

**WATER QUALITY AND QUANTITY ISSUES
IN THE METROPOLITAN ATLANTA REGION**

for Consideration by the CLEAN WATER INITIATIVE (CWI)

by the UPPER CHATTAHOOCHEE RIVERKEEPER

SUMMARY OF RECOMMENDATIONS

Made by
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For Consideration by
THE CLEAN WATER INITIATIVE

Develop a Regional Approach to Water Quality and Quantity Issues – Statewide Water Management Districts

Improve the Quality of Wastewater Discharges

1. Better Enforcement of Wastewater Discharge Permits
 - ◇ Stronger enforcement actions against chronic violators
 - ◇ Computerize discharge monitoring reports for each NPDES permit
 - ◇ Require NPDES permit holders to use certified testing labs
2. Encourage Wastewater Disposal Alternatives
3. Mandate Region-Wide Improvements to Wastewater Treatment Processes
4. Reduce and-or Eliminate Thermal Discharges
5. Upgrade Sanitary Sewer Collection Systems
6. Meet Deadlines for CSO Upgrades/Phase-Out
7. Increase Water Quality Monitoring
8. Improve Regulation of Septic Systems

Improve Quality of Storm Water Runoff Discharges

1. Create Regional and/or Local Storm Water Utilities
2. Utilize and Enforce Existing Federal Storm Water Permits
 - ◇ Better enforcement of federal municipal, industrial and construction storm water permits
 - ◇ Comprehensive mapping of storm water outfalls
 - ◇ Adherence to ARC's Storm Water Design Manual
3. Implement or Adopt Land Use Restrictions in Critical Areas and Conservation Incentives
 - ◇ Create land use restrictions
 - ◇ Implement Recommendations of Growth Strategies Reassessment Task Force (12/98)
4. Improve Watershed Assessments
5. Protect the Headwaters of the Metro Region
 - ◇ Drinking Water Supply Status for Lake Lanier and Other Federal Reservoirs
 - ◇ Specific regulations for pollution allocation/trading
6. Fund State and Local Public Education Campaigns

Develop More Comprehensive Water Supply Management Strategy

- Create and Implement a Region-wide Conservation Plan
- Make Water Prices Reflect the Value of the Resource
- Develop Water Efficiency Plans
- Develop Incentives and Mandates for Water Reuse/Water Recycling
- Create Growth Restrictions (e.g., urban growth boundary, discouraging water intensive industries)
- Implement urban growth boundaries
- Restrict Interbasin transfers

Train EPD Staff as Law Enforcement Officers

WATER QUALITY AND QUANTITY ISSUES IN THE METROPOLITAN ATLANTA REGION

1. BACKGROUND

The Metro Atlanta Chamber of Commerce and the Regional Business Coalition formed the Clean Water Initiative ("CWI") to educate business and community leaders about the existing water quality crisis in the Metro Atlanta Region, and devise solutions to two components of the crisis: wastewater treatment and storm water runoff. The CWI defines the Metro Atlanta Region as the ten counties within the jurisdiction of the Atlanta Regional Commission ("ARC"), plus Forsyth and Hall (hereinafter referred to as the "Region" or "Metro Region"). The Metro Atlanta Region is located at the headwaters of several major river basins, including the Apalachicola-Chattahoochee-Flint (ACF), Alabama-Coosa-Tallapoosa (ACT), and Altamaha systems, and depends heavily on these river systems for its continued prosperity.

It is important to note, however, that activities in the counties upstream of the Metro Region, in the ACT and ACF headwaters, also significantly impact the quality of the rivers and lakes in the Region. It will be difficult, if not impossible, for the Metro Region to improve its water quality, if impacts from these headwaters counties are not also addressed.

11. PROBLEM STATEMENT

Economic development in the Metro Region has negatively impacted water resources, both in the Region and upstream and downstream. Rapid growth has impaired regional water quality and strained regional water supplies. Model predictions indicate that State water quality standards cannot be met consistently downstream of Atlanta given the current level of permitted wastewater discharges. Public health and ecological implications demand that all sectors of the community join together to address this problem on a comprehensive watershed basis.

111. GOAL

The continued viability of the Region's economy is inextricably linked with the condition of its water resources. The Region must balance economic development with adequate, long-term water quality protection and water supply conservation.

IV. ISSUES/IMPACTS

A. **Water Quality Impairments**

1. Wastewater Treatment

NOTE: The federal Clean Water Act and the Georgia Water Quality Control Act mandate that any person who wants to discharge pollution (including treated wastewater) through a point source (e.g., pipe) into waters of the State of Georgia must obtain a National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Division ("EPD"). The NPDES permit regulates the volume and pollutant content of the discharge. EPD has the responsibility to monitor and enforce these permits.

- a. **Antiquated wastewater treatment plants/processes**
 - (i) **Combined sewer overflows ("CSOs")**-During extreme wet weather events, CSOs dump raw sewage into streams, contributing bacteria (e.g., fecal coliform), metals, nutrients, and other pollutants into the Region's waterways.
 - (ii) **Sanitary sewer overflows ("SSOs")**-Aging sewer lines in many counties and municipalities in the Region leak raw sewage into streams, further contributing to water quality impairment.
 - (iii) **Failing wastewater treatment plants**-**Poorly** maintained and overburdened public and private wastewater treatment plants in the Region violate permit limits and sometimes spill raw or partially treated sewage into waterways.
 - (iv) **Outdated wastewater treatment processes**-**Many** municipal and private wastewater treatment plants in the Region still utilize only secondary treatment processes, even though technologies exist for higher treatment levels.
 - (v) **Land Application Systems**-**As** an alternative to wastewater treatment plants, or as a means of disposing the waste sludge generated at wastewater treatment plants, animal feeding operations, or other waste generating facilities, the state permits land application of wastewater and/or sludge as a means of waste treatment. If done properly, the soil absorbs and filters the nutrients in the waste. Often times, land application systems are not properly designed, sited and/or operated. As a result, groundwater and adjoining surface waters become contaminated with nutrients, fecal coliform and other pollutants.
 - (vi) **Septic Systems**- Some counties in the Region, as well as counties upstream of the Region, rely heavily on septic

systems, which can contribute pollutants to surface and groundwater if not properly sited and maintained.

1. Inadequate treatment capacity

- (i) **Less Assimilative Capacity in Waterways**--The Region's growth has increased wastewater discharges to local waterways, stressing the assimilative capacity of our rivers and streams. The problem is exacerbated by the State's failure to promote aggressive water conservation and storm runoff controls.
- (ii) **Increased Surface Water Withdrawals**--Likewise, growth has resulted in increased surface water withdrawals in the region. This exacerbates the Region's capacity problems by depleting instream flows, further reducing the ability of waterways to assimilate waste and support aquatic habitat and recreational uses.
- (iii) **Change in Climatic Conditions**--Climatic conditions (e.g., hotter, drier trends) over the last several years have also reduced instream flows, magnifying the above problems.

Inadequate pretreatment programs

In the Metro Region, numerous industries known as pre-treaters, discharge into the sanitary sewer systems of the local governments. This contributes pollutants to the system that must be treated by the local government at its publicly owned treatment works ("POTWs"), before discharging the treated wastewater to state waters. Frequently, these pretreaters contribute pollutants to the system that cannot be properly treated by conventional treatment processes employed by POTWs. Additionally, these pre-treaters are not adequately regulated to ensure that their wastewater is treated to the highest level possible. Stronger enforcement and higher treatment standards for pre-treaters could make it easier and more cost efficient for POTWs to operate.

Inadequate instream flows to assimilate the Region's wastewater

In 1974, the State established 750 cubic feet per second ("CFS") as the required instream flow in the Chattahoochee River at the confluence of Peachtree Creek and the River. Given current demands on the River, this antiquated flow target does not guarantee sufficient water in the system to assimilate the Region's wastewater discharges and maintain water quality standards downstream.

2. Storm Water Runoff

a. Direct Storm Water Runoff Issues

(i) **Construction**--Rapid growth has increased the number of construction projects in and around the Metro Region. Uncontrolled storm water runoff from construction sites contributes silt and sediment to Georgia's waterways. Although State law requires stream buffers, construction along streams has been allowed to eliminate thousands of miles of natural stream buffers, reducing natural filtration of storm water runoff.

(ii) **Industrial & Commercial** --Storm water runoff from industrial and commercial facilities (parking lots, buildings, roadways, etc.), both through point and non-point sources, contributes numerous pollutants such as metals, fecal, pesticides and petroleum to waterways.

(iii) **Public Infrastructure** -Local and State governments collect storm water from roadways, parking lots and buildings via storm sewer systems and discharge the runoff into waterways from point sources, also contributing numerous pollutants contained in the runoff into waterways. Public facilities also contribute significant non-point source storm water runoff to waterways.

(iv) **Residential**--Storm water runoff from residential lawns is a major source for pesticides and herbicides in waterways. Rooftops, driveways and other impervious surfaces contribute pollutants.

(v) **Agriculture**--Agricultural activities contribute nutrients and fecal coliform bacteria to waterways both through point source discharges from processing plants and Concentrated Animal Feeding Operations ("CAFOs"), and non-point source pollution runoff from farm yard pastures and crop lands, which are sometimes over applied with fertilizers and pesticides. Additionally, protective streamside buffer zones are *not required* on agricultural lands.

NOTE: CAFOs, as defined by the U.S. Environmental Protection Agency ("EPA"), are agricultural enterprises where animals are kept and raised in confined situations. CAFOs congregate animals, feed, manure and urine, dead animals and production operations on a small land area.

(vi) **Forestry**--Land clearing, road building, planting, and other activities associated with forestry can disturb the soil, causing erosion and sedimentation, thus, compromising the affected landscape's