

# POLICY NOTES

Notes on Important Policy Issues in Georgia

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## Protecting Stream and River Corridors Creating Effective Local Riparian Buffer Ordinances

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The health of streams and rivers in Georgia depends to a great extent on the lands that surround them. Recognizing their value, federal and state agencies now widely advocate riparian buffers for protecting water quality on agricultural, forestry, and more urban lands. These buffers, or protected stream corridors, offer numerous benefits: trapping and removing sediment from runoff; stabilizing stream banks and reducing channel erosion; trapping and removing nutrients and contaminants; storing flood waters, thereby reducing property damage; maintaining habitat for fish and other aquatic organisms; providing terrestrial habitat; improving aesthetics, thereby increasing property values; and offering recreational and educational opportunities. In Georgia, local governments are required to protect buffers along certain streams and rivers by the Georgia Planning Act and the Mountain and River Corridor Protection Act.

Until now, scientifically based guidelines for buffer ordinances have not been available, and many local officials have worried that without solid scientific support a comprehensive buffer ordinance could face legal challenges from developers and other property owners. The minimum standards for riparian buffers issued by the Georgia Department of Natural Resources, Environmental Protection Division (EPD), are not based on current scientific research and do not provide a strong level of resource protection. Only certain streams and rivers are protected, and many activities harmful to water quality are exempted from regulation. Those counties and municipalities that want to develop effective, comprehensive riparian buffer ordinances that protect water quality and wildlife will find the minimum standards insufficient. But, local governments do have the authority to develop alternative, more effective ordinances.

A recent analysis of scientific buffer research applicable to Georgia has determined that the most effective buffers are at least 100 feet (30 meters) wide, composed of native forest, and are applied to all streams, including very small ones (Wenger 1999). Ideally, the width of the buffer will vary based on local conditions such as slope, width of the floodplain, presence of wetlands, and other factors. Two variable-width formulas that incorporate such factors are presented in the public policy paper. The first specifies a minimum width of 100 feet, while the second provides for a minimum width of 50 feet. For local governments that find a variable-width formula too cumbersome to administer, recommendations are also provided for a fixed-width buffer of 100 feet. Effective buffers exclude construction causing land disturbance, impervious surfaces, logging roads, mining, septic tank drain fields, application of pesticides and fertilizer, waste disposal sites, and livestock access.

Local buffer ordinances can take different forms, according to a recent study of riparian buffer ordinances in Georgia, its neighboring states, and the nation. For those local governments with zoning regulations, an ordinance that creates a buffer overlay district is the best approach. The next best alternative is a stand-alone ordinance. Buffer protection could also be incorporated into a floodplain ordinance. It is recommended that local governments do not use an erosion and sedimentation control ordinance to accomplish buffer protection. An effective riparian buffer ordinance will have the following characteristics:



- *Minimum standards for protection under the Georgia Planning Act and the Mountain and River Corridor Protection Act.* A good buffer ordinance will incorporate all state requirements into a single set of local regulations.
- *Flexibility and variance procedures.* In many cases, it is possible to slightly reduce the width of a portion of the buffer to accommodate the needs of a landowner while not significantly affecting buffer performance. In extreme cases, a variance that significantly reduces the buffer width will need to be issued or the local government will need to acquire the development interest for the buffer. The buffer ordinance should include variance criteria and procedures that are stringent but fair.
- *An exception for existing land uses.* Properties are only affected by the buffer ordinance when they change use—for example, when agricultural land is developed for residences.
- *Exceptions for specified activities.* Agriculture is traditionally outside the regulatory domain of local governments and may be exempted (although certain restrictions on pesticide and fertilizer application are appropriate). Forestry is acceptable within limits. Structures such as boat ramps are also excepted.
- *Guidelines for buffer crossings and restoration.* Crossings should be minimized, and restoration is sometimes necessary.

Good communication with property owners is essential in administering a buffer ordinance. This reduces the likelihood of opposition based on irrational fears and misunderstandings of the law. Proper enforcement is also a necessity, although previous experiences suggest that this burden need not be great. A simple and reliable system for determining buffer width—for those local governments with a variable-width ordinance—is also important. A model ordinance that incorporates all of the major provisions discussed above is included in the policy paper and is also available from the authors and the Vinson Institute.

Riparian buffers offer economic benefits. For one, they can increase property values. Properties near healthy, protected streams are worth more than properties located farther away or near unhealthy, aesthetically unpleasant waterways. Also, buffers protect water quality, which has immense economic value. By keeping sediment out of rivers, for example, buffers reduce the expenses of drinking water treatment plants. Clean streams and rivers are also valuable for recreation and tourism and are vital factors in attracting new businesses and residents. Finally, protecting streams with buffers is a low-cost way to enhance the survival of endangered aquatic species. In short, riparian buffers are not only essential tools for environmental protection, they are also important factors in the long-term economic health of a community.

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*This Note summarizes a paper published in the Institute's Public Policy Research Series, which is available from the Institute or can be accessed at [www.cviog.uga.edu/pprs](http://www.cviog.uga.edu/pprs).*

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## Selected Resources

Palone, R.S., and A.H. Todd, eds. 1998. *Chesapeake Bay Riparian Handbook: A Guide for Establishing and Maintaining Riparian Forest Buffers*. Radnor, Pa.: USDA Forest Service. NA-TP-002-97. (Available on the Internet at [www.chesapeakebay.net/facts/forests/handbook.htm](http://www.chesapeakebay.net/facts/forests/handbook.htm).)

Wenger, S.J. 1999. "A Review of the Scientific Literature on Riparian Buffer Width, Extent and Vegetation." Working paper. The University of Georgia, Institute of Ecology Office for Public Service and Outreach, Athens, Ga. (Available from the author at [swenger@arches.uga.edu](mailto:swenger@arches.uga.edu) and 706-542-9252.)

Witten, J. 1997. *Counties and the Takings Issue: How Far Can Government Go in Regulating Private Property?* Washington, D.C.: National Association of Counties. (Available from ACCG at 404-522-5022.)

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