

AN INNOVATIVE PLAN FOR WATER RESOURCES PROTECTION IN THE LAKE ALLATOONA/UPPER ETOWAH RIVER WATERSHED

Jerry Jones¹, David M. Kubala², Brian Ruggs³, James B. Stribling⁴

AUTHOR: ¹Vice President, Malcolm Pirnie, Inc. – 2200 Century Parkway, Suite 250, Atlanta, GA 30345 678-651.2730, ²Environmental Manager, Cherokee County Water and Sewerage Authority, Canton, Georgia, ³ Civil Engineer, Malcolm Pirnie Inc., 2170 Highland Ave, Suite 250, Birmingham, Alabama, and ⁴Director, Tetra Tech, Inc. - Center for Ecological Sciences, 400 Red Brook Blvd., Owings Mills, Maryland.
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Abstract: In 2000, the Georgia Department of Environmental Protection (EPD) implemented one of the most innovative approaches to watershed management and protection in the nation. That approach required the development of Watershed Assessments (WA) and Watershed Protection Plans (WPP) prior to receiving water or waste water permits (new or expanded). This surrogate approach was designed to ensure that local water and sewer providers give full consideration for how the added capacity (water and/or sewer) could impact long-term sustainability of water resources and ultimately develop and implement plans that would support protection and sustainability of the resources. Prior to this collaborative effort, WA's and WPP's were developed by individual permittees with a focus on their own political boundaries and/or service areas. In 2003, the Lake Allatoona/Upper Etowah (LAUE) River Watershed was initiated to implement a comprehensive evaluation of ecological (aquatic and physical habitat) and water resource conditions of the LAUE watershed. The group includes the counties of Bartow, Cherokee, Cobb, Dawson, Forsyth, Lumpkin, and Pickens, and three water and sewer authorities; Cherokee County Water and Sewerage Authority, Cobb County-Marietta Water Authority, and Etowah Water and Sewer Authority along with federal, state, and local agencies using a true watershed approach. The broad objective of the project was to develop a better understanding of the linkages between land-use and environmental resources with an aim of sustainable utilization of the water resources of the LAUE Watershed in accordance with Georgia's O.C.G.A 12-5-522(a)).

This was accomplished through rigorous sampling, analysis, coupled with linked watershed and reservoir modeling to produce data and assessments of known quality that will ultimately be used to make sound decisions that support sustainability of the area's water resources. The WPP will offer a scientifically defensible and achievable example of watershed management that is *spatially defined* and *politically plausible*. Environmental impacts were derived based upon the ability of a potential management alternative to enhance and/or protect aquatic ecological habitat as well as meet water quality standards. Economic impacts were derived for various management alternatives and were divided into two main categories: (1) BMP costs as an indicator of direct economic impacts; and (2) land opportunity costs as an indicator of indirect economic impacts. This collaborative framework links all aspects of Georgia State Water programs and could become the tactical model for the State to apply existing programs more efficiently and effectively at the watershed scale.