

Overview of Conservation-Oriented Statutes, Laws, Rules & Regulations

Georgia's water conservation statutes, rules, regulations and practices have evolved slowly since the late 1970's. It is safe to say that Georgia has moved from passive conservation with the adoption of low-flow fixture legislation in the 70s and 80s, toward more active conservation planning requirements that began in 1990s (rules and regulations requiring water conservation plans) and were recently revived with the Metro Water Planning District (2001) and Flint River Basin (2004) planning requirements.

The dilemma comes with the realization that active conservation may still not be enough to meet the growing demands and stresses on our country's water resources. Georgia's evolution of water conservation efforts is similar to that of other states. Many other states however have already moved from passive, through active and now are embracing aggressive water conservation to help alleviate the many water resource problems they face.

Georgia Statute – Official Code of Georgia Annotated (O.C.G.A.)

Water Quality and Control Act (O.C.G.A. §12-5-21(a))

It is declared to be the policy of the state of Georgia that,
“the water resources of the state shall be utilized prudently for the maximum benefit of the people, in order to restore and maintain a reasonable degree of purity in the waters of the state and an adequate supply of such waters, and to require where necessary reasonable usage of the waters of the state ...To achieve this end, the government of the state shall assume responsibility for the quality and quantity of such water resources and the establishment and maintenance of a water quality and water quantity control program adequate for present needs and designated to care for the future needs of the state...”

Ground-water Use Act of 1972 (O.C.G.A. 12-5-91) (Ga. L. 1972 p.976, §2.)

declares the policy of the state that,
“the water resources of the state be put to beneficial use to the fullest extent to which they are capable, subject to reasonable regulation in order to conserve these resources and to provide and maintain conditions which are conducive to the development and use of water resources.”

1978 Georgia Water Conservation Law

(Excerpts from the "Georgia Water Conservation" Booklet, printed March 1981 and December 1983. Georgia DNR-EPD.)

What the Law Requires

The 1978 session of the Georgia General Assembly passed a law that provided for a method of achieving reduction in water demands. The law says that after July 1, 1980, toilets, faucets, and showerheads employed in the construction of any new building and in the renovation, repair, or addition to any existing building must be water-conserving. Counties and cities throughout the state were authorized to adopt ordinances to enforce construction standards and directed to provide for certain exemptions and penalties. The following table compares typical water consumption rates, at the time, with those required in the new law for water-conserving type fixtures.

Construction Standards

Plumbing Fixture	Typical Water Usage	Water Usage with Conservation
Toilet	5-7 gallons per flush	3.5 gallons per flush
Shower	6-10 gallons per minute	3.5 gallons per minute
Faucet	4-7 gallons per minute	3.5 gallons per minute

Current status -----

No longer active, because federal agencies required more water conserving fixtures in 1990s.

Notes -----

EPD developed a model water conservation ordinance to accompany the Water Conservation Law. The following provisions might be included in a water conservation ordinance:

- a. *In all new construction, only fixtures and trim not exceeding the following flow rates or water usage shall be installed.*
 - Water closets, tank type – 3.5 gallons per flush*
 - Urinals, tank type – 3.0 gallons per flush*
 - Showerheads – 3.5 gallons per minute*
 - Lavatory, sink faucets – 3.5 gallons per minute*
- b. *All flow rates shall be tested at 60 PSI.*
- c. *Exceptions:*
 - Water closets designed to withstand unusual abuse or installation in a penal institution.*

Water closets, tank type designed for the handicapped.
Water closets, tank type designed for juveniles.
Industrial flood showerheads (emergency use.)
Water closets, one piece combination.

- Local governments were allowed to implement the low flow plumbing fixture requirements of the Law in two different ways. 1) adopt the Georgia Plumbing Code (GPC) in its entirety, the statewide flow standards were included. 2) if a local government used another code, such as the Southern Building Code Congress' Standard Plumbing Code which, at the time, did not require low flow fixtures, then a local ordinance needed to include low flow fixtures.
- Law stated that any person who installs any water closets, faucet or showerhead, after July 1, 1980, in violation of this ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punished as a misdemeanor.

1992 Water Conservation Law

What the Law Requires

All residential and commercial buildings constructed after 1992 must be installed with “Ultra-low flow” (ULF) toilets, shower heads, and faucets (O.C.G.A. §8-2-3(b)).

Plumbing Fixture	Typical Water Usage	Water Usage with Conservation
Toilet	3.5 gallons per flush	1.6 gallons per flush
Shower	3.5 gallons per minute	2.5 gallons per minute
Faucet	3.5 gallons per minute	2.5 gallons per minute
Urinals		1.0 gallons per flush

Current Status ----- Active

Notes -----

- Required of all states to comply with the U.S. Energy Policy Act of 1992 which was intended to generate consumer awareness of the need to conserve water as well as the benefits and financial savings that can accrue by reducing the need for new water supplies and treatment facilities, lowering operation and maintenance costs for water and sewer utilities, and reducing the amount of energy used to heat, treat, and transport water (O.C.G.A. §8-2-2).
- Now only low flow fixtures can be purchased in Georgia
- Georgia Environmental Facilities Authority (GEFA) requires localities to have active ULF ordinances to receive a grant or loan.
- Data regarding low flow fixtures and ordinances is not digital.

2001 North Georgia Metropolitan Water Planning District

What the Law Requires

The 2001 Metropolitan North Georgia Water Planning Act created a planning entity dedicated to developing comprehensive regional and watershed specific plans to be implemented by the 16-county governments located within the Metropolitan Atlanta.

The act calls for the creation of a water supply and water conservation management plan which

“... shall build upon and be coordinated within existing watershed planning efforts undertaken by local governments in the district area and plans otherwise developed by the state” (O.C.G.A. §12-5-584(a)).

The code elaborates that the director of EPD shall not approve any application by a local government in the district (for water supply withdrawal, land application system, or wastewater discharge),

“... unless such local government is in compliance with the applicable provisions of the plan or the director certifies that such local government is making good faith efforts to come into compliance.” The act also states that if a local government within the district fails to comply with the plan, the entity will be ineligible for state grants or loans for water supply and conservation projects (O.C.G.A. §12-5-584(d)(4)).

Current Status -----Active

Notes -----

- Intent of the law is “to create a planning entity dedicated to developing comprehensive regional and watershed-specific plans to be implemented by local governments in the district.” (O.C.G.A. §12-5-584)
- Intent of water conservation research was to determine cost-effective measures only – very little consideration for impact of the resource itself.
- Extensive modeling research used to identify “cost effective” conservation measures and the conservation benefits of implementing them. The water conservation requirements adopted by the governing board in 2003 as part of the “Water supply and conservation plan” include:
 - Establish conservation pricing in all District utilities

- Enact legislation to require plumbing retrofits on home resales
 - Enact legislation to require low-flush urinals for new industrial, commercial and institutional buildings
 - Enact legislation to require rain sensor shut-off switches on new irrigation systems
 - Require sub-unit meters in new multi-family buildings
 - Assess and reduce water system leakage
 - Conduct residential audits
 - Distribute low-flow retrofit kits to residential users
 - Conduct commercial water audits
 - Implement education and public awareness plan
 - Establish review and oversight of water conservation implementation and performance
- EPD has recently drafted guidelines to inform locals how permits will be granted or denied based on their planning efforts.

Agricultural Water Use and Metering

What the Law Requires

USE PERMITTING

Under the 1988 Amendments to the Georgia Water Quality Control Act, an Agricultural Water Use Permit is required for all surface water withdrawals of more than 100,000 gallons per day (gpd) for farm use. The Amendments define “farm uses” as follows:

“...irrigation of any land used for general farming, forage, aquaculture, pasture, turf production, orchards, or tree and ornamental nurseries; provisions of water supply for farm animals, poultry farming, or any other activity conducted in the course of farming operations. Farm uses shall also include the processing of perishable agricultural products and the irrigation of recreational turf, except in the Chattahoochee River watershed upstream from the Peachtree Creek confluence, where irrigation of recreational turf shall not be considered a farm use.”

Permits are perpetual and are transferred to subsequent landowners with the sale of the irrigated land (or activity) for which the original permit was issued.

Any person who desires to commence a farm use for which a permit issued after July 1, 2003, shall not commence such use prior to the installation of a water-measuring device by the Georgia Soil and Water Conservation Commission (House Bill 579, Section 2, (E)(3)).

After July 1, 2009, no one required to have a permit for farm use of water (Chapter 5, Title 12 Official Code of Georgia Annotated), shall withdraw water for a farm use without having a water measuring device in operation that has been installed by the Georgia Soil and Water Conservation Commission or its contractors (House Bill 579, Section 2, (E)(3)).

METERING PROGRAM

In 2004, the General Assembly passed a bill to provide money for the SWCC to *“implement a program of measuring farm uses of water in order to obtain clean and accurate information on the patterns and amounts of such use, which information is essential to proper management of water resources by the state and useful to farmers for improving the efficiency and effectiveness of their use of water, meeting the requirements of subsection (m) of this Code section, and improving water conservation. Accordingly, the state Soil and Water Conservation Commission shall on behalf of the state purchase, install, operate, and maintain water –metering devices for farm uses that are required by this Code section to have permits.”*

SWCC was directed to:

- Establish a priority system for installation of the meters by July 1, 2003
- Install all meters by July 1, 2009 – only one meter per farm
- Install free meters for permit applicants prior to Dec. 2002.
- No new farm use permits allowed without a meter, after July, 2003.
- After July 2009, no one allowed to use water for farm use that requires a permit without having an operable meter (that has been installed by the SWCC).
- retrofit all wells with meters and reporting information by 2009

Current Status-----Active

Permitting

Currently EPD staff condition all agricultural water use permits with the following standard conditions :

1. The use of surface water is limited to the quantity and purpose specified by the applicant.
2. EPD may transfer an Agricultural Use Permit upon receipt of written notification, with supporting documentation, by the owner of the lands irrigated under the permit.
3. The permit covers only the specified surface water source, acreage, irrigated property and pump location(s) identified in the application.
4. The permittee must install a flow meter on the permitted well or surface pump prior to the withdrawal of water.
5. Special conditions may be added depending on the withdrawal scenario. These may include: Establishing/maintaining water use records, water use reporting, installation/maintenance of flow monitoring equipment.

Metering

- All wells and pumps are GPS and GIS recorded
- This research has spurred other research groups to collect and analyze water use/withdrawal data – AG water Pumping Report by NESPAL, for example.
- By January, 2006, approximately 1650 will be installed.
- Special care will need to be taken to integrate information collected by EPD and information collected by the SWCC

1987 Municipal and Industrial Water Conservation Plans

What The Law Requires

The general policy for water withdrawals within the state requires a withdrawal of or in excess of 100,000 gallons of water a day receive a permit from the EPD. Applications for new or increased **surface water and groundwater withdrawals** shall contain a water conservation plan approved by the director and prepared based on guidelines issued by the director, except for permits solely for agricultural use (O.C.G.A. 12-5-31(d) and 12-5-96(a)(2)). Further, it is determined that applications for surface water withdrawals will be evaluated based on a water development and conservation plan for the applicant or for the region. Such water development and conservation plan shall

“promote the conservation and reuse of water within the state, guard against a shortage of water within the state, promote efficient use of the water resource, and be consistent with the public welfare of the state” (O.C.G.A. 12-5-31(h)).

For a **groundwater withdrawal** permit of or in excess of 100,000 gallons a day to be granted, EPD or the Board of Natural Resources shall consider a regional water development, conservation and sustainable use plan, where applicable (O.C.G.A. 12-5-96(d)(9)). Such a plan may be developed by the EPD or a party designated by the EPD. It shall

“serve to promote the conservation and reuse of water within the state, guard against shortage of water within the state and region, and promote efficient use of water resource...” (O.C.G.A. 12-5-96(e)).

What the Rules and Regulations Require

According to R&R 391-3-6-.07(4)(b)(8) and R&R 391-3-2-.04(11) a water conservation plan for non-farm uses shall include information regarding system management, treatment management and following components.

For overall **system management** the applicant is required to submit the following information :

- A minimum of twelve consecutive months (within the past 24 months) of data concerning unaccounted for water (UAW). UAW is defined as “the difference between the total amount of water pumped into the water system from the source(s) and the amount of metered water use by the customers of the water system.” It is to be expressed as a percentage of the total water pumped into the system (R&R 391-3-6-.07(2)(n) and 391-3-2-.02(s)).
- A description of any current or planned programs to reduce UAW such as those listed below:

- Leak detection and elimination;
- Availability of accurate maps of the water system;
- Meter maintenance, testing, replacement, calibration, etc;
- Prevention of tank overflows;
- Flushing programs without degradation of water quality;
- Prevention of unauthorized water use – fire hydrants, fire lines, etc;
- A list of unmetered service connections including publicly owned facilities, churches, etc.
- Other;
 - A list of inter-connections with other water systems and a description of any contractual agreements, type (emergency back-up, wholesale sale or purchase) and purchase amounts;
 - Any additional current or planned activities pertaining to system management that will contribute to water conservation. (R&R 391-3-6-.07(b)(8)(i) and 391-3-2-.04(11)(a)).

The applicant is also required to provide the following information regarding **treatment plant management** :

- The condition, calibration frequency, type, etc. of raw and finished water metering;
- An analysis of in-plant water use for filter backwashing, overflows, laboratory use, etc, as percentage of total plan production. Also, the plan must outline any ongoing or planned plant improvements (including schedules for planned improvements) and/or revised operational procedures to reduce in-plant use (R&R 391-3-6-.07(b)(8)(ii) and 391-3-2-.04(11)(b)).
- For groundwater withdrawals, a description or any recycling or reuse of filter backwash water must also be included in treatment plant management (R&R 391-3-2-.04(11)(b)(3)).

Conservation plans must also include a general description of the entity's **rate making policies**, accompanied by the following details:

- A list of non-billed service connections. Also, if available, a breakdown by number of meters or percent total production for each class of customer, e.g. residential, commercial, industrial, wholesale;
- A copy of the water rate structure currently in use including any surcharges, demand charges, etc., which may apply to certain customers and a description of the effects of this rate structure on water conservation;
- A description of any system policies concerning second meters for landscaping irrigation and any use of sewer meters for billing;
- Statements regarding the 1) if the system is self-supporting and 2) if the water system expenditures are subsidized by non-water/sewer system revenues (R&R 391-3-6-.07(b)(8)(iii) and 391-3-2-.04(11)(c)).

A description of the **plumbing ordinances and codes** under which the applicant functions must be included in the conservation plans. This section requires a description of the codes to ensure compliance with the ultra-low flow plumbing fixtures and any special requirements for outdoor water use (R&R 391-3-6-.07(b)(8)(iv) and 391-3-2-.04(11)(e)).

The permit applicant is required to also submit a description of any **recycling or reuse** of treated wastewater (R&R 391-3-6-.07(b)(8)(vi) and 391-3-2-.04(11)(f)).

The applicant is required to include a description of current or planned **education programs** designed to promote water conservation (R&R 391-3-6-.07(b)(8)(vi) and 391-3-2-.04(11)(g)).

EPD also requires any entity that receives a new or expanded water withdrawal permit to submit **progress reports** every five years. These progress reports outline actions and/or improvements made to conserve water and reduce water loss (R&R 391-3-6-.07(b)(8)(vii) and 391-3-2-.04(11)(h)).

Once the water withdrawal permit is granted, the permittee is required to submit to the director an **annual water use data report** describing UAW for the past 12 months (R&R 391-3-6-.07(4)(b)(8)(viii) and 391-3-2-.04(11)(i)).

Additionally, EPD requires **annual reports** be submitted to the director describing monthly average and maximum day use for each month of the previous calendar year (R&R 391-3-6-.07(15)).

Permittees are required to incorporate water conservation into **long-range planning**. This effort involves projecting water demand over a 20 year time period (using methods approved by the director) and incorporating the effects (or demand reductions) inherent in the implementation of new or enhanced water conservation programs (R&R 391-3-6-.07(b)(8)(ix) and 391-3-2-.04(11)(j)).

The permittee must also describe any **additional water conservation activities** (other than those are to be described in the permit application) (R&R 391-3-6-.07(b)(8)(x) and 391-3-2-.04(11)(k)).

The rules and regulations also allow the Director of EPD to request a water conservation plan from **public water systems** that withdraw water less than 100,000 gallons a day. Specifically, the rule reads, "Any applicant for a permit whose application is pending final consideration shall upon the request of the Director provide such additional information as may be necessary to enable the Director to properly pass upon the application. Such additional information may include, but not be limited to, ... water conservation plan..." (R&R 391-3-5-.17(3)).

Current Status-----*Active*

Notes -----

- 5-year conservation progress reports for groundwater permittees breaks down water usage by product produced and is a good source of information.
- All surface water withdrawals were GPSed in 1999. No specific GPS locations for most groundwater withdrawals due to the connected nature of the source.
- Permitting process allows for “special conditions” to be added to permits to require more conservation efforts.
- Conservation plan guidelines are general and only attempt to address municipal water users.
- No annual water use reports are submitted.
- Data reports that are submitted come in monthly for surface water (and contain only information regarding withdrawal). Groundwater data reports are collected semi-Annually (and contain only information regarding water withdrawal).

2004 Outdoor Water Use Rules

What the Rules Require

In May, 2004, the DNR Board adopted a drought management plan that contained pre-drought strategies that are equivalent to water conservation practices. R&Reg. 391-3-30-.02 through .03 states that these pre-drought strategies :

“391-3-30-.02 Applicability of Rule.

These rules apply to any entity, and its customers permitted by the A Environmental Protection Division (EPD) for water withdrawal or for operation of a drinking water system.

391-3-30-.03 Outdoor Water Use Schedule During Non-Drought Periods

(1) Outdoor water use other than exempted activities shall occur only as follows:

- a. Odd-numbered addresses: outdoor water use is allowed on Tuesdays, Thursdays, and Sundays*
- b. Even-numbered addresses: outdoor water use is allowed on Mondays, Wednesdays, and Saturdays.”*

Current Status-----Active

Notes -----

- Adopted as part of the Department of Natural Resources 2003 Drought Management Plan, to be implemented in times of emergency)
- Few counties/cities have actually adopted ordinances or policies recognizing the schedule.
- Exemptions in rules allow for large outdoor water uses to continue – i.e. golf courses, landscaping, new home landscape establishment