

ADEM UPDATE

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Segment of Dry Creek No Longer Impaired for Ammonia



The installation of alternative watering sources, such as this pond, helped prevent livestock from directly accessing Dry Creek.

A 12-mile segment of Dry Creek in Blount County (from Locust Fork to its source) has been removed from Alabama's Section 303(d) List of Impaired Waters in response to the implementation of a watershed restoration project. The project has been recognized by the U.S. Environmental Protection Agency in their recently published, "Nonpoint Source Success Stories."

Dry Creek is classified as Fish and Wildlife but was not meeting those specific water quality standards. The Department assisted local stakeholders in developing a watershed management plan to mitigate the negative impacts of nonpoint source pollution in the watershed and then provided \$208,220 in Clean Water Act Section 319 grant funds to support the installation of on-the-ground best

management practices to improve water quality. Federal, state, and local agencies along with landowners also partnered together to provide \$147,000 in grant matching funds to implement a variety of conservation and restoration practices.

Several landowners installed thousands of feet of exclusion fencing and provided alternative watering sources to prevent livestock from having direct access to the creek. These practices reduced nutrient and pathogen runoff from pasture lands and helped maintain stream-bank integrity. In addition, alum (aluminum sulfate) was applied to poultry litter to reduce phosphorus, ammonia, pH, and pathogen levels and numerous education/outreach activities were held at local schools for students, landowners, and other interested stakeholders.

Water quality monitoring conducted by the Department subsequent to the implementation of best management practices revealed no exceedances of water quality standards for ammonia. Thus, Dry Creek was removed from the 2012 Section 303(d) List of Impaired Waters. Additional grant funding has been awarded to continue with the implementation of the watershed management plan to target the remaining water quality impairments.

In addition to ADEM, watershed project partners include the Blount County Soil and Water Conservation District, the U.S. Department of Agriculture - Natural Resources Conservation Service, Cawaco Resource Conservation and Development Council, and the Alabama Department of Public Health.



Exclusion fencing was installed to keep animals away from streams.

High School Students Visit for Earth Day Event

The Alabama Department of Environmental Management celebrated Earth Day 2013 by hosting a special event for almost 100 area high school students. On April 17, students from G.W. Carver, Jefferson Davis, and Holtville high schools visited the ADEM central office on Coliseum Boulevard to learn about environmental programs that are being implemented on a daily basis to protect Alabama's air, land, and water resources.

The visiting students received guided tours and hands-on demonstrations from ADEM staff related to a wide-range of environmental programs including fish tissue monitoring, water quality sampling, air monitoring, recycling, solid waste disposal, and efforts that ensure Alabamians are provided with a safe, healthful environment. Students also learned about career opportunities at ADEM and were encouraged to pursue careers in science-related fields.

"ADEM scientists, engineers, geologists, meteorologists, chemists, biologists, and other professionals have dedicated their careers to protecting Alabama's natural resources," said ADEM Director Lance LeFleur. "We are pleased to provide this opportunity to educate high school students on the benefits of safeguarding the environment and provide them with information on career opportunities in math and science."

The event lasted four hours and included a check presentation to Jefferson Davis High School and G.W. Carver High School for their participation in the "Rep Your School Recycling Challenge." (See Below)



High School students received hands-on demonstrations at ADEM

Recycling Challenge Increases Awareness



ADEM Director Lance LeFleur presents a \$451.80 check to the principal of G.W. Carver High School

In an effort to raise awareness and provide an educational experience for the merits of recycling, ADEM invited two Montgomery high schools to participate in the "Rep Your School Recycling Challenge." The event was designed to motivate students to do their part to increase recycling in Alabama. The program had three simple steps that include sign up to earn cash for your school, challenge each student/teacher to participate, and report on your success.

In March, Jefferson Davis High School and G.W. Carver High School participated in the challenge. At the end of the competition week, G.W. Carver High School had the largest amount of recycled materials (over 1,000 pounds) receiving \$451.80 for their efforts while Jefferson Davis High School received a check for \$109.20.

Recycling in Alabama is a \$6 billion industry that employs more than 10,000 people. A ten percent increase in recycling could yield an additional 1,400 new jobs with an estimated, gross personal income of over \$66 million. ADEM is proud to provide high school students with this opportunity to represent their school in this recycling challenge which benefits local communities as well as Alabama's environment.

Joe's Branch Restoration Project Receives International Recognition

ADEM and a diverse group of stakeholders have been recognized as the recipient of the International Green Apple Award for their implementation of a unique project to improve water quality, reduce pollutant loads, and support habitat enhancements in the Joe's Branch Watershed. Joe's Branch, which flows into D'Olive Bay, had previously been identified by ADEM as being impaired due to severe erosion and siltation. This severe erosion and large pollutant load destroyed critical habitat, smothered aquatic organisms, and resulted in the loss of large areas of sea grass in D'Olive Bay. These areas of sea grass are vital to the reproduction of numerous aquatic organisms including fish, shrimp, crabs, and benthic macro invertebrates.



ADEM and a diverse group of stakeholders were presented the International Green Apple Award for Joe's Branch Restoration Project

In an effort to reverse the negative impacts in the Joe's Branch Watershed, ADEM provided financial and technical support for the installation of a Regenerative Step Pool Storm Conveyance System. The use of a Regenerative Step Pool Storm Conveyance System is an innovative approach to managing storm water runoff from highly developed urban areas. The system includes a porous material to filter storm water and a network of riffles and pools to reduce storm water velocity. In addition to lowering storm water velocity, the system also creates resource value by utilizing natural, "green" infrastructure that is aesthetically pleasing and provides habitat for plants and animals.

The installation of this Regenerative Step Pool Storm Conveyance System also serves as a demonstration project that can easily be adopted in other areas. The project highlights "green" storm water management techniques that provide local officials and developers with a model to emulate as they move forward to accommodate future growth.

The project has been supported by approximately \$600,000 from ADEM and the U.S. Environmental Protection Agency. These federal funds also require local stakeholders to provide a minimum of 40 percent in matching funds. However, local stakeholders have committed more than \$500,000 in matching funds, which far exceeds the minimum requirements, illustrating the commitment of local stakeholders to the project, and their vested interest in playing an active role in the restoration of the Joe's Branch Watershed.

College Students Receive Environmental Education



UWA students received hands-on educational opportunities at the Alabama Nature Center, with input from ADEM staff

Earlier this spring, freshmen at the University of West Alabama were the first college students to participate in the Water World Program at the Alabama Nature Center. The students learned about potential career opportunities in conservation and environmental fields while the various programs focused on hands-on stream monitoring and the management of water resources.

The program was designed to showcase nature and education, while giving students an opportunity to learn more about potential career paths. Not only were students exposed to nature and water habitats, they had the opportunity to hear from experts like Alicia Phillips and Ashley Lockwood, ADEM stream ecologists. Also, Aaron Goar and Gina Curvin, ADEM large river and reservoir scientists along with Michael Harper,

senior environmental engineer at the Alabama Department of Economic and Community Affairs, presented examples of career paths and emphasized the importance of their studies.

ADEM UPDATE Available Online

The Alabama Department of Environmental Management publishes the *ADEM UPDATE* quarterly to inform Alabamians on the latest news and activities of the Department. As a cost-savings measure, the *ADEM UPDATE* is no longer printed. It is distributed electronically and available online through the publications link on the ADEM website at adem.alabama.gov.



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