

SECTION 4: WATER QUANTITY POLICY

Background

The water quantity policy is to manage the consumptive use of water on the basis of defined hydrologic systems of surface water and groundwater so that sufficient amounts remain within a water source to allow all users and uses – present and future – reasonable opportunities to benefit from the values provided by the resources. Water use is consumptive when water is removed from a specified hydrologic system of surface water or groundwater and is not returned to that same system within a time frame that allows contemporary users and uses to avail themselves of the benefits of that quantity of water.

Consideration of consumptive use, in addition to water withdrawals, can more clearly show how water uses in some areas affect the water availability at other points within the water source and at points hydrologically connected to the source. The consumption from a water source, which is cumulative, can be quantified and compared with an assessment of the water available from that source for consumptive use. This consumptive use assessment will be a planning tool reflecting the effects of the current management of that water source, including surface water storage or other practices that supplement available water. Regional water plans can then be developed using this planning tool to ensure that consumptive use stays within the consumptive use assessment for that source or to specify the management practices that will be used to supplement the available water in a way that recognizes the shared nature of water resources and the opportunities supported by historic flow regimes.

The water resource assessment activities detailed in section 6 of this plan will provide the foundation for management of consumptive use. Resource assessments will require definition of hydrologic units and identification of the geographic boundaries from which a water source derives its waters (i.e., sub-basins or watersheds, aquifers). Such boundaries may be coincidental with political boundaries, but most often are not. Resource assessments will also require evaluation of historic flows and flow regimes. Historic flow regimes are not necessarily the same as natural flow regimes. Human activities have altered the flow regimes in many of Georgia's water resources, and historic flow regimes reflect the location, size and operation of water storage facilities, water withdrawals, water returns, and other factors.

The next step in resource assessment would be to determine the sustainable yield and consumptive use assessment for each water source. These determinations would be based on dry year conditions, to provide a baseline for regional planning purposes. Consumptive use assessments will be conducted following a methodology to be developed by EPD with the assistance of a technical advisory group with expertise in disciplines such as hydrology, biology, and other fields. The methodology will include defining dry year conditions for the source. Consumptive use assessments, including supporting factors such as sustainable yield, will be subject to public notice, review, and comment.

While consumptive use assessments must be predicated on dry year conditions, this approach to water management does allow for consumption of amounts greater than the consumptive use assessment during normal and wet years. Surface water flows and groundwater levels will generally be higher in normal and wet years than flows and levels accounted for in the consumptive use assessment, and this provides some opportunities for water use above that baseline. In normal and wet years, water withdrawals above consumptive use assessments may be permitted under specified conditions (for example, a diversion to fill a reservoir) and if such withdrawals do not have unacceptable adverse impacts on the affected water source. The use of water above the quantity defined by a consumptive use assessment will be addressed in preparation of regional water development and conservation plans and in permits issued pursuant to those plans, once they are adopted.

A similar comprehensive accounting of the yields for all aquifers in Georgia is likely to be extraordinarily expensive, time consuming, and may not produce results that are equally useful for each aquifer or overlying geographic area. Therefore, in deciding where and when to apply capital to this task, several variables must be considered: the functional characteristics of the aquifer, existing evidence of adverse effects due to withdrawals from the aquifer, and whether forecasts suggest significant increases in demands placed on that aquifer in the years ahead. While the process to be employed to develop a consumptive use assessment for a given aquifer must be fundamentally the same across the state, this approach will allow priorities and financial resources to be properly placed.

The policy also requires forecasting of future needs for consumptive use of water. Taken together, these resource assessments and forecasts would allow identification of gaps between water needs and the water expected to be available for consumptive use under dry year conditions. They would also support selection of the management practices to be used to meet current and future needs while protecting resource users and uses. This policy provides flexibility in the use of an array of water quantity management practices. Management practices are addressed in greater detail in sections 7 through 13 of this plan. Water conservation, which can be the most economically efficient way of meeting water needs, will be a priority water quantity management practice for implementation across the state.

Water Quantity Policy

- (1) Water resources in Georgia will be managed in a manner that recognizes the opportunities for offstream and instream uses of water that are supported by historic flow regimes. The flow regime in Georgia's rivers and streams varies widely across the state, and the opportunities for offstream and instream uses of water that are supported by these flow regimes likewise varies across the state. Historic flow regimes in different rivers and streams, and the opportunities for offstream and instream water use that they afford, are of prime importance in making water management decisions.
- (2) In concert with the integrated water policy, the State of Georgia will manage consumptive uses of surface water

and groundwater, alterations of flows through reservoir operations, water withdrawals, storage, and other actions that affect flow regimes, to ensure that current water needs are met without unreasonably foreclosing the ability of future generations to meet their own water needs.

- 3) The quality of Georgia's drinking water sources will be protected in accordance with the provisions of the Board of Natural Resources Rules for Environmental Planning Criteria, and all other relevant Georgia and federal statutes and rules that describe specific measures to be taken to ensure that the citizens of Georgia are provided with safe and healthy supplies of water.

3. The Division will determine the consumptive use assessment of water sources as set forth in section 6 of this plan. The Division will provide a consumptive use assessment for each water source in a planning region to water planning councils as guidance for production of a water development and conservation plan, in accordance with O.C.G.A. §§12-5-31(h) and 12-5-96(e).

Implementation Actions

On the state level, the Environmental Protection Division (EPD) will implement management of consumptive use through its current statutory authority. Under this plan, the EPD will take the following actions:

1. In accordance with O.C.G.A. §12-5-31(g) and DNR Rule 391-3-6-.07 regarding factors to be considered by the Division in evaluating applications for withdrawals from surface water sources, the Division will evaluate the extent to which the cumulative present and forecasted consumptive uses of surface water can be supplied within the consumptive use assessment of that surface water source.
2. In accordance with O.C.G.A. §12-5-96(d) and DNR Rule 391-3-2-.05, which describe factors to be considered by the Division in evaluating applications for groundwater withdrawal permits, the Division will evaluate the extent to which the cumulative present and forecasted consumptive uses of groundwater can be supplied within the consumptive use assessment for that groundwater source.
 - a. For some groundwater sources, the Director may determine that there is not sufficient evidence to suggest that increased use of the source will result in unacceptable adverse impacts on current or future uses of that source and that it is not practical to determine the consumptive use assessment of that source within reasonable time and cost constraints. The Director may allow increased use of these groundwater sources without a consumptive use assessment. Use of these sources will be subject to results of recurrent monitoring of aquifer response and the response of other connected water resources to increased withdrawals.
 - b. For those aquifers where it will not be possible to determine the consumptive use assessment within a reasonable period of time, the Director, upon consultation with the State Geologist will establish the range of additional withdrawals that will be allowed over each subsequent decade until consumptive use assessments can be determined. Management of these aquifers will focus on targeted, recurrent monitoring of aquifer response, and the response of other connected water resources, to withdrawal to provide early warning of any adverse effects.