



ENVIRONMENTAL EDUCATION SERIES

TIMELY INFORMATION

Agriculture & Natural Resources

EXTENSION ENVIRONMENTAL EDUCATION, AUBURN UNIVERSITY, AL 36849-5647

Results of the ADEM's Water Quality Inventory: 1992 & 1993 Report to Congress

Jesse LaPrade, *Extension Environmental Specialist*
James Hairston, *Professor of Agronomy and Soils—Water Quality*

The National Water Quality Inventory Report to Congress is prepared every two years under Section 305(b) of the Clean Water Act. All state Environmental Protection Agencies are responsible for monitoring and assessing the quality of public waters in their state. The data represented in this report is a summary of Alabama data compiled by The Alabama Department of Environmental Management (ADEM), and describe water quality conditions during 1992-1993.

All states measure water quality by determining if individual waters are clean enough to support uses such as fishing, swimming, and drinking. These uses are a part of the states water quality standards set by each individual state and approved by E.P.A.

The following data indicate water quality by use for rivers and streams, lakes and reservoirs, estuary and coastal waters. The status of wetlands and ground water quality is also summarized.

WATER SOURCES EVALUATED

1. Rivers and Streams (17% of total assessed)

- 82% Support all uses
- 2% Threatened
- 16% Impaired
- 13% partially supporting uses
- 3% not supporting uses

Leading Pollution Sources of Rivers and Streams

- 24% Agriculture
- 15% Municipal Point Sources
- 13% Resource extraction (mining)
- 9% Hydrologic habitat modification
- 8% Industrial point sources
- 5% Urban runoff/storm sewers

Reprinted December, 1997

ALABAMA A&M AND AUBURN UNIVERSITIES, AND TUSKEGEE UNIVERSITY, COUNTY GOVERNING BODIES AND USDA COOPERATING

The Alabama Cooperative Extension System offers educational programs, materials, and equal opportunity employment to all people without regard to race, color, national origin, religion, sex, age, veteran status, or disability.

2. Lakes and Reservoirs (95% of lake acres assessed)

- 69% Fully support fishing, swimming, drinking
- 4% Threatened
- 27% Impaired
- 24% partially supporting uses
- 3% not supporting uses

Leading pollution sources at the time of the assessment

- 7% Unknown
- 41% Industrial point sources
- 6% Contaminated sediments
- 3% Construction
- 0.15% Agriculture

Impaired lake acres **threatened** by

- 73% Other
- 16% Construction
- 1.2% Agriculture
- 9% Unknown

3. Estuaries and Coastal Waters (100% of total assessed)

- 57% Fully support all uses
- 0% Threatened
- 43% Impaired
- 19% partially supporting uses
- 24% not supporting uses

Leading pollution sources

- 34% Urban runoff/point sources
- 33% Combined sewer overflows
- 33% Municipal point sources

4. Wetlands

The National Wetlands Policy Forum has recommended that states prepare wetlands conservation plans (SWCP's). The E.P.A. has established a goal to assist the states, on a voluntary basis, in developing SWCP's by the year 2000. The ADEM is currently facilitating a Wetlands Conservation and Wetlands Management Initiative (WCAMI). Upon completion of planned WCAMI activity, Alabama will be in a better position to preserve remaining wetland acreage.

5. Ground Water

Approximately 280 million gallons of potable water, or 40% of the total daily use by Alabama citizens comes from ground water sources.

The leading sources of ground water contamination in the order of importance are:

1. Below ground storage tanks.
2. Septic tanks (systems).
3. Nonpoint source pesticide application.
4. Hazardous waste sites.
5. Landfills.

Pesticide Monitoring Program

Pesticide monitoring studies were conducted by the ADEM from 1989 through 1993 in areas of intensive farming. Results show detections in 25% of the residential wells and 23% of the springs sampled. Pesticide concentrations that exceeded the drinking water standards or health advisory limits were 3% of the wells and 6% of the springs tested. Observations made during the study indicate that the potential for contamination is high in the northwestern and southeastern areas of the state.

In general, the pesticide data indicated that localized contamination exists from nonpoint sources such as field application of pesticides, however levels of contamination were low in most cases.

SUMMARY

The Alabama water quality data is based on:

- * 17% of Alabama's 77,274 river miles
- * 95% of Alabama's 490,472 lake acres
- * 100% of Alabama's 610 estuary square miles

A total of 13% of Alabama's river miles assessed were found to be impaired with 3% of those not supporting any uses of fishing, swimming, or drinking. Of the 95% of Alabama's lake acres assessed, 27% of those were impaired, with 3% not supporting any of the above uses. There were 100% of Alabama's estuary square miles assessed (610 total) with 43% of those impaired and 24% not supporting any uses.

SUMMARY OF IMPAIRED AND LOST USES OF WATER SUPPLIES IN ALABAMA

	<u>Rivers and Streams</u>	<u>Lakes</u>	<u>Estuaries</u>
Impaired ¹	12,364 miles	132,427 acres	162 sq. miles
Lost for all uses	2,318 miles	14,714 acres	146 sq. miles

¹ Impaired status indicates that one or more uses of fishing, swimming, or drinking has been lost.

The report lists the leading sources of water quality impairment as shown in the table below for Alabama's rivers, lakes, and estuaries.

The leading sources of water quality impairment in Alabama			
Rank	Rivers	Lakes	Estuaries
1	Agriculture	Unknown	Urban runoff/ storm sewers
2	Municipal point sources	Industrial point sources	Municipal point sources
3	Resource extraction	Contaminated sediments	Combined sewer overflows
4	Hydrologic/habitat Modification	Construction	
5	Industrial point sources		