

# RIVER CORRIDOR PLANNING AND PROTECTION STRATEGIES

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**Abstract.** The Broad River watershed, which includes the Broad River and its tributaries, the Hudson and South Fork Broad rivers, has been the subject of extensive planning efforts by both local government and a local land trust culminating in a river corridor protection plan and ordinance, conservation easements, and state acquisition of one, and possibly more, identified tracts through River Care 2000.

This paper will discuss river corridor planning efforts in the Broad River watershed, protection strategies implemented individually by local government and a local land trust, as well as opportunities for public-private partnerships.

## INTRODUCTION

The Broad River, located in Northeast Georgia, is unique in the state as it is relatively unaltered from its headwaters to its confluence with the Savannah River. Its corridor supports a significant number of plant and animal populations including endangered and threatened species, as well as extensive wetlands, including those with significant wildlife habitat value and scenic areas. The National Park Service recognized 99 miles of the Broad River as pristine enough to qualify for consideration in the Federal Wild and Scenic Rivers System. The Georgia Department of Natural Resources (DNR) and the Georgia Natural Heritage program noted the outstanding ecological and recreational importance of 175 miles of the Broad River System.

Land use within the corridor is primarily agricultural, including crop forest, with very limited residential land use. A single granite quarry is located on the banks of the Broad River, north of its confluence with the South Fork. The sole public access site on the Broad River is located in Elbert County. This limited access results in trespass by nonriverfront residents who come to swim or fish and by paddlers seeking a spot to picnic or rest. Other threats to the Broad and Hudson rivers are landfill leachate, destruction of the vegetative buffer, river bank erosion, watering cattle in the river, litter, agricultural nonpoint pollution, effluent from individual septic systems, dense development impacting scenic viewsheds and other resources, an absence of tributary

protection, construction in floodplains and destruction of the natural filtration system.

The *Georgia Planning Act of 1989* mandated that the Georgia DNR develop criteria for river corridor protection. The Act authorizes local governments to provide protection for river corridors, though few have implemented formal river corridor protection. Most local governments in the Northeast Georgia region do no more than is required through the Erosion and Sedimentation Act because of fear of "takings" issues, lack of enforcement personnel, and in some cases, apathy. However, protection of surface water resources remains paramount in the region as is repeatedly evidenced in issues identified while developing a jurisdiction's comprehensive plan. Within Northeast Georgia, protection of the Broad River is aggressively pursued through a combination of regulatory and nonregulatory initiatives and is supported by the efforts of the Northeast Georgia Regional Development Center, Madison County, the State of Georgia, and the Broad River Watershed Association (BRWA).

## RIVER CORRIDOR PLANNING

River corridor planning along the Broad and Hudson rivers has been accomplished largely through the efforts of the local government and the BRWA. Local government protection initiatives have been independent to those of the BRWA; however, BRWA initiatives have sought a public-private partnership. Objectives of the planning initiatives include water quality, river access, habitat protection, and river-related tourism.

Successful corridor planning projects should employ the following specific actions:

**Coordination.** Find creative ways to coordinate existing programs at the federal, state, and local level to address the problem of overlapping jurisdictions and inconsistent agency actions; improve coordination/ cooperation among federal, state, and local agencies, and private groups; establish public and private partnerships; develop the means to achieve balanced participation by all river corridor users.

**Education.** Develop public awareness of identified river corridor values and their relationship to land uses to encourage active public participation in river planning efforts.

**Assistance.** Provide technical and financial assistance to local, state and federal governments and private groups and individuals to encourage the appropriate future uses of the river.

**Information.** Gather and make available information regarding river values, projects, case studies and other technical data to promote more comprehensive, objective decision-making and conflict avoidance between competing river uses.

**Legal.** Identify the appropriate means/agents to ensure adequate public access to river corridor land and water while considering property interests and ecological systems.

**Public Involvement.** Develop creative mechanisms to identify and develop river corridor constituencies and effectively involve the public as early as possible and continuously in the planning and decision-making process.

**Planning.** Ensure that planning for river corridors is coordinated among all levels of agencies and interests; address the full range of resources, problems, opportunities and river interests; use consistent systematic and objective approaches for planning; encourage environmentally sound conservation and resource management strategies; identify opportunities for economic and commercial development; and establish priorities for a range of uses.

**Policy.** Establish and encourage national, state and local policies and programs for river corridors to promote consistency and coordination and to encourage a balance between social/economic needs/issues while retaining or restoring resource values and reducing conflict.

**Resource Management.** Develop balanced planning and management which provide the opportunity for both conservation and development of the river resources, coordinated among all landowners and users, interest groups, and agencies.

## MADISON COUNTY RIVER CORRIDOR PLANNING

In 1992, Madison County, with the assistance of the Northeast Georgia Regional Development Center, developed a river corridor protection plan for a portion of the Hudson and Broad rivers that met the DNR protected river criteria.

That plan addressed the following river-related resources: plant species, wetlands, scenic views, archaeological resources, historic resources, and land use. The plan detailed thirteen threats to the corridor including quarrying activities, destruction of the vegetative buffer, erosion, nonpoint source pollution, septic system effluent, development, and the lack of tributary protection. The plan was developed by the Madison County Planning Commission with input from citizens through a series of town meetings. While most citizens present concurred with identified threats to river resources, a few citizens were concerned with private property rights issues, including takings. The plan supports the adoption and implementation of a protection ordinance that implements the DNR minimum planning criterion which includes a 100-foot vegetative buffer, a limitation on allowable land uses, and minimum lot size. However, an important addition to the county's protection criteria was the inclusion of quarrying activities because these activities are specifically exempt from the Erosion and Sedimentation Act (*O.C.G.A. §12-7-1 et seq.*) and further, according to DNR protection criteria, may, at the discretion of the local jurisdiction, be exempt from river corridor protection plans.

In addition to the county's activities, the BRWA undertook several planning initiatives for the river, including extensive mapping of the watershed including a prototype map of a two-quadrant area complete with various overlays.

The Department of Community Affairs received a grant from the Environmental Protection Agency to undertake an innovative watershed planning approach for the Broad River watershed. The project will involve use of a geographic information system and appropriate analysis models to highlight potential land use conflicts between development and water-based natural resources. This information will be shared with local officials to help them identify areas for priority consideration as they update and refine their land use plans and policies. These activities will be supplemented by a locally planned and implemented outreach effort to educate the public, stakeholders, and local officials in the region on appropriate practices for management of these threatened, environmentally sensitive areas.

## LOCAL REGULATORY PROTECTION

Regardless of what level of river corridor planning a local government undertakes, the planning should provide a sound basis for any subsequent regulation. U.S. Supreme Court and lower court decisions provide some guidance to local governments in drafting water resource protection policies. The government's plan should recognize the economic and environmental grounds for protecting the water resources. The regulations should not effectively restrict all economic use of the property. Finally, the regulations should

include procedural safeguards that provide for their waiver in those few cases where they will impose extreme financial hardship on a landowner.

**Madison County.** In 1993, Madison County, largely in response to water quality issues, adopted a Solid Waste Disposal Ordinance. The purpose of this ordinance is to restrict the siting of solid waste facilities so that they would not be located in areas where there is a high risk of contamination of surface water or groundwater. Areas where such facilities are prohibited include: within two miles of the banks of the Broad, Hudson, or the South Fork Broad rivers, within the 100-year floodplain of any of these rivers, and any wetland.

In 1995, Madison County passed a river corridor protection ordinance for a portion of the Hudson and Broad rivers. The ordinance defines an overlay district within the Madison County Zoning Ordinance. Any activity in the corridor must comply with the requirements of both the overlay zone and the underlying zoning district. Protection criterion includes maintenance of a 100-foot vegetative buffer, prohibition of septic tanks and their drainfields within the corridor, and restoration of the buffer if there is any land disturbing activity. The ordinance defines permitted and prohibited activities that mirror those in the DNR criteria and includes surface mining as a prohibited activity. A variance is permitted where literal interpretation of the ordinance will result in unnecessary hardship to the owner but only if three criteria are met: a demonstration of unnecessary hardship, proof that there will be no damage to the river corridor, and relief, if granted, would not cause substantial detriment to the public good or impair the purposes and intent of the ordinance. The applicant has the burden of proof of each criterion. Proof of no damage to the river corridor can include an Environmental Impact Statement. The ordinance is administered through a permit system. Permits are valid for six months with the possibility of one six-month extension if the activity is not complete but are revocable for failure to comply with regulatory guidelines.

The zoning ordinance also contains a Conservation/Scenic Preservation District. This district is designed to maintain the character of the natural, archaeologic, environmentally sensitive, and scenic areas of interest and to provide for the preservation of these areas. The district provides for several permitted uses, primarily uses which will preserve the land in a relatively unaltered state.

In 1996, Madison County updated its comprehensive plan which detailed concerns about protecting the entire watershed as opposed to specific river corridors largely due to water quality concerns. The updated comprehensive plan calls for requiring vegetative buffers for first and second order streams, 25 feet and 50 feet respectively, and mandatory

agricultural and forestry Best Management Practices (BMPs). The plan also outlines education, zoning, and subdivision regulatory initiatives, support of conservation easements, and potential greenway development.

## NONREGULATORY PROTECTION

The BRWA is a regional land trust incorporated in 1990 to preserve the Broad River as a free-flowing system and to support land use compatible with the maintenance of water quality, scenic rural character, and the preservation of sensitive natural areas and wildlife habitat. BRWA has been involved in a number of nonregulatory initiatives in an effort to protect the river corridor.

**Conservation Easements.** A conservation easement is a voluntary restriction of the development of property to protect values recognized by the Internal Revenue Service. The landowner may realize substantial federal and state income tax deductions as well as estate tax and local property tax benefits. The perpetual deed of easement is between the landowner and either a land trust or a governmental body. The easement holder must agree to monitor the property and enforce the restrictions in the easement.

To date, BRWA has secured one conservation easement but has four pending. All are on the upper stretch of the river and includes about 300 acres. The secured easement prohibits subdivision and preserves the land in its natural state.

**Education.** The Georgia Environmental Policy Institute, in conjunction with the BRWA, recently published a booklet on laws and regulations pertinent to protection of the Broad River watershed including government agencies to contact to report problems or to request information. An effort by local governments of Madison County to distribute this booklet could increase public awareness of watershed protection and help government officials enforce existing laws and regulations.

**Water Quality Monitoring.** The BRWA plans to develop a stream monitoring program for the Broad River. Support from local governments could help ensure the success of this program at minimal cost. Cooperation as well as direct participation by local farmers would be very helpful in determining the effectiveness of BMPs in protecting water quality. Periodic monitoring could be of direct benefit to farmers when results show that current BMPs are sufficient and that no additional efforts are required to reduce the impact of their operations on local streams.

**Greenway Development.** In 1995, in response to the previous year's flooding, the Georgia DNR, at the direction

of the Governor, established a new preservation initiative called River Care 2000. The goal of the program is to protect water quality and other related resources through state acquisition of river corridor segments. The DNR invited BRWA to submit a proposal for allocating some of the initial \$5 million allocation by the General Assembly for select tracts along the Broad River. The DNR was particularly interested in the Broad River because of existing partnerships between the region's local governments and environmental and preservation organizations.

BRWA's most ambitious project to date is the proposed Broad River Heritage Trail, an interconnected system of publicly and privately owned lands which will protect the natural, cultural, and scenic resources of the Broad River. The project envisions a series of anchor sites to allow controlled access to the river. Sites will be acquired for resource protection, recreation, interpretation, and education.

BRWA is negotiating a long-term lease for a 30-acre island currently in private ownership within the Madison County portion of the Broad River. Potential use of the island is wilderness camping. BRWA is also negotiating an agreement with Inland Rome Paper Company to clean up a site the company owns and coordinate long-term maintenance.

The State recently acquired a 279-acre site in Madison County. The site is composed of steep, rocky, mostly xeric slopes cut by numerous ravines and one large creek. It offers expanses of upland which include hardwood savanna communities, a large area of relatively undisturbed bottomland and an area of submesic north-facing slopes, as well as 4000-plus feet of river frontage. Most of the tract supports uncompromised natural communities, streams which are likely to contain a high diversity of aquatic fauna, and gorgeous vistas of the steep-sided Broad River valley. Potential uses for this site include natural area preservation, recreational access, scenic overlook, hiking, and an outdoor education/interpretative center.

The Georgia DNR Robust Redhorse Conservation Committee recently reintroduced the Robust Redhorse at two sites on the Broad River. This North American fish is highly threatened and experts agree that the species may face extinction in the next decade. The Broad River was selected for this reintroduction effort in part because it is one of the last free-flowing rivers in Georgia.

Successful repopulation of this fish in the river basins of its historic range requires habitat maintenance and enhancement. The Broad River has been heavily impacted by row crop agriculture in the watershed and although water quality has improved greatly since the 1960s, quantities and rates of sedimentation and poor water quality continue to pose real threats to the success of the species reintroduction efforts. BRWA's work will complement the Committee's

reintroduction efforts by maintaining and enhancing riverine habitat along the Broad River.

## CONCLUSION

Successful protection initiatives accomplished and planned for the Broad River, demonstrate the need for public-private partnerships in river corridor planning and protection. Corridor planning is a considerable undertaking and is most successful when it involves the public and provides for regulatory and nonregulatory protection strategies. Fortunately, there are a variety of protection tools available to local governments interested in protecting their water resources, and land trusts, gaining in popularity, are an excellent source for public-private alliances.

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