

# WATER QUALITY VS ECONOMIC STABILITY CONFLICT OR OPPORTUNITY

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## INTRODUCTION

Through the 1800's and until the mid 1900's, farming was the major and only significant industry in many areas of rural North Georgia. The soil nutrients were depleted as the highly erodible fields were intensely farmed. As a result, many farmers sought income alternatives to crop production. Poultry, dairy, beef, and pork production became increasingly important agricultural enterprises. The economic impact of these industries and their potential impact on water quality will be addressed in this presentation. Opportunities and actions to reduce water quality conflicts will also be emphasized.

## BACKGROUND

North Georgia, as defined for this paper, includes 73 counties located north of the Fall Line (Columbus, Macon, and Augusta), representing 39 percent of the state. These 14.8 million acres supply runoff water to seven river basins, including 18 major lakes in North Georgia, three others within Georgia, and several lakes in adjacent states. About 50 percent of the state's fresh water, 56 percent of the urban built-up areas, 42 percent of the forest land, and 29 percent of the agricultural land are located in North Georgia (*The 1992 Georgia County Guide*, 1992).

## ECONOMIC IMPACT

The significance of North Georgia's agricultural base is best realized by examining its livestock and poultry industries. About 49 percent of the state's cattle, 18 percent of the swine, 64 percent of the layers, 90 percent of the broilers, and 99 percent of the turkeys are raised in North Georgia. These are extremely valuable to the economy of the region and to Georgia.

About \$38 billion, or 21 percent of Georgia's estimated \$178 billion 1991 Gross Product, are attributed to

food and fiber resources (Kriesel, 1992). The forestry and the wood products industry is the single largest agricultural contributor at \$12.8 billion, with \$3.2 billion of these receipts coming from North Georgia. Crops, livestock, and poultry account for \$4 billion of agricultural receipts, with half of this (\$1.9 billion) occurring in North Georgia (*Georgia Agricultural Facts*, 1992). The balance of the state's agricultural receipts come from value-added production once the crops leave the fields.

## WATER QUALITY IMPACT

While the favorable agricultural economy is vitally important to North Georgia, it also creates potential for adverse effects and water quality. Eighty-two percent of the animal manure produced in the state is produced in North Georgia. Twenty of the 73 counties produce more animal manure than can be continuously applied to agricultural land for plant utilization. The majority of the remaining counties do not have sufficient agricultural land located near the livestock operations to economically and safely use all the material generated (*Georgia Agricultural Water Quality Assessment*, 1987). As a result, the potential exists for water quality problems associated with land application of manure and litter.

For the most part, streams in North Georgia's rural areas have good quality water. However, some limited problems relating to animal waste and crop production have already been documented. In some cases, elevated levels of fecal coliform, ammonia, pesticide, nitrogen, and phosphorus enrichment have led to streams being impaired for their designated use, and in a few cases, fish kills, fish advisories, and the closing of recreation areas have occurred (*Water Quality in Georgia*, 1990-1991).

Agricultural nonpoint sources of pollution, urban nonpoint sources, and municipal and industrial point sources in North Georgia have the potential for major adverse economic and social impacts. All of the major streams and lakes supply drinking water and support

fisheries, wildlife habitat, and recreation. The economic and social value of Lake Lanier alone, with its 14 million annual visitors and its function of providing water to 60 percent of the state's population, at least equals the value of gross agricultural production in its drainage (watershed) area. This condition also exists for the Savannah River and its lakes in North Georgia.

#### OPPORTUNITIES AND ACTIONS

Producers of crops, livestock, wood, and related industries are aware of the value of the water resources and the potential for adverse impact from their industries. Improvements have been made in reducing nonpoint sources of pollution, and agriculture has taken significant steps to reduce the potential of its industry to impair water quality.

For the past four years, a significant amount of the United States Department of Agriculture's (USDA) conservation resources have gone toward providing assistance for producers to maintain or improve water quality. In addition to ongoing USDA programs, many North Georgia counties have been targeted for demonstration of special projects which accelerate technical and financial assistance to producers for water quality protection and make use of new and innovative practices.

Since 1990, the six counties draining into Lake Lanier have had an additional \$1.7 million of local, state, and federal funds allocated to producers for the installation of water quality protection practices. Most of these resources were used to reduce potential water quality problems associated with animal waste. Another \$1 million of local, state, and federal resources were spent in five counties draining into Lake Sinclair; again, the funds were predominantly used to reduce animal manure disposal problems. These projects are exciting examples of the kinds of accomplishments that occur when individual producers, special interest groups and associations, and local, state, and federal governments cooperate.

The Georgia Soil and Water Conservation Commission, Georgia Environmental Protection Division, USDA Soil Conservation Service (SCS), and U.S. Environmental Protection Agency are working to identify watersheds in Georgia with a high potential for nonpoint source pollution. When released, the *Georgia Nonpoint Source Management Plan*, may identify considerably more needs in the nonpoint arena than existed in the 1989 Plan. SCS will use the plan to direct assistance to producers through each local Soil and Water Conservation District.

#### SUMMARY

While there is potential for conflict between a viable agricultural industry and good water quality in North Georgia, steps are being taken to assure this won't happen. Awareness exists, remedial steps are being taken, and most

of the interested parties are working together. Local, state, and federal agencies are targeting technical and financial resources to solve the problems. Through this voluntary process, producers in most cases will protect our streams while producing a quality agricultural product.

#### RECOMMENDATIONS

The main question now is, will existing resources be enough to protect water quality? Producers have increased their contributions, but the trend in federal funding is to remain constant or slightly decrease.

1. Georgia may need to increase its involvement, especially in the area of providing funds to assist producers to install water quality practices that benefit everyone.
2. Federal, state, and local agencies should target state of the art technical and financial assistance to producers on a field by field basis to plan nutrient application and utilization based on plant needs.
3. State agencies, organizations, industry groups, and others should work closely together to develop innovative ways to utilize the excess waste produced, including studying the possibility of a regional compost facility.

In the long run, preventing water quality problems is less expensive than repairing them; and in some cases, once water quality has been damaged, it is irreparable.

#### LITERATURE CITED

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