



*The mission of the Mississippi Department of Environmental Quality is to safeguard the health, safety, and welfare of present and future generations of Mississippians by conserving and improving our environment and fostering wise economic growth through focused research and responsible regulation.*

# Mississippi Department of Environmental Quality Environmental News

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MAY 2014

## MDEQ AWARDS REGIONAL RECYCLING COOPERATIVE GRANTS

On May 22, MDEQ announced the award of the agency's inaugural Regional Recycling Cooperative Grants to four community projects in the state. More than \$1 million in grants will be used to fund regional cooperative recycling projects in the Cities of Greenwood, McComb, Natchez, and Oxford. Each of the grant recipients, along with their partner communities, will use the grant funding to develop or enhance recycling systems in their region to help achieve the state waste reduction and recycling goal of 25 percent.

"We are excited to launch this new grant program and to work with these cities and their partners to expand recycling services and recycling access in the state. Increasing the access to recycling to more Mississippians means that more materials can be diverted from landfills and put back into manufacturing uses where the materials can be used over and over again. The continued use of recycled materials in manufacturing has multiple benefits such as conserving raw material resources, reducing our reliance on imports from other countries, conserving energy, reducing pollution, reducing our reliance on landfills, and gaining the economic benefit of using materials multiple times rather than simply disposing of the materials," said Trudy Fisher, MDEQ Executive Director.

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- The **City of Greenwood**, in partnership with Leflore County and the Cities of Itta Bena, Sidon, and Indianola, will receive a grant award in the amount of \$399,700 to increase and expand recycling efforts in the region. Funds will be used to provide curbside recycling in parts of Greenwood with plans to expand the service throughout the city. Additionally, new drop-off locations will be developed in each of the partner communities. Grant funds will also be used to acquire curbside recycling bins, drop-off recycling containers for partner communities, and vehicles and equipment.
- The **City of McComb**, in partnership with Pike County and the Cities of Osyka, Magnolia, and Summit, will receive a grant award in the amount of \$123,916 to expand current recycling efforts in Pike County. The project involves establishing recycling drop-off stations in all of the partner communities, recycling drop-off containers in centrally accessible locations, and a public education and outreach program.
- The **City of Natchez**, along with the City of Brookhaven and Wilkinson County, will use the grant award of \$317,162 to enhance the current curbside recycling programs in the City of Natchez and the City of Brookhaven. Additional recycling collection points will be established for the general public in Wilkinson County and at strategic locations at local college campuses, the regional airport, the port commission, the convention center, and other high visibility locations in Natchez. Recycling collection containers placed at these locations will provide greater public access to recycling in public venues and maximize material collection. A public education and outreach campaign will be developed to promote these expanded recycling efforts by the partner communities and to help the public understand the benefits of recycling and the importance of their participation.
- The **City of Oxford**, in partnership with the City of Batesville, Panola County, Lafayette County, the University of Mississippi, and Calhoun City, receives a grant award of \$227,160 to enhance the curbside recycling system in the City of Oxford and to expand recycling access in each partner community. The project includes adding recycling collection stations on the Ole Miss campus, the development of a recycling education and outreach campaign, recycling drop-off containers for partner communities, curbside recycling bins for the City of Oxford, and new equipment to transport recycling containers to the Oxford materials recovery facility.

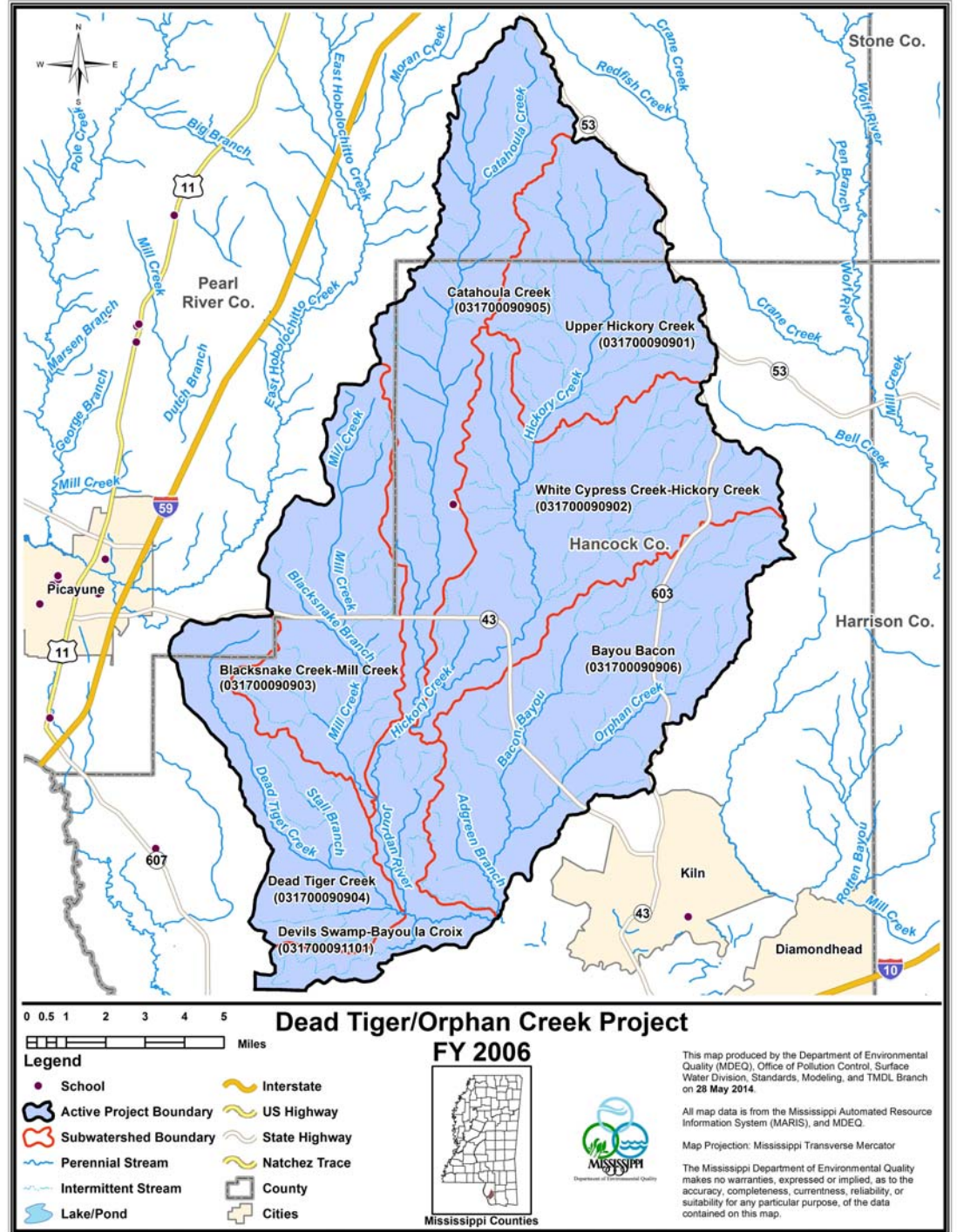
## RESTORING THE BIOLOGICAL INTEGRITY OF ORPHAN CREEK

### *A Success Story*

Agricultural nutrients, cattle with access to the creek or tributaries, and sediment erosion in pasture land contributed nonpoint source pollution to Mississippi's Orphan Creek. Water quality monitoring conducted in 2001 and 2003 indicated that Orphan Creek was not attaining aquatic life designated use support, which is intended to assure that a water body is healthy enough to support the propagation of fish and wildlife that use the water. As a result, the Mississippi Department of Environmental Quality (MDEQ) added Orphan Creek to the state's 2006 Clean Water Act (CWA) section 303(d) list for aquatic life use impairment.

The Dead Tiger/Orphan Creek Nonpoint Source project significantly reduced sediment and nutrients entering Orphan Creek through the implementation of best management practices (BMPs). After BMPs were installed, biological community data were collected at three monitoring locations on Orphan Creek in 2009. Using the data collected in 2009, Orphan Creek was assessed as attaining aquatic life use support as part of the 2012 section 305(b) statewide assessment process.

*See page 4 for map*



## Problem

The Dead Tiger/Orphan Creek Watershed is located in Hancock County in south Mississippi and spans approximately 25,146 acres. The watershed is comprised of approximately 44 percent pastureland, 54 percent timberland, and two percent wetlands, urban and other. Orphan Creek is part of the Upper Jourdan River Drainage Area that was listed on Mississippi's 1998 CWA section 303(d) list of impaired waters (Waterbody ID: MS112E). This listing included all waters of the Upper Jourdan River Drainage Area, which was an entire 11-digit HUC.

Biological community data are routinely used to assess waterbodies to determine if the stream is healthy enough to support a balanced aquatic community. In 2001, a targeted monitoring program was launched to collect biological community data on all wadeable waters outside of the Mississippi Alluvial Plain that were included in the CWA section 303(d) list and Orphan Creek was monitored as part of that program. MDEQ collected biological community data on Orphan Creek in 2001 and 2003. Using MDEQ's index of biological integrity, the Mississippi Index of Stream Quality (MBISQ), the data from 2001 and 2003 scored 53.2 and 51.46 respectively. According to the reference condition established for this region from the original calibration of the index, the scores needed to be higher than 61 to be considered attaining aquatic life use support. As such, the waterbody failed to support the aquatic life designated use. Using those data, a 6.2 mile segment of Orphan Creek (Waterbody ID: 203811) was placed on the 2006 CWA section 303(d) list for aquatic life use impairment and was subsequently selected as a priority watershed for restoration activities by MDEQ. In 2007, Orphan Creek data were analyzed according to EPA's Stressor Identification Guidance. Following this guidance, all available information collected in that waterbody, along with information on point and nonpoint source pollution and landuse-land cover data are used to determine the primary probable cause of the impairment to the stream. Resulting from this process, sediment and nutrients were identified as primary and secondary probable stressors causing the aquatic life use impairment. Sources in the problem areas included agricultural nutrients, cattle with access to the creek or tributaries, and sediment erosion in pasture land.



Pasture and hayland planting was necessary in establishing long-term vegetation in order to reduce sediment contributions from highly erosive areas near Orphan Creek.



Cattle fencing along Orphan Creek was an integral part of creek restoration in areas of heavy cattle influence. The new fencing will keep cattle from being able to gain access to the creek, alleviating direct nutrient loads within the creek.

## Project Highlights

In 2007, MDEQ partnered with the Mississippi Soil and Water Conservation Commission and the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) to implement best management practices (BMPs) within the watershed. BMP installation within the Orphan Creek sub-watershed began in early 2008 and was completed later that year. The BMPs included over 190 acres of nutrient management, nearly 40 acres of pasture and hayland planting, and over 2,800 feet of cattle fencing within the Orphan Creek sub-watershed. After addressing the causes of pollution and demonstrating in-stream improvements within Orphan Creek, BMP installation continued through 2011, comprising a total of 43 BMPs covering 533 acres within the much broader Dead Tiger/Orphan Creek Watershed.

## Results

In 2009, MDEQ returned to the original 2001 and 2003 sampling location in Orphan Creek to collect biological community data. The score was 76.5. Data were also collected at two new sites on Orphan Creek and scored 78.9 and 82. The MBISQ was re-calibrated in 2008. As a result of the recalibration the threshold for attainment in this region was 66. Using the 2009 data from the original sampling location and the two new sites, Orphan Creek was assessed as attaining the aquatic life use in the 2012 305(b) reporting cycle.

## Partners and Funding

Due to the high level of stakeholder interest, the restoration of Orphan Creek was a collective effort between the Mississippi Soil and Water Conservation Commission, the Mississippi Department of Environmental Quality, the U.S. Environmental Protection Agency, the NRCS, and the Hancock County Soil and Water Conservation District. The total cost of the overall Dead Tiger/Orphan Creek Watershed project was \$206,779, of which \$122,247 was comprised of CWA section 319 funds. Section 319 funds were expended in the following way: \$15,319 for technical assistance; \$3,273 for education and information outreach; and \$103,655 for BMP installation. Participating state and local stakeholders contributed a total of \$84,532 towards the implementation of the watershed project.

## ENHANCE SPOTLIGHT: TOYOTA



Toyota Motor Manufacturing Mississippi, Inc. joined the enHance program in 2014 at the Leader level. enHance is a voluntary environmental stewardship recognition program initiated by MDEQ. Learn more, including how to apply, at [www.enhance.ms](http://www.enhance.ms).

### 1. Why did Toyota apply for the enHance program?

We are continuously examining our business practices in terms of people and planet. As we continue improving our product and production process, we also intend to create a positive impact on our local communities. Cross collaboration with business partners participating in the enHance program will help us improve efficiency and potentially lower operating costs while providing a cleaner and healthier environment for our team members, their families and the local community.

### 2. How is membership beneficial for your company?

enHance membership will expose Toyota Mississippi to environmental best practices that will help develop our understanding of new green initiatives locally, statewide and nationally. Toyota will also be able to share its environmental commitment and motivation with participating industry as they become involved in environmentally friendly practices.

National Public Lands Day at Stafford Park in Pontotoc.





Earth Day activity with  
Boy Scouts

### **3. What steps has your company taken to be more environmentally friendly? Why?**

Toyota Mississippi has implemented a sustainable plant strategy that outlines how our facility will reduce wastes, become a model sustainable plant and complete Wildlife Habitat Certification. This strategy includes an environmental policy that outlines how each Team Member can improve our green culture by recycling, conserving energy and reducing waste. We have also installed solar panels and wood duck boxes in an effort to preserve our property.

### **4. How are you involved in your community?**

Toyota Mississippi is very proactive in community outreach and education. Each year 500 to 700 Toyota Mississippi team members and their families celebrate National Public Lands Day by performing beautification, conservation, and restoration projects at a public land in one of our three primary impact counties. We also support Boy Scouts projects that help earn Wildlife Conservation badges and the Girl Scouts North Mississippi Green Festival. In the future, we will work with our local neighbors and community to implement areas for environmental sustainability and education.

### **5. Would you recommend enHance to others?**

Yes. We are committed to doing our part to enhance a green culture.

### **6. Tell us about Toyota in Blue Springs. What do you manufacture?**

Located in beautiful Blue Springs, Mississippi, the newest of our 10 U.S. manufacturing plants is a model plant for sustainability. It's very efficient in its use of resources and materials, so it sends less waste to landfills while sending thousands of meticulously crafted Corollas to market. Along with being kind to the environment, our \$870.8 million plant is a real boost to the local economy, employing some 2,000 team members who build approximately 170,000 vehicles a year.



## MISSISSIPPI JOINS INTERSTATE MINING COMPACT COMMISSION

Stan Thieling and Michael B. E. Bograd, Office of Geology

After several years of interaction with the Interstate Mining Compact Commission (IMCC) and receiving valuable information from that organization, Mississippi applied for associate membership in the Compact in the fall of 2013 by means of a letter from Governor Phil Bryant. At the urging of Governor Bryant and MDEQ Executive Director Trudy Fisher, Mississippi sought full membership in the Interstate Mining Compact in 2014. The Mississippi Legislature subsequently passed enabling legislation during this year's session to bring Mississippi into the Compact as a full member, and Governor Bryant signed the bill into law on March 21, 2014. The Governor serves as Mississippi's representative on the Compact.

Stan Thieling, Director of the Coal Mining Division in the Office of Geology, attended the IMCC annual meeting in Reno, Nevada, in April. He was recognized for his role in Mississippi attaining associate membership and then full membership in the Compact.



L-R: Scott Fowler of the Illinois Department of Natural Resources, who served as chair of the awards committee, MDEQ's Stan Thieling, and Greg Conrad, IMCC Executive Director.

## MDEQ HELPS WITH STORM DEBRIS MANAGEMENT

Photos from the Lee County HHW collection site.

After tornadoes struck the state on April 28, MDEQ staff deployed to the affected counties to help local officials and residents across the state with the storm damage and to provide guidance on the proper management of debris. MDEQ also organized Household Hazardous Waste collection sites in Winston County, Lee County, and Jones County.





## THERMAL IMAGING FOR PREDICTIVE MAINTENANCE & ENERGY SAVINGS TRAINING

**WHEN:** Thursday, June 5, 2014; 11:00AM to 2:00PM (lunch will be served)

**WHERE:** Mississippi State University's CAVS-E Facility in Canton  
153 Mississippi Parkway, Canton, MS 39046.

**COURSE OBJECTIVE:** This lunch and learn training will cover how thermal imaging cameras can be used to evaluate a company's electrical systems, equipment, and facility design to identify potential energy savings opportunities and maintenance issues. Learn how TI cameras are useful tools to detect air and water leaks, missing or inadequate insulation, and other potential issues that result in wasted energy usage and excessive energy costs. Learn how TI cameras can be used for preventive and predictive maintenance, by locating potential safety hazards or problem areas that could result in equipment failure and downtime. Learn how you can take advantage of this technology to improve your operations.

### WHO SHOULD ATTEND?

Managers, Engineers and Maintenance personnel who have responsibility for preventive maintenance operations or energy management and want to learn more about the latest technology available will want to attend this workshop.

### INSTRUCTOR:

Bryan Buhler is currently working for Fluke Corporation, a manufacturer of Industrial Test Equipment. He is an Electrical Engineer by training and has worked in the field of Electrical Test Equipment for 32 years.

**REGISTRATION:** Please call Jill Sellers at (601) 407-2746 or email [jsellers@cavse.msstate.edu](mailto:jsellers@cavse.msstate.edu) for reservations. The price per participant is \$50.00.

**CO-SPONSORED BY:** MDEQ enHance Environmental Stewardship Program.

Tips from MDEQ's Pollution Prevention (P2) staff to save energy and money. Find more information at [consumerenergycenter.org/tips/summer](http://consumerenergycenter.org/tips/summer).

## 10 SUMMER TIME ENERGY SAVING TIPS

- ▶ Be a speedy chef. Nothing is more energy efficient for cooking than a microwave. It uses two-thirds less energy than a stove.
- ▶ Push a button to wash your dishes. Your dishwasher uses less water than washing dishes by hand. Then let dishes air dry to save even more!
- ▶ Fill up the fridge. Having lots of food in your fridge and freezer keeps them from warming up too fast when a door is open.
- ▶ Turn up your thermostat. Set your thermostat to 78 degrees when you are home and 85 degrees or off when you are away. Using ceiling or room fans allows you to set the thermostat higher.
- ▶ Use your appliances wisely. Do your laundry efficiently by using the warm or cold water setting for washing your clothes. Always use cold water to rinse clothes. When you need to use the dryer, run full loads, use the moisture-sensing setting, and clean the clothes dryer lint trap after each use.
- ▶ Operating swimming pool filters and cleaning sweeps efficiently. Reduce the operating time of your pool filter and automatic cleaning sweep to four to five hours, and only during off-peak time.
- ▶ Eliminate wasted energy. Turn off appliances, lights, and equipment when not in use. Unplug electronic devices and chargers when they aren't in use—most new electronics use electricity even when switched "off." Turn computers and printers off at the power strip.
- ▶ Replace air conditioner filters. Dirty filters restrict airflow and can cause the system to run longer, increasing energy use. Replace filters monthly for maximum benefit.
- ▶ Plug your home's leaks. Weather-strip, seal, and caulk leaky doors and windows and install foam gaskets behind outlet covers.
- ▶ A whole house fan permanently installed in your attic draws cool air into your home through the windows while forcing hot air out through your attic vents.

SAVE THE DATE

# WATERFEST

CELEBRATING AND PROTECTING THE BARNETT RESERVOIR  
[www.rezonate-ms.org](http://www.rezonate-ms.org)

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4PM-7PM  
JUNE 28TH  
OLD TRACE PARK

IN CONJUNCTION WITH  
THE  
THIRD ANNUAL  
*Independence Day*  
CELEBRATION



Logos for Rezonate! (Mississippi Department of Environmental Quality), The Barnett Reservoir Foundation, and The Rez.



*Photos from WaterFest in 2013. Come join the fun, and if you would like to volunteer, please contact Robin Carter at 601-961-5348.*

## MDEQ TO HOST RUBBISH SITE OPERATOR TRAINING

MDEQ is hosting the Mississippi training course for Class I rubbish site operators on June 11 and 12, at the Cabot Lodge – Millsaps on North State Street in Jackson. The course offers an opportunity to fulfill state training and testing requirements for the Class I Rubbish Site Operator Certification and updates general knowledge of Class I Rubbish Site regulatory and operational requirements. MDEQ also allows currently certified operators to attend as a refresher course for Continuing Education Units (CEUs).

The course is a day and a half class with a written examination on the second day. Persons who attend the course, pass the written examination, and meet the experience and education requirements may apply to MDEQ for a certificate of competency as a Class I rubbish site operator. The examination will not be required for those operators attending for CEUs only. All attendees that complete the class will receive 10 hours of CEUs that can be applied towards renewal of their certification. There is no registration cost for the training; however, all lodging, meal and transportation costs are the responsibility of the attendees.

Course instructors will include the staff of MDEQ and FTN Associates, Ltd. Advance registration for the course is required. For additional information on the training course and details about registration, contact Mark Williams with MDEQ at 601-961-5304 or visit the MDEQ solid waste program web page at: [www.deq.state.ms.us/solidwaste](http://www.deq.state.ms.us/solidwaste).





## **ADOPT-A-STREAM WORKSHOP**

The Mississippi Wildlife Federation along with the Mississippi Department of Environmental Quality will hold a two-day Adopt-A-Stream workshop at Holmes County State Park near Durant on June 17 to 18, 2014.

Adopt-A-Stream is a program that promotes environmental stewardship through training workshops, outdoor field activities and by introducing participants to watershed action projects.

The two-day program provides an in-depth study of watersheds, as well as hands-on training in chemical and biological parameters important to a healthy stream. In addition, the workshop will:

- ▶ Increase awareness of nonpoint source pollution
- ▶ Introduce surveying and mapping of a watershed
- ▶ Increase watershed protection awareness and possible actions that can be taken to help your watershed.
- ▶ A new model of - *It Begins at Home*. With ideas about projects such as:
  - ▶ Storm Drain Marking
  - ▶ Stream Clean-ups
  - ▶ Recycling
  - ▶ Advocacy and More

### **Who Should Participate?**

Educators, land managers, advocacy groups, Scout troop leaders, Envirothon Team advisors, watershed team leaders, environmental educators, concerned citizens, and others. For teachers, two CEU credits are available.

### **Registration Information**

Registration is available on the Mississippi Wildlife Federation/ Adopt-A-Stream website: [www.mswildlife.org/AAS/](http://www.mswildlife.org/AAS/) or by contacting Debra Veeder, Adopt-A-Stream Coordinator at (601)605-1790 or [dveeder@mswf.org](mailto:dveeder@mswf.org).

## SAVING EARTH HISTORY AT THE MUSEUM OF MISSISSIPPI HISTORY

David T. Dockery III, Office of Geology

Zachary Musselman, Geology Department, Millsaps College

I (Dockery) received a request on March 26, 2014, to look at fossil shells at the excavation site of the Museum of Mississippi History to see if they should be salvaged. Meeting me at the site were Richard Horton (Thrash Commercial Contractors), Rick Snowden (Deputy Executive Director of the Department of Finance and Administration), Sherri Hilton (Director of Communications, Department of Finance and Administration), and John Sprayberry (Bureau of Buildings) (Figure 1).



Figure 1. Fossiliferous Yazoo Clay at the construction site of the Museum of Mississippi History. The gray clay at bottom is unweathered and contains chalky fossil shells; above this is brown weathered clay with a potential to swell and shrink. From left to right are Richard Horton (Thrash Commercial Contractors), John Sprayberry (Bureau of Buildings), Sherri Hilton (Director of Communications, Department of Finance and Administration), and Rick Snowden (Deputy Executive Director, Department of Finance and Administration). Picture was taken on March 26, 2014.



The fossils were chalky ghosts of former sea shells in the unweathered (gray) part of the Yazoo Clay (Figure 2). I explained that the chalky Yazoo Clay shells were not of interest, but that those below in the Moodys Branch Formation, a nearshore marine sandy interval, were of interest. I requested that Richard Horton notify me when they began drilling the holes for the foundation piles. On April 23, 2014, Richard sent me an email stating: "I wanted to let you know that we have started drilling in the parking garage area. Just give me a call when you want to come out." I came out the next day and showed Richard, and the operator of the front end loader, the drill interval with the fossiliferous sand. They loaded my pickup truck to the limit with about 1,500 pounds of sand (Figure 3) and loaded it full again the next day. These loads were placed under a shade tree near a water connection to be wet sieved for fossil shells (Figure 4).



Figure 2. Yazoo Clay with a fossil pen shell in upper right of the species *Atrina jacksoniana* Dall, 1898. Picture was taken on March 26, 2014.



Figure 3. Left: Auger drill hole for pile is bringing up the fossiliferous sands of the Moodys Branch Formation. Right: Front end loader delivers a 1,500-pound load of Moodys Branch Formation sand to a pickup truck. Picture was taken on April 24, 2014.



Figure 4. Left: Sieving operation and 3,000-pound pile of Moodys Branch Formation on tarps beneath shade tree. Right: Close-up view of sieve, vegetable washer, and washtub below to collect the fine fraction for re-sieving. Pictures were taken on April 26, 2014.

Even though the auger bit destroyed most of the large shells, many small shells remained intact. Two fossils that were immediately seen at the site were the marine snail *Calyptrophorus stamineus* and the coral *Flabellum cuneiforme wailesi*. The subspecies of the latter was named in honor of B. L. C. Wailes, who drew four plates of fossil shells from the Moodys Branch Formation (Figure 5) for his book on the *Agriculture and Geology of Mississippi* published in 1854. These fossils lived at a time some 38 million years ago before there was a land isthmus connecting North and South America and when the Gulf of Mexico and Caribbean Sea were connected to the Pacific Ocean. The closest living relative to *Calyptrophorus* is the genus *Tibia*, which lives in the western Pacific Ocean, Indian Ocean, and Red Sea (Figure 6).

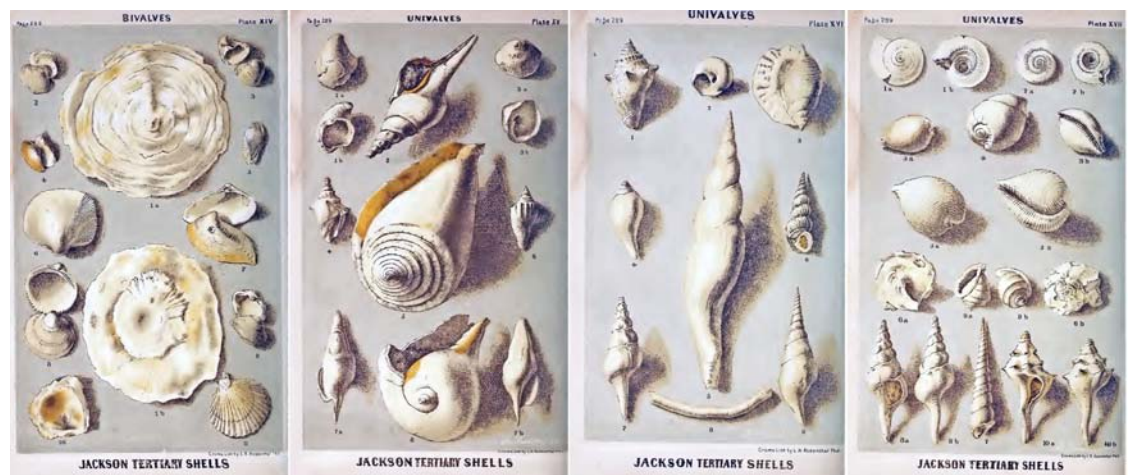


Figure 5. Fossils collected from the Moodys Branch Formation at Jackson, Mississippi, as illustrated by B. L. C. Wailes in his book on *The Agriculture and Geology of Mississippi* (1854, plates 14-17).



Figure 6. Top: *Calyptrophorus stamineus* (Conrad, 1856) from the Moodys Branch Formation (38 million years old) in pile borings at the construction site of the Museum of Mississippi History in Jackson, Mississippi. Web images: Bottom left: Living relative from the Japan and South China Sea, *Tibia martinii* Marrat, 1877. Bottom right: Living relative from the North Indian Ocean and Red Sea, *Tibia insulaechorab* Roding, 1798.

When former Mississippi Governor William Winter took an interest in salvaging fossils from the site, Richard Horton arranged to deliver two 5-yard-dump-truck loads to the grounds of the Mississippi Museum of Natural Science (Figure 7). The grain-size analysis of the Moodys Branch Formation sediments shown in the histogram in Figure 8 was done at the Millsaps College Geology Department laboratory. Here a sample of approximately 115 grams was dried in an oven for 24 hours at 100°C, cooled, disaggregated using a mortar and pestle, and mechanically sieved with a Ro-Tap for 10 minutes. Each size fraction was weighed, washed in an acid bath of 20% hydrochloric acid until no further reaction was detected, and weighed again. The percentage of soluble residue in blue represents the mass of dissolved fossil shells. The insoluble residue in yellow in the very-coarse and coarse sand fractions consists largely of grains composed of consolidated clay and silt. The medium sand fraction is a mix of quartz sand and consolidated clay and silt grains. The fine and very-fine sand fraction is almost exclusively quartz sand and reflects the true grain size of the Moodys Branch seafloor's quartz sand. This sand was winnowed from eroded deltaic deposits of the underlying Cockfield Formation as the "Moodys Branch Sea" transgressed northward across Mississippi and into southeastern Arkansas and southwestern Tennessee.



Figure 7. Left: William Winter and Richard Horton in front of the 5-yard dump truck designated to transport the Moodys Branch fossiliferous sand. Right: George Phillips and the truck driver after the first load was dumped on the grounds of the Mississippi Museum of Natural Science on May 1, 2014.

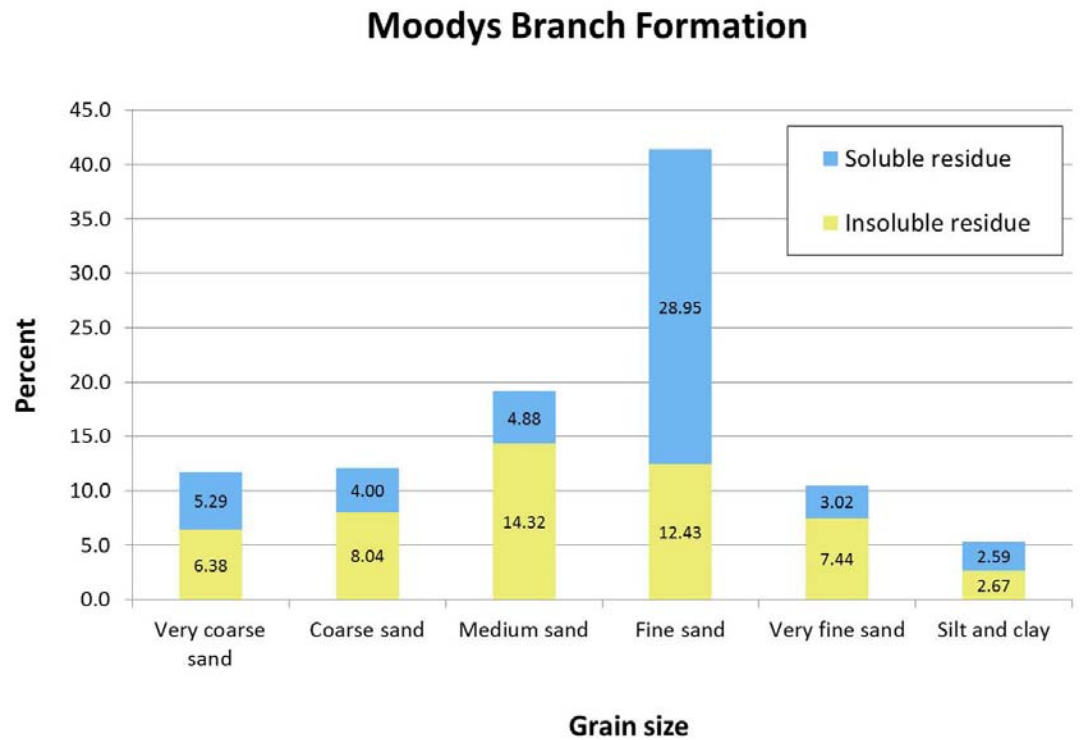


Figure 8. Grain-size analysis of the Moody's Branch Formation from pile borings at the Museum of Mississippi History. This analysis was done at the Millsaps College Geology Department laboratory. The blue soluble residue is from fossil shells.

Information on Earth history obtained from foundation borings at the Museum of Mississippi History construction site adds to the understanding of marine life some 38 million years ago at a time before global cooling, the formation of ice sheets in Antarctica, and associated drop in global sea level. Fossils sieved from salvaged Moody's Branch Formation sediments would make an ideal exhibit on some of Mississippi's really old inhabitants.

## MDEQ ENVIRONMENTAL ACTION LINKS



- Draft permits currently at public notice, <http://opc.deq.state.ms.us/publicnotice.aspx>.
- Permits and certificates issued in the last 90 days, [http://opc.deq.state.ms.us/report\\_permits.aspx](http://opc.deq.state.ms.us/report_permits.aspx).
- General permit coverages issued in the last 90 days, [http://opc.deq.state.ms.us/report\\_gnp\\_issued.aspx](http://opc.deq.state.ms.us/report_gnp_issued.aspx).
- Notices of Intent for coverage under a Statewide General permit received by the Environmental Permits Division, [http://opc.deq.state.ms.us/report\\_gnp\\_notice.aspx](http://opc.deq.state.ms.us/report_gnp_notice.aspx).
- List of the 401 Water Quality Certifications currently at public notice, [http://opc.deq.state.ms.us/report\\_wqc\\_public\\_notice.aspx](http://opc.deq.state.ms.us/report_wqc_public_notice.aspx).
- List of the compliance inspections recently conducted, [http://opc.deq.state.ms.us/report\\_eced\\_tasks.aspx](http://opc.deq.state.ms.us/report_eced_tasks.aspx).
- Orders issued by the Mississippi Commission on Environmental Quality, [http://opc.deq.state.ms.us/report\\_orders.aspx](http://opc.deq.state.ms.us/report_orders.aspx).

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## PICTURES OF THE MONTH

Sunflower

by James Starnes  
Office of Geology.

