uses the sanitary surveys to identify improvements that need to be made to improve the technical, managerial and financial capacity of the water systems. The sanitary survey report provides official, written documentation to the water system officials of the improvements that need to be made to protect public health and to improve the overall capacity of the water system. The sanitary surveys address eight components required by USEPA including the following: water source; treatment; distribution system; finished water storage; pumps, pump facilities and controls; monitoring and reporting and data verification; system management and operation; and operator compliance with State requirements.

The sanitary survey system evaluation forms were revised January 2001 to include areas for the DWP staff to verify written procedures, policies, programs, and other documentation that may affect the TMF capacity of these systems. Such items include, but are not limited to, Standard Operating Procedures (SOPs), Scheduled Maintenance Plans (SMPs), O & M Plans, Emergency Plans, Safety Programs, material and construction standards, business plans, water system security plans, organizational charts, plant schematics, distribution maps, documentation of repairs and complaints, unaccounted-for-water, monitoring plans, and field log books.

Between July 1, 2002 to June 30, 2003

Sanitary Surveys performed: 1,662
On-site Inspections conducted: 693

Between July 1, 2003 to June 30, 2004

Sanitary Surveys performed: 472
On-site Inspections conducted: 228

Between July 1, 2004 to June 30, 2005

Sanitary Surveys performed: 450
On-site Inspections conducted: 80

Between July 1, 2005 to June 30, 2006

Sanitary Surveys performed: 571
On-site Inspections conducted: 444

Between July 1, 2006 to June 30, 2007

Sanitary Surveys performed: 673
On-site Inspections conducted: 499

Between July 1, 2007 to June 30, 2008

Sanitary Surveys performed: 787
On-site Inspections conducted: 677

Between July 1, 2008 to June 30, 2009

Sanitary Surveys performed: 757
On-site Inspections conducted: 529

Between July 1, 2009 to June 30, 2010

Sanitary Surveys performed: 669
On-site Inspections conducted: 459

EPD expects the number and frequency of surveillance of the surface water systems to increase in the future. Currently DWPEP has the total of three surface water system inspectors.

EPD also performs inspections and provides on-site technical assistance and training to water systems. On-site technical assistance is very beneficial since most violations result from a failure of the owner or operator to understand the operational treatment processes, complex monitoring regulations and perform the required testing and reporting. EPD has always attempted to target the water systems with poor track records and visit them more often than systems that do not have any compliance problems. The on-site visits include, but are not limited to the following: water treatment plant site visits; operator training; emergency assistance; laboratory inspections; unscheduled system inspections; on-site technical assistance; special sample collection; complaint investigations; construction inspections; records review; source water inspections; GPS data collection; cross-connection inspections or investigations; watershed evaluations; and public hearings.

During the three-year period from July 1, 2007 to June 30, 2010, the Drinking Water Program conducted 121 sanitary surveys and 580 on-site inspections of water systems treating surface water or treating groundwater under the direct influence of surface water.

During the same period, the EPD District Offices performed 2,092 sanitary surveys and 1,085 on-site inspections of groundwater systems.

GROUND WATER UNDER THE DIRECT INFLUENCE OF SURFACE WATER PROGRAM:

The determination of groundwater under the direct influence of surface water process is an important way to monitor drinking water quality and the impact of development on the environment. The method for making these investigations and determinations in Georgia is based on documentation of source construction characteristics, geology, topography, site-specific measurements of biological water quality, and field evaluation.

Groundwater Under the Direct Influence of Surface Water is defined as any water beneath the surface of the ground with: a significant occurrence of insects or other macro organisms, algae, or large diameter pathogens such as *Giardia lamblia*; or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity or pH which closely correlate to climatological or nearby surface water conditions.

In its determination, the Division decided that the focus for proof of GWUDI would be on the first part of the definition (biological indicators) and uses the second part (physical parameters) for additional evidence or as a priority red flag. If living surface water organisms are present in the source, it is concluded that the groundwater is contaminated. A microscopic analysis that concentrated on finding living biological surface water indicators is used for this determination. Microscopic Particulate Analysis (MPA) is a technique used to examine groundwater for the presence of biological surface water indicators. The indicators include plant debris (containing chlorophyll), algae, protozoa, cyanobacteria, living diatoms, nematodes, rotifers, crustaceans, insects, insect parts, spores, pollen, and human pathogens such as *Amoeba*, *Giardia* cysts, and *Cryptosporidium*. A significant occurrence of indicators would mean that the groundwater source is under the direct influence of surface water (GWUDI).

All of the public groundwater sources that are deemed high priority are being monitored using microscopic analysis. Several factors were considered for risk assessment such as location, historical data, microbiological quality, chemical quality, physical parameters, well/spring

construction, hydrogeology, geology, and aquifer type. The sources with the greatest risk are those in karst areas (where water-soluble limestone is perforated by channels, caves, sinkholes, and underground caverns), springs without filtration, and old wells with broken sanitary seals, cracked concrete pads, faulty well casings, not grouted into the unweathered rock formation. In Georgia, the northwest and portions of the southwest and south central contain areas of karst topography.

During the period from July 1, 2002 to June 30, 2006, a total of 327 MPAs were performed on 214 drinking water sources. Of those 154 wells and 60 springs tested by EPD, only 30 wells and 21 springs were declared to be under the direct influence of surface waters. EPD worked with each affected water system and provided technical assistance in identifying and correcting the deficiencies that were contributing to the contamination of the sources. This action assured these systems to maintain technical capacity to stay in compliance with the drinking water standards. Most of the springs were impacted due to faulty containment area and the wells were impacted mainly because of bad casings. All of the affected springs were cleaned, repaired and tested before they were placed back into service. The wells were repaired, abandoned, or pumped to a surface water treatment plant for treatment.

GWUDI Activities	FY2003 - FY2006
Total number of PWS tested	130
Total MPAs Performed	327
Number of Wells Tested	154
Number of Wells UDI	30
Number of Springs Tested	60
Number of Springs UDI	21

To date, the targeted assistance under the GWUDI program has proven to be successful by minimizing or eliminating microbial risk from sources with questionable water quality.

The EPD Microbiological Laboratory began conducting the GWUDI related testing in fall of 2008. The Source Water Assessment Program collects samples and coordinate testing with the EPD Laboratory. EPD will continue to implement this program to ensure the safety of the drinking water supplies in the State.

AREA WIDE OPTIMIZATION PROGRAM: EPD discontinued participation in USEPA's multi-state Area Wide Optimization Program (AWOP) in 2008. The goal of the program is to provide maximum protection against microbial contamination by optimizing the performance of existing surface water treatment plants. The program stresses the multiple barrier approach (source water, flocculation, sedimentation, filtration, and disinfection) and evaluates facilities with respect to more stringent optimization performance goals. In AWOP, the most resource-intensive evaluation tools, such as Comprehensive Performance Evaluations (CPEs) and Performance Based Training (PBT) are focused on the systems presenting the greatest risk to public health.

A Comprehensive Performance Evaluation is a thorough review and analysis of a facility's design capabilities and associated administrative, operational and maintenance practices as they relate to achieving optimum plant performance. Currently, three (3) engineers and one (1) inspector from the Drinking Water Permitting & Engineering Program are certified to conduct regulatory Comprehensive Performance Evaluations. Multi-state CPEs were conducted in Georgia as well as other facilities located in Kentucky, Alabama, South Carolina, and North Carolina.

While not an active participant, EPD continues to analyze and track plant performance for all surface water and GWUDI plants in Georgia. This is time-consuming, but allows EPD to

determine which plants meet optimization goals each year. An award program is planned in the future.

In past years, the DWP made significant progress and achievement in the AWOP program. From 2005 to 2008, the Georgia population served by facilities meeting optimization goals increased from approximately 702,000 people to over 1,564,000 people. This represents approximately 18.6 percent of the total 8.4 million people served by community water systems. This is very significant because it means that more public health protection is being provided to the citizens of Georgia. This positive impact is attributable to systems striving to meet the optimization goals. Award certificates and public praise from the DWP at past technical conferences provided incentives for water systems to work towards meeting optimization goals and the formal ranking scheme created competition among water systems in the State.

AWOP Activities	2005	2006	2007	2008
Total # Optimized Plants	19	27	34	32
Population Served Optimized Water	702,104	1,290,069	1,290,187	1,564,358
% CWS Population Served Optimized Water	7.7%	16.8%	15.7%	18.8%
# Plants Meeting Settled Goals	53	63	51	51
# Plants Meeting Filtered Goals	56	62	60	60
# Plants Meeting Settled and Filtered Goals	29	35	34	34

GEORGIA RURAL WATER ASSOCIATION (GRWA): During the three-year reporting period from July 1, 2007 to June 30, 2010, EPD used 2% and 15% set aside funds to contract with GRWA for small system technical assistance and operator training (refer to Attachment B).

During the period from July 1, 2007 to June 30, 2010, GRWA conducted a total of 1,519 face-to-face onsite technical assistance visits under the "Circuit-Rider Contract". 966 of these visits were to systems serving less than 3,300 people. As part of this contract, GRWA also collected a total of 923 SOC samples and delivered them to the EPD Laboratory for analysis.

In addition, GRWA conducted an additional 98 on-site face-to-face technical assistance visits to surface water systems under the "LT1ESWTR and Stage 1 DBPR Contract" in order to help them comply with the microbial and disinfection by-products rules. Under this same contract, GRWA also conducted a total of 15 workshops and trained approximately 409 water system personnel on the new LT2ESWTR and Stage 2 D/DBPR.

Finally, GRWA conducted 132 on-site technical assistance visits to small groundwater system owners and operators under the "Groundwater System Training and Technical Assistance Contract" in order to help them comply with the disinfection by-products rules and Ground Water Rule. Under this same contract, GRWA also conducted a total of 28 workshops and trained approximately 1,338 water system owners and operators on new regulatory issues applicable to ground water systems.

As part of their technical assistance, education and outreach efforts, GRWA also offers two educational conferences in Helen and Jekyll Island each year. During the past three years, over 6,552 water and wastewater personnel and laboratory analysts attended these events.

During the period from July 1, 2007 to June 30, 2010, GRWA provided a total of 213 Water classes to a total of 3,864 individuals on the following topics: Class IV Operator Training, Basic

Water Training, Advanced Water Training, Backflow Training, Water Distribution Training, Water Lab Training, Water Exam Review Training, Fluoride Training, Management Training and Basic Mathematics used in water system operation.

GEORGIA ASSOCIATION OF WATER PROFESSIONALS (GAWP): Georgia Association of Water Professional's (GAWP) Drinking Water System Capacity Development Support Program continues to field technical support requests relative to the distribution of Georgia's Small System CCR guidance booklets and templates. GAWP handles technical support requests relative to the distribution of Georgia's Small System CCR guidance booklets, templates, and certification forms. During this reporting period, GAWP sent out numerous communication pieces (i.e. Special Advisories, Utility Notices, and Regulatory Updates) directly relevant to the regulated drinking water systems of Georgia. GAWP has an extensive electronic database that is available to the Georgia EPD for dissemination of critical information to Georgia's drinking water systems.

GEORGIA WATER AND WASTEWATER INSTITUTE: The Georgia Water and Wastewater Institute (GWWI) was incorporated in 1993 and today provides the majority of water and wastewater training in the State of Georgia, operating with financial assistance provided through contracts with EPD and modest tuition fees. GWWI annually offers approximately 80 courses with a total attendance of over 1,200 students and is dedicated to education and dissemination of technical and scientific information (refer to Attachment B).

During the reporting period from July 1, 2007 to June 30, 2010, GWWI conducted a total of 266 courses related to water, wastewater and/or laboratory operations and successfully trained 3,114 operators.

In the training sessions and workshops that were conducted at the annual, fall, and spring conferences during the past three years, GWWI's Technical Assistance, Education and Outreach efforts reached over 7,166 water and wastewater treatment plant operators, maintenance personnel, laboratory analyst, design engineers, consultants, and other professionals concerned about Georgia water and wastewater issues. Training topics included sessions on traditional issues such as water and wastewater treatment plant operations, maintenance and design, rules and regulations, laboratory operations, security and safety, as well as timely discussions on policy issues such as drought contingency planning, wastewater re-use, and legislative policy.

OPERATOR TRAINING: The State of Georgia obtained USEPA approval for its operator certification program on May 1, 2001, in conformance with Section 1419 of the SDWA, as amended. As part of this approval requirement, an annual report must be prepared in accordance with requirements of the "Final Additions to the Final Guidelines for the Certification and Recertification of the Operators of Community and Non-transient Non-community Public Water Systems" (published in the Federal Register on April 18, 2001) and submitted to USEPA to adequately demonstrate that the State of Georgia is implementing its operator certification program. In addition, Section 1419(b) of the Federal Safe Drinking Water Act (SDWA) requires EPA to withhold 20 percent of the funds that a State is otherwise entitled to receive under the SDWA Section 1452 unless a State has adopted and is implementing a program that meets the requirements of EPA's operator certification guidelines.

In its capacity development strategy program, EPD has utilized many resources and placed a very high priority on operator training and certification. EPD realizes that experienced, certified operators have the knowledge and dedication needed to properly operate and maintain a public water system.

GEORGIA’S OPERATOR CERTIFICATION PROGRAM: The “Georgia State Board of Examiners for the Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts” was created by legislation enacted in 1969 for the purpose of protecting the public health, safety, and welfare by establishing minimum qualifications for persons who operate public water supply treatment plants, water distribution systems, wastewater treatment plants, wastewater collection systems, or who conduct certain tests of water or wastewater samples in conjunction with the operation of public water system or wastewater treatment plants.

The Certification Board is part of the Professional Licensing Boards Division of the Office of the Secretary of State and is comprised of six members appointed by the governor. Five are active in the profession and one is a member from the public at large. At least 2 of the 6 Board members must be operators. All members are appointed for terms of four years. The Board meets six times per year.

The Board certifies six categories of licenses for public water system operators and laboratory analysts. Currently, there are 5,003 licensees who hold current certificates. Requirements for all categories include education, training, experience, and passage of a validated certification examination (ABC). The table below displays the number of certified operators by classification level for the reporting period 2001 - 2010. The data is also used to establish a baseline for EPD to measure progress in operator training and certification.

Operator License	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Class I	455	529	623	672	723	744	729	750	741	770
Class II	414	395	392	359	364	386	391	442	427	453
Class III	901	902	979	977	1015	971	925	984	929	971
Class IV	1067	874	977	872	932	922	817	913	794	878
Distribution	NA	640	739	805	923	1132	1190	1330	1304	1407
Laboratory	NA	419	462	454	482	515	494	592	507	524
Total	2837	3759	4172	4139	4439	4670	4546	5011	4702	5003

Classification of Systems, Facilities and Operators: EPD classifies public water systems (PWSs) in accordance with Section 10 of the Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act. Systems are classified on the basis of plant size or population served, type of source water, and treatment complexity in accordance with Section 391-3-5-.39 of the Georgia Rules for Safe Drinking Water (refer to Attachment C). The system classification determines the level of certification the operator in responsible charge (ORC) of the system must possess. During this reporting period there have been no changes made regarding public water system classification for Community and Non-transient Non-community systems.

Enforcement: EPD is the primary agency in Georgia for enforcing compliance with Georgia's Operator Certification Program. When EPD determines a PWS has violated Georgia's operator certification requirements, EPD takes whatever action is deemed necessary to ensure the PWS obtains or returns to compliance. In most cases, this starts as a written notice of violation to the system owner with a time schedule to return to compliance. Failure to comply with the established compliance schedule or repeating the same offense will result in the use of formal enforcement to obtain compliance with the operator certification requirements.

During the three-year reporting period, EPD records of formal enforcement indicate that approximately 5% of all formal Consent Orders were issued to water systems without a certified operator or ORC.

The Operator Certification Board and the Professional Licensing Boards Division of the Office of the Secretary of State handle specific enforcement actions against certified operators. During the reporting period, the Board investigated several operators for falsification issues and other violations of the Rules. A number of cases were referred to the Attorney General's Office to pursue revocation and/or suspension of the license issued to an individual due to providing false information on the certificate application.

Training for all classes of water system operators and laboratory analysts continues to be provided by GRWA (at locations throughout the State) and GWWI (at a permanent facility). From 2002 through 2010, over 27,715 water system personnel attended approximately 1,347 training classes. The training covered all classification levels and all areas of water system operation and maintenance.

The GRWA and the Georgia Association of Water Professionals (GAWP) (formerly named the Georgia Water Pollution & Control Association) also conduct many meetings, seminars, workshops and conferences throughout the year. Operators regularly attend to obtain the necessary continuing education credits required for certification renewal. Operators can also obtain continuing education credits by other means such as attending AWWA, NRWA and other national conferences or completing online training. Training for continuing education credits must be acceptable to the Certification Board and applicable to the field in which the certification is issued. During the reporting period between 2002 and 2010, over 55,676 water system personnel attended conferences and training related to water system operation and maintenance.

OPERATOR EXPENSE REIMBURSEMENT GRANT: The State of Georgia Environmental Protection Division (EPD) submitted an application to the US EPD Region IV for grant funds reserved under Section 1419(d) of the Federal Safe Drinking Water Act (SDWA) for small system operator training and certification reimbursement Program. Georgia's initial allotment under EPA's proposed Program was \$2,015,584 with a potential total allotment of \$3,613,200. Under the original application, Georgia applied for and received notice of grant award May 6, 2003 in the amount of \$1,694,754 to be used to reimburse and/or otherwise defray the cost of training, certification and re-certification for operators of community or non-transient non-community water systems serving 3,300 persons or fewer. Georgia applied for and received notice of amendment grant award September 7, 2004 in the amount of \$1,758,144. Amendment #2 in the amount of \$160,300 was applied for and awarded on September 19, 2005 bringing Georgia's total award amount to \$3,613,198.

After receiving the initial grant award, Program implementation for the State of Georgia was delayed due to State budget issues that temporarily delayed the filling of the Grants Assistant position for this project (this position was filled on March 1, 2005). Reimbursements were begun with a start date of July 1, 2004, for those expenses for which qualified operators/systems were able to produce appropriate receipts and/or backing documentation.

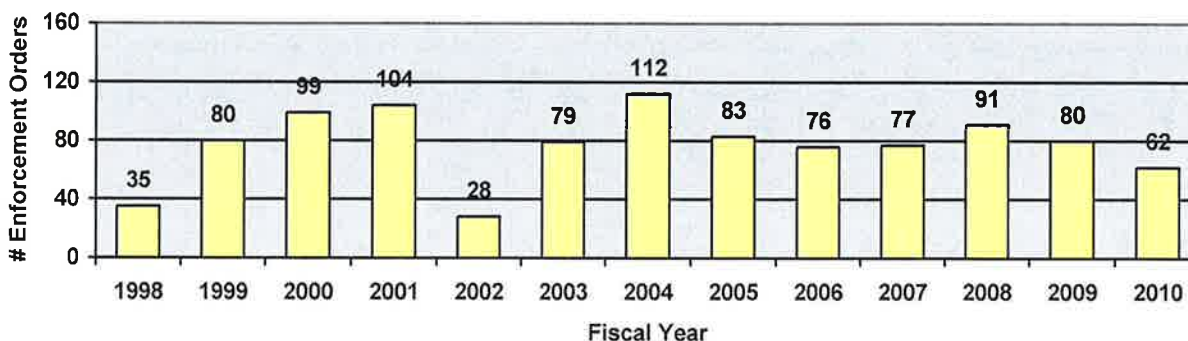
The current grant expired on June 30, 2011, and EPD rolled the remaining funds into Georgia's Drinking Water State Revolving Fund program.

COMPLIANCE AND ENFORCEMENT MECHANISMS: EPD continues to utilize informal and formal enforcement actions, such as written Notices of Violations (NOVs), Consent Orders, and Administrative Orders to obtain compliance with the federal and State drinking water regulations. Enforcement is an important tool to deal with public water systems that lack adequate capacity. EPD's stringent enforcement program has been a significant factor in encouraging private public water systems with limited capacity to physically merge or consolidate with local governmentally owned water systems or water authorities.

The continued use of negotiated settlements in the form of Consent Orders seems to be the most effective enforcement mechanism, rather than mandatory fines or civil penalties. Consent Orders allow EPD the flexibility to set appropriate penalties based upon the level of deficiencies and the negotiated plan to correct the violations in a timely manner. Please refer to the graphical representation of the number of enforcement orders issued for violations of the SDWA and/or the Permit to Operate a Public Water System during the past decade shown below.

During the annual reporting period from July 1, 2007 to June 30, 2010, a total of 310 enforcement orders were issued relating to SDWA or permit violations.

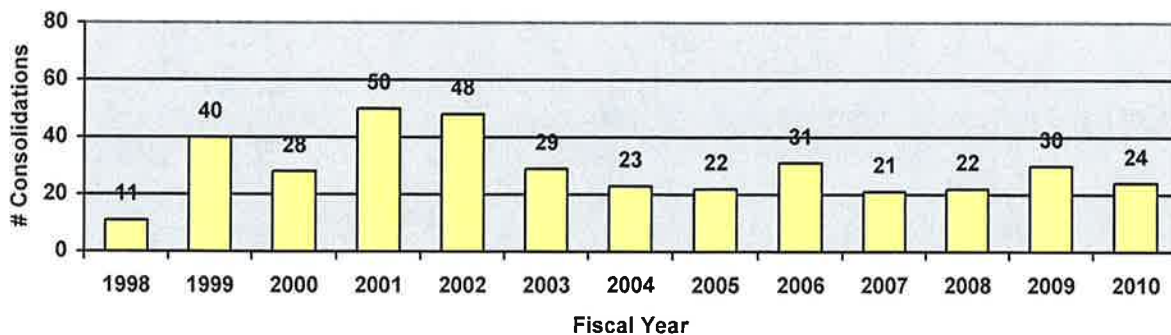
Enforcement Orders for public water systems.



WATER SYSTEM CONSOLIDATIONS: Whenever possible, EPD encourages consolidation of a water system with a nearby local governmentally owned water system or water authority. If formal enforcement action is being taken on a private water system, EPD may offer lower penalties if the water system agrees to connect to a local governmentally owned water system or water authority within a reasonable period of time. These water systems have the best track records for compliance and customer service, are generally larger systems, and have the TMF resources to provide safe, reliable drinking water on a consistent basis.

As of June 30, 2010, a total of 379 privately owned and operated public water systems have consolidated with a nearby governmentally owned public water system or water authorities. The figure below displays the number of consolidations in Georgia each year since 1998 and indicates that in any one year approximately 29 water systems are successfully consolidated with a local governmentally owned public water system or water authority.

Consolidations with governmentally owned water systems or water authorities.



We are expecting the number of consolidations to increase in the future as a result of increased financial and managerial burdens associated with complying with the recently enacted regulations, specifically the Stage 1 Disinfection Byproducts Rule, Stage 2 Disinfection Byproducts Rule, Long-Term 2 Enhanced Surface Water Treatment Rule, Radionuclide Rule, and the recently enacted Ground Water Rule.

CROSS CONNECTION CONTROL: EPD requires that all backflow prevention assembly testers hold a valid certification from a certification program recognized by EPD. GAWP has worked under contract to assist EPD in establishing this Statewide Backflow-Prevention Tester Certification Program. GAWP has been designated by EPD to administer the certification program for the State of Georgia utilizing exams provided by the Association of Boards of Certification. In addition, the American Backflow Prevention Association, the American Society of Sanitary Engineering, and the University of Florida/TREEO Center have been approved as official certification programs and are authorized to provide certification exams to GAWP to be used in this process.

Approximately 1,317 backflow prevention professionals have been certified since the beginning of the program.

INFORMATION MANAGEMENT: During FY 2010, EPD utilized the 10% set-aside for activities associated with the Information Management Program. The Information Management pilot project was created to improve the tracking and reporting of public water system data, automate the sample scheduling for public water systems' SDWA monitoring requirements, and automate compliance determinations. This program has enabled EPD to improve the accuracy of its data as well as the overall tracking system, which has lead to improved compliance by the water systems. E PD's Data Management Specialist assists in migration of laboratory data into the Division's SDWIS/State information management system. EPD continues to work on the following tasks:

1. The State Drinking Water Programs have been currently working in collaboration with the Department's Program Support Division, EPA, and DNR IT Department to upgrade