

# WATER MANAGEMENT ON THE CHATTAHOOCHEE-OCONEE NATIONAL FORESTS

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*REFERENCE:* *Proceedings of the 1991 Georgia Water Resources Conference*, held March 19 and 20, 1991, at The University of Georgia, Kathryn J. Hatcher, Editor, Institute of Natural Resources, The University of Georgia, Athens, Georgia.

## INTRODUCTION

Water resource management on National Forest land in Georgia plays a vital role in assuring an adequate supply and quality of water for future generations. To increase public awareness of the U.S. Forest Service mission in Georgia, this paper highlights the history, identifies public interests, includes legal requirements and presents resource management strategies.

## HISTORY

Our National Forests began as a vision of land stewardship many years ago by conservation minded individuals. Their ideas carried over into legislation by Congress (e.g. Organic Act, Weeks Act, Clean Water Act, National Forest Management Act, Forest Land Management Planning Act) and the President (E.O. 11988 and 11990) to identify, acquire, protect, improve and manage watershed conditions for dependent resources.

When the overfarmed, eroded, overcut or otherwise unwanted lands were acquired in the early 1930's to form the Chattahoochee and Oconee National Forests in Georgia, few people could imagine the changes that could be realized over the next 50-60 years (Figure 1).

Reforestation, silviculture treatments and rehabilitation projects are transforming the National Forests from the lands that no one wanted to the lands that everyone wants. This sudden popularity in the last decade is partly due to the sound management strategies of providing for multiple uses, goods and services.

## PUBLIC INTERESTS

The scourge of yesterday has become some of the most prized lands in Georgia. The Chattahoochee National Forest contains most of Georgia's trout streams, the headwaters of several municipal watersheds including Atlanta's own Lake Lanier and receives increasing pressures from urban interface for recreation associated with water. The change in land capability was no accident.

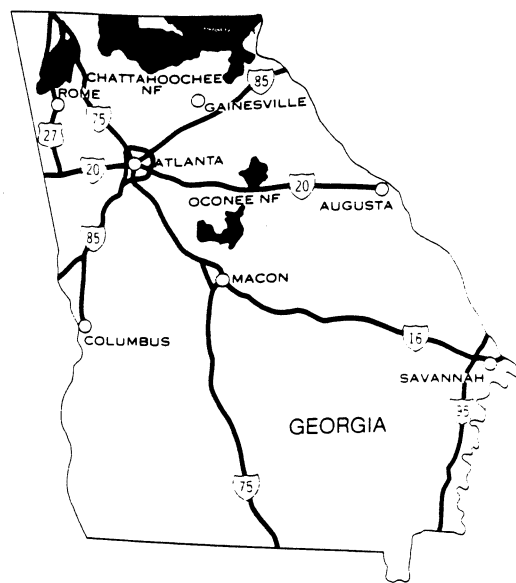


Figure 1. Chattahoochee and Oconee National Forests in Georgia.

The U.S. Forest Service has aggressively implemented good land ethics supporting water resources.

The issue of water resource management on National Forests has intensified, corresponding to growing public, state, national and international concerns. In a way, the National Forests are becoming a forum for public interests because management is open to public participation. Public involvement makes the Forest Service work harder, but the services are more likely to address the wide variety of public interests. Without planning and management of these interests, user satisfaction may decline or be lost.

The public identifies water as an important component of multiple use resource management. Many forest resources and uses depend on adequate water supplies and quality. Public recreational uses such as camping, fishing, rafting, boating, swimming, sight-seeing, hiking, hunting often revolve around water. Aquatic and riparian plant and animal life is directly tied to the

presence and/or persistence of water. Even terrestrial life depends on some water availability. Water is also needed for consumptive uses as water supplies for domestic, municipal, industrial and rural use.

## FOREST MANAGEMENT STRATEGIES

Resource and use conflicts in forest management not only exist, but are expected. With the expectation comes a variety of strategies to help defuse conflicts through identification of problems, scoping public concerns, developing alternatives, altering project design, selecting preventative practices, disclosing effects and making informed decisions.

This process of public involvement and environmental analysis is directed in The National Environmental Policy Act (1969 - also referred to as NEPA). Federal agencies as the Forest Service are required to use NEPA during project evaluations to address environmental significance and provide public disclosure. In implementing NEPA, projects become more balanced in addressing development and environmental needs. A mixture of resource disciplines including forestry, wildlife, engineering, recreation, cultural resources, soils and hydrology combine into interdisciplinary project analysis. Staff specialists are available in all these areas to provide information or be consulted as needed.

Further direction came with the Forest and Rangeland Renewable Resource Planning Act (1974) which directed the Forest Service to develop National Forest Plans. This direction came to respond to public concerns and resource complexities inherent in managing public lands.

The Chattahoochee-Oconee National Forest Land and Resource Management Plan (FLMP) with associated Environmental Impact Statement (EIS) became the first tier of planning to help address broad public issues, concerns and opportunities (ICOs), analyze environmental effects and provide basic decisions for resource constraints and allocations.

The second tier of planning is site specific project or activity analysis. Analysis must be accomplished for all projects that may have significant effects on the environment. An environmental analysis (EA) is developed on projects to decide if the environmental effects are significant. If significant, an EIS is required. If not significant, a Finding of No Significant Impact (FONSI) is provided for public review and comment. Projects that meet certain criteria as being neither controversial or significant, may qualify for an environmental exclusion for which a decision memo is provided for public review. An appeal process exists to provide for public response prior to court action for all decisions other than those disclosed following an EIS.

The FLMP is the operating document used as helpful guidance in day-to-day resource allocations and decisions

to provide a balance of goods, services and amenities from the National Forest. Resource protection and enhancement measures called Standards and Guidelines (S&Gs) are mandatory to ensure quality of projects.

Specific S&Gs for soil and water resources include appropriate preventative practices consistent with State approved Best Management Practices (BMPs) as well as other guidance to protect related resource values in general project design. The S&Gs are periodically updated to amend the FLMP when either BMPs, research findings or specific site needs require change.

Project level decisions are evaluated to document and disclose potential environmental consequences and are provided for public review and/or comment. All projects are designed to avoid, reduce or mitigate nonpoint pollution and are consistent with other identified requirements to protect water resources.

The Forest Hydrologist or Soil Scientist is consulted for specific watershed management information. Foresters, engineers, recreation, wildlife and other specialists receive soil and water awareness training and also have some responsibility in planning, implementing and monitoring activities to be consistent with soil and water quality needs. Activities include timber harvest, road construction or maintenance, recreational facilities, wildlife improvements, mineral exploration or development, impoundments, land purchases or exchanges and special uses. Riparian areas (including floodplains and wetlands) are identified with associated resource functions and values. Other regulation requirements such as to meet Section 404 of the Clean Water Act are included.

Of all activities, the practice of timber harvesting by clearcutting has become the most scrutinized and criticized. Many people are concerned that it looks bad. Other comments are that clearcutting destroys water quality and wildlife habitat. The practice of clearcutting refers to cutting essentially all woody vegetation down at one time. In some parts of the forest, clearcuts of up to 40 acres can be prescribed. The practice has been used extensively in the past to regenerate forest types that require open conditions for rapid seedling establishment. The visual impact of clearcutting is in the eye of the beholder, but public comments are generally negative.

The National Forests are moving away from using clearcutting in favor of harvesting methods that are less visually impacting. Clearcutting is still a viable tool to meet certain resource objectives. Future harvesting will include more seedtree, shelterwood, partial cuts and unevenaged management strategies.

## WATER MANAGEMENT STRATEGIES

Water and soil management go hand-in-hand on the National Forests. Quality water depends on not only

improving past watershed conditions, but also implementing sound practices for new activities. The Forest Service has been a leader in both these areas.

"Caring for the land" has reduced the severity of erosion and sedimentation associated with gullies on the Oconee National Forest. These efforts were nationally recognized by the Chief of the Forest Service in 1988 with the Chief's Stewardship Award.

Soil and water improvements associated with old roads are also important in improving water quality in the mountains. Many of these roads are in the same location when our forefathers were hunting for game or logging forest materials. Continued use today often requires a four-wheel drive and a wild spirit. Although fun to some, fish and other aquatic resources suffer from the sediment delivered to streams. Some of these roads are so entrenched into the landscape from past erosion, there is no way to improve conditions without major road reconstruction.

Timber sales provide much of the opportunity and money to fix these problems. These opportunities became available with the passage of the National Forest Management Act, providing a provision amending the Knutson-Vandenberg Act, permitting use of a portion of the timber sale receipts to improve conditions within the sale area. Without an economical timber sale program, availability of funds to reduce erosion from old roads or gullies, provide wildlife improvements or enhance fisheries with fish structures is limited. It is not unusual that some timber sale projects will actually prevent more sedimentation by rehabilitating past problems than the new project incurs. The timber harvest program has also provided much of the funding to keep the road network open and maintained for other Forest uses.

Recent watershed problems on the National Forests include impacts being experienced from the urban interface. The associated road use and dispersed camping are increasing erosion, sedimentation, compaction and site damage to riparian conditions. Proper waste facilities are often inadequate or unavailable to handle the increased use. Some recent uses are over concentrated or even unauthorized as more people try to squeeze into present conditions. Many are unaware of the resource impacts that they are causing. This type of National Forest management is presently underfunded. Opportunities exist for interested publics to volunteer or enter into cooperative agreements to help cope with the increased demand.

Roads and associated activities are primary contributors to stream sedimentation. Careful attention to BMPs especially installing adequate surface drainage during road construction and avoiding stream crossings will prevent much of the sedimentation. Other construction activities such as recreation facilities also have to meet erosion prevention practices.

Restrictions in riparian areas to help provide clean,

quality water include equipment limitation, erosion protection, shade on perennial streams, avoidance where possible and mitigation where necessary. Regulations associated with floodplains and wetlands, including acquiring 404 permits, are applicable.

## CONCLUSIONS

With all the resource conflicts, we have some real opportunities as we manage the National Forests into the future. Opportunities lie in working with other agencies and cooperating with others to achieve quality management results.

Forest management in general and water management specifically have become increasingly complex over the last decade. The reality that the National Forests are in a strategic position to influence the quality of life in Georgia is becoming more apparent every day. It is important that water management issues, concerns and needs are provided by our concerned publics.

As growth in Georgia finds water a limiting factor, municipalities and groups may look to public lands to meet some of these needs. The Forest Service tries to be a good neighbor when it can, but legal and environmental restrictions may outweigh some local public needs. As water resource specialists or interested neighbors, please give your National Forests early warning of your needs or interests so we can address them in a timely fashion.