

SECTION 8: WATER DEMAND MANAGEMENT PRACTICES

Background

Water conservation is an important tool that will be needed to meet the state's long-term water needs. It is also an important practice to ensure responsible use of a public resource. As laid out in this section, this plan's approach to water conservation will be accomplished by setting water conservation goals and requiring water withdrawal permittees to demonstrate progress toward those goals, while providing for due consideration of technical feasibility, cost-effectiveness, conservation measures in place prior to the adoption of this plan, and water use required by other regulatory programs for human health and sanitation.

As described below, the initial water conservation goals will be set in the statewide water conservation implementation plan. As the regional water development and conservation plans are developed, more specific and alternative water conservation goals may be set at the regional level to refine or supplement the statewide goals. Regional plans will provide a way to tailor the basic water conservation practices to the conditions of the water resources and the mix of water sectors and users in each region.

In addition to setting the initial goals for water conservation, the statewide water conservation implementation plan will also provide guidance on flexibility in implementation and reporting for smaller permittees (including the definition of a threshold for large vs. small permittees), and it will provide guidance on the reporting of progress toward water conservation goals by permittees.

The Board of Natural Resources will consider rule-making with regard to water withdrawal permitting as necessary to provide for the attainment of these water conservation goals. For municipal and industrial water permit holders, this section provides a choice between two approaches. One approach is to implement a basic set of water conservation practices that have proven to be generally beneficial and cost-effective for municipal and industrial water users. The other approach is to demonstrate progress toward water conservation goals, which will be defined in the water conservation implementation plan and/or in the regional water development and conservation plans. For agricultural users, as provided by current statute, further progress in the use of the most efficient tillage and conservation practices will continue to be encouraged.

This approach seeks to improve implementation of the water conservation plans that applicants are currently required to submit. As presented below, this approach provides flexibility in demonstration of progress on implementation of water conservation in EPD's permitting decisions, including consideration of either existing water use efficiency or the implementation of cost-effective water conservation practices.

Policy: Water Demand Management Practices

- (1) While water conservation alone cannot be expected to fully meet future water needs, water conservation is an effective and efficient management practice to meet some needs for all water users in the state. To support current and future use of water, and in accordance with DNR Rules 391-3-2-.04(11) and 391-3-6-.07(4)(b)(8)(ix), water conservation must be incorporated into long-term water demand and supply planning and measurable progress must be made toward water conservation goals and more efficient use of water.
- (2) Water reuse, or the use of reclaimed water as a substitute for another, generally higher quality water source, is a viable water management practice that may help sustain Georgia's water resources. This management practice, however, can contribute to consumptive use by delaying returns to surface water sources. The degree to which this practice can contribute to long-term use of water source will depend on the condition of that water source, including limitations on the availability of water and water quality concerns, and should be considered during preparation of regional water development and conservation plans. Water reuse will continue to be permitted and managed following the provisions of DNR Rule 391-3-6-.11 and EPD's guidelines for Water Reclamation and Urban Water Reuse (revised February 20, 2002 and any subsequent revisions).

Implementation Actions

- (1) The Department of Natural Resources will lead the development of a water conservation implementation plan, with assistance from stakeholders from multiple water use sectors, which will include water conservation goals, benchmarks, and best management guidelines for Georgia's diverse water use sectors. The plan will identify state resources and funding mechanisms to help achieve water conservation goals. It will also provide guidance on flexibility in implementation and reporting for smaller permittees (including the definition of a threshold for large vs. small permittees) and the reporting of progress toward water conservation goals.
- (2) The Board of Natural Resources will consider, upon adoption of this plan and completion of the water conservation implementation plan, amending its rules and regulations to provide the following in compliance with O.C.G.A. §§12-5-31(d), 12-5-91, and 12-5-6(a)(2):
 - a. To authorize the Director to require applicants for withdrawal permits or permit modifications for non-farm uses to demonstrate progress toward water conservation goals or water efficiency standards initially identified in the water conservation implementation plan and further refined in regional water development and conservation plans. In accordance with DNR Rules 391-3-6-.07 and 391-3-2-.04(11), permittees are required to develop water conservation plans. These plans should describe how a large or small permittee will meet the requirements of this section.

- i. If the applicant does not have an existing service area or operation, the applicant must develop a water conservation plan. The applicant must also develop an implementation schedule for its water conservation plan. Due consideration shall be given technical feasibility, cost effectiveness, and water use required by other regulatory programs for human health and sanitation.
- ii. If an applicant has an existing service area or operation, the applicant may demonstrate, through methods approved by the Director, acceptable water conservation results and/or compliance with water use efficiency standards or goals as identified in the water conservation implementation plan. In evaluating progress and compliance, the Director will take into account any conservation measures already in place as well as those scheduled to be implemented. Due consideration shall be given to any conservation measures in place prior to the adoption of this requirement, technical feasibility and cost effectiveness, and water use required by other regulatory programs for human health and sanitation. If the applicant is unable to demonstrate acceptable results and/or compliance, the Director may include within the permit a schedule for the implementation of appropriate conservation practices.
- iii. If an applicant has an existing service area or operation, the applicant may choose to demonstrate the implementation of some or all of the water conservation practices listed below and in DNR Rules 391-3-6-.07(4) and 391-3-2-.04(11) as an alternative to demonstration of compliance with the water conservation goals identified in the water conservation implementation plan. Additionally, permit applicants that are unable to demonstrate compliance with water conservation goals, as described in (ii) above, will be required to demonstrate the implementation of some or all of the water conservation practices listed below and in DNR Rules 391-3-6-.07(4) and 391-3-2-.04(11) prior to the issuance of withdrawal permits. Due consideration shall be given to any conservation measures in place prior to the adoption of this requirement, technical feasibility and cost effectiveness, and water use required by other regulatory programs for human health and sanitation.
 - 1) For municipal and private water utilities and water provider permittees or permit applicants:
 - a) Conduct regular water system audit following methods approved by the Director;
 - b) Implement a conservation-oriented rate structure for different water use sectors (residential, commercial, and industrial) and adopt water bills that clearly reflect consumer usage;
 - c) Adopt a water loss control program approved by the Director;
 - d) In compliance with DNR Rules 391-3-5-.06(a)(1)&(2), meter all water uses (current and future), including all outdoor water uses that are not currently metered (i.e. public uses);
 - e) Adopt a meter calibration, repair, and replacement program;
 - f) Adopt a program to collect information on water use by the largest water users/customers and target steps to increase efficiency of their water use. Depending on utility's user profile, targeted steps may include conducting audits for commercial and industrial customers, requiring sub-metering or estimates of individual water use for multi-family residential customers, among others;
 - g) In compliance with DNR Rule 391-3-30, enforce current outdoor water use schedule;
 - h) Meter water reuse and report reuse on a regular basis following guidance issued by the Director;
 - i) Conduct reuse feasibility studies, if appropriate, when no such study has been conducted in the past five years;
 - j) Consider the use of grey water where appropriate as a substitute for higher quality water; and
 - k) Update water conservation plans on a regular basis, following guidance issued by the Director, to reflect new and changing circumstances in water management.
 - 2) For industrial water withdrawal permittees or permit applicants:
 - a) Conduct facility-specific water audits every three years or when major process changes occur, whichever happens first;
 - b) Measure all water withdrawals;
 - c) Measure or estimate water reuse and report reuse on a regular basis following guidance issued by the Director;
 - d) Adopt maintenance and repair program for pipelines, intakes and discharge structures;
 - e) Install rain or moisture sensor shut-off on devices on new and existing irrigation systems;
 - f) Irrigate landscape in compliance with the current outdoor water use schedule defined in DNR Rule 391-3-30;
 - g) Conduct reuse feasibility studies, as appropriate, if no such study has been conducted over the past 5 years;
 - h) Consider the use of grey water where appropriate as a substitute for higher quality water; and

- i) Update water conservation plans on a regular basis, following guidance issued by the Director, to reflect new and changing circumstances in water management.
 - b. The Department of Natural Resources will provide technical assistance to permittees and permit applicants in meeting water conservation goals, and will implement an assessment and technical assistance project to evaluate conservation opportunities for permittees and applicants with small withdrawals.
 - c. Water withdrawal permit holders or drinking water providers submitting annual reports on non-farm water use to the Division in accordance with DNR Rules 391-3-6-.07(4)(viii), 391-3-6-.07(15)(e) and 391-3-5-.17(7) shall include in such reports data and information regarding implementation of water conservation plans and progress toward water conservation goals, using guidance provided by the Division. The following shall be provided by the permit holders and/or applicants for non-farm water use and considered by the Director when evaluating the implementation of water conservation plans and progress toward water conservation goals:
 - i. Measurable outcomes in terms of reduced or maintained water production or usage. Outcomes may be expressed on a per capita, per connection, total system, or other basis as approved by the Director;
 - ii. Impact any water conservation practices or programs have had on the consumptive use of water for that water planning region;
 - iii. A schedule for implementing water conservation practices or achieving water conservation goals;
 - iv. Feasible and efficient re-use of reclaimed water as an alternative for another generally higher quality water source; and
 - v. Other considerations, as determined by the Director.
 - d. Through the Georgia Department of Agriculture, the Georgia Soil and Water Conservation Commission, the University of Georgia Cooperative Extension Service, and other partners, entities with farm-related water use permits, including those for urban agricultural water uses, shall be encouraged to use the most efficient, practicable irrigation practices, as described in the water conservation implementation plan, and to use tillage practices that make the most efficient use of the irrigation water that is applied.
- (3) Regional water development and conservation plans, to be prepared as set forth in Section 14 of this plan, may include enhanced water conservation provisions as appropriate to the specific mix of water users in the region and the consumptive use assessments for the region's water sources.