

WATERSHED PLANNING AND MONITORING PROGRAM

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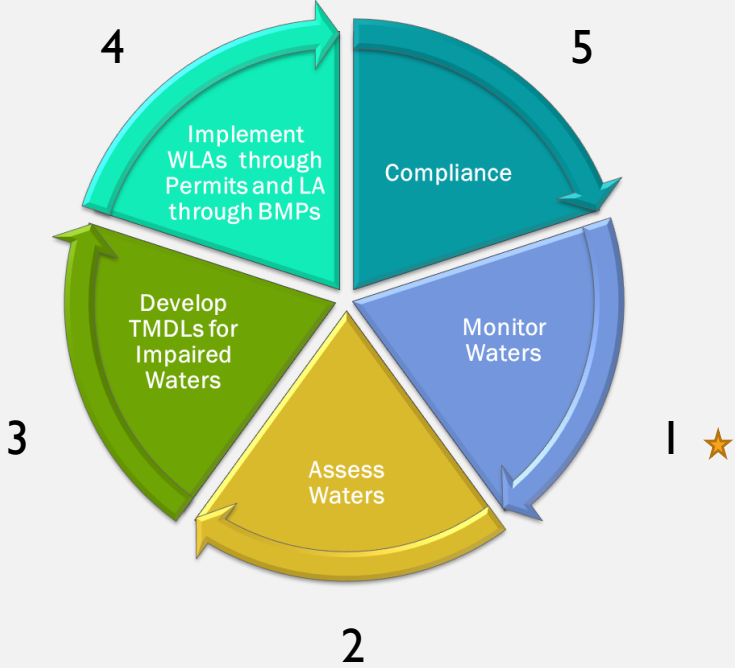
WATERSHED PLANNING AND MONITORING PROGRAM-WHAT WE DO

- Water Quality Standards
- Monitoring – chemical, physical and biological monitoring
- Assessment – assess water quality data vs. standards
- Water Quality Modeling
- Wasteload allocations for dischargers
- Total Maximum Daily Loads (TMDLs)
- Watershed Assessments/Protection Plans – required for expanding any major wastewater dischargers



THE CLEAN WATER ACT

The CWA process:



Objective:
Restore and maintain the chemical, physical, and biological integrity of the waters of the United States



WATER QUALITY STANDARDS

- EPA and the States establish standards
- Designated Uses
 - All waters assigned a designated use
 - **Fishing**
 - Drinking water
 - **Recreation**
 - Wild and Scenic River
 - **Coastal Fishing**
- Water Quality Criteria
 - Criteria must be protective of the designated use





WATER QUALITY MONITORING

- Trend Monitoring
- Lake Monitoring
- Estuary Monitoring
- Intensive Surveys
- DNR State Park Beach Monitoring
- Wetland Monitoring
- Ground Water Well Monitoring
- Biological Monitoring
- Fish Tissue Monitoring
- Facility Compliance Monitoring
- 175 Rivers and Streams
- 68 Lakes
- 11 Estuaries
- 27 DNR Park Beaches
- 130 Ground Water Wells
- 60 Biological Sites
- 15 Wetlands Sites
- 75 Fish Tissue Samples
- 96 Compliance Sampling Inspections





ASSESSMENT

- CWA § 305(b): Every two years States must prepare and submit to EPA a report that describes the water quality of the State's waters.
- Compare data to the Water Quality Standards
- Publish Water Quality in Georgia
 - Report contains 305(b)/303(d) list, which provides the conditions of all waters both supporting and not supporting



GEORGIA ENVIRONMENTAL MONITORING AND ASSESSMENT SYSTEM DATABASE (GOMAS)

- Chemical, physical, and biological monitoring data from EPD and USGS
- 305(b)/303(d) Assessments
- Watershed Assessment data
- Used to transfer data to federal databases WQX and ATTAINS
- Available to the public:

<https://gomaspublic.gaepd.org/>





TOTAL MAXIMUM DAILY LOADS

- EPD's TMDL Modeling and Development Unit has developed over 1700 TMDLs since 2000
- Tools used to develop TMDLs
 - Mass Balance
 - GA DOSAG - Steady State River Model
 - GA ESTUARY - Steady State Estuary Model
 - GA RIV-I - Hydrodynamic River Models
 - LSPC - Watershed Model
 - EFDC - 3-D Lake and Estuary Model





WATER QUALITY MODELING

- Water Quality Modeling Unit develops Wasteload Allocations (WLAs) for new and expanding wastewater treatment facilities and for permit reissuances
- Major parameters of concern:
 - 5-day Biochemical Oxygen Demand (BOD5)
 - Ammonia (NH₃)
 - Dissolved Oxygen (DO)
 - pH
 - Temperature
 - Nutrients
 - Bacteria
- Calibrate models to existing conditions
- Use models to determine permit limits and still meet the water quality standards



LITTLE OGEECHEE WASTELOAD ALLOCATION STUDY





QUESTIONS/COMMENTS?

