

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



**Georgia Environmental Protection Division
Watershed Protection Branch
Drinking Water Program
September 2014**

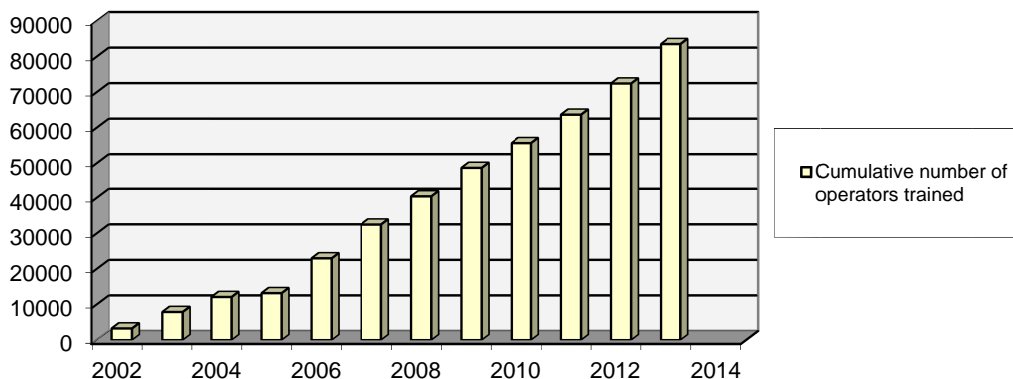
EXECUTIVE SUMMARY

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 ensure 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 2,419 active public water systems. Approximately 87% of the more than 9.8 million year-round 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 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 Figure 1 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. As a result of these efforts, improvements have been noted.

Figure 1. Cumulative number of operators trained by reporting year.



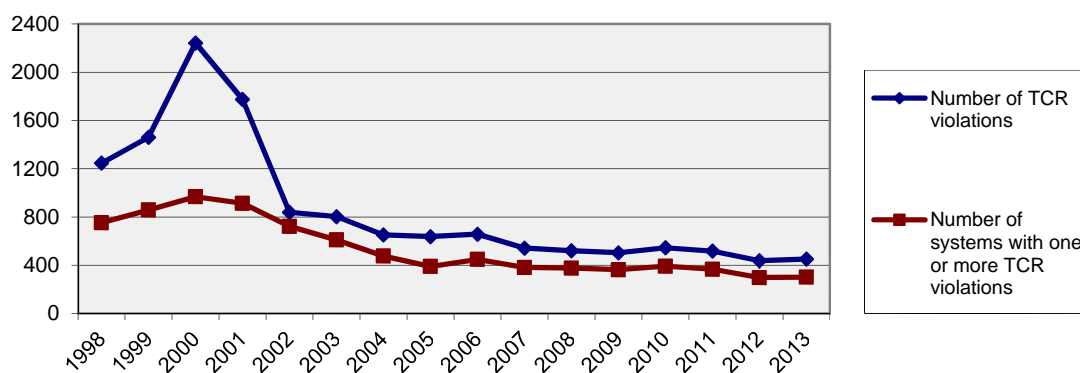
The U.S. Environmental Protection Agency (USEPA) approved Georgia's capacity development strategy program on September 21, 2000. Since then, significant progress has been made towards improving the technical, managerial, and financial capacity of the public water systems in Georgia. New systems are being 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 begun utilizing USEPA's Enforcement Tracking Tool (ETT) outputs to measure the success of the capacity development program and identify systems that might lack technical, managerial or financial (TMF) capacity.

Please refer to Attachment A for lists of new community, non-transient non-community, and transient non-community water systems permitted during the three-year period from July 1, 2010 through June 30, 2013. Attachment A also indicates whether or not these systems had an ETT score greater than or equal to 11 during the same period of time, an indication of significant compliance problems.

According to the data, only one (1) of the 33 new community and non-transient non-community water systems permitted during the last three years had an ETT score greater than or equal to 11. The data suggests that the capacity development program is having a positive effect. The new public water system struggled with compliance due to the consumer confidence reporting (CCR) requirements, and nitrate, lead and copper, and coliform monitoring.

Figure 2. Total Coliform Rule compliance data.



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 2 above). Georgia EPD contributes 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 and the associated monitoring and reporting requirements.

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, EPD expects 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 Drinking Water State Revolving Fund capitalization grant to provide low interest loans to eligible public water systems needing infrastructure improvements to achieve or maintain compliance with the Safe Drinking Water Act requirements or to protect public health. As of June 30, 2013, more than \$342 million in project assistance has been awarded for 188 water system improvement projects, benefiting approximately 3.4 million citizens in Georgia.

While EPD has the lead role and regulatory authority for the capacity development program, this agency cannot 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

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iii
LIST OF ABBREVIATIONS AND ACRONYMS	ix
INTRODUCTION	1
THIS REPORT	3
GENERAL INFORMATION	5
BACKGROUND	7
CAPACITY DEVELOPMENT AUTHORITY (New System Program).....	9
Control Points	9
Evaluating Program Success	11
CAPACITY DEVELOPMENT STRATEGY (Existing System Program).....	15
Plan Review/Approvals and the “Minimum Standards for Public Water Systems”	17
Business Plan and Operations & Maintenance Plan	17
Sanitary Surveys and Inspections	18
Ground Water Under the Direct Influence of Surface Water	19
Area Wide Optimization Program	20
Georgia Rural Water Association (GRWA)	20
Georgia Association of Water Professionals (GAWP)	21
Georgia Water & Wastewater Institute (GWWI)	21
Operator Training	22
Georgia’s Operator Certification Program	22
Operator Expense Reimbursement Grant	23
Compliance and Enforcement Mechanisms	24
Water System Consolidations	24
Cross Connection Control	25
Information Management	25
Drinking Water Fee for Service Laboratory Testing Program	26
Source Water Assessment and Delineation	27
Georgia WARN Program	27
Consumer Confidence Reports	28
Drinking Water State Revolving Fund	29
Statewide Water Management Plan.....	32
CONCLUSION	33
ATTACHMENT A - Lists of New Public Water Systems for FY 2010 to FY 2013	
Community Water Systems	
Non-Transient Non-Community Water Systems	
Transient Non-Community Water Systems	
ATTACHMENT B – Annual Contract Reports from GWWI and GRWA	
ATTACHMENT C – Water System Operator Classification	

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
ETT	Enforcement Tracking Tool
GAWARN	Georgia Water/Wastewater Agencies Response Network
GEFA	Georgia Environmental Finance Authority
GMA	Georgia Municipal Association
GAWP	Georgia Association of Water Professionals
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
SOP	Standard Operating Procedure
SWAP	Source Water Assessment Program
TCR	Total Coliform Rule
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: ETT 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 Report to the Governor on 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 three-year reporting period from July 1, 2010 to June 30, 2013; 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.

This report shows that the State of Georgia continues to ensure that all new CWS and NTNCWS demonstrate the technical, managerial, and financial capacity with respect to each national primary drinking water regulation in effect, or likely to be in effect, prior to commencing operation.

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 2,419 PWSs in Georgia that serve approximately 8.4 million people. This category includes CWSs, NTNCWSs, and TNCWSs. Some of these PWSs are very small water systems. 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 1,776 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 185 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 458 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 adequacy of 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 three-year reporting period ending June 30, 2013, the State of Georgia had approximately 2,419 active public water systems serving a population over 8.4 million people. Based on the latest census figures, this means 87% of the 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.

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 126 other communities for distribution. The other 2,184 water systems mainly use groundwater sources (wells and springs) as their water supplies.

Table 1. Community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water Under Influence	3	97,129
Purchased Ground Water Under Influence	1	13,260
Ground Water	1,543	1,650,274
Purchased Ground Water	8	5,964
Surface Water	102	5,043,757
Purchased Surface Water	119	1,620,613
TOTAL	1,776	8,430,997

Approximately 73% (1,776 out of the total 2,419 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% (225 out of the total 1,776 CWSs) are supplied by surface water sources and the remaining 87% (1,551) are served by groundwater sources.

Table 2. Non-transient non-community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water	180	60,835
Surface Water	2	826
Purchased Surface Water	3	1,351
TOTAL	185	63,012

In addition, there are 185 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, and schools. Furthermore, there are 458 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.

Table 3. Transient non-community water systems in Georgia.

Source Type	Number of Systems	Cumulative Population Served
Ground Water Under Influence	2	175
Ground Water	453	75,463
Purchased Surface Water	3	698
TOTAL	458	76,336

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. They are: (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 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.

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 EPD's "Minimum Standards for Public Water Systems" (Minimum Standards). The requirements also include submittal of a multi-year "business plan".

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 Unit 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 with 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 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, 2010 to June 30, 2013, a total of 115 business plans were received from 39 new community and non-transient non-community water systems and 76 existing water systems.
- As of June 30, 2013, a total of 809 business plans have been received from new and existing public water systems.
- As of June 30, 2013, 66 surface water or GWUDI systems have submitted detailed Operation & Maintenance (O & M) Plans.

Table 4 below displays information on business plans for the period from July 1, 2003 to June 30, 2013.

Table 4. Business plan data.

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
New Water Systems	56	24	59	64	26	50	37	28	20	6	13
Business Plans Submitted	107	63	99	55	53	48	40	42	21	33	61
Cumulative Business Plans	294	357	456	511	564	612	652	694	715	748	809

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 EPD's "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 a 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 smaller groundwater public water systems acquire and maintain adequate technical, managerial and financial capacity.

During the three-year reporting period from July 1, 2010 to June 30, 2013 approximately 4,047 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.

EVALUATING PROGRAM SUCCESS: EPD uses compliance tracking as an indicator or measure of success or achievement for the New Systems Program. Tracking of new water systems is conducted in order to identify whether any patterns or problems exist in the first three years of a new system's operation. If EPD sees certain persistent trends, then EPD will reevaluate the current program or approach and make appropriate adjustments to the New Systems Program.

Please refer to Attachment A for lists of new community, non-transient non-community, and transient non-community water systems permitted during the three-year period from July 1, 2010 through June 30, 2013. Attachment A also indicates whether or not these systems had an ETT score greater than or equal to 11 during the same period of time.

According to the data, only one (1) of the 33 new community and non-transient non-community water systems permitted during the last three years had an ETT score of greater than or equal to 11. The data suggests that the capacity development program is having a positive effect. The new public water system struggled with compliance due to the consumer confidence reporting (CCR) requirements, and nitrate, lead and copper, and coliform monitoring.

In its capacity development program, Georgia utilizes compliance rates to establish a baseline and measure improvement in the technical, managerial and financial capacity of water systems. EPD has decided to track 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 to 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 NPDWRS.

For the TCR, a Maximum Contaminant Level (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 are 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.

Table 5 below displays the compliance data for the TCR and indicates that, in any given year, an average of 539 water systems incurred an average of 864 TCR violations during the period from FY 1998 through FY 2013. The data is shown graphically on the next page. An average of 90 systems had an MCL exceedance.

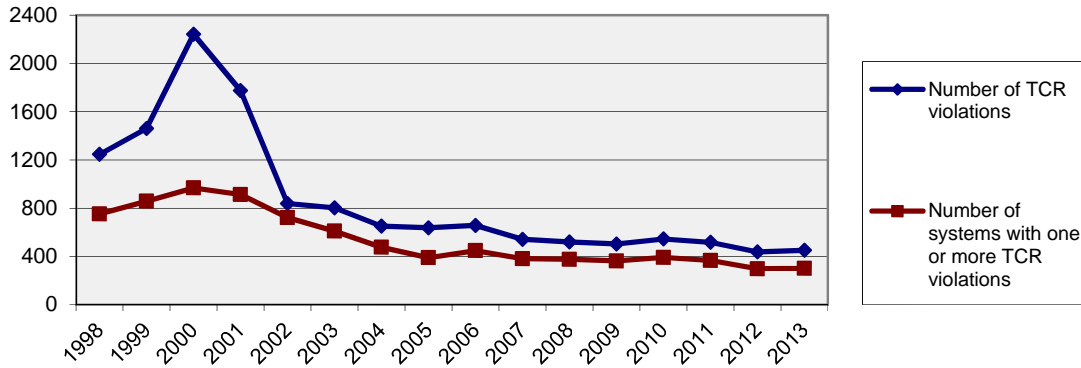
Table 5. Total Coliform Rule violations by year.

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
2011	517	58	459	367	50	338
2012	438	53	385	298	48	262
2013	451	82	369	301	71	263
Average	864	116	748	539	90	455

The data show that significant achievement has been made in compliance with the Total Coliform Rule. Since 2000, the total number of systems with TCR violations has decreased from 968 to 301. Likewise, the total number of violations due to MCL exceedance 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 toward education and training.

During the most recent year from July 1, 2012 to June 30, 2013, the data in the above table further indicates that 301 of the total 2,419 public water systems (12.4%) have one or more TCR violation(s). Only 71 public water systems (2.9%) had a TCR violation resulting from an MCL exceedance. Most microbiological TCR violations are non-MCL related violations.

Figure 3. Total Coliform Rule compliance data.



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 REVIEWS/APPROVALS & THE "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 three-year reporting period from July 2011 to June 30, 2013 approximately 4,047 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 (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 2013, a total of 809 business plans have been received from new and existing public water systems. During the three-year reporting period from July 1, 2010 to June 30, 2013, a total of 115 business plans were received from 39 new community and non-transient non-community water systems and 76 existing 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, 2013, a total of 66 surface water or GWUDI systems have submitted detailed O & M Plans.

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,

Table 6. EPD Compliance Activities.

<p><u>Between July 1, 2002 to June 30, 2003</u> Sanitary Surveys performed: 1,662 On-site Inspections conducted: 693</p>
<p><u>Between July 1, 2003 to June 30, 2004</u> Sanitary Surveys performed: 472 On-site Inspections conducted: 228</p>
<p><u>Between July 1, 2004 to June 30, 2005</u> Sanitary Surveys performed: 450 On-site Inspections conducted: 80</p>
<p><u>Between July 1, 2005 to June 30, 2006</u> Sanitary Surveys performed: 571 On-site Inspections conducted: 444</p>
<p><u>Between July 1, 2006 to June 30, 2007</u> Sanitary Surveys performed: 673 On-site Inspections conducted: 499</p>
<p><u>Between July 1, 2007 to June 30, 2008</u> Sanitary Surveys performed: 787 On-site Inspections conducted: 677</p>
<p><u>Between July 1, 2008 to June 30, 2009</u> Sanitary Surveys performed: 757 On-site Inspections conducted: 1089</p>
<p><u>Between July 1, 2009 to June 30, 2010</u> Sanitary Surveys performed: 669 On-site Inspections conducted: 459</p>
<p><u>Between July 1, 2010 to June 30, 2011</u> Sanitary Surveys performed: 739 On-site Inspections conducted: 652</p>
<p><u>Between July 1, 2011 to June 30, 2012</u> Sanitary Surveys performed: 538 On-site Inspections conducted: 745</p>
<p><u>Between July 1, 2012 to June 30, 2013</u> Sanitary Surveys performed: 628 On-site Inspections conducted: 703</p>

organizational charts, plant schematics, distribution maps, documentation of repairs and complaints, unaccounted-for-water, monitoring plans, and field log books.

EPD expects the number and frequency of visits to the surface water systems to increase in the future. Currently, the Drinking Water Program has the total of three (3) 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 reporting period from July 1, 2010 to June 30, 2013, the Drinking Water Program conducted 123 sanitary surveys and 1,056 on-site inspections of water systems treating surface water or GWUDI sources. During the same period, the EPD District Offices performed 1,782 sanitary surveys and 1,489 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 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 the 214 spring and groundwater well sources 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 GWUDI	30
Number of Springs Tested	60
Number of Springs GWUDI	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 coordinates 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. Due to budget constraints and lack of resources, there are no plans to participate in this program in the near future.

GEORGIA RURAL WATER ASSOCIATION (GRWA): During the three-year reporting period from July 1, 2010 to June 30, 2013, EPD used 2% and 15% set aside funds to contract with GRWA for small system technical assistance and operator training (refer to Attachment B).

Under this contract, GRWA conducted a total of 1,940 face-to-face onsite technical assistance visits under the "Circuit-Rider Contract". 1,283 of these visits were to systems serving less than 3,300 people. As part of this contract, GRWA also collected a total of 1,166 SOC samples and delivered them to the EPD Laboratory for analysis.

GRWA also conducted 7,630 separate on-site technical assistance visits to small water system owners and operators that were not funded by EPD using DWSRF set-aside funds.

Under the same contracts, GRWA also conducted a total of 45 workshops and trained approximately 840 water system personnel on new regulatory issues applicable to surface water and ground water systems such as the Stage 2 D/DBPR and Groundwater Rule.

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 4,308 water and wastewater personnel and laboratory analysts attended these important training events.

Finally, during the three-year period from July 1, 2010 to June 30, 2013, GRWA provided a total of 231 Water Operator classes to a total of 4,357 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 (GWWI): 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, 2010 to June 30, 2013, GWWI conducted a total of 253 courses related to water, wastewater and/or laboratory operations and successfully trained 3,372 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 7,269 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 5,125 licensees who hold current certificates. Requirements for all categories include education, training, experience, and passage of a validated certification examination. The table below displays the number of certified operators by classification level for the reporting period 2001-2013. The data is also used to establish a baseline for EPD to measure progress in operator training and certification.

Table 9. Certified operators licensed in Georgia by year and classification level.

Operator License	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Class I	672	723	744	729	750	741	770	746	761	786
Class II	359	364	386	391	442	427	453	444	447	472
Class III	977	1,015	971	925	984	929	971	903	957	985
Class IV	872	932	922	817	913	794	878	743	798	844
Distribution	805	923	1,132	1,190	1,330	1,304	1,407	1,332	1,400	1,503
Laboratory	454	482	515	494	592	507	524	508	517	535
Total	4,139	4,439	4,670	4,546	5,011	4,702	5,003	4,676	4,880	5,125

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 CWS and NTNCWS.

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.

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 three-year reporting period, the Board investigated several operators for falsification issues and other violations of the Rules. In addition, 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.

OPERATOR EXPENSE REIMBURSEMENT GRANT: The Environmental Protection Division (EPD) submitted an application to the US EPA Region IV for grant funds reserved under Section 1419(d) of the Federal Safe Drinking Water Act (SDWA) for the 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 on 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 CWS and NTNCWS serving 3,300 persons or fewer. Georgia applied for and received notice of amendment grant award on September 7, 2004 in the amount of \$1,758,144. Amendment #2 in the amount of \$160,300 was awarded on September 19, 2005 bringing Georgia's total award amount to \$3,613,198

After receiving the initial grant award, implementation of the program by 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 began on July 1, 2004, for those expenses for which qualified operators/systems were able to produce appropriate receipts and/or backing documentation.

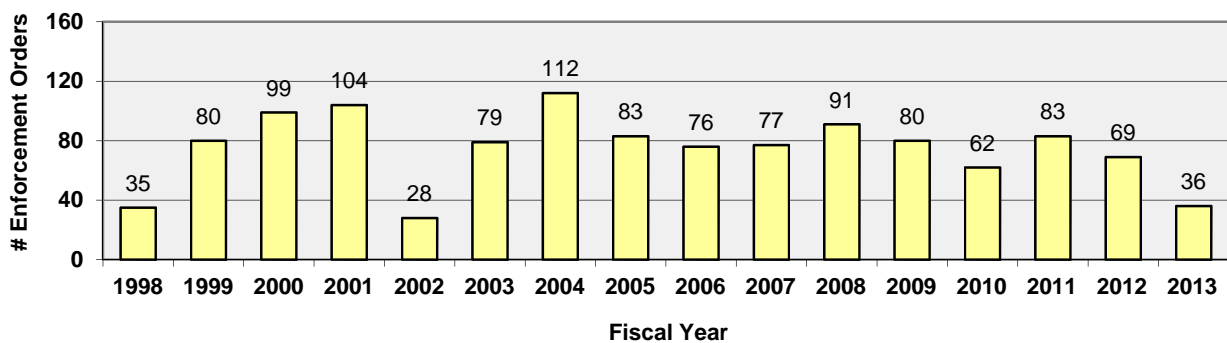
The current grant expired on June 30, 2011, and EPD moved the remaining funds into Georgia's Drinking Water State Revolving Fund program.

COMPLIANCE AND ENFORCEMENT MECHANISMS: EPD continues to utilize informal and formal enforcement actions, such as written Notices of Violations, 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. Refer to Figure 4 for the number of enforcement orders issued for violations of the SDWA and/or the Permit to Operate a Public Water System during the past fifteen years.

During the three-year reporting period from July 1, 2010 to June 30, 2013, a total of 188 enforcement orders were issued relating to SDWA or permit violations.

Figure 4. Enforcement Orders for public water systems.

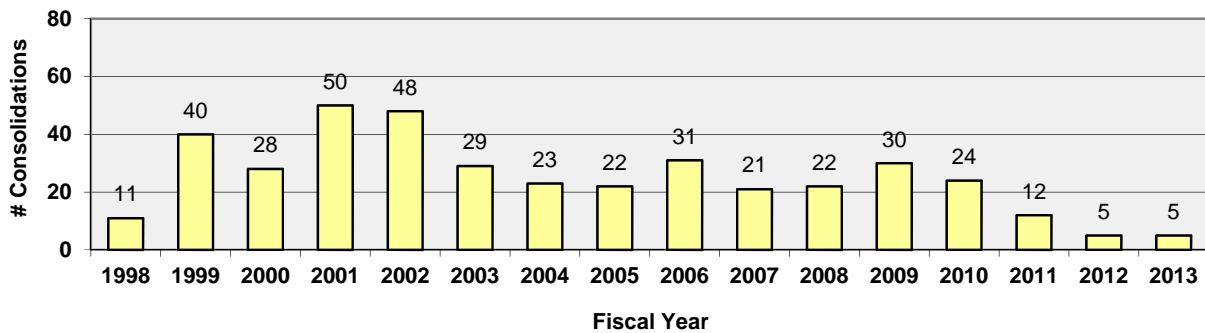


WATER SYSTEM CONSOLIDATIONS: Whenever possible, EPD encourages consolidation of a water system with a nearby local governmentally owned water system or water authority. If formal enforcement action is being taken on a private water system, EPD may offer lower penalties if the water system agrees to connect 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, 2013, a total of 401 privately owned and operated public water systems have consolidated with a nearby governmentally owned public water system or water authorities.

Figure 5 on the next page displays the number of consolidations in Georgia since 1998. Each year, approximately 25 water systems are successfully consolidated with a local governmentally owned public water system or water authority.

Figure 5. Consolidations with governmentally owned water systems or water authorities.



While the number of consolidations has dropped off since 2009, EPD expects 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 Stage 2 Disinfection Byproducts Rule, Radionuclide Rule, and 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.

Nearly 1,300 backflow prevention professionals have been certified since the beginning of the program.

INFORMATION MANAGEMENT: During the period from July 1, 2010 to June 30, 2013, EPD utilized the 10% set-aside for activities associated with the Information Management to improve the tracking and reporting of public water system data, automate sample scheduling for public water systems, and automate compliance determinations.

In recent years, the EPD Drinking Water Program collaborated with EPA Region 4, EPA Contractor (SAIC), and the DNR IT Department to upgrade the current version of SDWIS/State (version 8) to the new web-release version SDWIS/State versions 3.01 and 3.2. EPD staff continues to work to utilize all aspects of the program, including sample scheduling, automated compliance determinations, and enforcement actions.

EPD continues to use the web-based surface water treatment plant monthly operating reporting system developed for data management. The project allows the surface water systems to enter their own data and EPD determines compliance based upon the official data submitted by the ORC. A groundwater version of the web-based monthly operating reporting system may be developed in the future to accommodate the new requirements of the Groundwater Rule (GWR) that went into effect in December 2009, as well as recent water conservation legislation in Georgia.

DRINKING WATER FEE FOR SERVICE LABORATORY TESTING PROGRAM: The “Drinking Water Fee for Service Laboratory Testing Program”, established by EPD, makes compliance monitoring available to all public water systems at a very reasonable cost. Under an optional “fee for service”, EPD provides a water system with laboratory and related services that are consistent with the owner’s need to comply with the National Primary Drinking Water Regulations and related regulations. EPD specifically agrees to provide the required laboratory analyses, sampling containers and instructions (as monitoring is required), written reports on the results of the analysis of each sample, technical assistance regarding corrosion control treatment, applicable monitoring waivers, and limited vulnerability assessments. The “fee for service” is based on the total population served by the water system, the population type (community or non-community), the type of source water, and the number of entry points.

After the 1986 amendments to the federal Safe Drinking Water Act, the EPD found it necessary to implement the voluntary “Drinking Water Fee for Service Laboratory Testing Program” to expand its existing laboratory services to cover new and increase monitoring for Lead and Copper, Phase II and Phase V contaminants (synthetic organic chemicals, Inorganic chemicals, volatile organic chemicals, PCBs, etc). The Department of Natural Resources Board approved the voluntary program in April 1992. In addition to the monitoring, the fee system also covers related services such as information management, compliance reporting, vulnerability assessment (asbestos, dioxin, cyanide), waiver program (monitoring reduction), training, technical assistance, corrosion control, on-site investigation, public education and information, enforcement, etc. With the implementation of the “Drinking Water Fee for Service Laboratory Testing Program”, EPD maintained primacy for drinking water regulations while providing a valuable service to the public water systems. Without the program, many small public water systems would have difficulty complying with the NPDWR monitoring requirements due to the cost of testing and the complexity of the monitoring schedules.

The voluntary “Drinking Water Fee for Service Laboratory Testing Program” has been invaluable to the public water system owners and operators in Georgia. Its success can be measured with the high percent of the water systems participating in the program as well as the amount of savings realized by the water systems since its inception in 1992.

The EPD will continue to provide this very cost effective laboratory service in order to help public water systems acquire and maintain financial and technical capacity to comply with current and future drinking water regulations. All regulated chemical, physical, and radiological tests are being performed under the drinking water fee system, including the total trihalomethane and haloacetic acid tests required for the Initial Distribution System Evaluations under the Stage 2 Disinfectants and Disinfection Byproducts Rule and the source water monitoring for *Cryptosporidium* and *E. Coli* under the Long Term 2 Enhanced Surface Water Treatment Rule.

Recently, EPD has found it necessary to implement a new “Drinking Water Coliform Fee for Service Monitoring Program” for the microbiological laboratory services provided by EPD Laboratory. This new program covers analytical services associated with the Total Coliform Rule, and the costs are based on the number of routine samples a public water system is required to collect each month or quarter. The service includes analyses for routine, repeat, additional routine, replacement, special, source approval and triggered source water microbiological samples. The “Drinking Water Coliform Fee for Service Monitoring Program” offers high quality, efficient and cost-effective microbiological testing services to water systems and helps EPD assure Georgia’s drinking water supply is among the safest in the nation.

Currently, approximately 97% of the public water systems in Georgia participate in one of the two optional drinking water fee system contracts at an average estimated annual savings of \$9 million to the water system owners and operators.

SOURCE WATER ASSESSMENT AND DELINEATION: USEPA approved Georgia's Source Water Assessment and Protection Implementation Plan on May 1, 2000. Georgia's deadline for completion of surface water source water assessment plans (SWAPs) was November 1, 2003. Georgia's deadline for completion of groundwater SWAPs was June 2005 for community systems, December 2005 for non-transient non-community systems, and December 2006 for transient non-community systems.

Efforts to fund regional surface water system SWAP initiatives using DWSRF 15% set-asides have been completed. Over \$2.5 million of contracts were negotiated with various entities to assist EPD with SWAP implementation. Ground water SWAPs are being completed utilizing in-house staff.

Currently, EPD is in the process of performing SWAPs on all privately owned groundwater systems as the drinking water operating permits come up for renewal. For the three-year period from July 1, 2001 through June 30, 2013, approximately 2,880 source water assessments have been prepared for the privately owned ground water systems in Georgia. This activity for the privately owned ground water systems will continue in the future.

GEORGIA WARN PROGRAM: Following the impacts of Hurricane Katrina, it became apparent that even with the extraordinary efforts of utilities, water associations, and state regulatory agencies, the demand for resources and knowing where those resources were available overwhelmed the ability to effectively coordinate the initial response. Realizing that utilities needed a different approach, leaders in the water community and state agencies have joined together to create the Georgia Water/Wastewater Agency Response Network or GAWARN.

The State of Georgia initiated the formation of the GAWARN (Water/Wastewater Agencies Response Network) in August 2006. The mission of the program is to support and promote statewide emergency preparedness, disaster response, and mutual assistance for public and private water and wastewater utilities for natural and man-made events. It is a network of utilities helping utilities to prepare for emergencies and to organize response according to established requirements. This program is consistent with other statewide mutual aid and assistance programs and the National Incident Management System (NIMS).

GAWARN's steering committee board members consist of staff or personnel from Environmental Protection Division, public utilities, the Georgia Association of Water Professionals, and the Georgia Rural Water Association. The board meets approximately every sixty (60) days to discuss progress of the program. We already have several large and small water systems that have signed the Mutual Aid Agreement and became a part of the GAWARN network.

GAWARN has developed an interactive website program where utilities are able to request help, respond to incidents and upload their resources into the program. The GAWARN website has integrated the Resource Typing Manual, allowing each member to enter information specific to their utility about their resources including pumps, generators and others. The website makes it possible to request resources from neighboring utilities that have available resources.

The GAWARN program is a critical step in water incident and disaster preparedness. The program is offered at no cost to participants. Benefits include enhanced access to specialized resources, insurance for resources utilized during an emergency without pre-contractual limitations or retainer fees, expedited arrival of aid, indemnification and workers' compensation provisions to protect participating utilities, and reimbursement of costs, as needed. The program launched on March 29, 2007. The GAWARN Mutual Aid and Assistance agreement is available to all public and private water and wastewater utilities in the State.

The GAWARN had its first activation in response to the Iowa Flooding in mid-June of 2008. No actual deployment was necessary; however it was an excellent preparatory and learning opportunity to prove how important the GAWARN is to water and wastewater utilities. Since then the GA WARN Program and The GAEPD have been involved in numerous training and exercise programs thru out Georgia to help better prepare our drinking and wastewater facilities to respond to natural and man-made disasters. GA EPD and the GAWARN programs have been active participants and leaders in the Emergency Support Function 3 in responding to the 2009 severe flooding event that impacted most of North West Georgia. In addition, The GAEPD and the GAWARN members were involved in 2 Hurrex exercises, the 2010 and 2012 Hurrex Exercises. The 2012 Hurrex Exercise, which was held in May of 2012 at the Georgia Emergency Operations Center, was a great large scale exercise to help each entity identify roles and responsibilities and recognize vulnerabilities that need improvement.

The GAWARN is a great tool to provide restoration to affected water and wastewater utilities throughout the State of Georgia and outside the state for both natural and man-made disasters.

The GA EPD along with the GAWARN just participated in a 2 day extreme weather workshop that focused on lessons learned from extreme weather events that have occurred in Georgia such as the 2007 Drought and the 2009 extreme flooding event. The GA EPD along with GAWARN and EPA organized and developed the first ever GAWARN Table Top Exercise (TTX) in October 2012. Finally the GAWARN was a supporting agency to the recent Ice Storms that impacted the State of Georgia through resource requests from Water and Wastewater Utilities that required aid.

CONSUMER CONFIDENCE REPORTS: EPD initially established a three-year contract with GAWP, using Performance Partnership Grant (PPG) funds, to assist community water systems in completing the consumer confidence report (CCR) requirements of the 1996 Federal SDWA Amendments. As part of the contract, GAWP prepared and distributed the "Consumer Confidence Report Guidance and Preparation Manual, May 1999", to water systems affected by the new rule, directly trained over 750 water system personnel in a formal classroom setting, fielded over 1,400 technical support calls, presented material on the CCR program to Georgia Municipal Association (GMA), the Association County Commissioners of Georgia (ACCG), the Carl Vinson Institute of Government, Georgia's Peer Review Program, numerous Rural Development Centers (RDCs), nine GAWP conferences, and provided direct technical support by various other means.

During this reporting period, the GAWP continued to field technical support requests relative to the distribution of Georgia's CCR guidance booklets and templates. The table below summarizes the existing compliance data for the CCR Rule. Based on the compliance history, the CCR assistance was a success and reduced the rate of non-compliance for a new, complex regulation that affected many small water systems in Georgia.

It should be noted that the initial compliance rates for the regulation were significantly lower. For example, for the 2000 reporting year, the initial compliance rate for water systems meeting the July 1 delivery deadline was less than 70% and for the 2003 reporting year, it was less than 63%. In order to obtain better compliance, both formal and informal enforcement actions were taken by EPD. As shown in the table, compliance with the CCR Rule had been high until 2003. Beginning in 2004, the compliance rate began to decline mainly due to lack of resources by EPD to follow-up on the violators. Recently, an associate in the Drinking Water Program's Compliance & Enforcement Unit was designated to focus primarily on the CCR Rule. As a result, compliance rates increased noticeably from a low of 89.7 % in State FY 2005 to the current level of approximately 99% in recent years.

Table 10. CCR compliance rates.

Fiscal Year	CCRs Received	CCRs Required	Compliance Rate (%)
1999	1,591	1,597	99.6
2000	1,622	1,628	99.6
2001	1,569	1,584	99.1
2002	1,586	1,595	99.4
2003	1,594	1,607	99.2
2004	1,574	1,637	96.1
2005	1,481	1,651	89.7
2006	1,601	1,646	97.3
2007	1,613	1,659	97.2
2008	1,665	1,683	98.9
2009	1,640	1,694	96.8
2010	1,696	1,747	97.1
2011	1,746	1,689	96.7
2012	1,748	1,771	98.7
2013	1,734	1,765	98.2

In order to achieve a compliance rate of 98.7% in FY 2012, EPD issued 496 violations and numerous Consent or Administrative Orders. Similarly, EPD issued 489 violations and numerous Consent or Administrative Orders in order to achieve a compliance rate of 98.2 % in State FY 2013.

DRINKING WATER STATE REVOLVING FUND: With the passage of the 1996 Amendments to the Safe Drinking Water Act (SDWA) (Pub. L. 104-182) the Administrator of the U.S. Environmental Protection Agency (EPA) was authorized to establish a Drinking Water State Revolving Fund (DWSRF) loan program to assist States in financing local public water system infrastructure needed to achieve or maintain compliance with SDWA requirements in order to protect public health.

The Georgia General Assembly created the Georgia Environmental Finance Authority (GEFA) in 1986 as the successor agency of the Georgia Development Authority Environmental Facilities Program. GEFA is the primary State agency for assisting local governments in financing the construction, extension, rehabilitation, repair and replacement and securitization of environmental facilities necessary for public water purposes. 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 Safe Drinking Water Act requirements or to protect public health. The areas of infrastructure improvement funded through the DWSRF program include treatment, sources of public water supply, transmission (water mains and pumping facilities), and storage. As of June 30, 2013, more than \$342 million in project assistance has been awarded for 188 water system improvement projects, benefiting approximately 3.4 million citizens in Georgia.

The primary goal of the DWSRF program is to better protect public health. To accomplish this goal, the DWSRF program directs funds toward the most pressing compliance and public health related needs. As of June 30 2013, \$26.8 million of the total \$342 million in loans (7.8%) has

been to help non-compliant systems achieve compliance with drinking water standards. The remaining loan funds have been used to help utilities maintain compliance with drinking water regulations. A secondary goal of the DWSRF program is to support the continuation of assistance and prevention programs to ensure compliance with drinking water standards. Georgia EPD attempts to utilize 100% of the Public Water System Supervision set-aside from each capitalization grant to accomplish this goal. As stated in the Intended Use Plan, Georgia tries to maximize assistance to small or disadvantaged communities in Georgia serving less than 10,000 people. Refer to Table 11 for the annual number of assistance agreements by population size.

Table 11. DWSRF Project Assistance Agreements.

DWSRF Assistance by Population Size	Annual Number of Projects Receiving Assistance									
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Less than 500	0	0	1	5	0	3	5	4	4	2
501 – 3,300	0	0	4	2	4	5	4	3	5	3
3,3001 – 10,000	0	0	3	3	0	0	3	1	2	1
10,001 – 100,000	0	0	1	0	2	1	0	5	0	3
100,001 and Above	0	1	1	0	0	0	1	2	0	0
Total Number of Agreements	0	1	10	10	6	9	13	15	11	9
<i>Cumulative Number of Agreements: 84 (through 2006)</i>										

Table 11. DWSRF Project Assistance Agreements (continued).

DWSRF Assistance by Population Size	Annual Number of Projects Receiving Assistance									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Less than 500	2	2	1	3	2	2	2			
501 – 3,300	3	3	1	6	5	8	4			
3,3001 – 10,000	2	0	0	7	14	2	4			
10,001 – 100,000	4	1	0	12	0	5	6			
100,001 and Above	0	0	2	0	1	0	0			
Total Number of Agreements	11	6	4	28	22	17	16			
<i>Cumulative Number of Agreements: 188 (through 2013)</i>										

Figure 6 displays the total dollar amount of DWSRF project assistance provided to water systems each year from FY 1997 through FY 2013 (in million \$). In FY 2012, approximately \$14.5 million in DWSRF assistance was awarded for 17 projects. A total of 12 of these projects benefited water systems serving less than 10,000 persons. In FY 2013, approximately \$38 million in DWSRF assistance was awarded for 16 projects. A total of 10 of these projects benefited water systems serving less than 10,000 persons.

Figure 6. DWSRF project financial assistance.

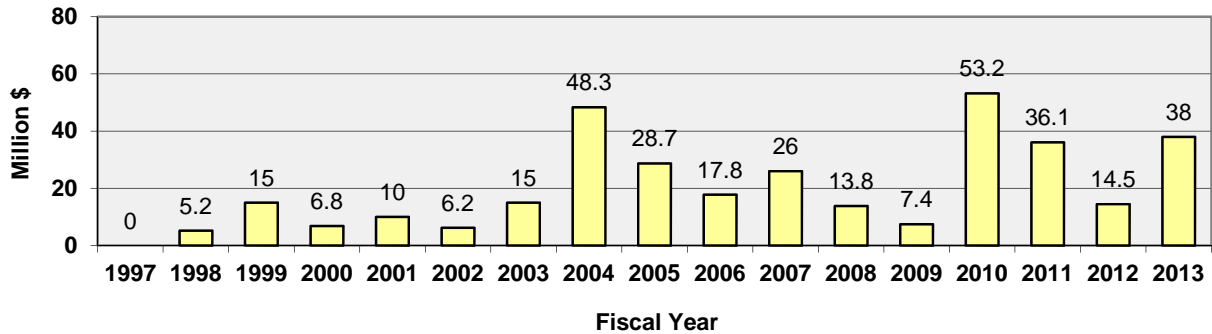


Table 12 displays detailed statistics on DWSRF project assistance for the period from FY 1997 through FY 2013 by project category.

Table 12. DWSRF project financial assistance by category.

Category	Yearly Assistance in Millions (1997 – 2005)								
	1997	1998	1999	2000	2001	2002	2003	2004	2005
Treatment	0	0	7.5	0.54	0	0.106	2.7	18.3	14.2
Distribution	0	0	5.2	3.3	8.2	2.8	6.1	22.8	10.3
Source	0	5.16	1.8	1.11	0.93	0.73	1.4	1.06	1.6
Storage	0	0	0.4	1.7	0.92	2.4	4.8	5.0	2.6
Other	0	0	0.052	0.17	0	0.17	0	1.0	0.02
Cumulative Total Dollar Amount: \$135,216,124 (through 2005)									

Table 12. DWSRF project financial assistance by category (continued).

Category	Yearly Assistance in Millions (2006 – 2013)								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Treatment	1.95	11.75	0.06	0	8.3	7.34	0	7.30	
Distribution	11.79	13.24	8.53	6.1	41.3	21.38	12.18	21.47	
Source	1.41	0.396	1.19	1.0	3.5	3.18	1.27	3.99	
Storage	2.32	0.57	4.06	0.1	3.5	4.22	1.05	5.21	
Other	0	0	0	0	0	0	0	0.06	
Cumulative Total Dollar Amount: \$341,712,897 (through 2013)									

GEFA continues to concentrate on strengthening the Authority's internal processes in anticipation of the future maturity of the DWSRF program. GEFA has also strived to meet the timely and expeditious use of projects funds to meet the binding commitment and un-liquidated obligation requirements of the DWSRF Program.

STATEWIDE WATER MANAGEMENT PLAN: In order to ensure the availability of high quality and reliable drinking water to the citizens of Georgia, EPD and Georgia's 10 Regional Water Planning Councils are required (by a 2008 joint House-Senate resolution that adopted a Comprehensive Statewide Water Management Plan) to periodically review, revise and implement 10 regional water plans (regional plans). An 11th regional plan is developed and periodically updated by the Metropolitan North Georgia Water Planning District under a separate statutory authority. These regional plans help Georgia manage its water supply in a sustainable manner and protect public health and natural eco-systems. The regional plans help public water systems address water supply and capacity development issues by providing guidance for a sustainable, reliable and safe supply of water for all users in Georgia.

As required by the State Water Plan and in accordance with EPD guidance, regional plans are developed by Regional Water Planning Councils and then critically reviewed by EPD before adoption. The regional plans incorporate water resources assessments (i.e., surface water, groundwater, and water quality) that determine the sustainable capacities of Georgia's water resources, and 40 year projections of future water needs (i.e., municipal, industrial, agricultural, and thermo-electric). In those cases when the projected water need exceeds sustainable capacities, the regional plans identify appropriate water management strategies to be implemented by water users (including public water systems) in order to stay within sustainable capacities. The initial set of regional water plans were adopted in November 2011. The regional plans are scheduled to be updated in 2016. As provided in the State Water Plan, the regional plans are used to guide decisions regarding state grants and loans to public water systems, including DWSRF loans.

During FY2012, EPD spent \$1,217,170 from DWSRF funds to complete the regional plans and conduct water quality monitoring, training, and technical assistance associated with state and regional water planning activities. During FY2013, EPD invoiced a total of \$839,946 from DWSRF set-asides, mostly for EPD personnel working directly on regional water planning activities.

CONCLUSION

This report has been prepared to outline the progress made in developing and implementing Georgia's capacity development authority and strategy programs. EPD has established a program that provides a solid foundation for current and future activities to help insure all Georgians are provided safe, reliable drinking water. To date, significant progress has already been made towards improving the technical, managerial, and financial capacity of the public water systems in Georgia. New systems are being designed and constructed to meet more stringent standards for quality and reliability, and new water system owners and operators are required to demonstrate adequate managerial and financial capacity prior to commencing operation. At the same time, 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 utilities.

Under the various current 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. 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.

While EPD has the lead role and regulatory authority for the capacity development program, this agency will not 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 develop effective working relationships with other State and local agencies and organizations to further achieve Georgia's long-term goals.

Attachment A - FY11 FY12 FY13 List of New CWS.ETT List.pdf

	A	B	C	D	E	F
1	PERMIT DATE	WSID	NAME	TYPE	ETT ≥ 11?	VIOLATIONS
2	08/02/10	GA0550053	CHATTOOGA CO-CLOUDLAND EXTENSION	C		
3	08/25/10	GA1830062	HORSE CREEK FARMS	C		
4	10/18/10	GA0290100	SAVANNAH - GENESIS POINT	C		
5	10/22/10	GA2230000	DALLAS	C		
6	10/27/10	GA1790158	YELLOW BLUFF WATER SYSTEM	C		
7	02/22/11	GA0310267	CROSSWAY COTTAGES	C		
8	02/24/11	GA1030152	INDIGO WOODS	C		
9	03/17/11	GA2810046	SPANIARD HILLS SUBDIVISION	C		
10	04/08/11	GA0310258	GRAYSTONE APARTMENTS	C		
11	04/28/11	GA0310273	SANDALWOOD S/D	C		
12	04/28/11	GA0310282	COYOTE CROSSING	C		
13	05/02/11	GA2090018	THREE RIVERS ESTATES	C	Y	Nitrates, TCR, CCR, LCR
14	05/26/11	GA1030157	PENNINGTON ESTATES WATER SYSTEM	C		
15	07/07/11	GA3110085	RAINBOW RETREAT S/D	C		
16	09/14/11	GA0710097	SHADOWOODS SUBDIVISION	C		
17	09/14/11	GA1870087	SETTLERS BLUFF SUBDIVISION	C		
18	11/21/11	GA1830063	MURRAY'S CROSSING SUBDIVISION	C		
19	03/12/12	GA3110109	YONAH EAST SUBDIVISION	C		
20	10/04/12	GA1830060	BRIAR CREST	C		
21	10/05/13	GA1830061	TIMBERLAND	C		
22	01/13/13	GA0850029	THE VILLAGE AT PARADISE VALLEY	C		
23	01/13/13	GA1830057	PINE VILLAGE / IRISH ACRES	C		
24	02/11/13	GA0710093	HILLTOP SUBDIVISION	C		
25	03/11/13	GA1330076	ROCKPORT WATER	C		
26	03/26/13	GA0310260	SPENWAY SUBDIVISION	C		
27	03/26/13	GA0310265	WOODLAKE SUBDIVISION	C		
28	04/18/13	GA0310291	LUCY LANE	C		
29	04/30/13	GA1110091	MOUNTAIN HIGH SUBDIVISION	C		
30	05/15/13	GA0430031	CEDAR PLANTATION ASSISTED LIVING	C		
31	05/29/13	GA2750080	SOUTHERN POINTE SUBDIVISION	C		

Attachment A - FY11 FY12 FY13 List of New NTNCWS.ETT List.pdf

	A	B	C	D	E	F
1	PERMIT DATE	WSID	NAME	TYPE	ETT ≥ 11?	VIOLATIONS
2	03/11/11	GA2050041	NORTH MITCHELL COUNTY ELEMENTARY SCHOOL	NTNC		
3	08/26/11	GA1230086	NO RUST, LLC / FM STAINLESS	NTNC		
4	03/11/13	GA1030154	COURTHOUSE ROAD WATER SYSTEM	NTNC		

Attachment A - FY11 FY12 FY13 List of New TNCWS.ETT List.pdf

	A	B	C	D	E	F
1	PERMIT DATE	WSID	NAME	TYPE	ETT ≥ 11?	VIOLATIONS
2	08/02/10	GA1450044	OAKHURST	NC		
3	09/09/10	GA2410135	SOUTHEASTERN EXPEDITIONS, LLC	NC	Y	Nitrates, TCR
4	05/10/11	GA1330077	PENFIELD CHRISTIAN HOMES - CENTRAL	NC		
5	05/26/11	GA1390133	NORTH GEORGIA CANOPY TOURS	NC		
6	06/03/11	GA2910077	RIVER'S EDGE RV PARK, HOA	NC		
7	06/28/11	GA0770136	DNR-CHATTAHOOCHEE BEND STATE PK VIST CEN	NC		
8	06/28/11	GA0770137	CAMPGRND	NC		
9	07/14/11	GA1230085	CAMP HIGHLAND	NC		
10	07/25/11	GA1410022	SHOULDERBONE CAMPGROUND	NC		
11	09/26/11	GA3110110	TEAMEFFORT SAUTEE	NC		
12	09/26/11	GA1390134	CAMP HOPE	NC		
13	01/04/12	GA2910101	RIVER'S EDGE RV PARK PHASE II	NC		
14	02/07/12	GA1050052	MICHAEL CASE RV CAMPGROUND	NC		
15	04/10/12	GA2510058	BSA-CAMP BLACK CREEK	NC		
16	04/10/12	GA0330063	RIVER WOODS RV PARK	NC		
17	04/19/12	GA1990054	OSCARS STEAK & SEAFOOD	NC		
18	06/26/12	GA2910103	WILDCAT LODGE & CAMPGROUND	NC		
19	07/23/12	GA1050053	KEY CLUB	NC		
20	08/08/12	GA2930056	SHRENO'S RESTAURANT	NC		
21	08/10/12	GA1070040	MSO WATER SYSTEM, INC.	NC		
22	10/12/13	GA2750077	LAKEVIEW DRIVE WATER SYSTEM	NC		
23	12/04/12	GA0530010	COLUMBUS - LEYTE FIELD	NC		
24	12/04/12	GA0530012	COLUMBUS - TRICOLOR	NC		
25	02/12/13	GA2610056	BRICKYARD PLANTATION II	NC		
26	04/30/13	GA0530011	MALONE 17 WATER SYSTEM	NC		
27	05/30/13	GA1390135	DNR-DON CARTER STATE PARK	NC		

Georgia Rural Water Association
Public Water System Capacity Development Activities
July 1, 2012 through June 30, 2013

Technical Assistance, Education, Outreach Efforts:

GRWA Conferences:

<u>Dates</u>	<u>Location</u>	<u>Attendance</u>
Oct. 28-30, 2012	Helen	<u>351</u> water system personnel Total attendance <u>637</u>
May 19-21, 2013	Jekyll Island	<u>523</u> water system personnel Total attendance <u>1,019</u>

GRWA Water System Technical Assistance Contacts: **(NOT DWSRF-funded)**

<u>Dates</u>	<u>On-site TA Contacts</u>
7/1/12 to 6/30/13	<u>2,589</u>

#####

Technical Assistance Visits and SOC Sampling (funded by 2% and 15% DWSRF Set-asides)

2% and 15% DWSRF Set-asides Technical Assistance Contract on-site contacts from 7/1/2010 to 6/30/2011:

Number of "circuit rider" type technical assistance (face-to-face contacts) visits made:

Year	Total Number of systems visited	Number of Private systems visited	number of Govt systems visited	Systems serving <3,300 people
2012-13	500	139	361	379

In addition to the number of public water systems visited for technical assistance under this contract, 406 systems were also visited for the collection of SOC samples.

Capacity Development Training Activities supported by DWSRF 2% and 15% set-asides.

Small Water System Training and Technical Assistance Contract:

Training: 16 workshops attendance: 355

Other Training for Water System Operators and Personnel

7/1/2012 thru 6/30/2013.

YEAR	No. of Classes	No. of Operators	Class Topics
2012-13	66	1,146	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; Basic and Applied Math; Pump; Safety; Confined Space Entry; O & M of Process Analyzers.

#####

Legislature funded activities: The funding received from the State Legislature helps to support the entire State-wide water and wastewater programs of GRWA. The funding is used to help offset the costs associated with the day-to-day operations of delivering training and technical assistance to water and wastewater system operators, managers and other personnel located throughout Georgia.



Georgia Water & Wastewater Institute, Inc.

A Subsidiary of the Georgia Association of Water Professionals

511 Stadium Drive
Carrollton, Georgia 30117
(770) 214-0153
(770) 214-0219 - FAX

July 31, 2013

MEMORANDUM

To: Ray Hashemi, Georgia Environmental Protection Division

From: Joel A. Peacock, Director of Operations
Georgia Water & Wastewater Institute

RE: Operator Training Program Update – Fiscal Year July 1, 2012 – June 30, 2013

Georgia's water and wastewater utilities have recently entered a new era in protecting public water supplies and providing safe tap water. Today, new challenges and issues face utility operations that require increased support and guidance from State agencies as well as training from professional organizations such as the Georgia Water & Wastewater Institute.

GWWI was separately incorporated in 1993, and today provides the majority of water and wastewater operator training in the State of Georgia, operating with financial assistance provided through contracts with EPD and modest tuition fees. The curriculum includes training in the areas of basic and advanced water and wastewater treatment plant operations, industrial wastewater treatment plant operations, laboratory operations, backflow prevention and cross-connection control, and numerous related courses in such areas as utilities supervision and management, safety, and maintenance. GWWI annually offers approximately 94 courses, with a total attendance of over 1401 students. GWWI is dedicated to education and dissemination of technical and scientific information.

GWWI is pleased to report the following information related to Operator Training in the State of Georgia.

Reporting Period of July 1, 2012 – June 30, 2013

1. DWSRF 15% Set-aside Funds: Class 4 Water Operator Training Update:

Relating to the Class IV Water Operator Training Program, GWWI completed the following during the 2012 fiscal period of July 1, 2012 - June 30, 2013:

- Offered 3 Class IV Water Training Course
- Successfully trained 12 operators

While attending these courses, the operators were informed on Georgia's groundwater sources, including types of aquifers and wells, groundwater protection, water treatment, and proper operation of a small water plant under state and federal guidelines. Major topics include Groundwater Resources in Georgia, The Safe Drinking Water Act, Monitoring Requirements, and Basic Mathematics.

Due to the economic climate, cut in travel and training budgets, GWWI has take extra measures in attempts to attract class IV operators to the Class IV training course. We continue to look into ways to take these training materials to the operators which are in need. GWWI is open to any suggestions of efforts to attract Class IV operators.

2. DWSRF 10% Set-aside Funds: Water and Wastewater and Laboratory Analysts Training

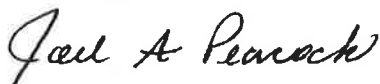
Relating to the Water, Wastewater and Laboratory Analysts Training, GWWI completed the following during the 2012 fiscal period of July 1, 2012 - June 30, 2013:

- Conducted 94 courses related to water, wastewater and/or laboratory operations.
- Successfully trained 1401 operators

GWWI is dedicated to education and dissemination of technical and scientific information. We welcome any comments and/or questions related to our training. Please contact us at (770) 618-8690 ext. 17.

Thank you for your continued support of our efforts.

Sincerely,



Joel A. Peacock,
Director of Operations
Georgia Water & Wastewater Institute, Inc.



Georgia Water & Wastewater Institute, Inc.

A Subsidiary of the Georgia Association of Water Professionals

511 Stadium Drive
Carrollton, Georgia 30117
(770) 214-0153
(770) 214-0219 - FAX

July 31, 2013

MEMORANDUM

To: Ray Hashemi, Georgia Environmental Protection Division

From: Joel A. Peacock, Director of Operations
Georgia Water & Wastewater Institute

RE: Technical Assistance, Education & Outreach Update
Fiscal Year July 1, 2012 – June 30, 2013

Georgia's water and wastewater utilities have recently entered a new era in protecting public water supplies and providing safe tap water. Today, new challenges and issues face utility operations that require increased support and guidance from State agencies as well as training from professional organizations such as the Georgia Water & Wastewater Institute.

The Georgia Water & Wastewater Institute goes beyond typical classroom type training in efforts to reach the needs of the operators in the State of Georgia. In doing so, GWWI participates in many events coordinated by our parent organization, the Georgia Association of Water Professionals (formerly GW&PCA). GAWP conducts numerous conferences and workshops focused on providing continuing education opportunities for professionals in the water and wastewater industry. At these events, GWWI participates in the presentation of technical papers and "short" training sessions throughout the conference and/or event. GWWI also participates in the exhibiting functions of these events by having a display booth explaining and advertising the training opportunities offered by GWWI. GAWP also conducts planning sessions for small, medium, and large utility directors as well as Association-wide District Director Meetings in efforts to better address the needs of the profession around the State. At these planning type meetings, GWWI attends, not only to make utility directors statewide aware of our training programs and offerings, but also to serve as a resource to the utilities as they plan for the future. This has proven to be a very effective tool for both the utility as well as GWWI in making sure the operators receive the types of training that are needed and required.

The following is a report of the events GWWI attended and participated in during Fiscal Year July 1, 2012 – June 30, 2013.

- **July 15-18, 2012** **GAWP Annual Conference & Expo** **Savannah, GA**
 - **(1,074 attendees)** GAWP's Annual Conference includes sessions on traditional topics such as water and wastewater treatment plant operations, maintenance and design, laboratory operations, and safety, as well as timely discussions on policy issues such as drought contingency planning, wastewater re-use, and legislative policy.

- **July 18, 2012** **Backflow Prevention Specialty Workshop** **Savannah, GA**
 - **(24 attendees)** The Backflow Prevention Specialty Workshop is designed to provide continuing education to Certified Backflow Testers. Some of the training topics include updates on rules, current trends and safety.

- **November 13-14, 2012** **Fall Conference & Expo** **Dalton, GA**
 - **(537 attendees)** The Fall Conference is targeted towards the operations-level professionals and includes sessions on traditional topics such as water and wastewater treatment plant operations, maintenance and design, laboratory operations, and safety.

- **December 11, 2012** **Backflow Prevention Specialty Workshop** **Marietta, GA**
 - **(55 attendees)** The Backflow Prevention Specialty Workshop is designed to provide continuing education to Certified Backflow Testers. Some of the training topics include updates on rules, current trends and safety.

- **March 26-27, 2013** **Industrial Conference & Expo** **Athens, GA**
 - **(305 attendees)** The Industrial Conference goes beyond just dealing with the water environment, and includes sessions on all aspects of industrial pollution control and prevention. This conference is targeted towards industrial environmental managers and operators, consulting engineers, regulatory personnel, equipment manufacturers and their representatives, and others concerned with industrial pollution control. Sessions addressed a broad array of topics, including regional water quality issues, air quality, remediation technology, data management, corrective action planning, wastewater evaluation technology, environmental management, site- assessment technology, environmental planning, Clean Water Act compliance, solid waste management.

- **April 16-17, 2013** **Spring Conference & Expo** **Macon, GA**
 - **(565 attendees)** The Spring Conference is targeted towards the operations-level professionals and includes sessions on traditional topics such as water and wastewater treatment plant operations, maintenance and design, laboratory operations, and safety.


- **April 30, 2013** **Backflow Prevention Specialty Workshop** **Marietta, GA**
 - **(75 attendees)** The Backflow Prevention Specialty Workshop is designed to provide continuing education to Certified Backflow Testers. Some of the training topics include updates on rules, current trends and safety.

During the Fiscal Year July 1, 2012 – June 30, 2013 period, GWWI's Technical Assistance, Education & Outreach efforts reached over 2,635 water and wastewater treatment plant operators, maintenance personnel, laboratory analyst, design engineers, consultants, and other concerned about Georgia water and wastewater issues.

GWWI is dedicated to education and dissemination of technical and scientific information. We welcome any comments and/or questions related to our training. Please contact us at (770) 618-8690 ext. 17.

Thank you for your continued support of our efforts.

Sincerely,

A handwritten signature in cursive script that reads "Joel A. Peacock".

Joel A. Peacock,
Director of Operations
Georgia Water & Wastewater Institute, Inc.

391-3-5-.39 Public Water System Classification. ~~Amended.~~

(1) **Purpose.** In accordance with Section 10 of the Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act (O.C.G.A. Section 43-51-1) the following classifications shall be considered as minimum levels, and the Division may classify any system or plant at a higher level if the complexity of the system or plant warrants such higher classification in the judgment of the Division. Any system or plant not fitting any of the following standard descriptions shall be classified individually according to the judgment of the Division. Where water is supplied to a distribution system from two or more sources, the classification may be set by the Division.

(2) **Minimum Classifications.** The following classifications shall be considered as minimum levels:

Public Water System Classification for Community and Non-transient Non-community Systems¹

System Type	Class I	Class II	Class III	Class IV
Surface water with conventional treatment plant	5.0 MGD or greater	4.99 MGD or less	<u>n/a</u>	<u>n/a</u>
Surface water with package or non-conventional treatment plant	1.0 MGD or greater	0.99 MGD or less	<u>n/a</u>	<u>n/a</u>
Surface water with approved high-rate filtration	3.0 gpm/sq.ft. or greater	Less than 3.0 gpm/sq.ft.	<u>n/a</u>	<u>n/a</u>
Groundwater under the direct influence of surface water	1.0 MGD or greater	Greater than 0.1 MGD to 0.99 MGD	0.1 MGD or less	<u>n/a</u>
Groundwater	50,000 or greater population	10,000 to 49,999 population	1,000 to 9,999 population	25 to 999 population
Distribution systems	Certification is required for the operator of public water distribution systems.			

Note: ¹ MGD is million gallons per day; gpm/sq.ft. is gallons per minute per square-foot filter surface area; n/a is not applicable.

(3) **Groundwater Transient Non-community Water Systems.** All Transient Non-community water systems with groundwater sources must have at least a Class IV operator certification.

(4) **Surface Water Transient Non-community Water Systems.** Certification of Transient Non-community water systems with surface water will be specified in their permit to operate a public water system.

(5) **Higher Classification.** When the complexity of water treatment warrants it, a higher classification may be required and specified in the permit to operate a public water system.

Authority O.C.G.A. Sec. 12-5-170 *et seq.* **History.** Original Rule entitled “Consideration of an Exemption Request” adopted. F. July 5, 1977; eff. July 26, 1977, as specified by Rule 391-3-5-.47. **Repealed:** New Rule entitled “Public Water System Classification” adopted. F. May 12, 1989; eff. June 1, 1989. **Amended:** F. Sept. 26, 1997; eff. Oct. 16, 1997. **Amended:** F. Sept. 29, 2000; eff. Oct. 19, 2000.