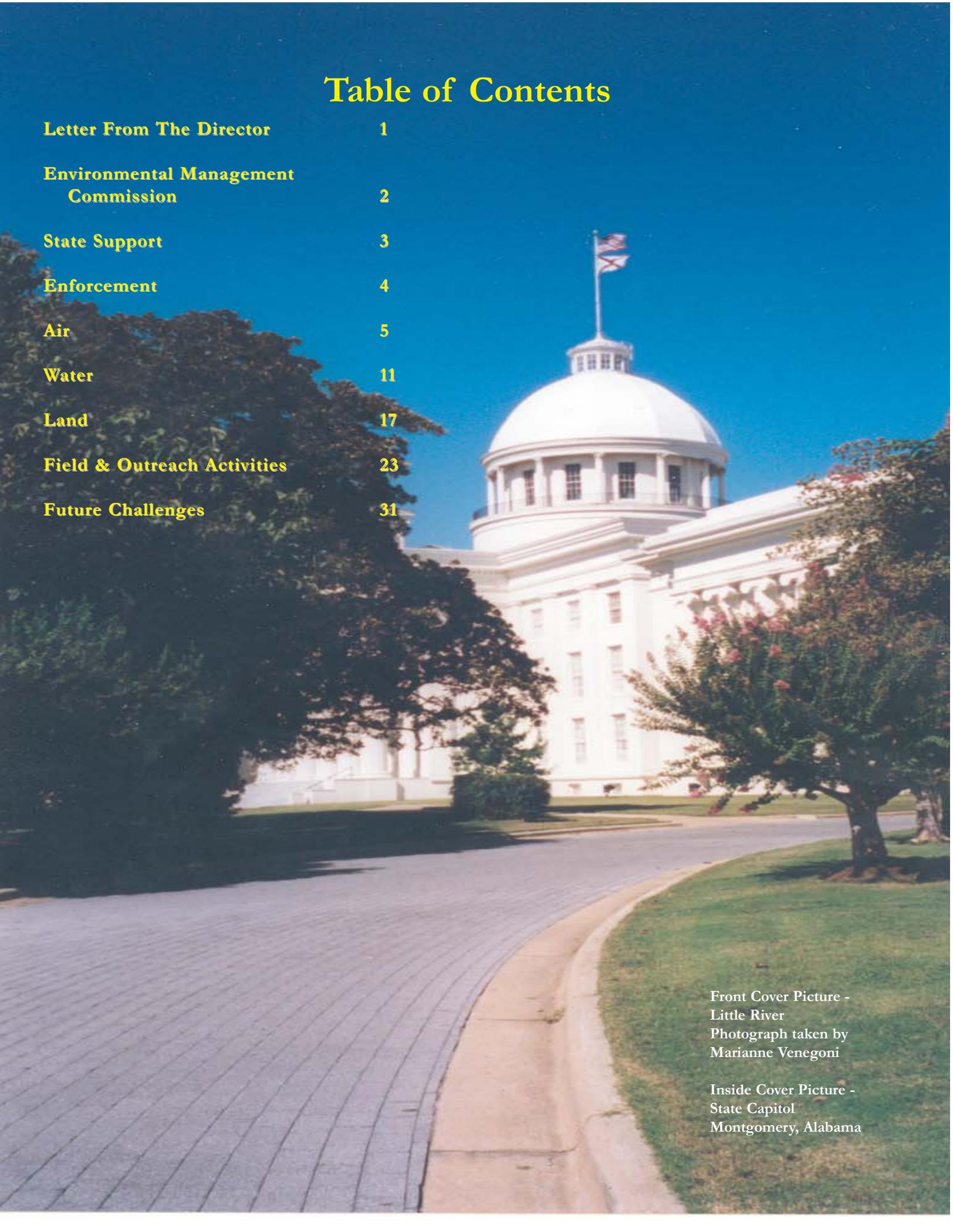
An aerial photograph of a river winding through a dense, lush green forest. The river is characterized by numerous large, light-colored boulders and rapids, creating white water as it flows. The surrounding forest is thick with various types of trees, including tall pines and broadleaf species. The overall scene is vibrant and natural.

# **Environmental Perspective 2003**

**Alabama Department of  
Environmental Management**

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Front Cover Picture -  
Little River  
Photograph taken by  
Marianne Venegoni

Inside Cover Picture -  
State Capitol  
Montgomery, Alabama

# LETTER FROM THE DIRECTOR



I am pleased to present "Environmental Perspective 2003," our annual report to the citizens of Alabama. The report summarizes the Department's activities in pursuit of air, land, and water quality objectives and reflects the achievements of the Department's dedicated staff working on behalf of all Alabama citizens.

Arguably the most significant accomplishment of 2003 was the achievement of the National Ambient Air Quality Standards for ozone in the Jefferson/Shelby County area. A variety of plans implemented by the Department resulted in significant reductions in the emissions of volatile organic compounds and nitrogen oxides, which are precursors to the formation of ground-level ozone, and enabled the Department to request that the U.S. Environmental Protection Agency (EPA) formally redesignate the Jefferson/Shelby County area as being in attainment for the 1-hour ozone standard.

Another major effort in 2003 was the Department's approval in July of a permit modification allowing the United States Army to proceed with the destruction of chemical weapons at the Anniston Chemical Agent Disposal Facility. The Department expended significant time and effort in its review of technical information submitted

during the permitting process and, on August 9, 2003, the first rocket containing chemical agent was destroyed. The Department has maintained a 24-hour/day, 7 day/week presence at the facility since operations began and will continue to monitor operations to ensure the safe, effective destruction of the stockpiled chemical weapons at this facility.

Also during 2003, the Environmental Management Commission and the Department began a strategic planning process designed to identify appropriate goals and objectives for both entities as work proceeds to ensure a quality environment for all Alabamians. Input from a diverse stakeholder group has been provided and five public meetings around the State facilitated citizen input as well. Information received will be used to finalize the plan in early 2004.

The Department also continued development of Total Maximum Daily Loads (TMDLs) for Alabama rivers, lakes, and streams that do not support, or only partially support, designated uses. The Department met its commitment to develop TMDLs for 115 waterbodies by the end of 2003 and will continue to address these needs as they are identified. Additionally, the Department implemented the federally mandated Phase II stormwater program in 2003 and also assisted public drinking water systems with preparing for, and responding to, bioterrorism threats through the development of vulnerability assessments.

The Department's legislative efforts during 2003 were rewarded with the passage of several bills that address key environmental needs. The Alabama Legislature's passage of the Scrap Tire Environmental Quality Act provides the authority for the Department to ensure the proper disposal of scrap tires in Alabama and the remediation of existing illegal scrap tire dumps. The Alabama Land Recycling Finance Authority Act, to be administered by the Department, establishes the Alabama Land Recycling Revolving Loan Fund to stimulate redevelopment of brownfield sites in economically depressed areas. The legislature also approved a bill to address inconsistencies between the Alabama Water Pollution Control Act and the Federal Clean Water Act to provide the public opportunity to comment on proposed administrative enforcement actions initiated by the Department. In addition, legislative changes to the Alabama Underground and Aboveground Storage Tank Act will enhance our environment through the provision of additional funds to assess and clean-up soil/groundwater contamination at tank sites.

While measurable improvements in Alabama's air, land, and water assets have been recorded, additional challenges and opportunities remain. As the Department moves to address these, we will continue efficient and effective use of the resources we are provided.

Appreciation is extended to the Governor, the Alabama Legislature, the Environmental Management Commission, our state and federal partners, and Alabama citizens for the support received in the Department's efforts to assure a safe, healthful, and productive environment.

Sincerely,  
James W. Warr  
Director

# ***Environmental Management 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/variances issued by the Department, adopting environmental regulations, developing environmental policy, and selecting the ADEM Director.

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

Commissioner Sanders, who presently serves as Chairman of the Commission, was appointed to the "physician" position in 1998 by Governor Fob James, Jr. Commissioner Sanders is a General Practitioner and a Psychiatrist and currently practices with Correctional Medical Services in Prattville.

## **Sam H. Wainwright, P.E.**

Commissioner Wainwright presently serves as Vice-Chairman of the Commission and was appointed to the "professional engineer" position by Governor Fob James, Jr. in 1998. Commissioner Wainwright is a retired Registered Professional Engineer who previously owned Wainwright Engineering and has been inducted into the Alabama Engineering Hall of Fame.

## **Patrick H. Byington**

Commissioner Byington was appointed to the "biologist/ecologist" position in 2001 by Governor Don Siegelman. Commissioner Byington serves as a program manager for the Southern Environmental Center and is the publisher of Bama Environmental News, an on-line environmental newsletter.

## **Kenneth A. Hairston, Esq.**

Commissioner Hairston was appointed to the "attorney" position by Governor Don Siegelman in 2002. Commissioner Hairston's law practice includes litigation, contracts, sports and entertainment, and municipal law.

## **John H. Lester, D.V.M.**

Commissioner Lester was re-appointed to the "chemist/veterinarian" position by Governor Don Siegelman in 2001. Commissioner Lester practices veterinary medicine at Lester & Donaldson Veterinary Hospital in Enterprise and is a past President of the Enterprise City Council.

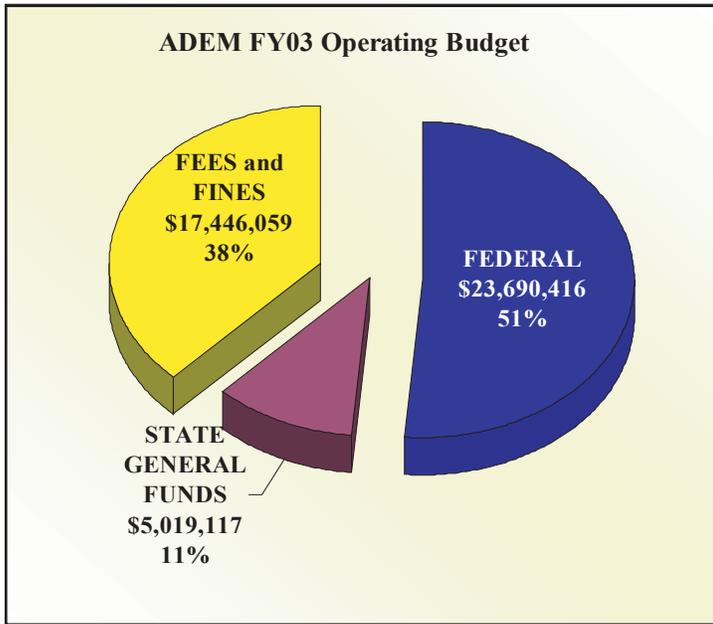
## **W. Scott Phillips**

Commissioner Phillips was appointed by Governor Don Siegelman in 2002 to the position requiring certification by the National Groundwater Association. Commissioner Phillips is a Vice-President with Malcolm Pirnie Inc., an environmental engineering/consulting firm.

## **Riley Boykin Smith**

Commissioner Smith was appointed in 2002 by Governor Don Siegelman to the "at large" position. Commissioner Smith is a businessman and former Commissioner of the Alabama Department of Conservation and Natural Resources.

# STATE SUPPORT

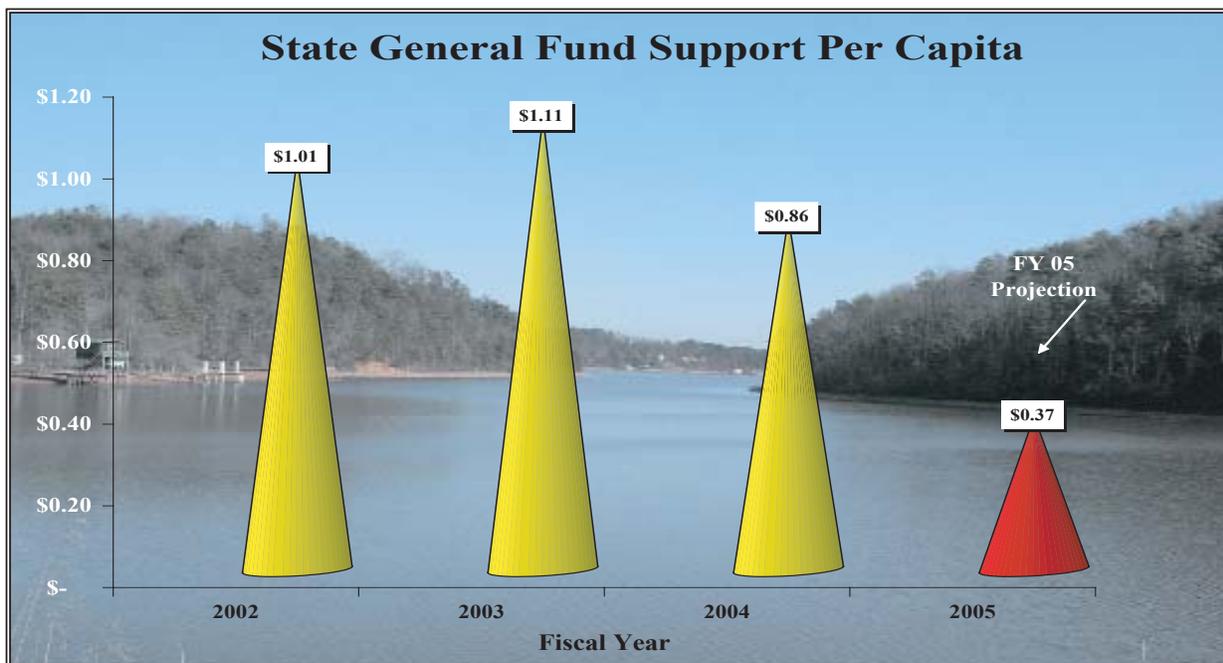


Although the Department has funded new program responsibilities through modification of its permit fee structure, the continued decline in the state's General Fund support poses serious challenges. Alabama is an "authorized" state, meaning that it is authorized to administer state environmental law in lieu of EPA administration of federal law. Such an arrangement is consistent with the Alabama Environmental Management Act creating ADEM, in which the Legislature expressed the intent to have federal environmental laws administered at the state level.

In Fiscal Year 2003 (FY03) the Department's General Fund appropriation reflected an increase over that received in FY02, but the total received was still considerably below that received in FY91. The Department's General Fund appropriation for FY04, which began October 1, 2003, is 21.4% less than that for FY03 and is more than \$1.5 million (28.4%) less than that received in FY91.

The largest portion of the FY04 budget cut will be absorbed by the Department's Solid Waste Branch. The Solid Waste Program receives no federal dollars, and relies heavily upon state General Fund support. Affected regulatory responsibilities include reviewing permit applications for proposed landfills, inspection of existing permitted landfills, enforcement actions, and investigation of illegal dumping complaints. Delays in permit application reviews, reduced inspections, and delays in complaint responses are expected as a result of the Department's current budget shortfall.

If the projected 56% cut in General Fund support for FY05 becomes reality, the Department will be supported from the General Fund at a level that is 32% of what it received in FY91. Given the requirements to provide a match for the federal grants, which comprise the largest share of the Department's operating budget, and the requirements to maintain authorization to administer environmental statutes at the state level, options for further cuts are fewer and the ramifications more dramatic.

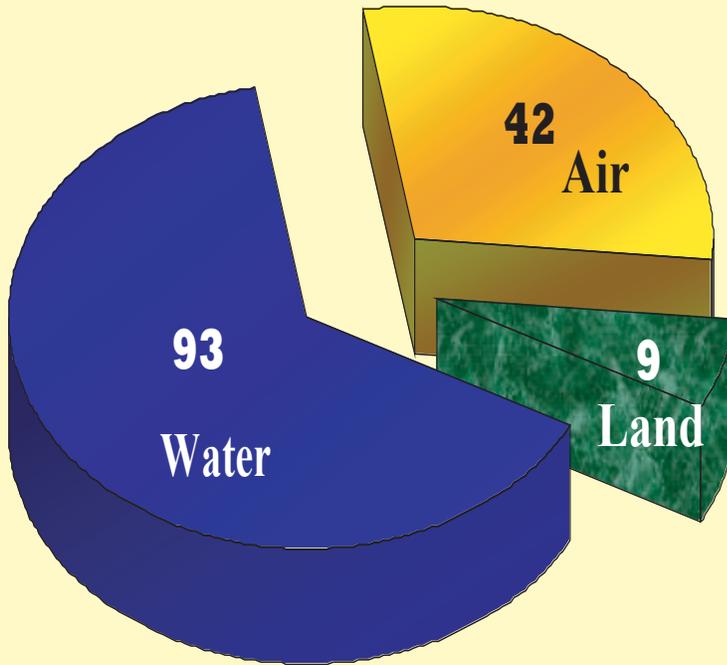


Source: General Fund Operating Dollars Divided by U.S. Census Bureau Population Estimates for Alabama

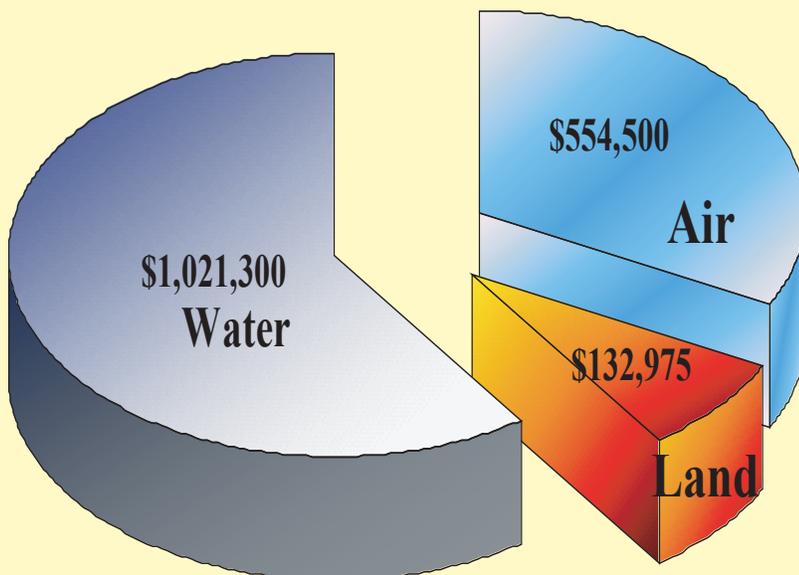
# ENFORCEMENT

## FY03 ADMINISTRATIVE ACTIONS

### ORDERS ISSUED



### PENALTIES ASSESSED



The Department continued an effective and efficient enforcement program in FY03, as evidenced by the issuance of 144 administrative orders. Of the 144 administrative orders, 133 assessed civil penalties totaling \$1,708,775. An administrative order is an enforcement tool utilized by the Department to assess civil penalties and establish compliance schedules for violations of environmental regulations.

The civil penalties contained in the administrative orders are assessed in accordance with six penalty factors outlined in Alabama law. The penalty factors include the seriousness of the violation, the standard of care shown by the company, any economic benefit obtained by delayed compliance, any efforts to minimize/mitigate the effects of the violation, the compliance history of the company, and the ability to pay a penalty.

Although the total number of administrative orders issued during the year is fewer than in previous years, it is still notable given the circumstances that existed. In January 2003, the United States Court of Appeals for the 11th Circuit determined that the enforcement process under the Alabama Water Pollution Control Act was not comparable to that provided for under the federal Clean Water Act.

Specifically, the court found that the public's ability to submit comments on proposed enforcement activities did not compare with the federal procedures. Accordingly, the Department's ability to take enforcement actions was curtailed until the Alabama Legislature could amend Alabama law. Revisions were approved in May and the Department subsequently began following the new process.

# Air

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## Pollutants with National Ambient Air Quality Standards

### Carbon Monoxide (CO)

A colorless, odorless, poisonous gas, formed as a by-product of incomplete combustion of fossil fuel. Motor vehicle exhaust is the major source of this pollutant.

### Lead (Pb)

An element that is emitted into the air, primarily from lead smelters and battery plants.

### Nitrogen Dioxide (NO<sub>2</sub>)

A gas that is a form of nitrogen oxide formed as a by-product of incomplete combustion of fossil fuels in motor vehicles, industrial boilers, and electric generating plants.

### Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)

Solid or liquid particles found in the air. Typical sources include combustion of fossil fuels, industrial processes (metals, fibers, etc.), fugitive dust sources (wind and mechanical erosion of soil) and photochemically produced particles (complex reactions between sunlight and gaseous pollutants).

### Sulfur Dioxide (SO<sub>2</sub>)

A gas produced primarily from the burning of fossil fuels containing sulfur impurities, refining of crude oil, manufacture of sulfuric acid and smelting of ores.

### Ozone (O<sub>3</sub>)

A gaseous secondary pollutant formed from a complex series of atmospheric reactions between reactive volatile organic compounds, or VOCs, and nitrogen oxides, or NO<sub>x</sub>, during the hotter months of the year.

The National Ambient Air Quality Standards, or "NAAQS", establish the dividing line between healthy and unhealthy air and EPA has established NAAQS for six pollutants nationwide. With the attainment of the 1-hour ozone standard in the Birmingham area, all areas of the state meet all current air quality standards. The Department operates 58 air monitors at 34 locations throughout the state to document air quality. There are also two local air quality programs that operate air monitors. Jefferson County Department of Health operates 47 monitors at 16 locations within the county and the City of Huntsville Division of Natural Resources and Environmental Management operates eight monitors at four locations.

## ***Birmingham Area Attains the 1-Hour Ozone Standard***

After more than 25 years of being classified in nonattainment for ground-level ozone, air monitoring data covering the period 2001-2003 indicates that the Birmingham area has attained the 1-hour ozone standard. This is a significant accomplishment and the Department has requested that EPA formally redesignate the Birmingham area as having achieved the 1-hour ozone standard.

Ground-level ozone is formed during the hotter months of the year from a complex series of atmospheric reactions between volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>). State/Federal air pollution control regulations for ground-level ozone allow no more than one, 1-hour exceedance per year over a three-year period. The 1-hour standard reflects the highest peak of ozone for a 1-hour period, and is set at 124 parts-per-billion.

The Birmingham area was first classified by the EPA in 1978 as being in nonattainment for ground-level ozone. The nonattainment area at that time was geographically defined as Jefferson County. With the implementation of the Clean Air Act of 1970 and the Clean Air Act Amendments (CAAA) of 1977, the state developed significant revisions to the State Implementation Plan (SIP) to address ozone in the Birmingham nonattainment area. Based on the best science at that time, these plans focused on reductions in VOC emissions.

Pursuant to the CAAA of 1990, Jefferson and Shelby Counties (Birmingham area) were declared a "marginal" (6% above the standard) nonattainment area for the 1-hour standard based on monitoring data from 1987-1989. Because marginal areas were barely over the standard, Congress presumed that the ongoing CAAA programs would enable these areas to reach

attainment. Areas whose ozone levels were higher were classified as "moderate," "serious," "severe," or "extreme." Any area above the "marginal" classification was required to take specific actions to reduce emissions of ozone precursors. The marginal classification required the Birmingham nonattainment area to attain the 1-hour ozone standard by November 15, 1993.

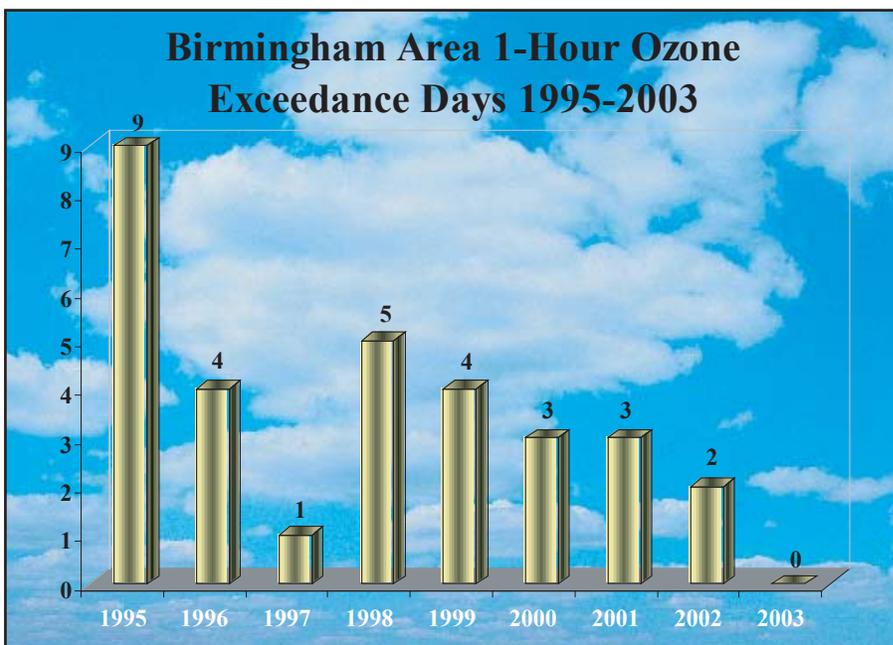
From 1991 through 1994, monitoring data from the Birmingham area indicated that the 1-hour ozone standard had been attained. However, additional violations of the 1-hour standard occurred in 1995 prior to finalization of the formal attainment designation by EPA. New violations of the ozone standard during the mid-1990s resulted in a revised SIP (based on computer modeling) which included regulatory controls to reduce NO<sub>x</sub> emissions. Plans to reduce NO<sub>x</sub> emissions in the area, as well as to control regional NO<sub>x</sub> transport, were approved by EPA in 2001, and helped to achieve attainment beginning in 2003.

The Birmingham attainment plan requires the use of cleaner-burning gasoline until national fuel standards take effect in 2004. Additionally, new emission controls for two electric power generating utilities in the Birmingham area were designed and implemented to help achieve clean air status for Birmingham. Some controls on electric power generating units began operation in 2002 in advance of the compliance deadline. Significant air pollution reductions are expected at Birmingham area electric power generating units through 2004. Additional reductions are expected through control measures applied to large electric generating units, large industrial boilers and turbines, stationary internal combustion engines, and cement kilns.

Once the Birmingham area is officially redesignated as being

in attainment of the 1-hour standard, this chapter in the area's air quality history will be closed. The area will then face new designations under EPA's revised 8-hour ozone standard in April 2004. Even though monitoring data indicates that the number of days in exceedance of the new 8-hour ozone standard have progressively decreased over the past five years, one of the area's monitors, located in Helena, continues to measure ozone levels above the new standard. State and national regulatory control programs already in place are expected to result in the area's achievement of the new 8-hour ozone standard no later than 2007.

The Department also participates with 18 other partners in the Alabama Partners for Clean Air (APCA) voluntary ozone action program. APCA is an affiliation of public, private, and nonprofit organizations working to implement voluntary strategies that improve air quality in Jefferson and Shelby Counties.



## Ozone Forecasting Continued

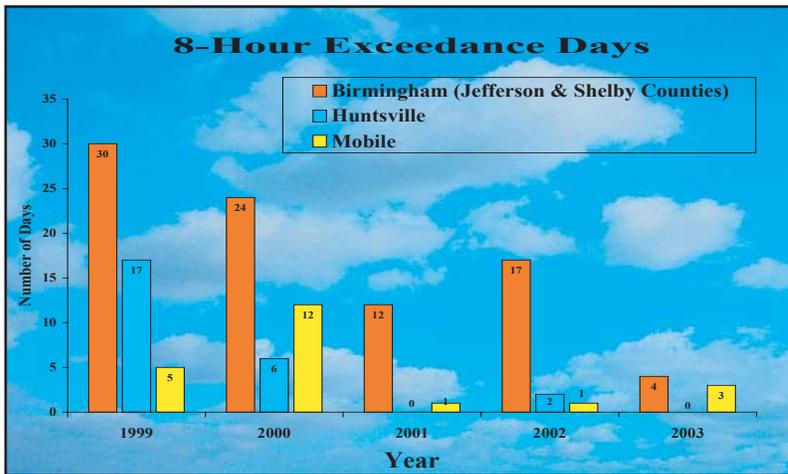
The Department continued ozone forecasting and awareness programs in Birmingham, Mobile, and Huntsville/Decatur during 2003. These programs were developed by local governments, businesses and industries, in conjunction with the Department, to aid in achieving and maintaining the air quality standards for ozone. The intent of these programs is to increase public awareness of ground-level ozone, declare Ozone Alerts on days when weather conditions are favorable for ozone concentrations to approach or surpass the air quality standard, and give the public the opportunity to voluntarily reduce emissions of ozone-causing pollutants on Ozone Alert Days.

The success of these awareness programs depends on pub-

lic participation on Ozone Alert days when the ozone levels are forecast to reach or surpass levels considered "unhealthy." Daily ozone forecasts are issued by the Department between April and September when ozone formation is most likely. These forecasts are issued Sunday through Friday, no later than 3:00 p.m. and predict ozone levels for the next day. The Friday forecast consists of a two-day forecast for Saturday and Sunday. All daily ozone forecasts are prepared by the Department's meteorologists and are based on predicted weather conditions, ozone forecast models, and observed ozone trends in the Birmingham, Huntsville/Decatur, and Mobile areas. The daily forecast consists of color-coded categories that correspond to different recommended actions for the general public.

Levels of Health Concern	Numerical Value	Meaning
Good	0-50	Air quality is considered satisfactory, and air pollution poses little or no risk.
Moderate	51-100	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups	101-150	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy	151-200	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy	201-300	Health alert: everyone may experience more serious health effects.
Hazardous	> 300	Health warnings of emergency conditions. The entire population is more likely to be affected.

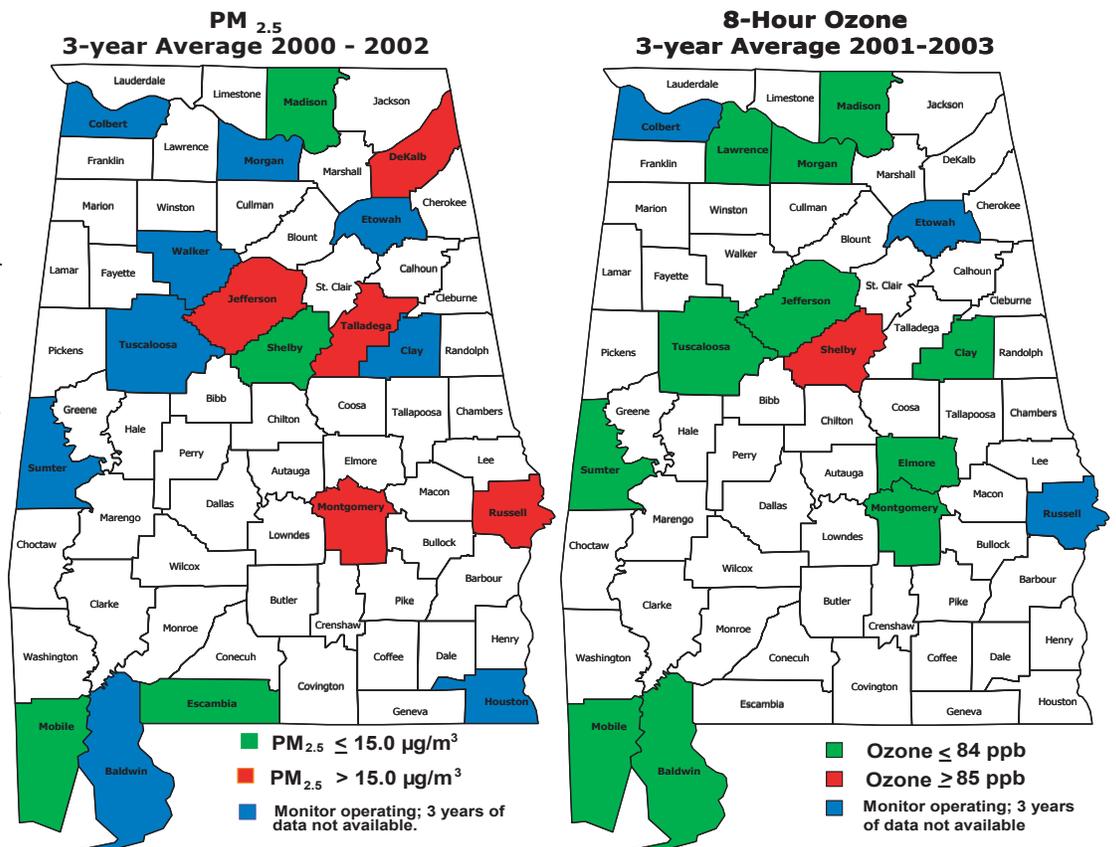
# New Air Quality Standards for Ozone and Fine Particles



New air quality standards for ozone and fine particles represent the third generation of standards that have been adopted since the early 1970s. The latest standards are significantly more restrictive than the previous ones. All areas of the state have monitored air quality that meets the previous two generations of each standard.

The current 1-hour ozone standard reflects the highest peak of ozone for a 1-hour period. EPA's new 8-hour standard reflects the 3-year average of the annual fourth-highest daily maximum 8-hour ozone concentration. EPA also strengthened the current primary (health-based) particulate (PM) standards by adding a new annual PM<sub>2.5</sub> standard set at 15 micrograms per cubic meter (µg/m<sup>3</sup>) and a new 24-hour PM<sub>2.5</sub> standard set at 65 µg/m<sup>3</sup>.

The new standards will go into effect when EPA makes formal designations of areas as being in attainment/nonattainment. The first step in EPA's implementation process is to solicit states' input on which counties should be designated "nonattainment." EPA requires any county in which at least one monitor exceeds the 8-hour ozone or PM<sub>2.5</sub> standard to be designated as being in nonattainment. Alabama's recommendations for 8-hour nonattainment areas were submitted in July 2003 and, based on 2000-2002 data, Jefferson, Shelby, and Morgan Counties were the only counties to be recommended as being in nonattainment. Alabama's recommendations for PM<sub>2.5</sub> nonattainment areas will be submitted in February 2004. Based on 2000-2002 data, Jefferson, Montgomery, Talladega, DeKalb, and Russell Counties would be recommended as being in nonattainment. EPA requires states to use the three most recent years of quality-assured data to make nonattainment recommendations. However, the quality assurance of 2003 monitoring data will not be complete until late spring 2004. Alabama's recommendations can be revised to reflect results from the 2001-2003 monitoring years. Counties recommended as being in nonattainment based on 2000-2002 monitoring data for either standard could potentially have their nonattainment status changed to attainment based on the 2001-2003 monitoring data.



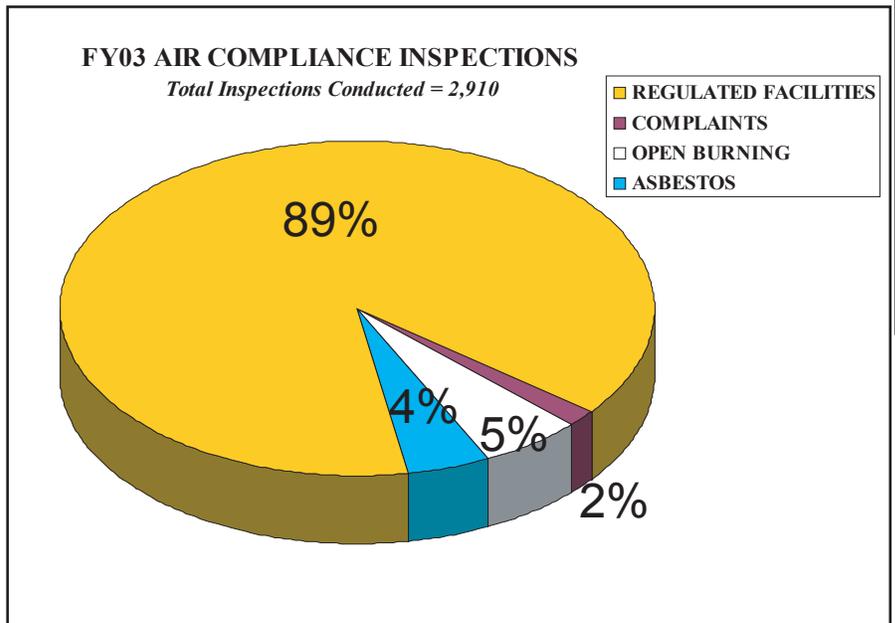
The Department has an ambient air monitoring network to measure levels of both particulates and ground-level ozone. Several new ozone monitors have been added in recent years to assess air quality for the new standards. The newest monitors were placed on-line in 2003 in Colbert and Russell Counties.

In addition to the benefits of national and regional air pollution control programs, the Department uses other non-traditional programs to aid in the reduction of air pollution. The Department institutes an open burning ban in eight Alabama counties (Madison, Morgan, Lawrence, Jefferson, Shelby, Montgomery, Mobile, and Baldwin) between May and September to combat the formation of ground-level ozone. The ban includes the burning of untreated wood, tree trimmings, and brush or plant growth generated by clearing or maintenance of land, and from construction and demolition operations.

## Field Presence

The Department carries out its air quality charge by implementing programs designed to achieve and maintain safe air quality levels. Various tasks, such as permitting, enforcement, implementing air toxics regulations, source evaluation and complaint investigation require a strong field presence.

Approximately 3,000 inspections of permitted facilities were performed in FY03. Other activities to monitor facility compliance in the field include the performance of real-time stack testing to measure a facility's actual emissions compared to its permitted allowance. During FY03, there were 747 emissions test events conducted within the state by consultants/industry, indicating a 43% increase over the last seven years. Seven emissions tests were conducted by Department personnel during FY03. These tests included measurements of particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide. In addition, Department personnel evaluated 625 emissions test reports to assure accuracy.



## Leak Detection Audit Program

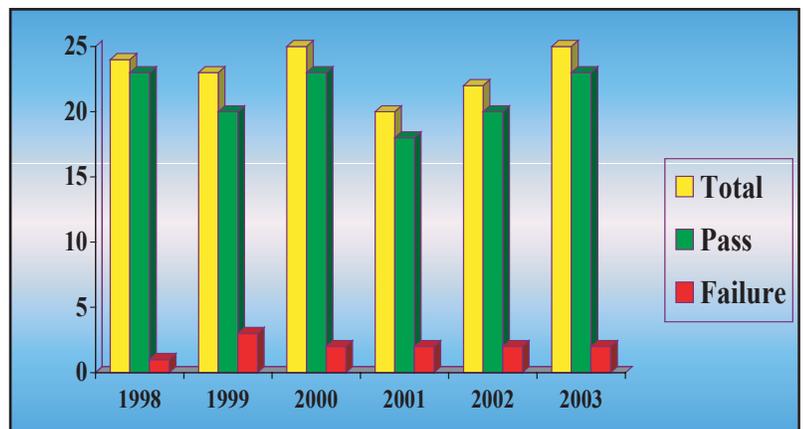
A leak detection audit program (LDAP) was initiated during FY03 to detect organic emissions leaking from gasoline trucks and facility equipment during loading operations at petroleum terminals. A total of 197 trucks were inspected and 23 (11.68%) were found to be leaking. Forty-two percent of the facilities inspected had leaking equipment.



Vapor Leak Checks performed on Petroleum Trucks

## Continuous Emissions Monitoring Systems Audit Program

Continuous emissions monitoring systems (CEMS) continuously sample, analyze and provide a permanent record of emissions from a source. The Department has a comprehensive plan for evaluating the certification and recertification of CEMS. During FY03, the Department conducted 25 audits involving 53 monitors of various types to determine the precision and accuracy of CEMS at regulated facilities. ADEM staff also observed the certification or recertification of 135 CEMS conducted by consultants and audited 20 CEMS at six electric generating facilities.



## ***Visible Emissions Certification Program***

The Department conducts a Visible Emissions Certification Program (smoke school) to train individuals to visually read opacity (density) of stack emissions at industrial facilities. Reading the opacity of emissions allows a field determination of compliance with mass emission standards. The procedures for reading plume opacities must follow EPA Method 9, which specifies training requirements that certification programs must use and the procedures for visually determining the opacity of emissions from stationary sources. This process has reflected a reduction in air particulate levels in the U.S. by 70%.

The Visible Emissions Certification Program consists of two "smoke schools" annually, conducted in the spring and fall and consisting of two sessions per school. The attendees represent industry, consultants and regulatory staff. The number of people attending smoke school has increased from approximately 20 in the early 1970s to nearly 1,000 in FY03.



*Field Certification Exercise*

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## ***Air Toxics Monitoring***



*Monthly Audit of Mercury Ambient Air Monitoring Equipment*

Since 1990, the Department has conducted statewide monitoring for a variety of atmospheric air pollutants. The most recent monitoring activities focus on mercury and polychlorinated biphenols (PCBs).

Monitoring for hazardous compounds around the perimeter of both regulated and non-regulated facilities provides new information on background concentrations of hazardous air pollutants. In 2001, the Department began operating a continuous monitoring site for ambient mercury in southwest Alabama. A comparison of the data gathered in FY02 and FY03 shows a decrease in the presence of ambient mercury at the site. Also present is a meteorological station that measures wind speed and direction, temperature and humidity.

Since 1999, a network of five monitors has been operated and maintained by a regulated facility in the Anniston area. These monitors are used to detect PCBs in ambient air and the network was expanded in FY03 to eight monitors. The regulated facility submitted a monitoring plan and, based on the Department's review, monitoring procedures were revised. The eight sites have been operating since April 2003. The regulated facility transmits results from the sampling events to ADEM for review on a bi-monthly basis and the Department has audited the sampling procedures monthly.



*Audit of PCB Ambient Air Sampling Equipment*

## **Water**

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# Alabama Achieves Reductions in Number of Impaired Waterbodies

In July 2003, the Department received approval from EPA for its Final 2002 Section 303(d) List of Impaired Waters. All states are required by Section 303(d) of the Clean Water Act to compile the list to identify segments of rivers, streams, lakes, reservoirs, and estuaries that currently do not support, or only partially support, their designated use(s). Additionally, each state must establish a priority ranking for the listed waterbody segments taking into consideration the sources of pollution, severity of the pollutants, and the designated use(s) of the segment.



Portions of Shoal Creek are listed on the 2002 303(d) List.

Alabama's 2002 list consists of 181 waterbody segments and 296 pollutants, compared to 193 segments and 362 pollutants in the 2000 list. A total of 19 segments and 73 pollutants have been removed since the 2000 list as a result of Total Maximum Daily Loads (TMDLs) development or Delisting Decisions (DDs) by ADEM.

A TMDL is a calculation of the maximum amount of a specific pollutant that a water body can receive and still comply with Alabama's federally approved water quality standards. The Department develops TMDLs for waterbody segments that are on the 303(d) list and once a TMDL is established, practices/procedures are implemented to return the waterbody segment to applicable water quality standards. Also examined in the removal of these waterbody segments and pollutants from

Impaired Waterbody Segments per Major River Basin	
Alabama	5
Black Warrior	31
Cahaba	11
Chattahoochee	2
Chipola	1
Choctawhatchee	5
Coosa	12
Escatawpa	8
Mobile	20
Perdido-Escambia	9
Tallapoosa	9
Tennessee	63
Tombigbee	5

the list is "good cause" justification. If recently collected water quality data demonstrates the waterbody segment meets the water quality standards for its designated use, it can be removed from the impaired list. The increased removal of waterbody segments and pollutants is reflective of the rigorous water quality monitoring and assessment methods employed by the Department to support 303(d) listing and delisting decisions.

A total of seven waterbody segments were added to the 2002 list, due primarily to fish consumption advisories issued by the Alabama Department of Public Health (ADPH). ADPH issues fish consumption advisories based upon data provided by the ADEM Fish Tissue Monitoring Program.

When compared to the 2000 list, the 2002 list documents that 172 miles of rivers/creeks/streams were delisted. These waterbody segments are now meeting the water quality criteria for their designated water use classifications. Alabama has over 77,000 miles of rivers, creeks, and streams with only 1,972 miles (2%) identified as not supporting, or only partially supporting, their designated use(s).

In 2003, ADEM continued its development of TMDLs for impaired waterbodies identified on its 303(d) List. The Department's TMDL development has focused on meeting the deadlines contained in the five year schedule established under a 1998 Consent Decree and Settlement Agreement between

**2002 303(d) List - Statistics**

- Total Segments = 181
- Total Pollutants = 296
- Rivers & Streams = 1972.8 miles
- Lakes & Reservoirs = 84,649 acres
- Estuarine/Coastal = 778.9 square miles
- Top Causes of Impairment = Organic Enrichment/Dissolved Oxygen, Pathogens, Siltation & Nutrients
- Major Basins with Most Listings = Tennessee, Black Warrior, Mobile

Plaintiffs and EPA. As part of the agreement, ADEM and EPA were required to address all 115 waterbody segments and 289 pollutants identified on Alabama's 1996 303(d) List of Impaired Waters.

The Department developed 81 TMDLs during the first four years of the schedule and has met all of the requirements for TMDL development for that time period. Additionally, the Department met all requirements for the November 5, 2003 deadline for the final year. The chart below illustrates the Department's TMDL efforts pursuant to the compliance schedule.

This year, TMDL development has proceeded at a rapid pace throughout the entire state, from the mountain streams of northeast Alabama to the coastal waters of Mobile Bay. The TMDL workload in FY03 has been the most difficult thus far due to the large number of segments and pollutants to be addressed. Also, the level of complexity involved with model development for many of the waterbody segments, such as reservoirs and coastal waters, has contributed to the work load.

After all settlement agreement requirements are met, the Department will continue the development of TMDLs for waterbody segments on the latest 303(d) List.

Date	1996 303(d) List Number of Segments	Percent of Total Segments Required to be Completed by end of Each Year
November 5, 1999	12	10%
November 5, 2000	12	20%
November 5, 2001	28	45%
November 5, 2002	29	70%
November 5, 2003	34	100%
Total	115	100%

TMDL Schedule Pursuant to the 1998 Consent Decree.

## Water Use Classification Upgrades

Water use classifications are used to categorize Alabama's rivers, creeks, lakes, streams, and coastal water bodies according to the beneficial uses designated for each water body and the water quality parameters necessary to support those beneficial uses. There are seven water use classifications in Alabama and each classification has specific water quality criteria associated with it.

On February 25, 2003, the Alabama EMC approved a proposed upgrade in the water use classification for Five Mile Creek in Birmingham from Agricultural and Industrial Water Supply to Fish and Wildlife. This segment of Five Mile Creek, located within the Warrior River Basin, extends from Newfound Creek to Ketona Creek.

The Fish and Wildlife upgrade for Five Mile Creek leaves only ten stream segments constituting 74 stream miles, out of a total of 77,242 miles of state waters, which remain classified as Agricultural and Industrial Water Supply.

The Department regularly collects data and reviews water quality data to determine if other streams are suitable for water use classification upgrades. Although, the Department continues to work toward the Clean Water Act goal of all streams classified as suitable for Fish and Wildlife, or better, some streams cannot achieve the water quality standards associated with the higher water use classifications due to naturally occurring conditions.

### Water Use Classifications in Alabama

Outstanding Alabama Water

Public Water Supply

Swimming and Other Whole Body Water-Contact Sports

Shellfish Harvesting

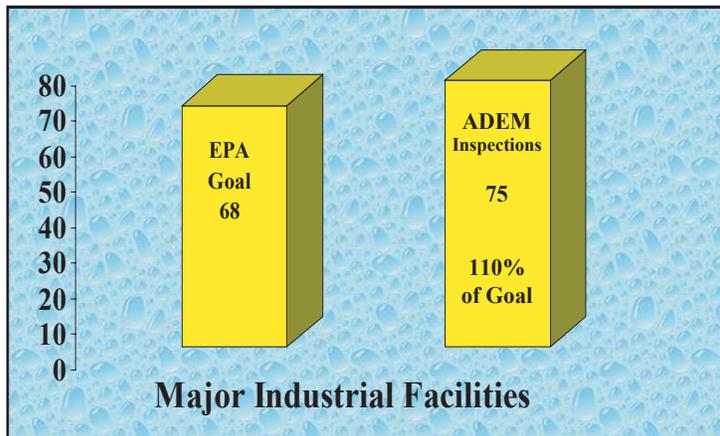
Fish and Wildlife

Limited Warmwater Fishery

Agricultural and Industrial Water Supply

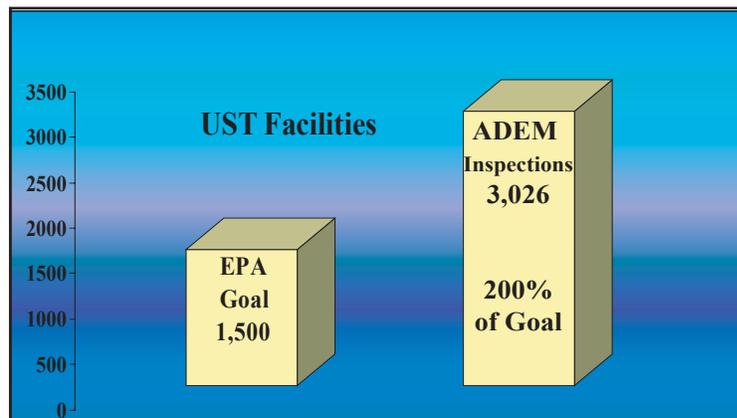
## Field Activities and EPA Goals

Water Division programs, as with many other ADEM programs, receive most of their funding through federal grants provided by EPA. The federal grants are accompanied by work-

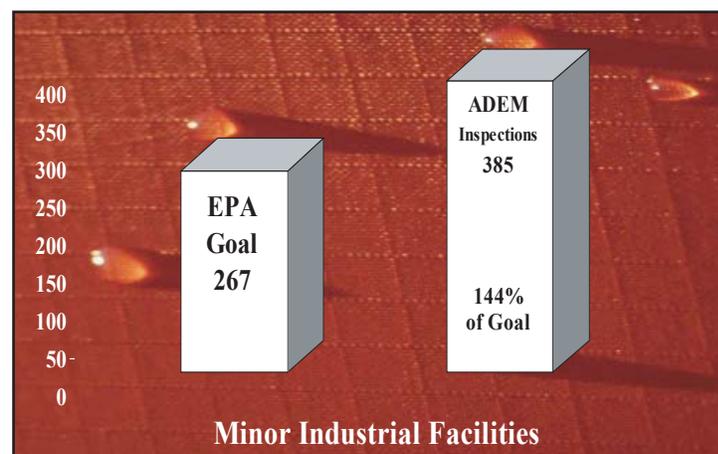


plans that contain specific goals that EPA has established for the state programs as well as accountability measures. The goals allow EPA to dictate, to a large degree, where the Department focuses its limited resources.

The goals identify specific items, such as the number of inspections that must be performed, and focus on specific areas that provide the most environmental benefit. For example, during 2003, EPA required the inspection of all "major" industrial facilities and 10% of all "minor" industrial facilities. Additionally, EPA required the inspection of 1,500 underground storage tank facilities.



The Department not only met but exceeded the goals established by EPA in each of these programs.



## Muscle Shoals Stormwater Drainage Wells Closed



Stormwater drainage wells such as this have the potential to introduce pollutants into the subsurface and impact groundwater quality.

The Department reached a major milestone in its continuing efforts to protect the groundwater resources in Muscle Shoals and surrounding areas by documenting the permanent closure of the Muscle Shoals stormwater drainage wells. The City of Muscle Shoals' stormwater management system consisted of 19 stormwater drainage wells, probably drilled in the 1940s as a public service effort to protect residential and com-

mercial areas from flooding.

However, it is now recognized that stormwater runoff from parking lots, streets, residential areas, rooftops, highways, etc., has the potential to introduce many pollutants into the subsurface, causing a significant impact on groundwater quality and ultimately drinking water supplies. Studies performed by the Geological Survey of Alabama, at ADEM's request, have demonstrated a hydraulic connection between many of the stormwater drainage wells and springs in the Muscle Shoals area.

ADEM regulated these stormwater drainage wells as Class V injection wells under the Department's Underground Injection Control (UIC) program. UIC permits were issued to the property owners where the stormwater drainage wells were located and specific spill prevention measures and best management practices were required.

The Department also worked with city officials to develop an alternative method of managing stormwater, allowing the closure of the stormwater drainage wells. After several years of planning, the City of Muscle Shoals recently completed its \$8 million stormwater drainage renovation project, including the permanent closure of the stormwater drainage

## Storage Tank Trust Fund Receives Additional Income

During the September Special Session, the Alabama Legislature passed a bill amending the statute that established the Alabama Underground and Aboveground Storage Tank Trust Fund. The passage of this legislation will provide necessary income to the Trust Fund to finance the costs of ongoing investigation and remediation activities at underground/aboveground storage tank facilities. The legislation authorizes a per gallon assessment between \$0.003 and \$0.01 with the specific amount being set annually by the EMC. The Trust Fund currently provides approximately \$17 million per year for the investigation and remediation of contaminated soil/groundwater.

The legislation also provided for the replacement of the five member Trust Fund Advisory Board with a nine member

Management Board. Six members represent retail marketers, one member represents the Alabama Petroleum Council, one member represents a petroleum equipment installer, and one member is an approved Response Action Contractor who performs investigations and corrective actions at Trust Fund eligible sites.

The legislation also contains a provision for additional funding for the Department for oversight and implementation of the Trust Fund Program. Additionally, a 120-day time limit was placed on the Department's approval or rejection of cost proposals and plans for work to be conducted at Trust Fund eligible sites. The Trust Fund is currently paying for investigation and cleanup of more than 1,800 releases.

## Source Water Assessments Protect Drinking Water Supplies

As required by amendments to the Safe Drinking Water Act of 1996, the Department developed regulations requiring public water supply systems to develop and implement a Source Water Assessment Program (SWAP). In accordance with the regulations, existing public water supply systems that utilize either a surface water source or a groundwater source had to complete a SWAP no later than February 6, 2003. The completion of a SWAP provides public water supply systems with important information that can be used to better protect and manage their water resources.

Additionally, surface water sources are required to have contingency plans developed for potential contaminants that are rated "highly susceptible" to entering the water intake and causing treatment difficulty. Once a SWAP is

approved it must be regularly updated by the water system.

Upon adoption of these regulations, more than 500 Alabama water systems were identified as needing a SWAP. However, since the initiation of the program, some water systems have abandoned their water source and opted to purchase water from another water system, thereby relieving them of the request for a SWAP. The total number of water systems in Alabama that have either abandoned their water source or completed all the SWAP requirements are identified below.

As these numbers reflect, almost 100% of the water systems have com-



Drinking Water Intake for Local Municipality

pleted all of the SWAP requirements. The Department has initiated appropriate enforcement action against the drinking water systems that have not completed the SWAP requirements and will be working with these systems to ensure they comply with all regulatory requirements.

### SWAP Completion Rates For Water Systems

Surface Water Systems	87 of 88	(99%)
Groundwater Community Systems	304 of 310	(98%)
Groundwater Non-Transient Non-Community Systems	29 of 29	(100%)
Groundwater Transient Non-Community Systems	75 of 75	(100%)

## Public Water Systems Develop Vulnerability Assessments

In May 2002, Congress enacted the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act), to enhance federal and state efforts to prepare for, and respond to, bioterrorism threats and other public health emergencies. In response to this action, all community water systems serving a population greater than 3,300 are

required to conduct a vulnerability assessment (VA) that identifies areas that could be potential targets of terrorist acts. These water systems are also required to prepare an emergency response plan (ERP) that incorporates the results of the vulnerability assessment.

ADEM is assisting these systems with the development of



their vulnerability assessments by providing technical assistance and conducting vulnerability/security assessment inspections. During these inspections the Department provides guidance, suggestions, and assistance to the water system personnel to help develop their VA and ERP.

The Department has developed standard operating procedures to be followed in the event of a terrorist act involving a public water system and an e-mail distri-

bution list has been established to constantly update water systems with the latest information on vulnerability assessments, security updates, and alerts. The Department, in conjunction with the Alabama Rural Water Association and the Rural Community Assistance Program, will also be conducting vulnerability assessment/emergency response plan workshops throughout Alabama during the coming year.

## ***Drinking Water Loan Program Praised In EPA Report To Congress***

According to EPA's recent Report to Congress, Alabama is served by one of the nation's top drinking water infrastructure financing programs. The report, entitled "The Drinking Water State Revolving Fund (DWSRF) Program - Financing America's Drinking Water from the Source to the Tap," summarizes the progress of the nation's DWSRF programs.

The DWSRF program provides subsidized low-interest loans to local communities for the installation of new drinking water treatment facilities and distribution systems, or the upgrading of existing systems. In turn, these new facilities

allow local communities to provide high quality drinking water to their citizens, strengthen their compliance with federal and state drinking water regulations, and enhance the overall protection of public health.

Alabama's budget constraints have precluded the appropriation of state funds for use as matching dollars for associated federal funds. The state, with ADEM as administrative agent, has implemented an advanced leveraging system providing for the issuance of revenue bonds backed by pledged repayments from local borrowers. This approach has allowed Alabama to greatly increase the

level of funding available to public drinking water systems.

Alabama's DWSRF ranks seventh out of eight southeastern states in terms of federal investment but is second only to Florida in total DWSRF funding. Additionally, Alabama ranks fourth in the country in terms of return on federal investment and twelfth in total construction outlays as a percentage of federal investment. Since its inception, 69 loans have provided more than \$131 million in funding to drinking water systems throughout Alabama.

## ***Area Wide Optimization Program***

During the past year, the Department continued its active participation in the EPA Region 4 Area Wide Optimization Multi-State Pilot Program (AWOP-MSPP). The AWOP-MSPP is a cooperative effort to optimize the performance of surface water treatment plants which, in turn, maximizes the protection of public health from microbial contaminants. The program emphasizes the coordination of existing resources at public water supply systems with proven procedures/practices to attain maximum performance.

Several members of the ADEM Drinking Water Branch have participated in AWOP-MSPP activities, including attending and hosting various workshops. The Department also conducted a fifth training session for surface water treatment plant personnel, completed the second round of Performance Based Training (PBT) for five water systems, and has scheduled a third round of PBT for six additional water systems. Performance Based Training is designed to use centralized training events to document measurable results.

The Department's participation in AWOP activities emphasizes the benefits that can be obtained when public water supply systems incorporate AWOP into their day-to-day activities.



*Birmingham's Putnam Water Treatment Plant*



## Land

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## Legislature Passes Scrap Tire Environmental Quality Act

The 2003 legislative session concluded with the passage of a significant environmental law allowing ADEM to establish regulations to prevent and abate illegal scrap tire dumps throughout Alabama. *The Scrap Tire Environmental Quality Act* became effective September 1, 2003, and ADEM is currently writing the rules under which the new law will be implemented. The new rules should be completed by October 1, 2004, at which time the Scrap Tire Commission will review implementation of the law and ADEM will begin regulatory activities.

The collection, transport, and disposal of used tires adversely impacts the state's environment and can be a threat to public health. Scrap tires overburden landfills, thus shortening their useful life, and also contribute to the proliferation of vermin and disease-causing organisms. Approximately 4.8 million replacement tires are sold annually in Alabama, with an estimated 14 to 20 million scrap tires stockpiled or illegally dumped throughout the state.

The new law seeks to uniformly regulate scrap tire accumulations statewide, from the point of generation to the point of disposal. Once a comprehensive set of rules are formulated and adopted, remediation of existing scrap tire stockpiles and prevention of the formation of new stockpiles can be realized.

Additionally, the new law provides a funding mechanism to enable the cleanup of scrap tire accumulations, responsible enforcement of the law and assistance in developing and promoting end-use markets for scrap tire material.

To be included in the regulations is a ranking system for existing scrap tire sites to be used in planning remediation activities. Also, the regulations will include a registration program for receivers of scrap tires and a permitting program for scrap tire transporters and processors. ADEM will also develop a strategy for enforcing provisions of the law consistent with the Environmental Management Act and other applicable statutes. Until new regulations are adopted, the ADPH will continue to provide guidelines for tire dealers or handlers who store or otherwise deal with scrap tires.

Commencing September 1, 2003, a one-dollar per tire Scrap Tire Environmental Fee is collected at the point of sale from consumers purchasing replacement tires. Fees collected by the Alabama Department of Revenue will be disbursed by ADEM to help defray the costs of remediation, abatement, and removal, as well as support the costs of development and enforcement of regulations associated with the new law.



Using global positioning technology to locate and map illegal scrap tire dumps

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## Anniston Chemical Weapons Incinerator Commences Operations

On August 9, 2003, the U.S. Army's Anniston Chemical Demilitarization Facility (ANCDF) began the carefully controlled destruction of M55 rockets filled with the nerve agent GB, commonly known as sarin. The M55 rockets, part of the ANCDF's 2,254-ton stockpile of cold-war era chemical munitions stored at the Anniston Army Depot, represent the first class of chemical weapons stored there to be destroyed by incineration. Successful destruction of these weapons is mandated under the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on Their Destruction.

ADEM approved the permit modification for the ANCDF Liquid Incinerator (LIC) and Deactivation Furnace System (DFS) GB Trial Burn Plans based upon its concurrence that ANCDF met the stringent technical and regulatory requirements to proceed with chemical agent destruction. Exhaustive reviews of technical information, including data from surrogate trial burns, preceded approval.

During surrogate trial burns, ANCDF successfully destroyed materials that are more difficult to destroy

than the chemical agents stored at the facility. The surrogate materials were processed through the LIC and the DFS with resulting documentation demonstrating that both incinerator components have the ability to destroy 99.9999 percent of the compounds.



Air pollution control and abatement system at the ANCDF

ADEM granted the initial permit for the ANCDF facility in 1997. The permit subsequently withstood numerous legal challenges, including appeals to the Alabama Court of Civil Appeals and the Alabama Supreme Court, both of which upheld ADEM's permitting decision. Significant resources have been devoted to ensure thorough and accurate reviews of the data and processes associated with the permitting of the facility, including ANCDF's ability to comply with applicable legal requirements related to the permitting process.

ADEM personnel maintain a 24 hours-per-day, seven-days-a-week presence at the facility in order to verify compliance with permit specifications and to monitor the progress of chemical weapons destruction. Approximately 26 members of ADEM's Land Staff have undergone extensive training to prepare for this important duty. ADEM personnel also observe the movement of weapons from their storage igloos into onsite storage containers and then to the incinerator facility.

During ramp-up of incinerator activities, the facility operated under self-imposed restrictions, limiting the movement of chemical weapons and the use of the LIC until over-pressurized safe rooms were constructed in area schools and other sensitive facilities. As the ramp-up period continued, the U.S. Army Corps of Engineers, who had responsibility for overseeing



The LIC at the ANCDF destroys chemical agent at 2,700 ° F, drained from munitions.

work to over-pressurize area buildings, notified ANCDF officials that enhanced protection systems were in place and restrictions could be lifted, allowing a more efficient operational schedule.

Although these operational limitations have been eased, chemical weapons storage, movement, and disposal continue to be strictly regulated and reviewed by ADEM and international chemical weapons treaty inspectors.

## Former Fort McClellan Property Ceded to Private Sector

Approximately 4,700 acres of the former Fort McClellan Army Base in Anniston have been transferred to private sector interests through an agreement reached between the U.S. Department of the Army, ADEM, and the Calhoun County Joint Powers Authority (JPA). Governor Bob Riley gave final approval to the land transfer on September 30, 2003.

The JPA is a local land re-use authority created to determine future civilian uses for the former base, which officially closed in 1999 under the Department of Defense's (DoD) Base Realignment and Closure (BRAC) program. The JPA will ultimately remediate and redevelop the acreage, which includes approximately 81 facilities and parcels that are candidates for various residential, commercial, and industrial activities.

The historic property transfer represents one of the Army's largest early

transfers to date of former military land to the private sector. It is also the Army's first-ever land transfer to involve a third-party cleanup of a former military installation that has unexploded ordnance onsite.

The successful privatization of the property necessitates that environmental cleanup responsibility be assumed by the JPA. The cleanup will involve discovery and removal of a range of environmental contaminants, including unexploded artillery rounds, mortar projectiles, spent rockets and smaller ordnance, as well as addressing industrial waste landfills.

The Comprehensive Environmental Response, Compensation and Liability Act requires the Governor's approval to allow a third party to proceed with environmental cleanup of the site in lieu of the DoD. ADEM will provide its technical expertise and oversight of the cleanup efforts under an Environmental

Services Cooperative Agreement reached between the Department, the Army, and the JPA. The agreement includes a \$48.5 million federal grant that the JPA will use to clean up the property, the largest such expenditure in the Army's BRAC program.

The Governor's approval and the agreements represent the latest phase of remediation and re-use of the former military base property at Fort McClellan. Earlier this year, the U.S. Department of Fish and Wildlife officially accepted approximately 7,600 acres of former base property and has re-designated the land as the Longleaf Pine National Wildlife Refuge. Current remediation efforts on this tract include surveys to determine the extent of remaining unexploded ordnance contamination. ADEM works closely with refuge stakeholders to oversee cleanup efforts.

## Solid Waste Program Affected By General Fund Cuts

Decreases in FY04 State General Fund appropriations have curtailed ADEM's solid waste program activities. The solid waste program historically has been funded primarily by the General Fund and current fiscal year budget cutbacks have meant an approximate \$1.3 million overall reduction for the Department, with nearly \$1 million being cut from the solid waste program.

The impact of the budget cuts will be manifested in fewer solid waste inspectors and decreased inspections of permitted municipal solid waste, construction/demolition and industrial landfills and medical waste treatment facilities. Additionally, the budget cutbacks will result in fewer investigations of reported or suspected illegal dump sites. Complaints of illegal dumping will continue to be accepted. However, response time for investigations will be longer and the Department's four field offices ability to respond to such complaints will be significantly reduced.

New solid waste permit applications and renewals of existing permits will be prioritized based on the date they are received and delays of six months to one year may be encountered in processing permit applications. Under previous funding plans, existing municipal solid waste landfills were inspected a minimum of once per quarter; construction/demolition and industrial landfills were inspected a minimum of twice per year; and, previously closed landfills were inspected a minimum of once per year. With cur-

rent constraints, there will only be enough funds and personnel available to the solid waste program to perform one inspection per landfill per year.

On September 30, 2004, 67 county and 15 local Solid Waste Management Plans are due for review and re-approval by ADEM. These Plans call for each county and municipality to evaluate the amount of solid waste generated and processed within their jurisdiction, as well as the remaining disposal capacity at each solid waste disposal facility within the area. Also, an evaluation must be made of the adequacy of the area's solid waste collection, transportation, and disposal, consistent with area needs. The Department has 60 days in which to make its reviews and offer comments on the plans; otherwise, the plans will receive automatic approval as mandated under state law.

Landfill Inspections	Number Of Inspectors
1999 - 662	1999 - 8
2000 - 588	2000 - 8
2001 - 625	2001 - 7
2002 - 476	2002 - 6
2003 (estimated) - 300	2003 - began with 5, now 2
2004 (estimated) - 190	2004 - 2

Comparison of Solid Waste Activities Since 1999

## Brownfields Redevelopment In Alabama

ADEM uses a variety of mechanisms to promote the assessment and redevelopment of brownfield sites throughout Alabama. A brownfield site, as defined in the 2002 Small Business Liability Relief and Brownfields Revitalization Act, is "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." There are many properties across Alabama that already have existing infrastructure yet they remain unused due to the real or perceived presence of contamination. These stagnant properties often result in the loss of job opportunities, low tax base generation, and the development of "greenfield" areas, which contributes to urban sprawl.

The Department is actively involved in working with industry groups, EPA, cities, counties, and private sector groups to identify, assess, and remediate these brownfield properties. ADEM provides assessment resources, voluntary cleanup options, and low-interest loan programs to encourage brownfield redevelopment.



Direct push technology is used to obtain soil and groundwater samples

Pilot Brownfield Assessments is one tool that ADEM uses to encourage the redevelopment of brownfield sites. Pilot Brownfield Assessments are performed under funding grants that EPA awards directly to cities/municipalities. Once a funding grant is awarded to a city/municipality, ADEM staff can perform assessment work through the collection of soil/groundwater samples and also provide interpretation of data. These efforts allow the city/municipality to maximize the use and effectiveness of their grant dollars. The Department has performed assessment activities at six Pilot Brownfield Assessments in Anniston, Montgomery, Birmingham, Prichard, Selma, and Uniontown.

Targeted Brownfield Assessments are also used by ADEM to document environmental conditions at brownfield sites. A Targeted Brownfield Assessment differs somewhat from a Pilot Brownfield Assessment in that the EPA funding for performing the assessment is awarded directly to ADEM. Although the funding procedures are different, the assessment activities performed under the Targeted Brownfield Assessment are very similar to those performed under a Pilot Brownfield Assessment, with ADEM staff collecting soil/groundwater samples and compiling/analyzing data. The Department has performed Targeted Brownfield Assessments in several areas throughout Alabama including Sylacauga, Tallassee, Birmingham, Alabaster, Triana, Ridgeville, Prichard, Huntsville, and Tarrant.



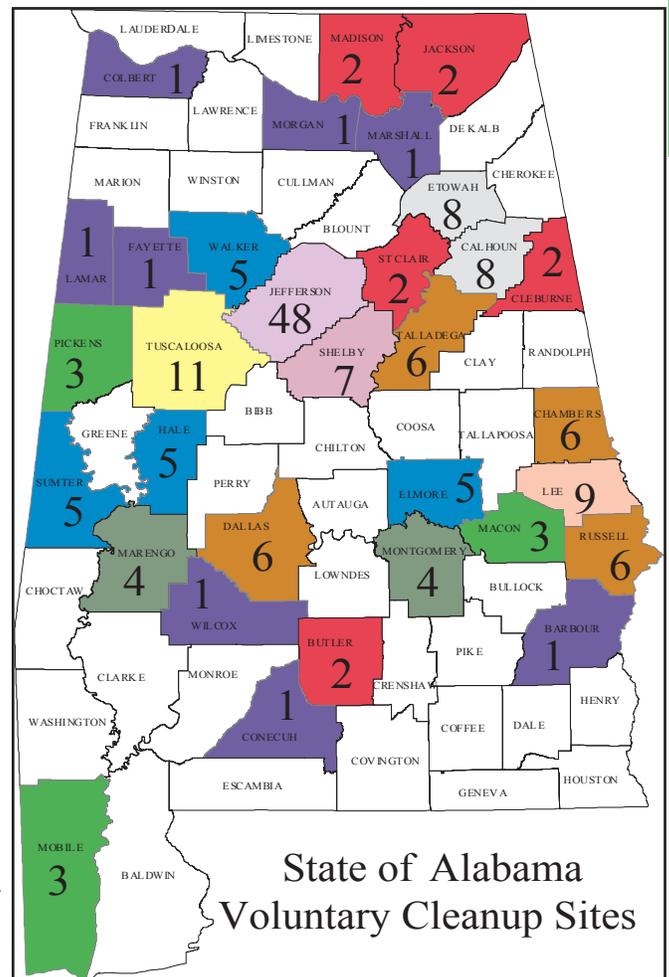
Former Montgomery Manufactured Gas Works site is now home to the New Montgomery Riverwalk Stadium.

ADEM also utilizes a voluntary assessment and cleanup program (VCP) to encourage the redevelopment of brownfield sites. The VCP allows innocent landowners to receive a limitation of liability for environmental contamination that occurred in the past. The framework for this program was provided through the Alabama Legislature's passage of the Alabama Land Recycling and Economic Redevelopment Act (ALRERA) in 2001. Since the inception of the VCP, 37 entities have agreed to address environmental problems at more than 170 sites across the state.

Furthermore, ADEM has established the Alabama Land Recycling Revolving Loan Fund which is designed to provide low-interest loans for the cleanup and redevelopment of brownfield sites in Alabama. The Department has already received a \$1 million grant from EPA to capitalize the fund and the Alabama Legislature has established the Alabama Land Recycling Finance Authority to oversee the fund.

Additionally, ADEM has been provided Section 128 (a) funds from EPA to develop an inventory of brownfield sites in Alabama and enhance the Department's assessment activities at brownfield sites. ADEM is working closely with local, regional, and state groups to develop the inventory of brownfield sites.

The redevelopment of brownfield sites will provide many benefits to Alabama citizens and Alabama's economy including, increased job opportunities, increased tax revenues, and the reduction in the development of greenfield areas. ADEM will continue to maximize the efforts of its various programs to encourage the redevelopment of brownfield sites.



# Alabama Hazardous Substance Cleanup Fund

The Alabama Hazardous Substance Cleanup Fund (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 be addressed by another federal or state cleanup program. The AHSCF program can be used to direct the appropriate action toward sites consisting of a single abandoned or spilled container, or to assist with more complex cleanup at larger sites requiring significant assessment and remediation.

During FY03, the AHSCF provided approximately \$104,000 for use at 11 hazardous substance sites. The number of sites addressed, as well as the amount spent on site assessment and cleanup was less in FY03 than in FY02 due to fewer identified sites and the limited availability of funds from other federal hazardous substance cleanup programs. Since the inception of the program, the AHSCF has addressed almost 300 hazardous substance sites, with approximately 250 sites remediated to a point that no additional action is required.

Generally, sites addressed utilizing AHSCF funds either are not qualified for, or are unlikely to receive cleanup funding under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, common-

ly referred to as "Superfund." Funding may also be used for long term maintenance and monitoring of sites which have historically been addressed under CERCLA. Generally, the AHSCF covers analytical costs, disposal fees, personnel costs and contractual cleanup services. The Department uses the AHSCF, combined with other resources, to identify, investigate and remediate hazardous substance sites in the most timely and appropriate manner.

The recovery of cleanup and remediation costs for a site from the potentially responsible party is a major part of the AHSCF. Response actions at hazardous substance sites may be conducted by the potentially responsible party (PRP) with oversight by ADEM. However, if a PRP is unwilling or unable to conduct a cleanup, funds from the AHSCF may be used and cost recovery and punitive damages may be pursued after the cleanup is complete. In FY03, cost recovery efforts from PRPs totaled \$62,166.

Funding for AHSCF activities is generated by legislative appropriations, fees from hazardous waste disposal at the Emelle hazardous waste landfill, and reimbursements from potentially responsible parties (PRPs). For FY03, legislative appropriations and tax revenue totaled \$138,965.

## Program Activities and EPA Goals

Hazardous Waste Permitting and Corrective Action Activity for 2003

	Commitments	Accomplishments
TSD Permits Issued	4	8
Transporter Permits Issued	0	95
RCRA Facility Assessments (RFAs) Completed	2	5
RCRA Facility Investigations (RFIs) Completed	6	10
Human Exposures Controlled Determinations	3	4
Releases to GW Controlled Determinations Completed	2	2
Remedy Selections Completed	0	3

The environmental programs managed by ADEM's Land Division derive a majority of their operational funds from federal grants provided by EPA. The federal grants are contingent upon achieving specific, clearly-defined goals, established by EPA and subsequently identified in Department-compiled workplans.

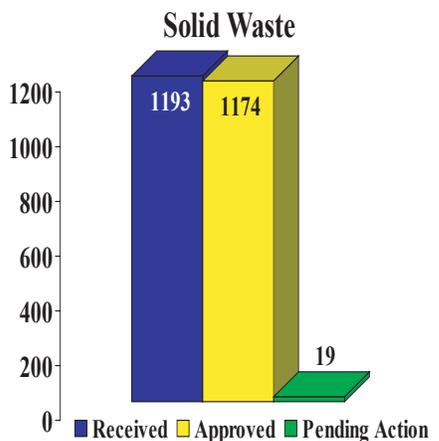
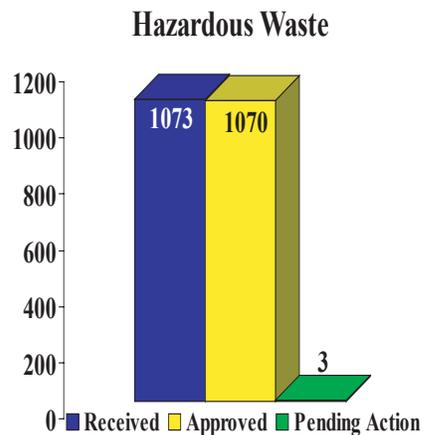
Goals established for Land Division programs are based upon well-defined protocols for activities that could affect Alabama's land resources and also offer the most efficient corrective actions to mitigate potential adverse impacts.

Similarly, the Land Division is charged with ensuring compliance with environmental regulations by each haz-

ardous waste transporter and hazardous waste treatment, storage, and disposal (TSD) facility statewide. The Land Division instituted a state program 14 years ago to ensure that wastes destined for disposal receive prior approval from the Department. The Land Division reviewed over 2,000 waste profiles in FY03 to ensure that all solid wastes are appropriately disposed as defined by the land disposal facility's solid or hazardous waste permits.

During FY03, ADEM not only met, but exceeded the goals established by the EPA in major permitting and corrective action areas of activity.

## Disposal Approval Request Applications





## **Field & Outreach Activities**

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## Fish Tissue Monitoring Efforts

According to the results from the Department's FY03 Fish Tissue Monitoring Program, most fish from river basins sampled in the fall of 2002 did not contain elevated levels of contaminants. ADEM collected a total of 389 fish from 41 locations in 33 different waterbodies during the sampling period. Fish were collected from waterbodies within the Warrior River Basin, which was the 2002 focus basin, as well as locations that were currently under fish consumption advisories issued by the Alabama Department of Public Health (ADPH).



*ADEM personnel measuring a largemouth bass*

Additionally, in an effort to monitor mercury concentrations in areas of concern, 11 stations (four new stations) were sampled in south Alabama. Since the initiation of the statewide ADEM Fish Tissue Monitoring Program in the early 1990s, over 292 sites within all river basins of Alabama have been sampled. The program is conducted in cooperation with the ADPH, the Alabama Department of Conservation and Natural Resources (ADCNR), and the Tennessee Valley Authority (TVA).

In the Warrior River basin samples were collected from the Warrior, Oliver, Holt, Bankhead, Smith, and Tuscaloosa Reservoirs and in North River. In south Alabama samples were collected in the Perdido-Escambia River Basin, Blackwater River (Baldwin and Escambia Counties), Big Escambia Creek, Little Escambia Creek, Yellow River, Magnolia River, Middle River, and Mifflin Lake. Additionally, samples were collected from one station in the Choctawhatchee River basin and one station each in Heron Bay, Perdido Bay, and Wolf Bay.

Fifteen stations were sampled on waterbodies, or adjacent waterbodies, with current ADPH fish consumption advisories. In the Coosa River basin six stations were sampled based on existing fish consumption advisories for polychlorinated biphenyls (PCBs). These six stations consisted of two stations each on Jordan, Mitchell, and Neely Henry reservoirs. In Mobile and Baldwin counties, five waterbodies (Bay Minette Creek, Chickasaw Creek, Escawtapa River, Styx River, and Tensaw River) were sampled based on consumption advisories for mercury. Additionally, three stations were sampled in Indian Creek near Triana and the Olin basin near McIntosh was sampled.

Little or no bioaccumulation of pollutants was detected in the majority of predator and bottom feeding species but analytical results did indicate some fish exceeded the FDA guidance levels for 4,4-DDE, Mercury and PCBs. Levels of 4,4-DDE above the FDA guidance level of 5.0 ppm were found in composite samples of channel catfish in the Choctawhatchee River, Middle River and North River. Middle River, also had a composite sample of largemouth bass above the FDA guidance for

4,4-DDE while the Blackwater River had one striped bass and one channel catfish above the 4,4-DDE guidance level.

Mercury levels were above the FDA guideline level of 1.0 ppm in one predator species (bass) from Blackwater River, Conecuh River, and the Escatawpa River while ladyfish collected from Perdido Bay exceeded the mercury guideline. Little Escambia River and Styx River had two bass exceed the mercury guidance level and Yellow River had three bass exceed the guidance level. Big Escambia Creek had six bass and Blackwater River had seven bass above the mercury guidance level. The FDA guidance level of 2.0 ppm for PCBs was exceeded in one white bass collected in the forebay area of

Jordan dam.

As part of the monitoring program, ADEM also checked fish for dioxin in three locations below bleach kraft paper mills. Bass and catfish below these discharges to the Conecuh River, Tombigbee River, and Tennessee River showed no dioxin or concentrations well below established levels of concern in fish tissue. Sampling below these mills is a continuation of monitoring that was initiated following changes instituted by the mills.

All samples were analyzed by the ADEM Laboratory for contaminants with the potential to bioaccumulate, including PCBs, arsenic, chlordane, toxaphene, mercury, mirex, DDT, DDD, DDE, dieldrin, dursban, endrin, heptachlor, heptachlorepoide, endosulfan, hexachlorobenzene, lindane, and certain heavy metals. Bioaccumulation is the process through which low levels of a contaminant in the environment are concentrated in the bodies of plants and animals. Fish are collected in the fall of each year when their systems are preparing for winter and most pollutants of concern would be expected to be stored at the highest concentrations.

Data from the fish tissue monitoring program are routinely forwarded to the ADPH to determine the need for new fish consumption advisories or changes to existing advisories. ADPH provides information on all current fish consumption advisories at its website. The site also provides information on ways to prepare fish to limit exposure to contaminants that may



*ADEM personnel collecting fish*

be present.

ADEM's monitoring program also included an evaluation of the physical condition of important sport and/or commercial fish species. The majority of the fish evaluated were found to be in good to excellent condition. Fish were

also checked for external anomalies, such as lesions, tumors, parasites, and deformities. Some 88 percent of the fish checked had no anomalies, a value similar to those of previous years.

## A Listing of Fish Consumption Advisories Can Be Found At

[www.adph.org](http://www.adph.org)

## Coastal Alabama Beach Monitoring Program Expands

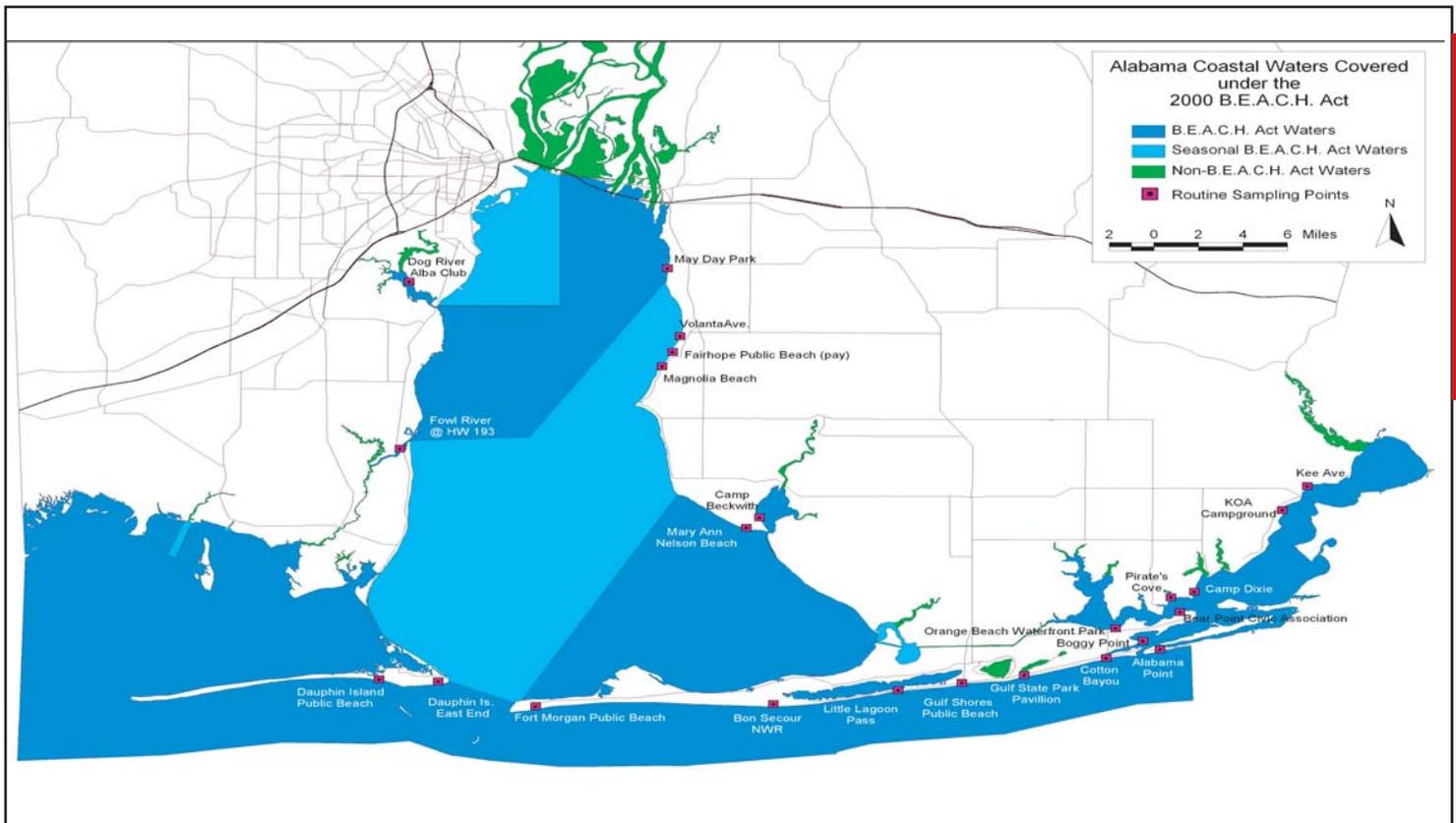
Alabama has approximately 50 miles of Gulf beaches and almost 70 miles of bay beaches, both of which are major tourist attractions and represent a significant component of the lifestyle of Alabama residents. In June 1999, ADEM, in cooperation with the ADPH, initiated a program to routinely monitor bacteria levels at five swimming beaches on the Gulf Coast and in August 2000, six additional beaches were added. Congressional passage of the Beaches Environmental Assessment and Coastal Health (BEACH) Act expanded the monitoring and assessment activities at public beaches and in the fall of 2002, ADEM and the Baldwin County Health Department conducted on-site surveys to evaluate additional public beach sites to add to the program.

During the past summer, a total of 24 public beach areas were monitored. A majority of these sites were sampled twice weekly from Memorial Day through Labor Day and for the remainder of the year sampling is conducted monthly. All sample collection and analyses are performed by qualified ADEM or ADPH staff, with analytical results made available to the public within approximately 24 hours.

The public beach locations that are sampled have signage with a color-coded bacteriological advisory status to inform the

public of the potential health risk associated with swimming or other water contact activities at that site. A **GREEN** advisory means the most recent water quality test revealed bacterial levels are below recommended thresholds while a **YELLOW** advisory indicates the most recent water quality test revealed bacterial levels exceed recommended thresholds and an increased risk of illness may be associated with swimming. Once a yellow advisory status has been issued, the site is re-tested. A **RED** advisory indicates continued elevated bacterial levels at the site and the ADPH issues a public health advisory. The site is re-tested until bacterial levels return to an acceptable level.

The Department documented approximately 30 events during FY03 that required the issuance of a red advisory. These events occurred at ten of the beach sites that are monitored, with no red advisories issued at the other 14 sites. Elevated bacterial levels can be caused by heavy rainfall events that allow stormwater runoff to carry bacterial matter into the coastal waters. ADEM and the ADPH use on-site signs, the ADEM web-page, press releases, and local newspapers to notify the public of the latest monitoring results.



## Phase II Stormwater Program Implemented

On January 23, 2003, ADEM implemented an expanded registration and compliance program for land disturbance/construction activities to address EPA mandates under the Phase II NPDES Stormwater program. The rules address land disturbance activities of one acre, or greater, sites that are less than one acre but are part of a larger common development that exceeds one acre and sites less than one acre determined by ADEM to have reasonable potential to cause water quality problems. The rules

also apply to non-coal mining sites less than five acres in size.

ADEM had previously adopted an incremental fee schedule to fund this federally-mandated program and additional staff have been added to the Department's central office and field offices to implement registration, inspection, complaint response, and enforcement activities. In addition to registration in the Department's database, the Department requires the implementation of effective best management practices

(BMPs) to control pollutants in stormwater runoff.

During FY03 over 3,550 construction/small mining sites secured NPDES coverage and ADEM performed over 3,000 site inspections, responded to and resolved over 400 citizen complaints, issued over 1,250 enforcement actions, and issued more than 60 administrative orders. Program information is available at

[www.adem.state.al.us/FieldOps/Permitting/Construction/Construction.htm](http://www.adem.state.al.us/FieldOps/Permitting/Construction/Construction.htm).

## Emergency Response Program



*159/120, Tuscaloosa/Jefferson County line. Car and tractor-trailer accident results in molten sulfur spill.*

ADEM staff respond to a wide variety of emergency situations, including natural hazards such as hurricanes, tornadoes, and floods, as well as technological hazards such as transportation related spills, facility incidents, and clandestine drug labs. The Department has responders on call at all times, 24 hrs/day, 365 days/year, from its branch offices located in Birmingham, Decatur, Mobile, and Montgomery. The strategic locations of the branch offices minimize the Department's response time and multiple personnel on call allow for response to concurrent events.

During FY03 the Department responded to 342 complaints associated with environmental pollution, 328 emergency incidents, nine fish kills, and 25 unclassified situations. ADEM personnel involved in the emergency response program are not dedicated to this activity alone, but have other duties within their functional unit. These individuals are required to mesh their day-to-day duties with their emergency response duties.

The Department's response to environmental emergencies is coordinated through the Alabama Emergency Management Agency in accordance with the Alabama Emergency Operations

Plan. Within this plan, key roles are assumed by local government entities such as County Emergency Management Agencies, County Health Departments, local fire departments and hazardous materials teams.

Funding for emergency response activities and related clean-ups is provided through a variety of federal/state agencies. For example, funding for clean-up/remediation activities for oil pollution incidents is available from the U.S. Coast Guard when a responsible party cannot be identified. Additionally, funding is available from the Local Government Reimbursement Program for responses to hazardous materials incidents. The local government assumes the lead role in the response/remediation with ADEM providing technical assistance. ADEM also administers the Alabama Hazardous Substance Cleanup Fund that has limited funding available for emergency response and abatement procedures.

During larger incidents additional federal resources can be obtained through EPA and/or the U.S. Coast Guard. Additionally, ADEM's response to terrorism incidents would be coordinated with Alabama's Office of Homeland Security.

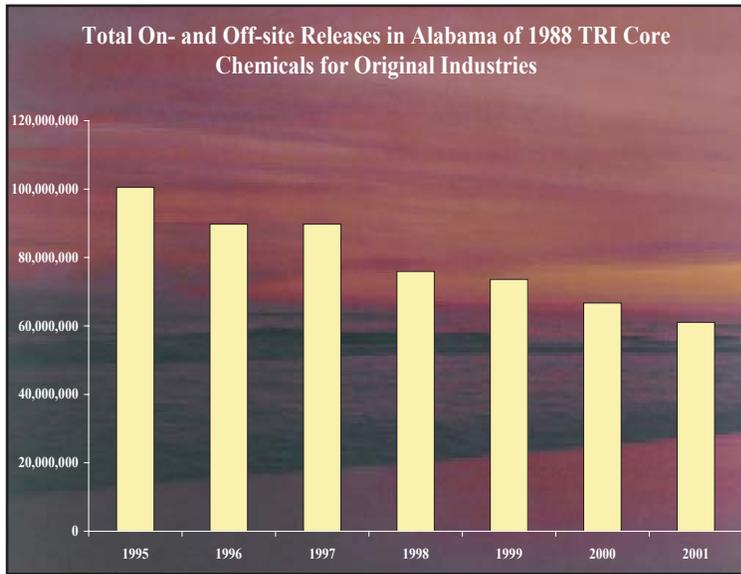


*CSX train derailment in Shorter, Macon County. Materials involved methyl ethyl ketone, vinyl acetate, and new railroad ties.*

## Toxic Release Inventory Data Documents Reductions

The EPA has released its Toxic Release Inventory (TRI) data for 2001, the most recent year for which data is available. As part of the 1986 Emergency Planning and Community Right-To-Know Act, industries that meet certain requirements must report to the states, and to EPA, specific information about certain "reportable" chemicals that they release, treat, transfer, or recycle. The TRI data provides interested parties the opportunity to identify the types and quantities of chemicals that are managed by industries located in their geographical area.

2001 TRI data was derived from 566 facilities that are located in Alabama and fall under the TRI reporting requirements. The 2001 TRI data indicates a reduction in several major categories



total pounds of chemicals reported in "Total On-and Off-site Releases" category. Also, the 2001 data documented a 10% reduction in the total pounds of chemicals reported in the "Total Releases Within State" category. A 50% decrease

was noted in the total pounds of chemicals reported in the "Production-related Waste Managed," while a 10% decrease was documented in the total pounds of chemicals reported for the "Total On-site Releases" category.

An accurate comparison of TRI data from year-to-year is difficult because the reporting requirements change yearly. However, these year-to-year changes move in a more conservative direction by adding new chemicals and lowering the reporting thresholds for existing chemicals. Accordingly, the Alabama reductions in the total pounds of chemicals documented in the 2001 TRI data are significant. Nationwide TRI data can be accessed through the TRI Explorer on EPA's website at [www.epa.gov/triexplorer](http://www.epa.gov/triexplorer).

## ADEM Laboratory Facilities



ADEM Central Lab Manager reviews samples and lab equipment

The Department operates three laboratory facilities that provide analytical services for all environmental samples including water, soil, sediments and fish tissue. These labs are strategically located in Montgomery, Mobile, and Birmingham and have the ability to analyze for approximately 316 different analytes, organics, inorganics, Biochemical Oxygen Demand (BOD), chlorophyll, fish tissues, PCBs, pesticides, and fecal coliform. These capabilities are an invaluable asset to the Department's ability to respond to environmental emergencies.

The ADEM Central Lab located in Montgomery is the Principal State Laboratory for the Drinking Water Certification Program. This designation requires that the ADEM Central

Lab accurately analyze performance evaluation samples annually and successfully pass an on-site audit by EPA every three years. Furthermore, the ADEM Central Lab performs on-site audits every three years at over 20 state/private laboratories that also analyze drinking water samples.

In FY03 the ADEM laboratories processed 8,821 samples and performed 63,923 different analyses. However, portions of the ADEM Central Lab are currently located in buildings that are over fifty years old. These antiquated facilities have high maintenance costs and several lab instruments have been damaged by leaking roofs. The Department is attempting to secure funding for the construction of a new central laboratory in Montgomery.



Conducting BOD analysis and calculating results

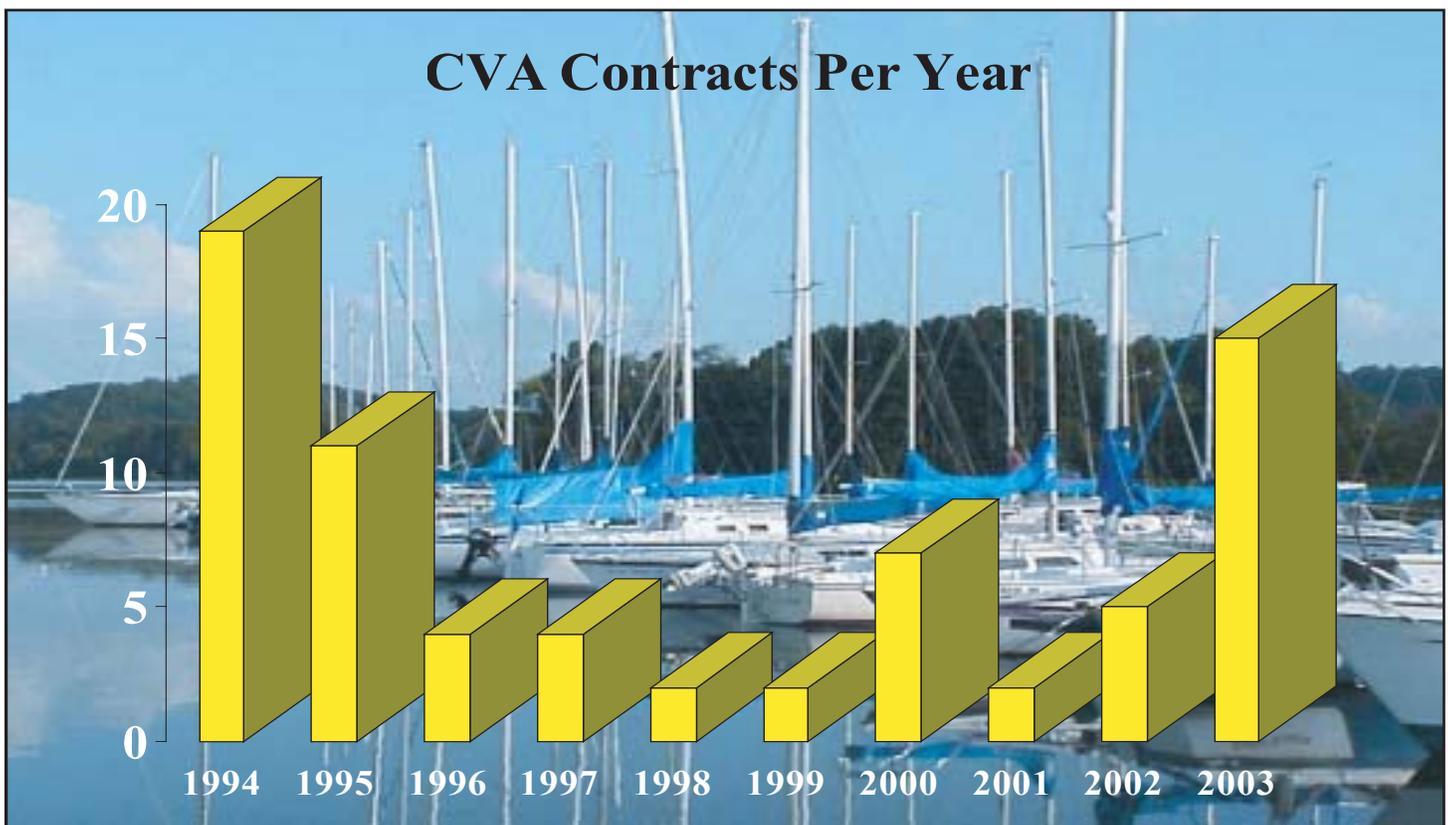
## Increased Interest and Awareness In Clean Vessel Act Program

In 1993 the U.S. Congress passed the Clean Vessel Act (CVA), designed to fund adequate facilities for the disposal of sewage from boats. Since that time, ADEM has provided this funding to marinas throughout Alabama to encourage and assist in the construction of onsite pump out stations.

Marinas must submit an application to ADEM for the funds, agree to pay 25% of the costs associated with the construction and installation of the pump out systems and agree to operate and maintain these devices once they are constructed. Also, marinas must connect their pump out stations to an approved sewage disposal system and must provide pump out services for a fee not to exceed \$5.00. To date, the Department has assisted in the construction of 71 pump out stations throughout the state.

This graphic below clearly indicates the strong interest shown in the program since its inception. However, since the Alabama Legislature's passage of the Marine Sanitation Act in 2002, the Department has seen a resurgence of interest and an increase in applicants. Additionally, the Department issued a mail-out to 120 marinas that had no sewage disposal system to inform them of the Clean Vessel Act Program and Department staff have been visiting marinas to encourage participation.

Effective October 1, 2003, the ADCNR is authorized to inspect boats for properly installed marine sanitary devices and marinas that do not possess pump out capabilities are prohibited from docking boats with on-board holding tanks containing untreated waste.



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## Ombudsman Office

The Ombudsman Office was created in 1993 to satisfy the requirements of the Clean Air Act Amendments of 1990. While the initial purpose of the Office was to assist small businesses in complying with requirements of the Clean Air Act, the Department expanded the role to include compliance assistance in all environmental media, as well as information requests from the general public.

During FY03 the Ombudsman Office handled over 2,000 requests for compliance assistance. Of these requests, approximately 10% were from state and local government agencies, 33% were from businesses, and 57% were from citizens or cit-

izen groups. While the calls from government agencies and businesses typically addressed specific regulatory issues, calls from the general public covered a wide range of topics.

In other outreach activities, the Ombudsman Office continued its public education efforts through presentations and exhibits at industry meetings, school and college classes, and environmental group meetings. The Office also participated in several Earth Day events across the state to create awareness of the environment and the Department's efforts to address environmental issues.

## Highlights of Stream Restoration Efforts

Sedimentation is one of the principal contributors of nonpoint source (NPS) pollution in Alabama and throughout the nation. According to Alabama's Final 2002 Section 303(d) List of impaired streams, approximately 30%, or 800 miles, of Alabama's identified waterbodies are impaired due to sedimentation. Sediment comes from many sources, including agricultural, construction, and forestry activities.

However, one source of sediment often overlooked is erosion of streambanks and streambeds. The soils that are eroded from the streambanks can lead to increased deposition of sediment downstream. Under other conditions, the streambed itself can erode and result in downcutting. Both conditions can cause the stream to become unstable.

As a result, there is a growing demand for new and innovative watershed restoration practices in Alabama to reduce sediment entering waterways and to improve the water quality of rivers and streams. Stream restoration using natural channel design and bioengineering techniques can reduce eroding streambanks and downcutting.

As a means to educate the public about these new ideas, a series of professional workshops on "Stream Restoration Using Natural Channel Design Techniques" have been offered statewide. These workshops, offering a combination of classroom sessions and extensive fieldwork, began with a coordinated effort by the Alabama Cooperative Extension System,



Field work on Waldrup Creek in Etowah County

Auburn University Marine Extension & Research Center, and the Mobile Bay National Estuary Program. Since the initial workshops, demand has increased and the scope broadened to include more advanced topics and additional cooperators including ADEM and other stakeholder groups. ADEM has also played a role in promoting the workshops by providing 319(h) funds to help support program.

Although the workshops are an important tool in this process, implementation of field projects will move the effort forward. ADEM is currently working with Auburn University on a stream restoration project on Parkerson Mill Creek in Auburn and with the Etowah County Soil and Water District on a potential project on Waldrup Creek.

## P2 Program Winners Announced

The Department's Pollution Prevention (P2) program continued its work with businesses and industries to implement waste reduction procedures and minimize the generation of waste products. The P2 program performs a variety of outreach activities including classroom/teacher training, supporting forums for the exchange of emerging P2 technologies, community involvement programs and seminars for private homeowners.

In addition, the P2 program presents annual awards to facilities that implement effective P2 plans and P2 activities. The annual Director's Awards are presented to facilities that have implemented a written P2 Plan and have demonstrated environmental benefits under that plan. The annual Achievement Awards are presented to facilities that do not have a specific written P2 Plan but have achieved environmental benefits through individual P2 projects or activities.

The winners of the **2003 ADEM Director's Awards** were McNeil Nutritionals – McIntosh, 3M Guin – Guin, and 3M Specialty Materials and Film Division – Decatur. The

**2003 Achievement Awards** winners include Michelin Tire Corporation – Dothan, Toyota Motor Manufacturing – Huntsville, and Anniston Munitions Center – Anniston.



Ms. Janeen Horton with Toyota Motor Manufacturing Alabama accepts 2003 P2 Achievement Award.

# The Alabama Clean Water Partnership

The Alabama Clean Water Partnership (ACWP), coordinated by ADEM, encourages the involvement of local stakeholders in addressing the protection and restoration of Alabama's water resources. Based on the watershed approach, the Partnership works across political boundaries linking point and non-point source interests to safeguard water quality. Clean Water Partnership Facilitators, supported by ADEM and individual basin sponsors and stakeholders, are in place across the state coordinating activities in all of the major river basins.

**1998** - The Clean Water Action Plan (CWAP) comes to Alabama, with ADEM and Natural Resource Conservation Service (NRCS) designated as lead agencies for the initiative. Quarterly meetings are held and stakeholder involvement sought.

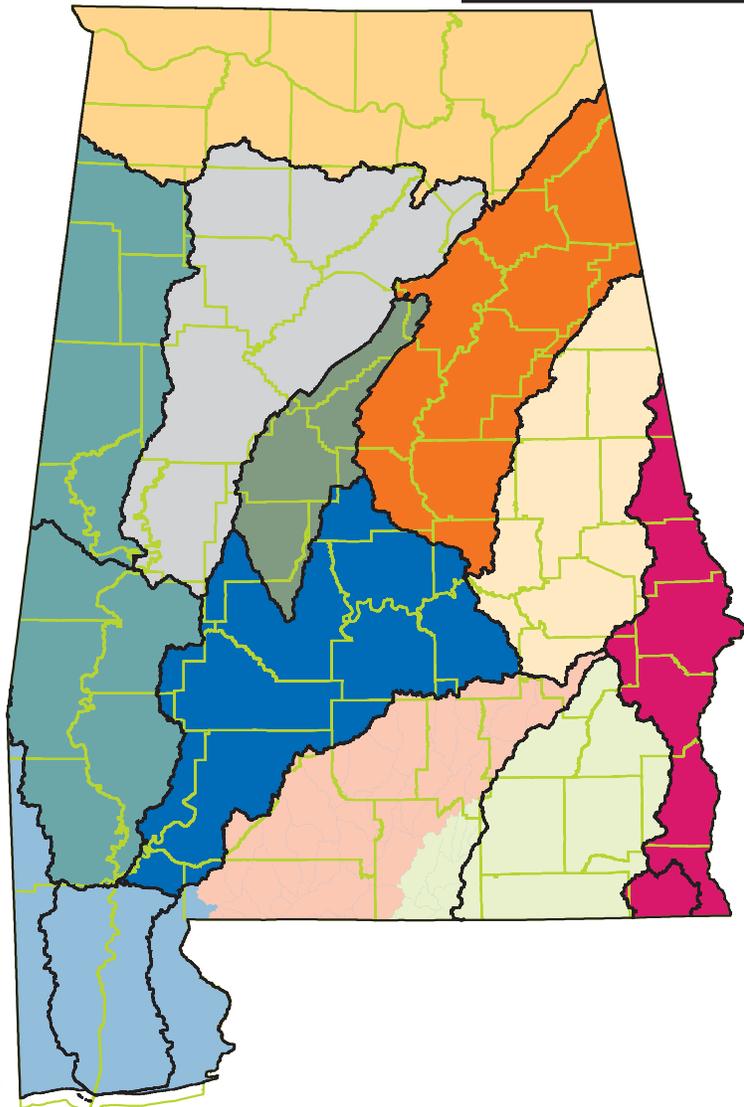
**1999** - Supported by ADEM's Water Division, a statewide coordinator and basin facilitators for the Coosa, Tennessee, and Tallapoosa basins were secured, stakeholders identified, and Basin Steering Committees formed.

**2000** - Leadership of the CWAP in ADEM was transferred to the Office of Education / Outreach. The project name was changed to the "Alabama Clean Water Partnership (ACWP)." Facilitators were secured for the Alabama-Tombigbee, Cahaba, and Black Warrior Basins. Sub-basin meetings began in the Coosa, Tallapoosa, and Tennessee basins.

**2001** - Basin facilitators secured for the Conecuh-Sepulga and Coastal basins. Sub-basin meetings began in the Black Warrior and Cahaba. The ACWP 501(c)3. nonprofit corporation was formed.

**2002** - Basin facilitators secured for Choc-Pea-Yellow and Chattahoochee-Chipola basins. Sub-basin meetings began in the Conecuh-Sepulga and Coastal basins.

**2003** - Stakeholder identification process continues in all basins, with sub-basin meetings organized in all basins and quarterly meetings of basin steering committees. Watershed management plans are produced through the Tennessee, Black Warrior, and Coastal Partnerships, with other plans under development.



## River Basins:

- Alabama
- Black Warrior
- Cahaba
- Chattahoochee
- Choctawhatchee
- Coosa
- Conecuh Sepulga
- Coastal
- Tallapoosa
- Tombigbee
- Tennessee



# Future Challenges

## Implementing Air Quality Programs

One of the most important challenges facing the Department in the next decade is formulating and implementing plans to respond to increasingly stringent air quality standards and other initiatives. Emission reduction programs will have a positive impact on ozone and fine particle formation, emissions of mercury and air toxics, deposition of airborne nitrogen compounds responsible for eutrophication of water bodies, visibility impairment, and possibly, global warming. Complicating the response to these concerns is their regional, national, or even global nature. The Clean Air Act, as presently written, presumes that air quality problems can be resolved by small-scale planning based on targeting a few counties at a time. The Department's ability to respond appropriately in the aforementioned areas will be limited, unless national regulations are developed to recognize the larger scale of the remaining air quality problems.



*Vista from Mount Cheaha*

## Water Quality

The unfunded and federally-mandated expansion of Phase I and II NPDES Stormwater programs are resource-intensive and will continue to present implementation challenges.

Nonpoint source (NPS) pollution is the primary contributor to water quality degradation and polluted runoff problems are diverse, complex, and inconsistent. A critical challenge for the NPS program is to sustain public awareness, both statewide and locally, that people are not only part of the problem - they are also part of the solution. Stakeholders must be provided with relevant, scientifically-based information and technical assistance. One component needed to address the broad scope of NPS pollution



*Cahaba Lillies in Bibb County*

problems is a comprehensive statewide network of cooperative local public/private partnerships. Acquiring adequate water quality or modeling data to assess program effectiveness continues to be an impediment to reporting the program's successes.

Other specific challenges for the Water program include maintaining a reduced backlog of NPDES permits, continued TMDL development and implementation of EPA-approved TMDLs, development of nutrient criteria for streams, development of an Integrated Monitoring and Assessment Report, adoption of new federal requirements for Drinking Water Systems, and the permitting of small, decentralized wastewater treatment systems.

## Waste Management

The Solid Waste regulatory program was significantly impacted by current fiscal year budget cuts. Further General Fund cuts in FY05 may jeopardize the existence of the solid waste regulatory program as it currently operates. New and/or additional sources of funding will be needed to restore the Solid Waste program to levels adequate for inspection and enforcement, complaint investigations, and permitting.

Also, further General Fund reductions could adversely affect the Department's hazardous waste program due to a potential inability to provide the required "match" for federal grant funding. The loss of revenue at both the state and federal levels restricts the Department's ability to maintain an experienced, competent technical staff and continue to provide timely compliance, investigation, remediation, and operations oversight.

The development of regulations for, and implementation of, a new permitting and enforcement program for the management of scrap tires by October 1, 2004, presents a significant challenge.



*Unauthorized Scrap Tire Dump*

## Brownfields Redevelopment

Both the state voluntary cleanup program and the federal Brownfields program will present opportunities for expanded site participation and the need for additional technical staff to assess, monitor, and oversee the remediation of properties with actual or perceived contamination. The Department must develop a summary, or inventory, of potential Brownfields sites statewide and offer readily accessible information to the public demonstrating remediation activities.

## Anniston Chemical Agent Disposal Facility

The continued high level of oversight and monitoring of the chemical weapons disposal facility at the Anniston Army Depot will present unique challenges. For an extended period of time, Department staff will maintain a 24 hour-per-day, 7 days-per-week presence at the facility in order to verify compliance with governmental hazardous waste permits.

## Laboratory Facilities

The Department's central laboratory buildings have outlived their service life and are in dire need of replacement. As the

Principal State Laboratory for the Drinking Water Certification Program, it is imperative that an adequate laboratory facility be secured.



*Before*



*After*

*Old dry cleaning facility that was remediated under the state Brownfields program is now the site of a County Courthouse Annex.*

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# Environmental Perspective 2003

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