Air Monitoring

The Department operates 60 air monitors at 36 locations throughout Alabama. These air monitors collect ambient air quality data for a variety of pollutants, including particulate matter, nitrogen dioxide, sulfur dioxide, carbon monoxide, lead and ozone. ADEM staff visit the air monitors regularly to perform maintenance and quality control checks.

Data collected by air monitors is evaluated and used to assess air quality across the state and to determine compliance with National Ambient Air Quality Standards. Additionally, the ozone data is qualified by the Department when issuing ozone forecasts to large municipal areas during the ozone season. The ozone forecasts allow citizens in the affected area to adjust their daily routines to minimize exposure and to take steps to reduce ozone formation.

Emergency Response

The Department performs emergency response activities to provide guidance and assistance to law enforcement, fire and other first-alert agencies in emergency situations. ADEM staff respond to a wide range of environmental emergencies involving leaks/spills of oil and hazardous materials. Due to the strategic location of ADEM's four offices, the Department is capable of delivering a timely response to environmental emergencies.

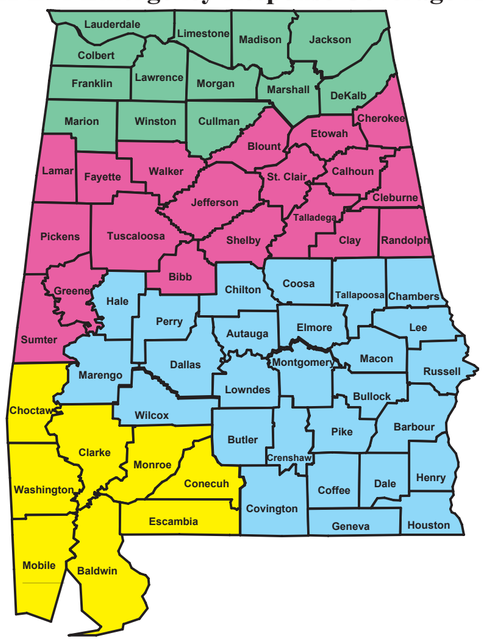
For more information contact:

Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700
www.adem.state.al.us

Lab Services

ADEM operates a full service environmental laboratory, capable of analyzing drinking water and wastewater samples, soils, sediments, tissue and hazardous waste collected by the Department's field staff. The Central Laboratory is located in Montgomery with branch laboratories in the Birmingham and Mobile Field Offices.

ADEM Emergency Response Coverage Areas



	Working Hours (7:00 a.m. - 5:00 p.m.)	After Hours (5:00 p.m. - 7:00 a.m.)
Birmingham	(205) 942-6168	1-800-843-0699
Decatur	(256) 353-1713	1-800-843-0699
Mobile	(251) 450-3400	1-800-843-0699
Montgomery	(334) 260-2700	1-800-843-0699

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

WORKING TO PROTECT ALABAMA'S ENVIRONMENT

The Alabama Department of Environmental Management (ADEM) is responsible for the administration and oversight of numerous environmental programs. Included in the administration of these environmental programs is review of permit applications, permitting decisions, inspections and compliance activities. However, ADEM also performs an extensive variety of monitoring activities to establish environmental standards and document the effectiveness of environmental programs. This brochure highlights some of the monitoring activities performed by ADEM in its pursuit of environmental quality.

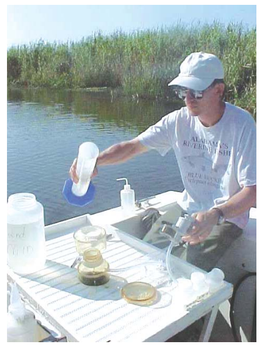
Reservoir Water Quality Monitoring

The Reservoir Water Quality Monitoring Program has monitored the water quality of Alabama's lakes/reservoirs since 1990. ADEM staff utilize scientific equipment to monitor water quality continually during critical, seasonal transitions.

Currently, over 180 sites are monitored with the resultant water quality data used to establish water quality standards, such as the recently developed nutrient criteria standards.

Beach And Coastal Assessment Monitoring

The Beach Monitoring Program was established in 1999 to monitor water quality at Alabama's coastal public beaches. Today, water samples are collected a minimum of once per week during the summer swimming season and once per month during winter at eleven of Alabama's most popular public beaches. The water samples are analyzed by ADEM and the Alabama Department of Public Health and the analytical results are posted on the Department's web page at **www.adem.state.al.us**. The web page contains a color coded system (green/yellow/red) to inform the public of the most recent water quality results.



The Department also collects and analyzes coastal water samples as part of the Coastal Assessment Monitoring Program. The Department collects these coastal water samples as part of the U.S. Environmental Protection Agency's National Coastal Assessment project.

ADEM

Fish Tissue Monitoring

ADEM has administered a systematic Fish Tissue Monitoring Program for more than ten years and has collected samples of fish from rivers and lakes throughout Alabama. All fish collected under this program are weighed, measured, assessed for external abnormalities and analyzed for a wide range of contaminants that have the potential to bioaccumulate.

Each year ADEM staff collect and analyze tissue samples from several hundred fish. Once the fish tissue samples have been analyzed, the results are submitted to the Alabama Department of Public Health which utilizes the analytical data to determine the necessity for fish consumption advisories. Fish consumption advisories are generally issued for a specific section of a river or lake and for a specific fish species.

Algae Assessments

The Department is currently evaluating three different methods to assess the algal content of a stream. Algal content can be an indicator of excess nutrients in a stream, that can lead to nutrient impairment, low dissolved oxygen and fish kills. The three methods under evaluation include a viewing box with grids, examination/identification of single-cell aquatic plants and analysis of the amount of chlorophyll present in the plant communities.

Fish And Aquatic Insect Community Assessments

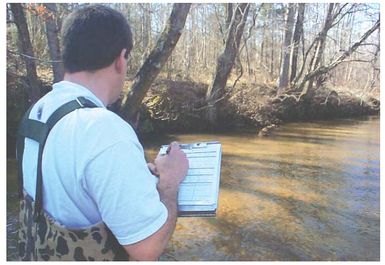
Assessments of fish and aquatic insect communities provide indications of water quality and the overall health of stream segments. These assessments are performed in conjunction with specific studies and involve the collection of fish and/or aquatic insects.

Additionally, all habitats present are sampled including rocks, logs, stream banks and sand substrates. Department personnel employ a wide variety of sampling equipment to ensure representative samples are collected.

The collected samples may be evaluated at the stream site, or preserved and transported to the Department's laboratory for evaluation. Department personnel evaluate the samples and apply computer models to interpret the data.

Water Quality Monitoring

Stream segments are routinely monitored to obtain water quality data and to document trends in water quality. These monitoring activities involve the collection and laboratory analysis of water samples for bacteria and other pollutants, as well as the collection of field data, such as stream flow rates and temperature.



Department staff also record visual observations at the stream sampling locations. These visual observations are combined with other data to determine the overall quality of a specific stream segment. The water quality data collected through this program allows the Department to establish trends in water quality by comparing previous data.

Compliance Evaluations

Compliance sampling inspections are performed on a routine basis at municipal and industrial facilities that hold National Pollutant Discharge Elimination System (NPDES) permits. These comprehensive inspections allow Department personnel to document compliance activities and determine when facilities are in compliance with the discharge limits of their NPDES permits.

Department inspectors collect samples of the treated water being discharged with a wide variety of manual and automated sampling devices. The water samples can be analyzed for field parameters on site or transported to one of ADEM's three laboratories for analysis.

Wetlands Restoration

As part of the wetlands restoration program, the Department coordinates with a variety of agencies such as the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers and the Alabama Department of Conservation and Natural Resources to identify and evaluate potential wetland restoration sites.

Wetlands provide tremendous environmental benefits by filtering water and providing critical habitat for a diverse variety of plants and animals. ADEM staff evaluate soil characteristics, animal species and plant vegetation to ensure restoration activities will achieve the maximum environmental benefits.

Groundwater Monitoring

A diverse scope of groundwater monitoring activities are performed by ADEM personnel including the collection of groundwater samples at landfills, industrial sites and underground storage tank sites. The Department also performs special groundwater studies involving the collection and analysis of groundwater data.