

EPA REGION IV
OFFICE OF PUBLIC AFFAIRS
ENVIRONMENTAL EDUCATION & PUBLIC OUTREACH



1993 ENVIRONMENTAL EDUCATION REPORT

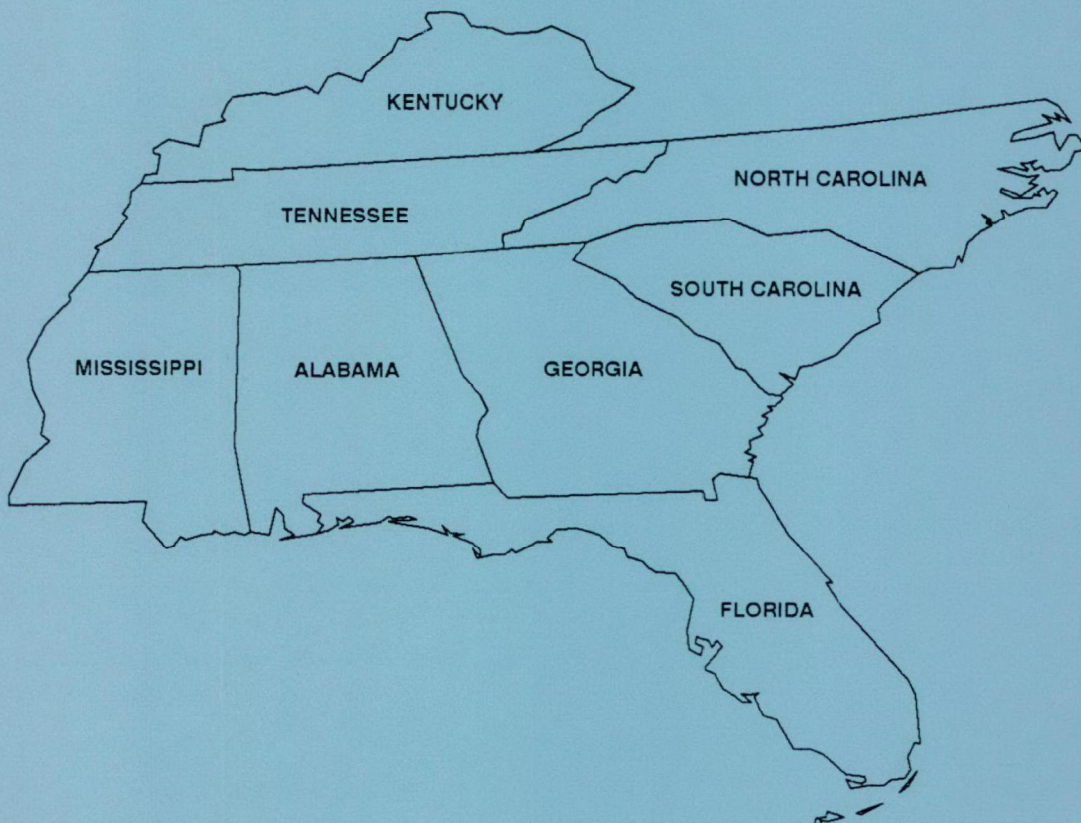


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EPA REGION IV 1993 ENVIRONMENTAL EDUCATION REPORT

INTRODUCTION

The Environmental Education and Public Outreach Staff was established in June 1991 in the Office of Public Affairs, EPA, Region IV. The main objectives of the staff are to:

- increase public understanding of EPA's mission and activities;
- promote public awareness of environmental issues;
- advance and develop environmental education and training; and
- solicit personal and corporate commitment to environmental protection through education and outreach.

BACKGROUND

On November 16, 1990, the National Environmental Education Act became law (Public Law 101-619). It builds upon environmental education efforts previously undertaken by the EPA and establishes formal communication and advisory links with educational institutions and other federal agencies.

Specific provisions of the law implemented by EPA Region IV include:

- awarding environmental education grants to support projects that design, demonstrate, and disseminate environmental education activities;
- awarding internships for college students and fellowships for in-service teachers to work with the professional staff of federal

agencies involved in environmental activities; and

- providing for national and regional awards that recognize outstanding contributions to environmental education.

ONGOING ACTIVITIES

To implement and administer a comprehensive environmental education and outreach program in EPA Region IV, the following activities have been established:

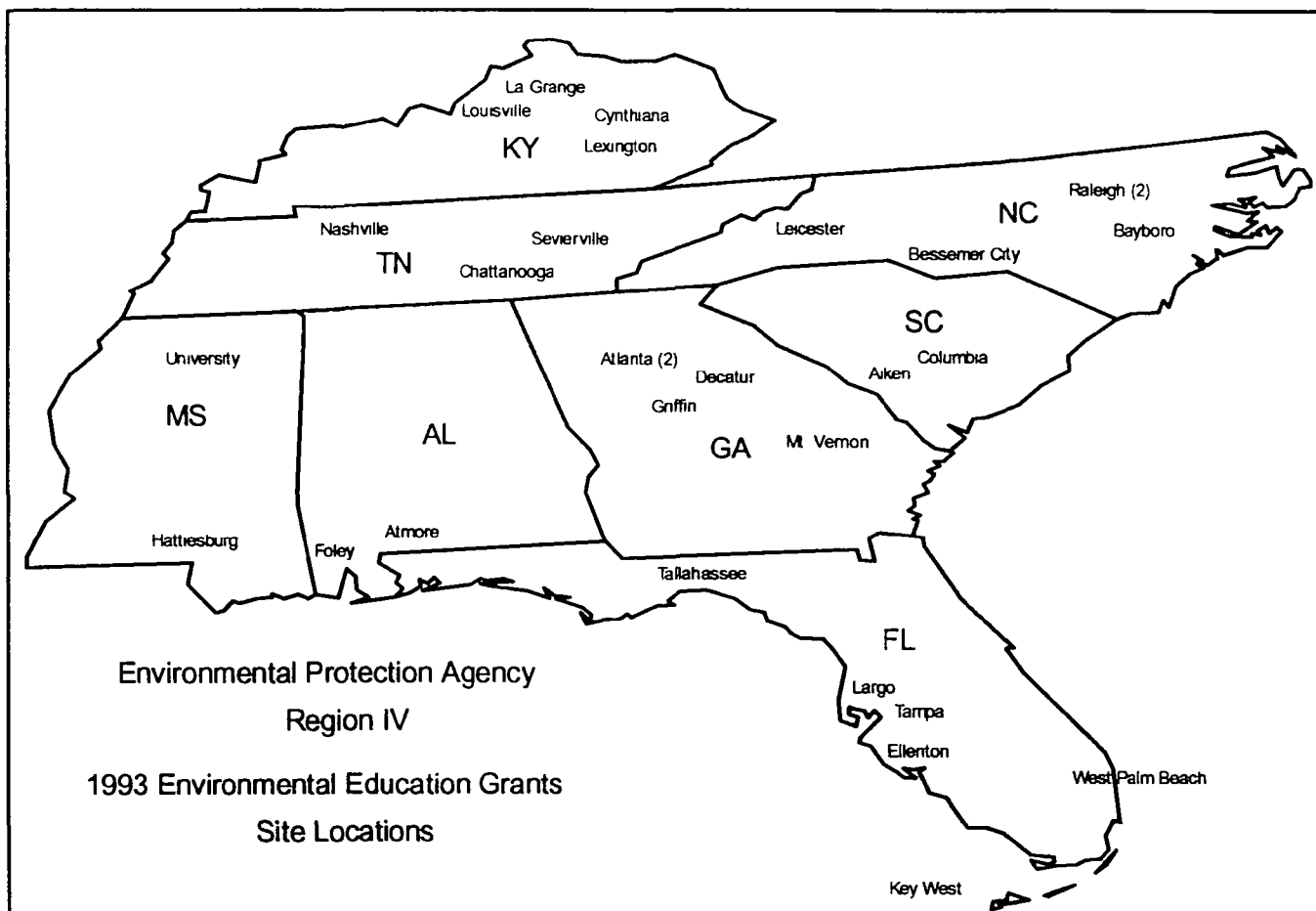
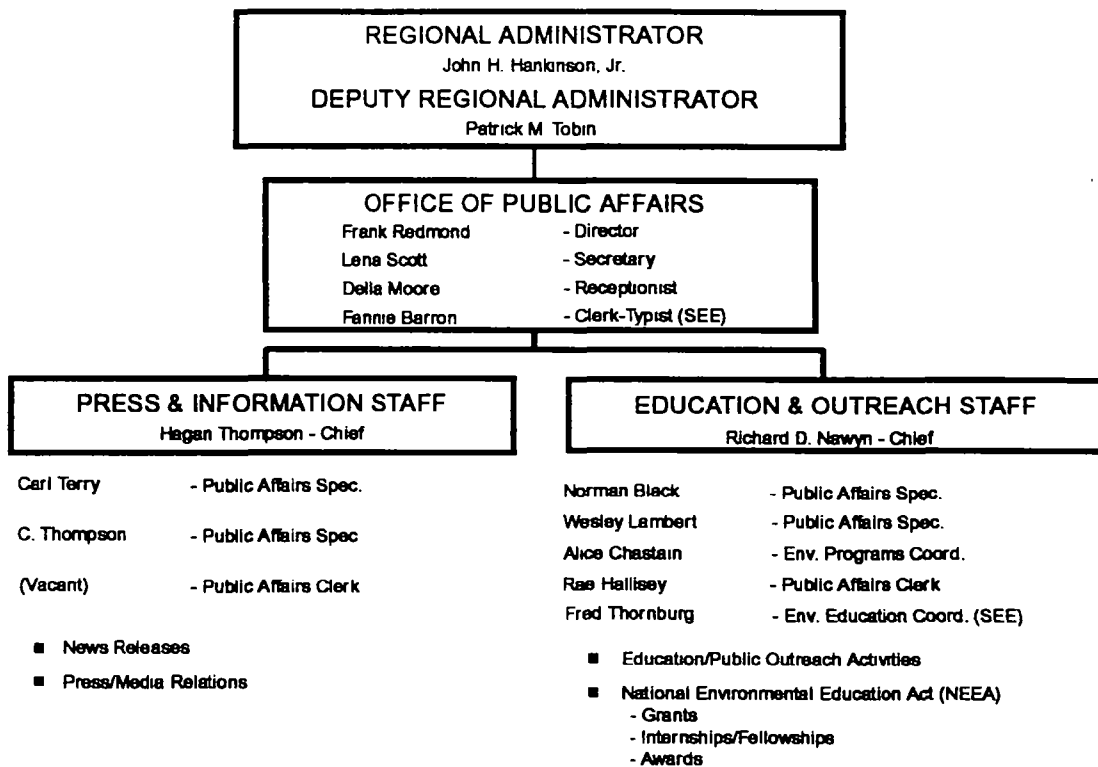
- Contact and cultivate working relationships with major educational, business, and civic organizations, as well as print and broadcast media to disseminate information about EPA's operations and activities.
- Coordinate outreach activities to provide environmental education information to the public at exhibits, expos, and conventions at the local, state, regional, and national levels.
- Coordinate a Region IV Speakers Bureau to meet public requests for speakers on environmental issues.
- Coordinate the President's Environmental Youth Awards (PEYA) Program for Region IV to recognize youth projects that promote local environmental awareness and channel that awareness into positive community involvement.
- Staff a toll-free hot-line to respond to public requests for environmental information.

The following report is published by the EPA Region IV Environmental Education and Public Outreach Staff, Office of Public Affairs, based upon information provided by the EPA Region IV program offices, states, and laboratories. The main purpose is to report on the state of environmental education in Region IV during 1993 and to share ideas and activities in education and outreach that others may use to build effective partnerships and further the goals of environmental education.

The report is not intended to capture all of the many environmental education efforts currently underway, but should provide a summary of some of the most significant outreach activities taking place in environmental education in Region IV. It should provide a good "snapshot" of Region IV's environmental education picture.

By sharing these environmental education activities and successes, we hope to generate ideas, facilitate communication among environmental education professionals, provide networks for information and resource sharing, facilitate the identification of gaps in environmental education resources and encourage strategies to eliminate them, and avoid the fragmentation and duplication of activities. We hope to increase the success of environmental education in the Region and mobilize the public to greater environmental awareness, understanding, and action.

**U.S. Environmental Protection Agency
Region IV Organization**
(404) 347-3004 FAX (404) 347-3721



EPA REGION IV PROGRAM OFFICES

ENVIRONMENTAL EDUCATION & PUBLIC OUTREACH STAFF, OFFICE OF PUBLIC AFFAIRS

Environmental Education Grants

Contact: Norman Black/Fred Thornburg,
(404) 347-3004

In 1993, \$170,000 in grants were awarded to 28 eligible organizations in the eight states in Region IV for environmental education projects. Twenty-five of these awards were for \$5,000 or less and were made to K-12 schools, non-profit environmental and educational organizations, and local youth organizations. Projects included a wide range of environmental education activities intended to improve students awareness, knowledge, and understanding of environmental issues. In addition, North Carolina State University was awarded \$24,802 by the EPA's Office of Environmental Education in Washington, D.C. to develop and test a model program for teaching K-5 minority students about the impact of non-point source pollution on the estuarine environment. Profiles of the 1993 projects can be obtained by contacting the office at the above number.

President's Environmental Youth Awards (PEYA) Program

Contact: Alice Chastain, (404) 347-3004

The PEYA Program recognizes youth projects that promote local environmental awareness and channel that awareness into positive community involvement. The best PEYA projects are given an award by the President. The

PEYA Program in Region IV had 73 entries in 1993, of which 68 were eligible to be judged on the national level. Nearly 11,000 PEYA applications were mailed out in 1993 within Region IV. The 1993 PEYA award winner from the region was a project entitled SWaMP Kids (Solid Waste Management Plan), which was submitted by the SWaMP Kids/Franklin County Challenge Program. The plan was completed by 12 and 13 year olds, who decided to help their county in Georgia meet the requirements of the state's Solid Waste Management Plan.

Speakers Bureau

Contact: Alice Chastain, (404) 347-3004

The Region IV Speakers Bureau coordinates the services of more than 150 full-time Region IV employees. Each media and program is represented. Created in 1990, this program sends EPA speakers on environmental topics to industry, community, and civic groups, as well as to universities and K-12 public and private schools. In 1993, 93 presentations were made by volunteer speakers, and 69 locations were visited.

Environmental Education Mailing List Database

Contact: Alice Chastain/Fred Thornburg,
(404) 347-3004

The office maintains and updates, as needed, a computerized mailing list database of approximately 11,000 schools and environmental organizations in the region, which can be sorted by state and type of school for targeted environmental education mailings.

Earth Games

Contact: Rich Nawyn, (404) 347-3004

A series of seven different environmental education computer games has been developed and field tested for grades 4-12 as an educational tool at conferences and expo exhibits, or for school presentations. These games are designed to raise the environmental awareness of teachers and students and to teach some basic environmental education concepts.

Exhibits and Shows

Contact: Wesley Lambert, (404) 347-3004

EPA Region IV took part in the following events during 1993:

- **Georgia Conservancy Youth Conference**, Savannah, GA, Feb 26-28
- **Atlanta Braves Env Awareness Day**, Braves Stadium, Apr 14
- **Atlanta Dogwood Festival**, Atlanta, GA, Apr 16-18
- **Earth Day Celebration**, Underground Atlanta, GA, Apr 22
- **Florida Earth Day Celebration**, Walt Disney World, Orlando, FL, Apr 25
- **Public Service Recognition Day**, Atlanta, GA, May 3-9
- **Zoo Conservation Day**, Zoo Atlanta, Atlanta, GA, Oct 2
- **Black Achievers in Science**, SciTrek Museum, Atlanta, GA, Oct 9
- **Florida Environmental Expo**, Tampa, FL, Oct 12-14
- **Sunbelt Agricultural Expo**, Moultrie, GA, Oct 19-21
- **Env Technology Expo**, World Congress Center, Atlanta, GA, Oct 26-28

EPA environmental education literature, posters, bookmarks, and other educational handouts are distributed during these events.

Public Notices, Meetings, Hearings

Contact: Lena Scott, (404) 347-3004

Two hundred five (205) public notices were issued, four public meetings and three public hearings were coordinated by the office during 1993. This included making all arrangements for the meeting facility, room arrangements, audio-visual equipment, handicap needs, court reporters, security as needed, and provisions for follow-up documentation.

Volunteer Outreach Program

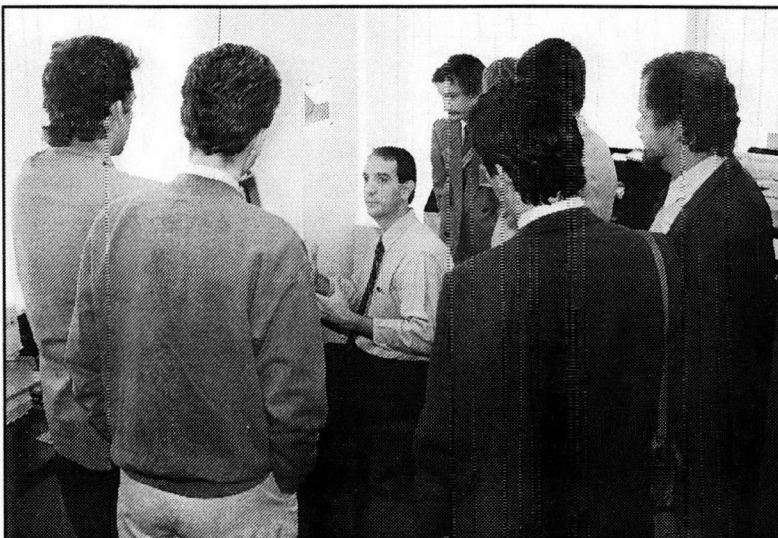
Contact: Wesley Lambert, (404) 347-3004

EPA employees volunteer for a wide variety of programs in the local community to promote environmental awareness such as tutoring subjects in adopt-a-school programs, judging science fair projects in the Atlanta Public Schools and Apple Corps, and a mentoring program with Clark Atlanta University. In addition, in 1993 the region began planning and implementing various aspects of the President's National Service Initiative which allows college-age participants to pay back a portion of their college tuition by performing acts of volunteer service in their communities.

International Programs

Contact: Norman Black, (404) 347-3004

The office was host to 30 foreign visitors from 11 countries during 1993. The visitors were given technical presentations and information about areas in which



Rock Tabor (seated), environmental scientist, of the Office of Integrated Environmental Analysis, explains Region IV's Geographic Information System to visiting environmental scientists from the Czech and Slovak republics. Their October 1993 visit to the regional office in Atlanta and Environmental Services Division and EPA Office of Research and Development in Athens, Georgia was arranged by the Environmental Education and Public Outreach Staff.



Charles Smith (on the left, facing the reader), an Agricultural Engineer, of the EPA's Office of Research and Development, in Athens, Georgia, uses a CME75 drill rig to show how to drill a ground water monitoring well, during the June 1993 visit by governmental and civil environmental experts from four western African nations. The visitors, only four of whom are shown, are from Guinea, Morocco, Senegal and Tchad. The visit was part of a larger one within Region IV arranged by the Environmental Education and Public Outreach Staff.

they had stated interest. Eighteen of the visitors, from six lands, were also given tours of the EPA's laboratory facilities in Athens, Georgia as part of their visit. The purpose of the presentations, tours, and documents given the visitors was information transfer.

Additional information was sent throughout the year, as requested, to some of the visitors after they had returned to their homelands.

The visitors during 1993 were from the following countries:

- Chile (1)
- Czech Republic (6)
- Denmark (4)
- Indonesia (2)
- Morocco (6)
- Nigeria (1)
- Korea (2)
- Senegal (3)
- Slovakia (1)
- Spain (2)
- Tchad (2)

Regional/State/Local Networks

The office established working relationships and partnerships with a number of federal, state, local, and private sector organizations during 1993 and maintained relationships set up in previous years with other organizations. These include:

• **Region IV Federal Environmental Education Workgroup** - a group of eight federal agencies in the southeastern region was established in December 1993 to discuss ways the agencies could more effectively communicate and collaborate in environmental education. The agencies were: Army Corps of Engineers, Department of Energy, Environmental Protection Agency, Fish & Wildlife Service, Forest Service, Geological Survey, National Park Service, and Tennessee Valley Authority. A report will be published to document each agency's current activities and serve as a starting point for collaborative federal environmental education efforts in the region. Contact: Rich Nawyn, (404) 347-3004

• **Geosphere Environmental Youth Camp** enabled 25-30 underprivileged middle school youth in metro Atlanta to attend a three-day-long camp, which met the Georgia Quality Basic Education Act core curriculum guidelines. The curriculum

covered water quality, air quality, wildlife habitats, and resource stewardship. The camp was developed in partnership with the National Park Service, Georgia PTA Council's Environmental Education Committee, and the Geosphere Center. Region IV plans to continue this partnership by participating in two 3-day-long weekend youth camps in the spring of 1994.

Contact: Alice Chastain, (404) 347-3004

• **Atlanta Braves Environmental Awareness Day** was co-ordinated in partnership with the U.S. Fish & Wildlife Service, Georgia Conservancy, Georgia Department of Natural Resources, Georgia Wildlife Federation, National Park Service, U.S. Forest Service, U.S. Geological Survey, Nature Conservancy, Corps of Engineers, Atlanta Botanical Gardens, Save the Manatee Club, Zoo Atlanta, Turner Broadcasting System, and National Foundation to Protect America's Eagles. This event was held at the Atlanta-Fulton County Stadium during the opening week of the Atlanta Braves 1993 baseball season, with an estimated 50,000 in attendance.

Contact: Wesley Lambert, (404) 347-3004

• **Earth Day Awareness Expo at Underground Atlanta** was staffed by approximately 20 employees at 10 exhibit booths in partnership with Georgia Nature Conservancy, MARTA, Georgia Lung Association, and Campaign for a Prosperous Georgia. The office arranged for radio station V-103 in Atlanta to broadcast live during the expo.

Contact: Alice Chastain, (404) 347-3004

Other Education & Outreach Activities

• **Earth Day/Month 1993** - in addition to displays at Underground Atlanta and Atlanta's SciTrek

Museum during April, speakers made presentations throughout the month at lunch and learn sessions on a variety of environmental topics. The office sponsored an Earth Day T-shirt contest, with an all-employee T-shirt day on Earth Day, and distributed to the public about 2000 dogwood trees, 1000 red maples, 1000 longleaf pines, 1000 white oaks, 1000 pines, and 500 packages of wild flower seeds donated by the Pennington Seed Company of Madison, Georgia. The office also distributed posters and environmental literature during presentations at schools and local Earth Day events.

Contact: Alice Chastain, (404) 347-3004

• **Sunbelt Agricultural Exposition, Moultrie, GA** - this agribusiness expo hosted about 204,000 persons and featured 922 exhibitors in 1993. The office co-ordinated six exhibits and 18 exhibitors from various media including representatives from the Air, Waste, and Water Management Divisions and the Environmental Services Division in Athens, Georgia. This is the most intensive education and outreach effort to the agricultural community during the year.

Contact: Wesley Lambert, (404) 347-3004

• **Environmental education packages to teachers, students, and the public** - the office receives approximately 20-30 requests weekly for environmental education materials. Nearly 800 packages were assembled and sent out in 1993 upon either phone or written request for use as lesson plans, teaching aids, school reports, etc. Contact: Alice Chastain/Rae Hallisey, (404) 347-3004

AIR, PESTICIDES AND TOXICS MANAGEMENT DIVISION

Contact: Greg Glahn, (404) 347-3043

Worker Protection Education

The Division conducted a number of educational activities to promote the implementation of the new EPA Worker Protection Standards (WPS). The activities included: (1) a three day workshop for seventy employees from various state agencies; (2) twenty-five seminars at regional and national meetings for various interest groups such as the Aerial Applicators Association, National Apple Institute, Agriculture Labor Relations Forum, and Association of Farm Worker Opportunities Programs; and (3) exhibits at the 1993 Sunbelt Agricultural Exposition and other major agricultural exhibitions.

Indoor Air Video

The Division funded the development of a video on indoor air which is designed to inform homeowners about indoor air problems and possible solutions. The video was produced in cooperation with the Georgia Chapter of the American Lung Association and filmed by GPTV, the Atlanta public television affiliate. The video will be available as an educational tool to interested parties. The Division is working with GPTV to air the video on the state network.

Air Display and Newsletter

The Division purchased an educational display to increase awareness of the Clean Air Act Amendments of 1990. The display was exhibited at the National Stone Association, Environmental Technology Exposition, Florida Environmental Exposition, and the Earth Day Celebration at Underground Atlanta. In addition, a newsletter is being distributed quarterly to the state and local air agencies. The articles contain

information on regulations and issues associated with the Clean Air Act.

Mobile Source Outreach

The Division initiated major activities to promote ways to reduce air emissions from mobile sources. The activities included: (1) the American Lung Association's Annual Clean Commute Day judging an essay and poster contest for the elementary students of DeKalb, Fulton, and Cobb counties and providing exhibits at Underground Atlanta; (2) the Clean Air Vehicle Association's Electric Car Grand Prix grading technical papers on the process used by the entrant colleges to convert gas-powered vehicles to battery power; (3) the Clean Cities Coalition, which is an EPA/Department of Energy cooperative effort to promote the conversion of fleets to alternative fuels; and (4) transportation workshops in Georgia, Kentucky, and North Carolina with the Federal Highway Administration.

Green Lights Program

The Division implemented major efforts to promote the EPA Green Lights Program which is a voluntary program encouraging companies to agree to reduce air emissions and save energy by upgrading lighting systems to energy efficient equipment. The Division's efforts included: (1) exhibits at the World Energy Engineering Congress Exposition; (2) presentations to a number of major companies; and (3) lectures to classes at Georgia Institute of Technology.

Stratospheric Ozone Depletion

The Division has implemented an extensive outreach program to

educate the public and the regulated community about the requirements of Title VI of the Clean Air Act. Presentations were conducted at twenty-three meetings sponsored by the regulated community or government agencies including meetings of the North Carolina Association of Plumbing, Heating and Cooling Contractors and the Regional Chapter of Air Conditioning and Refrigeration Wholesalers.

Romanian Students

Contact: Brian Beals, (404) 347-5014

The Air Enforcement Branch Staff conducted a presentation for Constantin Horia Barbu, a student representative from the Research Institute for Energetics, in Sibiu, Romania. Mr. Barbu was a participant in the U.S. Information Agency's International Visitors Program and had an interest in learning about the strategies being implemented by EPA to control acid deposition. The presentation consisted of discussions on industrial control technologies for sulfur dioxides and nitrogen oxides and the implementation of the Clean Air Act Amendments of 1990 - Title IV Acid Rain Program.

ENVIRONMENTAL SERVICES DIVISION

Contact: Cindy Kesler, (706) 546-3133

1993 Sunbelt Agricultural Expo -

The Ecological Support Branch's staff presented an exhibit at the 1993 Sunbelt Agricultural Expo in Moultrie, Georgia. The exhibit presented information on activities with non-point source pollution, the use of macroinvertebrates as indicators of pollution contamination, and other general

Ecological Support Branch Activities.

Georgia Adopt-A-Stream - Hoke Howard met with the GA-EPD Adopt-A-Stream Coordinator and members of the UGA Chapter of the School of Landscape Architecture and presented information on stream bioassessment. He conducted both classroom and field exercises to illustrate the techniques. Hoke also reviewed and provided comments to Georgia's Manual that will be used as a guide for citizens to conduct sampling along streams in the Adopt-A-Stream Program.

Team for School Improvement - Herb Barden is a standing member of the Clarke Central High School Team for School Improvement (TSI). The team is made up of the school principal, teachers, students, and two parents.

Georgia Science Fair - Chuck Padgett will serve as a judge at the Georgia Science and Engineering Fair on April 7, 1994.

UGA Lectures/Demonstrations - On May 25, Antonio Quinones and Louis Salguero made presentations on activated sludge wastewater treatment processes for the University of Georgia, Environmental Health Science, Water and Wastewater Laboratory. The presentations included a slide show and a demonstration on how to conduct activated sludge process control tests. Approximately 80 students participated in the training demonstration. Danny France made a presentation on ambient air quality monitoring to the University of Georgia Environmental Science class during February. Also, the Analytical

Support Branch has conducted numerous tours and given lectures as requested to University of Georgia classes relative to laboratory activities.

Earth Day Presentation - On May 6, Louis Salguero and Tim Simpson presented a water protection seminar for the Oconee Elementary School in Watkinsville, Georgia as a follow-up to Earth Day activities. Approximately 200 students attended the seminar.

FL-DEP Assistance - During November 2-4, Joe Compton provided technical assistance to the FL-DEP Tallahassee Office in the recording of a sampling videotape. Joe's role was to lend technical expertise in the proper methods to install flow measurement devices and automatic samplers, and in the correct application of the various sampling techniques. The tape will be used as a training tool for future FL-DEP and EPA training sessions.

GA-EPD Assistance - Tim Slagle and Danny France trained personnel of the GA-EPD on constructing an apparatus for making VOC canister standards during March.

Lectures - Hoke Howard gave a lecture on bioassessment to the UGA Chapter of American Water Resources Association.

Mike Carter lectured the Georgia Institutional Line Managers Association on what must be known about effluent guidelines and pretreatment.

Antonio Quinones and Mike Carter presented lectures to the Georgia Pollution Control Federation concerning environmental

monitoring.

On July 14, Mike Bowden presented an NPDES sampling lecture for the South Carolina Water Pollution Control Association and the Greenville Chamber of Commerce in Greenville, South Carolina. The presentation focused on the proper application of wastewater sampling procedures. Approximately 200 people attended.

Hazardous Waste Site Sampling Workshop for the Department of Energy (DOE), Oak Ridge - The Hazardous Waste Section (HWS) was invited by DOE based on the reputation of the technical staff and the merits of the course. Over 700 students attended two workshops presented by the HWS. Included in each course was a field demonstration of current techniques including: waste, soil and ground water sampling equipment; ground water monitoring well installation with the HWS drill rig; and sophisticated geophysical equipment. The course was accompanied by a new, updated course manual as well as new technical slides (over 800) prepared in a standard format.

Hazardous Waste Site Sampling Course - This was presented in both Athens, Georgia and Chapel Hill, North Carolina during FY-93. Over 35 students attended each offering. An abbreviated version of the course was presented to the ARC's contractors in January 1993 with over 75 in attendance.

Industrial Wastewater Treatment Course - Rod Davis and Bill Cosgrove presented this course in both Frankfort, Kentucky and Nashville, Tennessee. The

Frankfort course was attended by 30 RCRA staff; the Nashville course was attended by over 90 RCRA and Water Program staff from every district office. In addition to teaching students about wastewater treatment, the Nashville offering fulfilled one of the expectations of the course, that being to show the regulatory and technical relationship between the RCRA and Water Programs at industrial facilities.

Training - Hazardous Waste Section Instructors - Fred Sloan conducted a training session at the Southeastern Environmental Enforcement Network (SEEN) meeting in Nashville, Tennessee. The talk focused on how ESD conducts field investigations to support the criminal enforcement program in Region IV.

Rod Davis continued to support the Federal Bureau of Investigation (FBI) by serving as an invited instructor at the National Training Academy in Quantico, Virginia. Rod participated in two courses with the FBI this year.

Laura McGrath served as an instructor in the RCRA Orientation course presented at the Regional Office. The topic of her talk was ESD support of the Region IV RCRA program.

Dan Thoman served as an instructor at CLP Workshop for the South Carolina Department of Health and Environmental Control (SC-DHEC) in Columbia, South Carolina. Mr. Thoman presented a session on sample shipping and tracking.

Jon Vail served as an instructor at the RCRA Groundwater course in Montgomery, Alabama. The

course was attended by over 35 Alabama Department of Environmental Management staff. The topic of Mr. Vail's talk was ground water sampling.

NPDES Inspection Workshop -

This workshop was presented for the Water Management Division, Compliance Section on January 20 and a repeat of the same course on July 8. The course focused on NPDES inspection procedures and particularly areas of records, flow measurement, sampling, and observations. The course included demonstrations of flow measurement and sampling equipment. There were approximately 35 participants from the Regional Office for the first workshop and 10 for the second workshop. The course was also conducted during March 2-3 for the MS-DEQ in Jackson, and during May 10-11 for the FL-DEP in Jacksonville. Representatives from the ESD Hazardous Waste Section and the Analytical Support Branch, as well as the Regional Office of Criminal Investigations also participated at each location. There were approximately 75 participants from each state.

WASTE MANAGEMENT DIVISION

Office of Solid Waste

Contact: Patricia Zweig, (404) 347-2091

The Office of Solid Waste (OSW) sponsored the second "buy recycled" conference designed to educate government, non-profit and private sector purchasers about the availability and quality of recycled content products. The vendor show allowed purchasers to examine recycled products firsthand.

Financial Assurance Training

OSW conducted a two-day-long training course on Subtitle D Financial Assurance requirements and implementation. The course was designed to meet the needs of state regulatory personnel. Six of the Region IV states attended, as well as three representatives from the private insurance industry.

Tribal Solid Waste Focus Meeting

This meeting, the first of its kind in Region IV, was specifically for the five tribes in the Region. The purpose was to inform participants about solid waste regulations, planning, grants, source reduction, recycling and market development. Each tribe also told about its solid waste activities.

Business Waste Prevention Workshop

The EPA, in co-operation with INFORM, sponsored this one-day-long "seeing green" workshop for businesses, which targeted companies in the Orlando, Florida area. It was designed to help businesses improve their bottom lines and protect the environment through waste prevention.

Solid Waste Management Assistance Program

Through this grant program, the EPA provides funding to other organizations which conduct environmental education and outreach activities. One example is the Alabama Department of Environmental Management, which produced landfill training materials and conducted four workshops for landfill owners and operators in Alabama. Another is the

University of Florida, which developed training materials and conducted workshops to assist hotel and motel managers begin eco-purchasing, waste reduction and recycling programs.

Presentations and Exhibits

OSW's staff provided presentations at numerous conferences in the Region. In addition, OSW's two exhibits (one on integrated waste management and the other on buying recycled) were often displayed at conferences' vendor shows.

Federal Facilities Branch

Minority Participation at Savannah River Site

Contact: Victor Weeks, (404) 347-3016

Region IV participated in the development of the Citizens Advisory Board (CAB) for the Environmental Restoration and Waste Management Program at the Department of Energy's (DOE) Savannah River Site (SRS). The Region, South Carolina, and DOE stressed frequently to the citizens developing the SRS CAB Charter that their support was contingent on environmental equity being properly addressed. The charter provides for representation by local interests, including the requirement that 32% of the CAB's members be African American.

Oak Ridge Advisory Board

A stakeholders meeting to continue discussions about establishing a site-specific advisory board (SSAB) for the Oak Ridge Reservation was held on November 9, 1993. Forty people attended the meeting, which was covered by the

Knoxville Sentinel and a local public access TV program. A proposal to expand the Local Oversight Committee (LOC) into a SSAB was discussed and a steering committee formed to develop a more detailed plan for an SSAB based upon an LOC expansion. Another SSAB proposal, based upon a grass roots model, will also be prepared.

Visual Graphics

Contact: Betty Winter, (404) 347-2643

- The South Superfund Remedial Branch produced a video on the Superfund Remedial Process entitled "The Superfund Process: From Discovery to Decision." This 16-minute-long video is designed for communities around Superfund sites to help them understand the clean-up process and the role they can play in it. The video is being used across the country for community meetings and high school and college seminars, and is sent to reporters and others interested in learning about the process. In addition, the EPA's headquarters is adapting the video to include an explanation of the Superfund Accelerated Cleanup Model (SACM) and will distribute the revised video nationwide. Region III plans to use the video for some interactive training, and many states and private industries have requested copies of it.

- The South Superfund Remedial Branch developed a brochure entitled "EPA at Work...Protecting South Florida" as part of the South Florida Geographic Initiative (SFGI). It was produced in co-operation with the Florida Department of Environmental Protection. Its purpose is to increase public understanding of

the EPA's role in assisting the state to manage hazardous and solid waste in order to reduce harmful effects on southern Florida. Copies have been distributed to the Board of Public Education in Dade County and to the environmental specialist of the SFGI who plans to send copies to science directors at each high school in the area.

- The "Superfund Team and Mother Mouse" coloring book, created and produced by the Branch in 1992, was reprinted in 1993 by the EPA's headquarters. Region IV received 9,000 copies, which it plans to distribute to schools in Georgia and southern Florida.

Sangamo-Weston/Twelve-Mile Creek Superfund Site

Contact: Mike Norman, (404) 347-3931, ext. 6123

- In July 1993, Cynthia Peurifoy, a community relations coordinator for the Region, participated in a Career Workshop at Clemson University. The workshop is conducted each summer for minority and low income students that attend summer college preparatory classes. Ms. Peurifoy talked one-on-one with high school juniors and seniors about careers within the EPA, particularly about community relations. She also explained the EPA's organization, mission and various programs.

During the same period, a Clemson communications class did a project using the EPA's community relations program. Class members prepared questions to be asked as part of the community relations interview process, as if they were the community relations coordinator. Ms. Peurifoy worked

with the professor to explain the process and with some of the students as well.

- The Emergency Response & Removal Branch conducted seven outreach seminars for the Spill Prevention control and countermeasures regulations in FY 1993. There were a total of 325 attendees from state government, the regulated community, and industry associations. The meetings were held in Atlanta, Georgia; Bowling Green, Kentucky; and Columbia, South Carolina.

WATER MANAGEMENT DIVISION

Coastal Programs

Contact: Connie Alexander, (404) 347-1740

TV-Video - "Downstream From The Mountains To The Coast"

The EPA, along with Southern Appalachian Man and the Biosphere, Tennessee Valley Authority, Tennessee Aquarium, and WBIR-TV (NBC) developed a 30-minute television video which aired during October as part of the Heartland Series. The theme covers a broad range of issues relevant to a watershed. A Teachers Guide and poster, which include activities from the Water Sourcebook, are also available.

Florida Keys National Marine Sanctuary

The EPA and National Marine Sanctuary are funding a television program entitled "Sounding Line." The program provides an opportunity for the public to call in and respond to issues affecting the

environment in their area.

National Estuary Programs

Indian River NEP, Sarasota Bay, and Tampa Bay NEP work to educate local citizens and communities about the benefits of planting native plants. A handbook is being developed as a guide to native plants and vegetation.

The National Estuary Programs are conducting sub-regional workshops for community leaders, developers, citizens, and local politicians. The workshops provide an opportunity for them to state their opinions about problems and conditions related to the estuarine systems. Their ideas will be included in the Comprehensive Conservation Management Plans being developed by the NEP programs.

Near Coastal Waters

The Bay Watch Project, funded by the EPA and Nature Conservancy, is helping to bridge the gap between what the scientist knows and can find out, and what people with on-the-water experience know and can find out. Several Volunteer Monitoring Projects are being funded throughout Florida, Georgia, and North Carolina.

Coastal Programs Brochure

A brochure has been completed which defines and outlines the Coastal Programs Section.

Drinking Water

Contact: Kristu Watkins, (404) 347-2913

Water Sourcebook

A comprehensive Water Sourcebook for grades 3-5 has

been developed, field tested and reviewed. A final camera-ready copy will be ready for distribution in December 1993. The Sourcebook contains activities and labs, reference materials and a glossary. The EPA has received proposals through the environmental education grants program for local, state, national, and international distribution.

South Carolina Fee System

An EPA contract managed by the Drinking Water Section contributed to the successful passage of a \$4.2 million generated user fee based upon service connections. Educational materials were developed to inform the South Carolina legislature's members, water systems, and the drinking water community about the benefits of a state-run drinking water program. The effort resulted in South Carolina being able to maintain primary enforcement responsibility, or primacy.

National Drinking Water Week

The Drinking Water Section organized a committee to sponsor activities during National Drinking Water Week (May 2-8, 1993). The committee included representatives from the State of Georgia, the City of Atlanta, local utilities and other organizations. A water taste test was conducted at an Atlanta Braves game and seven metro area water utilities participated. Atlanta Braves fans chose Douglas County as the winner. Region IV honored the participating utilities and committee members. Media coverage included radio and television interviews by local stations.

In addition, water trivia questions

and answers about drinking water were displayed on the matrix board at several Atlanta Braves games. Other activities during the week included a performance of "Captain Hydro and the Water Bandit" by the Small Change Original Theatre to a group of 60 elementary students from the Cobb County School System and the Cherokee Indian Tribe, tours of water treatment facilities, a 5K Fun Run, and public service announcements.

Wetlands Education & Outreach

Contact: Jennifer Derby, (404) 347-3871

The Wetlands Planning Unit sponsored American Wetlands Month Events during May, 1993. Public information meetings were held in communities targeted for Advanced Identification of Wetlands Projects. A nine-poster series on wetlands was produced and a travel guide to wetlands in the southeast is being developed. The staff participated in a watershed tour for the public, an International Symposium on Wetlands Education, and a workshop on Wetlands and Watersheds Management.

OFFICE OF POLICY & MANAGEMENT

Pollution Prevention

Contact: Carol Monell, (404) 347-7109

Region IV awarded grants to each of the eight state pollution prevention programs located in the state regulatory agencies. This has allowed the state P₂ programs to continue and/or expand their pollution prevention operations including providing training, performing waste assessments, and

providing technical assistance.

The Region IV Pollution Prevention Network was formed to oversee the implementation of pollution prevention activities. Four subgroups were established: grants, permits, enforcement, and voluntary programs. The Network also is in the process of identifying specific training needs in the area of pollution prevention, and addressing those needs as they are identified.

The Waste Reduction Resource Center (WRRC) has continued to add to their library through the collection of technical documents, case studies, and conference proceedings. The staff have participated in regional and national conferences both as attendees and as presenters. The requests for telephone and on-site assistance have increased in 1993. Methods are being investigated to maintain a high level of responsiveness under the increased workload.

Global Climate Change Activities

Contact: Cory Berish, (404) 347-7109

Green Lights

In conjunction with HQ, Region IV sponsored the largest single recruiting event to date and featured EPA Administrator Browner. In the ceremony, 26 new Partners, Allies, and Endorsers signed Green Lights Memorandums of Understanding enhancing their corporate image. The participants committed over 25 million square feet to the program and almost all of the major electric utilities in the South, along with some major universities, consulting firms, and the Atlanta Committee for Olympic

Games (ACOG) signed up.

EarthWalk Program

The Region IV residential energy conservation program continues to grow in importance. In the last year, we have cooperated with the Southface Energy Institute and various organizations, including the Georgia Federated Garden Clubs, High Schools, the Boy Scouts of America and the media to distribute thousands of outreach brochures. We estimate that we have reached over 400,000 homeowners and that we will annually save homeowners over 2 million dollars on their energy bills and prevent the release of more than 20,000 tons of carbon dioxide.

QUEST

Similar to the EarthWalk program, Region IV has worked with other EPA staff to develop the QUEST outreach tool which identifies a few simple things to do in the office and at home to save energy and reduce pollution. Region IV is implementing QUEST by co-printing it with interested organizations such as the State of Alabama, the Florida Phosphate Council, Georgia Power and others.

Cool Communities

The Cool Community Program is a national, action-oriented, environmental-improvement program of AMERICAN FORESTS and the U.S. Environmental Protection Agency. Cool Communities aims to mobilize organizations, government agencies, and businesses to create positive, measurable change in urban environmental conditions and energy conservation, and to increase public awareness on these

issues. Dade County and Miami, Florida have signed on to this program and the region is currently working with the U.S. Forest Service to establish Atlanta as the next Cool Community.

Energy Efficient Home Designs

The Region is continuing efforts to have energy efficient affordable homes designed and built in the Southeast. The Region is working with all the major affordable home developers in the metropolitan Atlanta area, and also with groups such as Habitat, that build homes across the nation, to reduce energy waste in homes. The guide "Energy Efficiency - Making Affordable Homes Affordable" was finished this year and is available from the Southface Energy Institute. Though we have just started this program, we estimate that we have saved homeowners in the Atlanta area over \$50,000 and prevented the release of 335 tons of carbon dioxide.

Demand Side Management

The Region worked with the Georgia Demand Side Working Group (WG) to help Georgia Power Company develop a long-term energy management plan. Georgia Power is committed to the vision that it is cheaper to encourage conservation than to build new power plants. Region IV worked to improve Georgia Power's DSM residential plan. In this sector alone, we estimate that the WG suggestions will save about \$500,000 annually in electric bills and result in the reduction of emissions of approximately 455 tons of carbon dioxide, and 66,000 and 35,000 pounds of SO_x and NO_x, respectively, above the original base plan.

Energy Scenario Generator

Throughout the country, policy makers at national, regional, and local levels are making decisions on what types of energy efficiency programs to implement. The Region IV Lotus 123 spreadsheet model allows the user to create energy efficiency scenarios for the geographic area of interest in four sectors: residential, commercial, industrial, and automobile transportation. The model was presented at the Kentucky Post Rio Conference and is available for EPA Regions 3, 4 and 5.

Atlanta "Green" Olympics Promotions

EPA is working with a large number of groups in the Southeast to promote the concept of sustainable development and pollution prevention during the upcoming Summer Olympic games. It is anticipated that over three billion people will watch the 1996 summer games. This event represents an extraordinary opportunity to reach a huge global audience with an environmental message. Atlanta Committee for the Olympic Games (ACOG) became an endorser of the Green Lights program in FY93.

Adaptation Program

Region IV developed the package "Planning for Sea Level Rise" which was mailed to every Region and HQ with 600 copies distributed through the Gulf of Mexico Program, and another 1,000 through the NEP program.

Country Studies

As a part of the Central American Country Studies Grant, this project

is designed to look at "vulnerabilities" of natural resources to a changing climate.

Planet Protection Center

A grant was awarded through HQ to the National Retail Hardware Association (NRHA) to try to instill in the approximately 5,000 home retail stores across America the concept of cost effective pollution prevention. This program has a large potential for success and for public education.

Risk Education

Two Risk Communication courses were provided for Regional staff. Understanding the concepts of risk communication is very important to EPA staff who represent the Agency at public meetings. The development of risk training will continue to be facilitated in the Region.

EPA REGION IV OFFICE OF RESEARCH & DEVELOPMENT LABORATORIES

ENVIRONMENTAL RESEARCH LABORATORY, ATHENS, GEORGIA

Contact: Valeta Kate McDaniel, (706) 546-3524

Partners in Education

Since the Fourth Street Elementary School opened three years ago, the Environmental Research Laboratory (ERL) in Athens has entered into a joint agreement with the school to sponsor educational activities for math and environmental-ecology. The following activities were accomplished in FY 1993:

- Environmental and Ecology Science Camp: Fundraisers to send six children to the Rock Eagle Summer Science Camp at Rock Eagle, Georgia. This is a two-week-long science and ecology experience for 5th graders.
- Nature Trail: Fourth Street School students, faculty, and EPA employees completed a two-mile-long nature trail on the school's 20-acre campus in 1992. In 1993, the students learned to make markers to identify various plants and trees in the natural habitat.
- Faculty Tours: Teachers and administrative staff members of five area schools toured the EPA's Athens facilities.
- Essay Contest: The EPA sponsored the Young Inventors Contest and awards. Six laboratory personnel helped to judge the contest.
- Science Club: EPA staffers demonstrated environmental science during the After School Program at which children of working mothers stay until 6 pm.
- Nature Trail Teaching Manual: A student manual describing the nature trail and showing detailed information about flora and fauna is being completed.

Environmental Science Workshops

Three environmental science workshops for teachers of grades K-12 were held in July, August, and September.

The workshop for high school teachers of biology, chemistry, earth sciences, and physics was attended by 22 teachers. The seven-day-long course at ERL was a co-operative presentation with the American Chemical Society. The workshop offered hands-on experience in innovative science-teaching methods.

The workshop for middle school teachers (grades 6-8) was two-days-long and was attended by 12 teachers. It was given in conjunction with the Oconee County School System and a middle school science education project to increase the science awareness of 950 students. The EPA's staff conducted several 1-day-long workshops during the summer for interested elementary school teachers. Environmental science kits are being prepared as a teacher resource.

Environmental Science Center for K-12 Curriculum Materials

ERL's library of materials about environmental issues offers free literature and borrowing privileges to the general public and secondary school teachers. Students of the University of Georgia in Athens, especially the College of Science and Education are frequent users of this resource.

WET WAY

ERL observed WET WAY (or "Reflections on Water") in November and December. During this time, eight ERL scientists made presentations to nearly 300 K-12 students about various aspects of water as it affects human health and the environment.

Exhibits & Shows

- Coordinated the exhibit for ORD at the National Boy Scout Jamboree at Fort AP Hill, Virginia in August, 1993. Smaller exhibits from 4 other labs made up the ORD exhibit which in turn made up the larger EPA exhibit. The total area occupied by EPA was about 1 acre square, and was one of several exhibits by about 17 other federal agencies on the well known 20-acre Conservation Trail. Some 5,000 boy scouts and their friends and families visited the exhibit during its 10-day duration. About 40,000 boy scouts camped out as did some 10,000 staff and coordinators. We are looking forward to the opportunity to enlarge and enhance ORD's exhibit

at the next National Jamboree - in 1997. Call Kate McDaniel (706-546-3524) if you are interested in being a part of this effort.

- Presented a display on environmental teaching materials in a 20' X 20' booth at the Sunbelt Agricultural Exposition in Moultrie, GA in October. A total of 167 teachers and educators visited the booth which resulted in 70 requests for 217 pieces of literature, posters, brochures, and videos related to teaching environmental science at the K-12 level. The Expo lasted 3 days.

- Presented an environmental education booth featuring the principles of underground water and the protection thereof with hands-on activities at the Cherokee District Scout Show. Scouts had to play "contaminated underground water detective" to find an abandoned leaking gas tank that was contaminating the drinking water supply of a small community.

Governor's Council on Environmental Education

The Athens lab participated actively in the Governor's Council on Environmental Education in 1993. The Council's 12 members investigated the status of, and need for, environmental education in Georgia's public schools. The Council's recommendations will be communicated to the governor in the January legislative session. The outcome will be forthcoming in the Spring. If you would like to have a copy of the Council's work and recommendations, call 706-546-3524 and ask for "A Framework for Environmental Education in Georgia Schools."



Middle school pupils from Escambia County, Florida, get a close-up look at water samples during their visit to the Gulf Breeze Laboratory.

ENVIRONMENTAL RESEARCH LABORATORY, GULF BREEZE, FLORIDA

Contact: Andy McErlean, (904) 934-9231

Teacher In-service

Andy McErlean, Ph.D., Senior Science Advisor, introduced innovative instructional materials and discussed environmental education issues at an in-service training workshop for upper-elementary and middle school teachers at the Brentwood Middle School. He also demonstrated Toxi Trace, a hands-on, instructional experience in hazardous waste monitoring.

Mrs. Flora C. Wilkins, a Brentwood Middle School Science Teacher, led the workshop for the Escambia County school system. She also participated in a national EPA Environmental Workshop entitled "Training Future Scientists" held this summer in Washington, D.C.

EPA'S ENVIRONMENTAL EDUCATION ACTIVITIES AT RESEARCH TRIANGLE PARK, NORTH CAROLINA

Contacts: Rhoda Ritzenberg, (919) 541-2615; Anne Pope (919) 541-5373; Lynne Peterson, (919) 541-3582

EPA organizations in the Research Triangle Park area (Raleigh, Durham, and Chapel Hill) have focused their environmental education activities on three areas: outreach to kindergarten through 12th grade students; training for college and university students; and teacher training.

Primary and Secondary Schools (K-12)

Students in the Research Triangle area benefit from the enthusiasm and knowledge that EPA staffers bring to the classroom. Scientists volunteer under three separate programs:

- **Adopt-A-School** - A middle school has been adopted by EPA.

• **Scientist in the Classroom** - Through one-time visits to a classroom, EPA scientists reach about 2000 students a year.

• **Scientist in Residence** - About 15 scientists volunteer to establish a special relationship with a class, going into that classroom on a continuing basis throughout the school year.

Through each of these programs, students get to know top-notch scientists. Although the students may be unaware of their mentors' credentials, they do learn that science can be an exciting area of discovery.

EPA has been careful to reach populations currently under-represented in scientific fields. EPA, together with Shaw University, a historically black university, sponsors a program where 8th grade students who excel in math and science undertake a challenging 5-year curriculum on Saturdays during the school year and in the summers. At present,

25 students are enrolled.

Also, EPA cosponsors a career day for 7th grade girls as well as an environmental science career day. Many exciting programs need a little seed money to get started. In 1993, EPA in the Research Triangle awarded five grants for \$2500 or less to schools or teachers who had bright ideas for teaching environmental education. Some of the programs developed will be exported to other schools or entire school systems.

Undergraduate and Graduate Programs

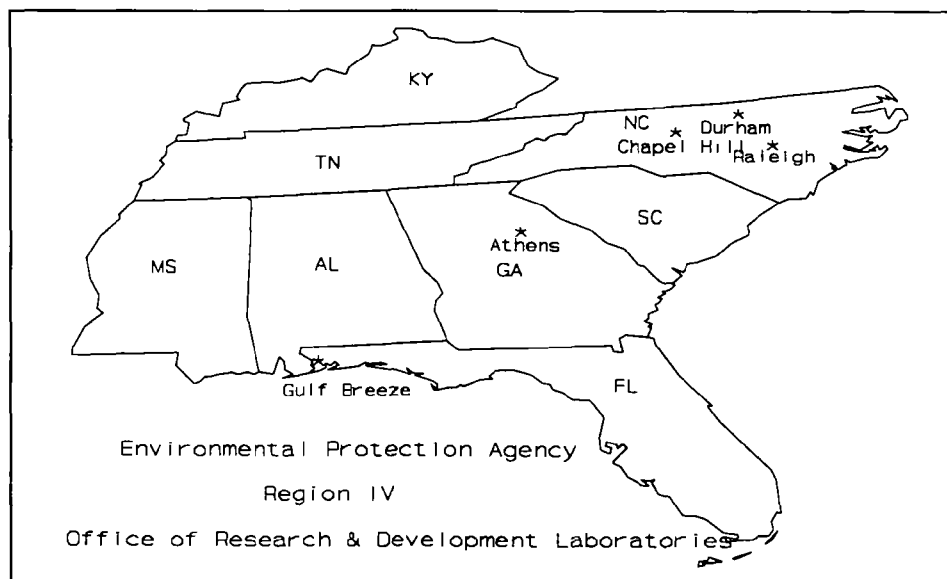
Five graduate students and five undergraduates benefitted from 10 weeks of paid work at EPA laboratories this summer and from tuition stipends. Also, EPA's health effects lab has a training program with North Carolina Central University; students work at the EPA lab and receive university credit and pay. EPA has memorandums of understanding

with three local universities: A&T State; UNC at Chapel Hill; and NC State. Other memorandums of agreement are in process. These agreements, in addition to formalizing already strong ties with the universities, foster cultural diversity in the workplace and in approaches to environmental problems.

EPA also is involved in developing a GED course in environmental science and an environmental technician curriculum for community colleges.

Teacher Training

Teachers who want to increase their knowledge of the environment and use environmental issues as a means of teaching other subjects may attend a 10 hour course, a 4 day course, or a longer course sponsored by EPA. These programs will be in full swing during the summer of 1994 and are geared to kindergarten through high school teachers.



EPA REGION IV STATES

ALABAMA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Contact: Catherine G. Lamar, (205) 271-7709

Teacher Workshops/Volunteer Monitoring

Contact: Patti Hurley, (205) 271-7938

Members of the Mining and Nonpoint Source section provided workshops on non-point source pollution, volunteer monitoring, and environmental education to 410 K-12 teachers, Soil Conservation Service personnel and citizens. The workshops were presented in co-operation with Auburn University and the Alabama Water Watch volunteer monitoring program.

Ombudsman Post Created

Contact: Jim Moore, (205) 271-7925

ADEM has created an ombudsman's post designed to assist small businesses comply with environmental rules and to serve as a liaison between ADEM, the general public, and local governments. The position was mandated by the 1990 Clean Air Act Amendments as a conduit between regulatory agencies and small businesses affected by air pollution control rules. ADEM has elected to make this position include air, land, and water and expanded the scope and outreach to include municipalities and the public.

Industrial Storm Water Management Seminars

Contact: Jim Moore, (205) 271-7925

The ADEM Ombudsman's office presented four seminars on industrial storm water management to approximately 1,200 representatives of small and medium sized industries which monitor storm water regulated by NPDES general permits. Participants were furnished hands-on, cost-effective knowledge about how to achieve and maintain compliance with storm water regulations.

Subtitle D Seminars

Contact: Mike Forster, (205) 270-5651

Four seminars on solid waste regulations were attended by about 400 persons from the regulated community at sites across Alabama. The programs included discussions about a number of topics including the Subtitle D extension, changes in Alabama's state solid waste rules, compliance, ground water monitoring, closure and post-closure requirements, and the status of landfills in the state.

Flint Creek Watershed

Contact: Patti Hurley, (205) 271-7938

Members of the department's mining and non-point source section participated in the kickoff celebration for the Flint Creek Watershed Project near Decatur. The project provided information to citizens and encouraged their participation. Flint Creek is one of

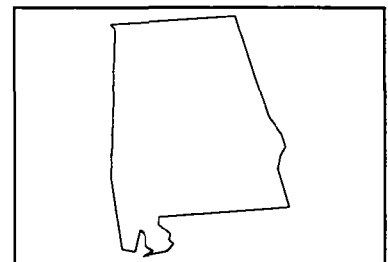
two projects in the Southeast chosen to demonstrate a holistic approach to watershed management in accordance with the EPA's Watershed Protection Approach.

LEGACY - Partners for Environmental Education

Contact: Patti Hurley, (205) 271-7938

The department continued its support of Legacy, a multi-agency, broad-based, non-profit effort to create a comprehensive K-12 environmental education curriculum and serve as a clearinghouse for environmental education materials. Legacy, in co-operation with the state's departments of education and public health, distributed 100,000 free place mats to 200 restaurants across the state. The place mats provided citizens with environmental information and their distribution was centered around Earth Day.

Legacy, in conjunction with ADEM, the EPA, and the Alabama Geological Survey produced a new Alabama Water Resources Map. The map, which featured river basins, charts, tables, facts, and color photographs, was accompanied by a study guide. More than 3,400 maps, with study guides, were distributed to school systems across Alabama.



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Contact, Jim Lewis, (904) 488-7326

Office of Environmental Education Established

The Florida Department of Environmental Protection, formed in 1993 from the Department of Environmental Regulation and Department of Natural Resources, recently established an Office of Environmental Education. The new office is responsible for helping the department to develop an agency-wide environmental education program. An Environmental Education Steering Committee with representatives from each division within the department was also formed.

School Outreach and Public Information

The department is an informational service for the general public, other governmental agencies, environmental and civic organizations and schools. It answers inquiries and provides information about Florida's environment in the form of pamphlets, fact sheets, videos and posters. Every year the department sends to the state's 67 school districts the booklet entitled "Your Environment: A Guide for Students" which was designed to inform 4th, 5th and 6th grade students about Florida's natural resources. It also sends the booklet entitled "Classroom and Field Experiments for Florida's Environmental Resources" which was produced to help educators

develop "hands-on" environmental projects for students.

Fishing Lines: An Angler's Guide to Florida Marine Resources

This publication provides educational information to saltwater anglers and recreational fishers about this resource including: fishes habitat and the various impacts on it; the species for which Florida regulates fishing and why; species' life-histories; and management measures taken to protect the resource, as well as those that need to be taken to protect the resource.

PARKnership

The department's Florida Park Service gives elementary and middle school and high school students the opportunity to learn through serving in seven of the state's parks. Their experiences range from creating a butterfly habitat to restoring sand dunes to planting seedlings.

Laboratory

Tours of the department's laboratory complex are provided for school groups and other organizations. The department provides a speaker before the tour to explain what an environmental lab is and what is done there.

Partners for Excellence

This unique partnership matches the needs of the schools with the resources of local businesses and government agencies. Department employees serve as consultants for students who are in the process of

producing science fair projects and as judges for school science fairs. Employees also participate in the schools' "Career Days" to inform students about environmental careers.

Speakers Bureau

The Speakers Bureau provides speakers to schools statewide on topics that relate to protecting Florida's fragile ecosystem.

Boating Safety

The department's Marine Patrol and the Florida Game and Fresh Water Fish Commission created "Bobber" a cartoon character that was designed to educate children and adults regarding water and boating safety. TV spots, media kits, brochures, posters and a teaching manual were also developed to assist in this effort.

4R's

The department provides to teachers in Florida supplementary material on solid waste which can be used in teaching math, social studies, language arts, and science in pre-Kindergarten through the 12th grade.

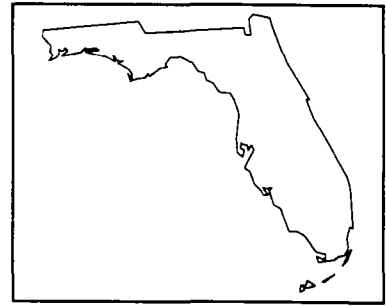
Used Oil Recycling Education Project

The department developed a Used Oil Recycling Education Project which is designed for grades K-12, and includes a complete curriculum explaining how oil is formed, produced, processed, what oil does inside an engine, the types of impurities added by routine motor wear, and why oil should be properly managed and recycled.

Environmental Indicator Project

The department is working in cooperation with the Council of State Governments and the Florida Department of Education to develop a science teaching method to teach secondary students how to use environmental indicators to assess environmental quality in their counties. The environmental indicator system, "The Strategic

Assessment of Florida's Environment" (SAFE) is a collection of 140 indicators of environmental quality, grouped into nine categories (Land Use and Resources Protection, Water Quality, Water Quantity, Air Quality, Waste Management, Wildlife, Infrastructure, Environmental Investment, and Public Perception).



GEORGIA DEPARTMENT OF NATURAL RESOURCES

Governor's Environmental Education Council

Contact: Dr. Ron Pulliam, (706) 542-2968

The Georgia Environmental Education Council was established in late 1992 and given the task of developing recommendations to improve environmental education in Georgia's tax supported schools. The council consists of representatives of education, industry, conservation organizations, hunting and fishing interests, and state government departments, including the Department of Natural Resources.

Open meetings were held in 1992 and 1993 throughout Georgia to solicit suggestions from environmental organizations, public school teachers and administrators, the University of Georgia's College of Education's faculty, and parents and students. In November 1993, a final report and recommendations were given Georgia's governor. The recommendations include a grant program for outdoor

classrooms and improving teacher training in pre-service and in-service areas. The council will continue to make recommendations to the governor and Department of Education, and will offer guidance as needed.

"Fall into Recycling" and "Spring into Recycling"

Contact: Pamela Thomas, (404) 656-4713

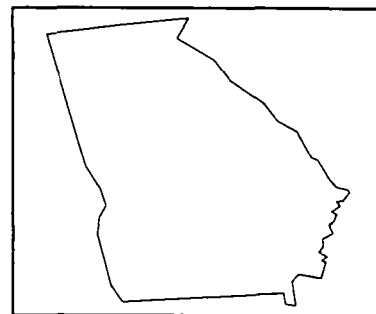
The Georgia Department of Natural Resources, Environmental Protection Division (EPD) took part in the third annual "Spring into Recycling" in May, and "Fall into Recycling" in November. This event was co-sponsored by the Department of Community Affairs, WXIA Channel 11, and private industries. The one-day-long events, held at seven locations in metro Atlanta, were designed to allow the public to bring in many types of recyclables such as glass, aluminum, paper, and hard to recycle items such as latex paint, motor oil, and anti-freeze. More than 400 tons of recyclables were collected at the events. The public was given educational handouts which focused on what can be recycled and how it should be

collected. WXIA also informed the public about ways to recycle.

Georgia River Clean-up

Contact: Laurie Hawkes, (404) 656-4905

The Second Annual River Clean-up took place on July 17-24, 1993. Nearly 910 people volunteered more than 4,700 hours of their time and collected more than 1,160 bags of trash and numerous larger items. The clean-up covered a total of 12 rivers and river basins and two island beaches in 17 counties. Twenty-one local organizers planned and co-ordinated the event with volunteer support from several Georgia Clean and Beautiful Programs, environmental organizations, schools, civic groups, church groups, and private industry.



KENTUCKY NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET

Contact: Maleva Chamberlain. (502) 564-3410

Teacher Workshops

Representatives of the department's four divisions (Air Quality, Environmental Services, Waste Management, and Water) participated in four Agriculture and Environment in the Classroom teacher workshops attended by a total of 140 teachers. They continue to work with 65 SEEK (Students Exploring the Environment in Kentucky) clubs across the state.

Department of education, public information, and public outreach personnel also served as staff support for Kentucky's Rio to the Capitols Conference in May, helping with many aspects of the planning process. Their tasks in connection with the conference included producing and staffing an exhibit, writing press releases, and serving as reporters. For the Governor's Conference on the Environment in November, they again provided exhibits and educational materials, helped provide speakers for panels, and put together a script for a tour of the Ohio River at Covington, which focused on environmental problems in the Northern Kentucky area.

DIVISION OF AIR QUALITY

Contact: Lillie Cox. (502) 564-3382

"Clean Air for Kentucky" Education Program

In 1993 there were 25 "Clean Air for Kentucky" hot-air balloon events throughout the Commonwealth at schools, camps, fairs, festivals, and other special events.

More than 150 air quality teacher/education packets were used in classrooms for these events and reached more than 15,000 students.

In addition, more than 1,500 education packets were distributed at teacher workshops, in-service programs, conferences, and in answer to requests.

DIVISION OF ENVIRONMENTAL SERVICES

Contact: Nancy Fouser. (502) 564-2150

River Assessment Monitoring Project

In a first-ever effort in Kentucky to involve schools in two other states in a study of their common watershed, high school students from Kentucky, Virginia, and West Virginia participated in this year's River Assessment Monitoring Project (RAMP) on the Big Sandy and Tug Fork rivers.

RAMP is an annual event sponsored by the Division of Environmental Services and the Division of Water. On Oct. 20, between 7 a.m. and 10 a.m., students conducted a one-time sampling of the Big Sandy River basin at 30 points in the three-state watershed. After analysis by the Environmental Services laboratory, the results were sent to the students who then reported their findings, drew conclusions from the data, and made recommendations about water quality in the river basin.

Their reports will be given to the environmental protection offices of the three states involved for potential review and action.

DIVISION OF WASTE MANAGEMENT

Contact: Debra Hockensmith. (502) 564-6716

Waste: A Hidden Resource in Kentucky

Debra Hockensmith conducted 14 in-service workshops for "Waste: A Hidden Resource in Kentucky," a waste education curriculum for grades 7-12. The workshops were attended by 354 teachers who also received curriculum guides. She also distributed 672 copies of a guide entitled "Let's Reduce and Recycle: A Solid Waste Awareness Curriculum."

During 1993, she staffed exhibit booths at conferences, environmental fairs and the Kentucky State Fair, and made 29 presentations to school assemblies, civic organizations, local solid waste advisory committees, etc. about waste reduction, recycling, and establishing local education programs. More than 15,000 documents have been provided to various public audiences through mailings and distributions at meetings. Some 600 cabinet employees have also received training in the mandated state government office paper recycling program.

Ohio River Sweep

Debra worked with the Ohio River Valley Water Sanitation Commission to organize and conduct the fifth annual Ohio River Sweep, a six-state riverbank

cleanup along the entire river's length. Volunteers included 3,414 Kentuckians.

DIVISION OF WATER

Contact: Maleva Chamberlain, (502) 564-3410

Water Watch Program

Kentucky's popular and effective Water Watch program, co-ordinated by Ken Cooke, provided 25 teachers' in-service programs in 1993. It also provided information for a poster and essay contest in co-operation with the Division of Conservation and the Louisville

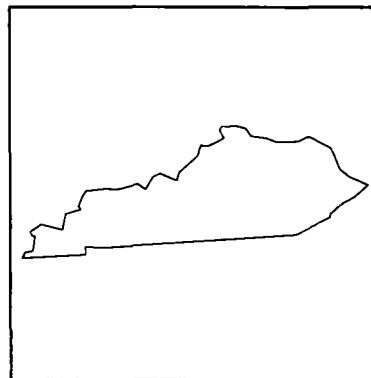
Courier-Journal. Geography Awareness Week materials were distributed through Water Watch, and Ken made special classroom presentations that week. Water Watch also helped to distribute materials for wetlands education, including the video entitled *Wealth of Wetlands*.

Eight new slide programs were developed for a non-point source pollution photo survey and educational slide program.

Rivers Month

Morgan Jones, Wild Rivers program co-ordinator, prepared and

disseminated brochures for Rivers Month, which listed statewide activities during the month. Many activities were sponsored by the division, which also took part in them.



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Contact: Eleana Turner, (601) 961-5015

Department-sponsored Activities

The department co-ordinated the Mississippi "Year of Clean Water" activities, which included assisting with a Youth Fishing Rodeo in Biloxi and Celebrate the Gulf in Pass Christian, as well as the Clean Water in Mississippi Celebration in Vicksburg. The department also co-ordinated the Year of the Gulf events and played a major role in the Governor's Conference on Water in Jackson by providing two speakers, three educational exhibits, and several committee members.

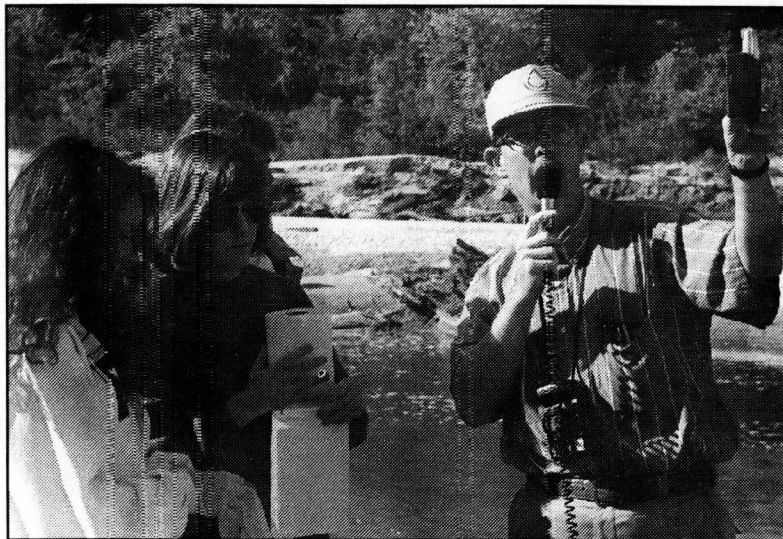
The public information division, which represented the department, staffed exhibits at the Mississippi Wildlife Extravaganza, Mississippi Water Resources Association, and the Mississippi Environmental Conference. All areas of the department participated in numerous Earth Day events held across the state, and throughout the year provided speakers for organizations such as clubs, civic groups and schools.

A master copy of a recycling activity booklet, pencils, and magnets were designed and distributed to every K-2 grade child in the state.

Surface Water Division

Contact: Barry Royals, (601) 961-5102

The division had an exhibit at the Mississippi Municipal Association and at the Mississippi Water Pollution Control Operators Association. The water quality management section held a one-week-long workshop at Mississippi



Chemistry students from Copiah-Lincoln Community College, in Wesson, Mississippi, receive instructions from Joe Doss of the Soil Conservation Service, during the Mississippi Feeder River Project, a Year of the Gulf activity, to test phosphate and nitrate levels in streams that feed into the Gulf of Mexico.

State University for agriculture education high school teachers. An environmental workshop entitled "Project Earth Teacher" was conducted at two locations during the year. The division was also involved with the development of lesson plans and a video about non-point pollution.

Ground Water Division

Contact: Bill Barnett, (601) 961-5119

The ground water division participated with the Mississippi Petroleum Marketers Association in a Convention and Trade Expo in Biloxi at which outreach materials were distributed. The division also worked with the agricultural community on a pesticide container recycling program and on investigating the pesticide contamination of ground water.

Hazardous Waste Division

Contact: Sam Mabry, (501) 961-5062

The division distributed educational material at a household hazardous waste amnesty day in Ocean

Springs. An informal seminar for wood treaters was conducted to tell them about the new regulations which affect their industry.

Air Division

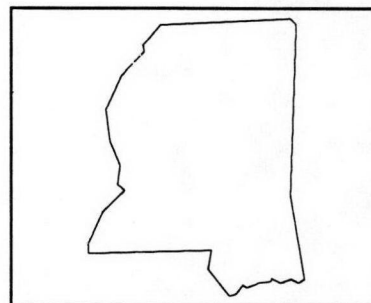
Contact: Dwight Wylie, (601) 961-5104

The division co-sponsored a seminar for the regulated community on the Title V program, regulations, and fees.

Pollution Prevention Program

Contact: Thomas Whitten, (601) 961-5241

This division co-ordinates an annual southeastern environmental conference on the Mississippi Coast, as well as eight recycling demonstration projects.



NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

Contact: Anne Taylor, (919) 733-0711

Legislatively established Office of Environmental Education

The 1993 Session of the North Carolina General Assembly established the Office of Environmental Education within the Department of Environment, Health, and Natural Resources (EHNR) in order to formally promote environmental education in the state. The office must encourage coordination between the various state and federal agencies, citizens groups, and the business and industrial community. Its other duties include assisting the North Carolina Department of Public Instruction integrate environmental education into course curriculum, and serving as a clearing point for environmental education information.

Organizational Structure

The office's organizational structure has been designed to include the department's library, which will be expanded to include an information resource center for environmental education and communication. The new office is being staffed with environmental education specialists and information resource managers.

Environmental Education Advisory Council

This council is internal and informal at present. It is made up of environmental education specialists and interests within the agency. Project Estuary, Project Learning Tree, Project Wild, Project WET, Soil & Water, the Zoological Park, the three North Carolina Aquariums, and the Museum of Natural Sciences make up a sample of the agencies represented. The productive organizational development of approximately forty five participants on this council, each with invaluable environmental education experience and expertise, is underway.

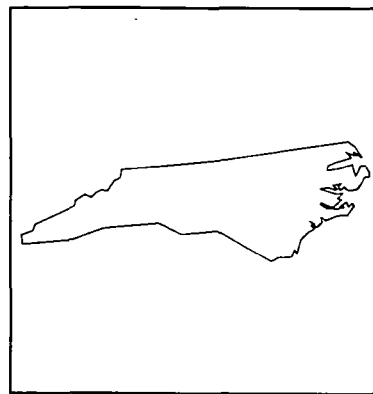
Environmental Education selected as a top EHNR priority

EHNR has established its goals and objectives with specific initiatives identified to achieve those goals and objectives. "Expand Environmental Education" has emerged as a top priority commitment for this administration. Initiatives under the environmental education banner include: 1) strengthening the existing environmental education programs listed above, plus others, 2) promoting environmental education under the State's "Year of the Coast" theme, 3) building a new Museum of Natural Sciences, and 4) a comprehensive environmental education plan including teacher

training and outreach, outdoor classrooms, and the development of appropriate technology such as multi-media, geographic information system (GIS), and information highway.

A Guide for Teachers: Directory of EHNR Environmental Education Programs

Under the leadership of a University of North Carolina-Chapel Hill graduate student, North Carolina is now in a position to publish a compilation of the environmental education programs within EHNR in order to provide access to these programs by interested teachers and educators. Through a public-private partnership to commemorate North Carolina's Year of the Coast, a printing of 20,000 copies of a special coastal edition of the Directory has been arranged.



SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

BUREAU OF AIR QUALITY

Contact: Mohamed Abdelsalam, (803) 734-4750

Educational Displays

The bureau exhibited at several public, environmental outreach opportunities. Some items used at these events included a table-top display, a touchscreen computer quiz, and informational handouts.

"Environmental School"

The bureau co-hosted the first "Environmental School" of the Department of Health and Environmental Control (DHEC), which was attended by more than 60 fourth-grade students at the Saluda River Elementary School.

Citizen and Student Inquiries

The bureau responded to dozens of air quality inquiries by mailing relevant information to the inquirers. Requests for presentations often followed. The common theme of the inquiries was requests for help with research projects, science fairs, summer camps, curriculum development, and senior theses.

Public-Private Partnerships

The bureau and the Boy Scouts of America participated in establishing an Explorers' post at DHEC. The bureau also worked with the South Carolina Public Service Authority to develop an environmental essay contest.

Assistance with New Regulations

The bureau co-sponsored a workshop with the U.S. EPA and the South Eastern Fabricare Association to help the state's dry-cleaner owners and operators comply with a recently issued federal standard.

NONPOINT SOURCE WATER POLLUTION

Contact: Phil Hayes, (803) 734-5078

Olympic Gold Medalist Spokesperson

Melvin Stewart of Fort Mills, South Carolina, the most decorated individual Olympian ever from the Carolinas, served as DHEC's Nonpoint Source Water Pollution (NSWP) Spokesperson and taped two public service announcements for Nonpoint Source water pollution education. The first announcement encouraged seventh and eighth graders to take part in the South Carolina Environmental Awareness Student Awards Competition at the Riverbanks Zoo. The second, now being broadcast as a public service announcement by television stations, encourages South Carolinians to keep the state's waters clean. Stewart's involvement in the project was the result of a public and private partnership between DHEC and Muhleman Marketing in Charlotte.

South Carolina Environmental Awareness Student Awards Competition

In 1993, during Riverbanks Zoo's Conservation Day, more than 300 seventh and eighth graders demonstrated their environmental knowledge during the first annual South Carolina Environmental Awareness Student Awards Competition. Of these, 48 were honored as semi-finalists, with 15 winners sharing in the \$1,200 in

savings bonds presented by the South Carolina Electric and Gas Company. Rich Nawyn, Chief of Environmental Education and Public Outreach for the U.S. EPA's Region IV, in Atlanta, Georgia, served as judge and awards presenter. Jim Gandy, Chief Meteorologist at WIS-TV, in Columbia, South Carolina moderated the environmental competition. This program, designed to be replicated in other states and funded in part by the U.S. EPA, had three divisions of competition which were: Environmental Awareness Poster; Environmental Awareness Essay; and Environmental Awareness Bowl. The poster and essay theme was "My Role in Turning the Tide on Water Pollution." The competitions were sponsored by DHEC's NSWP Education program, the South Carolina Electric & Gas Company, and the Riverbanks Zoo.

Champions of the Environment

"Champions of the Environment" is a statewide educational and awareness program for students and classes involved in activities that support conservation, water pollution education, and other environmental causes. The program is a co-operative, educational partnership with Union Camp, WACH-TV, Dupont and DHEC's NSWP Program.

During the 1993-94 school year, eighteen 60-second news interview segments are being made, each of which features a primary or high school student who has achieved significant results in an environmental project and named a "Champion of the Environment". The segments are being aired 25 times each for a total of 450 viewings.



Leigh Bailey, a pupil at the E.L. Wright Middle School, Columbia, South Carolina, puts a Champions medallion around the neck of Lauren Lucas, a 12-year-old pupil at Northside Middle School, West Columbia, South Carolina. Lucas' winning program was entitled KIDS ACT (i.e., Kids Accepting Challenges Today). Lucas later won first prize in a magazine's national essay contest with an essay about the Champion program and was recommended for an appearance in a 1994 ABC special hosted by Peter Jennings, in which President Clinton will talk with school children about their concerns.

OFFICE OF SOLID WASTE REDUCTION & RECYCLING

Contact: Richard Chesley, (803) 734-4957

Presentations

The Office of Solid Waste Reduction and Recycling (OSWRR) made more than 150 presentations to schools, local governments, and civic groups.

Solid Waste and Recycling Curriculum

OSWRR, in conjunction with the state's Department of Education, a state-wide team of teachers, and private consultants completed the kindergarten through eighth grade segment of "Action for a Cleaner Tomorrow: A South Carolina Environmental Curriculum." The development of the activity-based, inter-disciplinary curriculum began in March 1992. Pilot testing and training sessions were held statewide during 1993.

Buy Recycled Workshops

The office held a workshop entitled "Buying Recycled: Or How to Put the Cart Before the Horse" for more than 200 procurement officers, county recycling coordinators and others. The workshop was sponsored by OSWRR, the National Recycling Coalition, Sonoco Products Co., and Cracker Barrel Restaurants.

Household Hazardous Waste Collection Day

OSWRR held a Household Hazardous Waste Collection Day in connection with Earth Day. More than six tons of household hazardous waste were collected from about 270 people from a two-county area. OSWRR developed and distributed an educational video for communities to use to set up a household hazardous waste collection event.

"Environmental School"

OSWRR acted as co-host of the department's first "Environmental School."

Promotional Posters

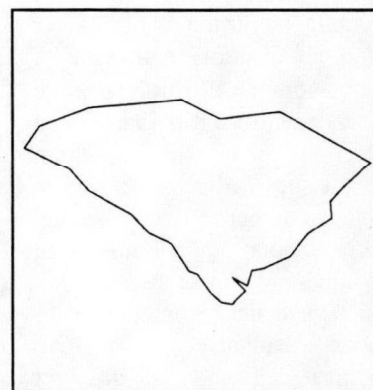
OSWRR developed posters featuring NASCAR driver Kyle Petty, Green Bay Packer Sterling Sharpe, and NASA astronaut Col. Charles F. Bolden, which were distributed free to schools statewide.

Public-Private Partnerships

OSWRR and Pepsi Cola, in Columbia, promoted aluminum can recycling at schools and the University of South Carolina. In addition, OSWRR and radio station WNOK-FM, Columbia, and Richland County, held a Super Recycling Day, in October, and collected more than five tons of recyclables.

Educational Displays

Staff members set up displays at various workshops and seminars and the South Carolina State Fair, in Columbia.



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Contact: Wayne Scharber, (615) 532-0220

Wayne K. Scharber, Assistant Commissioner, made presentations to two regional meetings of the state's Pork Producers Association. In these, he described the regulatory process which assures compliance with the Tennessee Water Quality Control Act of 1977. Field examples were shared to promote a better understanding of the program, and a number of farmers shared their experiences of how to relate to the regulatory agency.

503 Sludge Seminars

Roger LeMasters, Manager of the Municipal Facilities Section, Division of Water Pollution Control conducted four statewide seminars for waste water treatment operators and supervisors. More than 240 professionals who attended the seminars received instructions on the new 503 sludge and bio solids regulations.

Nonpoint Source Symposium

Dr. Andy Barrass, Program Director of the Non Point Source Program, Division of Water Pollution Control co-hosted a symposium with Austin Peay State University entitled Riparian Habitat Protection and Reconstruction. The issues discussed were problems associated with stream bank erosion, methods and techniques to control stream bank erosion, and the reconstruction of riparian habitat. Sixty-five participants from 40 different agencies participated in the three-day conference.

Leak Detection Seminars

Lamar Bradley, Deputy Director, Division of Underground Storage Tanks held three seminars across the state in conjunction with the Tennessee Oil Marketers Association. More than 200 participants heard discussions on new technologies associated with leak detection and reviewed new tank standards.

Solid and Hazardous Waste Conference

The 22nd Annual Solid/Hazardous Waste Conference and Exhibition was held in April. This event set a new attendance record, with more than 1,100 participants and more than 100 exhibitors. The conference is the Division of Solid and Hazardous Waste Management's main communication tool with which to provide programmatic information and to learn from problems and success stories shared by staff, the regulated community, consultants, the public, and vendors.

Bureau of Resources Management

Contact: Rick M. Sinclair, (615) 532-0734

Mobile Solid Waste Exhibit

The Division of Solid Waste Assistance entered into a public-private partnership with TVA and the Tennessee Soft Drink Association to design and operate a mobile exhibit, which carries a small reference library and more than 50 publications for distributors. It also has two video units and about 20 video tapes or video loops for use by special community programs. Since its dedication in February 1993 by Governor McWherter, the exhibit has visited 46 counties, cities, or

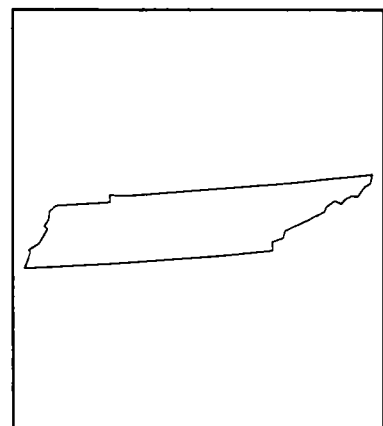
schools, primarily in western and middle Tennessee. It has attracted national attention and was booked into two regional and two national conferences in the fall of 1993.

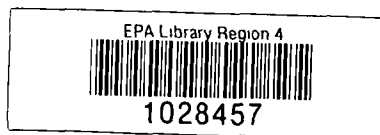
Workshops on Waste Reduction and Recycling

A wide range of audiences including 4-H clubs, local government officials, recycling center operators, and industries took part in workshops on waste reduction and recycling provided by the division. Topics included the state mandated 23% reduction rule, co-operative marketing and transportation, designing solid waste programs, and industrial waste audits.

Radon and Real Estate Workshops

Workshops co-sponsored by the American Lung Association, EPA, and local real estate associations were held in three locations across the state by the Radon Program of the Pollution Prevention and Environmental Awareness Division. Issues concerning radon and real estate transactions, including legal liability and other environmental hazards were discussed.





ACKNOWLEDGEMENTS

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