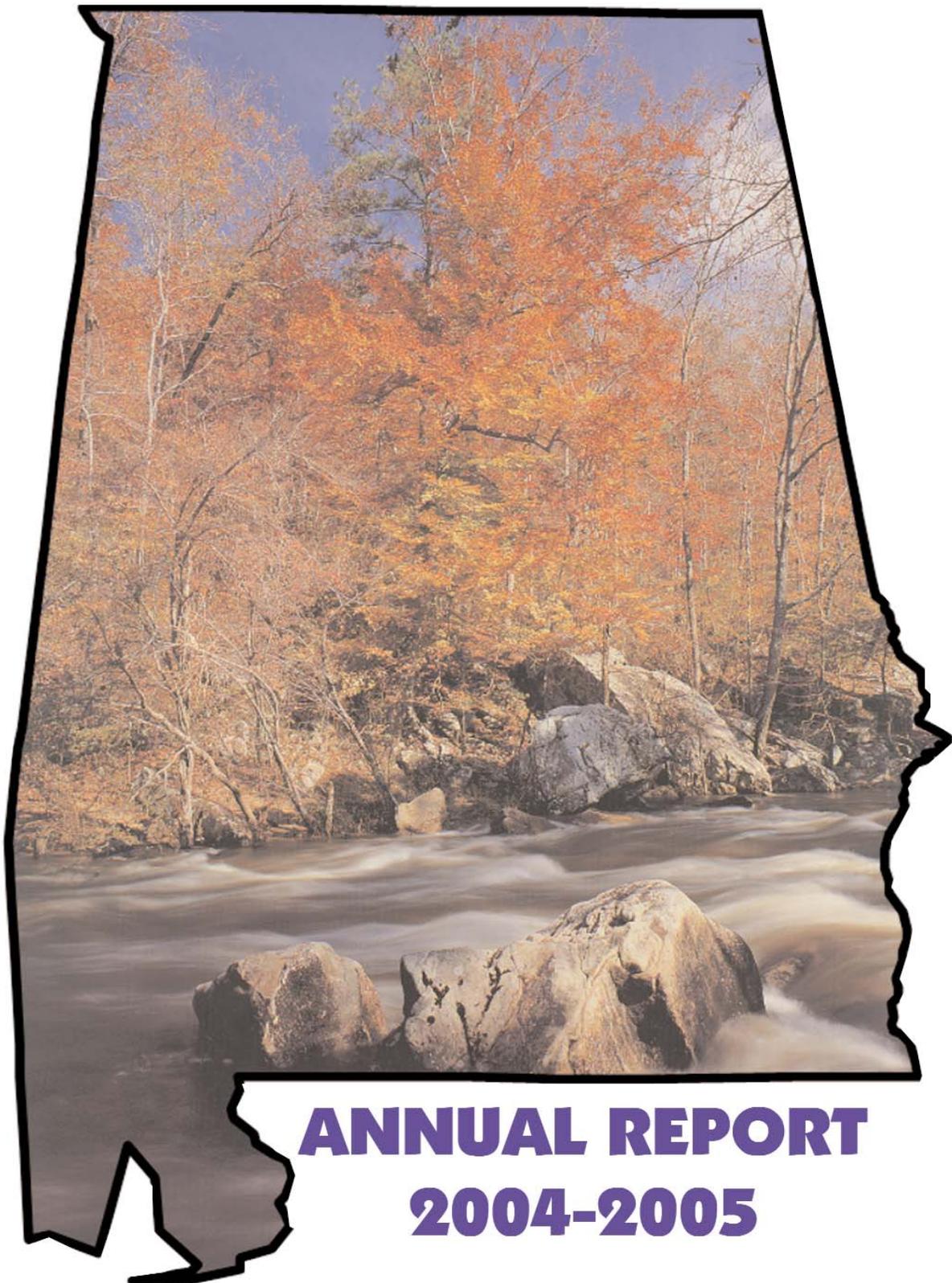


ADEM

Alabama Department of Environmental Management



ANNUAL REPORT
2004-2005

Commission

The Environmental Management Commission is comprised of seven members. Each member is appointed by the Governor, must meet the qualifications for the applicable position as specified in the Environmental Management Act, and is subject to Senate confirmation. The Commission's duties include hearing administrative appeals of permits, administrative orders, and variances issued by the Department, adopting environmental regulations, developing environmental policy, and selecting the ADEM Director.

W. Scott Phillips

(Chairman)

Certified by National Water

Well Association

Kenneth A. Hairston, Esq.

Attorney

John H. Lester, D.V.M.

Chemist/Veterinarian

Sam H. Wainwright, P.E.

Engineer

Riley Boykin Smith

Member at Large

Patrick Byington

(Vice-Chairman)

Biologist/Ecologist

Vacant

*Physician **

***William M. Sanders, M.D.**

Resigned Nov. 2005

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Letter from the Director



Trey Glenn

Alabama is blessed with abundant natural resources. The beauty, environment, and natural resources of our state are second to none. We have everything you could possibly want in a place to live and work. We have beautiful beaches, scenic mountains and valleys, and sparkling lakes, rivers, and streams.

It is the mission of the Alabama Department of Environmental Management to manage the environment and ensure the decisions we make are in the best interest of our state. ADEM's job is to preserve and protect what we have today for future generations of Alabamians.

As the ADEM director, my duty is to make sure that I do the best job I can to support what our employees are already doing and that is making Alabama better tomorrow than she is today.

In a short time on this job, I have been impressed with the impact and range of ADEM. We have a wonderful opportunity to serve the people of Alabama, and an awesome responsibility to leave this state in better shape than we found her. We are working hard every day to accomplish that.

We have 600 dedicated employees at ADEM and their input and expertise is vital to me. The department is organized in five divisions: Air, Land, Water, Permits & Services, and Field Operations. We have a central office and analytical laboratory in Montgomery with a new lab under construction. We also have field offices and lab facilities in Decatur, Birmingham, and Mobile.

Like most state agencies, ADEM is bound by its policies, rules, and regulations. We are thorough and diligent in our administration of state and federal environmental programs. At the same time, we are going to continue to explore new ideas and new technologies that can help us do our job more efficiently and effectively.

We will continue to communicate and work cooperatively with the Alabama Environmental Management Commission, elected officials, stakeholder groups, and the regulated community to handle pressing environmental issues. We will continue implementing the Commission's strategic plan and constantly look at solutions to complex situations with an ever present view of the future and our responsibility to the taxpayers.

I ask you to take a close look at this Annual Report. It summarizes the efforts and achievements of our professional staff as we continue to work toward striking a realistic balance between the demands associated with economic growth and development, and the desire of every citizen to see Alabama's extraordinary natural resources protected for the enjoyment and fulfillment of generations to come. This report will illustrate and give insight into what programs we administer and what we do at ADEM on a daily basis to manage Alabama's environment.

A handwritten signature in blue ink, appearing to read "Trey Glenn". The signature is fluid and cursive, with a prominent "T" and "G".

Trey Glenn
ADEM Director

Overview

The Alabama Department of Environmental Management is working to become the best state environmental agency in the country in balancing the protection of Alabama's environment and the health of its citizens with the productive use of the state's valuable natural resources. ADEM's mission is to responsibly adopt and fairly enforce rules and regulations consistent with the statutory authority granted to the department to protect and improve the quality of the environment for present and future generations of Alabamians.

ADEM monitors environmental conditions and recommends changes in state laws or regulations to respond appropriately to changing environmental conditions. Alabama has a wealth and variety of natural resources. These resources are not unlimited

and the use of these resources must be balanced with other needs including economic development.

Background

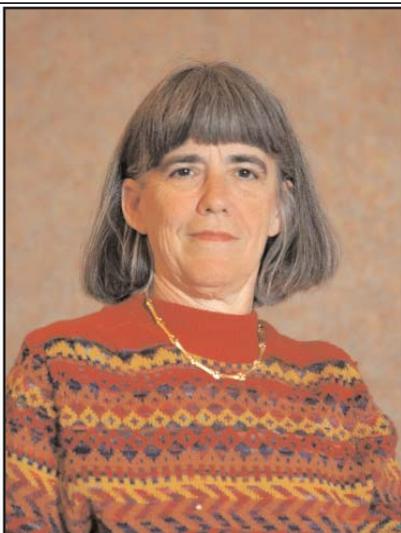
In 1982, the State Legislature passed the Alabama Environmental Management Act establishing ADEM and the Alabama Environmental Management Commission. The commission has seven members who are appointed by the Governor and confirmed by the State Senate. Each commissioner serves a six-year term.

The commission has the authority to: select ADEM's director and advise the director on environmental matters; to establish, adopt, modify, and suspend any rules, regulations or environmental standards for

ADEM; to develop environmental policy for the state; and to hear and determine appeals of administrative actions.

Budget

ADEM's operating budget for the 2005 fiscal year (Oct. 1, 2004 - Sept. 30, 2005) was \$49.1 million. More than half of the budget, \$27.2 million, came from federal grants. The department imposes fees for permitting activities and collects penalties for violations. This amount in FY 2005 totaled more than \$17.9 million. ADEM receives a small percentage from the State General Fund that is used to match federal grants. In FY 2005, this allocation was 8% of the department's budget totaling just under \$4 million.



Marilyn Elliott

The position of Deputy Director was created by the Environmental Management Act in 1982 as the second-in-command of the department. As a part of this function the Deputy Director has the responsibility of the day-to-day technical operations of ADEM. Oversight is exercised over all activities in the Air, Land, Water, and Field Operations divisions.

The Deputy Director assures the goals and objectives of the department are holistically achieved considering all media and associated commitments outlined in the Governor's Smart Budget and the strategic plans of the Environmental Management Commission, the department, and EPA along with the work plans of all federal grants.

Duties of the position include supervision of regulation development and implementation, environmental permitting, regulated facility compliance and enforcement, environmental assessment and corrective action, air and water quality monitoring, and associated grant and budget management.

Overview

Workforce

ADEM has 600 employees statewide with field offices in Birmingham, Decatur, and Mobile; and a central office and laboratory facilities in Montgomery. One of ADEM's greatest resources is a dedicated and professional staff of scientists and engineers. The department's highly-skilled, and technical workforce is critical in monitoring industry, construction, landfills, and other entities in an ever-changing environment.

Environmental Administration

ADEM is authorized to administer all major environmental laws including the Clean Air Act, Clean Water and Safe Drinking Water Acts, and federal solid and hazardous waste programs. The department's major

functions of permitting, enforcement, and compliance are handled through five divisions; Air, Land, Water, Field Operations, and Permits & Services. ADEM's functions are supported by an Office of General Counsel, Human Resources Division, Public Relations Division, and Fiscal Office.

Technology and Tomorrow

The continued use of evolving, state-of-the-art technology is a priority for ADEM. The department is consistently exploring new innovations, computer applications, personal digital assistants, and aerial technology to improve its performance and operate more efficiently and effectively.

ADEM is constantly looking at ways to enhance existing pollu-

tion prevention programs including mechanisms to invest additional funding and provide incentives for participation in pollution prevention programs and recycling.

The department is developing a proactive, positive program for media and public relations. Today's ADEM is looking at initiatives to improve the process of handling questions and requests from the media and inquiries from the public.

ADEM is putting the environment first and striving to give Alabamians a better tomorrow. Today's ADEM is exploring a wide variety of methods to better manage the state's environment, protect natural resources, and safeguard Alabama's air, land, and water.



John Hagood

In the 2005 fiscal year, ADEM added the position of Executive Counsel in answer to the Environmental Management Commission's call for better communications to the regulated community, concerned interest groups, the Legislature, and other governmental entities.

The Executive Counsel oversees the Permits & Services Division and the Human Resources Division. The position works closely with the Director serving as the department's legislative liaison, assisting with the budget process, and helping shape and implement policy.

Other duties of the office include working with the Public Relations Division to enhance the image of the department, and attending public meetings to get input from citizens on environmental issues and concerns. The Executive Counsel is also working to develop an environmental justice information unit.

Air Division

The Air Division of the Alabama Department of Environmental Management ensures ambient air quality standards, established by the U.S. Environmental Protection Agency, are met to protect human health and the environment. These measures include monitoring air quality, reviewing emission regulations, and implementing a permitting system to ensure that facilities comply with regulations. The division also monitors industrial operations to ensure that pollution controls are properly operated and maintained.

Clean Air Act

ADEM's Air Division administers the federal Clean Air Act in Alabama. Passed by the U.S. Congress in 1970 and last amended in 1990, the Act established two types of national air quality standards; primary standards which set limits to protect public health, and secondary standards setting limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation and buildings.

Particulate Matter (PM 2.5)

The division monitors fine particulates in Alabama through the Particulate Matter (PM 2.5) multi-year grant. Emissions from



Ron Gore

large sources such as utilities, refineries, lime cement plants, and pulp and paper mills; and small sources such as cars, trucks, and open burning contribute to fine particle concentrations. In the 2005 fiscal year, the division was able to limit the areas designated as non-attainment under the PM 2.5 National Ambient Air Quality Standard (NAAQS).

Federal Air Program

This program is for implementing and maintaining national ambient air quality standards throughout the state of Alabama and permitting, monitoring, and enforcement of non-major sources. Some monitoring of air toxic pollutants is performed under this grant. Types of regulated facilities under this pro-

gram include gasoline tank trucks, stations, and terminals, along with small incinerators and sawmills.

Title V

The Title V program is for permitting, monitoring, and enforcement of major sources of air pollution. Regulated facilities in Alabama under this program include: utilities, refineries, lime cement plants, pulp and paper mills, surface coating operations, chemical plants, agricultural facilities, and gas compressor stations. This also includes some monitoring of mercury. During the 2005 fiscal year, the division was able to keep Alabama's Title V fee lower than many other states through efficient management of the program.

Air Permits

Permits are perhaps the most essential factor in the environmental regulatory process and are designed to assure that any source complies with the applicable environmental statutes before becoming operational. Any facility planning to construct or modify a potential air pollution source must contact the division to determine if an air permit will be required and what permitting procedures should be followed.

Air Division

The permitting decisions made by the Alabama Department of Environmental Management are technical judgments. If the application demonstrates that the project is capable of complying with regulations, a permit is issued. Zoning issues are not within the purview of the division and therefore, are not considered when permitting air emissions sources. These issues are within the jurisdiction of local zoning authorities.

Clean Air Interstate Rule

In the 2005 fiscal year, the division initiated the development of the Clean Air Interstate Rule in Alabama. CAIR was issued on March 10, 2005, by the U.S. Environmental Protection Agency. The rule is designed to achieve the largest reduction in air pollution in more than a decade. CAIR will ensure that Americans continue to breathe cleaner air by dramatically reducing air pollution that moves across state boundaries. In 2015, CAIR will provide health and environmental benefits valued at more than 25 times the cost of compliance.

CAIR will permanently cap emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) in the eastern United States. CAIR achieves large reductions of SO₂ and NO_x emissions across 28

eastern states and the District of Columbia. When fully implemented, CAIR will reduce SO₂ emissions in these states by more than 70% and NO_x emissions by over 60% from 2003 levels. According to EPA, this will result in \$85 to \$100 billion in health benefits and nearly \$2 billion in visibility benefits per year by 2015 and will substantially reduce premature mortality in the eastern U.S. The benefits will continue to grow each year with further implementation.

A closely related action is the EPA Clean Air Mercury Rule, the first ever federally-mandated requirements that coal-fired electric utilities reduce their emissions of mercury. Together the Clean Air Mercury Rule and CAIR create a multi-pollutant strategy to reduce emissions throughout the U.S.

Emissions and Modeling

ADEM's Air Division is charged with the responsibility of ensuring Alabama's air quality meets federal standards. Several methods are used to analyze the quality of Alabama's air. Computer models use air emissions to simulate what the ground-level concentrations of pollutants would be using meteorological data and terrain information. Stack tests are conducted to measure the actual levels of



Stack tests are conducted by the Air Division to measure actual levels of emissions being released by a facility.

emissions that are being released by a facility. Emission inventories use the past year's actual emissions to analyze emission trends.

Visible Emission Certification

The visible emissions certification program consists of two "smoke schools" conducted in the spring and fall consisting of two sessions per school. These schools are open to ADEM personnel, other regulatory personnel, consultants, and members of the regulated community. The purpose of the program is to certify participants' ability to meet federal requirements for making

Air Division

visible emissions determinations. Each session consists of one day of lecture followed by a written exam and two days of field training and testing. The lecture certification is valid for three years, the field certification for six months.

VISTAS

The Air Division is involved with other agencies in other air quality initiatives. Twenty-two states, including Alabama, are participating in the NOx State Implementation Plan (SIP) to reduce nitrogen oxides from large combustion sources. Although EPA is the lead agency dealing with stratospheric ozone, citizens in Alabama can call ADEM to get general information or register complaints. These complaints are then referred to EPA for enforcement action. States in EPA Region 4 are involved in VISTAS (Visibility Improvement State and Tribal Association of the Southeast) to reduce regional haze in parks and recreational areas. Alabama along with Florida, Mississippi, and Louisiana also are involved in the Gulf Coast Ozone Study to examine ozone along the Gulf Coast. Through coordinated efforts among other states and other agencies resources can be better and more efficiently utilized to ensure clean air.

Hurricane Effects

Throughout the 2005 ozone season, several tropical storms and hurricanes played a major role in the air quality that was observed across the state of Alabama. In general this year, tropical systems were found to be very beneficial to maintaining good air quality. The storms brought with them clouds, moisture, precipitation, wind, and lower temperatures which helped keep the air cleaner.

Hurricanes had a vast impact on Air programs in the state of Alabama during the 2005 fiscal year. The clearing of debris from Hurricane Ivan caused delayed mercury monitoring in Washington County in southwest

Alabama. The hurricane also damaged monitoring equipment. Mercury monitors were taken down prior to landfall of these hurricanes to avoid major damage to equipment. Therefore, air monitoring was interrupted for coastal areas of Alabama during these storms.

Particulate monitoring in the coastal areas also was affected by the hurricanes. Periods of data were lost due to monitors being down. The hurricanes also delayed inspections of facilities located along the coastal areas and offshore. Additionally, under the Alabama Gas Program, the sulfur content requirements for gasoline and diesel fuels were waived - at the federal level - as a result of Hurricane Katrina.



ADEM's Air Division monitors air quality, reviews emissions regulations, and implements a permitting system to ensure that facilities comply with all state and federal regulations.

Land Division

The Land Division of the Alabama Department of Environmental Management seeks to ensure that hazardous wastes, hazardous substances, non-hazardous solid waste, medical waste, and scrap tires are being properly managed in a manner protective of the environment and public health.

Hazardous Waste

The Land Division implements state and federal laws on recycling, pollution prevention, and hazardous waste management and assists in the cleanup of sites contaminated with hazardous wastes and substances. The division's Governmental and Industrial Hazardous Waste Branches administer major provisions of the federal hazardous waste law, which specifies environmental standards for hazardous waste generators, transporters and treatment, storage, and disposal facilities.

The branches track hazardous waste from generation to final disposition, imposing strict standards at each step. Treatment, storage and disposal facilities must demonstrate financial resources sufficient to cover costs of any environmental conditions that might occur while the site is operational and to ensure safe closure and adequate manage-



Gerald Hardy

ment for 30 years thereafter. Hazardous waste transporters are required to secure a permit and carry documents thoroughly identifying the waste being transported.

The division administers the Resource Conservation Recovery Act in Alabama. This program establishes a system for controlling hazardous waste in a way that is protective of human health and the environment. RCRA applies to active industrial and governmental facilities. The Chemical Demilitarization program falls under RCRA. The Anniston Chemical Agent Disposal Facility uses high temperature incineration to destroy stockpiled chemical weapons stored at the Anniston Army Depot. Although

funded separately, the facility is regulated through RCRA and ADEM monitors activity on site 24-hours a day, seven days a week.

The Comprehensive Environmental Response, Compensation, and Liability Act is administered through the Land Division in the state of Alabama. The program stipulates prohibitions and requirements for closed and abandoned hazardous waste sites. CERCLA provides liability for persons responsible for releases and maintains a trust fund for clean up when no responsible party can be determined.

As part of the CERCLA program, sites are cleaned up under the oversight of ADEM and the U.S. Environmental Protection Agency, either by responsible parties or using trust fund (Superfund) monies. The program addresses abandoned or inactive sites where wastes have been improperly managed and emergencies resulting from spills, leaks, or other accidents. The division assists EPA in implementing Superfund provisions in Alabama by conducting site assessments and overseeing removals at these sites.

The purpose of SACA, the Support Agency Cooperative Agreement, is to allow ADEM to support EPA-lead activities in the

Land Division

clean-up of CERCLA sites. This support generally is in the form of document review and comment, meeting attendance, and field inspections of projects to determine compliance with approved plans. A variety of sites and activities are proposed for coverage under the agreement including National Priorities List sites, proposed NPL sites, and other sites which ADEM and EPA agree to include along with waste removal from the sites.

ADEM's Land Division administers the Alabama Hazardous Substances Cleanup Fund used to assess and remediate sites not eligible for Superfund money. The AHSCF was established in 1989 by the Alabama Legislature to provide a mechanism for ADEM to investigate, remediate, and monitor hazardous substance sites. These sites may be an endangerment to human health and the environment, but may not qualify to be addressed under another cleanup program. During the 2005 fiscal year, 14 sites were addressed under this program. Actions included the investigation of abandoned drums, complaints, monitoring of ongoing sites, and other actions to assess and remediate problems.

Solid Waste

The Land Division regulates the disposal of non-hazardous solid waste in Alabama. Activities include permitting of landfills for municipal solid waste, construction or demolition, and industrial waste. The division's Solid Waste Branch conducts regular inspections of landfills to assess compliance with state and federal requirements. Enforcement action is taken when needed. The branch also investigates complaints of unauthorized solid waste dumps and initiates appropriate enforcement action if necessary.

In June 2003, the Alabama Scrap Tire Environmental Quality Act was passed to comprehensively regulate scrap tire accumulations and to provide for cleanup and remediation of illegal scrap tire dumps. The Act placed a \$1 fee on all replacement tires sold to establish a scrap tire fund, and required ADEM to develop a program to regulate the management of scrap tires.

The division's Scrap Tire Unit inspects scrap tire receivers, transporters, and processors as well as sites where tires have been illegally disposed. The unit investigates complaints of illegal dumping or disposal of scrap tires and takes enforcement action if necessary.

Regulated parties consist of retail sellers of tires (new or used), transporters of scrap tires, processors of scrap tires, and landfills used for disposal.

In the 2005 fiscal year, the unit processed and issued 1,550 registrations and permits, responded to approximately 200 technical assistance requests, investigated over 100 complaints concerning illegal dumping or burning of scrap tires, assessed seven illegal disposal sites, and inspected 75 facilities in Alabama. The unit also implemented a paperless program where correspondence and reports were electronically scanned (no paper files) and inspectors use Personal Digital Assistants to record inspection information and prepare reports that are scanned.

Brownfields and Voluntary Cleanup

The Land Division uses a variety of mechanisms to promote the assessment and redevelopment of brownfields sites defined as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of hazardous substance, pollutant, or contaminant." Many properties in Alabama have existing infrastructure, yet remain unused due to the real or per-

Land Division

ceived presence of contamination. Generally, a Brownfield site is put back into productive use by a three step process: assessment, remediation, and redevelopment. In the assessment phase, the testing for contamination is conducted through the collection and analysis of field samples, including groundwater, surface water, sediments, and soil. The data is then used to formulate a remediation plan for site cleanup.

Remediation will vary according to contamination levels, site conditions, and remediation technologies. In some cases, engineering or institutional controls, such as deed or water use restrictions, may be required before a site can be reutilized. In many cases, the cost of the remediation may be offset by the use of existing infrastructures such as utilities, roads, and railways.

The redevelopment of a site is the ultimate goal of the program. A brownfield site may be utilized as a new industry, but many brownfields sites across the country have been redeveloped as affordable housing units, parks and recreational facilities, or shopping malls. ADEM works closely with regional and local government entities to identify and promote the revitalization and reuse of potential brownfields sites.

ADEM's Voluntary Cleanup Program began in May 2001 with the signing of the Alabama Land Recycling and Economic Redevelopment Act. The VCP is a fee driven program in which the department provides oversight of voluntarily conducted assessments and cleanups. Once assessed or remediated the sites are provided with certain liability protections. Virtually all entities are eligible to enter the VCP as a means to revitalize economically depressed areas. In the 2005 fiscal year, a steady growth in the program continued with 159 sites completing assessments and cleanups with most returning to productive use.

Alabama's Drycleaner Environmental Response program is a voluntary insurance pro-

gram for active and inactive drycleaner facilities and wholesale distribution facilities. The program is designed to cover some of the costs of assessment and remediation of environmental contamination caused by dry cleaning agents. To participate in the program members are required to pay an annual registration fee into a trust fund.

Participation in the program is voluntary but coverage for environmental cleanup is only extended to those who pay into the trust fund. ADEM's responsibilities include establishing performance standards, reviewing initial investigations, prioritizing sites, reviewing assessment and cleanup plans, and ultimately issuing concurrence letters.



ADEM's Land Division conducts regular inspections of landfills to assess compliance with state and federal regulations.

Water Division

ADEM's Water Division evaluates and classifies all waters of the state based on existing and expected uses. The division administers the Clean Water Act in Alabama ensuring water quality standards are met. This is accomplished by regulating point-source discharges including municipal, semi-public/private, and industrial wastewater treatment plants and stormwater runoff from industrial and municipal facilities. The division issues permits requiring industries, municipalities, and private wastewater treatment facilities use at least the level of best available technology or secondary treatment, as appropriate, to protect the state's water resources, and works diligently to maintain clean and safe drinking water for more than four million Alabamians.

Drinking Water

The Drinking Water Branch works closely with more than 700 water systems in Alabama to provide safe drinking water. Each month the bacteriological quality of drinking water is tested by individual systems with results submitted to the Department for review and approval. Specific chemicals are analyzed quarterly and annually to ensure that drinking water meets established



James McIndoe

standards under the Safe Drinking Water Act.

Alabama's excellent drinking water quality and high compliance rate of public drinking water systems can be attributed to numerous factors including ADEM's mandatory operator certification requiring adequately trained operators to treat drinking water. The branch requires properly constructed and maintained drinking water treatment facilities that can only be constructed with a permit from ADEM, and a high quality of both surface water and ground water that is protected through numerous activities. The branch annually reviews more than 150 sets of plans and specifications for water construction projects, performs final inspections, and

provides annual inspections of all public water systems. Technical assistance is provided to managers and operators regarding new and proposed requirements.

The branch annually provides a compliance report listing all water system violations. In addition, water systems are required to provide an annual consumer confidence report providing information on contaminants detected in drinking water, status of source water assessments, source of drinking water, and treatment processes. ADEM protects surface water sources through a Source Water Assessment and locally determined source water protection programs mandated by the reauthorization of the Safe Drinking Water Act.

In the 2005 fiscal year, the branch revised ADEM's Division Seven rules providing clarification and making them consistent with federal requirements. The branch, working with various local, state, federal and non-profit organizations, was able to quickly respond to the needs of public water systems affected by Hurricanes Dennis and Katrina. This quick response was instrumental in getting all of Alabama's public water systems back to normal operation within a few days after the storms.

Water Division

NPDES

ADEM administers the National Pollutant Discharge Elimination System program for industrial and municipal facilities and the State Indirect Discharge (SID) pretreatment program for industrial indirect discharges. The industrial NPDES and SID programs are implemented by the Industrial Section. In accordance with NPDES, industrial facilities are permitted to discharge storm water from industrial activities and treated wastewater to surface waters. Under SID, facilities are permitted to discharge treated wastewater to public or privately-owned wastewater treatment works. Other section responsibilities include performance of on-site inspections of industrial facilities and industrial wastewater treatment systems; review of plans, reports, and applications pertaining to wastewater discharges, design of wastewater treatment systems, and best management practices (BMPs) for stormwater discharges; and serving as a liaison between private citizens, municipalities, industrial facilities and other governmental agencies in the investigation and resolution of compliance problems and complaints.

The Municipal Section manages the NPDES permit program for municipal and non-industrial

wastewater sources such as semi-public and private facilities and municipal separate stormwater sewer (MS4) facilities. Other section responsibilities include performance of on-site inspections of municipal, semi-public and private sanitary wastewater treatment and collection systems, and MS4 collection systems; review of plans, reports, and applications pertaining to sanitary wastewater discharges, sanitary wastewater treatment design, and stormwater program management; and serving as a liaison between private citizens, municipalities, industrial facilities and other governmental agencies in the investigation and resolution of compliance problems and complaints.

Water Quality

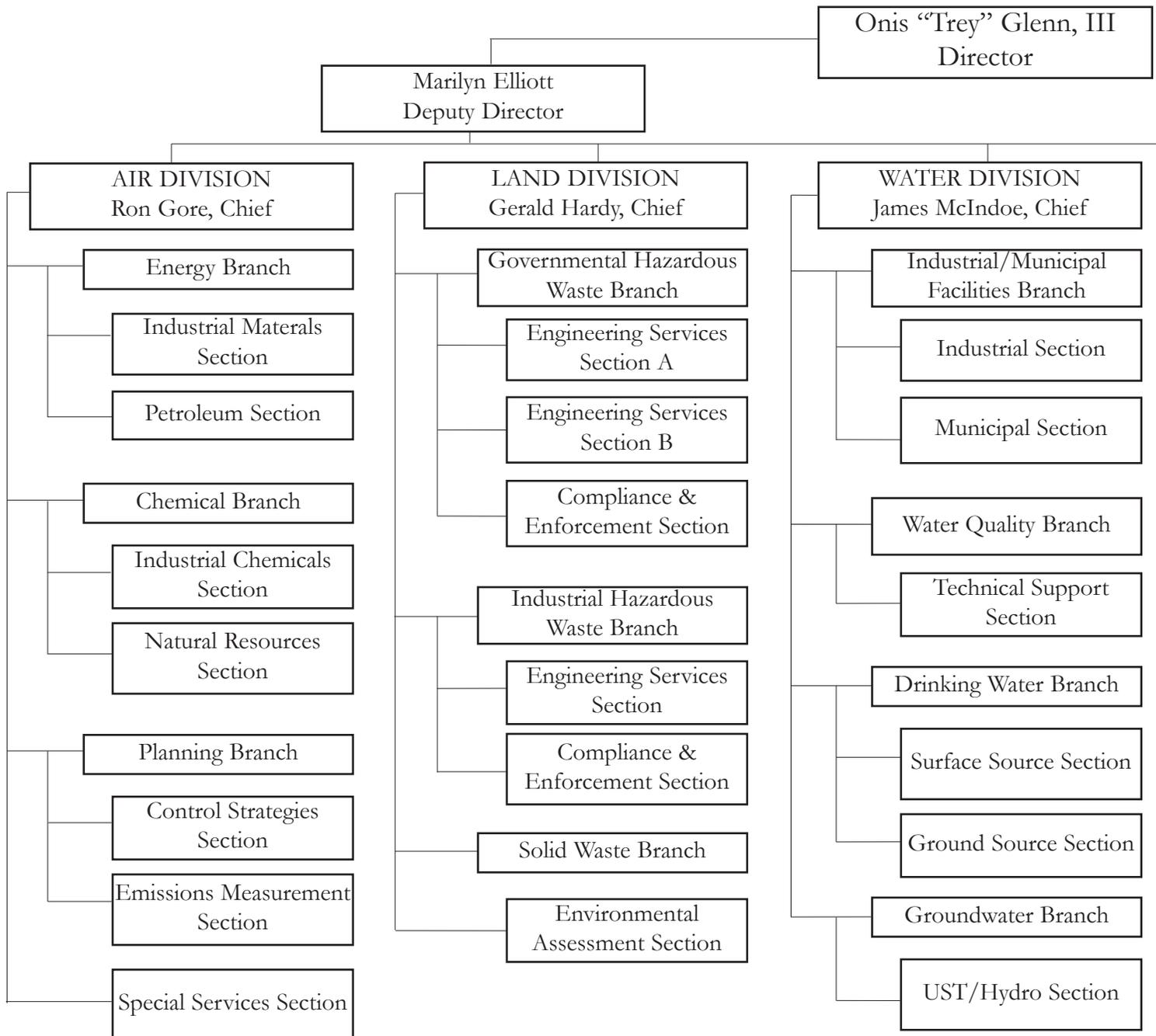
ADEM administers a number of programs related to surface water quality. The programs include water quality standards, list of impaired waters, total maximum daily load development, waste load allocation development, and water quality planning and integrated reporting.

Section 303(d) of the Clean Water Act establishes that states are to list waters for which technology-based limits alone do not ensure attainment of applicable water quality standards. The

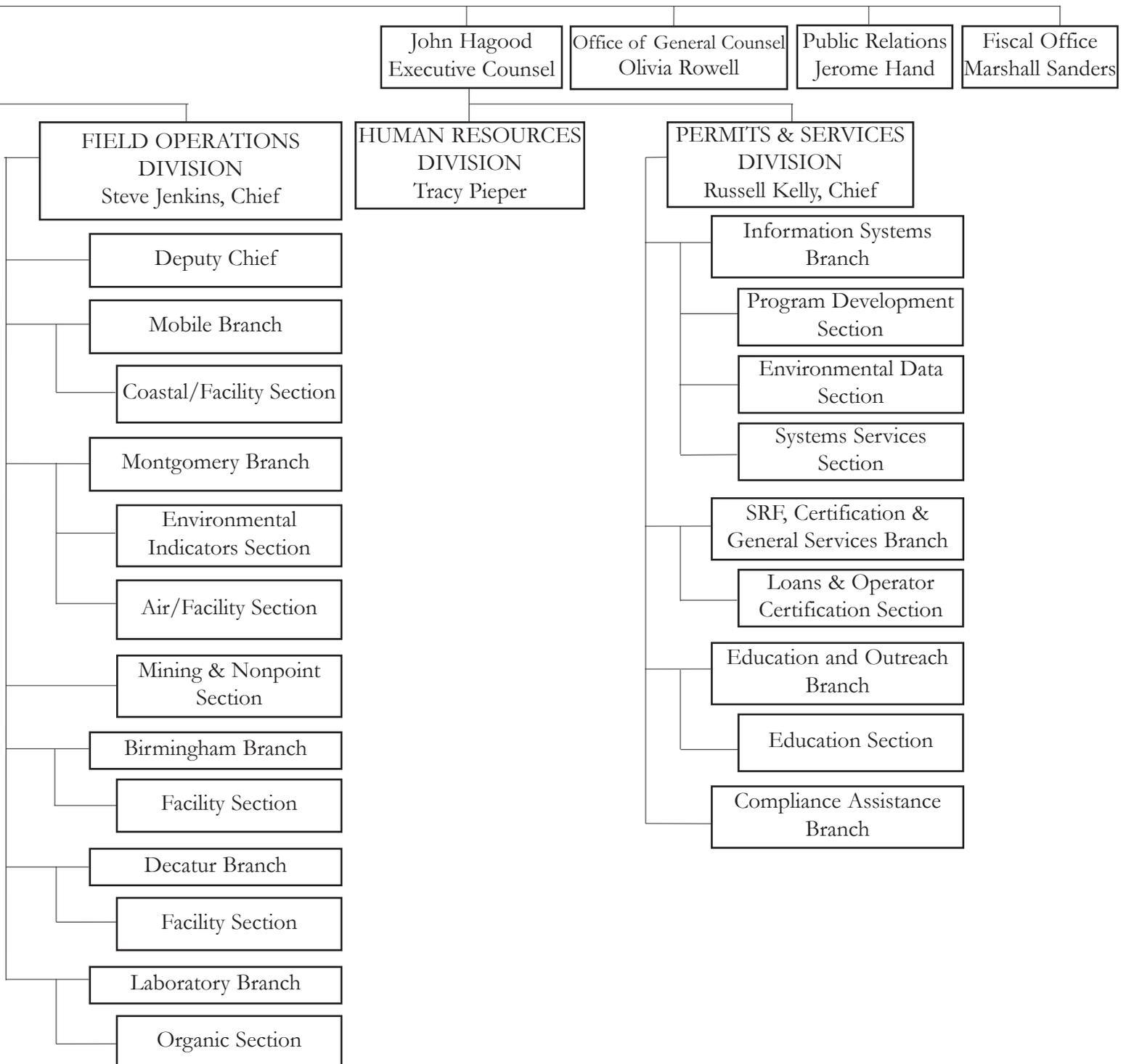
303(d) list is to be submitted to EPA on April 1 of even-numbered years. The list includes priority rankings set by the state for the listed waters. Once the impaired waters are identified, section 303(d) requires the state to establish total maximum daily loads (TMDLs) that will meet water quality standards for each water body, considering seasonal variations and a margin of safety that accounts for uncertainty. The Water Quality Branch works to determine the amount of each pollutant causing water quality impairment that can be allowed such that the water quality standards for the water body are maintained. The branch develops TMDLs according to a specified schedule approved by EPA after an opportunity for public comment.

The branch administers the water quality standards program that establishes and revises standards for surface waters. The standards consist of the designated uses of surface waters, the water quality criteria to protect those uses and an anti-degradation policy, all of which are included in ADEM's regulations. The program provides the basis for establishing permit limits under the NPDES for industrial and municipal wastewater treatment facilities.

Organizational



Chart



Water Division

Support for certain water quality planning activities is handled by the branch with funds passed to regional planning commissions or organizations. As required by the Clean Water Act, Alabama has established and maintains a continuing planning process pertaining to all navigable waters of the state. The continuing planning process is an umbrella document that provides the framework to coordinate and unify the activities and procedures necessary for maintaining waters of an acceptable quality in a manner consistent with the Alabama Water Pollution Control Act and the Clean Water Act. EPA is responsible for periodically reviewing the adequacy of the process.

Under section 305(b) of the Clean Water Act, the division prepares a biennial report to EPA on the condition of Alabama's waters, including those waters which do not fully support their designated uses. The division reviews applications for water quality certification for hydroelectric generation facilities submitted in accordance with section 401 of the Act and issues water quality certifications, when appropriate, with necessary conditions.

The effectiveness of the division's surface water quality management programs is evaluated

using water quality data and information collected by the surface water monitoring program. Where appropriate, the water quality management program incorporates priorities associated with related programs such as watersheds management, the Non-point Source Management Plan, the Coastal Area Management Plan and the Mobile Bay National Estuary Program.

Groundwater

ADEM's Groundwater programs include the Underground Injection Control program, which regulates disposal of treated wastewater into the subsurface, and the Underground Storage Tank program, designed to prevent and clean up pollution caused by leaking underground storage tanks.

The UST Corrective Action Section oversees initial response, assessment, monitoring, risk evaluation and remediation of releases from underground storage tanks. Section staff manages aspects of the program which includes: working with responsible parties and their select-

ed contractors on Trust Fund eligible sites and ineligible sites; reviewing closure site assessments; reviewing technical plans and reports regarding assessment, risk evaluation and remediation of UST releases; and reviewing cost proposals for Trust Fund eligible work. ADEM project managers are assigned specific UST releases and are responsible for overseeing site activities.

The UST Compliance Unit is responsible for implementation of equipment and leak detection standards for underground storage tank systems. The unit performs inspections and recommends enforcement action where needed and provides the regulated public with as much information as possible to ensure that a tank owner or operator understands their responsibilities.



ADEM's Water Division works to maintain clean and safe drinking water for more than four million Alabamians.

Field Operations

The mission of the Field Operations Division is to support the programs and activities of ADEM by gathering, analyzing, and distributing quality data and information. The division provides statewide emergency response to natural disasters, releases of oil and hazardous materials as a result of spills, accidents, facility incidents, and responds to fish kills.

ADEM has field offices in Birmingham, Decatur, Mobile, and Montgomery. Each of the offices has staff assigned on a rotating basis for emergency response duties 24-hours per day, seven days a week. The division supports local governments in response to actual or potential releases of oil and hazardous materials resulting from natural, manmade or technological disasters. The ADEM response staff serves as state on-scene coordinator for facility related releases of hazardous materials and oil releases to state waters. The division acts as the technical advisor in identifying and directing the containment, treatment, and removal of hazardous materials impacting or threatening citizens or the environment. ADEM serves as the point of coordination between the state and federal response resources of the U.S. Environmental Protection Agency and the U.S. Coast Guard.



Steve Jenkins

In the regulatory arena the division has responsibility for the wastewater permitting, inspection, compliance monitoring, and enforcement activities associated with animal feeding operations, mining, coal-bed methane, construction, and compliance issues associated with silviculture and other non-point sources. The division coordinates efforts to prevent adverse impacts on water quality due to non-point sources including working with federal and other state agencies to ensure the use of Best Management Practices, and requiring storm water controls for mining and construction sites. The division also is involved in the regulatory activities associated with the Alabama Coastal Area Management Plan and with water

quality certifications for dredge and fill permits.

Lab Analysis

The division operates three laboratories, the central lab in Montgomery and branch laboratories in Birmingham and Mobile. The central laboratory is responsible for organic, inorganic and radiochemical analyses for the department's Air, Land, and Water programs. A variety of scientific instrumentation is used to perform the analyses and achieve ever-decreasing detection limits. (The department's new analytical lab is under construction with a completion date set for the summer of 2006.) The Mobile and Birmingham laboratories have a complete array of inorganic analyses that includes metals, nutrients, solids, cyanide, phenols and bacteriological capability.

Emergency Response

The division responds to a variety of emergency situations, including hurricanes, tornadoes, and floods as well as transportation spills and facility incidents. The division has responders on call at all times from each of its branch offices. These strategic locations minimize response time and multiple on-call personnel allow for response to concurrent events. The division's response to

Field Operations

environmental emergencies is coordinated through the Alabama Emergency Management Agency.

In the 2005 fiscal year, Field Operations staff responded to numerous emergency events including Hurricane Katrina. ADEM deployed teams of engineers and scientists to the Gulf Coast for environmental response and recovery efforts. Field Operations staff coordinated with public water and wastewater systems impacted by the storm to ensure they were functioning properly. The division provided assessment and technical assistance to water systems in an effort to maintain safe drinking water supplies and worked in close partnership with the U.S. Coast Guard, EPA, and the National Oceanic Atmospheric Administration to identify and recover hazardous materials dislodged during the storm. Aerial reconnaissance was used by Field Operations personnel for assessments and to look for surface water spills and other leaks of chemicals, petroleum products and hazardous materials. Field Operations staff also assisted Mississippi in recovery and environmental efforts following Hurricane Katrina.

Field Operations is also responsible for the SARA Title III program and reviews, maintains, and serves as a repository for sever-

al different documents required to be filed by various industry throughout the state. These documents include hazardous chemical inventory forms, material safety data sheets, toxic release inventory reports, and accidental release notifications. Data from these documents are compiled and made available to the public, industry, and local emergency planning committees for use in emergency situations, to analyze release trends, and to aid in reduction of toxic chemical releases.

Coastal Programs

Alabama's Coastal Area Management Program has been in effect since 1979 and ADEM's Coastal Section under the Field Operations Division works to regulate various activities on coastal lands and waters seaward of the continuous 10-foot contour in Baldwin and Mobile counties. Implementation of the program is shared by the state Department of Conservation and Natural Resources and ADEM, with ADEM responsible for all programmatic regulatory functions, including permitting, monitoring and enforcement activities. Other division responsibilities and activities in the coastal area include development and implementation of the Alabama Coastal Non-point Pollution Control program, conducting the Coastal Watershed

Survey Program, and conducting studies and projects related to coastal resource management concerns. The division provides assistance to local governments relative to coastal resource management issues through technical assistance, reviews state agency permits, and handles Coastal Zone Management Consistency Review of federally regulated activities, federal projects, federal permits and federal assistance to local coastal communities.

NPDES

The division administers National Pollution Discharge Elimination System permits related to construction, mining, and agriculture activities. Federal and state regulations regarding discharges of storm water require operators and owners to obtain NPDES permit coverage prior to conducting regulated construction, disturbance, or initial operation of small non-coal, non-metallic mining sites, and associated land disturbance activities. These rules require that a Construction Best Management Practices Plan, prepared by a qualified credentialed professional, and designed to minimize pollutant discharges in storm water runoff to the maximum extent practicable during land disturbance activities, be fully implemented and effectively maintained. Best Management Practices are required to be submitted with the request for registration

Field Operations

for proposed discharges to a Tier 1 water body, proposed discharges to an Outstanding National Resource Water-designated water body, and for projects involving water body relocation or significant alteration. NPDES registration coverage must be retained until all disturbed areas have been reclaimed and effective storm water quality remediation has been achieved.

The rules require an operator or owner to register construction activities and associated areas one acre or greater in size. Construction activities less than one acre that are part of or associated with a larger plan of development or sale that might eventually exceed one acre, must also register. In addition, construction activities less than one acre in size that are determined by ADEM to have significant potential to cause or contribute to water quality impairment, may be required to register.

Field Operations monitors Animal Feeding Operations and Concentrated Animal Feeding Operations to ensure that they protect water quality. All CAFOs are required to register with ADEM, and all AFO/CAFOs are required to implement and maintain effective best management practices for animal waste production, storage, treatment, transport, and proper disposal that meet or exceed Natural Resources Conservation

Service technical standards and guidelines.

The division is responsible for permitting and compliance activities relative to NPDES permit coverage for treated wastewater and storm water discharges from surface and underground mining operations, regulated construction activity, coal-bed methane gas exploration, development, and production.

Environmental Monitoring

Water Quality: In 2005 ADEM revised its Water Quality Monitoring Strategy in an effort intended to be the first step in an ongoing planning process. The Strategy sets forth a 10-year plan to address EPA's Elements of a State Water Monitoring and Assessment Program. ADEM's monitoring strategy is implemented on a five-year monitoring cycle and an in-depth review of the strategy is completed at the end of each cycle.

This strategy document will enable ADEM to build on its existing monitoring capabilities and to address all state waters over time. This strategy is viewed as an opportunity for long-term planning and to that end, includes discussion of future initiatives and a timeline that address incremental improvements necessary to incorporate requirements outlined in Elements of a State Water Monitoring and Assessment Program and to satisfy monitoring goals and requirements pursuant to the Alabama Water Pollution Control Act, the Alabama Environmental Management Act, and the federal Clean Water Act. Components of the strategy include monitoring of streams, rivers, reservoirs, coastal waters, and fish tissue.

Air Quality: The division also performs ambient air quality monitoring for ozone and particulate matter at 25 locations in Alabama.



ADEM's new central laboratory is set to open in the summer of 2006.

Permits & Services

ADEM's Permits and Services Division serves as the one-stop focal point for all permit applications and redevelopment projects by coordinating communications, conferences, and other administrative functions. An environmental permit is the mechanism used to regulate emissions to the air and water as well as to ensure quality drinking water and the proper management of solid and hazardous wastes. The conditions and limits of these permits are developed by skilled technical staff assigned to specific program areas to ensure the protection of human health and the environment. In addition to permits, the division houses most of the administrative staff at the department including educational resources, compliance assistance, operator certification programs, revolving loan programs, and computer information systems.

Permits

Applications for permits for new industry in Alabama typically come to the Permits & Services Division through a local industrial development board or the Alabama Development Office. ADEM's technical staff and company representatives discuss specific requirements for the application. Any necessary modeling of wastes discharged to receiving streams or modeling of air emis-



Russell Kelly

sions is discussed in detail. Specific processing steps and time periods are provided so that the applicant can include these tasks in the overall planning of project development. The division coordinates communications, public notices, and hearings. Division staff arranges conferences with the applicant to expedite the permit process and handles the collection of fees.

Upon application receipt, the division enters information about the facility into the permit tracking database. ADEM technical staff reviews the information provided in the application to determine completeness and compliance with applicable standards. When the permit application is determined to be complete and in compliance with all standards, a

'draft permit' is prepared and a notice of the public comment period is published in a paper of general circulation in the area of the project and on the ADEM web site.

Public comment periods are provided to give the public an opportunity to raise issues. Significant public interest may cause the draft permit to be changed or for the division to schedule a public hearing to receive additional technical input before a final decision is made. Environmental permit decisions are technical in nature and not a mechanism for settling zoning differences. An environmental permit is utilized to control emissions to air, land, and water ensuring the protection of human health and the environment. Specific constituent limits are assigned for each permit which must meet stringent federal and state environmental standards. After a comment period or a public hearing, a thorough evaluation is prepared by the technical staff and made available to those who commented or expressed an interest in the project. A final permit decision is made by the department following this evaluation.

Education and Outreach

ADEM has a number of non-regulatory functions administered

Permits & Services

by the Permits & Services Division including its Education and Outreach efforts. These activities include assistance with pollution prevention, recycling, support to small business with compliance, and coordinating voluntary programs to reduce non-point source pollution and improve water quality.

Pollution Prevention is a voluntary non-regulatory program to encourage industry, non-regulated businesses, government agencies and the general public to reduce the amount of waste they produce through source reduction practices. The division's Ombudsman Office staffs a toll-free hotline to provide informational assistance to businesses and the general public and manages grants to marinas for the installation of boat sewage pump out stations and educating boaters about clean boating practices through the federal Clean Vessel Act. The 319 Non-point Source Pollution program is also administered through the division. This non-regulatory program is designed to accomplish water quality improvements through its holistic approach to watershed management and through the utilization of stakeholders and partners that live, work, and recreate in their local watersheds.

In the 2005 fiscal year, this

program worked to complete several stream restoration projects in the Gadsden area. These restoration projects involved restoring the natural features and curves of these streams along with installing some habitat features to increase the aquatic biology of the streams. (See photo.) The program also initiated and hosted numerous training events in the 2005 fiscal year, including the 16th Annual Non-point Source Conference which was attended by over 200 stakeholders and the STEPL, Spreadsheet Tool for the Estimation of Pollutant Load, reduction training which was

attended by more than 40 stakeholders. The program also continued its support of several stakeholder groups including the Alabama Clean Water Partnership and Alabama Water Watch.

State Revolving Fund Loans

The Clean Water State Revolving Fund and the Drinking Water State Revolving Fund are low interest loan programs intended to finance public infrastructure improvements to public water and wastewater treatment systems statewide to ensure a more abundant, clean, safe and



ADEM's Lisa Huff and Michael Jones collect macro-invertebrates prior to stream restoration activities in Etowah County.

Permits & Services

reliable water supply for Alabamians. The programs are funded in part with the proceeds of tax-exempt bond issues by the Alabama Water Pollution Control Authority and the Alabama Drinking Water Authority. Both authorities are composed of the Governor, Lt. Governor, Speaker of the House, Finance Director and ADEM Director.

The Permits & Services Division administers the loan programs, performs the required technical and environmental reviews of projects, and disburses funds to recipients. In the 2005 fiscal year, ADEM surpassed the \$1 billion dollar mark in the SRF loan programs. In the last 16 years, water and wastewater systems in 58 Alabama counties have successfully closed loans through the two programs. The \$1 billion ranks Alabama second in the southeast in total funding for public drinking water and wastewater infrastructure improvements.

The Clean Water State Revolving Fund Loan program began in 1989 to assist with construction of wastewater treatment and collection facilities and to achieve statewide compliance with water quality standards. The

Drinking Water State Revolving Fund Loan program started in 1998 to provide low-interest financial assistance to communities for water treatment, storage, and distribution improvements to meet more stringent water quality requirements. The division also administers the Brownfield

terms. Operator certification provides for training and establishes a program for certifying the competency of operators that run water and wastewater treatment plants and systems.

Computer and Information Systems

The Information Systems Branch provides computer technology needed to support and link the department's wide-ranging environmental programs, projects, and services. The branch equips ADEM staff with the latest hardware and software to perform their jobs more efficiently. These services not only help employees obtain and process information more effectively but also play a vital role in

making the department more accessible and accountable to the public. In addition to the branch's responsibility for development and maintenance of ADEM's computer network, equipment and programs, the branch also assists with the installation of software and employee training. The department's web site and intranet sites are maintained by the branch which develops and monitors security systems to protect the integrity of ADEM's computer data.



In 2005, ADEM surpassed the \$1 billion dollar mark in State Revolving Fund Loan programs to finance infrastructure improvements to public water and wastewater treatment systems.

Cleanup Revolving Loan Fund which provides financing to local communities for remediation of brownfields sites.

Operator Certification

The purpose of water and wastewater treatment operator certification is to protect the public health and welfare and prevent pollution by classifying all water and wastewater treatment plants, water distribution systems, and public wastewater collection sys-

Office of General Counsel

ADEM complies with a wide array of federal and state laws and regulations and the Office of General Counsel provides representation, legal advice, and assistance for the Director, deputy director, and various divisions and branches. The office reviews orders and contracts and issues legal opinions. Staff attorneys represent ADEM in civil litigation in state and federal courts, assist in the formulation of administrative orders and represent the department in appeal hearings before the Environmental Management Commission and other administrative agencies.

In the 2005 fiscal year, ADEM issued 127 administrative orders with 113 carrying civil penalties totaling more and \$1.38 million. Regulatory programs administered by the department are diverse. However the fundamental principle of consistency guides ADEM's enforcement process with similar penalties being assessed for similar permit violations both within programs and across divisions and branches. When penalties are assessed, six penalty factors referenced in the 1975 Code of Alabama are considered including; the seriousness of the violation, standard of care, economic benefit of delayed compliance, efforts to minimize or mitigate the viola-



Olivia Rowell

tion's effect, history of previous violations, and the entity's ability to pay.

During fiscal year 2005, the OGC filed 10 lawsuits seeking to enforce various environmental statutes and regulations including a suit against the Bishop Landfill in Marshall County, seeking proper closure of the site, and a suit against Dirt, Inc. in Mobile County, addressing disposal of unauthorized waste in a solid waste landfill. Other lawsuits were filed to address violations of storm water regulations, enforce permit requirements, and collect unpaid civil penalties. The office assisted the Attorney General's office in the prosecution of a number of enforcement cases and also assisted EPA and the U.S. Attorney's Office in the prosecu-

tion of McWane, Inc., which resulted in a verdict of more than \$5 million.

The OGC works with the Director and division chiefs on internal and external legal issues and is responsible for keeping up to date on new laws, rules, and regulations affecting the department and ensuring division and branch supervisors are informed of legal issues that relate to them. The office also handles legal questions involving human resource matters.

In the 2005 fiscal year, the OGC successfully defended the department in the case of Hosey, et. al. v. ADEM, Glenn, Gore and Kelly. The Court denied the plaintiff's request for a temporary restraining order, rejecting its challenge to ADEM's hearing procedures. The office was instrumental in presenting a case before the U.S. 11th Circuit Court ending in a favorable ruling for ADEM involving "standing to appeal" regarding Title V permits under the Clear Air Act. The Court of Civil Appeals also reversed and remanded an order awarding attorney fees in a Lowndesboro case involving ADEM's solid waste program. The successful presentation of the case saved the department \$338,000 in legal fees and expenses.

Human Resources

The Human Resources Division of the Alabama Department of Environmental Management supports the Director's office, division chiefs, and branch supervisors to ensure that all federal and state personnel laws and regulations are followed. The division provides advice and guidance regarding personnel interviewing, hiring, probationary reports, performance appraisals and employee training. The division assists other divisions, sections, and branches within the department with salary adjustments, personal leave, benefits issues, and any disciplinary actions. The staff also is responsible for coordinating health and wellness programs and maintaining all employee files.

Policies and Procedures

The division maintains and updates the Policies and Procedures Manual for the department and provides research and assistance. The staff interprets personnel-related laws, rules, and agency policies, and makes recommendations on departmental procedures, policies, and plans. The division recommends changes to employee classifications and reviews manpower issues. Staff routinely attend training seminars and receive updates on relevant issues and reviews documents to remain



Tracy Pieper

current on employee law trends. The division also assists employees with opportunities for counseling and information concerning raises and promotions.

Recruiting

In the 2005 fiscal year, representatives from the Human Resources Division visited numerous colleges and universities to recruit personnel for positions in the department. The staff assembled presentations and publications explaining the department's functions, opportunities for employment within the agency, and the programs administered by the Alabama Department of Environmental Management.

The division also worked closely with graphic arts staff to

publish Career Benefits, and Career Opportunities brochures and to post job openings and job descriptions on the Human Resources page of the ADEM web site. The site lists employment classifications currently being recruited by the department. It also features a link to download state applications, electronic copies of brochures, and has a list of frequently asked questions and answers. In addition, the division serves as a liaison to the State Personnel Department for all actions and activities involving human resources.

Policy of Non-discrimination

The Alabama Department of Environmental Management does not discriminate on the basis of race, color, national origin, sex, religion, age or disability in the administration of its programs or activities, in accordance with applicable laws and regulations.

The department has designated responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination requirements. ADEM appoints employees based on an equal opportunity, merit basis, without regard to race, color, national origin, sex, religion, age or disability.

Public Relations

Public accountability is the fundamental mission of the Public Relations Division at the Alabama Department of Environmental Management. The division responds to inquiries from the public and media representatives, and distributes news releases and advisories to announce departmental programs, services, and events. Throughout the 2005 fiscal year, the division worked with other ADEM divisions, sections, and branches to promote programs, meetings, projects and services to make information available to the legislature, state agencies, news media, and the general public.

The Public Relations Division works closely with all of ADEM's other divisions to coordinate responses to the news media and to promote departmental programs. To inform citizens about permits, regulations, compliance and enforcement actions, the division distributed dozens of news releases and media advisories in the 2005 fiscal year. News releases were made available to the public on the ADEM web site at www.adem.state.al.us. The division routinely sets up media interviews for the Director and ADEM scientists and engineers to help explain complicated programs and to answer technical



Jerome Hand

questions. The division is responsible for the content of the Annual Report and also monitors electronic and print news media for articles and reports involving ADEM programs and services.

The Public Relations Division is the contact point for news media inquiries and responds to requests for information about regulations, permits, grants, and various ADEM programs. The staff also receives requests from citizens, public officials, and environmental groups and helps provide access to public documents for news reporters, editorial boards, and the general public. In the 2005 fiscal year, the division responded to numerous inquiries and forwarded messages to other divisions or agencies when nec-

essary to provide prompt and complete responses.

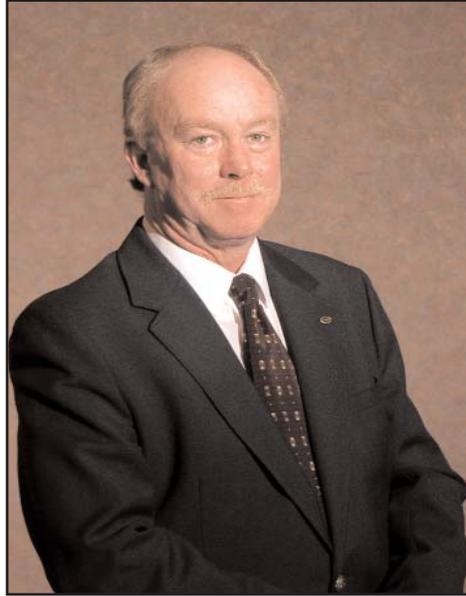
In the 2005 fiscal year, ADEM added to its Public Relations staff as part of the Environmental Management Commission's strategic plan calling for improved external affairs through better media and public outreach programs. To accomplish this, staff from the division attended numerous public meetings to gather input from citizens, provide information, and answer questions. The division also worked with staff from the Environmental Management Commission to announce meetings and coordinate media coverage.

The Public Relations Division worked with public relations staff at EPA Region 4 and other states in the 2005 fiscal year to coordinate response to environmental issues that involved Alabama and other southern states. Following Hurricane Katrina, ADEM public relations staff toured the Gulf Coast and worked closely with information officers from the U.S. Coast Guard, EPA, the U.S. Army Corps of Engineers, and other state agencies to handle media requests and updates to citizens involving environmental response and recovery, and to explain the department's role.

Fiscal Office

The Fiscal Officer is responsible for all financial operations of the department including directing a large, complex accounting system which includes payroll, purchasing, investments, revenues and expenses. The fiscal officer plans and directs preparation of the annual budget, operations plan, and a major federal grants program. As financial advisor to the Director and division chiefs the fiscal officer provides advice and assistance on all matters relating to finance, contracts, budgets and federal grants management. The fiscal officer is responsible for helping the Director ensure that the goals and objectives can be met within the allotted budgets and funding provided by the Legislature.

ADEM's operating budget for the 2005 fiscal year was \$49 million



Marshall Sanders

dollars. The department had 643 employees budgeted and was awarded 79 federal grants for environmental protection from the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Agency.

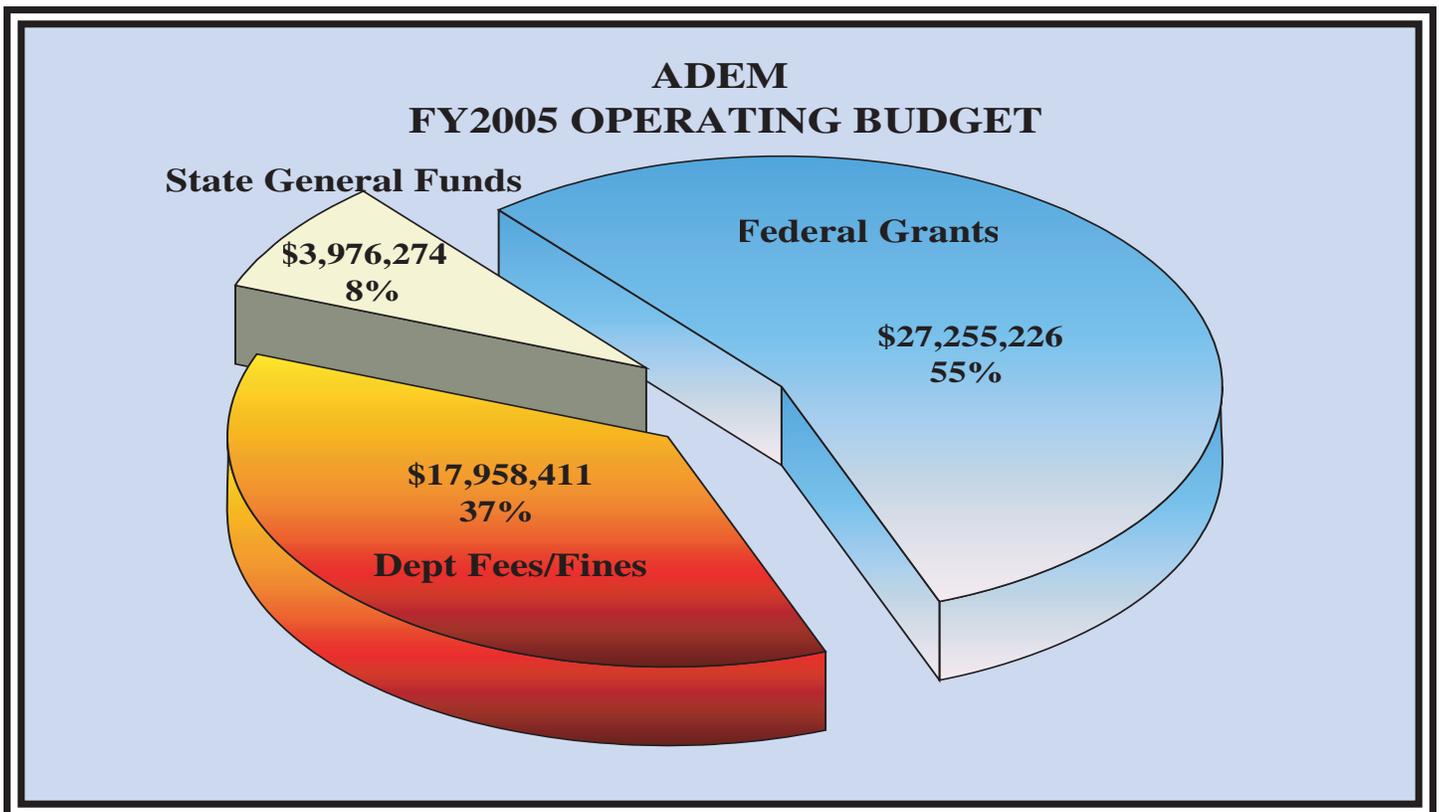
The officer oversees the Clean and Drinking Water State Revolving Funds that provide significantly lower interest rate loans to municipalities for water and wastewater infrastructure projects. These funds have a combined investment asset balance of more than \$100 million. In the 2005 fiscal year, ADEM reached a major milestone in the SRF programs when the total cumulative loans issued exceeded \$1 billion.

The department is also responsible for the Alabama Underground Storage Tank and Solid Waste Trust Funds and the Hazardous Substance Cleanup Fund. These funds have a combined asset total of more than \$40 million dollars.



Vital Stats FY'05

Permits issued	7,327
Facilities observed/inspected	25,992
Administrative orders	127
Administrative penalties	\$1.38 million
Complaints investigated	1,690
Emergency responses	406
Air monitoring stations maintained	233
Water monitoring stations maintained	1,057
Well drillers licensed	135
Wastewater operator certificates issued	1,098
Lab samples collected	9,368



ADEM

Alabama Department of Environmental Management

1400 Coliseum Boulevard
Montgomery, Alabama 36110

or

Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700

www.adem.state.al.us