



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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Mississippi Department of Environmental Quality Environmental News

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RIKARD IS NEW MDEQ EXECUTIVE DIRECTOR

Gary Rikard assumed the position of MDEQ Executive Director beginning September 1. Rikard was named by Governor Phil Bryant in July to succeed Trudy Fisher who had served as Executive Director since 2007.

"I am grateful for the opportunity to serve in this capacity, and I am humbled by Gov. Bryant's choice and by his faith in me," Rikard said. "I look forward to the challenge and to leading an agency that is tasked with such an important mission."



Rikard, previously a partner with Butler Snow, LLP, has practiced environmental law since 1996, including serving as senior attorney at MDEQ from 1996-1998. Prior to earning his law degree, he worked as an environmental engineer at MDEQ, specializing in permitting and water quality compliance issues. He served more than 22 years in the Mississippi National Guard, retiring with the rank of Major. During his service, he served as assistant staff judge advocate, acting as the primary legal officer for environmental matters.

Rikard earned a bachelor's degree in civil engineering from Christian Brothers University, completed graduate studies in environmental engineering at the University of Mississippi School of Engineering, and holds a juris doctor degree from the University of Mississippi School of Law. He and his wife Karen have one daughter and reside in Madison.



GOV. BRYANT ISSUES DELTA SUSTAINABLE WATER RESOURCES TASK FORCE EXECUTIVE ORDER

In August Governor Phil Bryant issued an executive order establishing the Governor's Delta Sustainable Water Resources Task Force. Under the direction of the Executive Director of MDEQ, the task force is charged to work together to ensure that the Delta will have future sustainable water supplies.

In 2011, former MDEQ Executive Director Trudy Fisher formed an executive level multi-agency and multi-organization task force that developed and implemented actions to sustain water resources for agriculture, fisheries, and wildlife in the Delta. The Governor's Executive Order establishing the task force provides affirmation of the importance of this work and charges the members to work in a unified and collaborative manner.

"The need for a sustainable water supply is always the lifeblood of any region and is clearly of the utmost importance in Mississippi and the Delta," Governor Bryant said. "This task force will continue to bring regional experts together from various public and private sectors to recommend policies as it pertains to the aquifer and its water level. I look forward to seeing the annual report in January from the task force and feel confident in the individuals that will head this search for a solution."

More than 17,000 permitted irrigation wells in the shallow Mississippi River Valley Alluvial Aquifer are used for irrigation and aquaculture and pump approximately 1.5 billion gallons of groundwater each day. This pumpage demand has exceeded the recharge to the aquifer resulting in continuing overbalances of groundwater withdrawals versus aquifer recharge and notable water-level declines in the aquifer.

The task force is comprised of the Yazoo Mississippi Delta Joint Water Management District, Delta Council, Delta F.A.R.M., Mississippi Farm Bureau, the U.S. Army Corps of Engineers, the USDA Natural Resources Conservation Service, the Mississippi Soil and Water Conservation Commission, and MDEQ.

A copy of the Governor's Executive Order is available at: <http://bit.ly/1qNJqlv>.

STAFF CHANGES



Willie McKercher

Willie McKercher was recently selected as Chief of the Assessment/Remediation I Branch of the Groundwater Assessment and Remediation Division (GARD). Willie has been with MDEQ since 2001. He is a registered Professional Engineer and earned his master's degree in Civil Engineering from the University of Mississippi in 2006 and his bachelor's degree from Mississippi State University in Biological Engineering in 2001. He has been a lead Remedial Project Manager for GARD for a number of complex environmental and regulatory projects and is also a member of the Interstate Technical and Regulatory Council (ITRC) Vapor Intrusion Team that developed the current ITRC guidance document on Vapor Intrusion in 2007. Willie resides in Brandon along with his wife Jessica and their son.



Ernie Shirley

Ernie Shirley has been appointed as the Chief of the Emergency Services Division. Shirley has worked for MDEQ since 1995 beginning his career at the agency's South Regional Office. In 1997 he moved to Emergency Services in Jackson. He earned a B.S. in Environmental Science from Delta State University in 1993, and worked as a chemistry and science teacher before accepting a position with MDEQ. Shirley served 22 years in the Mississippi National Guard and was awarded the Mississippi Magnolia Cross upon his retirement in 2011. Shirley is a native of Yazoo County, and he and his family live in Madison.

MDEQ FISH TISSUE MONITORING PROGRAM

Below: William Smith and Jenny Ulmer retrieve fish after being stunned by electro-shock.

MDEQ's Laboratory monitors fish tissue for contaminant levels that could be harmful to people that consume fish from the state's waters. When elevated levels of contaminants are found in fish tissue, the data is used by a multi-agency task force to determine if a fish tissue consumption warning or advisory is warranted. Presently, there are advisories for mercury, DDT, toxaphene, and PCBs on many state waters.

Photos are from September of flathead catfish, blue catfish, large-mouth buffalo, and silver carp taken from Steele Bayou.



Gathered fish are taken back to the MDEQ Laboratory. Three fish of the same species are filleted and ground together for testing. Below Al Gibson begins the process.



NRDA DOLPHIN WORK

In June, MDEQ representative Willie McKercher participated in a joint study led by NOAA to evaluate potential lingering health impacts of the 2010 BP Oil Spill on dolphin stocks in the Northern Gulf of Mexico. June's assessment was conducted in the Barataria Bay region of Louisiana. The assessment involved the live capture, evaluation and release of adult Common Bottlenose Dolphins (*Tursiops truncatus*). Assessments conducted previously and in the future in the Mississippi Sound and Barataria Bay will be utilized to provide information for the Trustees' Natural Resource Damage Assessment case.



NOAA Permit 932-1905-MA-009526

UPDATE ON PICAYUNE WOOD TREATING SUPERFUND SITE

Photos: Site visit in 2013. MDEQ's Michael Slack explains the process at a public availability session.

The 32-acre Picayune Wood Treating Superfund Site closed operations in 1999, and has been undergoing investigation and cleanup by the U.S. Environmental Protection Agency and MDEQ since 2004. In 2005, EPA's Superfund Redevelopment Initiative supported a reuse planning assessment for the site. The soil cleanup was completed in 2013, and a second planning process updated the future use plan based on current remedial features, community goals, and surrounding land use. A report summarizing the outcomes of the planning process, including reuse goals, remedial considerations, a future use concept plan and next steps for implementation is available at the following link: <http://bit.ly/ZmHHZN>.

A webinar, Exploring Recreational and Educational Opportunities at the Picayune Wood Treating Site, will be available on October 21, 2014, from 12:00 p.m. to 2:00 p.m. (CDT). For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live>.



JOIN ENHANCE!

MDEQ is accepting applications for the enHance program from July 1 to September 30. Check out the enHance website for information on current members, a calendar, training workshop materials, and information on how to apply.

enHance is open to all types of facilities with a separate initiative for municipalities.

enHance is a voluntary initiative to recognize environmental leaders in Mississippi. Participating organizations make a commitment to address and achieve on-going environmental improvements. More information, benefits, an application, and application instructions can be found at www.enhance.ms.

Send the completed application to enhance@deg.state.ms.us.



enHance's annual workshop provides information on a variety of topics for enHance members and visitors.

E3 for Sustainable Manufacturing

Plan ○ Assess ○ Transform

Tuesday, September 30, 2014

8:30 a.m.—3:00 p.m.

LOCATION:

**TOYOTA
MOTOR MANUFACTURING**
1200 Magnolia Way
Blue Springs, MS

Cost:

**\$20/person
(Includes Lunch)**

TO REGISTER

Online

<http://conta.cc/1wg0KQg>

or email

rjackson@innovate.ms

For Further Information

Mary Jean Gates

662-846-0448

Dallas Baker

601-961-5670

E3 Program Sponsors



E3: ECONOMY - ENERGY - ENVIRONMEN
A SUSTAINABLE GROWTH STRATEGY

ENVIRONMENT ○ ECONOMY

- ◆ **Learn how Toyota manages operations through their EEMS - Environmental Management System**
- **Participate in a Kaizen/Improvement Activity**
- ◆ **Tour plant waste management areas to view operational controls**

ENERGY ○ ECONOMY

- ◆ **See demonstrations of energy auditing equipment and learn how to identify energy savings opportunities**
- **Learn about the latest energy efficient lighting**

Who Should Attend?

**Plant Managers, Environmental Managers,
Production Supervisors, Energy Managers, Maintenance**

Agenda: <http://www.enhance.ms/training-and-workshops>

Register Early—Class Size is limited

WASTE PESTICIDE DISPOSAL PROGRAM FOR MISSISSIPPI FARMERS

MDEQ used Nonpoint Source Section 319 grant and other matching funds from the Mississippi Department of Agriculture and Commerce to contract with Mississippi State University for a waste pesticide disposal program in 2013 and 2014. The primary goal of this project was to help Mississippi farmers and property owners minimize the environmental risks associated with the disposal of waste pesticide products by providing them a way to dispose of products in a safe and efficient manner. Two events, one in the southern Mississippi Delta and one in the northern Mississippi Delta, were held to cover as much of the highly agricultural area as geographically possible. The first event was held in Sharkey County in Rolling Fork on December 12, 2013, and the second event was held in Coahoma County in Lyon on February 25, 2014.

The event in Sharkey County yielded 33 loads of more than 24,450 pounds of material from 11 counties. In Coahoma County 30 loads from 5 counties yielded about 31,675 pounds. Waste tires were also collected at both events.



Business E-Waste Day



Friday, October 24, 2014



MS Farmers Market
929 High Street
Jackson, MS 39202
8:00 a.m. to 2:00 p.m.

Bring any unwanted electronics to the Mississippi Farmers Market, Friday, October 24, from 8:00 a.m. to 2:00 p.m.

Acceptable Items:

Computers, All Computer Components, Desktop Copiers, Fax Machines, Radios, Televisions, Cell Phones, Desk Phones, VCR Players, DVD Players, Electronic Games, Monitors, Keyboards, Printers, Laptops, Scanners, Stereos/Radios

*****There is a \$2 charge per monitor & \$12 charge per television*****

This charge covers the cost incurred by Magnolia Data Solutions from recycling these items properly and in keeping with EPA requirements (i.e. shipping and weight for CRT tubes.) All items collected are properly recycled at Magnolia Data Solutions.

For more information on this event, please contact Niki Carr Lowery at (601) 948-7575, ext. 234 or email nlowery@greaterjacksonpartnership.com or contact Marsha Hobson at (601) 366-4842 or email keepjack@bellsouth.net.

This e-Waste day is brought to you by the following organizations



FALL SWANA CONFERENCE TO HOST LANDFILL GAS ENERGY SESSION

The Mississippi Magnolia Chapter of the Solid Waste Association of North America (SWANA) will hold its Fall State Conference at the Natchez Grand Hotel and Suites in Natchez on October 14 to 16. The conference agenda and registration information can be found at: <http://msswana.businesscatalyst.com>.

As a part of the Fall Conference, MDEQ in partnership with EPA's Landfill Methane Outreach Program and the State SWANA Chapter are conducting a Landfill Gas Energy Session. The Landfill Methane Outreach Program (LMOP) is a voluntary assistance and partnership program that the MDEQ administers in partnership with EPA. The MDEQ joined this partnership in 2001 as part of the agency's commitment to facilitate and promote the use of landfill gas as a renewable energy source. The MDEQ's mission through LMOP is to help develop landfill gas to energy projects in Mississippi thereby protecting the environment and public health by reducing methane emissions from landfills and providing environmental, economic, and energy benefits to businesses and communities. Currently, Mississippi has four landfill gas to energy projects located at the Waste Management Pecan Grove and Prairie Bluff Landfills in Harrison and Chickasaw Counties, the Golden Triangle Landfill in Clay County, and the Three Rivers Landfill in Pontotoc County. The MDEQ LMOP is working to build on these successes through continued promotion of future projects including events like the Landfill Gas Energy Session.

The Landfill Gas Energy Session will be held on the first day of the 2014 conference and will include information from both public and private sector representatives on developing and implementing a landfill gas to energy project. Topics will include: services, tools, and resources made available through LMOP; the characteristics of a candidate landfill and other elements needed to build a successful landfill gas to energy project; the potential costs, savings and profits associated with a landfill gas to energy project; emerging technologies employed for collecting and converting landfill gas; and case studies of existing landfill gas to energy projects.

The Fall SWANA Conference will also include sessions on the City of Natchez Recycling Program; groundwater monitoring, contamination assessment, and remediation; air monitoring; landfill safety and fire control; and other solid waste management related issues. In addition, the State SWANA Chapter is offering a Manager of Landfill Operations (MOLO) Course October 13-16 which will run concurrently to the conference sessions.

For more information on the 2014 Fall SWANA Conference, please contact Charlie Bock with MDEQ at (601) 961-5232 or by e-mail to Charlie.Bock@deq.state.ms.us. For information on the State LMOP program and the upcoming Landfill Gas Energy Session, please contact Jennifer Milner with MDEQ at (601)961-5739 or by e-mail to Jennifer.Milner@deq.state.ms.us.

SMOKE SCHOOL OFFERED

On October 15-17, MDEQ will offer a Visible Emissions Evaluation training and certification session (Smoke School). Both first-time certification and recertification in EPA Test Method 9 will be offered. There is no fee charged for smoke school training.

First-time participants or persons holding no recent certification must pre-register and attend a classroom orientation session beginning at 1:30 p.m., Wednesday, October 15, 2014, in the Windsor I meeting room at the Regency Hotel & Conference Center, 400 Greymont Avenue in Jackson. To pre-register for the classroom session contact Ms. Jalissa Sandifer via email at Jalissa.Sandifer@deq.state.ms.us or Ms. Shelley Benton (Shelley.Benton@deq.state.ms.us) or by calling at (601) 961-5171. Please include participant's name, company name, complete mailing address, contact number, and email address.

Anyone desiring to certify or recertify must attend the outdoor session beginning at 8:00 a.m., Thursday, October 16, 2014, at the Smith-Wills Stadium parking lot on Cool Papa Bell Drive off Lakeland Drive in Jackson. Those certified at the previous school are required only to attend the outdoor session.



2014 MEEA ANNUAL CONFERENCE *Experiential Discovery Across the Curriculum*

October 3-4, 2014

[Friday Noon to Saturday 5 PM*
Registration begins 11:15 AM]

Highlights

- Earn 1.5 CEUs
- Active Learning
- Networking
- Engaging Format
- Fun!

Discovery Tracts

- **GreenSchools!**—Experience Project Learning Tree's award-winning program first hand!
Green Teams conduct five hands-on inquiry-base investigations leading to healthier schools, saving schools' money and development of conservation leaders. Teams at the conference will investigate energy usage, school grounds including urban forestry, water, or environmental quality at "Lake Tiak-O'Khata School" and make recommendations.
Learn about PLT's **GreenWorks!**, a grant program that funds GreenSchools! projects. Grants are for **\$2,000** and require 50% match which may be met by donations and in-kind labor. Don't miss out on this opportunity!
- **Enhancing EE Activities with Geography and History Elements**
- **Poster Session and EE Presentations**—Call for papers will be forthcoming! [Email Janet Chapman (see below) for more info.]

Lake Tiak-O'Khata

213 Smyth Lake Road, Louisville, MS 39339
www.ltok.com

Make Your Room Reservation Today!

- Call 1-888-845-6151 to reserve your room at Lake Tiak-O'Khata.
- Block of rooms available through **September 4**. (Three meals included with room rate!)
- Single: \$122
- Double \$85/person
Roommate Name _____
(specify 'TBA' if open for roommate assignment)
- (Triple \$72 & Quad \$66 available—Find your own roommates!)
- RV Hookups \$19 (Reserve to insure availability. Meals extra.)
- Lake Tiak-O'Khata Questions? 1-888-845-6151

Register Now! Only \$60! Send in \$15 pre-registration fee, balance (\$45) due on arrival.**
[Classroom teachers qualify for \$75 scholarship towards balance of registration fee and room expense.]

Name: _____ Affiliation: _____

Year Round Email Address: _____ F _____ or M _____

Mailing Address: _____
address city state zip

Phone Number (24 hr): _____ Are you a classroom teacher applying for a scholarship? Y ___ N ___

Meal Option: No Preference ___ Vegetarian ___ Accessibility Needs: _____

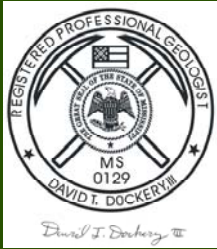
CEUs Desired? ___ Yes ___ No (CEUs are covered in registration. CEU Application Form must be filled out prior to end of conference.)

EITHER Send \$15 check made out to MEEA with registration form by **Sept 15, 2014** to Peggy Guyton, P.O. Box 43, Mayhew, MS 39753.

OR Visit www.meeaworkshops2014.weebly.com to register and pay by CR/DB card or PO. Registration questions? Contact Peggy at 228.324.3136 or peggyguyton@gmail.com. Other questions? Janet_Chapman@deq.state.ms.us or 601.961.5266.

*Participants are required to attend both days.

**Everyone pays the place-holding pre-registration fee of \$15.



SAND DUNE SINKHOLES

David T. Dockery III, RPG, Office of Geology

Mount Baldy at Indiana Dunes National Lakeshore remained off-limits indefinitely after the popular attraction swallowed up six-year-old Nathan Woessner in a sinkhole on July 12, 2013. Firefighters rescued the boy after he was trapped for three and a half hours under 11 feet of sand (Figure 1). Two additional sinkholes have appeared on the sand dune since that time (Figure 2). Research by the Environmental Protection Agency identified a large number of anomalies below the dune's surface using ground-penetrating radar. Scientists report that the narrow sinkholes last less than 24 hours before they collapse and fill with the surrounding sand (National Park Traveler, April 26, 2014).



Figure 1. July 12, 2013, photo shows rescue workers with heavy equipment working to free 6-year-old Nathan Woessner from a sinkhole in massive sand (AP Photo/The News Dispatch, Julie McClure).



Figure 2. Left: Depression on the surface of Mount Baldy leading to a hole below. Right: A narrow deep “sinkhole” on Mount Baldy. Pictures from web images.

The sand dunes at Indiana Dunes National Lakeshore were formed some 14,000 years ago. Most are now covered in forest, with the exception of one 124-foot-high dune named Mount Baldy that is a big pile of sand with no grass and a few scruffy trees. Around 200,000 people visit this park every year, mostly to climb on Mount Baldy. Professor of Geosciences Erin Argyilan (Indiana University Northwest) was doing a wind study on Mount Baldy when Nathan Woessner went into an area blocked off for restoration to inspect a small depression. The depression suddenly gave way. Argyilan thought Nathan’s parents were mistaken when she heard them screaming and pointing to the place their son disappeared. Narrow deep holes contradicted everything she knew about sand dunes. Based on discussions with other geologists, the best answer is that the holes are caused by decomposing trees buried under the dune for nearly a century. The wet conditions during the spring of 2013 may have caused the decomposed trees to become unstable to the point of collapse, creating holes at the surface. Oregon residents claimed to have seen the same thing happen in sand dunes on the Pacific Coast (Baffling, Boy-Swallowing Holes Close an Indiana Dune, Lindsey Smith, NPR, May 8, 2014). Figure 3 shows sand dunes encroaching on dead trees along Shackleford Banks, North Carolina.



Figure 3. Sand dunes encroaching on dead trees, killed when their roots became buried, on Shackleford Banks, North Carolina. Picture was taken in 1977.

Recent events concerning “sand dune sinkholes” in Indiana may explain the sand-filled molds that preserve 300-million-year old *Lepidodendron* logs in Mississippi (Figure 4) and elsewhere. Figure 5 shows the sandstone-filled trunk and root of a related Pennsylvanian tree *Sigillaria* from the Joggins Formation in the Joggins Cliffs on the Bay of Fundy in Nova Scotia. Stumps of some of the Joggins trees contain the bones of amphibians and early reptiles. One possibility is that these animals were living in hollow stumps and were buried by sediment-laden flood waters. Another is that they were walking across a depression on an ancient sand dune and fell down a rotten-tree sinkhole.



Figure 4. I. E. Gresham and grandson beside a recently-quarried sand-filled *Lepidodendron* log in the Hartselle Sandstone at the Gresham Quarry in Tishomingo County, Mississippi. Picture (black-and-white negative; Image 849) taken by Ed Blake on June 3, 1966.

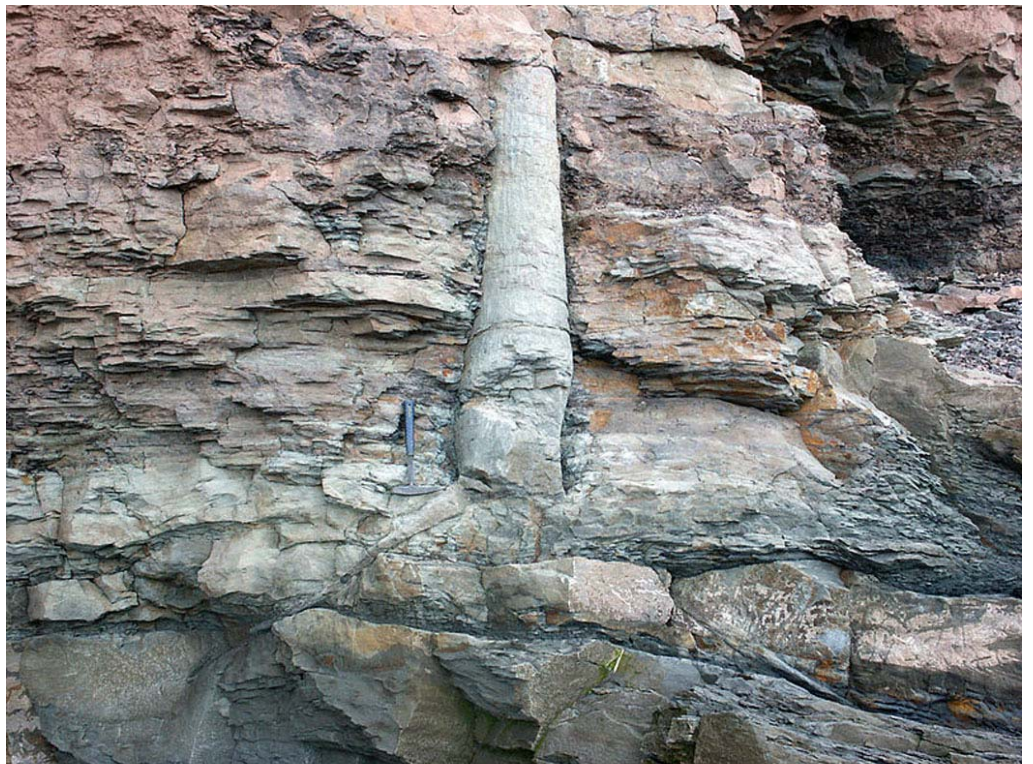


Figure 5. Trunk and roots of the Pennsylvanian tree *Sigillaria* in the Joggins Formation at Joggins Cliffs on the Bay of Fundy in Nova Scotia. Image from Wikimedia Commons.



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.
- General permit coverages issued in the last 90 days, 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.
- List of the 401 Water Quality Certifications currently at public notice, 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.
- Orders issued by the Mississippi Commission on Environmental Quality, http://opc.deq.state.ms.us/report_orders.aspx.

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Quality**

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PICTURE OF THE MONTH

Hardy Hibiscus in Mad-
ison County

by Sherryl Couch, Envi-
ronmental Permits Divi-
sion.

