



Mississippi Department of Environmental Quality

Environmental News

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.

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MS TIG Welcomes Public Submission of Project Ideas

By Gary Rikard, MDEQ Executive Director

As Mississippi's Trustee on the Natural Resource Damage Assessment Trustee Council, I wanted to pass along information from the Mississippi Trustee Implementation Group (MS TIG) and ask for your input. The MS TIG is beginning the process of writing the Restoration Plan II and would like your ideas regarding natural resource restoration project ideas in Mississippi. Information about the restoration types being considered, as well as the Oil Pollution Act criteria against which project ideas will be evaluated, can be found in the [Programmatic Restoration Plan](#).



We intend to focus on, and would like to receive your project ideas for, these restoration types (found in Chapter 5 of the plan):

- **Wetlands, Coastal and Nearshore Habitats** Projects will focus on two restoration approaches: 1) Create, restore and enhance coastal wetlands, and 2) Protect and conserve marine, coastal, estuarine, and riparian habitats (Sections 5.5.2 and 5.D.1).
- **Nutrient Reduction** (Sections 5.5.4 and 5.D.2)
- **Oysters** (Sections 5.5.9 and 5.D.1)
- **Sea Turtles** (Sections 5.5.10 and 5.D.4)
- **Marine Mammals** (Sections 5.5.11 and 5.D.5)

Submitting Project Ideas

There are two avenues to submit new restoration project ideas or to make revisions to previously submitted project ideas:

[Trustee Council Project Submission Portal](#)

[MDEQ Restoration Project Idea Portal](#)

We will consider new, revised, and previously submitted project ideas relative to the specific restoration types above that are submitted by August 10 for the upcoming Restoration Plan II.

Project ideas submitted after the deadline, along with previously submitted and unselected project ideas, will be considered in future restoration planning.

Updates and comprehensive information about all restoration efforts can be found at restore.ms. Thanks for your assistance and interest.



Hancock County Marsh Living Shoreline

Overall Budget - \$50 Million

Construction Budget – 35 Million

Long Term Maintenance, Monitoring, E&D / CA / Resident Inspection, Contingency – 15 million

Schedule:

1/1/16 – 11/1/18

The Office of Restoration's Natural Resources Damage Assessment (NRDA) program recently took representatives from the Mississippi Trustee Implementation Group (MS TIG) on a tour of the [Hancock County Marsh Living Shoreline project](#) (upper photo).

The breakwaters (top right photo) were constructed along the coast to slow further erosion.

The boats in the two bottom right photos are used for bringing material to create the Living Shoreline.





Orientation photos courtesy of William Carey University.

Restoration Project Update — WCU School of Pharmacy

William Carey University recently received approval from the Accreditation Council for Pharmacy Education to admit the first class to its new pharmacy school at the Tradition campus in Biloxi. The [WCU School of Pharmacy](#) opened July 23 with a class of 58 students.



In September 2017, Gov. Phil Bryant announced that the U.S. Department of the Treasury had approved a \$1 million RESTORE grant award for accreditation support for the School of Pharmacy. These funds were designated to support workforce development and job creation. This project aligns with the workforce development priorities developed by the GoCoast 2020 Commission.

"The accreditation of the William Carey School of Pharmacy will be a boost to the economy for South Mississippi as well as making a difference in students' lives. We're pleased to support the university with RESTORE funds that were allocated for this important initiative," said Gov. Phil Bryant.



"We are so pleased to be approved as the second school of pharmacy in the State of Mississippi. This is another step in our efforts to meet the health care needs of Mississippi and the Gulf South," added WCU President Dr. Tommy King.

WCU's School of Pharmacy is an accelerated program, enabling students to earn a Doctor of Pharmacy degree in two years, 10 months, instead of the more usual four years. Classes will meet year-round in four terms of 10 weeks each. It is one of only 11 accelerated pharmacy programs in the country, and the only one in Mississippi, Alabama, and Louisiana.

Want to join enHance?

More information about the enHance program, including how to apply, is available at www.enhance.ms.

Looking for New enHance Members

The enHance program is seeking its next class of environmental leaders in the state, and interested manufacturers, local governments, and other organizations are encouraged to apply.

The application period began July 1 and closes September 30. More information about the program, including how to apply and access to online applications, is available at www.enhance.ms. In addition, questions about the program may be directed to [Mr. Khairy Abu-Salah](#) with MDEQ at 601-961-5284.





MDEQ Awards \$295,000 to 17 School Districts for New School Buses

MDEQ announced July 2 that it has awarded \$295,920 to 17 school districts to apply to the purchase of new school buses for the upcoming school year. The rebates were provided to the school districts toward the purchase of new diesel powered buses with more stringent pollution controls to replace older buses thus reducing emissions of particulate matter, hydrocarbons, and carbon monoxide. Since 2009, the MDEQ Diesel School Bus Replacement Program has awarded over \$1.08 million to 38 school districts for the purchase of 67 school buses.

"Because thousands of Mississippi children begin and end their days with a trip on a school bus, providing for clean school buses is an ongoing priority for the Mississippi Department of Environmental Quality. School buses are the safest and most efficient way to transport students, but we want to ensure that it's a healthy trip," said Gary Rikard, MDEQ Executive Director.

The districts selected were:

- Cleveland School District - \$28,640 for two buses
- Greenville Public School District -- \$28,640 for two buses
- Lawrence County School District -- \$28,640 for two buses
- Alcorn School District -- \$15,000 for one bus
- Coahoma Early College High School -- \$15,000 for one bus
- Greene County School District -- \$15,000 for one bus
- Harrison County School District -- \$15,000 for one bus
- Leake County School District -- \$15,000 for one bus
- Lee County School District -- \$15,000 for one bus
- Long Beach School District -- \$15,000 for one bus
- Monroe County School District -- \$15,000 for one bus
- North Bolivar Consolidated School District -- \$15,000 for one bus
- North Pike School District -- \$15,000 for one bus
- Pontotoc City School District -- \$15,000 for one bus
- Pontotoc County School District -- \$15,000 for one bus
- Starkville Oktibbeha Consolidated School District -- \$15,000 for one bus
- West Jasper School District -- \$15,000 for one bus

Ask a Geologist

MDEQ's website has recently added a new feature, "[Ask a Geologist.](http://www.mdeq.ms.gov/geology/ask-a-geologist)" Office of Geology staff are frequently asked to identify finds at shows or through social media. To help keep up with demand, a webpage has been added for people to attach a photo of their rocks and fossils found in Mississippi for identification. That page can be found at www.mdeq.ms.gov/geology/ask-a-geologist.

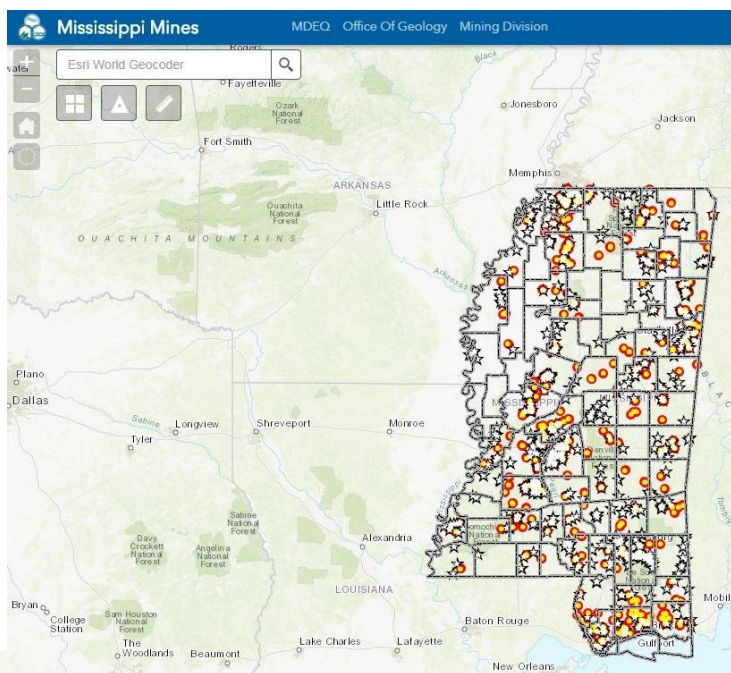


What's your find?



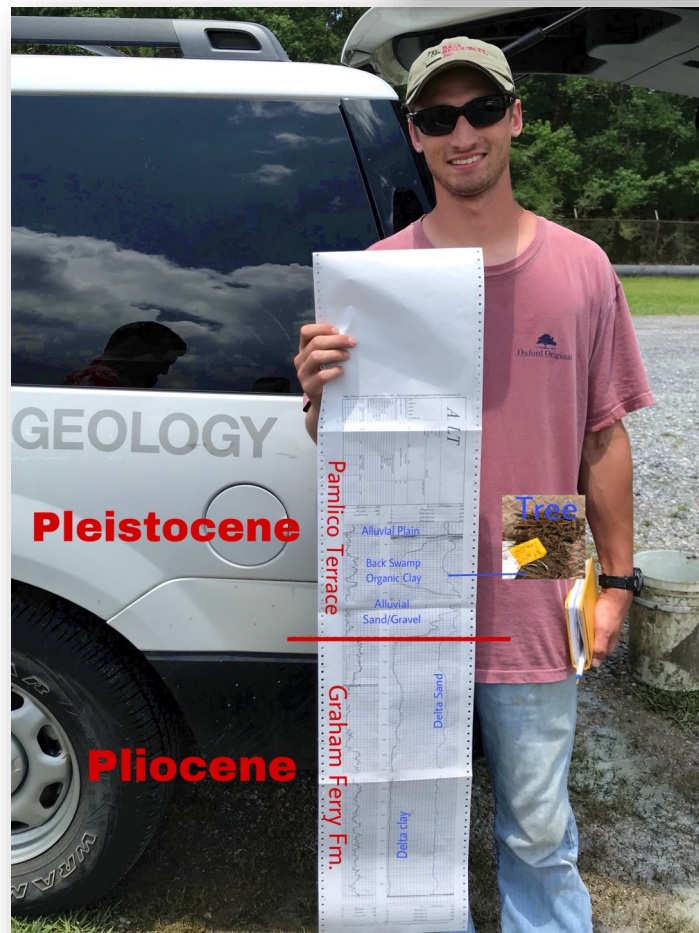
Helpful Maps

The MDEQ website has links to several interactive maps available to the public. They range from mines to boreholes to floodmaps to Underground Storage Tanks. They can be found on the website [here](http://www.mdeq.ms.gov).



Geologic Mapping in Jackson County

A stratigraphic test hole was drilled by the Office of Geology in June in cooperation with the Jackson County Port Authority and MDEQ's Office of Land and Water Resources for a geologic mapping project near Pascagoula. A perfectly-preserved, eight foot diameter tree from the last ice age buried 85 feet below modern day sea level was penetrated during the drilling of the test hole. Samples were taken for study and a geophysical survey was also acquired on the test hole to better map the geology and understand the geologic history of the coastal area.



Geology Outreach

James Starnes, from the Office of Geology, recently spoke to a meeting of the Mississippi Gem and Mineral Society about rocks, fossils, the state's geology, and the origins of Mississippi gravel.



MDEQ Staff Raises Funds for Jackson Zoo

MDEQ staff selected the Jackson Zoo as their summer fundraising project. About \$1,900 was raised by staff to "adopt" Big Mike, a Southern White rhinoceros.



MDEQ To Host August Rubbish Site Operator Training

MDEQ is hosting a training course for Mississippi Class I rubbish site operators on Tuesday, August 14, and Wednesday, August 15, at the Cabot Lodge Millsaps on North State Street in Jackson.

The course fulfills state training and testing requirements for Class I Rubbish Site Operator Certification and updates general knowledge of Class I rubbish site regulatory and operational requirements. MDEQ will also allow currently certified operators to attend as a refresher course for Continuing Education Units (CEUs). The course lasts 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 who complete the class will receive 10 hours of CEUs which 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 [Deidre Graham](mailto:Deidre.Graham@mdeq.ms.gov) with MDEQ at 601-961-5513 or visit <https://www.mdeq.ms.gov/land/waste-division/>.

Mississippi Coastal Cleanup is October 20

MDEQ is a proud sponsor of the Mississippi Coastal Cleanup which will be held October 20. Visit mscoastalcleanup.org to find out how to volunteer, become a sponsor, or more about cleaning up the Coast. The 2017 cleanup covered 200 miles of coastline, waterways, and barrier islands with 1,763 volunteers collecting 1,336 bags of trash weighing 26,178 pounds!





LiDAR and Geomorphology of the Big Black River at Edwards

David T. Dockery III, RGP, and Jonathan R. Leard, GIT

Geomorphology is the study of landforms, including their sculpture, by earth surface processes such as air, water, and ice. Changes in landscapes by both erosion and deposition generally operate at slow rates punctuated by rapid events such as landslides or floods.

Technological advances in Light Detection and Ranging (LiDAR) remote sensing have contributed greatly to the study of landforms. The Big Black River Basin in Central Mississippi has a typical coastal plan morphology with dendritic tributaries and a meandering river on a broad floodplain. This morphology changes where the river crosses the Glendon and Marianna limestones of the Vicksburg Group at Edwards, Mississippi. Here the river exhibits a stream morphology with straight channels directed by bedrock structure such as joint planes as it cuts a narrow canyon through hard limestone ledges. Figure 1 is a bare earth hillshade LiDAR image with an overlay of the surface geology, showing the Vicksburg Group to underlie the constricted valley river cut or gorge near Edwards. Formations labeled on the image from north to south include the Kosciusko Formation, Cook Mountain Formation (CM), Cockfield Formation, Yazoo Clay, Forest Hill Formation (FH), Vicksburg Group, and Catahoula Formation.

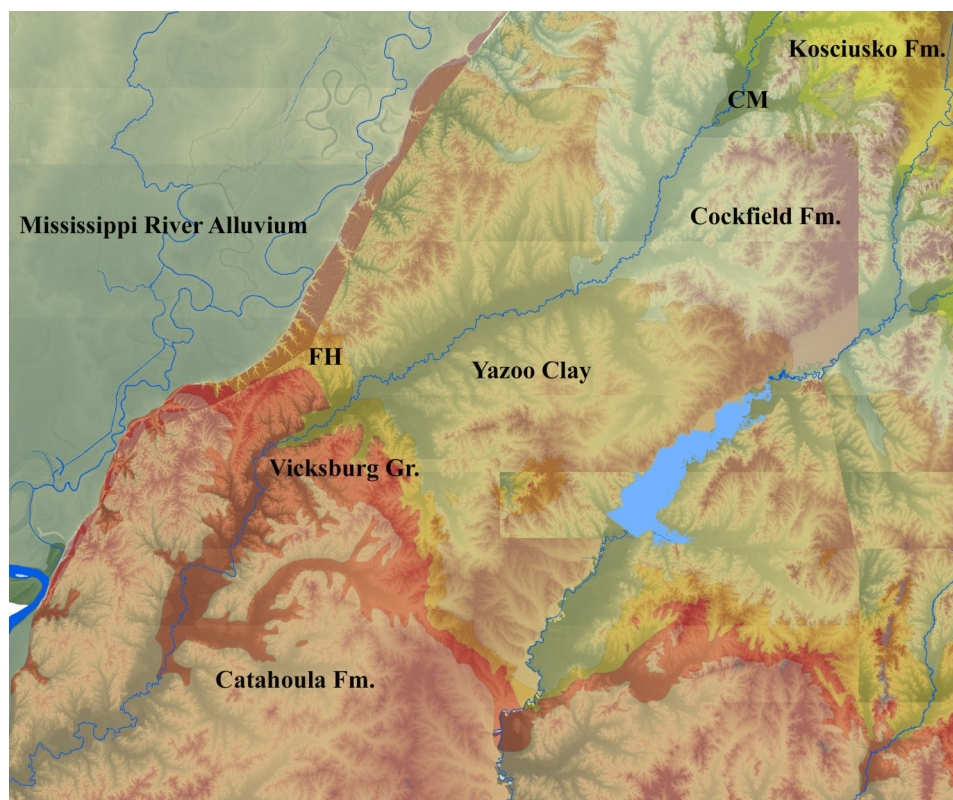


Figure 1. Bare earth hillshade LiDAR overlain with surface geology showing the “gorge cut” of the Big Black River through limestones of the Vicksburg Group.

Figure 2 is a closer view of the Vicksburg gorge cut with LiDAR only on the left and with surface geology overlay on the right.

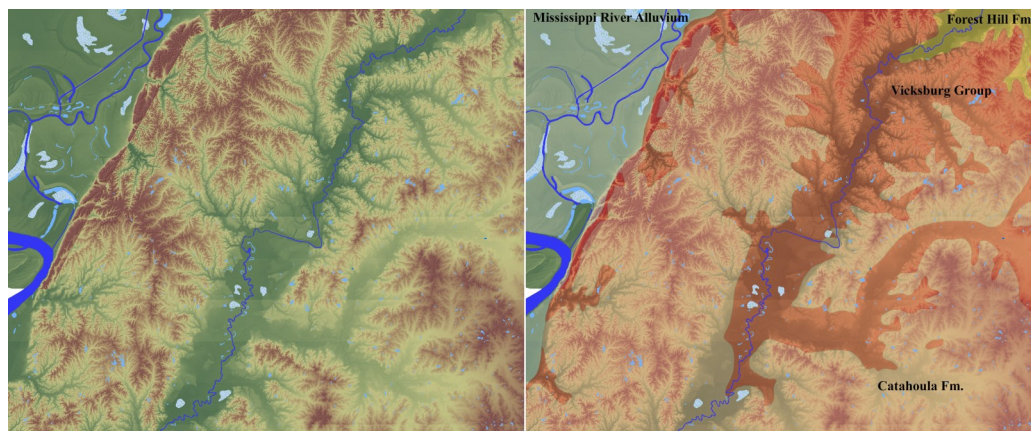


Figure 2. Bare earth hillshade LiDAR (left) and bare earth hillshade LiDAR overlain with surface geology formations (right). Stream form changes from meandering to trellis at center of images.

Figure 3 is a close up view of the straight channel pattern where the Big Black River leaves the narrow Vicksburg gorge only to skirt a high terrace on the river's west bank and plow into the bluff line, carving out a U-shaped scar.

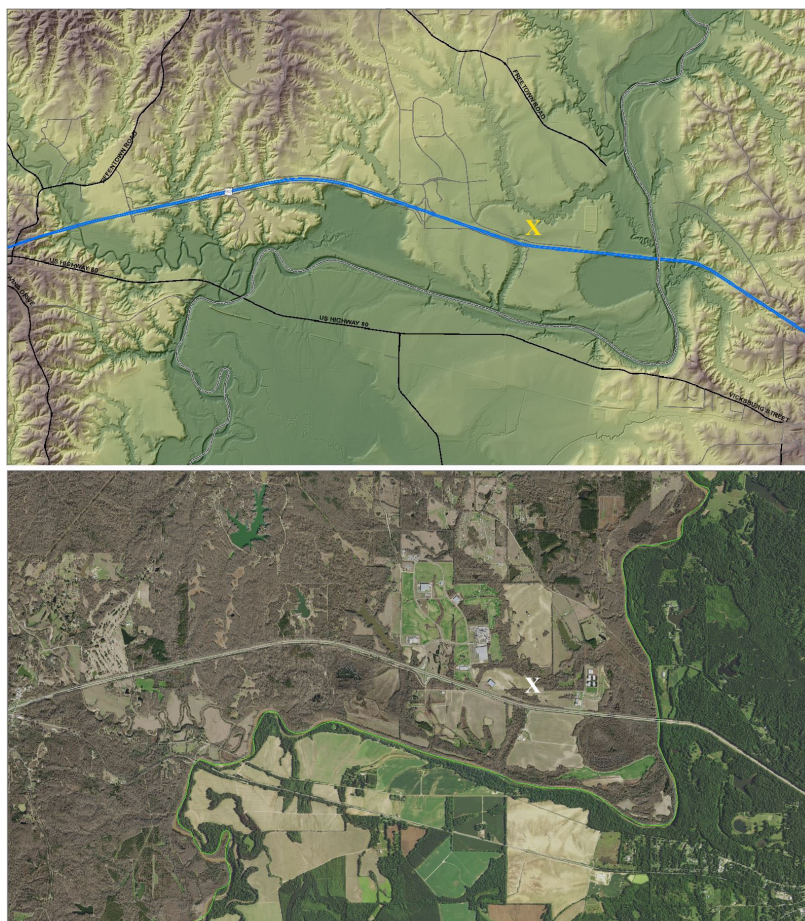


Figure 3. Bare earth hillshade LiDAR (top) and orthoimagery (bottom) of trellis stream morphology on the Big Black River. "X" marks the location of an 800-foot-deep seismic hole through a high terrace overlying Glendon Limestone.

This long bluff cut exhibits the best exposure of the Byram Formation, which overlies the Glendon Limestone, in the state (Figure 4). Northeast of the bluff cut is a large U-shaped meander scar in the high terrace. The high terrace is a remnant of the river's old floodplain before its incision into the limestones of the Vicksburg Group.



Figure 4. U-shaped gorge cut into the eastern valley wall of the Big Black River near Edwards, Mississippi, exposing fossiliferous marine sediments of the Byram Formation. From left to right are Mary Dockery and Therese and Luc Dolin.

The geophysical log of a seismic test hole (Figure 5), marked by an X on the images, shows 50 feet of terrace sands overlying the Glendon Limestone of the Vicksburg Group. Thus, a limestone foundation protects the high terrace from river scouring. The straight course of the river westward from the bluff line follows the structural strike and possible joint planes of limestone beds in the Vicksburg Group. Once the riverbed is above the influence of bedrock, it resumes a meandering course.

Figure 5 correlates bedrock units as shown on the geophysical log with the high river terrace at 151 feet above mean sea level and the present floodplain of the Big Black River at 120 feet. Assuming a river channel depth as shown for the high terrace, the river channel of the present-day terrace is entrenched in the Glendon and Marianna limestones. The straightness of the channel south of the 151-foot high terrace is due to the physical attributes of the bedrock.

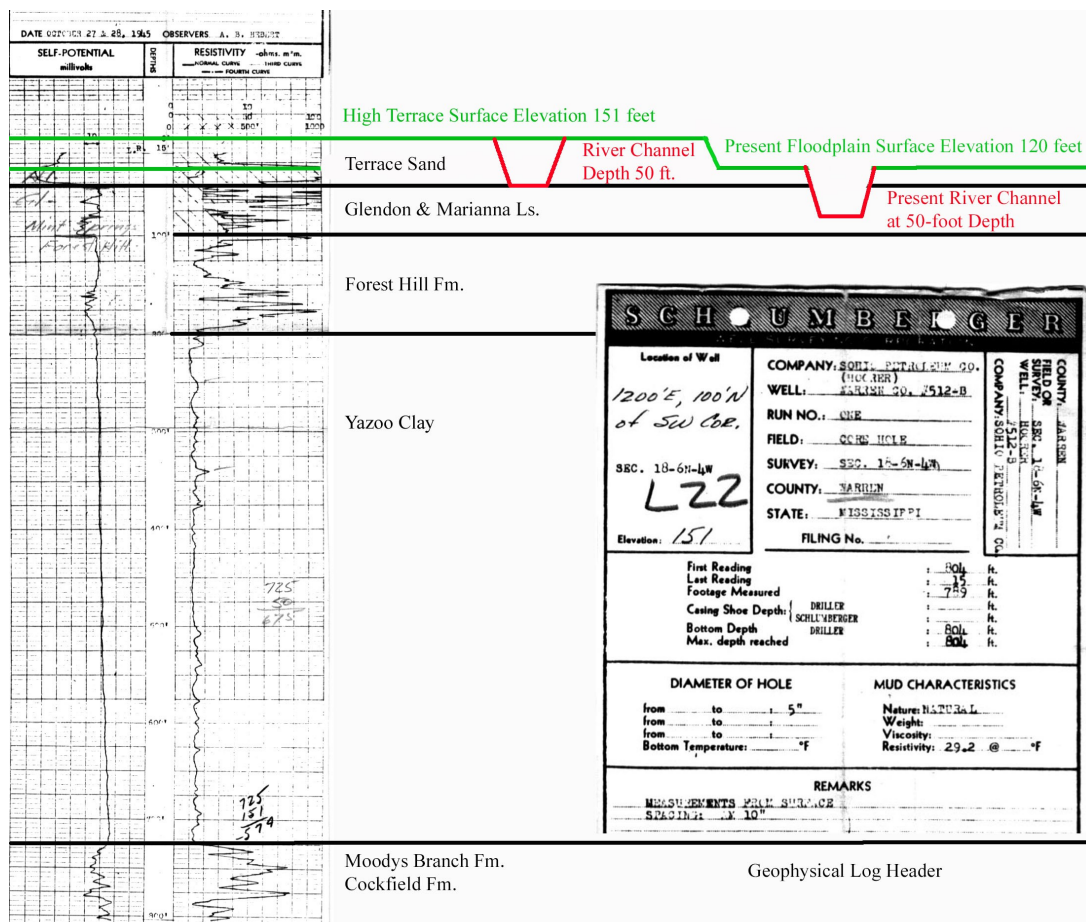


Figure 5. Correlation of geophysical log with terrace and floodplain surfaces and river channel bottoms.

Some geologists have attributed the straight courses of the Big Black River near Edwards to underlying faults. This explanation suggests the risk of possible seismic activity. The use of LiDAR in geomorphic analyses provides a more plausible explanation for these straight reaches and reduces concerns of seismic risk for such critical infrastructure as the Highway 80 and Interstate 20 bridges over the Big Black River.

EMPOWERING CHILDCARE CENTERS FOR A HEALTHY MS WORKSHOP



SPEAKERS

- Dr. Charles Allgood, MSDH
Division Director of Childcare
Licensure
- Dr. Alyce Stewart, MSDH
Bureau Director of Genetics
- Wes Holsapple, MSDH
Healthcare Coalition & Training
Coordinator, Office of
Emergency Planning and
Response
- Dr. DeJonnelle G. King,
President, Advanced
Environmental Consultants, Inc.
- Crystal Veazey, MSDH Program
Director
- Duncan Welch, MSDH Director,
Division of On-site Wastewater
- Jennifer Milner, MDEQ State
Recycling Coordinator
- Trayce Moore-Thomas, MDEQ
SBEAP Technical Assistance
Coordinator

LIMITED SEATING
First Come,
First Served

AUGUST 23, 2018
(Thursday)
8:30 am – 4:30 pm

CE Roy Community Center
300 East 5th St., Hattiesburg, MS

Hosted by:
Mississippi Department of Environmental Quality
Office of Community Engagement
Small Business Environmental Assistance Program

833-256-4820

7
CONTINUING
EDUCATION
HOURS

TOPICS

- ✓ Childcare Licensure
- ✓ Genetic Diseases
- ✓ Emergency Preparedness
- ✓ Eliminating Exposure to Asbestos
- ✓ Lead Poisoning Prevention
- ✓ Common Issues with Septic Tanks
- ✓ Waste Management and Recycling
- ✓ Small Business Environmental Assistance Program (SBEAP)

LUNCH

Lunch available for delivery from McAllister's Deli.

Must PRE-ORDER from select menu and PAY prior to August 23, 2018.





MDEQ Environmental Action Links

- [Draft permits currently at public notice](#)
- [Environmental Permits Division scheduled public hearings](#)
- [Geology permit application public notice](#)
- [Permits and certificates issued in the last 90 days](#)
- [General permit coverages issued in the last 90 days](#)
- [Notices of Intent for coverage under a Statewide General permit received by the Environmental Permits Division](#)
- [List of the 401 Water Quality Certifications currently at public notice](#)
- [List of the compliance inspections recently conducted](#)
- [Orders issued by the Mississippi Commission on Environmental Quality](#)





Mississippi Department of Environmental Quality

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www.mdeq.ms.gov



Picture of the Month

Cat Island sunset
taken by Chris
Wells, MDEQ Chief
of Staff.

