



Cultural and Historical Resources

Photograph by Tom Blagden

The history of the Reedy River Watershed generally mirrors the settlement and evolution of much of the country. Evidence that Native Americans used or inhabited the area date back to the late Paleo Period (12,000–8,000 B.C.). When European explorers and settlers first came to the area, it was occupied by the Cherokee Nation. As settlers continued to migrate, they gradually moved northwestward through the state, eventually pushing the Cherokee out, around the time of the Revolutionary War.

Early on, the river and its tributaries were used for water and power sources for an assortment of mills built along their banks. At first the mills served agriculture and the timber industry. In the 19th century, textile mills became a key part of the region's economy. As cities and communities grew, the river also became an avenue for the disposal of municipal and industrial waste.

The Reedy River was once a source of pride and beauty to the communities built around it. Through the past two centuries, it gradually became a source of derision, embarrassment and disgust. After the passage of the Clean Water Act of 1972, the river's water quality gradually improved, and it is beginning again to be considered an asset that needs to be preserved and protected. A thorough knowledge and understanding of the watershed's history is vital to the understanding of the present and equally vital for future recreational, economic and industrial planning.

During its first several meetings, the Cultural/Historical Resources Issue Committee worked to pull together as much readily available historical information about the Reedy River basin as possible. The committee found a variety of sources of historical information for Greenville:

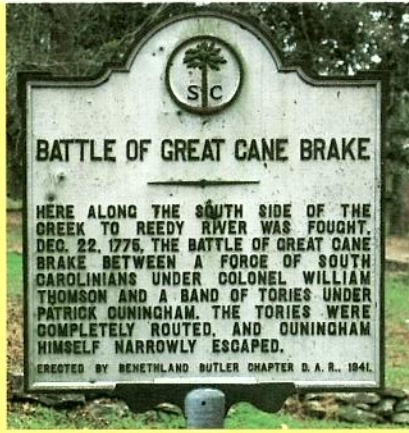
- The Greenville County Historical Society published a concise history of the Reedy River Falls Historic Park (Sawyer 1997). This book also includes some general county history, but only as it pertains to the City of Greenville.
- Henry Bacon McKoy wrote *The Story of Reedy River* (1969). The book includes a number of facts about the river's history, quotes regarding the river that had been written by others, and mention of some historic maps, personal thoughts and poems. By the author's own admission, the story is far from complete. He made little attempt to string together the information into a continuous history, to double check facts, or to include much information about areas outside the City of Greenville.
- The South Carolina Institute of Archeology and Anthropology (SCIAA) maintains data on at least 242 archeological sites within the Reedy River Watershed. The locations of these sites are kept confidential in order to discourage collecting by souvenir hunters. Members of the Greenville Historical Society are aware of a number of sites that the SCIAA does not know about. Other groups and individuals in Greenville County are believed to have information about even more sites. As of today, there is no complete database of archeological and historical sites in the Reedy basin.

Even less has been written about the Reedy River's history in Laurens County. Although the Laurens County Historical Society is active, it does not expend much effort within the Reedy River Watershed, as that portion of the county is relatively small and unpopulated. There are at least two buildings within the watershed that are on the National Register of Historic Places and a number of other buildings may be eligible for listing on the register.

Historical sites and buildings within the Reedy watershed have few protections. Greenville County Council passed the Greenville County Historic Preservation Ordinance in 1998. Among the ordinance's purposes is the protection,



preservation and enhancement of "...the distinctive architectural and cultural heritage of Greenville County..." The ordinance sets the criteria and procedure for designating a historic building, property or district, and the procedures that must be followed in order to alter or demolish structures with such a designation. It also establishes the make up of a commission to carry out the objectives of the ordinance. Its biggest limitation is that it only applies to the unincorporated parts of the county. Protection can only be extended into a municipality by approval of its city council.



A Battle of the Great Canebreak historic marker on Harrison Bridge Road near Simpsonville. This is the only American Revolutionary site in Greenville County.

Laurens County has no historic preservation ordinances. Existing protections only apply to the sites or buildings in the National Registry of Historic Places. Section 106 of the National Historic Preservation Act requires that federal agencies whose actions might affect registered properties take those properties into consideration and try to reduce any adverse affect that the project might have on those properties. When projects that might affect registered historical properties do not involve federal funding, Section 106 protections do not apply.

Methodology

The Cultural/Historical Resources Issue Committee was chaired by Marion Mahon of the Laurens County Soil and Water Conservation District and consisted of members from both the Greenville and Laurens County Historical Societies, a representative from the South Carolina Department of Archives and History, a faculty member of Furman University and several long time residents of the area. The committee met on a regular basis. Over the early course of their work, the committee developed three main objectives: identify the cultural and historical resources that exist, protect those resources whenever possible and educate the public about the importance of those resources.

After reviewing available historical information and applicable protective ordinances, the committee met

several more times to discuss ways to improve the state of historical knowledge and resources within the watershed.

Recommendations

After reviewing the issues that affect cultural and historical resources, the issue committee developed and submitted the following recommendations to the Reedy River Task Force. All were subsequently approved for inclusion in this plan.

1. The committee has identified a number of historically important sites and buildings in the Reedy River Watershed. However, there is concern that some important historical resources remain unidentified. While this concern exists for the entire watershed, there is particular concern for the lower portions of the watershed in both Laurens and Greenville Counties. For this reason, the committee recommends the following:
 - a. A survey of cultural, historical and archeological sites within the watershed should be conducted.
 - b. The survey should be used to determine which buildings, structures or sites within the Reedy River Watershed are eligible for listing in the National Register of Historic Places.
 - c. Information derived from the survey and other studies should be archived, entered into a GIS database and be made available to interested parties, with certain restrictions concerning the locations of sensitive sites. These data should be housed both at county planning commission offices and with the Department of Archives and History.
2. South Carolina is growing and developing at an unprecedented rate. This is especially true in the Reedy River Watershed in and around the City of Greenville, but land use changes are also evident in the lower parts of the watershed. When land is developed for residential, commercial and industrial uses, unprotected historical and archeological sites can be destroyed.

The Cultural/Historical Resources Issue Committee of the Reedy River Task force does not seek to prevent or otherwise hinder such development, but is concerned with the permanent loss of sites important to the culture, heritage and identity of the people of Greenville and Laurens Counties. Recognizing that preservation of all sites is impractical, we recommend the following:

 - a. Upon completion of the survey and inventories recommended by this committee (see

Recommendation #1), the sites and resources should be ranked for their importance to history and culture. The ranking of these sites should be conducted by an appropriate panel of experts. The results of the ranking should be included in the GIS database (see Recommendation #1).

- b. Whenever major development projects are planned, developers should be provided with a list and evaluation of the sites and/or resources known to exist on the land in question. When important sites or resources exist on the land,



A building from the Greenville Coach Factor remains on the banks of the Reedy as part of the Peace Center for the Performing Arts

developers should take appropriate measures to protect them. If this is not possible, archeologists and/or historians should be allowed access to the site for the purpose of collecting data and/or artifacts that will be studied and catalogued off site.

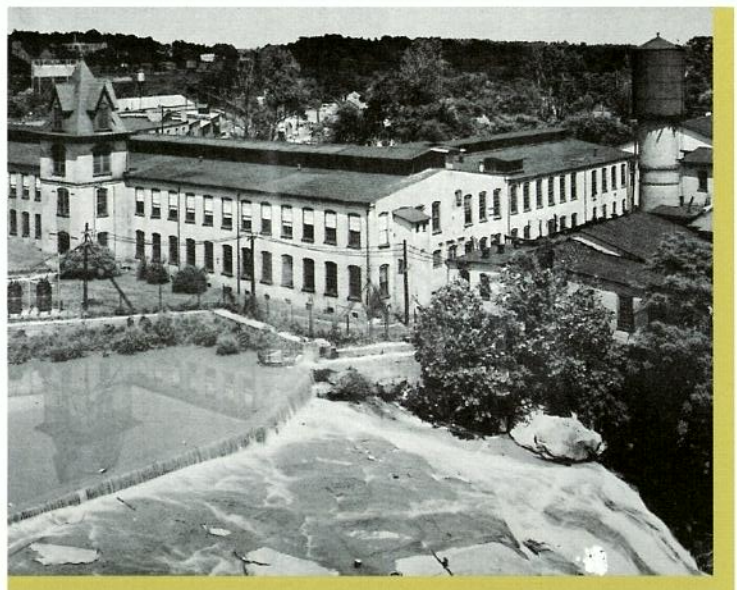
- c. A land trust serving Laurens County needs to be established.
 - d. Ordinances protecting historic resources need to be adopted or expanded in Laurens and Greenville Counties.
 - e. An endowment should be established for the acquisition of land and historical easements, based on prioritized historic importance.
3. Local history of an area is an important resource in planning for the future. When people are aware of past events, activities and conditions in and around the Reedy River, they may be motivated to treat it as an asset worth protecting.

Opportunities to educate the public about local history are relatively limited. Given that the South Carolina Department of Education just completed the multi-year task of developing and writing curriculum standards, it is highly unlikely that the committee or task force would ever be able to

influence the curricula of local schools to include Reedy River history. The committee chose to focus its education recommendations on those chance circumstances known as “teachable moments.” Historical information needs to be made available when people want or need it.

In order to increase public awareness of Reedy River history, the committee recommends the following:

- a. Historical information should be included in paddling and other recreational guides that are published for the river. Each stretch of the river described for recreational purposes could also include the events and interesting historical sites that are related to that section.
- b. Information about the tax benefits of historical and conservation easements and other title restrictions that can preserve important sites should be publicized by land trusts serving the area.
- c. Telephone numbers of the pertinent agencies and organizations involved with protection of cultural and historical resources should be listed in the telephone directories so that they are easily accessed when historical or archeological sites are discovered. Agencies and organizations should include the Department of Archives and History, historic preservation commissions, historic societies and the Stowe South Carolina room of the Greenville Public Library.
- d. A commissioned history of the Reedy River would be a significant resource for identifying sites and educating the public on their importance. Such a history should be researched and written by a trained historian.



The Camperdown Mill on the banks of the Reedy River Falls operated from 1875 to 1956. Bowater, Inc. now stands on the site of this mill.



Recreation

Photograph by Tom Blagden

The Reedy River offers well-known and well-hidden recreational opportunities, from urban parks and greenways in the upper watershed to peaceful paddling in the lower watershed. Realizing the river's full recreation potential within this rapidly developing watershed will require concerted restoration and protection efforts and improved public access. The Reedy River Task Force identified recreation as a principal issue for future use of the river and formed the Recreation Issue Committee to provide recommendations.

The most well known recreational site on the Reedy River in the City of Greenville, Cleveland Park, started in 1924 with a donation of 110 acres from William Choice Cleveland. In 1933, the Reconstruction Finance Corporation, part of President Franklin Roosevelt's New Deal

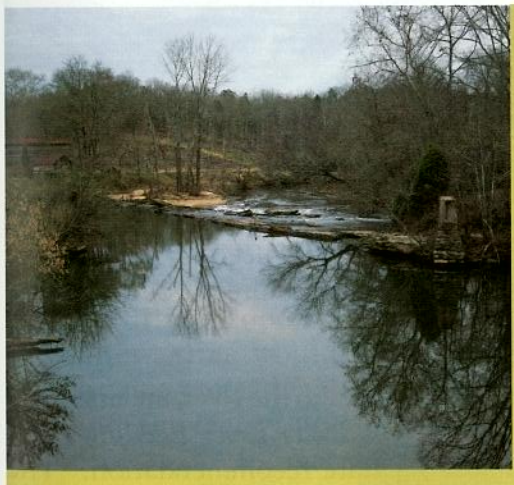


Today's Reedy River flows through the heart of Cleveland Park

response to the Great Depression, granted funds for work on the Reedy River, including a new bed for the river in Cleveland Park.

In Laurens County, recreational sites have come and gone on private property. For example, Culbertson's Mill was built on the Reedy River at Ekom Beach Road about 1840. In subsequent years, the site had a store and post office and by 1950 included a skating rink and bowling alley. Visitors used the river for picnicking and swimming. Below the Reedy

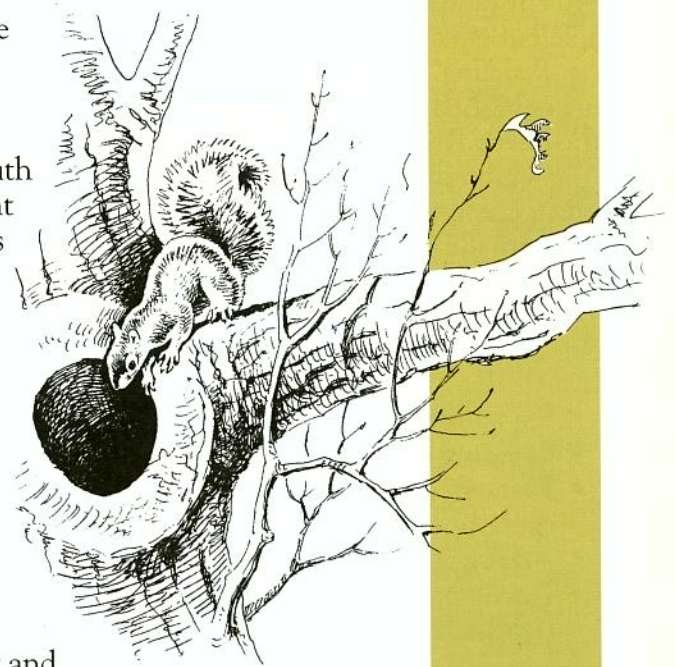
River, Lake Greenwood's swimming, fishing, boating and other recreational opportunities are attracting residential development to the shoreline.



Culbertson's Mill dam downstream of Ekom Beach Road

To help reveal the natural resources of the Reedy River to participants in the watershed study, South Carolina Department of Natural Resources (SCDNR) staff organized six canoe trips from September 1999 to June 2000. Though the first and last trips were cancelled due to drought-induced

low flow in the river, we had successful trips from Cleveland Park to Lake Conestee south of urban Greenville, Cedar Falls Road to Hillside Church Road in southern Greenville County and Boyd Mill Pond to Ekom Beach Road in Laurens County.



Methodology

The Recreation Issue Committee was co-chaired by Paul Ellis of the City of Greenville Parks and Recreation Department and Bill Erkes of the Laurens County Recreation Department. Members of the committee included representatives from local government, state government, Clemson University, recreation businesses, tourism interests, paddling clubs, environmental organizations and riparian property owners. Hosted by the City of Greenville Parks and Recreation Department, the committee met regularly from September 1999 to April 2000. Discussions in the initial meetings focused on the existing recreation resources and events along the Reedy River, the potential recreation activities to be supported along the river and the potential funding sources for recreation.

The committee found that recreation promotion for the Reedy ranged from the simple but effective *Reedy River Paddling Trail* brochure published by Friends of the Reedy River (1999) to the elaborate *Master Vision for the Reedy River Corridor* prepared by Sasaki Development on behalf of the Greenville Convention and Visitors Bureau. The latter proposes major public improvements above and below the Reedy River Falls in downtown Greenville, which include:

- Expanding the park and garden spaces
- Creating a water theater
- Removing the Camperdown Way road bridge that obstructs the falls
- Adding a pedestrian bridge
- Developing river-oriented residential, office, retail, stadium and possibly convention projects

The committee also discussed smaller-scale community projects that would use public/private partnerships to achieve results, such as Poinsett Park. Additionally, the Clemson University Department of Planning and

Landscape Architecture conducted a planning student project for Cleveland Park West in which the area's citizens engaged in park planning and design to stimulate neighborhood revitalization.

A key topic for the committee was improved access to the river. Only Cleveland Park provides adequate access for canoeing and kayaking on the river. New access facilities at bridge crossings for paddling, hiking, wildlife viewing, historic site interpretation, and public



A Reedy River Task Force canoe trip

safety environmental response and search and rescue operations were discussed. The need for a boat ramp on the Reedy portion of Lake Greenwood was also identified.

To publicize improved access to the river, updating and expanding the existing *Reedy River Paddling Trail* brochure became a separate recommendation. The river map could be enhanced with more details about paddling hazards such as pipelines, bridges, dams and submerged "strainers." Other safety concerns, like understanding the dangers of flash flooding on the river, could be more fully addressed. The natural and cultural history of the river could be presented as part of the paddling experience, and, subsequently, hiking opportunities. Stewardship ethics would be emphasized as a basis for personal behavior while using the river's recreational resources.

Development of a greenway system along the entire river evolved as a major long-term goal. The committee concluded that riparian buffers were needed along the river and its tributaries, even where public access could not be provided. Hiking trails connecting future access points along the main river corridor were seen as the principal recreation amenity in the greenway system. Trails could also connect to nature centers or preserves that might be established in the river corridor at Lake Conestee in Greenville County, or the Clemson University tract in Laurens County.

The committee was determined to strive for implementation of its own recommendations, as well as those of other committees. Though members considered relying on existing organizations, they eventually decided to recommend establishment of a separate authority dedicated to overall implementation of *The Reedy River Report: Managing a Watershed*.

Recommendations

After reviewing the issues that affect recreation, the Recreation Issue Committee developed and submitted the following recommendations to the Reedy River Task Force. All were subsequently approved for inclusion in this plan.

1. Establish designated Reedy River Public Access Points along the river below Cleveland Park that are safe, functional and do not interfere with environmentally or historically sensitive property. These sites would provide recreational and emergency access.

Generally, land should be purchased adjoining existing highway bridge locations to establish permanent Reedy River Public Access Points. The primary amenities at these locations would in-

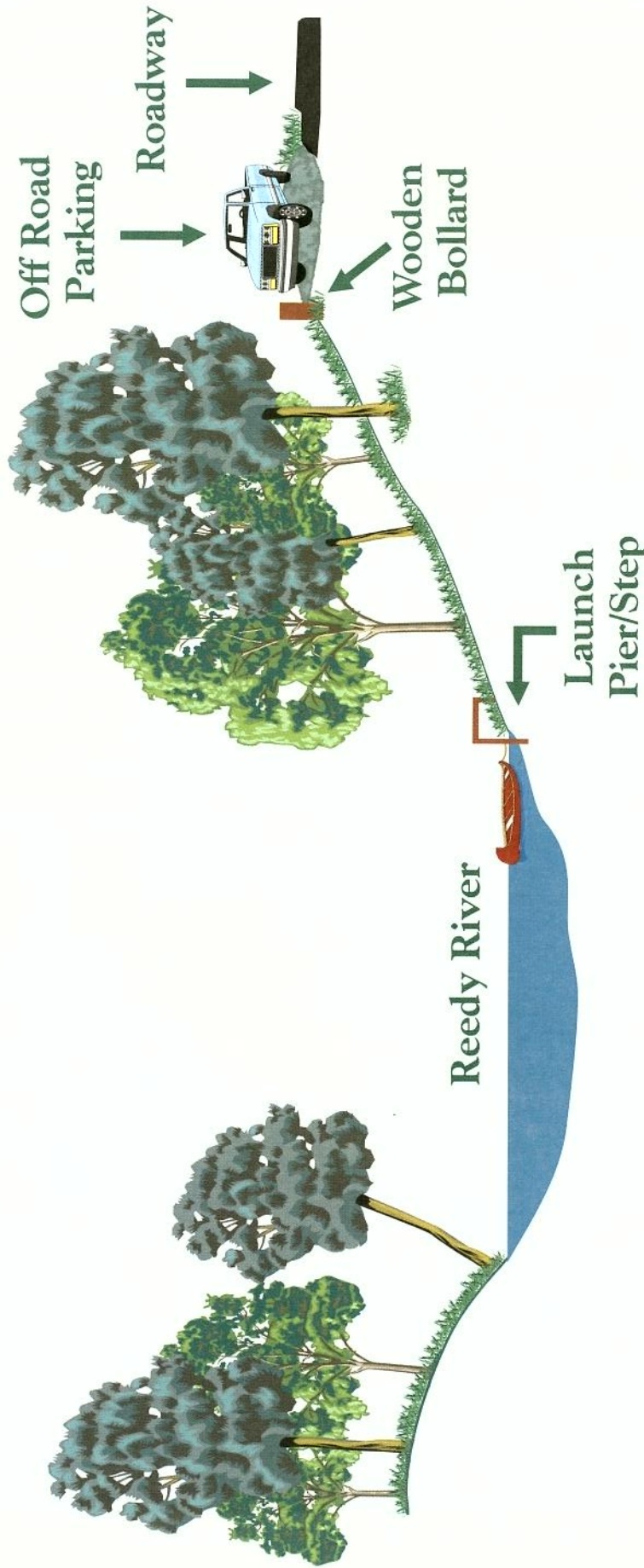
clude off-street parking, appropriate signage and launch steps. Optional amenities, such as picnic tables, trash cans, primitive camping sites and hiking trails, can be included if a responsible maintenance agency is identified, and the amenities do not interfere with private property. These access points should be located and designed in coordination with public safety considerations to facilitate search and rescue operations as well as environmental response actions. A conceptual drawing of the manner in which potential access points should be designed is illustrated in Figure 16.

- a. The types of recreational activities recommended to be encouraged and facilitated from the Reedy River Public Access Points are:
 - i. Canoeing and kayaking
 - ii. Hiking
 - iii. Picnics
 - iv. Nature/wildlife photography and observation
 - v. Fishing or swimming activities (Note: Fishing and swimming are not recommended leisure activities above Boyd Mill Pond at this point in time due to the marginal quality of the water, especially during heavy rain periods.)



Cleveland Park offers parking and canoe access to the Reedy River

Figure 16: Conceptual Illustration of Potential Access Points



General Principals for Development of River Access Points:

1. Provide vehicle parking space safely off road way and an appropriate distance from the river's edge.
2. Use gentle slopes to reach the river's edge.
3. Maintain natural vegetation in the buffer area between the road and the river.
4. Minimize the use of impervious surfaces for vehicle parking and trails.
5. Provide a permanent launch platform or step at the rivers edge.

Figure 17: Locations of Potential Access Points

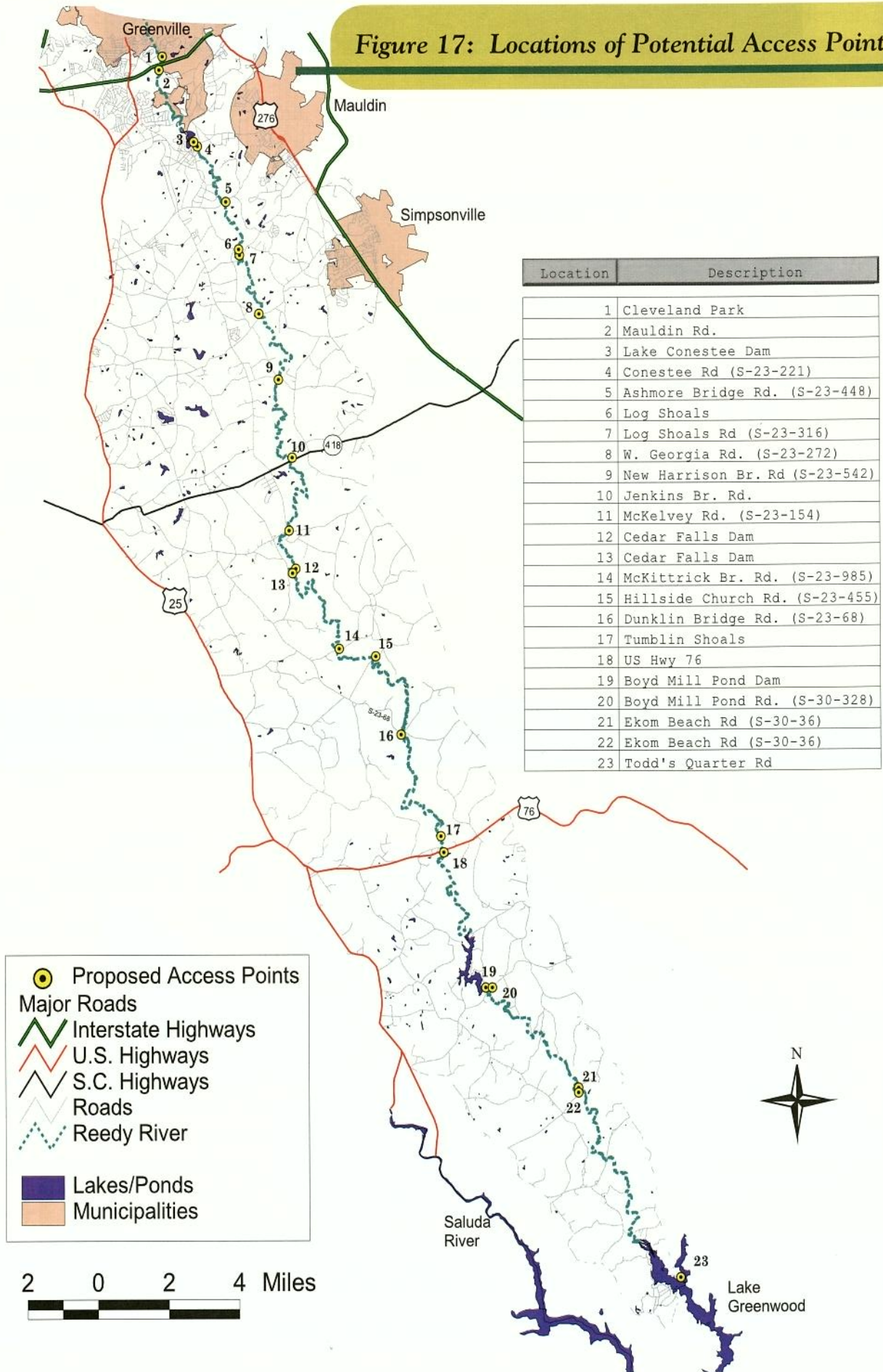


Table 6: Public Access Points Priority for Development

Priority	Put In/Take Out	Mileage	Time
1	Boyd Mill Pond/Ekomp Beach Road S-30-36	5.3 miles	3 hrs
2	Cedar Falls/Hillside Church Road	5.5 miles	3 hrs
3	Tumblin Shoals, US Highway 76/ Boyd Mill Pond	5.3 miles	2.3 hrs
4	Log Shoals Road S-23-316/ W. Georgia Road S-23-272	5.3 miles	3 hrs
5	Cleveland Park/Western Carolina- Mauldin Road	3.7 miles	2.5 hrs

b. The following recommended locations for Reedy River Public Access Points are illustrated in Figure 17:

- i. Cleveland Park
- ii. Western Carolina/Mauldin Road
- iii. Lake Conestee Dam S-23-221
- iv. Ashmore Bridge Road S-23-448
- v. Log Shoals Road S-23-316
- vi. W. Georgia Road S23-272
- vii. New Harrison Bridge Road S-23-542
- viii. Jenkins Bridge Road and SC Highway 418
- ix. McKelvey Road S-23-154
- x. Cedar Falls Dam
- xi. McKittrick Bridge Road S-23-985
- xii. Hillside Church Road
- xiii. Dunklin Bridge Road S-23-68
- xiv. Tumblin Shoals US Highway 76

- xv. Boyd Mill Pond Dam
- xvi. Ekomp Beach Road S-30-36
- xvii. Lake Greenwood-Dockside Landing Restaurant (private) or River Road (public)

c. Recommended priorities for development of Reedy River access points are presented in Table 6.

2. Expand the existing Reedy River Greenway in downtown Greenville upstream to Travelers Rest and downstream to Lake Greenwood to provide community recreation space, preserve water quality and safeguard against flooding.

Management control of the riparian zone should be achieved through a combination of land acquisition and conservation easements held in public trust or by private, non-profit conservation organizations. A minimum of a 200-foot riparian

zone along each side of the Reedy River, and 100 feet along each side of the major tributaries should be protected, enhanced, and preserved.

Where possible, larger tracts of land, such as the Clemson University riverfront holdings in Laurens County and property around Lake Conestee, should be considered for parks, outdoor education sites and nature preserves.

The primary amenity to be provided along the Reedy River Greenway would be hiking trails that connect Reedy River Public Access Points. Additional Reedy River Public Access points will be needed in the future, especially upstream from Linkie Stone Park, for access to the Reedy River Greenway.

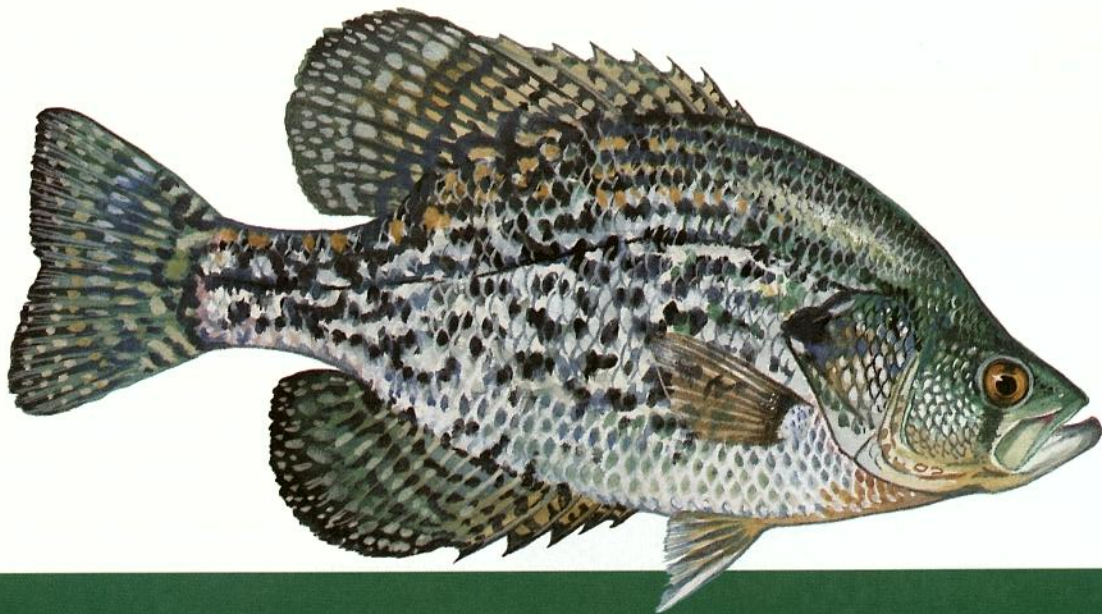
3. A Reedy River Access Guide should be printed and distributed throughout the upstate region of South Carolina. The guide will inform potential users of the recreation resources offered by the Reedy River, emphasizing the Access Points and a paddling guide. It will include natural and cultural history of the river corridor and guidance on the ethical use of the river and its stewardship.
4. Establish a *Reedy River Watershed Committee** with oversight responsibilities to continue the

advancement and implementation of *The Reedy River Report: Managing a Watershed* recommendations.

In order to cover the operating expenses necessary for staffing, *The Reedy River Watershed Committee* should be funded by Laurens County, Greenville County and the City of Greenville. Two of the committee's seven members should be appointed by Laurens County Council, two members by Greenville County Council, two members by Greenville City Council and one member by the Governor. *The Reedy River Watershed Committee* should be organized so that it can be expanded in the future to include other river corridor initiatives in the upstate region.

There needs to be a determination as to which public agency or agencies will maintain the access points and whether access points can be included in the "Adopt-A-Landing" program sponsored by the SCDNR.

* The recommendation developed by the Recreation Issue Committee called for establishment of the "Reedy River Authority." Subsequent discussions by the Reedy River Task Force resulting in the name of the entity being changed to "Reedy River Watershed Committee." The current proposal for *The Reedy River Watershed Committee* is presented in Appendix D.



Eleanor Welling, President of Friends of the Reedy River, joined us on the Cleveland Park to Lake Conestee segment, and retold the story of the trip in an opinion piece for "The Greenville News." Her account captures the problems and potential of restoring recreation on the Reedy:

I recently had the good fortune to be a participant on a canoe trip on the Reedy River. This outing, sponsored by the South Carolina Department of Natural Resources and its Reedy River Task Force, was intended to give participants a different perspective on the resource that is the subject of its basin-wide planning efforts. As promised, we learned more from a few hours on the river than we could have in hundreds of hours of task force meetings.

The history of our community and that of the 77-mile long Reedy are inexorably intertwined. Greenville was founded on her banks and from earliest history until today, the river has served us in many capacities. The natural beauty of the falls served as "Greenville's trysting place" for young couples and the two mill ponds as swimming holes and baptismal fonts. The Reedy first provided power for our industrialization and then served for years as the dumping ground for industrial wastes and raw sewage.

Despite its long history of abuse, the river has somehow survived, and now is getting a little help from its friends. On our recent canoe trip, it was an extraordinary adventure to follow a great blue heron down this wild green corridor right in the midst of our city.

We learned of the critical importance of the streamside forests so essential in providing a



Lake Conestee is gradually filling in with sediment from eroded soils



A trash and debris dam at a pipeline crossing obstructs canoeists

protective buffer from surrounding homes, businesses and apartment complexes. These forests protect the river banks from erosion, reduce stormwater impacts, slow floodwaters and provide habitat to an amazing variety of wildlife and songbirds. Employees of the Western Carolina Regional Sewer Authority and the construction company putting in the major sewer trunk line met with us that day on the river.

It was reassuring to know that the controversial but successful relocation of several miles of pipeline would do much to protect the river and the sensitive streamside forests so necessary for its survival.

As we silently paddled under Pleasantburg Drive and I-85, I felt we were in a beautiful but secret world that so few know of and even fewer value. I wanted to somehow bring Greenville to the river in its midst, to share the wildlife, the quiet and the beauty of one of our community's greatest resources. I was excited by the potential this corridor has for our community, to teach our history, to learn of our responsibilities as stewards of our environment, to provide recreational and educational opportunities.

It was disheartening to see the large amount of trash along the river, despite our numerous river cleanups over the past several years. "Dams" of trash had

to be broken up and hacked through. The brutal impact of Greenville's stormwater runoff was also clearly evident along our course, with huge trees undermined and banks scoured by the incredible power that quickly transforms a small stream into a raging torrent with even the slightest rain.

The stretch from I-85 to the village of Conestee is the wildest part of the river. Here the river is wide and its banks deeply forested. Much of this area is owned by the City of Greenville and the Sewer Authority, thus buffering it from the impact of growth.

Lake Conestee, lying just below the treatment plant, and behind the Greenville Braves stadium, provided the most eye-opening experience of the trip. Conestee, a historic mill community, was once a thriving village and reportedly had electricity before Greenville. It is sad commentary that this historic lake, once 145 acres, now consists primarily of contaminated sediments and only about 20 acres of water.

As Greenville grew, the lack of sediment control ordinances and waste water standards resulted in a failure to respect our neighbors downstream. Despite this evidence of poor stewardship, Lake Conestee demonstrates that nature is resilient. Beavers are busily managing the water resources we have neglected, waterfowl and shorebirds enjoy the remaining pools, songbirds thrive in the re-emerging wetland forests, and the tracks of deer, racoon and foxes are abundant.

One afternoon on the Reedy will open one's eyes to the history and inspiring beauty of our "hometown river." According to Leonardo da Vinci, "To touch a river, is to touch all that has come before, and all that is to come after."

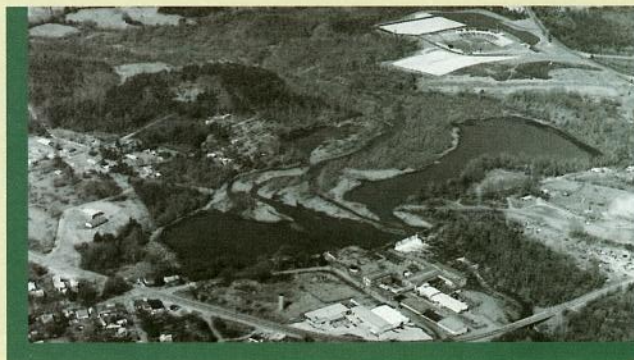
Touching the Reedy is a humbling and enriching experience that enables us to see the river's value and to feel the responsibility of restoring it to a condition in which we all can take pride. It has served us well for so long; perhaps now we should give it a hand.



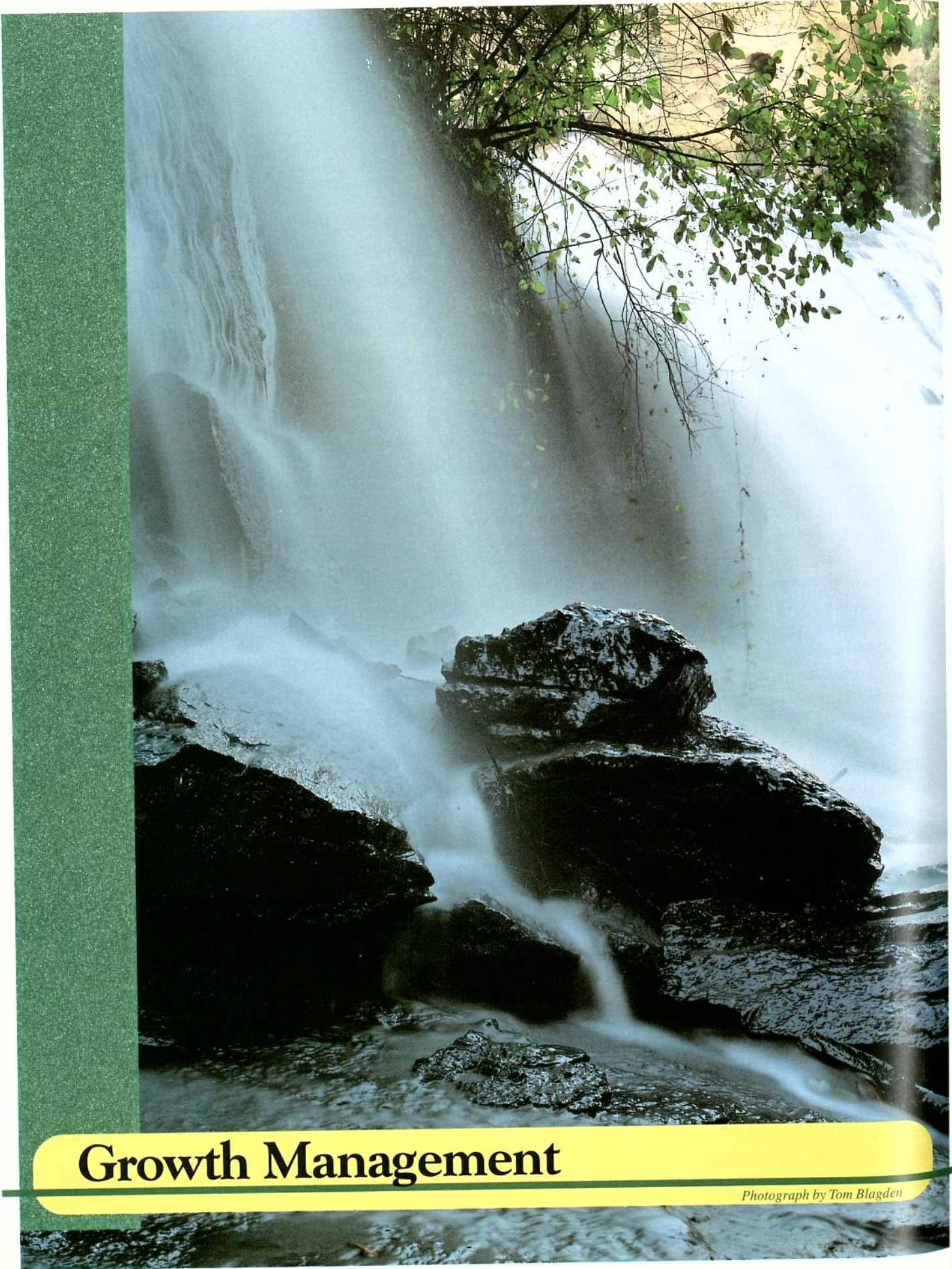
Aerial photographs illustrating the sedimentation of Lake Conestee. The lake in 1943...



in the 1970's and....



in the 1980's.



Growth Management

Photograph by Tom Blagden

Human inhabitants have altered the Reedy River Watershed landscape for many thousands of years. However, today's pace and pattern of urban development markedly accelerates our impacts on the sustainability of this riverine ecosystem. The Reedy River Task Force identified growth management in the watershed as a fundamental issue for the river's future and assigned the topic to the Growth Management Issue Committee for recommendations.

Greenville County, with a population of about 358,400 in 2000, has been the most populous county in South Carolina for the last twenty years. It is projected to keep that lead, growing by more people over the next twenty years than the current population in all of Laurens County, which was about 63,700 in 2000. Similarly, Greenville County has led the state in the number of housing units, adding over 26,000 between 1990 and 1998. In the same period, housing units in Laurens County increased by nearly 4,000.

Using recent advances in satellite remote sensing and computer-based geographic information systems, the rooftops, parking lots, roads and other impervious surfaces associated with urban growth can be detected and tracked over time. The South Carolina Department of Natural Resources (SCDNR) has applied this technology to the Reedy River Watershed, to depict and measure the changing patterns and proportions of principal land use categories. Landsat Thematic Mapper satellite imagery, which "sees" portions of the landscape as small as 30 meters by 30 meters in size, was mapped by computer to reveal the extent of forest land, agricultural land, urban land and water surfaces in the 167,000-acre watershed. Images from early 1983 versus late 1997 indicate that over this nearly 15-year period about 20,000 acres of agricultural land (12% of the watershed) was converted into 10,000 acres of urban land and 10,000 acres of forest land (Figure 18). The new urban land is mostly dispersed, low-density, automobile-oriented sprawl, especially south and east of Greenville. The new forest land is mostly pine plantations of the forest products industry in the lower watershed. Though checked against aerial photographs, this analysis is prone to mistake some agricultural land of bare soil as urban, and some urban land in residential areas with many trees as forest land.

The sprawl development pattern in the upper portion of the watershed multiplies the amount of impervious surface serving each new resident, increasing storm water runoff and decreasing groundwater recharge. Consequences of sprawl in the Reedy River include flash floods, diminished base flow, channelization, streambank erosion, bottom scouring, siltation and nonpoint source pollution. Other impacts associated with growth include excess nitrogen and phosphorus from point and nonpoint discharges, devegetation of the riparian zone and litter.

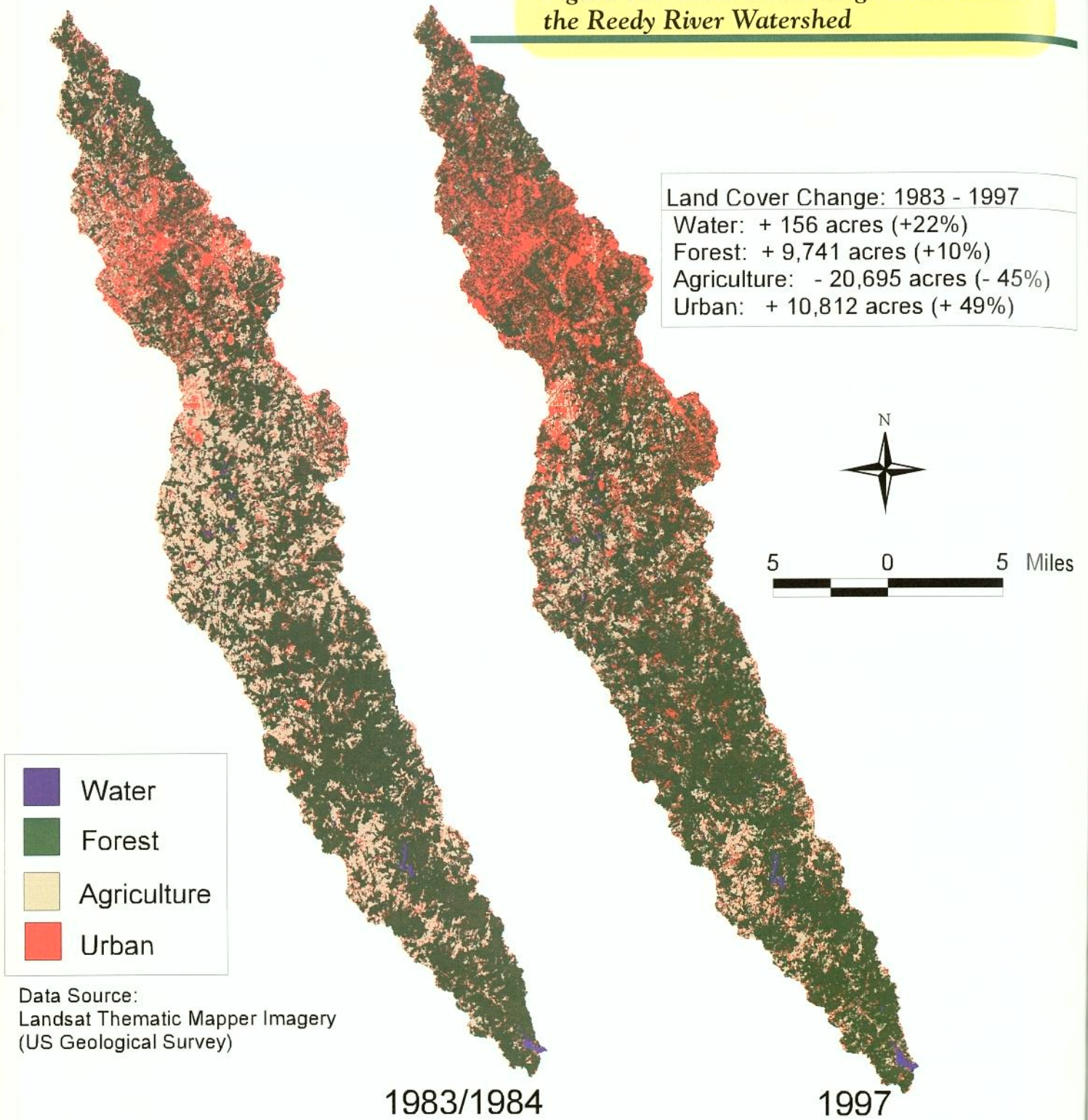
Public awareness of the undesirable effects of community growth is becoming more evident. For example, during the recent update of Greenville County's Comprehensive Plan, *Designing Our Destiny*, citizens expressed concerns about traffic congestion, school overcrowding, flooding, overextension of infrastructure and the loss of rural landscapes. Citizens also asked for more farmland protection and greenways. Though the most recent Laurens County Comprehensive Plan dates from 1997, it echoes public concern for protecting important farmland from development.



Residential subdivision development in southwest Mauldin



Figure 18: Land Use Change Detection in the Reedy River Watershed




Class	1983/1984	1997
Water	722 acres (1%)	878 acres (1%)
Forest	98,979 acres (59%)	108,720 acres (65%)
Agriculture	45,617 acres (27%)	24,922 acres (15%)
Urban	22,039 acres (19%)	32,851 acres (19%)

Methodology

The Growth Management Issue Committee was chaired by Chip Bentley of the Appalachian Council of Governments. Members of the committee included representatives from local government, regional government, Clemson University, state and federal agencies, the development community and environmental organizations. The committee began meeting in August 1999, hosted by the Appalachian Council of Governments, and continued to meet through March 2000. Initial topics of conversation at the first few meetings included regional development context of the watershed, status of local land use controls, such as zoning, in the watershed and region, infrastructure costs of growth and the need for state and local coordination on land use planning.

The committee also contributed to the agenda for the growth management conference hosted by the Reedy River Task Force. They considered topics such as greenways, flooding, land use impacts on water quality, traffic impacts on air quality, intergovernmental coordination of infrastructure, pending state legislation for farm and forest land protection, brownfields redevelopment and smart growth assistance and incentives. The final agenda balanced perspectives on economic development, community land use planning and natural resources protection.

During the committee's deliberations, the Greenville Water System reversed its intention to extend a water line to southern Greenville County, citing growing concerns about stimulating sprawl. The Southern Connector was under construction, between I-185 and I-385, prompting Greenville County to refine its recently adopted comprehensive plan for related growth impacts. Greenville County also worked on expanding zoning in the southern portion of the county, creating a cluster development ordinance, and allowing pervious surfaces for overflow parking lots. Laurens County debated new development standards and county airport zoning. Greenwood County, Laurens County and Newberry County began meeting separately on environmental and land use issues affecting Lake Greenwood. Clemson University focused one of its graduate-level planning studies on the Reedy River. The South Carolina Department of Health and Environmental Control (SCDHEC) reconsidered its regulations on the use of septic systems for new development.



Final agenda for the growth management conference hosted by the Reedy River Task Force on December 1, 1999

Agenda

Changes in the Reedy River Watershed: A Discussion of Growth Management

- 7:45 am Registration/coffee and pastries
- 8:30 am Welcome
Alfred H. Vang, Deputy Director, SCDNR
- 8:45 am Growth: Should It Be Managed? A State Perspective
Senator Phil Leventis
- 9:15 am Lessons from the Lowcountry
Dr. Jeff Allen, Strom Thurmond Institute, Clemson University
- 9:45 am Break
- 10:00 am Growth and Impacts on Natural Resources: The Charles River
Bob Zimmerman, Exec. Dir., The Charles River Watershed Assn.
- ** Panels will be moderated by Dr. Robert Becker, Director of the Strom Thurmond Institute, Clemson University****
- 11:00 am How Does Growth Management Affect Us?
*Beverly Turner Reedy River Property Owner
Tom Trantham, Dairy Farmer
Vivian Lancaster, Friends of Lake Greenwood*
- 12:15 pm Lunch
- 12:45 pm Upstate Growth Trends (during lunch)
Richard Lacy, SCDNR
- 1:30 pm How Do We Guide Growth Management?
*Brad Wyche, Upstate Forever
Gale Crawford, Homebuilders Association
Ed McMullen, SC Policy Council
George Fletcher, President Elect, Greenville Chamber of Commerce*
- 4:15 pm Can We Manage Growth? Bringing It All Together
*Senator Phil Leventis
Mayor Knox White, City of Greenville
Michael Pitts, Vice Chair, Laurens County Council*
- 5:00 pm Questions/wrap-up
- 5:30 pm Adjourn

As the committee formed its recommendations for the task force, it debated the use of the following:

- Vegetated buffers along riparian corridors
- Constructed wetlands for storm water management
- Incentives for design standards within the river corridor
- Conservation subdivisions that create shared open space along with new houses
- Best development practices for site construction, particularly storm water management
- Public greenways along the river system
- A management and maintenance entity for the Reedy River
- Improved floodplain mapping in the watershed
- "Truth in location" notifications to property buyers about public vs. private land use responsibilities

Coordination of public infrastructure investments, especially for roads, schools, water supply and sewage disposal, was deemed essential for regional growth management, but no practical recommendation emerged to apply to the watershed per se.

Recommendations

After reviewing the issues that affect growth within the watershed, the issue committee developed and submitted the following recommendations to the Reedy River Task Force. All were subsequently approved for inclusion in this plan.

1. Implement a program to establish a comprehensive greenway system for the Reedy River Watershed.

To implement this recommendation, we propose the creation of a Greenway Advisory Council, established between Greenville County and Laurens County. The council would oversee the establishment of a greenway system extending throughout the Reedy River Watershed. The advisory council should work closely with the county recreation districts, municipal recreation departments and local planning staffs to develop and implement a Greenway Master Plan and should be charged with the following tasks:

- a. Develop an inventory of existing and potential greenway and open space resources in the watershed.

- b. Identify priorities for acquisition and development of lands for greenways.
- c. Develop a Greenway Master Plan, including implementation strategies.
- d. Identify and secure funding for greenway resource acquisition and development.
- e. Facilitate cooperation among counties, municipalities and other authorities for managing open space resources.

2. Develop a River Corridor Stewardship Guide that promotes the responsible management of the resources of the Reedy River Watershed, consistent with larger community goals.

Within the watershed, each governmental entity (counties, municipalities and special districts) should develop compatible strategies and incentives to manage growth in a way that meets both environmental and economic goals. Many tools exist to coordinate growth in a manner that meets both goals. The key to successful protection of the Reedy will be to tailor a subset of these tools to fit the institutional, economic and environmental needs of the Reedy River Watershed and its residents.

To accomplish this, the Reedy River Best Practices Council should be established to develop a guide that is tailored to the Reedy River Watershed and sets out the best strategies for this area. The goal of this document should be to promote incentives and strategies to enhance the protection of the Reedy River while maintaining the economic



Commercial supercenter development off Bramlette Road

development potential of the watershed. Suggested strategies might include advocating open space preservation and incorporating cluster development concepts for residential areas. Such a development strategy could minimize total impervious surfaces, reduce total construction costs, provide open space, conserve natural areas and promote watershed protection. Strategies should also address future commercial and industrial development. Parking requirements for commercial and industrial land uses should be reviewed to see where the overall imperviousness associated with parking lots can be reduced.

The use of land trusts, conservation easements and tax abatement should also be looked at as ways to promote conservation of the riparian areas without causing hardships to local economic development efforts.

Appropriate redevelopment strategies that help reduce the necessity of additional construction in the watershed should also be explored. Additionally, these strategies should coordinate with the Greenway Master Plan to implement its recommendations. The Best Practices Council should also conduct an analysis of current development plans and regulations in the watershed in order to understand the extent of potential future development. Based on this analysis, the Best Practices Council can suggest strategies most appropriate for expected future development.

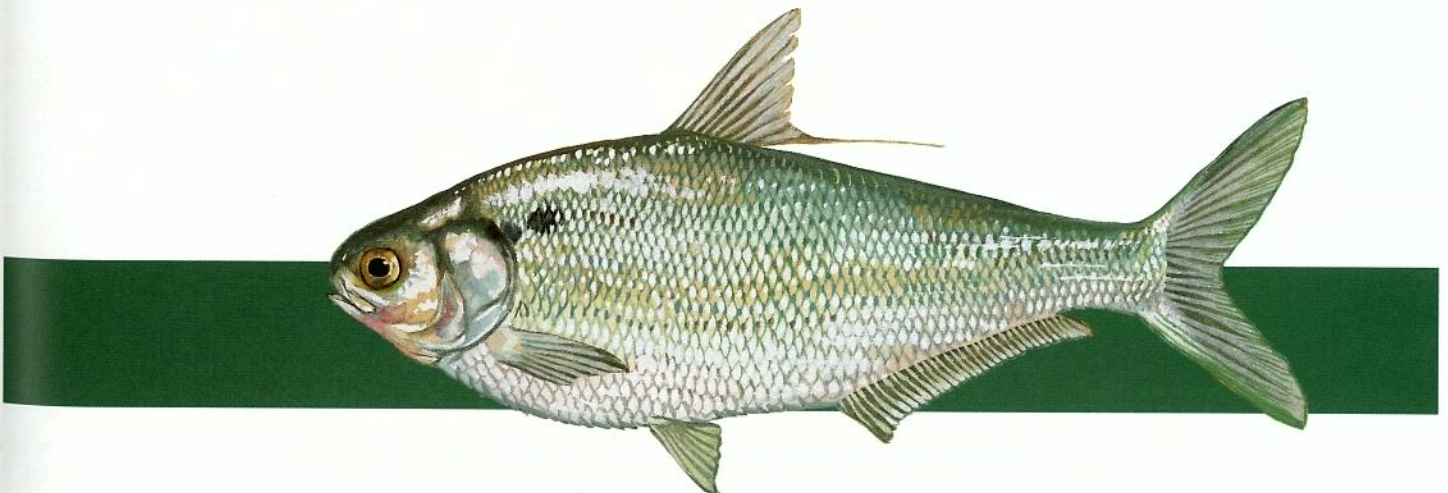
3. Develop a system to track growth, development and related environmental impacts within the

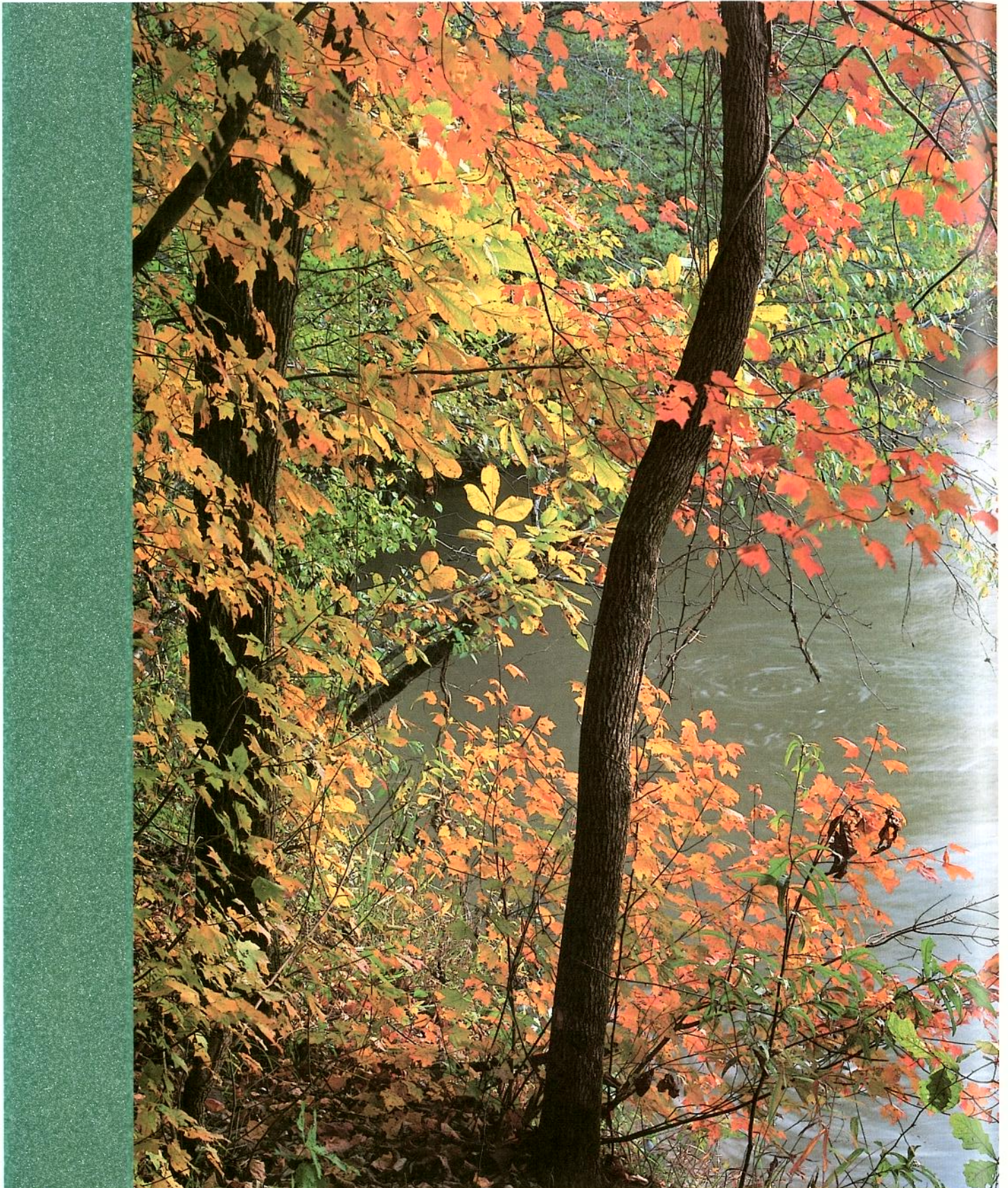


Greenville Technical College uses part of the Reedy River floodplain for stormwater, parking, and tennis

watershed. This information will be provided to the appropriate agencies for use in the development of growth management policies and regulations.

It is recommended that the Greenville County GIS Department develop a monitoring system that tracks growth within the watershed on a continual basis. This would be accomplished with the use of existing GIS information, aerial photography, satellite imagery and ground truth measures to monitor changes as they take place within the watershed. Using the county's existing GIS technology, the department could track changes in land use and identify trends. Counties, as well as school districts, special purpose districts and municipalities could use this data as they develop best practices strategies to address future growth and economic development.





Education

Photograph by Tom Blagden

Studies and polls show the majority of Americans consider themselves environmentalists and are willing to take steps and change behaviors in order to improve and maintain the quality of their environment (National Environmental Education and Training Foundation, 1999). Unfortunately, some of those same studies show that the general public does not understand the workings of the natural world. They do not know what the principal threats to our waterways are, or the manner in which their daily actions might affect those waterways.

New methods and technologies for dealing with environmental problems are developed regularly. Such developments are rarely covered in the general media and research scientists and engineers are not always successful at publicizing important findings. These are the two main problems that the Education Issue Committee sought to address. Education, outreach and communication should serve to make the community aware of river-related issues and keep people abreast of the best ways of dealing with them.

Methodology

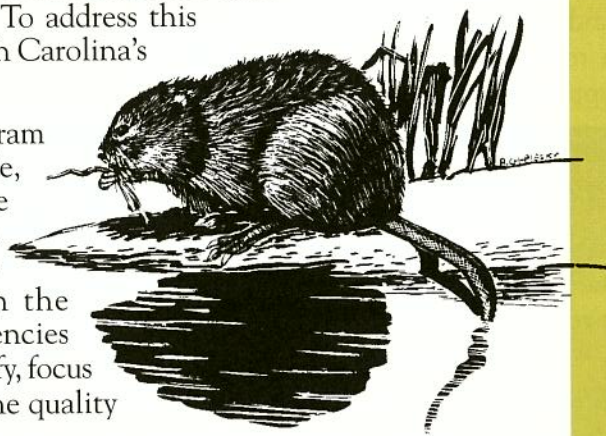
The Education Issue Committee was chaired by Laura Blind of the Joe Adair Outdoor Education Center and consisted of members from Greenville Technical College, Clemson University, local schools and state agencies. The committee met on a regular basis. During the first few committee meetings, the members compiled a list of needs for environmental education that included:

- Increase the public's general awareness of the river
- Form networks between communities that are affected by the river
- Teach about:
 - Nonpoint source pollution
 - Point source pollution and TMDLs
 - Importance of storm water management
 - Other specific curricula
- Make sure citizens know which government officials and agencies they could turn to for help
- Increase recreation opportunities—learn through enjoyment

As the meetings progressed, the committee determined that it would not develop specific curricula because this activity would be extremely time consuming and the end result of such work would be dubious without having the specific venues where the material could be taught in place. The committee, therefore, looked at the broader picture in order to establish a framework from which a watershed education program could be built for the Reedy River.

A chief concern of the committee regarded the continued implementation of the management plan after the task force's work is complete. The public's awareness must be maintained long after publication of the plan. To address this issue, the committee looked to the program in North Carolina's Neuse River Watershed.

The Neuse River Watershed is host to a pilot program of the North Carolina Cooperative Extension Service, the *Neuse Education Team* (or the *Neuse Effort*). The *Neuse Effort* originated in 1997 when the North Carolina General Assembly approved funding to enhance environmental educational efforts in the watershed. The team works with local and state agencies and governments, as well as private citizens, to identify, focus and coordinate educational programs to improve the quality of the Neuse River.



The *Neuse Education Team* targets their programs to all within the watershed whose actions have an impact on the quality of the river. Their audiences include the agricultural and forestry community, industry, and urban, suburban and rural homeowners. They also have extensive resources that schoolteachers can use with students.

The educational methods of the *Neuse Effort* include tours of demonstration and research projects, workshops, pamphlets and other literature, conferences and specialists who are available for more individualized advice and guidance. The team coordinator also acts as a public relations coordinator and deals extensively with the media. The Education Issue Committee recommends a similar approach to the one used in the *Neuse Effort*.

A complementary approach to watershed education and maintaining public focus on the river is the establishment of a watershed education and research center. Environmental education centers stress teaching through hands-on activities and direct observation. A well-sited and equipped center can attract top researchers and the kinds of projects that would benefit water quality and ecosystem health within the Reedy basin and in similar watersheds throughout the Piedmont region.

The Education Issue Committee envisions a center (or centers) where different approaches for dealing with the river-related environmental problems can be tested and demonstrated for industries, land users and homeowners. Since the Reedy flows through urban, suburban and rural areas, environmental problems that occur in each should be addressed.

In addition, a center can be used to enhance people's appreciation and enjoyment of the river and its riparian zone through more general outdoor education and recreational opportunities.

Recommendations

After reviewing the issues that affect education, the Education Issue Committee developed and submitted the following recommendations to the Reedy River Task Force. All were subsequently approved for inclusion in this plan.

- 1.a. A full time watershed education/public relations coordinator, modeled loosely on that

of North Carolina's *Neuse River Effort*, should be employed for the Reedy River Watershed. Education efforts, such as demonstration projects, informational literature, press releases and other media promotions should be coordinated through this position. The person hired for this position should act as a liaison between:

- i. Researchers working on projects connected with the river
- ii. Such researchers and the public and media
- iii. Communities and governments affected by river issues

Partnering between interested parties (citizen groups, governments, educational institutions) can be facilitated through this position.

Organizations that may be suitable to administer job requirements, evaluations, salary and benefits, etc. for the coordinator position include, but are not necessary limited to, Clemson Extension, South Carolina Department of Health and Environmental Control, South Carolina Department of Natural Resources and affected Soil and Water Conservation Districts.

- b. The Education Issue Committee fully supports the recommendation by the Aquatic Health and Riparian Zone Management Issue Committee that establishes a comprehensive biological assessment program for the Reedy River and its tributaries, including biotic inventories (terrestrial and aquatic), water monitoring and wetland inventories. While the primary purpose of such an assessment program should be the establishment of baseline conditions and to monitor improvement/degradation of the river, the assessment offers a unique opportunity for increasing public awareness of the river and its associated resources. The watershed education coordinator should:

- i. Regularly update the local media, through press releases, photo and/or video opportunities of the purposes, progress and special findings of the assessment.
- ii. Where feasible, find and take advantage of opportunities for the involvement of local schools, neighborhoods and community groups in the assessment.

In addition, the coordinator should ready for publication a nature field guide for the river and its riparian zone, using the information and data produced by these assessments.

2. Establish a watershed education center (or centers) that addresses land use and water quality issues of both the urbanized upper portion and the rural lower portion of the Reedy River Watershed. The education center(s) will:
 - a. Provide a full educational experience, from classroom to in-field observation and hands-on learning.
 - b. Provide grounds and facilities needed for research and demonstration projects.
 - c. Bring and maintain the attention of the public to the river.
 - d. Serve as a focal point for river-related issues and events.
 - e. Provide river-related recreational opportunities.

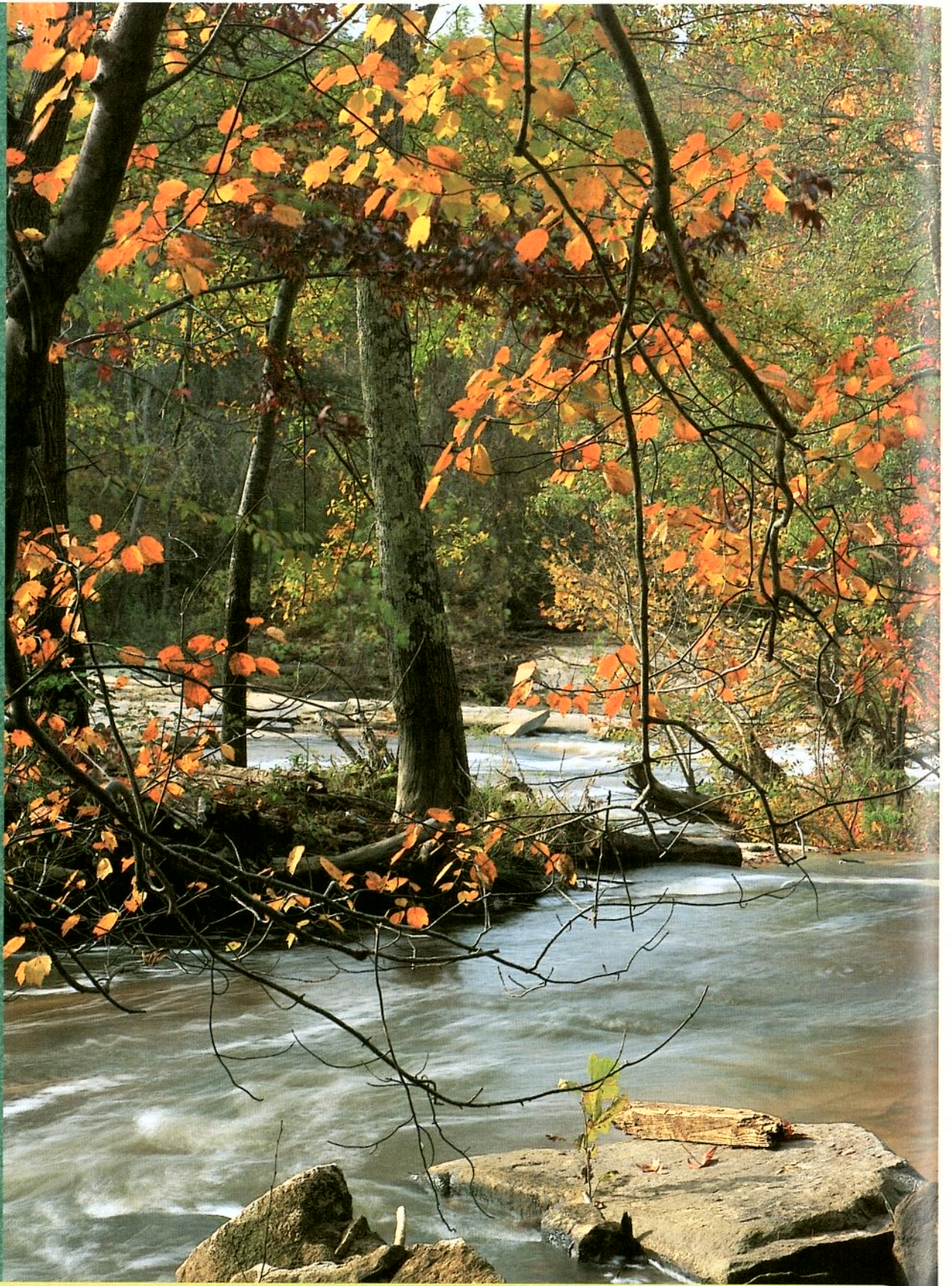
The benefits of an education center are not to be restricted to schoolchildren. Formal and informal instruction can be provided for homeowners, developers, and forestry and agricultural land users in the form of demonstration projects and seminars. University level research should also be encouraged on the grounds, if the site lends itself to such activity.

Education center facilities and surrounding lands should be sufficient to include classroom and meeting space, space for research and demonstration projects, room for interpretive materials and any necessary exhibits or overview materials that explain research and demonstration projects and site appropriate recreation facilities such as canoe landings and nature trails.

Potential sites for an education center are presented below. This list is not all-inclusive. Other sites may also be worthy of consideration.

- Taylor Island in Lake Conestee—Just south of the City of Greenville, this wooded island sits in the silted-in portion of the lake. The location makes Taylor Island ideal for research and education centered on urban water quality problems.
- The Adair Property (now owned by Clemson University)—On the lower Reedy River in Laurens County is a 500-acre tract on a rural, largely wooded area of the watershed. The size and natural environment of this parcel sets few limits on its research and education potentials. This is also an ideal site for river-related recreational opportunities.
- Brashier Campus of Greenville Technical College—This campus, south of the City of Greenville, borders the river in an area where land use is rapidly changing from agricultural to suburban residential.





Realizing The Vision

Photograph by Tom Blagden

Natural resources planning and management is becoming increasingly complex. In our never-ending attempt to simplify difficult questions and issues, we are finding that we must look at the inter-connected nature of our problems. For example, we cannot understand the quality of water in our rivers without looking at land use and land management issues.

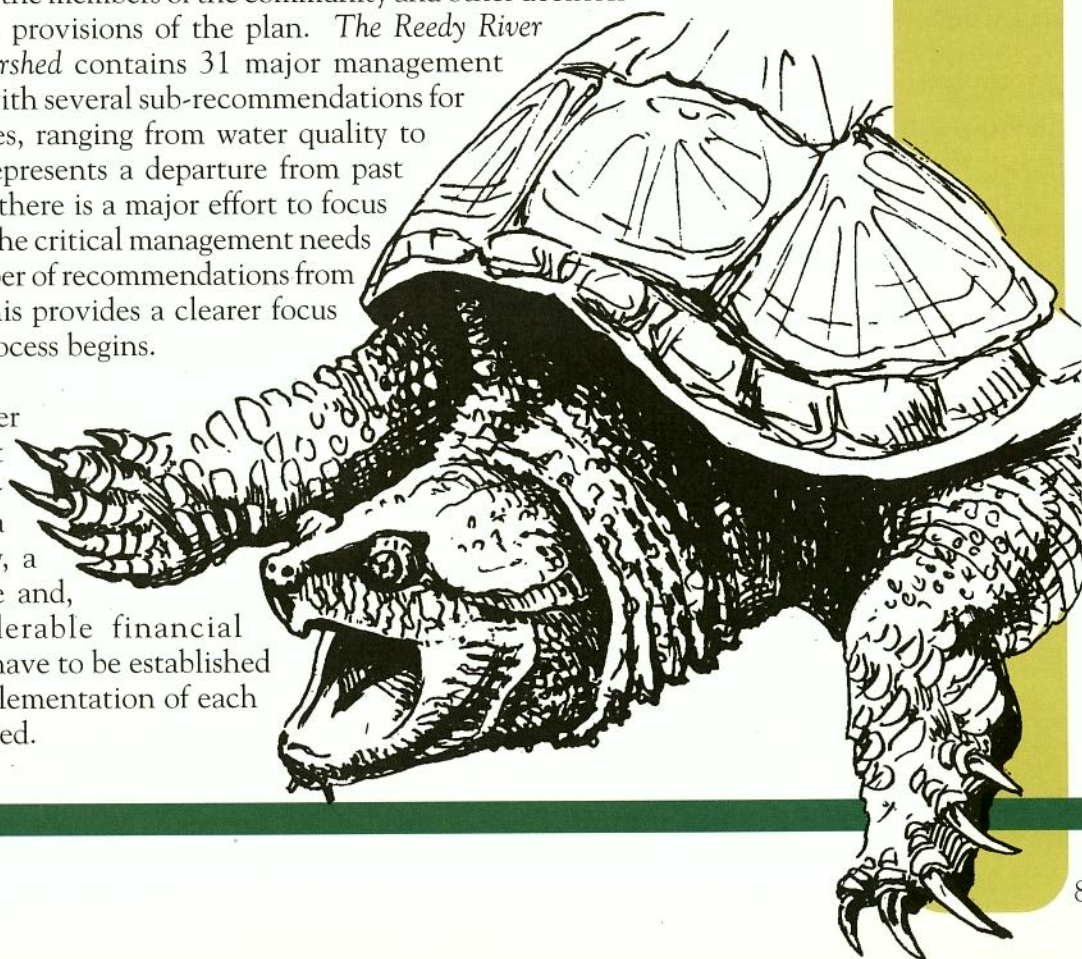
The Reedy River Report: Managing a Watershed is an attempt to examine the complexity and inter-connectedness of natural resources. Completing a watershed management plan is a challenging process. Over an 18 month period, the Reedy River Task Force, its issue committees and the general public completed an examination of the critical resources in this watershed and compiled a comprehensive management plan.

Over 140 individuals devoted significant time and effort to the completion of this study. Completing this process is a significant achievement that will contribute positively to the management of the Reedy River. However, the process of completing a plan is actually the simplest phase in resource management. The final phase in the process, the implementation phase, is always the most demanding part.

In a citizen-based planning effort, the process itself contains many positive outcomes. Participants are exposed to a variety of viewpoints, increasing the understanding of ways that different groups use the resource base and the needs of each group. A second benefit of this approach is a final plan that is based on collective wisdom, representing a balanced view that acknowledges all legitimate resource needs. This type of plan can also lead to proactive decision-making. When citizens come together to construct a common vision for resource management, the result is a guidebook for a broad cross-section of decision makers and resource users.

For all the positive benefits associated with this type of planning process, the true measure of success lies in the ability of the members of the community and other decision makers to implement the provisions of the plan. *The Reedy River Report: Managing a Watershed* contains 31 major management recommendations along with several sub-recommendations for the basin and its resources, ranging from water quality to recreation. This study represents a departure from past watershed studies in that there is a major effort to focus the recommendations on the critical management needs and limit the overall number of recommendations from each issue committee. This provides a clearer focus as the implementation process begins.

Even with a smaller number of overall management recommendations, implementation will require a carefully crafted strategy, a significant amount of time and, in some cases, considerable financial resources. Priorities will have to be established and strategies for the implementation of each recommendation developed.



Not all recommendations will require the same type of effort to implement. Many recommendations will require cooperative approaches involving partnerships among governmental entities or public-private partnerships. Implementing other recommendations will require financial resources. Many will require political decisions that must be made by local or state governments. However, an overwhelming majority of the recommendations in this plan can be implemented by landowners, river users, local organizations or political leaders who simply decide these recommendations provide a reasonable means for managing the basin's resources. Many of the recommendations in this latter group will rely upon education as the key vehicle for implementation. Regardless of which approach is needed for implementation, each recommendation will require efforts over a long period of time.

Creating An Implementation Process

One of the first steps in the implementation process is to create a permanent entity to succeed the Reedy River Task Force. The task force has recommended creating *The Reedy River Watershed Committee* to be charged with the responsibility of implementation.

The recommendation calls for this committee to be appointed by county and municipal governments in the Reedy River/Lake Greenwood Watershed. This is a critically important task. The river obviously ignores political boundaries, and long-term management and problem solving will take cooperation and communication at the local government level. County and city governments must be key players in this process.

A commitment to a permanent implementation process is critical to realizing the vision contained in this plan. The creation of *The Reedy River Watershed Committee* presents an opportunity to make the vision reality.

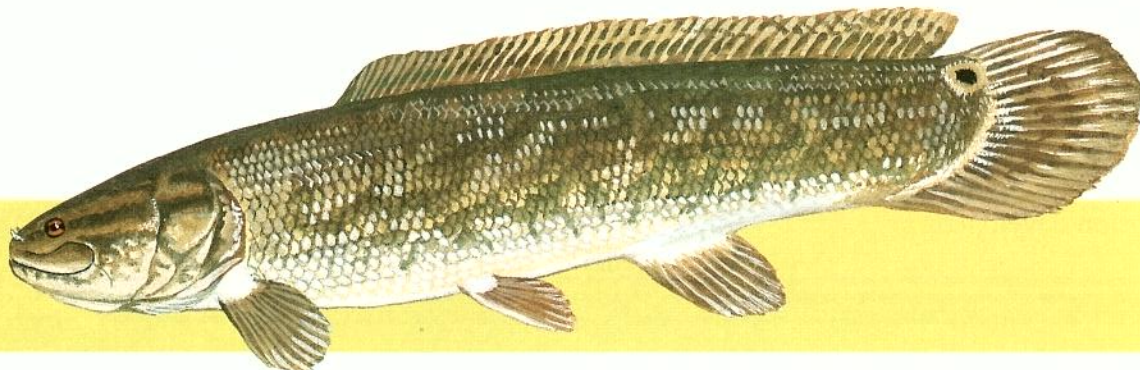
Conclusion

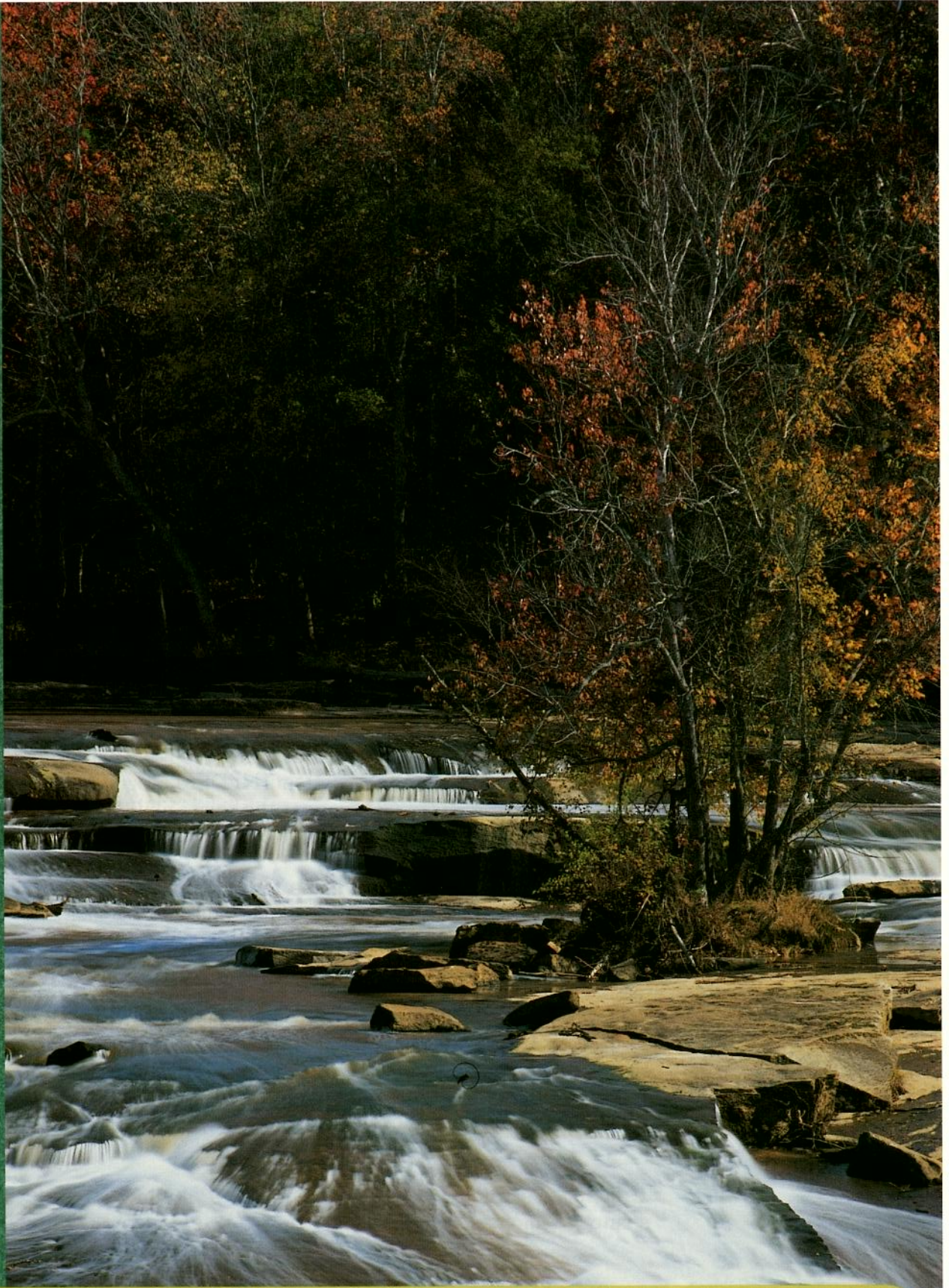
This report is the result of a community-based and inclusive planning process involving numerous citizens from throughout the Reedy River Watershed. The planning process brought people with diverse views together and has resulted in a plan grounded in local values and based on long-term sustainable management goals.

This planning process has already yielded positive benefits for the Reedy River Watershed. To fully realize the efforts of the people who created this plan, we must be committed to implementation. These implementation efforts should utilize education and a broad-based outreach strategy, as did the planning process. It will depend upon the creation of a permanent *Reedy River Watershed Committee*, with assistance from local, regional and state government.

The basin's economic, ecological, cultural and recreational resource base is constantly changing. Social and cultural forces bring change. Political forces bring change. These phenomena make our resource base dynamic. Thus, a management plan must also be dynamic and subject to change.

Aldo Leopold stated, "A conservationist is one who is humbly aware that with each stroke he is writing his signature on the face of the land." In the complex world in which we now find ourselves, it is more important than ever before to use care "in writing our signature on the face of the land." We must understand the nature of the impacts our actions and decisions have upon our natural resource base. Utilizing proactive, comprehensive management plans, such as *The Reedy River Report: Managing a Watershed*, may give us an opportunity to sustain a viable resource base for those who follow in our footsteps.





Glossary & Literature Cited

Photograph by Tom Blagden

Glossary

303(d) List: Under Section 303(d) of the federal Clean Water Act, each state is required to provide a comprehensive inventory of waters that do not meet the state water quality standards or the goals of the Clean Water Act. This list is prepared biannually and identifies those waterbodies that need additional management actions.

7Q10: The lowest average flow in a river, calculated over seven days during a period of ten years.

Aquatic Macroinvertebrates: Aquatic insects and other aquatic invertebrates that are generally associated with substrates of waterbodies (including streams, rivers and lakes). These organisms can be useful indicators of water quality.

Basin Monitoring Stations: Locations from which samples are collected on a monthly basis, year round, during a basin's target year. Each basin within the state is targeted for additional sampling once every five years.

Habitat: The specific area or environment in which a particular type of plant or animal lives (elements of habitat include food, cover and water).

Nonpoint Source Pollution: Contamination that comes from a diffuse source rather than from a specific point. Examples include storm water runoff from roads, urban areas and agricultural areas.

NPDES Permit: Pipe discharges of treated wastewater require a permit under the federal National Pollutant Discharge Elimination System (NPDES) program. The permit is based on a wasteload allocation model that determines the river's ability to assimilate particular pollutants. The permit specifies the types and amounts of pollutants that can be released to the river by each respective discharger.

Nutrifification: The process by which an excess of plant nutrients are added to a waterbody; phosphorus and nitrogen are the nutrients that typically cause the most concern in terms of nutrification.

Point Source Pollution: Contamination that comes from a specific, definable source such as an outfall pipe.

Primary Monitoring Stations: Locations from which samples are collected monthly throughout the year.

Riparian Buffer: A strip of natural vegetation along a stream or river. Riparian buffers fulfill three basic roles: maintenance of the hydrologic, hydraulic and ecological integrity of the stream channel; removal of pollution from runoff; and protection of fish and wildlife.

Riparian Zone: At the smallest scale, the riparian zone would be the immediate water's edge where specialized plants and animals form a distinct community. At a larger scale, it would be the area periodically inundated by high water; i.e., the banks and floodplain of the river. Finally, on the largest scale, it would be the band of forest that has a significant influence on the river ecosystem, or conversely is significantly influenced by the river (Hunter, 1990).

Secondary Monitoring Stations: Locations from which samples are collected monthly from May through October, a period critical to aquatic life due to higher water temperatures and lower flows.

Total Maximum Daily Load (TMDL): Represents the maximum pollutant load allowed for a specific waterbody that will allow water quality standards to be maintained.

Tributary: A stream or river flowing into a larger stream or river.

Watershed: The drainage area of a stream and its tributaries.

Wetland: Land transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Wetlands must have one or more of the following three attributes: 1) at least periodically, the land supports predominantly hydrophytes (plants adapted to wet soil conditions); 2) the substrate is predominantly undrained hydric soil; and 3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

